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Water Resources Data
Ohio
Water Year 2003

Volume 2
St. Lawrence River Basin and Statewide Project Data

Water-Data Report OH-03-2

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

CALENDAR FOR WATER YEAR 2003

2002

OCTOBER

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2003

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Water Resources Data
Ohio
Water Year 2003

Volume 2. St. Lawrence River Basin and Statewide Project Data

By H.L. Shindel, J.P. Mangus, and S.R. Frum

Water-Data Report OH-03-2

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

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

U.S. Department of the Interior
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PREFACE

This volume of the annual hydrologic data report of Ohio 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 Trust Territories. These records of streamflow, ground-water levels, and quality of water provide the hydrologic information needed by State, local, and Federal agencies and the private sector for developing and managing our Nation's land and water resources. Hydrologic data for Ohio are contained in two volumes:

Volume 1. Ohio River Basin Excluding Project Data
Volume 2. St. Lawrence River Basin and Statewide Project Data

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

K.E. Bossenbroek	S.W. Hatch	J.W. Roberts
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This report was prepared in cooperation with the State of Ohio and with other agencies under the general supervision of J.R. Morris, District Chief, Ohio.

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13. ABSTRACT *(Maximum 200 words)*
Water-resources data for the 2003 water year for Ohio consist of records of stage, discharge, and water quality of streams; stage and contents of lakes and reservoirs; and water levels and water quality of ground-water wells. This report, in two volumes, contains records for water discharge at 138 gaging stations and various partial-record sites; water levels at 217 observation wells and 35 crest-stage gages; and water quality at 30 gaging stations, 34 observation wells, and no partial-record sites. Also included are data from miscellaneous and synoptic sites. Additional water data were collected at various sites not involved in the systematic data-collection program and are published as miscellaneous measurements and analyses. These data represent that part of the National Water Information System collected by the U.S. Geological Survey and cooperating Federal, State, and local agencies in Ohio.

14. SUBJECT TERMS
*Ohio, *Hydrologic data, *Surface water, *Ground water, *Water quality, Flow rates, Gaging stations, Lakes, Reservoirs, Chemical analyses, Sediments, Water temperature, Sampling sites, Water levels, Water analyses, Streamflow, Water wells.

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CONTENTS

ILLUSTRATIONS

[Maps showing project study areas are at the beginning of each project-data listing]

SURFACE-WATER STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED

[Letters after station names designate type of data: (c) chemical, (d) discharge, (e) contents and (or) elevation, (M) water-quality monitor, (HBM) hydrologic bench mark, (S) daily suspended-sediment data]

GROUND-WATER STATIONS FOR WHICH RECORDS ARE PUBLISHED

[Letter after station names designate type of data: (l) water level]

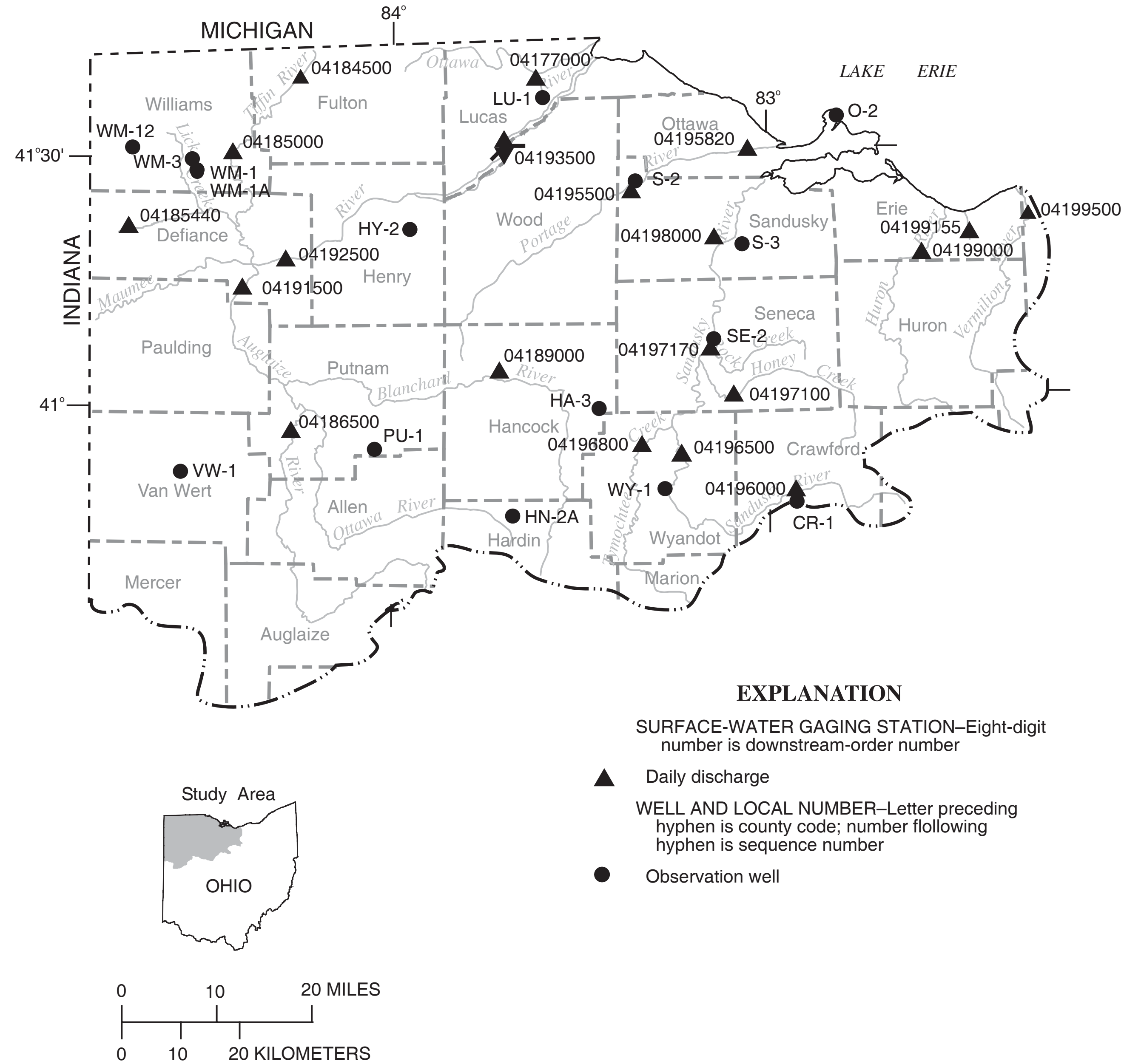

Figure 1a. Location of data-collection stations and wells.

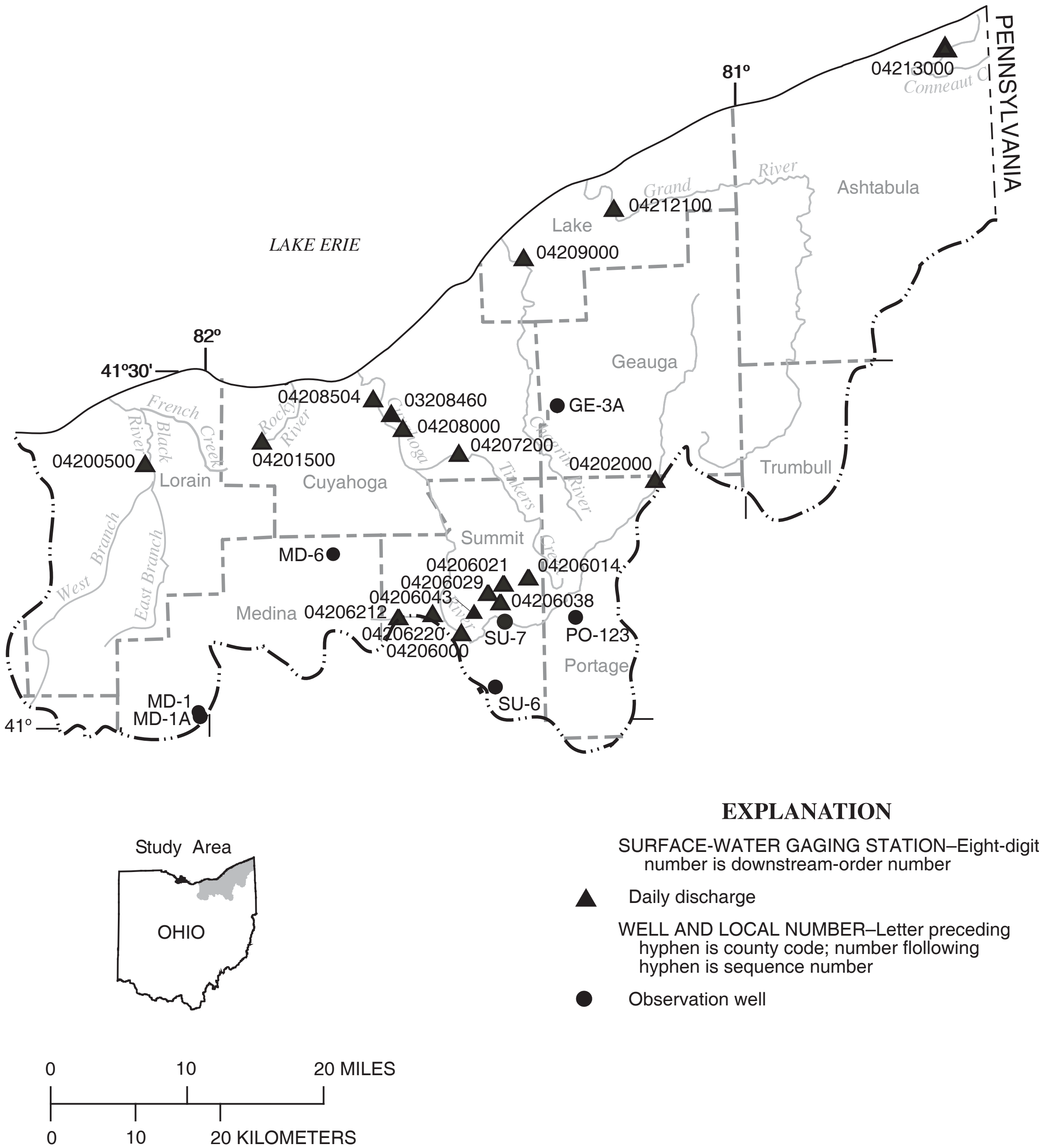

Figure 1b. Location of data-collection stations and wells.

Discontinued Surface-Water-Discharge Stations

The following continuous-record surface-water-discharge or stage-only stations (gaging stations) have been discontinued. Daily discharge or stage records were collected and published for the period of record, expressed in water years, shown for each station. Discontinued project stations with less than 3 years of record 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.

[mi^2, square miles; a---, not determined for canals]

Station name	Station number	Drainage area (mi^2)	Period of record
St. Joseph River near Blakeslee	04177500	394	1926-32
St. Marys River near Willshire	04181000	354	1926-32
Maumee River at Antwerp	04183500	2,129	1922-35 1939-82
Maumee River near Sherwood	04184000	2,275	1903-06
Tiffin River near Brunersburg	04185500	736	1928-36
Miami and Erie Canal at Delphos	04186000	a---	1928-33
Ottawa River at Lima	04187100	128	1988-99
Ottawa River at Allentown	04187500	160	1924-36 1943-82
Ottawa River at Kalida	04188000	309	1931-36
Eagle Creek near Findlay	04188500	55.0	1947-57
Blanchard River at Glandorf	04189500	644	1921-28 1947-52
Blanchard River at Dupont	04190000	756	1928-36
Roller Creek at Ohio City	04190500	5.14	1946-48
Town Creek near Van Wert	04191000	21.2	1945-53
Miami and Erie Canal near Defiance	04192000	a---	1925-29 1953-69
Miami and Erie Canal at Waterville	04193000	a---	1921-29
Swan Creek at Toledo	04194000	199	1945-48
Portage River near Pemberville	04194500	337	1930-35
North Branch Portage River near Bowling Green	04195000	45.1	1924-32
Lacarpe Creek near Oak Harbor	04195825	2.95	1988-92
Bayou Ditch near Oak Harbor	04195830	2.82	1988-92
Broken Sword Creek at Nevada	04196200	83.8	1976-81
Tymochtee Creek near Marseilles	04196600	137	1970-74
Sandusky River near Mexico	04197000	774	1923-36 1938-82
Honey Creek near New Washington	04197020	17	1979-89
Wolf Creek at Bettsville	04197300	66.2	1976-81
East Branch Wolf Creek near Bettsville	04197450	82.4	1976-81
Havens Creek at Havens	04197500	4.28	1946-49
East Branch Huron River near Norwalk	04198500	85.5	1924-35
Old Woman’s Creek at U.S. Highway 6 at Huron	04199165	26.5	1980-94
Lake Erie at Huron	04199170		1980-86
Lake Erie at Ruggles Beach	04199175		1987-94
Vermilion River near Fitchville	04199287	112	1987-89 1991-93

Discontinued Surface-Water-Discharge Stations—Continued

[mi^2, square miles; a---, not determined for canals]

Station name	Station number	Drainage area (mi^2)	Period of record
West Branch Black River above Lake Street at Elyria	04200430	174	1980-84
Cuyahoga River near Kent	04202500	210	1934-35
Breakneck Creek near Kent	04203000	77.6	1927-35
Cuyahoga River at Cuyahoga Falls	04203900	333	1999-2001
Little Cuyahoga River at Mogadore	04204000	14.3	1946-78
Little Cuyahoga River at Massillon Road at Akron	04204500	31.6	1946-74
Springfield Lake Outlet at Akron	04205000	9.72	1946-49 1961-74
Little Cuyahoga River at Akron	04205500	44.4	1920 1928-34
Little Cuyahoga River Below Ohio Canal at Akron	04205700	59.2	1974-79
Yellow Creek at Ghent	04206208	12.7	1992-98
North Fork at Bath	04206210	2.81	1992-98
Park Creek at Bath Center	04206211	0.826	1992-98
Bath Creek at Bath Center	04206215	3.52	1992-98
Cuyahoga River at Ira	04206250	478	1974-79
Ohio Canal at Independence	04207500	a---	1922-23 1927-36 1941 1949-80
Grand River near North Bristol	04209500	85.4	1942-47
Phelps Creek near Windsor	04210000	25.6	1942-59
Grand River near Rome	04210500	251	1942-47
Rock Creek near Rock Creek	04211000	69.2	1942-66
Mill Creek near Jefferson	04211500	82.0	1942-74
Grand River near Madison	04212000	581	1923-35 1938-74
Ashtabula River near Ashtabula	04212500	111	1924-36 1939-48 1950-79

Discontinued Surface-Water-Quality Stations

The following continuous-record surface-water-quality stations have been discontinued. Daily records of temperature, specific conductance, pH, dissolved oxygen, or sediment were collected and published for the period of record, expressed in water years, shown for each station. Discontinued project stations with less than 3 years of record 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.

[mi^2, square miles; letters designate type of record: do, dissolved oxygen; pH, pH; s, sediment; sc, specific conductance; t, temperature]

Station name	Station number	Drainage area (mi^2)	Type of record	Period of record
Maumee River at Antwerp	04183500	2,129	t	1939-82
Maumee River at Defiance	04184100	2,316	do, sc, t	1966-70
			pH	1973-78
Tiffin River at Evansport	04185300	541	do, pH, sc, t	1968-78
Auglaize River near Ft. Jennings	04186500	332	do, pH, sc, t	1969-78
Ottawa River at Allentown	04187500	160	sc, t	1969-82
			do, pH	1977-82
Auglaize River at Cloverdale	04188200	713	do, pH, sc, t	1967-78
Blanchard River near Findlay	04189000	346	do, pH, sc, t	1968-80
Auglaize River near Defiance	04191500	2,318	s	1936
			do, pH, sc, t	1966-76
Maumee River near Waterville	04193490	6,313	do, pH, sc, t	1977-91
Maumee River at Waterville	04193500	6,329	do, pH, sc, t	1963-77
Maumee River at mouth at Toledo	04194023	6,608	do, pH, sc, t	1967-75
Middle Branch Portage River near Portage	04194310	217	sc, t	1969-75
Portage River at Railroad Bridge at Woodville	04195600	428	do, pH, sc, t	1968-80
Portage River at Elmore	04195800	432	t	1950-52
			s	1950-53
			do	1970-80
Sandusky River near Upper Sandusky	04196500	298	do, sc, t	1969-79
			pH	1977-79
Tymochtee Creek at Crawford	04196800	229	do, pH, sc, t	1968-75
Sandusky River at St. Johns Bridge near Mexico	04196990	711	do, sc, t	1969-76
Honey Creek at Melmore	04197100	141	s	1988-89
Sandusky River near Fremont	04198000	1,251	s	1951-56
				1979-2002
Sandusky River below Fremont	04198005	1,264	do, pH, sc, t	1966-80
West Branch Huron River near Willard	04198018	86.0	sc, t	1968-75
Huron River at Milan	04199000	371	s	1970-74
			s	1988-91
Huron River below Milan	04199100	385	do, pH, sc, t	1968-78
Vermilion River near Fitchville	04199287	112	s	1987-89
Vermilion River near Vermilion	04199500	262	sc, t	1969-76
			do, pH	1976-80
East Branch Black River at Grafton	04199900	170	sc, t	1969-75
West Branch Black River near Elyria	04200400	170	sc, t	1969-75
West Branch Black River above Lake Street at Elyria	04200430	174	s	1980-81
Black River at Elyria	04200500	396	t	1962-70
			sc	1964-70
			s	1980-81

Discontinued Surface-Water-Quality Stations—Continued

[mi^2, square miles; letters designate type of record: do, dissolved oxygen; pH, pH; s, sediment; sc, specific conductance; t, temperature]

Station name	Station number	Drainage area (mi^2)	Type of record	Period of record
Black River below Elyria	04200550	412	do, sc, t	1966-82
			pH	1976-82
Cuyahoga River at Old Portage	04205700	59.2	do, pH, sc, t	1970-84
			s	1972-81
Cuyahoga River at Botzum	04206200	443	t	1947-49
Tinkers Creek at Bedford	04207200	83.9	s	1972-79
Cuyahoga River at Independence	04208000	707	s	1950-74
			do, sc, t	1965-91
			pH	1972-91
			s	1977-84
			s	1988-2002
Big Creek at Cleveland	04208502	35.3	s	1978
Cuyahoga River at Dupont Intake in Cleveland	04208505	794	sc	1964-75
Cuyahoga River at West Third Street Bridge	04208506	798	do, pH, sc, t	1966-87
Cuyahoga River at Superior Street Bridge in Cleveland	04208510	808	do, pH, sc, t	1964-66
Chagrin River at Willoughby	04209000	246	t	1950
			s	1969-74
Grand River at Painesville	04212200	701	do, pH, sc, t	1966-82
Fields Brook at Ashtabula	04212680	3.63	do, pH, sc, t	1983-91
Ashtabula River at Ashtabula	04212700	136	do, pH, sc, t	1968-79

INTRODUCTION

The Water Resources Discipline of the U.S. Geological Survey (USGS), in cooperation with state agencies, obtains a large amount of data each water year (a water year is the 12-month period from October 1 through September 30 and is identified by the calendar year in which it ends) pertaining to the water resources of Ohio. These data, accumulated during many 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 USGS, they are published annually in this report series entitled “Water Resources Data—Ohio.”

This report (in two volumes) includes records on surface water and ground water in the State. Specifically, it contains (1) discharge records for streamflow-gaging stations, miscellaneous sites, and crest-stage stations, (2) stage and content records for streams, lakes, and reservoirs, (3) water-quality data for streamflow-gaging stations, wells, synoptic sites, and partial-record sites, and (4) water-level data for observation wells. Locations of lake- and streamflow-gaging stations, water-quality stations, and observation wells for which data are presented in this volume are shown in figures 1a through 1b (located after “contents”). The data in this report represent that part of the National Water Information System collected by the USGS and cooperating State and Federal agencies in Ohio.

This series of annual reports for Ohio 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 was changed to present (in two or three volumes) data on quantities of surface water, quality of surface and ground water, and ground-water levels.

Prior to the introduction of this series, and for several years concurrent with it, water-resources data for Ohio were published in a series of USGS 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, Parts 3 and 4.” For the 1961 through 1970 water years, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title “Quality of Surface Waters of the United States,” and ground-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 can be found in libraries of the principal cities of the United States and can be purchased from the U.S. Geological Survey, Information Services, Box 25286, Denver, CO 80225.

Publications similar to this report are published annually by the USGS for all states. These official USGS reports are identified by means of a 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 OH-03-2.” For archiving and general distribution, the reports for 1971-74 water years are also identified as water-data reports. These water-data reports can be purchased in paper copy or in microfiche from the National Technical Information Service, U.S. Department of Commerce, 5285 Port Royal Road, Springfield, VA 22161.

USGS water data can be accessed on the World Wide Web at *http://water.usgs.gov*. Data at this Web site include historical daily values and peaks, real-time water data, and spatial data. (The USGS Ohio District’s Web site can be accessed at *http://oh.water.usgs.gov*.)

Additional information for specific reports may be obtained by writing the District Chief at the address given on the back of title page or by telephoning (614) 430-7700.

COOPERATION

The USGS has had cooperative agreements for the collection of water-resources data since 1898. The following organizations assisted in collecting data in this report:

Cities of Akron, Canton, Columbus (Water Division and Sewerage and Drainage Division), Fremont,

Oregon, Toledo, and Westerville
Counties of Clermont, Geauga, Knox, Lake, Lucas, Lorain, Madison, Ross, and Summit
Eastgate Development and Transportation Agency
Hamilton and New Baltimore Groundwater Consortium
Miami Conservancy District
Natural Resources Conservation Service
Northeast Ohio Regional Sewer District
Ohio Departments of Health, Natural Resources (Mineral Resources Management and Water Divisions) and Transportation
Ohio Water Development Authority
Ottawa Soil and Water District
State of Ohio Adjutant General's Department
Toledo Metropolitan Area Council of Governments
Villages of Chagrin Falls, North Olmstead, and South Russell
U.S. Air Force, Air Force Materiel Command, Aeronautical Systems Center, Environmental Management Directorate, Restoration Branch
U.S. Army Corps of Engineers (Buffalo, Huntington, Louisville, and Pittsburgh Districts)

SUMMARY OF HYDROLOGIC CONDITIONS

Ohio is part of three physiographic provinces. Each province has its own distinctive hydrologic characteristics. The topography of the Till Plains Section of the Central Lowlands Physiographic Province (fig. 2) consists of gently rolling ground moraine, bands of terminal moraine, and outwash-filled valleys. Glaciation altered the courses of most streams in this area. The Eastern Lake Section (fig. 2) consists of wide expanses of level or nearly level land interrupted only by the sporadic sandy ridges that are the last visible remnants of glacial-lake beaches. Much of the area was swamp prior to development, and marshes are still present along Lake Erie near Toledo. The Lexington Plain Section of the Interior Low Plateaus Province (fig. 2) is characterized by rolling terrain and a few isolated large hills and ridges. The "barbed" drainage pattern formed when small streams were captured as their headwaters cut back into the hills over time. Streams have carved the Kanawha Section of the Appalachian Plateaus Province (fig. 2) into an intricate series of hollows and steep-sided ridges. Only the large streams in the section have any appreciable flood plain. In the southern New York Section (fig. 2), successive waves of glaciation have subdued the relief, buried many preglacial valleys, and rerouted many streams.

Precipitation

The average annual precipitation in Ohio is about 38 inches. The annual precipitation decreases from around 42 inches on the southern border to about 32 inches in the northwest. An anomalous area of high precipitation (as much as 44 inches) in northeastern Ohio results from air masses that pick up moisture and heat from Lake Erie and subsequently release precipitation over a range of hills stretching northeastward from Cleveland.

Monthly precipitation typically is greatest from May through July and least in October, December, and February. Of the approximate 38 inches of average annual precipitation, about 10 inches runs off immediately, 2 inches is retained at or near the surface and evaporates and transpires, and 26 inches enters the ground. Of the 26 inches that enters the ground, 20 inches is retained in the unsaturated zone and is later lost by evapotranspiration. The remaining 6 inches reaches the water table. Of this 6 inches, 2 inches eventually discharges to streams, and the rest is lost by evapotranspiration and consumptive use. Average runoff ranges from about 15 to 18 inches along the southern border to about 8 to 12 inches along most of the northern border, except in the northeast, where runoff is as much as 20 inches. The pattern of streamflow differs from the pattern of precipitation because of the contributions of snowmelt to streamflow in the early spring and the reduction in flows by evapotranspiration from June through September.

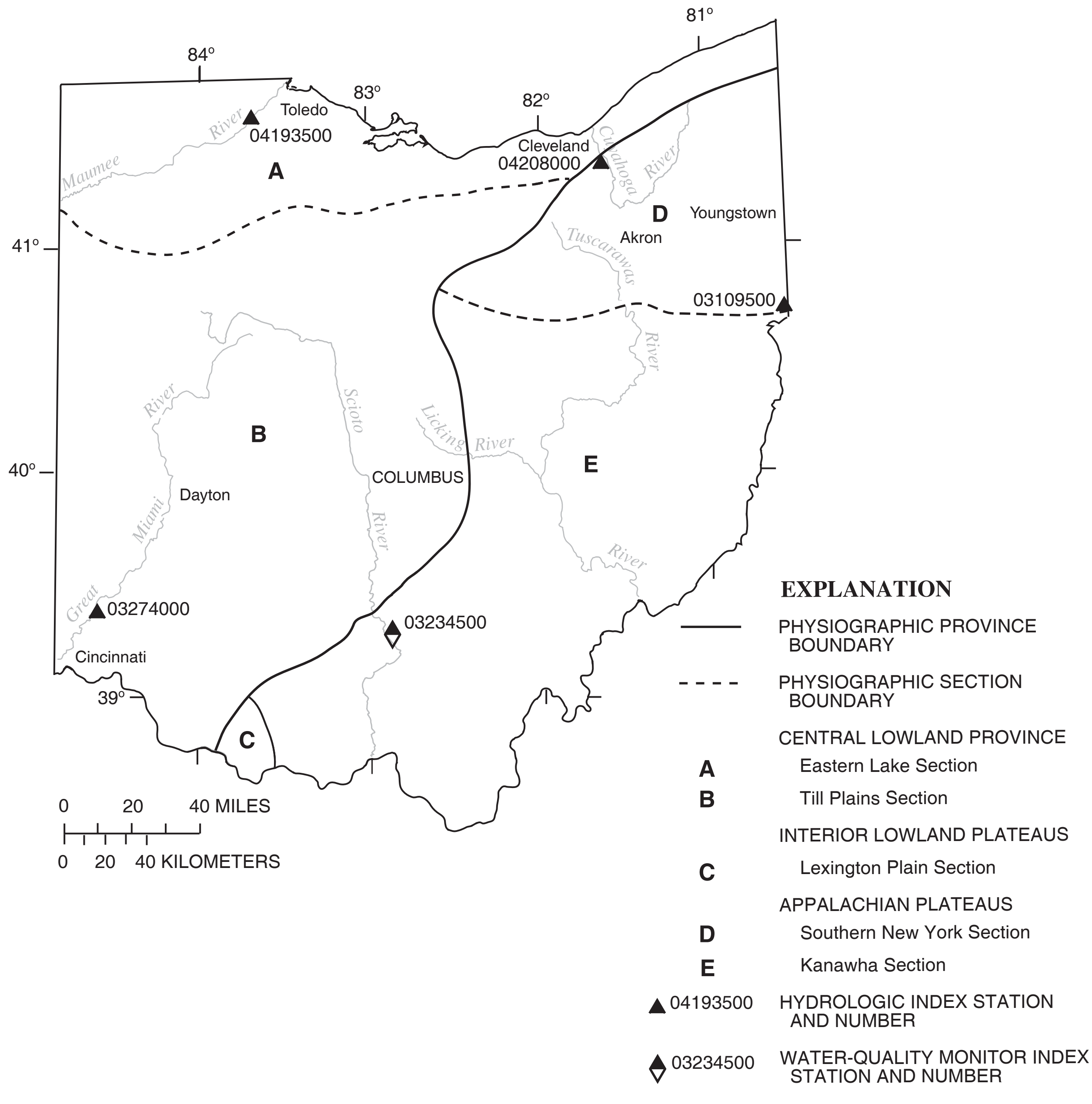

Figure 2. Physiographic divisions and location of hydrologic index stations.

Surface Water

Streamflow

Streamflow-data-collection stations are distributed irregularly throughout the State and tend to be concentrated on the main river systems. The stations are used to sample a wide variety of conditions. The drainage areas range from less than four to more than 6,330 square miles and represent a wide diversity of topography and other physical characteristics. Streamflow ranges from unregulated to highly regulated.

Statewide Streamflow, Water Year 2003. Streamflow conditions during water year 2003 were as follows:

October. At the beginning of water year 2003, streamflow was in the normal[1] to below-normal range in southern Ohio and below normal in northern Ohio

November-December. Streamflow was generally in the normal range in the southern part of Ohio and below normal in northern Ohio throughout the period.

January-February. Normal to below-normal streamflow prevailed throughout the State in response to near-normal precipitation.

March. Runoff from snowmelt caused streamflow to rise into the above-normal range in southwest Ohio and into the normal range for the remainder of the State.

April. Streamflow declined into the deficient range in southern Ohio in response to below-normal precipitation. Flows remained normal in the northern part of the State.

May-June. Excessive flows prevailed statewide in May due to above-normal precipitation. Flows declined into the normal range by the end of the period except in southwest Ohio, where they remained above normal.

July-September. Well above normal precipitation produced excessive flows throughout Ohio for the remainder of the water year. Record daily and monthly flows were established at several gages during the period. At the close of water year 2003, streamflow was above normal statewide.

A comparison of streamflows for 2003 with long-term median flows at four representative stations is shown in figure 3.

Water Quality

Water-quality data in Ohio are collected on a short-term basis in conjunction with local or regional studies. On a long-term basis, water-quality data in Ohio are collected at fixed stations. The only active long-term monitoring program in Ohio is the National Water-Quality Assessment (NAWQA) Program, a program designed to assess the status and trends in the quality of ground- and surface-water resources in major hydrologic systems (study units) of the United States. Sampling in NAWQA began in 1991 in the Nation and in March 1996 at some sites in Ohio as part of the Lake Erie-Lake St. Clair (LERI) study unit. Sampling began in 1999 at some sites as part of the Great Miami and Little Miami River Basins (MIAM) study unit. In 2001, watersheds in the MIAM study unit were combined with those in the White River Basin study unit in Indiana to form the White and Great and Little Miami River Basins study unit (WHMI). During 2003, the LERI NAWQA was in its low-intensity data-collection phase; water-quality data were collected at five fixed stations eight times per year. During 2003, the WHMI was in its high-intensity data-collection phase and collected water-quality data 18 times per year at two fixed sites in Ohio. Samples at NAWQA sites are collected over a range of streamflows and are analyzed for major anions and cations, nutrients, pesticides, suspended sediment, and selected physical properties.

Several continuous years of water-quality data collected as part of the NAWQA program for two sites are shown in figures 4 and 5—the Maumee River at Waterville and the Mad River at St. Paris Pike at Eagle City.

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[1] For streamflow, “normal” is defined as being between the 25th and 75th percentiles as measured during the base period, water years 1971-2000.

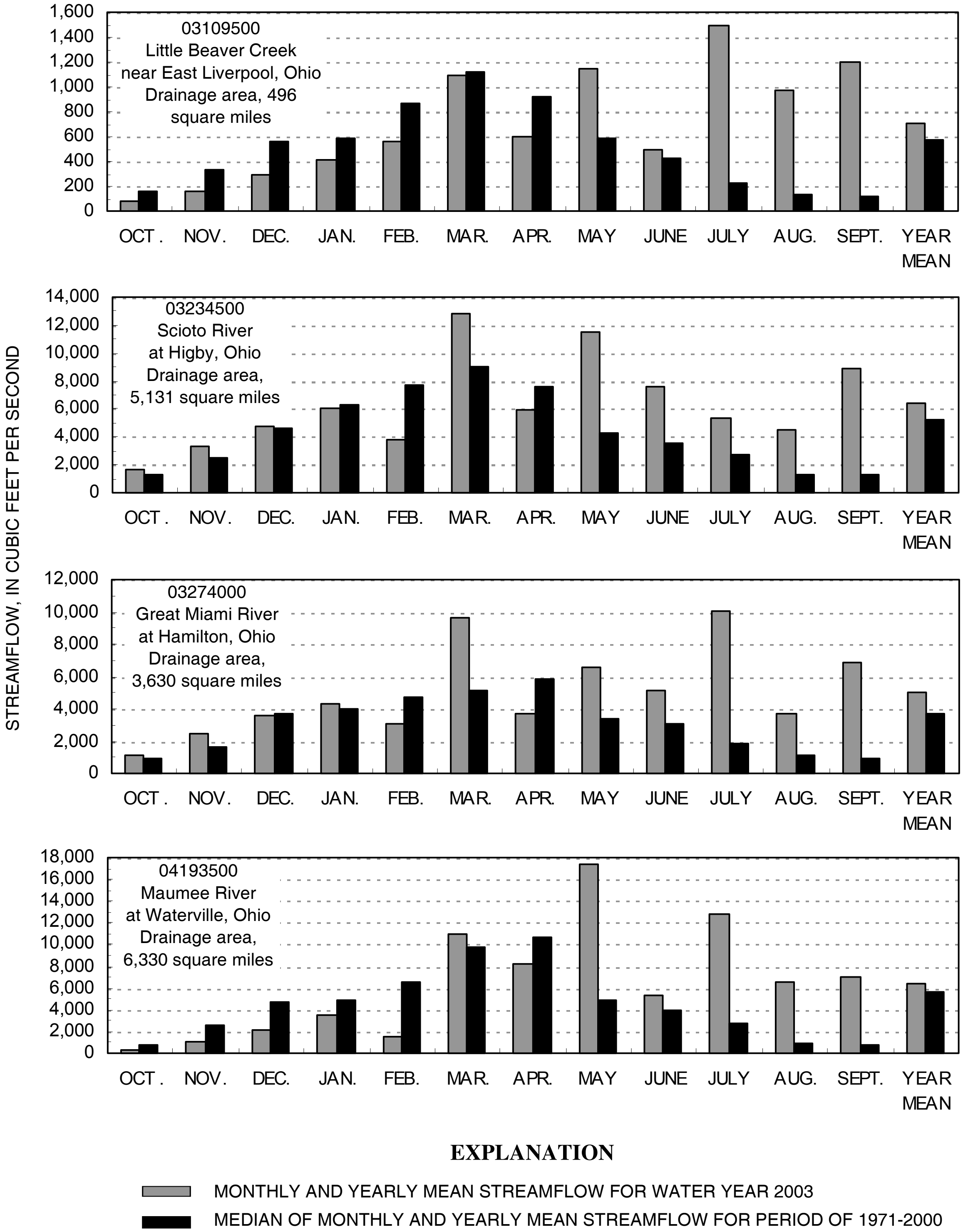


Figure 3. Streamflow during water year 2003 compared with median streamflow for period 1971-2000 for four representative gaging stations.

Streamflows and concentrations of selected constituents measured during the previous 7-year period (1996 to 2002) for the Maumee River and previous 4-year period (1999 to 2002) for the Mad River are shown in boxplots. Results of analysis of samples collected in water year 2003 are superimposed on the box plots and are represented by dark circles.

The values for streamflow measured at the time of water-quality sampling during 2003 were similar to those found during the previous 7-year period for the Maumee River but not for the Mad River. For the Maumee River in 2003, three out of eight samples were collected at low flow (below the 25th percentile for the previous 7-year period), two at a moderate flow (between the 25th and 75th percentile), and three at high flow (above the 75th percentile). For the Mad River, samples collected during 2003 were collected during higher streamflows than for the previous 4-year period; no samples were collected at low flow, 12 were collected at medium flow, and 6 were collected at high flow.

At both sites, chloride concentrations (commonly associated with municipal or industrial point sources of wastewater) were in the same range in 2003 as concentrations measured during the previous periods. For the Maumee River, chloride concentrations determined in eight samples collected during 2003 ranged from 10 to 96 milligrams per liter (mg/L), with a median of 42 mg/L. For the Mad River, concentrations determined in 11 samples collected during 2003 were lower than in the Maumee, ranging from 11 to 29 mg/L, with a median of 21 mg/L.

Out of the 26 samples collected for nitrate plus nitrite during 2003 at these two sites, none exceeded the U.S. Environmental Protection Agency Maximum Contaminant Level for finished drinking water (10 mg/L, as N). In Ohio, fertilizers are a major source of nitrate. Concentrations in the Maumee River in 2003 were in the same range as those found during the previous 7-year period. Similarly, in the Mad River, nitrate plus nitrite concentrations during 2003 were in the same range as those found during the previous 4 years, except that no outside values above the 95th percentile were found during 2003.

Agricultural runoff and municipal and industrial point sources are the principal sources of phosphorus in Ohio. Increased phosphorus concentrations may lead to a high rate of production of plant materials in water and eutrophication of the receiving water. During 2003, median concentrations of total phosphorus were 0.129 mg/L for the Maumee River and 0.053 mg/L for the Mad River. Phosphorus concentrations are affected by streamflow. For 2003 in the Mad River, 11 out of 18 samples were above the median phosphorus concentration for the previous 4-year period (0.05 mg/L), probably the result of higher streamflows during 2003.

The Maumee and Mad Rivers are in areas of heavy herbicide use. Not surprisingly, atrazine was detected in 100 percent of the water sample collected . Atrazine concentrations found in samples collected during 2003 were generally in the same range as those found during the previous periods. In the Maumee River during 2003, atrazine concentrations ranged from 0.113 to 16.7 micrograms per liter (μg/L); in the Mad River, atrazine concentrations were lower and ranged from 0.01 to 1.7 μg/L. The atrazine concentration in one samples from the Maumee River exceeded the U.S. Environmental Protection Agency's Maximum Contaminant Level of 3 μg/L.

Elevated suspendend-sediment concentrations result from periods of high streamflows and are exacerabated by increased development and agriculture. Suspended-sediment concentrations in the Maumee River in 2003 were lower than those found during the previous 7-year period; the median value for 2003 was 19 mg/L, whereas the median for the previous period was 67 mg/L. At the Mad River, concentrations during 2003 were somewhat higher than those measured during 1999-2002; median concentrations were 38 and 28 mg/L, respectively.

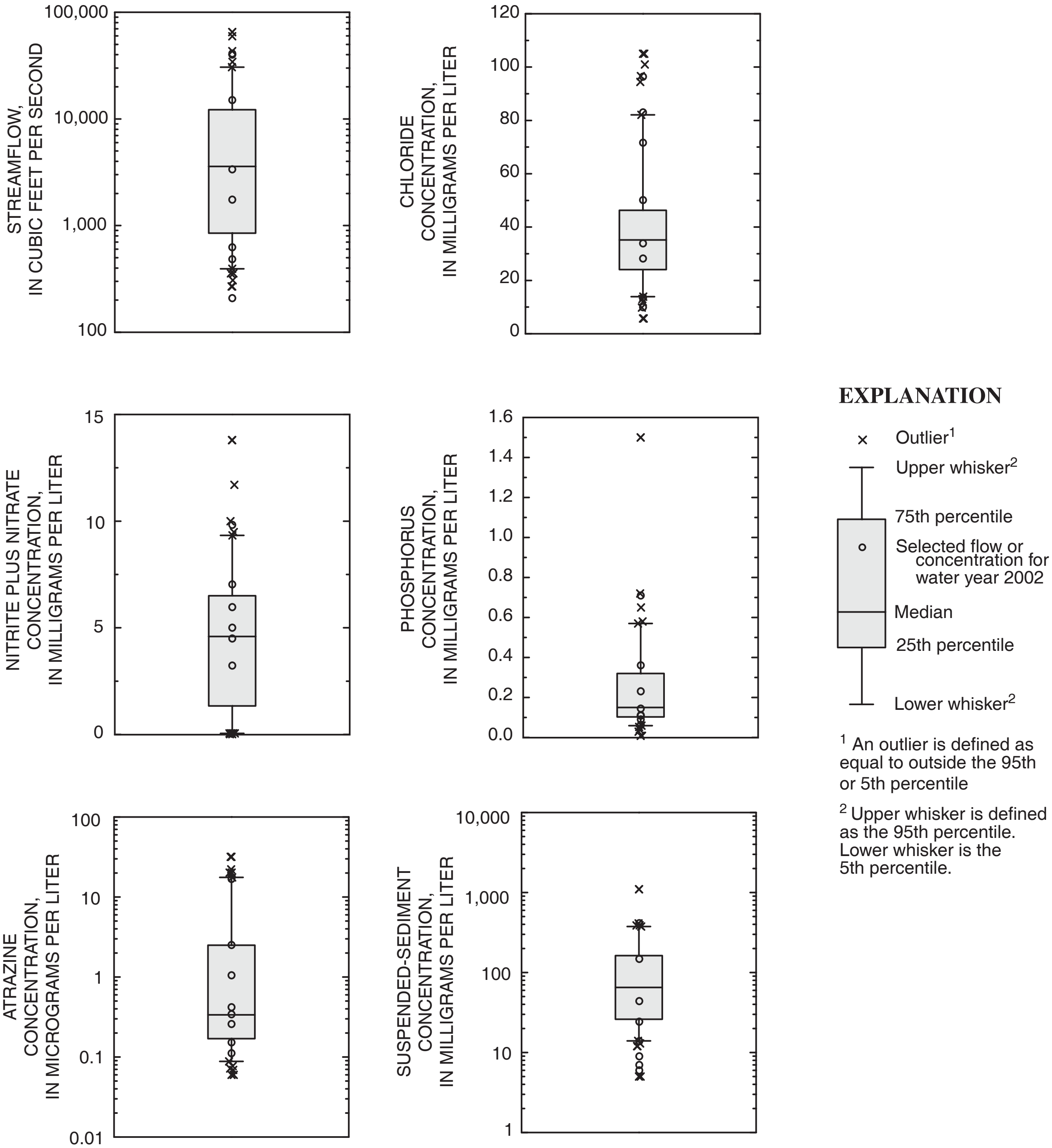


Figure 4. Streamflow and concentration of select constituents measured in water year 2003 and the distribution of those characteristics from measurements made during water years 1996-2002 for the Maumee River at Waterville, Ohio.

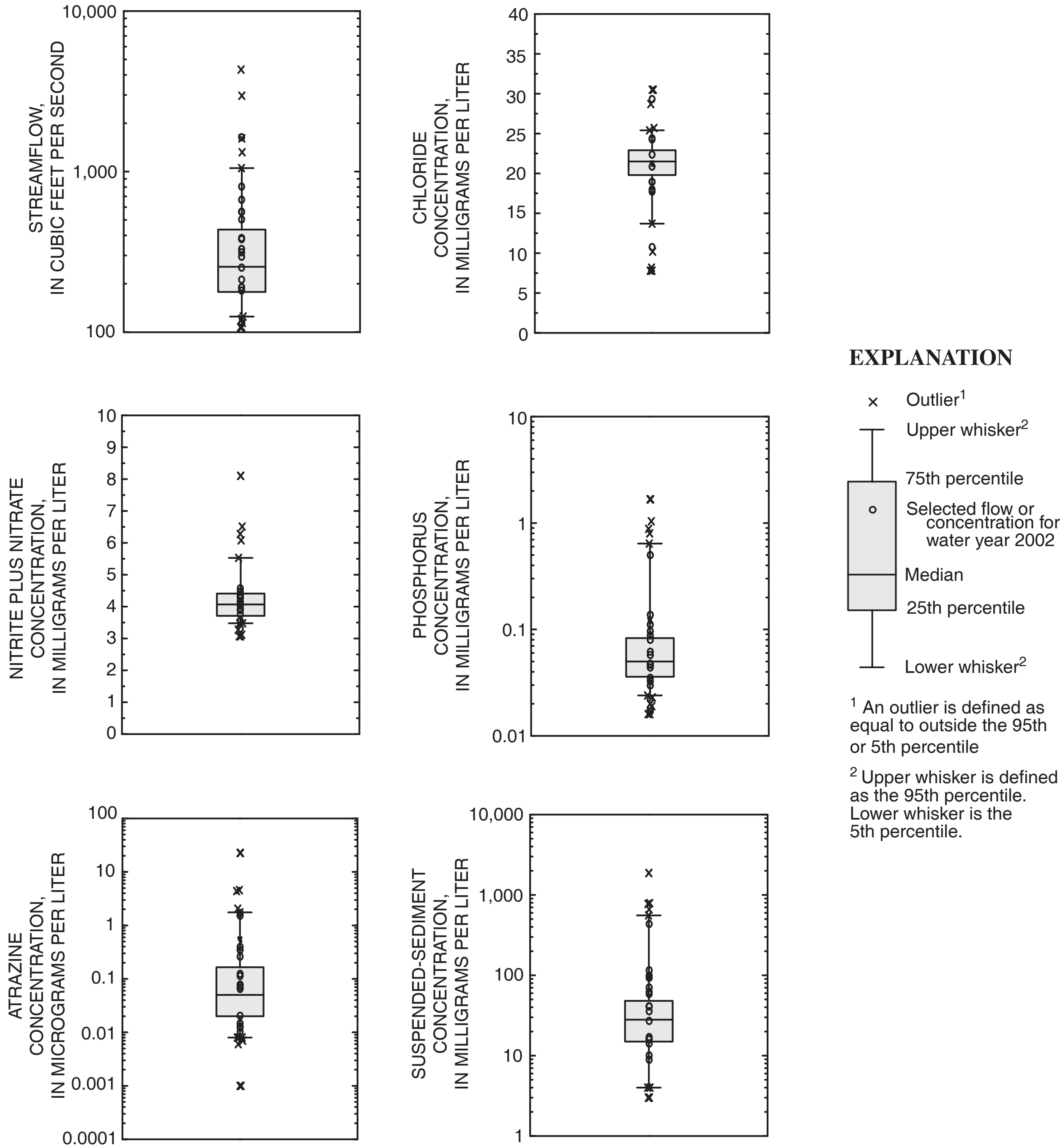


Figure 5. Streamflow and concentration of select constituents measured in water year 2003 and the distribution of those characteristics from measurements made during water years 1999-2002 for the Mad River at St. Paris Pike at Eagle City, Ohio.

Ground Water

Ground water serves the needs of 46 percent of Ohio's population. An estimated 800 million gallons of ground water per day is withdrawn for public-supply, domestic, industrial, and agricultural purposes. Many people in Ohio depend on ground water as the only practical source of supply.

Ohio's unconsolidated aquifers are composed of either coarse- or fine-grained sediments. Both types are composed mainly of materials of glacial origin. The coarse-grained unconsolidated aquifers generally consist of highly permeable sand and gravel. Much of the sand and gravel is alluvium derived from glaciofluvial outwash along the courses of some modern streams; thus, these aquifers sometimes are referred to as “watercourse” aquifers. Coarse-grained unconsolidated aquifers in the northwestern corner of the State (fig. 6) underlie glacial till, are locally confined under artesian pressure, and are highly productive. Extensive kame-terrace deposits of water-bearing gravel and sand are widely used ground-water sources in northeastern Ohio. The fine-grained unconsolidated aquifers are similar to the coarse-grained unconsolidated aquifers in form and origin but are less permeable because of higher percentages of mixed fine sand, silt, and clay. Included in the fine-grained unconsolidated aquifers are tills that contain thin or localized stratified lenses of sand and gravel.

Ground-water supply for much of the unglaciated upland area of southeastern Ohio is from bedrock aquifers composed of shaly sandstone and thin limestone. These strata, which range from Mississippian to Permian in age, are dominated by low-yielding shales and shaly sandstones that include numerous coal-bearing strata. In some places, small water supplies are available from fractured coal beds. Several sandstone aquifers in northeastern Ohio are of regional extent and are major ground-water sources for individual and small public supplies. These include the Berea and Black Hand Sandstones of Mississippian age and several sandstone members of the Pottsville and Allegheny Formations of Pennsylvanian age. The Lake Erie coastline of northeastern Ohio is underlain by shale of Devonian and Mississippian age (fig. 6) that yields only small amounts of water to wells. Silurian-age limestone and dolomite and Devonian limestone comprise the carbonate aquifer system (fig. 6) of much of western Ohio. Glacial cover is uneven and consists of valley fill and terminal moraine in some places. The northeastern part of western Ohio contains an area of high-yielding wells that tap a preferentially weathered zone, which developed when a carbonate section was periodically exposed as land mass during the Paleozoic Era. The southwestern corner of Ohio near Cincinnati is underlain by shale and a thin limestone aquifer of Ordovician age. Away from the watercourse (coarse unconsolidated) aquifers that traverse the area, the rocks that form the uplands yield only very small amounts of ground water.

Ground-Water Levels

Most ground-water observation wells in Ohio tap unconsolidated sand and gravel aquifers associated with the State's principal streams. Sample 1-year and 5-year hydrographs of a well completed in an unconfined unconsolidated sand-and-gravel aquifer are shown in figure 7. The observation-well network also includes some bedrock wells in areas where consolidated aquifers are heavily used for water supply, such as in the carbonate-rock region of northwestern Ohio. Sample 1-year and 5-year hydrographs of a well completed in a confined carbonate-rock aquifer are shown in figure 8. The yearly low for most wells occurs during the winter months, especially in cold, dry years or near the end of the growing season. Highs for the year usually occur from March through June, which is the peak of the recharge season. The yearly water-level fluctuation due to climatic conditions in water-table and confined-aquifer wells is commonly 3 to 5 feet but can be as much as 10 feet.

Ground-water conditions in Ohio during water year 2003 were as follows:

October. At the beginning of water year 2003, ground-water levels were below normal in most aquifers throughout the state. Levels declined in October and remained below normal.

November-December. Ground-water levels showed some response to normal to above-normal precipitation during the period; however, levels remained below normal statewide.

January-March. A combination of above-normal precipitation and periods of snowmelt produced net rises in ground-water levels throughout Ohio, but levels continued to be below normal.
June-July. Above-normal precipitation during the period produced net rises in ground-water levels statewide. Levels rose to above normal in consolidated aquifers but remained below normal in unconsolidated aquifers.
August-September. Seasonal declines occurred throughout the period; but in response to above-normal precipitation, ground-water levels were above normal statewide.

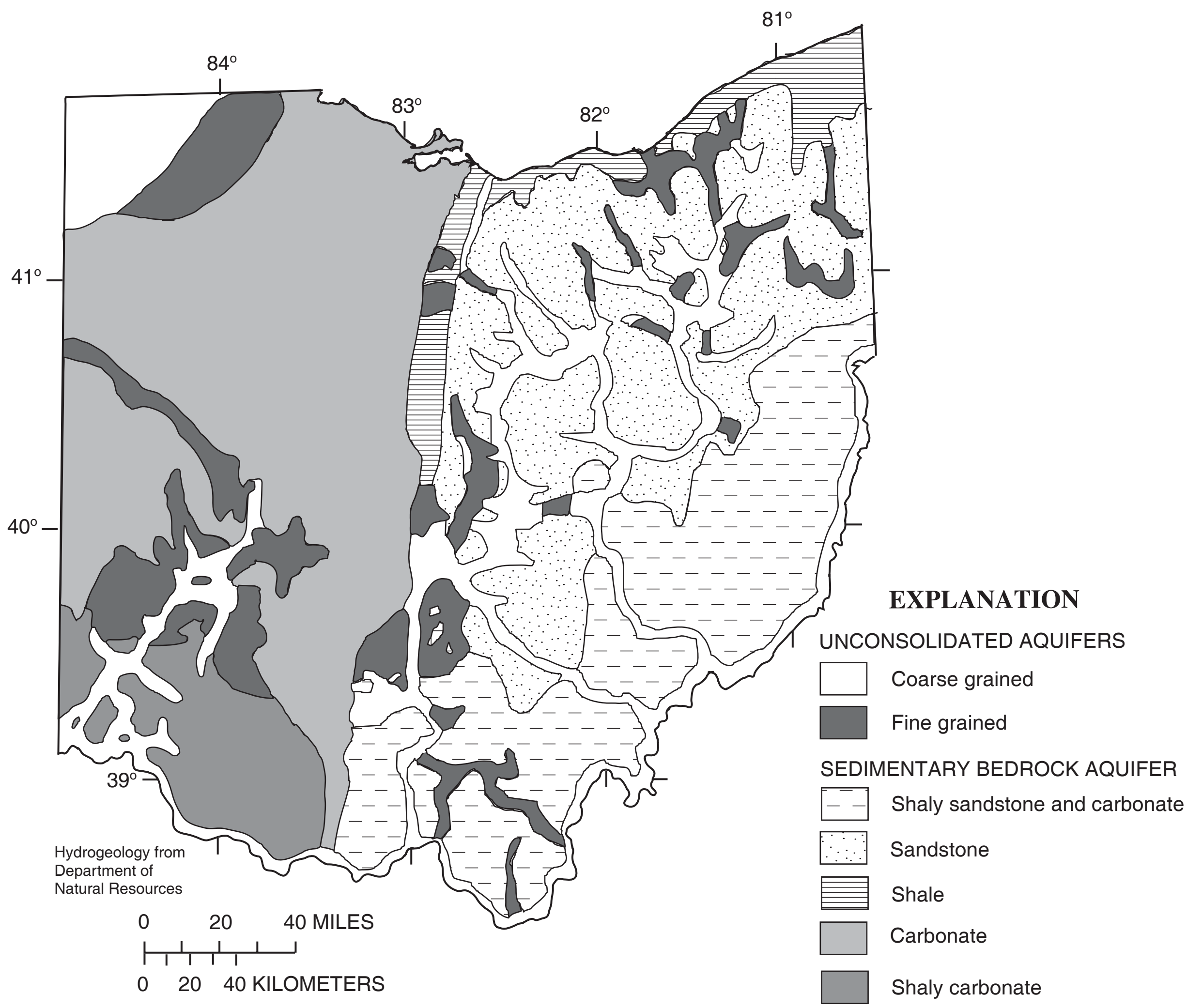
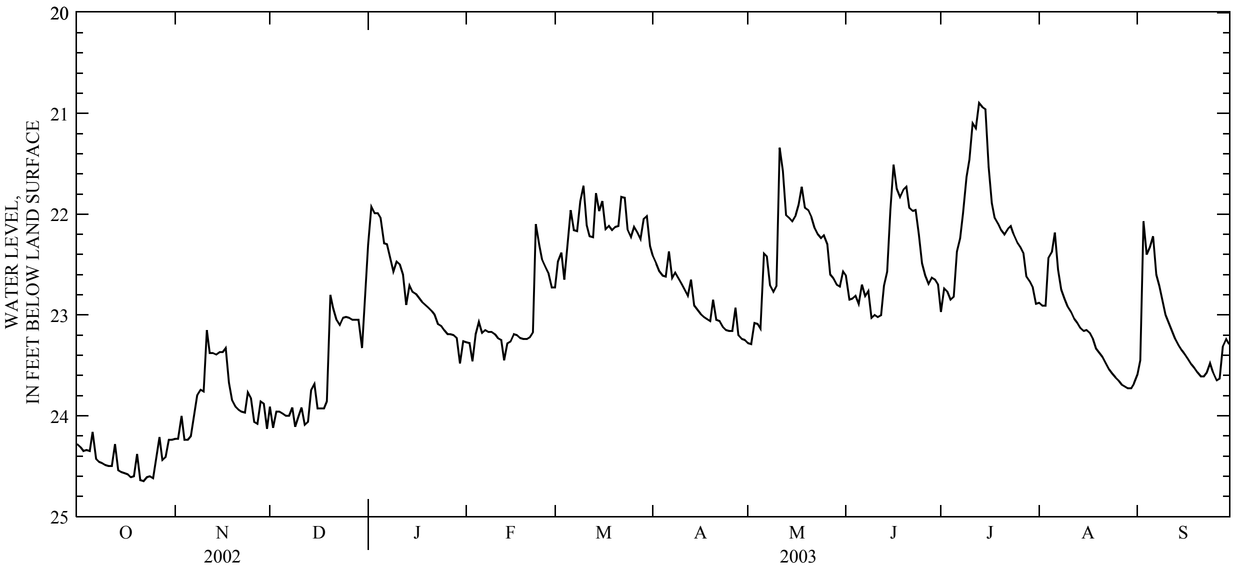


Figure 6. Geographic distribution of principal aquifers in Ohio.



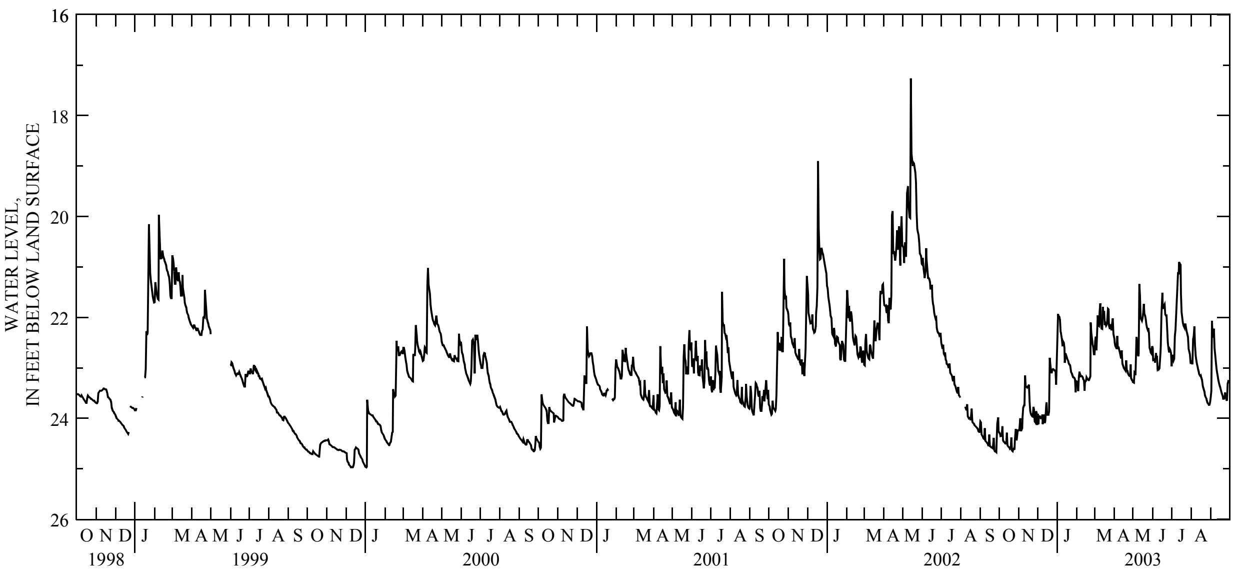


Figure 7. Sample of 1-year and 5-year hydrographs of well H-1 (391717084393300), completed in a unconfined unconsolidated aquifer.

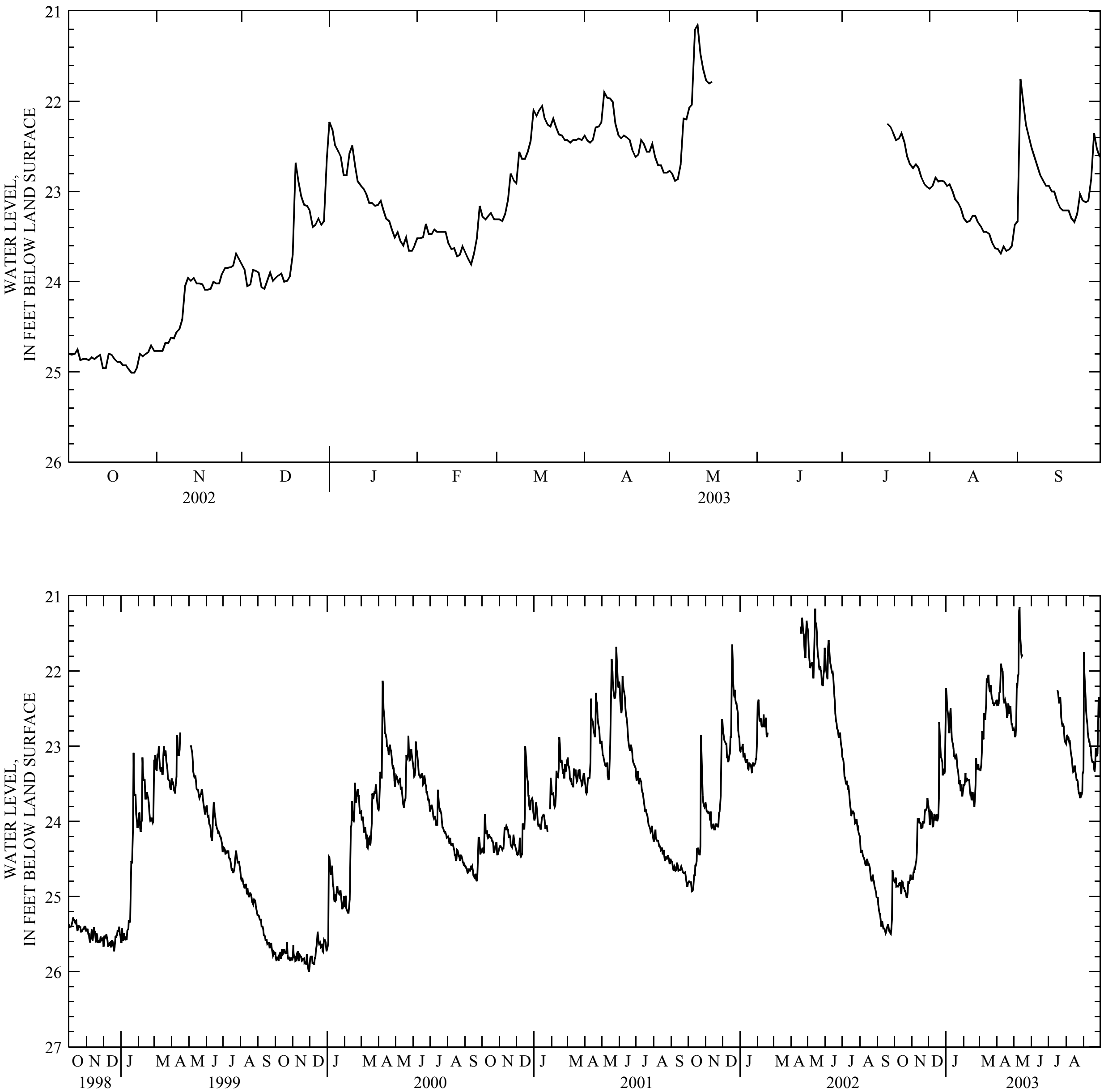


Figure 8. Sample of 1-year and 5-year hydrographs of well U-4 (401826083255200), completed in a confined carbonate-rock aquifer.

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 indention 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 09004100, which appears just to the left of the station name, includes a 2-digit part number "09" plus the 6-digit (or 8-digit) downstream order number "004100." 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. 9). 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.

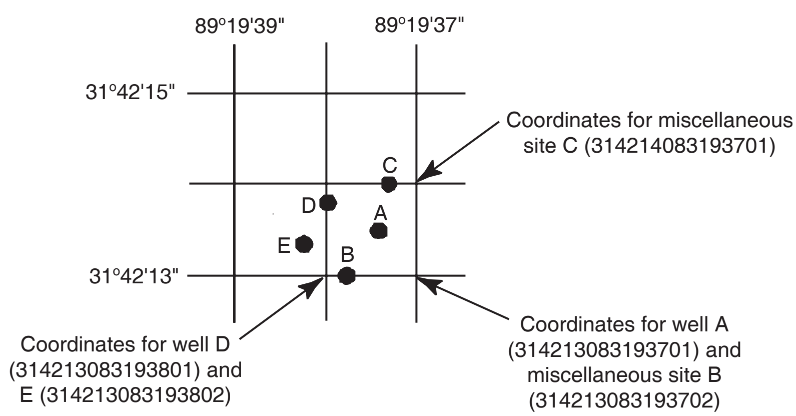


Figure 9. System for numbering wells and miscellaneous sites (latitude and longitude).

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 re-mobilization 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 semiannually 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 (fig. 1a and 1b) 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 a current meter or acoustic Doppler current profiler, 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 (TWRIs), 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).

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 ultrasonic or acoustic instruments 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, 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; and (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.

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/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.

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 ft^3/s; to the nearest tenths between 1.0 and 10 ft^3/s; to whole numbers between 10 and 1,000 ft^3/s; and to 3 significant figures above 1,000 ft^3/s. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to 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 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 1a and 1b.

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.

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 TWRIs Book 1, Chapter D2; Book 3, Chapters A1, A3, and A4; and Book 9, Chapters A1-A9. These TWRIs 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 TWRIs, 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 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 TWRIs 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 TWRIs 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 1c and 1d, 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, current water year 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 TWRIs. 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. Definitions of common terms such as algae, water level, and precipitation are given in standard dictionaries. Not all terms defined in this alphabetical list apply to every State. See also table for converting inch/pound units to International System (SI) units on the inside of the back cover.

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.

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 poly-chlorinated 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 is purposely placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is collected. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multiplate 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 the 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.

Bedload is material in transport that is supported primarily by the streambed. In this report, bedload is considered to consist of particles in transit from the bed to an elevation equal to the top of the bedload sampler nozzle (ranging from 0.25 to 0.5 foot) that 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”)

Bed material is the sediment mixture of which a stream-bed, lake, pond, reservoir, or estuary bottom is composed. (See also “Bedload” and “Sediment”)

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 is also called the Autotrophic Index.

Blue-green algae (*Cyanophyta*) are a group of phytoplankton organisms having a blue pigment, in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water. Concentrations are expressed as a number of cells per milliliter (cells/mL) of sample. (See also “Phytoplankton”)

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 lithology and porosity of the rock.

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 are generally reported as cells or units per milliliter (mL) or liter (L).

Cells volume (biovolume) determination is one of several common methods used to estimate biomass of algae in aquatic systems. Cell members of algae are frequently used 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:

sphere $4/3\ \pi r^3$ cone $1/3\ \pi r^2 h$ cylinder $\pi r^2 h$.

pi (π) is the ratio of the circumference to the diameter of a circle; pi = 3.14159….

From cell volume, total algal biomass expressed as biovolume (μm^3/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.

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 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 bound-aries. 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, ft^3/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, [(ft^3/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 are numerically 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, (ft^3/

s)/mi^2] is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming the runoff is distributed uniformly in time and area. (See also “Annual runoff”)

Daily mean suspended-sediment concentration is the time-weighted 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 periodic sample or 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 are usually 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 UTM coordinates. (See also “Gage datum,” “Land-surface datum,” “National Geodetic Vertical Datum of 1929,” and “North American Vertical Datum of 1988”)

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

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, etc., 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. Alternatively, 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 are commonly 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 feacalis, Streptococcus feacium, 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 are generally 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) concentration value 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 qualitatively identified 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 (<).

Euglenoids (*Euglenophyta*) are a group of algae that are usually 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 itself is not an actual physical object, the datum usually is 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 technique 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 have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algae mats or floating “moss” in lakes. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample. (See also “Phytoplankton”)

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 are typically 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.), 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 uniformly distributed on it. (See also "Annual runoff")

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

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) is generally 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. [Note: In several previous NWQL documents (NWQL Technical Memorandum 98.07, 1998), the LRL was called the nondetection value or NDV—a term that is no longer used.]

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.

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.

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

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

Micrograms per kilogram (UG/KG, µg/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, µg/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, µS/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 of 1929) is a fixed reference adopted as a standard geodetic datum for elevations determined by leveling. It was formerly 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 Vertical Datum of 1988 (NAVD 1988) 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 (m^2), acre, or hectare. Periphyton, benthic organisms, and macrophytes are expressed in these terms.

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

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 utilizes 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 (millimeters)	Method of analysis
Clay	>0.00024 - 0.004	Sedimentation
Silt	>0.004 - 0.062	Sedimentation
Sand	>0.062 - 2.0	Sedimentation or 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 mechanical 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 are usually microscopic, and their movement is subject to the water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials to the surrounding water, the phytoplankton have a profound effect upon the quality of the water. They are the primary food producers in the aquatic environment and 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 photo-synthetic 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 [mg C/(m^2/time)] for periphyton and macrophytes or per volume [mg C/(m^3/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 [mg O/(m^2/time)] for periphyton and macrophytes or per volume [mg O/(m^3/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 (<2mm, sand or finer). Below are the class categories expressed as the percentage covered by fine sediment:

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

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 (ft^3/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, 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")

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.

Synoptic studies are short-term investigations of specific water-quality conditions during selected seasonal or hydro-logic 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 hierarchial scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, *Hexagenia limbata,* is the following:

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

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 tons 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 due to 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 U.S. EPA 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 pathlength 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 are often 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, 2003, is called the “2003 water year.”

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

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

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”)

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

The USGS publishes a series of manuals titled the "Techniques of Water-Resources Investigations" that describe procedures for planning and conducting specialized work in water-resources investigations. The material in these manuals 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. Each chapter then is limited to a narrow field of the section subject matter. This publication format permits flexibility when revision or printing is required.

Manuals in the Techniques of Water-Resources Investigations series, which are listed below, are available online at *http://water.usgs.gov/pubs/twri/*. Printed copies are available for sale from the USGS, Information Services, Box 25286, Federal Center, Denver, Colorado 80225 (an authorized agent of the Superintendent of Documents, Government Printing Office). Please telephone "1-888-ASK-USGS" for current prices, and refer to the title, book number, section number, chapter number, and mention the "U.S. Geological Survey Techniques of Water-Resources Investigations." Other products can be viewed online at *http://www.usgs.gov/sales.html*, or ordered by telephone or by FAX to (303)236-4693. Order forms for FAX requests are 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.

Book 1. Collection of Water Data by Direct Measurement

Section D. Water Quality

1–D1. *Water temperature—Influential factors, field measurement, and data presentation*, by H.H. Stevens, Jr., J.F. Ficke, and G.F. Smoot: USGS–TWRI book 1, chap. D1. 1975. 65 p.

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

Section D. Surface Geophysical Methods

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

2–D2. *Application of seismic-refraction techniques to hydrologic studies,* by F.P. Haeni: USGS–TWRI book 2, chap. D2. 1988. 86 p.

Section E. Subsurface Geophysical Methods

2–E1. *Application of borehole geophysics to water-resources investigations,* by W.S. Keys and L.M. MacCary: USGS–TWRI book 2, chap. E1. 1971. 126 p.

2–E2. *Borehole geophysics applied to ground-water investigations,* by W.S. Keys: USGS–TWRI book 2, chap. E2. 1990. 150 p.

Section F. Drilling and Sampling Methods

2–F1. *Application of drilling, coring, and sampling techniques to test holes and wells*, by Eugene Shuter and W.E. Teasdale: USGS–TWRI book 2, chap. F1. 1989. 97 p.

Book 3. Applications of Hydraulics

Section A. Surface-Water Techniques

3–A1. *General field and office procedures for indirect discharge measurements,* by M.A. Benson and Tate Dalrymple: USGS–TWRI book 3, chap. A1. 1967. 30 p.

3–A2. *Measurement of peak discharge by the slope-area method,* by Tate Dalrymple and M.A. Benson: USGS–TWRI book 3, chap. A2. 1967. 12 p.

3–A3. *Measurement of peak discharge at culverts by indirect methods,* by G.L. Bodhaine: USGS–TWRI book 3, chap. A3. 1968. 60 p.

3–A4. *Measurement of peak discharge at width contractions by indirect methods,* by H.F. Matthai: USGS-TWRI book 3, chap. A4. 1967. 44 p.

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Section A. Statistical Analysis

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

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8–A1. *Methods of measuring water levels in deep wells,* by M.S. Garber and F.C. Koopman: USGS–TWRI book 8, chap. A1. 1968. 23 p.

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8–B2. *Calibration and maintenance of vertical-axis type current meters,* by G.F. Smoot and C.E. Novak: USGS–TWRI book 8, chap. B2. 1968. 15 p.

Book 9. Handbooks for Water-Resources Investigations

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04177000 OTTAWA RIVER AT UNIVERSITY OF TOLEDO, TOLEDO, OHIO

LOCATION.—Latitude 41°39′29″, longitude 83°37′19″, in NE ¼ sec. 32, T.9 S., R.7 E., Lucas County, Hydrologic Unit 04100001, on left bank at auto bridge at University of Toledo, Toledo, Ohio, 0.4 mi downstream from Deline Ditch, 5.6 mi upstream from Sibley Creek, and 10.9 mi upstream from mouth.
DRAINAGE AREA.—150 mi^2. Area at site used prior to Sept. 30, 1948, 150 mi^2, revised.
PERIOD OF RECORD.—March 1945 to September 1948 (published as "Tenmile Creek at Toledo"), August 1976 to current year.
REVISED RECORDS.—WSP 1307: Drainage area.
GAGE.—Water-stage recorder. Datum of gage is 576.28 ft above sea level. From Aug. 1976-July, 1979, at site 500 ft downstream. Prior to Sept. 30, 1948, water-stage recorder at site 2,500 ft upstream at datum 3.72 ft higher.
REMARKS.—Records fair except for periods of estimated record, which are poor. Water-quality data fomerly collected at this site.
EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of June 1, 1943, reached a stage of 15.1 ft present datum, from floodmark, Lucas County Sanitary Engineers; discharge, 3,400 ft^3/s. Flood of Apr. 25, 1950, reached a stage of 15.0 ft present datum, from floodmark; discharge, 3,300 ft^3/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	4.9	22	13	140	e8.0	e13	95	56	242	15	13	389
2	5.4	27	11	84	e10	e12	78	88	117	14	154	191
3	32	39	10	46	e15	e11	63	148	77	13	47	147
4	14	54	8.8	41	70	e10	175	86	60	16	76	85
5	25	64	8.4	35	29	e9.6	766	265	50	23	45	46
6	7.0	57	8.5	31	e20	e9.0	1090	573	41	20	23	35
7	4.9	37	8.1	25	e16	e14	494	293	35	53	18	26
8	4.8	33	7.6	27	e13	e26	310	198	31	79	31	22
9	4.2	28	6.4	32	e12	145	234	474	31	76	30	18
10	3.8	117	6.0	35	e11	48	209	894	27	63	18	16
11	3.6	89	6.5	43	e9.4	38	157	827	26	51	17	14
12	3.9	27	6.2	48	e8.6	75	122	484	159	30	71	13
13	3.7	24	6.2	e26	e8.0	192	92	295	449	20	25	12
14	3.1	20	15	e19	e7.6	218	71	172	349	15	22	13
15	3.5	17	13	e16	e7.0	382	64	149	163	16	17	29
16	3.2	15	9.0	e14	e6.6	699	59	205	96	28	28	16
17	2.7	10	8.1	e13	e6.4	978	52	150	75	14	45	12
18	2.4	8.7	11	e12	e6.0	776	54	105	57	14	27	9.9
19	12	15	128	e11	e7.0	427	48	82	51	12	17	10
20	5.7	12	127	e10	e9.0	345	54	80	44	12	13	9.7
21	3.7	12	104	e9.0	e13	465	47	67	36	32	11	12
22	3.2	44	60	e8.6	e50	446	41	56	30	14	10	110
23	3.1	29	37	e8.0	e31	263	37	46	27	14	8.5	82
24	2.9	26	25	e7.6	e25	174	31	43	23	11	7.7	67
25	19	25	27	e7.4	e20	134	29	41	20	9.2	9.6	60
26	31	20	23	e7.2	e18	116	28	38	30	7.8	9.6	39
27	7.4	17	18	e7.0	e16	98	27	35	26	28	8.8	104
28	5.2	15	16	e6.8	e14	78	26	35	17	45	9.4	72
29	4.8	13	16	e6.8	---	147	25	31	29	12	9.1	66
30	4.6	14	30	e6.6	---	218	44	30	16	9.1	8.9	41
31	16	---	76	e6.6	---	128	---	156	---	8.5	8.3	---
TOTAL	250.7	930.7	849.8	789.6	466.6	6694.6	4622	6202	2434	774.6	837.9	1766.6
MEAN	8.09	31.0	27.4	25.5	16.7	216	154	200	81.1	25.0	27.0	58.9
MAX	32	117	128	140	70	978	1090	894	449	79	154	389
MIN	2.4	8.7	6.0	6.6	6.0	9.0	25	30	16	7.8	7.7	9.7
CFSM	0.05	0.21	0.18	0.17	0.11	1.44	1.03	1.33	0.54	0.17	0.18	0.39
IN.	0.06	0.23	0.21	0.20	0.12	1.66	1.15	1.54	0.60	0.19	0.21	0.44

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	63.5	88.6	126	114	174	271	243	150	131	48.2	29.7	40.9
MAX	407	449	380	561	467	729	438	358	437	264	143	406
(WY)	1987	1993	1978	1993	1990	1978	1977	1945	1989	1992	1980	1981
MIN	0.85	3.04	6.14	4.92	16.7	43.8	20.4	21.4	7.36	8.46	0.82	0.13
(WY)	1947	1947	1947	1977	2003	2000	1946	1988	1988	1984	1946	1946

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1945 - 2003	
ANNUAL TOTAL	40067.6		26619.1			
ANNUAL MEAN	110		72.9		123	
HIGHEST ANNUAL MEAN					215	1993
LOWEST ANNUAL MEAN					65.5	1995
HIGHEST DAILY MEAN	2040	May 14	1090	Apr 6	3500	Mar 14 1982
LOWEST DAILY MEAN	2.4	Sep 26	2.4	Oct 18	0.00	Aug 24 1945
ANNUAL SEVEN-DAY MINIMUM	3.0	Aug 7	3.2	Oct 12	0.00	Aug 24 1945
MAXIMUM PEAK FLOW			1220	Apr 6a	3950	Mar 14 1982
MAXIMUM PEAK STAGE			9.96	Apr 6	14.54	Mar 14 1982
INSTANTANEOUS LOW FLOW					0.00	Sep 19 1945
ANNUAL RUNOFF (CFSM)	0.73		0.49		0.82	
ANNUAL RUNOFF (INCHES)	9.94		6.60		11.15	
10 PERCENT EXCEEDS	217		167		309	
50 PERCENT EXCEEDS	27		26		39	
90 PERCENT EXCEEDS	3.9		7.0		7.0	

a Peaks above base shown in table of peak discharges and stages at continuous-record surface-water-discharge stations.
e Estimated.

04184500 BEAN CREEK AT POWERS, OHIO

LOCATION.—Latitude 41°39′35″, longitude 84°14′57″, in NE ¼ of SE ¼ sec. 5, T.9 S., R.1 E., Fulton County, Hydrologic Unit 04100006, on left bank at downstream side of bridge on Fulton County Road 20, 2.1 mi south of Powers, 0.3 mi upstream from Iron Creek, 5 mi downstream from Siver Creek, and 5.2 mi east of Fayette.
DRAINAGE AREA.—206 mi^2.
PERIOD OF RECORD.—October 1940 to Septmber 1981, November 2000 to current year.
REVISED RECORDS.—WSP 1307: 1948 (M). WSP 1912: Drainage area WDR OH-76-2: 1975.
GAGE.—Water-stage recorder and crest gage. Datum of gage is 710.0 ft above sea level. Prior to Jan. 18, 1941, nonrecording gage, Jan. 18, 1941-Sept. 30, 1977, water-stage recorder at site 0.5 mi upstream at datum 12.57 ft higher; Oct.1, 1977-Oct. 30, 1980 at site 0.5 mi upstream at datum 7.57 ft higher.
REMARKS.—Records fair except for periods of estimated record, which are poor. Water-quality data formerly collected at this 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	19	30	44	e73	e16	e21	249	92	80	17	6.6	25
2	17	29	59	e64	e16	e20	214	114	80	16	313	81
3	19	28	74	e58	e20	e19	182	120	73	14	343	120
4	21	28	e60	e54	e28	e18	170	110	69	14	226	85
5	23	27	e54	e52	e43	e17	717	250	67	16	173	61
6	22	28	e50	e48	e68	e18	732	294	65	16	119	47
7	22	28	e46	e44	e50	e19	521	216	62	49	89	39
8	22	29	e42	e41	e42	e21	399	177	62	65	67	34
9	21	32	e39	e39	e37	e24	332	411	60	69	56	30
10	20	41	e36	e36	e33	e35	291	886	57	52	45	26
11	20	59	e34	e33	e31	e74	260	693	53	45	39	24
12	20	61	e33	e31	e28	e180	227	537	59	38	37	22
13	20	53	e31	e29	e26	e240	195	459	101	31	35	20
14	19	51	e30	e28	e24	e340	172	364	102	26	32	19
15	19	45	e29	e27	e22	e700	159	302	85	23	30	24
16	20	41	e28	e26	e21	e1000	142	268	70	20	27	23
17	20	40	e27	e25	e19	e800	128	234	62	18	25	22
18	21	38	e26	e24	e18	e540	120	208	57	12	23	20
19	23	41	e25	e23	e17	e470	112	185	53	8.0	17	19
20	22	39	e25	e22	e16	e420	108	168	48	8.7	17	18
21	24	39	e64	e21	e16	642	106	151	43	14	14	17
22	25	49	e56	e21	e20	468	109	137	39	22	16	37
23	24	52	e49	e20	e29	345	107	124	35	21	11	95
24	24	49	e46	e20	e27	278	98	115	29	15	9.5	93
25	25	47	e42	e19	e26	250	88	107	25	13	8.6	120
26	28	44	e40	e19	e24	253	82	101	22	11	11	173
27	27	42	e38	e18	e23	218	77	94	23	9.3	11	336
28	26	41	e36	e18	e22	194	72	89	19	10	9.7	379
29	25	49	e34	e17	---	450	66	82	22	7.5	9.3	256
30	24	36	e43	e17	---	430	66	76	21	7.5	13	183
31	31	---	e58	e17	---	309	---	77	---	5.9	10	---
TOTAL	693	1216	1298	984	762	8813	6301	7241	1643	693.9	1842.7	2448
MEAN	22.4	40.5	41.9	31.7	27.2	284	210	234	54.8	22.4	59.4	81.6
MAX	31	61	74	73	68	1000	732	886	102	69	343	379
MIN	17	27	25	17	16	17	66	76	19	5.9	6.6	17
MED	22	41	40	26	24	250	150	168	58	16	25	35
AC-FT	1370	2410	2570	1950	1510	17480	12500	14360	3260	1380	3650	4860
CFSM	0.11	0.20	0.20	0.15	0.13	1.38	1.02	1.13	0.27	0.11	0.29	0.40
IN.	0.13	0.22	0.23	0.18	0.14	1.59	1.14	1.31	0.30	0.13	0.33	0.44

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	47.9	85.5	163	179	290	386	337	231	128	86.4	40.3	42.6
MAX	285	350	722	761	830	863	1019	1071	540	507	222	431
(WY)	2002	1973	1968	1952	2001	1978	1950	1943	1981	1951	1980	1981
MIN	8.30	13.5	13.4	15.5	16.9	64.5	77.1	53.3	25.6	12.1	8.38	7.03
(WY)	1964	1965	1964	1963	1963	1964	1946	1941	1962	1963	1963	1963

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1941 - 2003	
ANNUAL TOTAL	64486.4		33935.6			
ANNUAL MEAN	177		93.0		167	
HIGHEST ANNUAL MEAN					329	1950
LOWEST ANNUAL MEAN					34.8	1964
HIGHEST DAILY MEAN	3250	May 13	1000	Mar 16	3740	Apr 5 1950
LOWEST DAILY MEAN	2.3	Sep 11	5.9	Jul 31	2.3	Sep 11 2002
ANNUAL SEVEN-DAY MINIMUM	2.6	Sep 7	8.3	Jul 26	2.6	Sep 7 2002
MAXIMUM PEAK FLOW			1300	Mar 16a	4250	Apr 29 1956
MAXIMUM PEAK STAGE			15.61	Mar 15b	20.03	Feb 20 1981
INSTANTANEOUS LOW FLOW					5.0	Aug 9 1964
ANNUAL RUNOFF (AC-FT)	127900		67310		120800	
ANNUAL RUNOFF (CFSM)	0.86		0.45		0.81	
ANNUAL RUNOFF (INCHES)	11.65		6.13		11.00	
10 PERCENT EXCEEDS	418		251		412	
50 PERCENT EXCEEDS	51		38		65	
90 PERCENT EXCEEDS	14		17		16	

a Peaks above base shown in table of peak discharges and stages at continuous-record surface-water-discharge stations.
b Ice jam.
e Estimated.

04185000 TIFFIN RIVER AT STRYKER, OHIO

LOCATION.—Latitude 41°30′16″, longitude 84°25′47″, in SE ¼ sec. 5, T.6 N., R.4 E., Williams County, Hydrologic Unit 04100006, on left bank 0.5 mi downstream from bridge on State Highway 191 at west edge of Stryker, Ohio, 0.6 mi upstream from Penn Central bridge, and 1.6 mi downstream from Leatherwood Creek.

DRAINAGE AREA.—410 mi^2.

PERIOD OF RECORD.—September 1921 to September 1928 (published as "near Stryker"), October 1940 to current year.

REVISED RECORDS.—WSP 1144: 1922-28. WSP 1387: 1925. WSP 1912: Drainage area.

GAGE.—Water-stage recorder and crest gage. Datum of gage is 685.1 ft above sea level. Prior to Sept. 30, 1928, nonrecording gage at site 3.5 mi downstream at different datum; Oct. 13, 1940-Jan. 17, 1941, nonrecording gage; and Jan. 18, 1941-Sept. 30, 1953, water-stage recorder, at site 0.5 mi downstream at same datum.

REMARKS.—Records fair except for periods of estimated record, which are poor. Small diversion upstream from gage for municipal supply of Archbold. Diversion returned as sewage to Brush Creek, which flows into Tiffin River about 15 mi downstream from station. Water-quality and sediment data fomerly collected at this site.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood in Mar. 1913 reached a stage of 16.0 ft, from floodmarks; discharge, 7,600 ft^3/s. Flood in 1937 reached a stage of 15.0 ft, from information by local resident; discharge, 6,000 ft^3/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	e20	28	68	e170	e17	e25	e500	133	147	31	25	134
2	e20	33	47	e140	e17	e23	e420	225	139	28	255	640
3	e19	33	45	e100	e20	e22	e350	263	128	25	450	754
4	e18	32	85	e86	e30	e22	e320	239	117	23	482	346
5	e17	34	106	e80	e50	e21	e1200	770	108	26	471	156
6	e25	36	e90	e74	e100	e21	e2000	1380	98	33	359	86
7	e23	37	e82	e68	e70	e20	e1300	1390	89	40	226	58
8	e20	37	e76	e66	e56	e24	e1000	1090	86	139	153	43
9	e19	37	e70	e62	e50	e30	e700	1160	89	449	200	35
10	18	49	e64	e58	e43	e45	e600	1370	85	328	152	30
11	18	106	e60	e54	e37	e70	e460	1500	80	176	90	29
12	17	132	e58	e49	e33	e120	e400	1580	112	121	72	26
13	18	111	e56	e44	e30	e230	e340	1500	234	84	65	20
14	17	94	e54	e41	e28	e700	e300	1310	233	61	57	19
15	18	83	e52	e38	e26	e1200	e270	1020	197	47	55	22
16	18	75	e50	e35	e24	e3000	e240	680	154	47	53	26
17	18	66	e49	e32	e21	e2400	e220	478	122	44	50	23
18	18	60	e48	e30	e20	e1700	e210	385	104	34	44	19
19	21	59	e48	e27	e19	e1200	e200	324	93	30	41	17
20	24	60	e47	e26	e17	e1500	e190	283	84	23	34	11
21	23	62	e160	e25	e17	e1800	e180	253	71	35	31	12
22	23	78	e110	e23	e25	e1000	e190	225	63	71	29	36
23	23	111	e90	e22	e36	e800	e190	202	56	67	28	116
24	23	111	e62	e21	e34	e600	e160	184	50	51	25	119
25	24	97	e56	e21	e30	e520	145	171	44	37	22	195
26	29	86	e52	e20	e29	e460	133	158	38	28	21	211
27	31	78	e48	e20	e27	e420	122	145	37	28	22	279
28	29	70	e45	e19	e26	e400	112	136	36	56	24	260
29	27	58	e44	e19	---	e1100	106	128	31	37	24	215
30	27	73	e43	e18	---	e900	99	119	32	25	23	144
31	27	---	e70	e18	---	e700	---	121	---	23	24	---
TOTAL	672	2026	2035	1506	932	21073	12657	18922	2957	2247	3607	4081
MEAN	21.7	67.5	65.6	48.6	33.3	680	422	610	98.6	72.5	116	136
MAX	31	132	160	170	100	3000	2000	1580	234	449	482	754
MIN	17	28	43	18	17	20	99	119	31	23	21	11

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	119	222	366	386	553	785	665	402	264	149	74.7	69.6
MAX	933	1339	1785	1687	1586	2563	1990	2112	1422	761	799	460
(WY)	2002	1993	1928	1993	2001	1982	1950	1943	1989	1943	1998	1981
MIN	10.2	14.6	18.4	20.2	21.9	135	106	74.4	24.1	13.7	9.76	7.39
(WY)	1964	1954	1964	1963	1963	1964	1946	1925	1988	1988	1941	1999

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1922 - 2003	
ANNUAL TOTAL	143194.7		72715			
ANNUAL MEAN	392		199		337	
HIGHEST ANNUAL MEAN					671	1950
LOWEST ANNUAL MEAN					59.6	1964
HIGHEST DAILY MEAN	3870	May 14	3000	Mar 16	7640	Mar 15 1982
LOWEST DAILY MEAN	3.7	Sep 12	11	Sep 20	2.5	Jul 18 1988
ANNUAL SEVEN-DAY MINIMUM	5.8	Sep 8	18	Oct 10	3.6	Jul 7 1988
MAXIMUM PEAK FLOW			3300	Mar 16a e	7800	Mar 15 1982
MAXIMUM PEAK STAGE			14.20	Mar 16e	18.36	Mar 15 1982
INSTANTANEOUS LOW FLOW					2.5	Jul 18 1988
10 PERCENT EXCEEDS	1480		489		941	
50 PERCENT EXCEEDS	100		59		124	
90 PERCENT EXCEEDS	14		21		23	

a Peaks above base shown in table of peak discharges and stages at continuous-record surface-water-discharge stations.
e Estimated.

04185440 UNNAMED TRIBUTARY TO LOST CREEK NEAR FARMER, OHIO

LOCATION.—Latitude 41°21′42″, longitude 84°41′28″, Defiance County, Hydrologic Unit 04100006, on right bank 400 ft above bridge on Rosedale Road, 0.5 mi above mouth and 3 mi west from Farmer, Ohio.
DRAINAGE AREA.—4.23 mi^2.
PERIOD OF RECORD.—October 1985 to current year.
GAGE.—Water-stage recorder. Elevation of gage is 760 ft above sea level (from topographic map).
REMARKS.—Records fair except for periods of estimated record, 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	0.02	0.06	e0.27	9.8	e0.32	e0.72	4.0	1.0	0.21	0.06	17	81
2	0.02	0.08	e0.25	3.3	e0.31	e0.68	3.0	2.2	0.18	0.06	100	56
3	0.02	0.08	e0.23	1.9	0.43	e0.70	2.4	0.93	0.21	0.05	16	12
4	0.08	0.09	e0.22	e1.2	21	e0.80	22	0.64	0.21	0.06	48	5.2
5	0.03	0.11	e0.21	e1.0	4.0	e1.2	78	150	0.17	0.10	9.7	2.9
6	0.02	0.11	e0.19	e0.92	1.7	e1.0	9.6	12	0.14	0.11	4.0	2.0
7	0.02	0.09	e0.18	e0.88	0.87	e0.80	20	4.5	0.13	1.2	2.0	1.2
8	0.02	0.09	e0.17	e1.2	e0.60	7.4	15	2.7	0.14	18	2.4	0.83
9	0.02	0.08	e0.15	6.8	e0.46	11	6.9	114	0.13	18	28	0.61
10	0.02	17	e0.15	5.8	e0.40	3.8	4.3	64	0.11	1.9	3.8	0.50
11	0.02	13	e0.15	1.9	e0.36	2.0	3.0	13	0.11	0.70	1.8	0.45
12	0.02	1.7	e0.15	e1.2	e0.32	23	2.3	25	1.8	0.35	1.7	0.38
13	0.02	0.87	e0.15	e1.1	e0.30	69	1.8	6.5	1.0	0.21	1.3	0.26
14	0.02	0.49	e0.14	e1.0	e0.27	e23	1.8	3.5	0.67	0.14	0.79	0.23
15	0.03	0.34	e0.14	e0.90	e0.25	e15	1.7	5.3	0.39	0.12	0.57	0.50
16	0.03	0.28	e0.19	e0.82	e0.24	e13	1.5	3.4	0.23	0.09	0.43	0.29
17	0.03	0.26	0.21	e76	e0.23	e10	1.1	2.3	18	0.04	0.30	0.19
18	0.04	0.22	0.26	e8.0	e0.22	e9.0	1.00	1.8	4.5	0.04	0.20	0.15
19	0.07	0.22	3.9	e0.62	0.30	e8.2	0.90	1.3	1.2	0.03	0.15	0.15
20	0.05	0.24	17	e0.56	1.0	12	0.83	1.1	0.68	0.03	0.13	0.12
21	0.03	0.28	3.3	e0.52	3.1	18	0.73	0.86	0.41	0.48	0.11	0.11
22	0.03	8.1	1.5	e0.50	12	7.3	0.61	0.74	0.29	0.32	0.10	12
23	0.03	3.4	0.87	e0.46	3.7	4.5	0.52	0.61	0.22	0.84	0.09	4.7
24	0.03	2.0	0.62	e0.45	1.8	3.5	0.48	0.50	0.17	0.15	0.08	1.4
25	0.06	1.1	e0.45	e0.43	1.1	3.1	0.48	0.42	0.12	0.07	0.07	23
26	0.09	0.78	e0.39	e0.41	e0.90	2.8	0.44	0.35	0.10	0.05	0.17	3.7
27	0.06	0.55	e0.36	e0.39	e0.80	2.3	0.34	0.31	0.09	13	0.47	54
28	0.05	e0.40	e0.33	e0.38	e0.76	2.6	0.24	0.30	0.09	9.7	0.15	6.8
29	0.05	e0.35	e0.32	e0.36	---	46	0.19	0.28	0.09	0.95	0.13	3.3
30	0.04	e0.30	1.2	e0.35	---	7.7	0.25	0.24	0.07	0.35	0.12	1.9
31	0.06	---	52	e0.34	---	4.6	---	0.30	---	0.15	0.10	---
TOTAL	1.13	52.67	85.65	129.49	57.74	314.70	185.41	420.08	31.86	67.35	239.86	275.87
MEAN	0.036	1.76	2.76	4.18	2.06	10.2	6.18	13.6	1.06	2.17	7.74	9.20
MAX	0.09	17	52	76	21	69	78	150	18	18	100	81
MIN	0.02	0.06	0.14	0.34	0.22	0.68	0.19	0.24	0.07	0.03	0.07	0.11
CFSM	0.01	0.42	0.65	0.99	0.49	2.40	1.46	3.20	0.25	0.51	1.83	2.17
IN.	0.01	0.46	0.75	1.14	0.51	2.77	1.63	3.69	0.28	0.59	2.11	2.43

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.04	3.98	5.75	5.49	6.88	7.33	7.92	4.80	3.14	1.83	2.16	1.51
MAX	15.7	15.6	23.9	13.9	21.2	14.5	20.6	13.6	9.09	7.75	16.4	9.20
(WY)	2002	1993	1991	1993	1990	1998	1999	2003	1996	1986	1998	2003
MIN	0.031	0.037	0.11	0.44	0.46	1.19	1.92	0.26	0.046	0.011	0.015	0.003
(WY)	1995	2000	1990	2000	1995	2001	1987	1988	1988	1988	1989	1991

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1986 - 2003	
ANNUAL TOTAL	1281.51		1861.81			
ANNUAL MEAN	3.51		5.10		4.47	
HIGHEST ANNUAL MEAN					6.66	1998
LOWEST ANNUAL MEAN					1.96	1995
HIGHEST DAILY MEAN	101	Jan 31	150	May 5	322	Aug 25 1998
LOWEST DAILY MEAN	0.02	Sep 4	0.02	Oct 1	0.00	Aug 3 1987
ANNUAL SEVEN-DAY MINIMUM	0.02	Sep 4	0.02	Oct 6	0.00	Aug 3 1987
MAXIMUM PEAK FLOW			699	May 5a	1770	Aug 25 1998
MAXIMUM PEAK STAGE			5.55	May 5	7.59	Aug 25 1998
INSTANTANEOUS LOW FLOW					0.00	Jul 27 1991
ANNUAL RUNOFF (CFSM)	0.83		1.21		1.06	
ANNUAL RUNOFF (INCHES)	11.27		16.37		14.36	
10 PERCENT EXCEEDS	5.8		12		9.4	
50 PERCENT EXCEEDS	0.41		0.50		0.63	
90 PERCENT EXCEEDS	0.03		0.06		0.05	

a Peaks above base shown in table of peak discharges and stages at continuous-record surface-water-discharge stations.
e Estimated.

04186500 AUGLAIZE RIVER NEAR FORT JENNINGS, OHIO

LOCATION.—Latitude 40°56′55″, longitude 84°15′58″, in SE ¼ sec. 15, T.1 S., R.5. E., Putnam County, Hydrologic Unit 04100007, on left bank 200 ft upstream from bridge on U. S. Highway 224, 3.5 mi northeast of Fort Jennings, Ohio, 6 mi upstream from Ottawa River, and 7.3 mi downstream from Jennings Creek.

DRAINAGE AREA.—332 mi^2.

PERIOD OF RECORD.—August 1921 to December 1935. October 1940 to current year.

REVISED RECORDS.—WSP 744: 1932. WSP 974: 1930(M). WSP 1307: 1922-24(M), 1926-27(M), 1929(M). WSP 1912: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 713.6 ft above sea level. Prior to Oct. 6, 1930, nonrecording gage at same site and datum.

REMARKS.—Records fair except for periods of estimated record, which are poor. Beginning Jan. 4, 1971, water was diverted for low-flow augmentation and water supply of city of Lima, in Ottawa River Basin. Some diversion from Grand Lake to Auglaize River Basin through Miami and Erie Canal into Jennings Creek at a point 9.2 mi upstream from station. Annual figures of runoff are considered to be within 10 percent of natural yield. Water-quality and sediment data formerly collected at this 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	28	20	35	2340	e10	e170	306	66	77	167	88	376
2	15	13	40	1830	e9.8	e140	251	493	139	480	440	2340
3	8.8	7.7	52	731	e13	e120	212	566	114	338	2430	4150
4	4.4	15	46	352	e130	e110	222	342	294	165	4390	3560
5	2.8	38	30	240	e450	e300	2050	958	363	1610	3560	1040
6	2.3	34	19	186	e380	e1200	2630	2320	244	3720	1860	417
7	2.0	42	31	146	e170	1470	1690	1230	159	4020	576	252
8	1.9	27	20	132	e110	e700	2200	632	106	5080	437	174
9	1.7	15	11	245	e74	e1300	1460	2080	86	6700	747	151
10	1.8	26	8.3	697	e54	e2300	711	4530	111	5800	372	117
11	1.7	106	6.6	502	e43	e1700	478	4710	120	4320	237	92
12	1.6	136	5.8	e200	e40	e1100	359	4530	140	2460	169	75
13	1.4	147	4.5	e96	e38	e1500	280	2610	786	765	368	55
14	1.4	81	4.9	e54	e35	e2200	225	817	2180	464	470	43
15	1.4	47	5.7	e37	e34	1960	190	605	3400	333	285	46
16	1.3	32	8.6	e29	e33	1360	172	1060	1490	266	175	54
17	1.5	26	10	e23	e32	1220	159	662	494	218	108	63
18	1.6	24	9.3	e20	e31	1010	146	389	857	174	80	39
19	1.7	21	101	e17	e30	754	128	291	1010	143	62	29
20	1.7	21	679	e15	e29	823	109	238	391	119	52	37
21	1.6	21	1200	e14	e28	1210	105	197	251	322	45	52
22	2.0	22	521	e13	e45	2140	101	243	182	1800	41	61
23	2.4	27	241	e12	e130	1390	79	194	136	2120	35	107
24	2.0	32	150	e12	822	609	57	174	126	747	31	94
25	2.2	36	98	e11	888	412	50	154	117	393	27	229
26	3.4	50	e68	e11	507	336	48	130	106	254	28	279
27	11	57	e50	e11	e300	395	48	110	132	162	156	1360
28	5.1	53	e40	e11	e210	328	46	82	128	268	195	2230
29	8.4	51	e30	e10	---	303	47	65	107	290	175	829
30	31	41	63	e10	---	457	64	60	85	228	87	356
31	31	---	1160	e10	---	414	---	63	---	135	222	---
TOTAL	184.1	1268.7	4748.7	8017	4675.8	29431	14623	30601	13931	44061	17948	18707
MEAN	5.94	42.3	153	259	167	949	487	987	464	1421	579	624
MAX	31	147	1200	2340	888	2300	2630	4710	3400	6700	4390	4150
MIN	1.3	7.7	4.5	10	9.8	110	46	60	77	119	27	29
CFSM	0.02	0.13	0.46	0.78	0.50	2.86	1.47	2.97	1.40	4.28	1.74	1.88
IN.	0.02	0.14	0.53	0.90	0.52	3.30	1.64	3.43	1.56	4.94	2.01	2.10

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	76.7	169	300	425	466	593	507	303	254	190	81.3	89.0
MAX	782	1286	1283	2184	1555	2112	1874	1237	1142	1652	579	1090
(WY)	1927	1973	1991	1950	1950	1978	1957	1943	1981	1992	2003	1926
MIN	5.44	8.53	10.9	8.23	23.6	78.3	51.3	28.7	13.6	12.7	8.10	2.89
(WY)	1989	2000	2000	1977	1964	2000	1971	1934	1988	2002	1991	1999

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1921 - 2003	
ANNUAL TOTAL	86137.6		188196.3			
ANNUAL MEAN	236		516		287	
HIGHEST ANNUAL MEAN					537	1973
LOWEST ANNUAL MEAN					65.3	1931
HIGHEST DAILY MEAN	4340	Mar 31	6700	Jul 9	12000	Jul 15 1992
LOWEST DAILY MEAN	1.3	Oct 16	1.3	Oct 16	0.50	Oct 20 1994
ANNUAL SEVEN-DAY MINIMUM	1.5	Oct 12	1.5	Oct 12	1.1	Sep 19 1999
MAXIMUM PEAK FLOW			6880	Jul 9a	12800	Jul 15 1992
MAXIMUM PEAK STAGE			15.95	Jul 9	20.30	Jan 23 1959
INSTANTANEOUS LOW FLOW					0.50	Oct 20 1994
ANNUAL RUNOFF (CFSM)	0.71		1.55		0.87	
ANNUAL RUNOFF (INCHES)	9.65		21.09		11.76	
10 PERCENT EXCEEDS	535		1640		698	
50 PERCENT EXCEEDS	49		130		74	
90 PERCENT EXCEEDS	3.2		9.9		17	

a Peaks above base shown in table of peak discharges and stages at continuous-record surface-water-discharge stations.
e Estimated.

04189000 BLANCHARD RIVER NEAR FINDLAY, OHIO

LOCATION.—Latitude 41°03′21″, longitude 83°41′17″, on east line of sec. 10, T.1 N., R.10 E., Hancock County, Hydrologic Unit 04100008, on left bank at upstream side of county road bridge, 2 mi west of Findlay, Ohio, 3 mi downstream from Eagle Creek, and 3 mi upstream from Aurand Run.
DRAINAGE AREA.—346 mi^2.
PERIOD OF RECORD.—October 1923 to December 1935, October 1940 to current year. Monthly discharge only for October 1923, published in WSP 1307.
REVISED RECORDS.—WSP 974: 1942. WSP 1054: 1927-30, 1933(M), 1945. WSP 1387: 1926, 1928(M), 1930(M), 1952. WSP 1912: Drainage area. WRD-OH-81-2: 1959, 1975(M). WRD-OH-97-2: 1996(M).
GAGE.—Water-stage recorder. Datum of gage is 753.65 ft above sea level (North American Vertical Datum of 1988). Prior to July 24, 1930, nonrecording gage at same site and datum.
REMARKS.—Records good except for periods of estimated record, which are poor. Water is diverted upstream from station into Findlay Reservoir. All water returns to stream upstream from station. Water-quality and sediment data formerly collected at this 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	24	35	132	3230	e40	e56	226	82	104	79	83	191
2	19	33	106	2180	e40	e52	213	200	92	761	252	440
3	17	27	59	581	e50	e50	176	177	106	824	905	749
4	18	28	48	312	e140	e60	281	126	90	265	1630	304
5	21	36	44	e180	e240	1050	3120	730	113	262	1510	140
6	15	45	37	e150	e150	1240	3090	1260	95	579	587	83
7	14	30	30	e130	e84	611	2390	648	79	1200	302	57
8	14	25	30	e140	e60	539	3030	772	126	3280	222	48
9	14	25	26	496	e50	2420	1760	3370	497	5060	160	46
10	17	122	26	907	e46	1790	685	6990	289	5930	166	36
11	16	106	26	390	e45	1070	442	6690	184	5280	133	36
12	18	115	26	176	e43	1080	324	4750	324	2940	132	40
13	17	92	25	e130	e41	1650	238	1750	529	608	75	45
14	18	49	32	e110	e39	1590	189	715	924	316	101	45
15	20	39	35	e92	e38	1920	171	519	459	225	71	45
16	19	40	38	e80	e36	1470	161	507	265	177	68	45
17	19	30	30	e70	e34	1150	133	366	365	132	57	46
18	21	26	40	e64	e33	893	114	278	781	103	49	47
19	39	27	778	e60	e32	607	99	229	436	85	54	47
20	22	25	1970	e54	e32	652	94	288	261	73	44	47
21	18	24	1100	e50	e31	1020	98	1020	200	245	48	35
22	17	79	322	e48	275	922	93	648	153	841	51	52
23	17	59	e140	e47	691	459	82	293	119	391	51	36
24	17	72	e90	e46	465	290	70	217	92	215	53	51
25	47	102	e78	e44	288	230	65	178	78	148	44	58
26	55	122	e72	e43	148	235	69	144	75	109	65	43
27	21	124	e68	e43	e80	392	61	119	215	139	67	449
28	19	86	e64	e42	e64	278	57	109	173	279	46	466
29	22	68	e60	e41	---	366	59	102	110	284	50	230
30	29	102	167	e41	---	450	60	95	91	163	51	122
31	33	---	2420	e40	---	289	---	154	---	107	40	---
TOTAL	677	1793	8119	10017	3315	24881	17650	33526	7425	31100	7167	4079
MEAN	21.8	59.8	262	323	118	803	588	1081	248	1003	231	136
MAX	55	124	2420	3230	691	2420	3120	6990	924	5930	1630	749
MIN	14	24	25	40	31	50	57	82	75	73	40	35
CFSM	0.06	0.17	0.76	0.93	0.34	2.32	1.70	3.13	0.72	2.90	0.67	0.39
IN.	0.07	0.19	0.87	1.08	0.36	2.68	1.90	3.60	0.80	3.34	0.77	0.44

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	63.9	150	285	365	424	554	473	289	233	142	65.8	86.2
MAX	623	1435	1482	1800	1402	1814	1588	1081	1612	1075	474	944
(WY)	1927	1973	1991	1930	1959	1978	1957	2003	1981	1992	1979	1926
MIN	2.43	3.67	4.28	6.54	9.86	60.1	33.3	22.1	18.3	4.27	1.24	1.62
(WY)	1935	1935	1935	1945	1964	1941	1925	1925	1988	1934	1934	1934

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1924 - 2003	
ANNUAL TOTAL	95294.9		149749			
ANNUAL MEAN	261		410		260	
HIGHEST ANNUAL MEAN					571	1973
LOWEST ANNUAL MEAN					57.5	1931
HIGHEST DAILY MEAN	5000	Feb 1	6990	May 10	12000	Jun 14 1981
LOWEST DAILY MEAN	9.6	Sep 1	14	Oct 7	0.40	Aug 27 1934
ANNUAL SEVEN-DAY MINIMUM	10	Sep 1	15	Oct 6	0.56	Aug 25 1934
MAXIMUM PEAK FLOW			7710	May 10a	13000	Jun 14 1981
MAXIMUM PEAK STAGE			13.16	May 10	17.43	Jun 14 1981
INSTANTANEOUS LOW FLOW			13	Oct 8	0.40	Aug 27 1934
ANNUAL RUNOFF (CFSM)	0.75		1.19		0.75	
ANNUAL RUNOFF (INCHES)	10.25		16.10		10.23	
10 PERCENT EXCEEDS	451		1020		623	
50 PERCENT EXCEEDS	47		101		60	
90 PERCENT EXCEEDS	13		27		10	

a Peaks above base shown in table of peak discharges and stages at continuous-record surface-water-discharge stations.
e Estimated.

04191500 AUGLAIZE RIVER NEAR DEFIANCE, OHIO

LOCATION.—Latitude 41°14′15″, longitude 84°23′57″, in NE ¼ sec. 9, T.3 N. R.4 E., Defiance County, Hydrologic Unit 04100007, on right bank 125 ft downstream from City of Bryan hydroelectric dam, 0.2 mi upstream from Jackson Ditch, and 3 mi south of Defiance, Ohio.
DRAINAGE AREA.—2,318 mi^2.
PERIOD OF RECORD.—May to August 1903 (gage heights only), April 1915 to current year. Monthly discharges only for some periods, published in WSP 1307.
REVISED RECORDS.—WSP 954: 1941. WSP 1912: Drainage area. WRD OH-72-1: 1966(M).
GAGE.—Water-stage recorder. Datum of gage is 659.70 ft above sea level. May 20-Aug. 8, 1903, non-recording gage at site 1.8 mi downstream at different datum; Apr. 13, 1915-Dec. 6, 1933, nonrecording gage near right bank on downstream side of dam at datum 6.00 ft higher, and auxiliary tailwater staff gage near right bank on downstream side of dam at present datum; Oct. 1982-Nov. 1984 at dam 125 ft upstream, at present datum.
REMARKS.—Records fair except for periods of estimated record, which are poor. Flow regulated by dam at powerplant at station; reservoir capacity, 9,800 acre-ft. Plant shut down except for occasional gate operation, Jan. 10, 1963-Sept. 7, 1985. Some diversion by Miami and Erie Canal from Grand Lake into Jennings Creek, tributary to Auglaize River 70 mi upstream from station. Water-quality data formerly collected at this site.
EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Mar. 1913 reached a stage of 38.8 ft, from reading on powerplant tailwater gage at present datum; discharge, 120,000 ft^3/s, from rating curve extended above 51,000 ft^3/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	453	45	444	11000	357	876	2130	499	586	561	829	2180
2	171	43	441	10000	127	816	1530	1090	553	1110	2340	6370
3	112	41	441	5600	327	372	1300	2940	747	2550	8980	10900
4	265	39	430	4890	949	518	1240	2300	551	2110	14700	11000
5	113	226	391	2040	1110	671	10800	8240	932	4450	16300	5850
6	25	271	e300	1400	1590	1510	16800	14100	786	10200	11500	1840
7	36	59	e240	1330	1500	4430	15000	10800	538	14100	4140	1710
8	36	60	e180	1250	1430	3520	16400	5020	664	24600	2310	1270
9	41	63	e130	912	1120	4260	13700	14200	400	29300	2980	1200
10	47	66	e96	1670	534	8040	9280	28600	600	26200	2220	810
11	48	418	e76	3350	337	7740	4400	33000	765	19500	1370	530
12	46	1310	e56	2130	333	6880	3240	31600	1040	14800	893	517
13	46	976	e40	1140	153	10700	1730	26000	1260	9830	1930	588
14	166	717	e44	1240	52	14300	1290	16200	7570	6470	2010	508
15	46	570	e48	1080	54	15100	63	8100	6770	2660	1560	247
16	46	350	e52	698	62	16300	635	3850	4560	1060	1110	172
17	46	328	e56	709	501	13900	926	3230	4260	710	531	110
18	44	175	e250	512	568	10900	584	1710	8120	568	512	282
19	43	82	1010	391	389	7280	611	1700	11000	564	516	68
20	44	289	4220	364	134	7050	695	1510	5320	570	294	66
21	44	396	8120	314	39	7180	702	1080	2840	2630	279	111
22	43	200	4450	311	422	8240	446	1110	1260	10300	486	684
23	45	83	1920	162	781	7980	686	1640	651	11600	249	889
24	42	86	1210	214	1930	3980	333	1240	914	8490	115	1470
25	41	e400	1010	298	2280	2400	232	908	534	3140	245	1870
26	40	e700	977	299	1600	1860	407	837	424	2360	274	3110
27	37	798	918	305	1540	1410	349	455	478	918	346	7880
28	36	573	544	356	1110	1540	381	537	653	1150	1340	13400
29	189	219	404	365	---	1670	341	536	800	1820	1220	8310
30	201	308	464	144	---	2100	159	530	606	1680	681	e5000
31	49	---	5140	150	---	2480	---	565	---	1200	455	---
TOTAL	2641	9891	34102	54624	21329	176003	106390	224127	66182	217201	82715	88942
MEAN	85.2	330	1100	1762	762	5678	3546	7230	2206	7006	2668	2965
MAX	453	1310	8120	11000	2280	16300	16800	33000	11000	29300	16300	13400
MIN	25	39	40	144	39	372	63	455	400	561	115	66

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	511	985	1821	2497	2997	4115	3489	2025	1488	895	374	448
MAX	4151	7856	8510	13350	10170	13090	11210	10490	6733	7006	2668	5571
(WY)	2002	1973	1967	1950	1976	1982	1957	1943	1947	2003	2003	1992
MIN	23.6	7.28	9.34	48.5	111	382	242	69.8	101	42.0	27.1	28.9
(WY)	1953	1953	1977	1977	1964	1941	1946	1934	1988	1930	1932	1963

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1916 - 2003	
ANNUAL TOTAL	601278		1084147			
ANNUAL MEAN	1647		2970		1789	
HIGHEST ANNUAL MEAN					3337	1973
LOWEST ANNUAL MEAN					342	1931
HIGHEST DAILY MEAN	29100	Mar 31	33000	May 11	52300	Mar 14 1982
LOWEST DAILY MEAN	25	Oct 6	25	Oct 6	0.50	Oct 13 1952
ANNUAL SEVEN-DAY MINIMUM	30	Aug 7	40	Oct 6	1.1	Oct 12 1952
MAXIMUM PEAK FLOW			34100	May 11	52500	Feb 16 1950
MAXIMUM PEAK STAGE			21.39	May 11	27.65	Feb 13 1959
INSTANTANEOUS LOW FLOW					0.50	Oct 13 1952
10 PERCENT EXCEEDS	4240		10100		4990	
50 PERCENT EXCEEDS	310		798		438	
90 PERCENT EXCEEDS	43		58		39	

e Estimated.

04192500 MAUMEE RIVER NEAR DEFIANCE, OHIO

LOCATION.—Latitude 41°17′31″, longitude 84°16′52″, in NW ¼ sec. 22, T.4 N., R.5 E., Defiance County, Hydrologic Unit 04100009, on left bank 40 ft upstream from Independence Dam, 4 mi downstream from mouth of Auglaize River, and 4.5 mi east of Defiance, Ohio.
DRAINAGE AREA.—5,545 mi^2.
PERIOD OF RECORD.—October 1924 to December 1935, March 1939 to September 1974, October 1978 to current year.
REVISED RECORDS.—WSP 974: 1926-27, 1930. WSP 1387: 1925-28, 1946. WRD Ohio, 1970: Drainage Area.
GAGE.—Water-stage recorder. Datum of gage is 658.56 ft above sea level. Prior to Nov. 13, 1924, nonrecording gage at same site and datum.
REMARKS.—Records good except for periods estimated record, which are poor. Flow affected by regulation of Auglaize River at hydroelectric plant of the Hydro-Corporation, 7 mi upstream. Operation of hydroelectric plant there was discontinued Jan. 10, 1963-Sept. 7, 1985. Low flow slightly regulated by powerplant at Ft. Wayne, Indiana. Slight diversion 275 ft upstream into Miami and Erie Canal through a 24-inch conduit, which bypasses station. Two 36-inch diversion pipes installed at dam in 1998 for low-flow augmentation. Water-quality and sediment data formerly collected at this 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	946	174	828	15100	590	e1600	6730	1240	1410	1040	2640	3780
2	639	160	802	15000	455	e1300	5470	2170	1430	1330	8260	15100
3	322	152	713	9550	440	e1100	4190	4610	1540	3150	22800	22900
4	614	141	687	7290	2170	e1000	4400	4950	1540	3670	25500	22000
5	483	235	668	4510	2330	e1100	19500	16500	1710	5380	27600	14700
6	254	496	544	e3200	3360	e1300	29900	30700	1870	14600	22000	8080
7	314	193	294	e2800	3490	e1900	27000	24800	1560	21800	14900	6650
8	354	185	339	e2300	2870	e4600	26700	14900	1800	36400	11100	5040
9	312	204	432	e2100	2260	e5000	23000	26500	1360	45700	10000	3360
10	222	313	594	e2400	e1300	e5800	16700	49200	1390	44200	7900	2500
11	176	1540	523	e4500	e960	e10000	10500	54800	1580	37900	4820	1670
12	168	2700	297	e3000	e740	e9000	8340	52500	1780	32500	3000	1380
13	195	2640	281	e2300	e550	e12000	5680	45400	2770	26500	3890	1120
14	263	1950	298	e2000	e450	e17000	4720	33400	9520	20800	4070	939
15	191	1450	291	e1500	e380	e24000	2360	22200	11600	13300	3280	956
16	155	971	441	1240	e350	e30000	2340	15700	9960	7020	2450	927
17	140	847	484	1170	e500	26700	2560	12000	12500	4110	1430	937
18	164	707	e350	1090	e880	21700	2090	8310	15700	2350	1240	854
19	189	526	1770	871	e550	16900	1900	6210	16500	1680	1230	665
20	160	553	5560	820	e420	14600	1860	5340	11300	1360	1010	560
21	234	714	10000	753	e320	14500	1820	4790	8620	2690	727	626
22	384	768	7760	700	879	14900	1530	3740	5350	17200	1000	1120
23	230	809	4380	572	1520	13800	1470	3880	3530	17500	913	2440
24	180	854	2620	456	2460	9480	1430	3240	2970	13200	647	3920
25	173	1040	2220	562	3590	6870	1050	2430	2280	7300	664	5560
26	175	1360	1970	546	2610	5840	1140	2230	1490	5720	781	7910
27	186	1300	1740	546	e2200	4770	1160	1830	1230	3900	730	14900
28	250	1100	1190	592	e1800	4400	1160	1510	1200	4650	2550	23700
29	303	768	930	614	---	5790	1040	1390	1400	5100	2130	18500
30	460	610	1010	522	---	8770	916	1500	1070	4600	1350	11800
31	199	---	7050	425	---	8370	---	1480	---	3460	956	---
TOTAL	9035	25460	57066	89029	40424	304090	218656	459450	137960	410110	191568	204594
MEAN	291	849	1841	2872	1444	9809	7289	14820	4599	13230	6180	6820
MAX	946	2700	10000	15100	3590	30000	29900	54800	16500	45700	27600	23700
MIN	140	141	281	425	320	1000	916	1240	1070	1040	647	560

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1433	2647	4517	5871	6941	9361	8576	5328	3718	2202	1109	1163
MAX	11490	16410	18040	30150	22460	33940	23210	27270	20370	13230	7598	11470
(WY)	2002	1973	1967	1950	1959	1982	1957	1943	1981	2003	1998	1926
MIN	63.9	110	158	219	363	1455	789	359	214	211	111	88.1
(WY)	1929	1954	1964	1945	1964	1941	1925	1925	1988	1930	1932	1955

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1925 - 2003	
ANNUAL TOTAL	1458328		2147442			
ANNUAL MEAN	3995		5883		4390	
HIGHEST ANNUAL MEAN					8286	1950
LOWEST ANNUAL MEAN					849	1931
HIGHEST DAILY MEAN	46900	Feb 2	54800	May 11	98800	Mar 15 1982
LOWEST DAILY MEAN	140	Oct 17	140	Oct 17	3.0	Sep 4 1925
ANNUAL SEVEN-DAY MINIMUM	176	Oct 15	176	Oct 15	27	Aug 31 1925
MAXIMUM PEAK FLOW			55500	May 11	104000	Mar 15 1982
MAXIMUM PEAK STAGE			9.60	May 11	15.87	Mar 15 1982
INSTANTANEOUS LOW FLOW					2.0	Sep 3 1925
10 PERCENT EXCEEDS	11000		17100		12500	
50 PERCENT EXCEEDS	1100		1830		1420	
90 PERCENT EXCEEDS	235		314		229	

e Estimated.

04193500 MAUMEE RIVER AT WATERVILLE, OHIO

LOCATION.—Latitude 41°30′00″, longitude 83°42′46″, Lucas County, Hydrologic Unit 04100009, on downstream side of first pier from left end of bridge on State Highway 64 at Waterville, Ohio, 3 mi downstream from Tontogany Creek, and 20.7 mi upstream from mouth.
DRAINAGE AREA.—6,330 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—November 1898 to December 1901, August 1921 to December 1935, March 1939 to current year. Miami and Erie Canal flow included at Waterville prior to 1930, when the canal was abandoned.
REVISED RECORDS.—WSP 894: 1930(M). WSP 1084: 1946. WSP 1387: 1900(M), 1922-23, 1933. WDR OH-68-1: 1967. WDR OH-70-1: Drainage area. WRD-OH-82-2: 1981.
GAGE.—Water-stage recorder with auxiliary crest-stage gage. Datum of gage is 595.71 ft above sea level. Nov. 19, 1898-Dec. 31, 1901 and Aug. 26, 1921-July 31, 1930, nonrecording gage; Aug. 1, 1930-Dec. 31, 1935, water-stage recorder; Mar. 14, 1939-Mar. 12, 1940, nonrecording gage at same site and datum.
REMARKS.—Records fair except for periods of estimated record, which are poor. Satellite telemeter at station. Water-quality and sediment data collected at this site.
EXTREMES FOR PERIOD OF RECORD.—Practically no flow at times prior to June 30, 1929, when entire river flow was being diverted by canal.
EXTREMES OUTSIDE PERIOD OF RECORD.—Flood in Mar. 1913 reached a stage of 19.9 ft, from information by local resident; estimated discharge, 180,000 ft^3/s, from rating curve extended above 94,000 ft^3/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	880	455	812	18500	e620	e1700	7830	1220	2100	1150	2900	1950
2	882	249	850	18200	e540	e1400	6240	2550	1760	1040	5720	11300
3	468	133	1020	13900	e500	e1200	4650	5390	1590	1780	20400	22800
4	378	186	948	8260	e900	e1100	4300	6360	2020	3650	27400	23600
5	638	152	970	6340	e1700	e1000	20100	15700	1710	3490	32300	18800
6	348	436	774	3920	e3200	e1200	33300	38900	2120	10700	25900	9780
7	295	507	697	e3000	e4100	e1600	30300	34000	2010	18500	18700	7480
8	153	343	420	e2600	e3900	e4700	29800	23100	1910	30500	11900	6030
9	260	221	419	e2400	e3000	e4000	26600	25300	2080	42400	10400	4110
10	238	438	588	e2300	e1500	e5500	20400	55800	1410	42400	9420	3160
11	170	1010	632	e3300	e1200	e11000	14600	62400	1830	37200	5900	2010
12	157	2340	515	e5200	e850	e10000	9390	58700	2520	32100	4020	1570
13	250	3260	372	e3500	e700	e12000	7210	50300	4270	27200	3150	1260
14	167	2380	401	e2200	e580	e15000	5600	39100	8290	22100	4070	1080
15	143	1780	370	e1800	e500	e22000	3540	27600	14900	16400	3630	1030
16	202	1330	375	e1500	e400	e36000	1930	20100	12800	8910	2790	891
17	149	1030	554	e1200	e700	34100	2410	13900	10200	5430	1750	901
18	146	885	581	e1000	e1000	26500	2650	11800	17000	2950	1180	839
19	343	806	1330	e900	e650	21300	1850	7400	19500	1880	1140	957
20	187	544	6730	e840	e470	17200	1920	6520	14800	1420	1080	567
21	127	679	10800	e900	e330	17100	1950	5290	10300	1470	810	520
22	217	1030	10600	e820	e600	16800	1690	4520	7360	10700	711	830
23	330	1020	6790	e690	e1400	16100	1380	3980	4710	17500	877	1680
24	230	1080	2940	e570	e1800	12600	1580	3950	3290	15300	733	3250
25	213	1130	2680	e640	e3000	8010	1170	2650	3050	9690	556	4830
26	373	1460	2080	e700	e4000	6700	1180	2320	1920	5800	640	7140
27	255	1570	2020	e780	e2500	5360	1230	2110	1560	4710	629	12500
28	180	1450	1860	e800	e2000	4630	1260	1670	1390	4510	1050	24700
29	196	1130	1300	e760	---	5170	1070	1550	1450	5040	2220	22000
30	448	827	1120	e700	---	8550	1130	1500	1320	5070	1630	14800
31	575	---	5520	e660	---	9330	---	1870	---	3800	989	---
TOTAL	9598	29861	67068	108880	42640	338850	248260	537550	161170	394790	204595	212365
MEAN	310	995	2163	3512	1523	10930	8275	17340	5372	12740	6600	7079
MAX	882	3260	10800	18500	4100	36000	33300	62400	19500	42400	32300	24700
MIN	127	133	370	570	330	1000	1070	1220	1320	1040	556	520
MED	238	949	948	1500	950	8550	3100	6520	2110	5800	2790	3210
CFSM	0.05	0.16	0.34	0.55	0.24	1.73	1.31	2.74	0.85	2.01	1.04	1.12
IN.	0.06	0.18	0.39	0.64	0.25	1.99	1.46	3.16	0.95	2.32	1.20	1.25

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1575	2951	5348	6743	7916	10790	9796	6252	4365	2548	1279	1191
MAX	13810	19010	23830	34010	30000	38210	25890	29540	24030	12740	9665	10320
(WY)	2002	1993	1967	1950	1976	1982	1957	1943	1981	2003	1998	1992
MIN	95.5	196	177	235	424	1759	914	587	231	207	146	127
(WY)	1964	1965	1964	1945	1934	1941	1946	1934	1988	1930	1941	1963

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1930 - 2003	
ANNUAL TOTAL	1689686		2355627			
ANNUAL MEAN	4629		6454		5046	
HIGHEST ANNUAL MEAN					9370	1950
LOWEST ANNUAL MEAN					938	1931
HIGHEST DAILY MEAN	52100	Feb 2	62400	May 11	113000	Mar 14 1982
LOWEST DAILY MEAN	81	Sep 14	127	Oct 21	17	Jun 30 1988
ANNUAL SEVEN-DAY MINIMUM	110	Sep 12	173	Oct 12	47	Jun 27 1988
MAXIMUM PEAK FLOW			64100	May 11	121000	Mar 14 1982
MAXIMUM PEAK STAGE			12.87	Mar 16b	17.18	Mar 14 1982
INSTANTANEOUS LOW FLOW					17	Jun 30 1988
ANNUAL RUNOFF (CFSM)	0.73		1.02		0.80	
ANNUAL RUNOFF (INCHES)	9.93		13.84		10.83	
10 PERCENT EXCEEDS	12700		20100		14100	
50 PERCENT EXCEEDS	1300		1920		1670	
90 PERCENT EXCEEDS	221		401		264	

b Ice jam.
e Estimated.

04193500 MAUMEE RIVER AT WATERVILLE, OHIO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—April 1950 to September 2003 (discontinued).
PERIOD OF DAILY RECORD.—
CHLORIDE: October 1987 to September 1994.
NITROGEN, NITRITE + NITRATE: October 1987 to September 1994.
NITROGEN, AMMONIA + ORGANIC: October 1987 to September 1994.
PHOSPHORUS: October 1987 to September 1994.
SUSPENDED SEDIMENT DISCHARGE: April 1950 to September 1984. October 1987 to September 2003 (discontinued).
INSTRUMENTATION.—Refrigerated water-quality pumping sampler, operated by Heidelberg College Water Quality Laboratory, from Oct. 1987-Sept. 1994. Sampler located at station 04193490.
REMARKS.—Sediment samples were collected by a local observer on an approximate once daily basis. Sediment loads were calculated using the mean-interval method (Porterfield, George, 1972, Computation of Fluvial-Sediment Discharge: U.S. Geological Survey, Techniques of Water-Resources Investigations, Book 3, Chap. C3, 66 p.). For days with unsteady concentration, discharge, or both, the day was subdivided into hourly intervals and the daily load was calculated by summation of hourly loads. This required interpolation between measured and estimated concentrations.
EXTREMES FOR PERIOD OF DAILY RECORD.—
SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,240 mg/L, Mar. 26, 1954; minimum daily mean, 1 mg/L, on many days during 1953, 1955, 1963, Jan. 15, and 16, 2001.
SEDIMENT LOADS: Maximum daily, 300,000 tons, Feb. 24, 1990; minimum daily, 0.26 ton, Sept. 18, 1955.
EXTREMES FOR CURRENT YEAR.—
SEDIMENT CONCENTRATIONS: Maximum daily mean, 773 mg/L, Apr. 6; minimum daily mean, 3 mg/L, Nov. 2.
SEDIMENT LOADS: Maximum daily, 124,000 tons, May 11; minimum daily, 1.3 tons, Nov. 3.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(00061), USGS National Water Information System parameter code; cfs, cubic feet per second; Sampling code*, 10 means stream cross-section sample collected by equal-width-increment (EWI) method; uS/cm, microsiemens per centimeter; deg C, degrees Celsius; mm, millimeter; mg/L, milligrams per liter; --, no data]

Date	Time	Instan-taneous dis-charge, cfs (00061)	Sam-pling method, code* (82398)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Temper-ature, air, deg C (00020)	Temper-ature, water, deg C (00010)	Suspnd. sedi-ment, sieve diametr percent <.062mm (70331)	Sus-pended sedi-ment concen-tration mg/L (80154)
MAY								
07...	1150	34300	10	391	13.0	15.5	98	449
JUL								
10...	1240	43000	10	282	29.0	23.5	--	209

04193500 MAUMEE RIVER AT WATERVILLE, OHIO—Continued

WATER-QUALITY RECORDS—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

[cfs, cubic feet per second; mg/L, milligrams per liter; tons/day, tons per day; ---, no data; e, estimated]

Day	Mean discharge (cfs)	Mean concen-tration (mg/L)	Sediment discharge (tons/day)	Mean discharge (cfs)	Mean concen-tration (mg/L)	Sediment discharge (tons/day)	Mean discharge (cfs)	Mean concen-tration (mg/L)	Sediment discharge (tons/day)
		OCTOBER			NOVEMBER			DECEMBER	
1	880	20	47	455	5	5.8	812	19	42
2	882	20	47	249	3	2.4	850	18	42
3	468	18	24	133	4	1.3	1020	17	47
4	378	17	17	186	5	2.4	948	16	41
5	638	16	27	152	6	2.3	970	15	40
6	348	14	13	436	5	6.0	774	14	30
7	295	13	10	507	5	6.8	697	13	25
8	153	11	4.7	343	5	4.6	420	12	14
9	260	11	7.6	221	5	2.8	419	11	13
10	238	11	6.8	438	9	11	588	10	16
11	170	10	4.7	1010	27	77	632	9	15
12	157	10	4.2	2340	35	224	515	9	12
13	250	10	6.6	3260	36	315	372	8	8.1
14	167	10	4.3	2380	22	146	401	7	7.3
15	143	9	3.6	1780	16	78	370	5	5.3
16	202	9	4.9	1330	13	47	375	5	5.1
17	149	9	3.5	1030	16	44	554	5	7.5
18	146	9	3.4	885	21	50	581	5	8.1
19	343	8	7.6	806	23	49	1330	23	128
20	187	8	4.1	544	21	30	6730	120	2310
21	127	8	2.7	679	18	32	10800	221	6520
22	217	8	4.4	1030	15	40	10600	205	5920
23	330	7	6.5	1020	12	32	6790	148	2760
24	230	7	4.4	1080	11	31	2940	78	638
25	213	7	3.9	1130	10	31	2680	58	418
26	373	7	6.6	1460	15	59	2080	55	310
27	255	6	4.3	1570	14	59	2020	53	287
28	180	6	2.9	1450	14	55	1860	50	252
29	196	4	2.3	1130	17	52	1300	48	169
30	448	5	6.1	827	19	43	1120	54	162
31	575	6	8.8	---	---	---	5520	125	2150
TOTAL	9598	---	303.9	29861	---	1539.4	67068	---	22402.4
		JANUARY			FEBRUARY			MARCH	
1	18500	225	11300	e620	8	13	e1700	19	86
2	18200	212	10400	e540	7	10	e1400	18	68
3	13900	168	6360	e500	6	8.6	e1200	17	56
4	8260	126	2820	e900	13	31	e1100	17	50
5	6340	103	1770	e1700	25	115	e1000	16	43
6	3920	95	1000	e3200	38	322	e1200	15	49
7	e3000	90	733	e4100	47	518	e1600	17	72
8	e2600	77	540	e3900	39	408	e4700	30	379
9	e2400	61	399	e3000	27	223	e4000	33	359
10	e2300	47	291	e1500	17	72	e5500	75	1110
11	e3300	51	451	e1200	15	50	e11000	124	3640
12	e5200	65	904	e850	15	34	e10000	138	3720
13	e3500	42	407	e700	14	27	e12000	230	7440
14	e2200	22	135	e580	13	21	e15000	363	14600
15	e1800	19	94	e500	13	17	e22000	490	29000
16	e1500	19	76	e400	12	13	e36000	556	53700
17	e1200	18	58	e700	12	22	34100	400	37200
18	e1000	17	47	e1000	11	29	26500	227	16500
19	e900	17	40	e650	10	18	21300	153	8840
20	e840	16	36	e470	10	12	17200	119	5540
21	e900	15	37	e330	9	8.0	17100	109	5070
22	e820	15	32	e600	8	13	16800	109	4940
23	e690	14	26	e1400	11	40	16100	108	4670
24	e570	13	20	e1800	15	75	12600	96	3270
25	e640	12	22	e3000	20	164	8010	78	1700
26	e700	12	22	e4000	24	256	6700	62	1120
27	e780	11	23	e2500	21	140	5360	55	796
28	e800	10	22	e2000	19	105	4630	52	652
29	e760	10	20	---	---	---	5170	49	688
30	e700	9	17	---	---	---	8550	47	1080
31	e660	8	15	---	---	---	9330	47	1190
TOTAL	108880	---	38117	42640	---	2764.6	338850	---	207628

04193500 MAUMEE RIVER AT WATERVILLE, OHIO—Continued

WATER-QUALITY RECORDS—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

[cfs, cubic feet per second; mg/L, milligrams per liter; tons/day, tons per day; ---, no data; e, estimated]

Day	Mean discharge (cfs)	Mean concen- tration (mg/L)	Sediment discharge (tons/day)	Mean discharge (cfs)	Mean concen- tration (mg/L)	Sediment discharge (tons/day)	Mean discharge (cfs)	Mean concen- tration (mg/L)	Sediment discharge (tons/day)
		APRIL			MAY			JUNE	
1	7830	49	1030	1220	14	46	2100	18	104
2	6240	50	847	2550	27	198	1760	17	82
3	4650	45	568	5390	47	702	1590	16	70
4	4300	43	519	6360	53	912	2020	14	77
5	20100	368	23000	15700	91	5430	1710	12	55
6	33300	773	69600	38900	538	57100	2120	11	65
7	30300	613	50400	34000	476	44400	2010	12	64
8	29800	369	29700	23100	296	18800	1910	12	64
9	26600	246	17800	25300	251	18200	2080	13	72
10	20400	171	9550	55800	500	76700	1410	11	43
11	14600	128	5060	62400	739	124000	1830	9	46
12	9390	95	2420	58700	603	95700	2520	28	211
13	7210	65	1290	50300	423	57700	4270	46	528
14	5600	53	807	39100	326	34600	8290	121	3050
15	3540	47	452	27600	241	18100	14900	150	6090
16	1930	44	230	20100	198	10800	12800	113	3940
17	2410	36	229	13900	172	6460	10200	117	3430
18	2650	27	198	11800	146	4700	17000	269	12500
19	1850	25	125	7400	120	2410	19500	325	17200
20	1920	25	130	6520	88	1560	14800	227	9180
21	1950	25	131	5290	56	797	10300	173	4840
22	1690	25	114	4520	43	532	7360	136	2740
23	1380	25	93	3980	40	429	4710	102	1310
24	1580	23	99	3950	36	388	3290	87	768
25	1170	21	67	2650	33	236	3050	81	671
26	1180	19	60	2320	29	185	1920	76	395
27	1230	17	56	2110	26	148	1560	73	306
28	1260	15	50	1670	23	102	1390	70	262
29	1070	13	37	1550	21	89	1450	67	262
30	1130	13	39	1500	20	82	1320	64	227
31	---	---	---	1870	19	97	---	---	---
TOTAL	248260	---	214701	537550	---	581603	161170	---	68652
		JULY			AUGUST			SEPTEMBER	
1	1150	58	181	2900	36	283	1950	41	265
2	1040	52	145	5720	70	1230	11300	142	4770
3	1780	58	285	20400	152	8640	22800	260	16100
4	3650	68	667	27400	235	17500	23600	239	15200
5	3490	64	604	32300	253	22100	18800	154	7970
6	10700	100	3030	25900	171	12100	9780	109	2910
7	18500	166	8470	18700	121	6200	7480	78	1590
8	30500	288	24100	11900	95	3060	6030	48	797
9	42400	361	41300	10400	83	2340	4110	36	398
10	42400	234	26900	9420	72	1830	3160	31	265
11	37200	156	15700	5900	60	962	2010	26	144
12	32100	132	11400	4020	48	530	1570	25	104
13	27200	114	8370	3150	42	368	1260	24	81
14	22100	95	5700	4070	50	548	1080	23	68
15	16400	76	3410	3630	41	399	1030	22	62
16	8910	57	1390	2790	35	265	891	22	52
17	5430	38	568	1750	29	140	901	21	51
18	2950	31	251	1180	26	82	839	20	46
19	1880	28	144	1140	24	75	957	20	51
20	1420	25	96	1080	24	69	567	19	29
21	1470	22	87	810	23	51	520	18	26
22	10700	62	2290	711	23	44	830	27	63
23	17500	99	4700	877	23	54	1680	45	212
24	15300	75	3130	733	22	44	3250	64	575
25	9690	62	1640	556	22	33	4830	83	1100
26	5800	53	832	640	21	37	7140	103	1990
27	4710	49	621	629	21	35	12500	144	5150
28	4510	44	539	1050	24	82	24700	266	17800
29	5040	42	568	2220	46	275	22000	219	13200
30	5070	40	545	1630	36	160	14800	132	5220
31	3800	38	390	989	26	70	---	---	---
TOTAL	394790	---	168053	204595	---	79606	212365	---	96289
YEAR	2355627		1481659.3						

04195500 PORTAGE RIVER AT WOODVILLE, OHIO

LOCATION.—Latitude 41°26′58″, longitude 83°21′41″, in sec. 28, T.6 N., R.13 E., Sandusky County, Hydrologic Unit 04100010, on left bank at upstream side of bridge on U.S. Highway 20 in Woodville, Ohio, 600 ft downstream from unnamed right bank tributary, and 10.3 mi upstream from Sugar Creek.
DRAINAGE AREA.—428 mi^2.
PERIOD OF RECORD.—July 1928 to December 1935, October 1939 to current year.
REVISED RECORDS.—WSP 894: 1929-30. WSP 1207: 1933. WSP 1387: 1931, 1933. WSP 1912: Drainage area.
GAGE.—Water-stage recorder. Datum of gage is 614.75 ft above sea level. Prior to Oct. 8, 1933, nonrecording gage; Oct. 9, 1933-Dec. 30, 1935, water-stage recorder; Oct. 17-Nov. 29, 1939, nonrecording gage, all at same site and datum.
REMARKS.—Records good except for periods of estimated record, which are poor. Flow supplemented by water imported from Maumee River Basin for municipal supply for city of Bowling Green 16 mi upstream. The importation of this water began Sept. 1, 1951. Water-quality data formerly collected at this site 800 ft downstream. Sediment data formerly collected at this site. National Weather Service gage height telemeter at station.
EXTREMES OUTSIDE PERIOD OF RECORD.—Flood in Mar. 1913 reached a stage of 17 ft, from information by local residents; discharge, 17,000 ft^3/s, from rating curve extended above 11,500 ft^3/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	39	10	292	2970	e50	e150	285	79	663	83	111	87
2	27	8.9	184	1520	e56	e140	250	623	438	67	177	416
3	21	11	118	640	e70	e130	205	1060	260	56	566	463
4	20	9.8	126	368	177	e120	230	522	200	54	1770	275
5	17	11	72	259	603	e110	4030	1250	175	48	3980	152
6	16	14	53	210	374	e140	4920	2800	144	49	3280	97
7	13	17	50	158	234	e470	2290	1250	123	57	1420	70
8	12	19	42	161	e140	e390	2900	1560	115	185	825	55
9	10	24	39	207	e110	e600	1750	2080	177	1610	547	46
10	10	24	34	921	e92	e1100	987	5110	191	1340	303	40
11	10	105	29	656	e82	e600	668	4540	136	819	185	36
12	10	259	28	352	e70	e500	491	3200	144	480	169	34
13	9.3	137	29	e250	e62	e800	365	1820	1090	257	216	30
14	8.7	79	31	e190	e58	e3000	279	866	1140	154	150	27
15	8.3	55	34	e160	e54	e4000	239	547	976	106	100	29
16	8.3	43	54	e130	e50	e3500	210	469	499	82	76	28
17	8.9	37	89	e110	e47	2840	180	379	302	63	62	27
18	9.2	34	103	e90	e44	1980	156	292	502	51	53	28
19	9.6	30	853	e76	e42	1350	142	236	710	44	45	28
20	8.8	27	2720	e68	e40	1100	130	227	358	38	40	22
21	12	26	1830	e60	e39	1740	121	298	221	44	35	20
22	11	36	734	e56	e50	1860	118	245	157	129	51	24
23	13	119	383	e52	e120	1050	110	197	122	198	76	29
24	12	226	240	e48	e300	648	94	167	100	169	53	39
25	13	270	185	e46	e250	473	84	149	82	153	39	37
26	17	358	146	e44	e220	369	81	132	74	93	32	32
27	34	282	111	e42	e190	298	80	118	217	68	54	57
28	35	187	116	e40	e170	251	74	111	289	663	43	183
29	22	130	102	e41	---	254	67	108	159	965	33	175
30	15	180	105	e43	---	401	66	106	110	369	30	112
31	11	---	1780	e47	---	363	---	253	---	182	27	---
TOTAL	471.1	2768.7	10712	10015	3794	30727	21602	30794	9874	8676	14548	2698
MEAN	15.2	92.3	346	323	136	991	720	993	329	280	469	89.9
MAX	39	358	2720	2970	603	4000	4920	5110	1140	1610	3980	463
MIN	8.3	8.9	28	40	39	110	66	79	74	38	27	20
CFSM	0.04	0.22	0.81	0.75	0.32	2.32	1.68	2.32	0.77	0.65	1.10	0.21
IN.	0.04	0.24	0.93	0.87	0.33	2.67	1.88	2.68	0.86	0.75	1.26	0.23

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	89.2	190	350	451	526	751	653	418	293	150	87.0	84.8
MAX	722	1595	1722	2129	1793	2542	1965	1685	1875	821	1601	1088
(WY)	1951	1973	1991	1952	1976	1982	1957	1943	1981	1958	1998	1981
MIN	2.96	3.61	4.37	2.24	2.00	118	41.7	25.4	9.29	2.81	3.09	3.67
(WY)	1935	1935	1935	1945	1934	1941	1946	1934	1988	1930	1933	1944
(+)	8.03	7.12	6.74	6.90	7.37	7.35	7.98	7.51	7.97	8.43	8.38	8.23
MEAN≠	7.17	85.2	339	316	129	984	712	985	321	272	461	81.7
CFSM≠	0.02	0.20	0.79	0.74	0.30	2.30	1.66	2.30	0.75	0.64	1.08	0.19
IN≠	0.02	0.22	0.91	0.85	0.31	2.65	1.86	2.65	0.84	0.73	1.24	0.21

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1928 - 2003	
ANNUAL TOTAL	121385.3		146679.8			
ANNUAL MEAN	333		402 (≠394)		≠329	
HIGHEST ANNUAL MEAN					628	1973
LOWEST ANNUAL MEAN					81.4	1931
HIGHEST DAILY MEAN	7140	Feb 2	5110	May 10	11100	Aug 27 1998
LOWEST DAILY MEAN	7.0	Aug 14	8.3	Oct 15	0.40	Aug 26 1931
ANNUAL SEVEN-DAY MINIMUM	7.7	Aug 12	8.8	Oct 14	0.93	Oct 12 1934
MAXIMUM PEAK FLOW			5630	May 10a	11500	Feb 15 1950
MAXIMUM PEAK STAGE			10.45	Mar 14b	14.51	Feb 15 1950
INSTANTANEOUS LOW FLOW			8.0	Oct 15	0.40	Aug 16 1931
ANNUAL RUNOFF (CFSM)	0.78		0.94		0.79	
ANNUAL RUNOFF (INCHES)	10.55		12.75 (≠12.49)		≠10.57	
10 PERCENT EXCEEDS	728		1090		858	
50 PERCENT EXCEEDS	66		120		70	
90 PERCENT EXCEEDS	9.9		22		8.4	

(+) Diversion in cubic feet per second, from Maumee River Basin for municipal supply; furnished by City of Bowling Green.
≠ Adjusted for diversion.
a Peaks above base shown in table of peak discharges and stages at continuous-record surface-water-discharge stations.
b Ice jam.
e Estimated.

04195820 PORTAGE RIVER AT ELMORE, OHIO

LOCATION.—Latitude 41°29′28″, longitude 83°13′29″, Ottawa County, Hydrologic Unit 04100010, on right bank 500 ft upstream from State Route 590, 0.4 mi upstream from Sugar Creek, and 4.2 mi east of Elmore.
DRAINAGE AREA.—494 mi^2.
PERIOD OF RECORD.—August 1998 to current year.
GAGE.—Water-stage recorder. Datum of gage is 576 ft above sea level.
REMARKS.—Records fair except for periods of estimated record, which are poor. Flow supplemented by water imported from Maumee River Basin for municipal supply for city of Bowling Green 30 mi upstream. The importation of this water began Sept. 1, 1951.

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	16	373	3770	e76	e160	389	164	1030	87	148	52
2	45	14	280	2240	e84	e150	327	539	710	67	162	410
3	34	13	159	996	e100	e140	266	1570	368	55	496	618
4	28	13	190	553	253	e130	268	861	237	47	1890	372
5	26	13	122	353	824	e140	4210	1160	196	45	3650	198
6	23	14	80	273	e600	e200	6120	3490	154	39	3990	123
7	22	15	74	205	e290	e720	3170	1810	125	52	1860	86
8	19	18	60	189	e220	e680	3430	2210	122	90	1080	67
9	17	23	57	236	e170	e1000	2430	2620	186	1720	736	53
10	16	35	48	e900	e140	e2000	1420	5480	252	1880	409	45
11	16	64	47	e600	e120	e1200	979	5460	174	1200	229	40
12	16	325	42	e420	e100	e840	731	3950	163	733	165	37
13	15	201	41	e340	e92	e1000	531	2480	1450	373	230	34
14	13	115	44	e280	e84	e4000	383	1280	1800	208	185	31
15	13	80	49	e240	e74	e5400	316	814	1430	139	123	31
16	13	62	62	e210	e70	e4000	274	671	786	105	93	32
17	13	51	98	e180	e64	3620	233	535	397	80	75	29
18	14	46	139	e150	e60	2640	205	378	403	62	60	27
19	17	44	751	e130	e58	1900	184	287	996	50	51	30
20	16	40	3380	e120	e56	1450	178	255	482	43	44	27
21	13	39	2650	e110	e64	2170	172	347	258	47	40	23
22	19	52	1170	e100	e80	2490	172	304	174	79	38	24
23	16	104	596	e94	e140	1530	164	229	130	229	70	32
24	19	281	341	e88	e420	962	149	187	103	194	65	34
25	19	337	220	e82	e320	702	140	161	86	185	46	42
26	26	481	189	e78	e250	527	138	143	75	124	35	35
27	25	410	144	e74	e210	401	146	125	134	83	37	47
28	49	267	131	e72	e180	330	154	118	353	494	55	134
29	38	184	153	e68	---	333	148	116	195	1350	40	202
30	26	201	138	e70	---	524	140	115	121	578	32	137
31	20	---	1730	e72	---	530	---	190	---	254	29	---
TOTAL	709	3558	13558	13293	5199	41869	27567	38049	13090	10692	16163	3052
MEAN	22.9	119	437	429	186	1351	919	1227	436	345	521	102
MAX	63	481	3380	3770	824	5400	6120	5480	1800	1880	3990	618
MIN	13	13	41	68	56	130	138	115	75	39	29	23
CFSM	0.05	0.24	0.89	0.87	0.38	2.73	1.86	2.48	0.88	0.70	1.06	0.21
IN.	0.05	0.27	1.02	1.00	0.39	3.15	2.08	2.87	0.99	0.81	1.22	0.23

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	212	68.0	359	378	728	772	1053	689	478	132	421	66.4
MAX	747	119	802	996	1164	1351	1515	1227	1169	345	1686	107
(WY)	2002	2003	2002	1999	2002	2003	1999	2003	2000	2003	1998	1998
MIN	22.9	20.1	37.4	99.8	186	378	578	131	193	23.6	21.1	13.1
(WY)	2003	2000	1999	2000	2003	2000	2000	1999	2002	2002	1999	1999

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1998 - 2003	
ANNUAL TOTAL	152554.5		186799			
ANNUAL MEAN	418		512		422	
HIGHEST ANNUAL MEAN					512	2003
LOWEST ANNUAL MEAN					347	2000
HIGHEST DAILY MEAN	7330	Feb 2	6120	Apr 6	9940	Aug 27 1998
LOWEST DAILY MEAN	5.7	Jul 17	13	Oct 14	5.7	Jul 17 2002
ANNUAL SEVEN-DAY MINIMUM	7.1	Jul 14	14	Oct 12	7.1	Jul 14 2002
MAXIMUM PEAK FLOW			6500	Apr 6a	10200	Aug 27 1998
MAXIMUM PEAK STAGE			11.12	Mar 15b	13.92	Aug 27 1998
INSTANTANEOUS LOW FLOW			12	Oct 16	5.5	Jul 17 2002
ANNUAL RUNOFF (CFSM)	0.85		1.04		0.86	
ANNUAL RUNOFF (INCHES)	11.49		14.07		11.62	
10 PERCENT EXCEEDS	935		1480		1200	
50 PERCENT EXCEEDS	89		150		103	
90 PERCENT EXCEEDS	13		27		17	

a Peaks above base shown in table of peak discharges and stages at continuous-record surface-water-discharge stations.
b Ice jam.
e Estimated.

04196000 SANDUSKY RIVER NEAR BUCYRUS, OHIO

LOCATION.—Latitude 40°48′13″, longitude 83°00′21″, in NE ¼ sec. 10, T.3 S., R.16 E., Crawford County, Hydrologic Unit 04100011, on right bank at downstream side of bridge on township road, 1 mi upstream from unnamed left bank tributary, 1.5 mi west of Bucyrus, Ohio, and 12 mi downstream from Loss Creek.

DRAINAGE AREA.—88.8 mi^2.

PERIOD OF RECORD.—August 1925 to November 1935, July 1938 to December 1951, December 1963 to September 1981, October 1995 to current year.

REVISED RECORDS.—WSP 744: 1925-32. WSP 874: 1938. WSP 1307: 1926(M), 1928(M), 1931, 1932(M), 1934-35(M), 1939, 1940(M), 1946(M). WSP 1912: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 955.04 ft above sea level. Prior to May 11, 1940, nonrecording gage.

REMARKS.—Records fair except for periods of estimated record, which are poor. Low flow slightly affected by operation of reservoirs for municipal supply of Bucyrus. Water-quality and sediment data formerly collected at this site.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Mar. 23, 1913 reached a stage of 14.5 ft, from floodmarks. Flood of Jan. 22, 1959, reached a stage of 11.9 ft, from floodmarks; discharge, 13,500 ft^3/s.

REVISIONS.—The maximum discharge for water year 2002 has been revised to 1,690 cfs, Apr. 3, 2002; gage height, 7.09 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	16	16	45	773	e6.2	e22	94	54	38	145	21	57
2	11	12	30	325	e6.0	e20	75	306	29	158	43	379
3	9.3	10	e17	150	e10	e30	54	155	38	67	459	173
4	12	9.8	e15	e80	e170	e45	84	87	50	45	184	68
5	9.2	15	e12	e40	e100	e600	992	235	43	54	128	39
6	8.7	12	e10	e31	e45	e200	400	234	33	38	59	28
7	9.2	11	e8.0	e27	e25	e140	390	262	28	130	41	21
8	7.6	14	e6.4	e40	e18	e200	657	1180	65	618	31	17
9	6.8	13	e5.2	e56	e15	e700	243	1260	565	2050	25	14
10	6.2	65	e4.0	e70	e12	e200	152	1590	159	777	21	13
11	6.2	518	e3.8	e14	e9.6	e130	113	442	78	422	18	12
12	6.1	165	e3.6	e11	e8.0	e125	87	238	73	163	16	11
13	5.8	63	e3.5	e10	e7.0	e370	68	178	129	90	15	10
14	5.9	39	e5.0	e10	e6.2	657	58	122	97	60	17	9.9
15	6.0	29	e8.0	e9.8	e5.8	302	51	97	72	46	14	13
16	6.6	26	e12	e9.6	e5.4	314	46	104	48	41	12	15
17	6.5	22	e24	e9.2	e5.2	292	41	98	46	34	12	12
18	6.5	20	48	e9.0	e5.0	244	37	66	69	26	11	9.5
19	14	21	327	e8.6	e4.8	179	34	54	50	22	10	67
20	6.5	16	887	e8.4	e4.7	148	42	108	40	19	8.9	137
21	13	17	287	e8.2	e4.6	146	49	225	32	49	8.5	42
22	9.1	60	120	e8.0	e18	153	42	103	27	156	11	59
23	8.0	141	72	e7.8	e37	103	34	66	23	100	8.2	174
24	6.9	102	44	e7.6	e110	81	30	53	20	55	8.4	77
25	18	134	e27	e7.4	e60	80	28	45	18	35	7.7	52
26	15	93	e18	e7.2	e40	166	27	38	26	27	22	57
27	26	60	e14	e7.0	e31	137	25	34	20	42	46	924
28	15	45	e13	e6.8	e26	90	24	33	16	124	34	942
29	18	40	e12	e6.6	---	231	28	35	20	60	17	207
30	12	47	e12	e6.6	---	241	28	31	29	34	14	109
31	16	---	1210	e6.4	---	126	---	40	---	25	13	---
TOTAL	323.1	1835.8	3303.5	1771.2	795.5	6472	4033	7573	1981	5712	1335.7	3748.4
MEAN	10.4	61.2	107	57.1	28.4	209	134	244	66.0	184	43.1	125
MAX	26	518	1210	773	170	700	992	1590	565	2050	459	942
MIN	5.8	9.8	3.5	6.4	4.6	20	24	31	16	19	7.7	9.5
CFSM	0.12	0.69	1.20	0.64	0.32	2.35	1.51	2.75	0.74	2.07	0.49	1.41
IN.	0.14	0.77	1.38	0.74	0.33	2.71	1.69	3.17	0.83	2.39	0.56	1.57
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 2003, BY WATER YEAR (WY)												
MEAN	22.9	54.6	107	138	140	183	153	97.4	76.2	37.3	24.6	23.2
MAX	278	271	405	635	339	471	408	252	428	184	212	125
(WY)	1927	1973	1928	1950	1976	1978	1964	1969	1947	2003	1979	2003
MIN	1.28	1.34	1.39	3.93	2.29	32.9	9.64	4.44	1.93	0.84	1.34	0.38
(WY)	1935	1935	1935	1977	1934	1981	1935	1934	1934	1995	1995	1995

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1925 - 2003	
ANNUAL TOTAL	31489.8		38884.2			
ANNUAL MEAN	86.3		107		87.6	
HIGHEST ANNUAL MEAN					145	1973
LOWEST ANNUAL MEAN					20.4	1934
HIGHEST DAILY MEAN	1440	Apr 3	2050	Jul 9	4600	Dec 14 1927
LOWEST DAILY MEAN	2.0	Sep 8	3.5	Dec 13	0.34	Sep 30 1995
ANNUAL SEVEN-DAY MINIMUM	2.4	Sep 8	4.5	Dec 8	0.36	Sep 24 1995
MAXIMUM PEAK FLOW			2290	Jul 9a	5800	Dec 14 1927
MAXIMUM PEAK STAGE			8.18	Jul 9	9.83	Dec 14 1977
INSTANTANEOUS LOW FLOW					0.60	Sep 28 1947
ANNUAL RUNOFF (CFSM)	0.97		1.20		0.99	
ANNUAL RUNOFF (INCHES)	13.19		16.29		13.40	
10 PERCENT EXCEEDS	194		239		195	
50 PERCENT EXCEEDS	22		34		22	
90 PERCENT EXCEEDS	3.8		7.3		3.3	

a Peaks above base shown in table of peak discharges and stages at continuous-record surface-water-discharge stations.
e Estimated.

04196500 SANDUSKY RIVER NEAR UPPER SANDUSKY

LOCATION.—Latitude 40°51′02″, longitude 83°15′23″, Wyandot County, Hydrologic Unit 04100011, on left bank at downstream side of county road bridge, 0.7 mi downstream from unnamed right bank tributary, 0.8 mi upstream from Rocky Run, and 2 mi northeast of Upper Sandusky, Ohio.
DRAINAGE AREA.—298 mi^2.
PERIOD OF RECORD.—October 1921 to December 1935, January 1938 to September 1981, November 2000 to current year. Gage height records collected at site 3 mi upstream since 1912 (fragmentary) are contained in reports of National Weather Service.
REVISED RECORDS.—WSP 874: 1927-30, 1933. WSP 1387: 1922(tn), 1923-29, 1944. WSP 1912: Drainage area
GAGE.—Water-stage recorder. Datum of gage is 792.25 ft above sea level. Prior to Sept. 14, 1924, nonrecording site and datum. Water-quality data collected at site 1969-1980.
REMARKS.—Records good except for periods of estimated record, which are poor.
EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of June 1937 reached a stage of 14.3 ft from high-water marks in gage well.

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	33	134	2890	e38	e140	366	73	116	263	63	51
2	39	28	e80	1700	e37	e130	296	306	101	568	105	481
3	25	38	e58	786	e36	e110	235	541	96	288	338	636
4	23	37	e44	442	e60	e100	253	298	127	167	795	272
5	22	35	e36	305	e370	e760	1940	491	134	234	617	141
6	21	38	e30	e180	e200	1850	2270	826	111	189	410	88
7	19	35	e25	e150	e140	1230	1360	515	89	397	202	62
8	14	37	e22	e140	e110	627	2040	1870	90	1020	134	49
9	13	27	e19	e230	e90	2230	1270	2850	545	3650	93	40
10	13	47	e17	e450	e70	2250	700	4510	873	4380	71	31
11	11	391	e16	e200	e54	1030	489	3560	351	2620	56	27
12	10	885	e15	e160	e42	847	369	1290	215	1140	83	25
13	10	299	e14	e120	e34	1510	283	801	186	545	55	22
14	9.5	148	e14	e100	e27	2080	224	558	242	316	39	20
15	9.6	92	e13	e88	e22	1200	188	412	188	214	36	29
16	8.8	66	e25	e78	e19	1010	161	515	142	161	31	26
17	11	53	e40	e70	e17	947	141	450	108	124	28	25
18	12	43	e100	e66	e15	845	125	304	109	97	24	25
19	18	39	414	e62	e13	697	108	230	142	76	23	26
20	12	36	1960	e58	e12	568	97	322	118	62	22	97
21	18	34	1700	e56	e11	600	113	764	89	105	20	140
22	17	52	752	e52	e30	602	124	581	70	246	18	87
23	14	178	375	e50	385	448	110	312	60	347	16	200
24	18	328	243	e48	865	322	90	221	51	266	17	289
25	25	304	e130	e46	640	274	80	176	44	150	14	152
26	24	351	e110	e44	e400	500	76	145	39	94	28	107
27	42	246	e80	e43	e210	570	71	119	53	80	50	1030
28	34	165	e66	e42	e160	373	66	109	51	162	71	2200
29	40	125	e56	e40	---	539	66	104	38	240	58	1170
30	33	127	e80	e40	---	907	68	96	42	135	39	496
31	36	---	2120	e39	---	546	---	108	---	84	27	---
TOTAL	660.9	4317	8788	8775	4107	25842	13779	23457	4620	18420	3583	8044
MEAN	21.3	144	283	283	147	834	459	757	154	594	116	268
MAX	59	885	2120	2890	865	2250	2270	4510	873	4380	795	2200
MIN	8.8	27	13	39	11	100	66	73	38	62	14	20
CFSM	0.07	0.48	0.95	0.95	0.49	2.80	1.54	2.54	0.52	1.99	0.39	0.90
IN.	0.08	0.54	1.10	1.10	0.51	3.23	1.72	2.93	0.58	2.30	0.45	1.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	53.5	126	268	388	437	569	450	268	190	102	55.8	65.2
MAX	795	891	1107	1701	1069	1490	1399	761	1283	594	504	839
(WY)	1927	1973	1978	1930	1971	1963	1957	1969	1947	2003	1958	1981
MIN	1.67	5.09	5.64	13.9	15.6	114	37.3	18.2	6.44	8.07	4.02	1.22
(WY)	1964	1964	1964	1945	1964	1941	1946	1934	1934	1934	1952	1955

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1922 - 2003	
ANNUAL TOTAL	91442.1		124392.9			
ANNUAL MEAN	251		341		248	
HIGHEST ANNUAL MEAN					449	1973
LOWEST ANNUAL MEAN					70.0	1934
HIGHEST DAILY MEAN	3270	May 14	4510	May 10	8400	Jan 22 1959
LOWEST DAILY MEAN	1.9	Sep 14	8.8	Oct 16	0.60	Sep 13 1955
ANNUAL SEVEN-DAY MINIMUM	2.8	Sep 8	10	Oct 11	0.71	Sep 8 1955
MAXIMUM PEAK FLOW			4690	May 10	10000	Jan 22 1959
MAXIMUM PEAK STAGE			8.59	May 10a	15.00	Jan 22 1959
INSTANTANEOUS LOW FLOW			7.7	Oct 16	0.50	Oct 2 1963
ANNUAL RUNOFF (CFSM)	0.84		1.14		0.83	
ANNUAL RUNOFF (INCHES)	11.41		15.53		11.31	
10 PERCENT EXCEEDS	606		868		630	
50 PERCENT EXCEEDS	66		108		63	
90 PERCENT EXCEEDS	6.1		20		8.1	

a Peaks above base shown in table of peak discharges and stages at continuous-record surface-water-discharge stations.
e Estimated.

04196800 TYMOCHTEE CREEK AT CRAWFORD, OHIO

LOCATION.—Latitude 40°55′22″, longitude 83°20′56″, in SE ¼ sec. 27, T.1 S., R.13 E., Wyandot County, Hydrologic Unit 04100011, on right bank at downstream side of bridge on State Highway 199 (formerly U.S. Highway 23), 0.4 mi northwest of Crawford, Ohio, 1.5 mi downstream from Lick Run, 2.7 mi upstream from Little Tymochtee Creek, and 3 mi southeast of Carey, Ohio.
DRAINAGE AREA.—229 mi^2.
PERIOD OF RECORD.—Occasional low-flow measurements, water years 1961-63, and annual maximum, water years 1961-64, June 1964 to current year.
REVISED RECORDS.—WRD Ohio 1969: 1964(P), 1966(M), 1967(P).
GAGE.—Water-stage recorder. Datum of gage is 785.86 ft above sea level.
REMARKS.—Records good except for periods of estimated record, which are poor. Water-quality and sediment data formerly collected at this 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	20	2.7	92	1520	e17	e100	250	26	73	20	25	28
2	9.6	2.6	e64	2020	e17	e96	185	65	99	391	30	163
3	5.4	2.9	e40	1340	e16	e86	145	110	91	158	92	627
4	4.1	3.5	e33	469	e34	e80	172	171	84	72	273	536
5	3.5	3.8	e28	241	e70	e450	1030	303	177	68	396	206
6	2.7	4.5	e22	163	e200	818	1640	725	150	94	309	107
7	2.3	4.5	e19	125	e100	954	1900	781	104	292	173	64
8	2.6	4.4	e17	106	e70	528	1480	382	88	1050	112	41
9	2.2	4.5	e15	185	e54	e700	1590	1070	102	2040	75	28
10	1.6	8.5	e13	425	e43	e1000	893	2620	160	2010	43	22
11	1.2	35	e12	395	e37	e1200	410	3470	128	2030	32	18
12	0.99	121	e11	e150	e30	e820	274	2180	87	1410	28	17
13	0.81	193	e11	e110	e25	e780	197	1400	77	602	24	16
14	0.56	106	e10	e80	e20	e1100	148	591	155	229	24	15
15	0.62	61	e10	e66	e17	2320	113	338	138	137	20	15
16	1.0	37	e10	e54	e14	1710	91	397	110	94	19	13
17	1.1	26	e13	e47	e12	1150	75	781	88	67	17	14
18	1.0	21	e20	e40	e11	925	63	490	76	49	15	14
19	1.2	19	206	e35	e9.4	681	55	231	58	38	14	15
20	1.1	16	727	e31	e8.4	516	51	339	53	29	13	14
21	0.95	14	940	e28	e7.8	455	44	927	50	53	11	14
22	0.90	16	857	e26	e20	570	40	681	38	127	11	16
23	0.98	19	313	e24	e60	492	44	263	32	129	13	20
24	0.93	32	166	e23	e170	295	43	153	26	113	12	24
25	1.2	70	109	e22	e480	214	35	107	22	69	10	39
26	2.3	127	e74	e21	e230	383	31	83	20	44	11	46
27	2.4	149	e62	e20	e150	639	31	65	23	32	17	82
28	2.1	114	e52	e20	e120	391	30	52	19	50	17	302
29	2.2	85	e44	e19	---	306	28	46	17	76	15	520
30	2.6	79	e70	e18	---	484	26	55	19	39	14	235
31	2.9	---	872	e18	---	413	---	77	---	33	13	---
TOTAL	83.04	1381.9	4932	7841	2042.6	20656	11114	18979	2364	11645	1878	3271
MEAN	2.68	46.1	159	253	73.0	666	370	612	78.8	376	60.6	109
MAX	20	193	940	2020	480	2320	1900	3470	177	2040	396	627
MIN	0.56	2.6	10	18	7.8	80	26	26	17	20	10	13

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	31.2	131	220	227	300	405	342	221	143	112	33.6	33.0
MAX	278	844	1104	777	823	1392	946	686	780	741	201	370
(WY)	1987	1993	1991	1974	1975	1978	1972	1996	1981	1992	1992	1981
MIN	0.084	0.86	1.78	1.67	37.2	35.1	32.8	11.7	1.78	1.04	0.48	0.27
(WY)	1965	1992	1992	1977	1972	1983	1971	1988	1988	1965	1965	1964

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1964 - 2003	
ANNUAL TOTAL	56558.20		86187.54			
ANNUAL MEAN	155		236		183	
HIGHEST ANNUAL MEAN					330	1973
LOWEST ANNUAL MEAN					72.2	1988
HIGHEST DAILY MEAN	2460	Mar 30	3470	May 11	6280	Dec 31 1990
LOWEST DAILY MEAN	0.18	Aug 18	0.56	Oct 14	0.00	Aug 10 1964
ANNUAL SEVEN-DAY MINIMUM	0.30	Aug 13	0.87	Oct 12	0.00	Oct 23 1964
MAXIMUM PEAK FLOW			3790	May 11a	6700	Dec 31 1990
MAXIMUM PEAK STAGE			7.85	May 11	11.21	Mar 6 1963
INSTANTANEOUS LOW FLOW					0.00	Aug 10 1964
10 PERCENT EXCEEDS	351		748		501	
50 PERCENT EXCEEDS	30		55		34	
90 PERCENT EXCEEDS	0.73		4.5		1.6	

a Peaks above base shown in table of peak discharges and stages at continuous-record surface-water-discharge stations.
e Estimated.

04197100 HONEY CREEK AT MELMORE, OHIO

LOCATION.—Latitude 41°01′20″, longitude 83°06′35″, Seneca County, Hydrologic Unit 04100011, at bridge on State Highways 67 and 100 at Melmore, Ohio, 1.5 mi upstream from Buckeye Creek.
DRAINAGE AREA.—149 mi^2.
PERIOD OF RECORD.—Annual maximum, water years 1961-75, February 1976 to current year.
GAGE.—Water-stage recorder. Elevation of gage is 818 ft above sea level (from topographic map).
REMARKS.—Records fair except for periods of estimated record, which are poor. Water-quality data fomerly collected at this 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	7.5	1.0	50	e1000	e7.8	e29	145	22	38	11	41	15
2	3.7	1.4	e30	e500	e7.6	e24	108	26	36	25	41	33
3	2.2	1.3	e20	e300	e7.4	e30	83	89	34	155	168	65
4	1.4	1.4	e14	e180	e30	e40	148	71	32	70	205	47
5	1.2	1.4	e11	e80	e200	478	1060	62	33	38	405	29
6	0.98	1.5	e8.0	e50	e80	617	1200	110	31	32	144	20
7	0.80	1.3	e6.6	e37	e30	518	828	103	27	31	75	14
8	0.69	1.2	e5.2	e35	e20	402	944	78	101	478	54	11
9	0.59	1.1	e4.2	e60	e17	884	722	427	482	1750	37	8.5
10	0.56	3.3	e3.3	e80	e15	758	386	921	524	2340	29	6.6
11	0.55	13	e3.0	e50	e13	407	246	815	231	2040	24	5.6
12	0.54	46	e2.6	e34	e12	287	169	463	115	963	20	4.8
13	0.55	40	e2.5	e30	e11	442	121	317	85	455	17	4.3
14	0.52	21	e2.3	e25	e10	522	87	209	231	211	15	4.0
15	0.51	11	e2.7	e22	e9.4	553	70	132	125	121	13	4.9
16	0.49	6.1	e3.3	e20	e8.8	472	59	108	71	78	11	4.5
17	0.45	4.7	9.4	e18	e8.2	418	51	80	49	56	11	5.3
18	0.46	4.1	17	e16	e7.6	377	45	62	43	40	10	4.1
19	0.68	3.2	129	e15	e7.0	301	40	50	52	31	10	5.7
20	0.62	2.5	550	e14	e6.6	274	36	149	45	26	8.6	21
21	0.60	2.1	549	e13	e6.4	339	35	440	34	37	7.9	40
22	0.58	8.0	265	e12	e10	320	35	315	27	177	7.2	27
23	0.53	64	e100	e11	e22	216	34	144	23	143	11	27
24	0.53	89	e50	e11	e60	140	30	88	19	89	16	43
25	0.90	83	e30	e10	e110	110	27	65	16	56	12	34
26	1.1	92	e20	e9.6	e70	330	26	51	18	37	9.9	24
27	1.0	72	e17	e9.4	e50	296	25	42	19	42	9.3	86
28	0.90	47	e15	e8.8	e34	171	24	36	14	314	7.7	433
29	0.86	35	e13	e8.6	---	294	22	35	15	313	7.1	385
30	0.92	38	e12	e8.2	---	408	21	35	14	123	7.4	135
31	0.78	---	e100	e8.0	---	241	---	37	---	61	6.9	---
TOTAL	33.69	696.6	2045.1	2675.6	870.8	10698	6827	5582	2584	10343	1441.0	1547.3
MEAN	1.09	23.2	66.0	86.3	31.1	345	228	180	86.1	334	46.5	51.6
MAX	7.5	92	550	1000	200	884	1200	921	524	2340	405	433
MIN	0.45	1.0	2.3	8.0	6.4	24	21	22	14	11	6.9	4.0
CFSM	0.01	0.16	0.44	0.58	0.21	2.32	1.53	1.21	0.58	2.24	0.31	0.35
IN.	0.01	0.17	0.51	0.67	0.22	2.67	1.70	1.39	0.65	2.58	0.36	0.39

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	28.5	91.8	155	147	233	264	239	119	109	74.5	43.1	34.7
MAX	186	550	518	465	601	765	540	340	740	373	233	242
(WY)	1991	1993	1978	1993	1976	1978	1979	1997	1981	1992	1998	1981
MIN	0.71	2.51	1.99	1.31	31.1	40.4	44.4	8.69	1.05	0.46	0.91	0.84
(WY)	1989	1995	1977	1977	2003	1981	1976	1988	1988	1988	2002	1995

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1976 - 2003	
ANNUAL TOTAL	35201.47		45344.09			
ANNUAL MEAN	96.4		124		128	
HIGHEST ANNUAL MEAN					189	1993
LOWEST ANNUAL MEAN					48.1	1988
HIGHEST DAILY MEAN	2120	Mar 30	2340	Jul 10	4000	Dec 30 1990
LOWEST DAILY MEAN	0.15	Sep 11	0.45	Oct 17	0.07	Sep 28 1988
ANNUAL SEVEN-DAY MINIMUM	0.17	Sep 7	0.50	Oct 12	0.09	Sep 24 1988
MAXIMUM PEAK FLOW			2540	Jul 11a	4440	Jun 13 1981
MAXIMUM PEAK STAGE			10.99	Jan 15b	11.00	Jun 13 1981
INSTANTANEOUS LOW FLOW					0.07	Sep 28 1988
ANNUAL RUNOFF (CFSM)	0.65		0.83		0.86	
ANNUAL RUNOFF (INCHES)	8.79		11.32		11.68	
10 PERCENT EXCEEDS	189		403		339	
50 PERCENT EXCEEDS	19		31		30	
90 PERCENT EXCEEDS	0.55		1.5		1.9	

a Peaks above base shown in table of peak discharges and stages at continuous-record surface-water-discharge stations.
b Ice jam.
e Estimated.

04197170 ROCK CREEK AT TIFFIN, OHIO

LOCATION.—Latitude 41°06′49″, longitude 83°10′06″, Seneca County, Hydrologic Unit 04100011, on left bank 0.05 mi downstream from bridge on Rebecca Street, at Heidelberg College, Tiffin, Ohio.
DRAINAGE AREA.—34.6 mi^2.
PERIOD OF RECORD.—June 1983 to current year.
GAGE.—Water-stage recorder. Elevation of gage is 740 ft above sea level (from topographic map).
REMARKS.—Records fair except for periods of estimated record, 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	1.7	1.7	12	312	e2.3	e1.7	22	5.7	11	4.1	5.4	7.1
2	1.5	1.5	5.2	66	e2.2	e1.6	18	7.1	8.4	3.8	7.0	5.7
3	1.6	1.6	2.3	27	e2.5	e5.0	14	6.3	7.4	3.5	8.9	6.9
4	2.0	1.8	1.4	17	e80	e15	62	5.7	7.6	3.3	18	6.4
5	1.8	2.1	1.1	13	e30	e80	580	13	7.0	3.2	59	4.6
6	1.9	1.9	0.90	12	e6.0	e50	120	14	6.3	3.3	26	3.7
7	1.8	2.0	e0.70	11	e2.5	e30	172	10	5.7	5.5	10	3.2
8	1.7	1.8	e0.60	10	e1.5	e80	201	8.1	12	95	7.0	3.0
9	1.9	2.0	e0.54	33	e1.2	e150	57	163	134	443	5.6	2.8
10	1.9	5.3	e0.50	54	e1.1	e28	32	129	32	173	4.9	2.7
11	1.8	11	e0.48	27	e1.0	e19	22	38	15	179	4.4	2.5
12	1.9	4.3	e0.47	e14	e1.0	e14	17	24	13	42	4.1	2.5
13	1.9	3.5	e0.52	e8.0	e0.94	e30	13	23	26	18	3.8	2.5
14	2.0	2.0	e0.58	e7.0	e0.90	e90	11	17	282	12	4.8	2.5
15	1.9	1.4	e0.64	e6.6	e0.88	e64	10	12	158	9.4	4.2	2.9
16	2.1	1.5	e0.72	e6.0	e0.84	e58	9.3	9.9	24	8.3	3.8	2.7
17	2.3	1.4	e0.80	e5.8	e0.82	e56	8.5	8.5	14	7.4	3.5	2.5
18	2.4	1.3	e1.1	e5.4	e0.82	e45	7.9	7.9	11	6.9	3.5	2.5
19	2.9	1.2	106	e5.0	e0.80	43	7.4	7.3	9.1	6.4	3.0	3.6
20	2.3	1.3	339	e4.7	e0.80	42	7.3	11	7.4	6.1	2.8	2.9
21	2.3	1.2	94	e4.5	e0.80	56	7.0	60	6.4	11	2.8	2.7
22	2.2	5.6	28	e4.3	e30	75	6.8	22	5.7	12	2.7	4.1
23	2.3	31	20	e4.0	e120	37	6.4	11	5.2	10	2.7	3.5
24	2.3	26	14	e3.7	e25	25	6.2	8.8	4.7	8.4	2.5	3.5
25	2.7	32	12	e3.4	e8.0	21	6.1	7.5	4.4	6.6	2.5	3.7
26	1.7	33	8.9	e3.2	e2.0	56	6.1	6.6	4.8	5.9	2.8	3.7
27	1.2	14	7.5	e3.0	e1.9	47	5.7	6.2	6.2	11	3.0	14
28	1.2	5.8	6.9	e2.9	e1.8	26	5.4	6.1	6.4	83	2.6	35
29	1.2	3.4	6.6	e2.7	---	67	5.4	5.8	5.0	28	2.5	11
30	1.2	5.2	66	e2.6	---	71	5.2	7.4	4.5	9.5	2.6	5.9
31	1.4	---	630	e2.5	---	31	---	9.4	---	6.5	2.5	---
TOTAL	59.0	207.8	1369.45	681.3	327.60	1414.3	1451.7	671.3	844.2	1225.1	218.9	160.3
MEAN	1.90	6.93	44.2	22.0	11.7	45.6	48.4	21.7	28.1	39.5	7.06	5.34
MAX	2.9	33	630	312	120	150	580	163	282	443	59	35
MIN	1.2	1.2	0.47	2.5	0.80	1.6	5.2	5.7	4.4	3.2	2.5	2.5
CFSM	0.06	0.20	1.28	0.64	0.34	1.32	1.40	0.63	0.81	1.14	0.20	0.15
IN.	0.06	0.22	1.47	0.73	0.35	1.52	1.56	0.72	0.91	1.32	0.24	0.17

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	9.21	25.7	35.9	36.9	57.1	48.5	55.8	28.7	22.7	14.5	10.9	11.3
MAX	50.3	145	172	98.5	122	138	108	87.6	90.8	82.0	88.8	99.5
(WY)	1991	1993	1991	1993	1990	1984	2002	1997	1997	1992	1998	1992
MIN	1.27	1.73	2.09	9.48	11.7	13.6	17.9	2.29	1.12	0.55	1.19	0.83
(WY)	2000	2000	1992	2001	2003	1989	1988	1988	1988	1988	2002	1995

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1984 - 2003	
ANNUAL TOTAL	11840.25		8630.95			
ANNUAL MEAN	32.4		23.6		29.6	
HIGHEST ANNUAL MEAN					48.2	1984
LOWEST ANNUAL MEAN					11.6	1988
HIGHEST DAILY MEAN	1080	Feb 1	630	Dec 31	1590	Aug 26 1998
LOWEST DAILY MEAN	0.39	Sep 11	0.47	Dec 12	0.32	Jul 29 1988
ANNUAL SEVEN-DAY MINIMUM	0.49	Sep 7	0.53	Dec 8	0.37	Sep 11 2001
MAXIMUM PEAK FLOW			793	Apr 5	2640	Aug 26 1998
MAXIMUM PEAK STAGE			7.13	Feb 22b	8.96	Aug 26 1998
INSTANTANEOUS LOW FLOW					0.32	Jul 29 1988
ANNUAL RUNOFF (CFSM)	0.94		0.68		0.85	
ANNUAL RUNOFF (INCHES)	12.73		9.28		11.61	
10 PERCENT EXCEEDS	44		56		56	
50 PERCENT EXCEEDS	4.5		6.0		6.1	
90 PERCENT EXCEEDS	0.81		1.4		1.4	

b Ice jam.
e Estimated.

04198000 SANDUSKY RIVER NEAR FREMONT, OHIO

LOCATION.—Latitude 41°18′28″, longitude 83°09′32″, in sec. 17, T.4 N., R.15 E., Sandusky County, Hydrologic Unit 04100011, on left bank at downstream side of county road bridge, 2.3 mi upstream from Ballville diversion dam, 2.5 mi downstream from Wolf Creek, and 3.5 mi southwest of Fremont, Ohio.
DRAINAGE AREA.—1,251 mi^2.
PERIOD OF RECORD.—November 1898 to March 1901 (gage height and discharge measurements only, published as "at Fremont"), October 1923 to December 1935, July 1938 to current year. Monthly discharge only for October 1923, published in WSP 1307.
REVISED RECORDS.—WSP 744: 1931-32. WSP 874: 1938. WSP 1144: 1924-30. WSP 1387: 1925, 1928-29, 1931-35. WSP 1912: Drainage area.
GAGE.—Water-stage recorder. Datum of gage is 626.30 ft (National Geodetic Vertical Datum of 1912). Nov. 18, 1898-Mar. 10, 1901, nonrecording gage at site 4 mi downstream at different datum; Nov. 8, 1923-Sept. 5, 1930, nonrecording gage at present site and datum.
REMARKS.—Records good except for periods of estimated record, which are poor. Water-quality data collected at this 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	312	60	e1000	9520	e140	e600	1570	359	632	185	422	165
2	185	57	e500	7950	e180	e540	1090	617	484	392	552	240
3	125	53	e350	6340	e240	e490	841	697	428	1850	717	780
4	95	56	e280	3640	e400	e460	815	1170	428	1030	1730	1540
5	75	59	e240	1690	e1900	e440	6320	1360	407	582	3950	1100
6	60	62	e200	1070	e1400	e1300	8640	2260	443	456	2900	597
7	52	63	e170	791	e1000	e4000	7330	2630	475	555	1540	381
8	50	59	e150	677	e700	e3300	8660	2710	488	2160	946	273
9	48	55	e130	860	e580	e3300	7130	5180	1280	10600	667	208
10	47	57	e120	1760	e480	e5400	4990	11200	1830	11300	497	169
11	47	313	e120	e1100	e420	e3800	2890	10600	1870	12200	378	143
12	47	373	e110	e860	e370	e2200	1890	10800	1140	10500	309	120
13	46	971	109	e640	e330	e2000	1430	7840	1170	6390	291	105
14	44	690	118	e450	e300	e4300	1110	4010	3380	2380	357	97
15	40	413	118	e370	e270	e7000	922	1990	3160	1220	308	95
16	37	281	139	e300	e250	e6400	782	1380	1190	827	239	95
17	37	215	154	e250	e220	5130	675	1340	747	616	195	92
18	37	180	181	e210	e210	3900	605	1590	590	484	180	87
19	40	151	826	e180	e190	3140	547	1150	541	393	164	91
20	47	128	4520	e160	e210	2500	499	826	476	323	147	93
21	42	111	5410	e150	e260	2430	483	2370	420	356	132	88
22	37	170	3950	e130	e400	2620	448	2980	357	737	120	151
23	39	323	2300	e120	e1100	2180	446	1960	304	1020	109	239
24	42	406	1190	e120	e2100	1620	438	1110	268	849	104	230
25	54	669	773	e110	e1600	1140	416	755	235	689	102	373
26	77	769	568	e110	e1200	1160	397	599	214	508	100	346
27	70	e1000	427	e100	e940	1940	372	496	237	405	98	402
28	65	e600	344	e100	e720	1840	354	426	258	1360	97	1680
29	63	e450	320	e98	---	1510	350	376	246	1400	139	3210
30	62	e640	392	e110	---	2400	354	348	217	942	149	2220
31	60	---	5170	e120	---	2290	---	478	---	603	140	---
TOTAL	2082	9434	30379	40086	18110	81330	62794	81607	23915	73312	17779	15410
MEAN	67.2	314	980	1293	647	2624	2093	2632	797	2365	574	514
MAX	312	1000	5410	9520	2100	7000	8660	11200	3380	12200	3950	3210
MIN	37	53	109	98	140	440	350	348	214	185	97	87
CFSM	0.05	0.25	0.78	1.03	0.52	2.10	1.67	2.10	0.64	1.89	0.46	0.41
IN.	0.06	0.28	0.90	1.19	0.54	2.42	1.87	2.43	0.71	2.18	0.53	0.46

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	222	562	1087	1536	1901	2285	1861	1094	814	472	235	254
MAX	2521	4413	5495	7659	7504	8261	5524	3654	6091	3479	1660	3713
(WY)	1927	1993	1991	1930	1984	1978	1957	1969	1981	1992	1958	1981
MIN	9.94	25.4	32.6	53.5	60.3	319	144	100	43.4	30.9	22.4	13.5
(WY)	1964	1954	1964	1961	1964	1941	1946	1941	1988	1934	1952	1953

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1924 - 2003	
ANNUAL TOTAL	358081		456238			
ANNUAL MEAN	981		1250		1022	
HIGHEST ANNUAL MEAN					2167	1984
LOWEST ANNUAL MEAN					275	1934
HIGHEST DAILY MEAN	14300	Feb 2	12200	Jul 11	36000	Mar 15 1978
LOWEST DAILY MEAN	18	Sep 13	37	Oct 16	5.0	Oct 20 1963
ANNUAL SEVEN-DAY MINIMUM	21	Jul 6	40	Oct 16	6.3	Jul 9 1988
MAXIMUM PEAK FLOW			12500	Jul 11a	36500	Mar 16 1978
MAXIMUM PEAK STAGE			10.94	Feb 23b	16.14	Feb 24 1979
INSTANTANEOUS LOW FLOW					4.4	Feb 29 1964
ANNUAL RUNOFF (CFSM)	0.78		1.00		0.82	
ANNUAL RUNOFF (INCHES)	10.65		13.57		11.10	
10 PERCENT EXCEEDS	2220		3300		2720	
50 PERCENT EXCEEDS	280		443		279	
90 PERCENT EXCEEDS	28		76		39	

a Peaks above base shown in table of peak discharges and stages at continuous-record surface-water-discharge stations.
b Ice jam.
e Estimated.

04199000 HURON RIVER AT MILAN, OHIO

LOCATION.—Latitude 41°18′06″, longitude 82°36′25″, in SW ¼ sec. 4, T.5 N., R.22 W., Erie County, Hydrologic Unit 04100012, on right bank on upstream side of bridge on U.S. Highway 250, 0.2 mi northwest of Milan, Ohio, and 2 mi downstream from confluence of east and west branches.
DRAINAGE AREA.—371 mi^2.
PERIOD OF RECORD.—March 1950 to September 1980, October 1987 to current year.
REVISED RECORDS.—WSP 1912: Drainage area. WDR OH-89-2: 1988.
GAGE.—Water-stage recorder. Datum of gage is 573.26 ft above sea level. July 29, 1953-Oct. 5, 1979, water-stage recorder at site of former highway bridge 500 ft downstream at same datum; July 29, 1953, nonrecording gage at site of former highway 450 ft downstream at same datum.
REMARKS.—Records fair except for periods of estimated record, which are poor. Water-quality and sediment data formerly collected at this 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	49	23	385	3170	e72	e150	337	72	525	55	101	107
2	33	26	217	1230	e78	e140	283	138	245	55	211	374
3	28	22	130	591	e90	e130	234	308	165	142	497	295
4	26	19	197	372	e200	e130	563	171	148	86	532	149
5	26	20	210	286	e500	e120	4760	193	139	71	591	89
6	23	25	115	244	e400	e180	1990	311	115	64	275	64
7	21	20	92	190	e280	e500	1480	292	98	113	142	49
8	21	21	68	209	e200	e400	2400	2210	293	248	119	42
9	18	23	66	467	e150	e700	1060	2710	2110	2480	81	38
10	19	28	72	520	e120	e900	643	2980	742	2750	68	35
11	17	455	53	e260	e110	e600	476	1070	377	1620	60	36
12	16	335	53	e210	e98	e500	361	716	434	495	56	29
13	15	133	54	e180	e90	e1000	272	722	624	275	53	24
14	15	69	99	e160	e84	2560	219	480	1750	183	45	23
15	14	51	184	e140	e80	1760	189	317	571	120	57	28
16	14	74	263	e120	e76	1340	164	254	305	94	79	24
17	14	99	197	e110	e74	1180	141	199	205	73	110	21
18	14	74	160	e100	e70	990	125	161	184	56	81	21
19	26	55	1130	e94	e66	704	115	136	188	48	57	294
20	22	49	3070	e88	e64	621	110	288	131	42	44	456
21	19	48	1180	e82	e64	806	126	964	104	194	37	180
22	23	746	505	e78	e90	712	117	426	91	451	42	128
23	21	1080	365	e74	e200	464	100	251	82	208	105	178
24	19	689	e240	e72	e400	348	88	183	74	123	72	169
25	27	807	e220	e68	e300	309	84	143	67	79	49	99
26	49	652	e200	e66	e230	941	95	117	69	55	42	82
27	39	411	e190	e64	e190	607	88	102	79	96	36	1950
28	36	308	e180	e64	e170	377	79	103	66	1040	40	1640
29	28	247	e160	e64	---	724	73	95	62	399	38	463
30	22	490	607	e66	---	843	70	88	58	201	30	268
31	25	---	5350	e68	---	445	---	392	---	134	32	---
TOTAL	739	7099	16012	9507	4546	21181	16842	16592	10101	12050	3782	7355
MEAN	23.8	237	517	307	162	683	561	535	337	389	122	245
MAX	49	1080	5350	3170	500	2560	4760	2980	2110	2750	591	1950
MIN	14	19	53	64	64	120	70	72	58	42	30	21
CFSM	0.06	0.64	1.39	0.83	0.44	1.84	1.51	1.44	0.91	1.05	0.33	0.66
IN.	0.07	0.71	1.61	0.95	0.46	2.12	1.69	1.66	1.01	1.21	0.38	0.74

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	56.7	166	349	455	533	677	578	320	239	180	101	79.3
MAX	402	1259	1909	1302	1422	1697	1536	929	980	1821	749	573
(WY)	1991	1973	1991	1952	1959	1978	1957	1967	1981	1969	1998	1972
MIN	7.86	14.0	9.23	26.8	24.0	117	86.0	46.5	14.9	11.8	11.3	5.76
(WY)	1964	1964	1964	1977	1964	1981	1971	1962	1988	1963	1952	1955

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1951 - 2003	
ANNUAL TOTAL	105742.3		125806			
ANNUAL MEAN	290		345		310	
HIGHEST ANNUAL MEAN					530	1997
LOWEST ANNUAL MEAN					145	1953
HIGHEST DAILY MEAN	6700	Feb 1	5350	Dec 31	31400	Jul 5 1969
LOWEST DAILY MEAN	4.5	Sep 13	14	Oct 15	3.0	Sep 10 1955
ANNUAL SEVEN-DAY MINIMUM	5.9	Sep 7	15	Oct 12	3.4	Sep 16 1955
MAXIMUM PEAK FLOW			5920	Dec 31a	49600	Jul 5 1969
MAXIMUM PEAK STAGE			17.29	Mar 9b	31.10	Jul 5 1969
INSTANTANEOUS LOW FLOW					2.2	Sep 10 1955
ANNUAL RUNOFF (CFSM)	0.78		0.93		0.84	
ANNUAL RUNOFF (INCHES)	10.60		12.61		11.35	
10 PERCENT EXCEEDS	599		770		701	
50 PERCENT EXCEEDS	78		130		85	
90 PERCENT EXCEEDS	12		26		15	

a Peaks above base shown in table of peak discharges and stages at continuous-record surface-water-discharge stations.
b Ice jam.
e Estimated.

04199155 OLD WOMAN CREEK AT BERLIN ROAD NEAR HURON, OHIO

LOCATION.—Latitude 41°20′54″, longitude 82°30′50″, Erie County, Hydrologic Unit 04100012, on left downstream side of Berlin Road Bridge, 3.8 mi southeast of Huron, Ohio.
DRAINAGE AREA.—22.1 mi^2.
PERIOD OF RECORD.—October 1987 to September 1994, October 1995 to current year. Published as "Old Woman's Creek" prior to 2002.
REVISED RECORDS.—WSP 1912: Drainage area. WDR OH-89-2: 1988.
GAGE.—Water-stage recorder. Datum of gage is 570 ft above sea level. Erie County benchmark.
REMARKS.—Records fair except for periods of estimated record, 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	0.89	0.66	27	129	e1.7	e6.2	22	3.7	75	3.1	1.2	5.1
2	0.64	0.52	13	54	e1.9	e5.6	18	8.0	22	3.2	20	5.4
3	0.44	0.49	11	29	e2.3	e5.0	14	5.7	15	2.6	55	2.8
4	0.47	0.55	9.3	22	e7.0	e4.8	92	4.5	13	10	70	1.6
5	0.69	0.58	7.8	19	e20	e25	474	10	11	8.6	14	0.94
6	0.45	1.1	6.8	18	e13	e22	79	10	8.1	3.5	6.8	0.88
7	0.28	0.97	6.1	18	e11	e18	115	14	6.5	39	4.2	0.66
8	0.20	0.90	5.8	19	e7.0	e30	98	41	34	131	3.0	0.46
9	0.18	0.84	4.8	58	e5.6	e70	52	133	103	53	2.5	0.41
10	0.15	4.1	4.9	38	e4.5	e56	34	68	22	182	2.1	0.37
11	0.17	111	4.9	18	e3.7	e46	25	30	14	71	1.6	0.32
12	0.19	12	5.2	e10	e3.1	e40	20	28	14	19	1.4	0.26
13	0.21	3.6	6.0	e8.0	e2.8	211	15	24	53	9.8	1.2	0.18
14	0.30	2.1	28	e6.2	e2.6	164	13	15	272	6.0	0.92	0.15
15	0.25	1.7	51	e5.2	e2.4	107	12	12	39	4.4	0.82	0.33
16	0.22	5.1	54	e4.3	e2.3	96	10	9.1	19	3.8	1.6	0.28
17	0.22	6.7	17	e3.8	e2.2	83	8.4	7.3	13	2.5	2.1	0.15
18	0.19	3.6	18	e3.4	e2.0	64	7.5	6.1	11	2.2	1.1	0.09
19	0.77	2.7	137	e3.0	e1.9	43	6.7	5.4	8.9	2.0	0.78	48
20	0.56	3.0	195	e2.7	e1.8	43	6.8	51	7.3	1.6	0.63	16
21	0.40	3.1	47	e2.4	e1.7	43	9.0	61	5.8	30	0.50	3.3
22	0.34	272	23	e2.2	e3.0	46	7.1	20	4.8	24	0.41	3.0
23	0.36	156	18	e2.0	e5.0	26	6.0	13	3.9	6.8	0.35	4.7
24	0.58	85	13	e1.9	e15	20	5.3	11	3.3	4.2	0.34	2.6
25	1.2	85	13	e1.8	e12	21	5.2	8.3	2.6	2.6	0.30	1.8
26	8.2	44	10	e1.8	e9.0	98	5.5	6.7	3.8	2.1	0.35	1.2
27	2.8	26	9.6	e1.7	e8.0	37	4.7	5.8	6.2	4.1	0.38	166
28	1.4	27	10	e1.7	e7.0	23	4.2	6.4	3.3	5.0	0.29	33
29	1.0	23	8.9	e1.6	---	89	3.8	5.4	2.5	2.8	0.24	10
30	0.81	74	132	e1.6	---	50	3.6	4.5	4.2	1.9	0.21	5.7
31	0.92	---	408	e1.6	---	27	---	88	---	1.4	0.16	---
TOTAL	25.48	957.31	1305.1	488.9	159.5	1619.6	1176.8	715.9	801.2	643.2	194.48	315.68
MEAN	0.82	31.9	42.1	15.8	5.70	52.2	39.2	23.1	26.7	20.7	6.27	10.5
MAX	8.2	272	408	129	20	211	474	133	272	182	70	166
MIN	0.15	0.49	4.8	1.6	1.7	4.8	3.6	3.7	2.5	1.4	0.16	0.09
CFSM	0.04	1.44	1.90	0.71	0.26	2.36	1.77	1.04	1.21	0.94	0.28	0.48
IN.	0.04	1.61	2.20	0.82	0.27	2.73	1.98	1.21	1.35	1.08	0.33	0.53

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.21	13.1	23.3	29.6	31.9	33.7	41.6	19.2	17.9	6.56	5.72	5.90
MAX	20.8	68.4	98.2	74.8	78.6	86.3	66.5	52.2	47.4	35.1	23.7	23.1
(WY)	1997	1993	1991	1993	1990	1993	1998	1989	1997	1992	1992	1996
MIN	0.001	0.31	0.70	8.03	5.70	11.2	18.4	2.20	0.17	0.010	0.000	0.000
(WY)	1995	1992	1992	1988	2003	2001	1988	1988	1988	1991	1991	1991

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1988 - 2003	
ANNUAL TOTAL	8640.76		8403.15			
ANNUAL MEAN	23.7		23.0		19.3	
HIGHEST ANNUAL MEAN					34.1	1997
LOWEST ANNUAL MEAN					8.48	2001
HIGHEST DAILY MEAN	571	Feb 1	474	Apr 5	838	Jan 8 1998
LOWEST DAILY MEAN	0.00	Jul 17	0.09	Sep 18	0.00	Jun 15 1988
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 17	0.20	Oct 7	0.00	Jun 15 1988
MAXIMUM PEAK FLOW			893	Mar 9a	1940	Feb 27 1997
MAXIMUM PEAK STAGE			9.56	Mar 9	11.92	Jan 21 1999
INSTANTANEOUS LOW FLOW			0.08	Sep 18	0.00	Sep 9 1991
ANNUAL RUNOFF (CFSM)	1.07		1.04		0.87	
ANNUAL RUNOFF (INCHES)	14.54		14.14		11.86	
10 PERCENT EXCEEDS	49		62		41	
50 PERCENT EXCEEDS	7.2		5.8		4.2	
90 PERCENT EXCEEDS	0.00		0.45		0.00	

a Peaks above base shown in table of peak discharges and stages at continuous-record surface-water-discharge stations.
e Estimated.

04199500 VERMILION RIVER NEAR VERMILION, OHIO

LOCATION.—Latitude 41°22′55″, longitude 82°19′01″, in T.6 N., R.19 W., Lorain County, Hydrologic Unit 04100012, on right bank downstream wingwall of bridge on North Ridge Road, 3.5 mi southeast of Vermilion and 4.5 mi upstream from mouth of Lake Erie.
DRAINAGE AREA.—262 mi^2.
PERIOD OF RECORD.—March 1950 to September 1981, November 1, 2000 to current year.
REVISED RECORDS.—WSP 1912: Drainage area. WDR-OH-70-1: 1969.
GAGE.—Water-stage recorder. Datum of gage is 595.14 ft above sea level. Prior to Aug. 3, 1953, nonrecording gage at site 40 ft upstream at same datum.
REMARKS.—Records fair except those for period of estimated record, which are poor. Water-quality data formerly collected at this 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	22	6.2	231	2640	e22	e66	257	37	615	24	66	32
2	13	5.9	152	1050	e24	e60	207	59	271	23	74	41
3	9.6	5.5	110	497	e28	e54	163	531	154	212	296	95
4	7.7	5.2	88	300	e70	e49	334	231	124	107	623	78
5	7.1	5.3	149	218	e300	e46	3750	164	124	65	353	48
6	5.9	6.5	111	176	e230	e70	2290	228	110	45	191	34
7	5.0	6.5	81	153	e160	e340	1150	224	90	48	130	26
8	4.1	7.1	64	152	e110	e230	2170	1280	118	242	99	21
9	3.8	6.9	45	296	e80	e400	986	3210	1300	1140	85	17
10	3.9	7.6	50	433	e60	e800	509	3600	776	1570	79	15
11	4.1	125	61	307	e52	e600	343	1430	284	421	69	14
12	3.8	130	50	e180	e42	e400	256	635	235	221	46	13
13	3.8	116	43	e120	e38	e700	194	725	473	134	32	9.6
14	3.7	58	132	e94	e32	e3000	153	526	1060	90	27	8.9
15	3.6	34	279	e76	e30	e2200	130	285	463	67	27	8.9
16	3.5	30	326	e66	e26	e1600	113	225	201	54	24	8.8
17	3.4	31	301	e54	e24	1270	98	184	129	44	48	7.7
18	4.0	30	153	e50	e23	951	88	145	102	38	83	7.1
19	5.5	27	338	e40	e22	652	79	120	91	32	70	86
20	6.0	31	1470	e36	e20	479	72	198	80	28	45	286
21	5.8	30	832	e32	e23	397	73	448	66	62	33	174
22	5.2	439	344	e30	e32	364	75	253	58	72	25	84
23	4.7	637	236	e27	e100	295	71	154	50	147	18	65
24	4.5	387	183	e25	e300	230	63	116	43	107	15	124
25	5.2	351	116	e24	e200	202	56	96	37	68	13	87
26	19	284	e100	e23	e120	560	56	84	34	51	12	58
27	14	219	e90	e22	e90	434	52	75	38	47	11	1230
28	9.5	177	e82	e21	e76	276	48	71	29	634	9.6	2190
29	8.2	138	e76	e20	---	487	42	65	26	476	8.9	693
30	7.4	261	250	e20	---	600	38	61	30	152	9.5	267
31	6.5	---	2850	e21	---	372	---	277	---	92	15	---
TOTAL	213.5	3597.7	9393	7203	2334	18184	13916	15737	7211	6513	2637.0	5829.0
MEAN	6.89	120	303	232	83.4	587	464	508	240	210	85.1	194
MAX	22	637	2850	2640	300	3000	3750	3600	1300	1570	623	2190
MIN	3.4	5.2	43	20	20	46	38	37	26	23	8.9	7.1
CFSM	0.03	0.46	1.16	0.89	0.32	2.24	1.77	1.94	0.92	0.80	0.32	0.74
IN.	0.03	0.51	1.33	1.02	0.33	2.58	1.98	2.23	1.02	0.92	0.37	0.83

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	30.4	114	318	356	459	719	461	257	122	132	41.5	44.0
MAX	231	906	2340	1396	1289	4759	1170	830	629	2045	329	240
(WY)	1973	1973	1978	1952	1976	1978	1957	1969	1981	1969	1958	1972
MIN	0.41	1.60	1.41	17.3	10.8	96.3	68.3	32.7	11.1	2.56	1.54	0.000
(WY)	1964	1964	1964	1964	1964	1953	1971	1976	1963	1963	1952	1953

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1950 - 2003	
ANNUAL TOTAL	73655.6		92768.2			
ANNUAL MEAN	202		254		257	
HIGHEST ANNUAL MEAN					864	1978
LOWEST ANNUAL MEAN					102	1953
HIGHEST DAILY MEAN	4270	Mar 31	3750	Apr 5	22900	Dec 15 1977
LOWEST DAILY MEAN	1.6	Jul 21	3.4	Oct 17	0.00	Aug 27 1953
ANNUAL SEVEN-DAY MINIMUM	1.7	Jul 16	3.7	Oct 12	0.00	Aug 27 1953
MAXIMUM PEAK FLOW			4510	Apr 5a	40800	Jul 6 1969
MAXIMUM PEAK STAGE			11.54	Mar 15b	17.14	Jul 6 1969
INSTANTANEOUS LOW FLOW					0.00	Aug 27 1953
ANNUAL RUNOFF (CFSM)	0.77		0.97		0.98	
ANNUAL RUNOFF (INCHES)	10.46		13.17		13.33	
10 PERCENT EXCEEDS	401		606		590	
50 PERCENT EXCEEDS	75		79		55	
90 PERCENT EXCEEDS	2.7		8.0		3.5	

a Peaks above base shown in table of peak discharges and stages at continuous-record surface-water-discharge stations.
b Ice jam.
e Estimated.

04200500 BLACK RIVER AT ELYRIA, OHIO

LOCATION.—Latitude 41°22′49″, longitude 82°06′17″, in T.6 N., R.17 W., Lorain County, Hydrologic Unit 04110001, on left bank in Cascade Park at Elyria, Ohio, 0.8 mi downstream from confluence of east and west branches.
DRAINAGE AREA.—396 mi^2.
PERIOD OF RECORD.—October 1944 to current year. Records for May 1903 to July 1906 (published as "near Elyria") published in WSP 97, 129, and 205, are unreliable and should not be used.
REVISED RECORDS.—WSP 1912: Drainage area. See also PERIOD OF RECORD.
GAGE.—Water-stage recorder. Datum of gage is 620.83 ft above sea level.
REMARKS.—Records fair except for periods of estimated record and for discharges greater than 1,000 ft^3/s, which are poor. Some regulation at low flow for industrial use. Water-quality and sediment data formerly collected at this 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	45	11	199	3800	e31	e130	352	41	1890	31	141	94
2	42	9.3	150	2000	e30	e120	269	126	780	28	124	80
3	36	10	107	947	e70	e110	216	754	293	27	132	107
4	19	10	e70	544	e160	e100	447	349	194	61	158	109
5	17	15	e50	e320	e500	e90	4540	242	171	46	242	72
6	11	26	e40	e230	e330	e84	3800	273	148	38	403	51
7	12	35	e66	e200	e240	e560	1730	310	122	77	916	40
8	9.2	17	e45	e170	e170	e360	2870	504	157	539	308	34
9	7.0	15	e40	e400	e130	e600	1580	3290	1380	282	731	30
10	6.7	41	e36	859	e110	e1100	872	4230	978	1220	506	26
11	6.4	228	e34	494	e90	e900	573	2230	353	465	152	23
12	5.8	311	e33	e300	e80	e540	344	823	260	293	96	18
13	7.3	202	e32	e200	e70	e700	237	1050	1140	150	73	15
14	7.5	106	418	e120	e64	e2000	182	713	2530	97	59	13
15	6.4	66	785	e100	e58	e1700	141	375	1930	70	49	18
16	7.4	58	515	e86	e56	e2200	126	246	579	48	55	15
17	8.4	54	e280	e76	e52	e1500	113	196	248	37	174	13
18	7.4	55	e200	e68	e50	e1100	98	158	166	32	801	13
19	25	68	e240	e60	e48	e700	85	125	146	29	209	236
20	12	86	1390	e52	e45	709	85	271	119	24	107	375
21	9.1	102	1130	e50	e44	572	86	923	96	107	73	313
22	11	856	565	e47	e70	532	98	440	80	555	53	148
23	14	1240	350	e43	e200	410	105	210	66	1580	44	155
24	12	734	e200	e50	e600	292	89	142	56	400	36	370
25	26	567	e160	e38	e300	247	77	113	48	197	32	176
26	49	370	e140	e37	e210	646	73	96	44	116	34	107
27	33	249	e120	e36	e170	596	65	85	45	102	33	1740
28	28	207	e110	e34	e150	390	56	76	37	1240	22	3380
29	19	157	e100	e33	---	651	36	68	31	3380	43	1470
30	15	186	327	e32	---	1050	37	60	34	851	27	347
31	13	---	3150	e31	---	661	---	600	---	227	25	---
TOTAL	527.6	6091.3	11082	11457	4128	21350	19382	19119	14121	12349	5858	9588
MEAN	17.0	203	357	370	147	689	646	617	471	398	189	320
MAX	49	1240	3150	3800	600	2200	4540	4230	2530	3380	916	3380
MIN	5.8	9.3	32	31	30	84	36	41	31	24	22	13
CFSM	0.04	0.51	0.90	0.93	0.37	1.74	1.63	1.56	1.19	1.01	0.48	0.81
IN.	0.05	0.57	1.04	1.08	0.39	2.01	1.82	1.80	1.33	1.16	0.55	0.90

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	61.5	219	390	474	588	768	630	363	216	140	75.2	80.1
MAX	463	1238	1885	1825	1505	1866	1728	1122	1245	1472	529	701
(WY)	1997	1986	1991	1952	1959	1978	1957	1969	1947	1969	1958	1972
MIN	2.34	5.78	5.82	8.48	16.6	135	22.0	49.3	10.6	7.42	4.72	2.84
(WY)	1945	1945	1945	1945	1964	1953	1946	1999	1988	1991	1952	1946

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1945 - 2003	
ANNUAL TOTAL	106276.4		135052.9			
ANNUAL MEAN	291		370		332	
HIGHEST ANNUAL MEAN					534	1973
LOWEST ANNUAL MEAN					130	1953
HIGHEST DAILY MEAN	4700	May 14	4540	Apr 5	24900	Jan 22 1959
LOWEST DAILY MEAN	5.7	Sep 13	5.8	Oct 12	0.60	Oct 5 1944
ANNUAL SEVEN-DAY MINIMUM	6.7	Oct 9	6.7	Oct 9	1.4	Oct 1 1944
MAXIMUM PEAK FLOW			5110	Apr 5a	51700	Jul 6 1969
MAXIMUM PEAK STAGE			10.45	Apr 5	26.40	Jul 6 1969
INSTANTANEOUS LOW FLOW					0.00	Oct 10 1956
ANNUAL RUNOFF (CFSM)	0.74		0.93		0.84	
ANNUAL RUNOFF (INCHES)	9.98		12.69		11.40	
10 PERCENT EXCEEDS	668		933		805	
50 PERCENT EXCEEDS	99		116		74	
90 PERCENT EXCEEDS	8.5		19		11	

a Peaks above base shown in table of peak discharges and stages at continuous-record surface-water-discharge stations.
e Estimated.

04201500 ROCKY RIVER NEAR BEREA, OHIO

LOCATION.—Latitude 41°24′24″, longitude 81°53′14″, in T.6 N., R.15 W., Cuyahoga County, Hydrologic Unit 04110001, on right bank at downstream side of Cedar Point Road Bridge in Rocky River Reservation, just downstream from confluence of east and west branches, and 3 mi northwest of Berea, Ohio.
DRAINAGE AREA.—267 mi^2.
PERIOD OF RECORD.—October 1923 to September 1935, September 1943 to current year. Monthly discharge only for October 1923, published in WSP 1307.
REVISED RECORDS.—WSP 1437: 1924, 1925(M), 1926, 1927(M), 1928-29, 1930-35(M), 1945. WSP 1912: Drainage area. WDR-OH-2-1983: 1978-1982(M).
GAGE.—Water-stage recorder. Datum of gage is 649.9 ft above sea level. Cuyahoga County benchmark. Prior to Sept. 30, 1935, nonrecording gage at same site and datum.
REMARKS.—Records fair except for periods of estimated record, which are poor. Some regulation at low flow by small reservoirs on East Branch. Some interbasin transfer of water from Lake Erie for municipal water supply by Cleveland Metro Water District. Water-quality and sediment data formerly collected at this site.
EXTREMES OUTSIDE PERIOD OF RECORD.—Flood in Mar. 1913 reached a stage of 20.9 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	50	39	889	255	e60	e160	328	62	2420	60	198	274
2	40	35	316	e200	e60	e160	286	1110	582	75	208	397
3	36	36	200	e180	e130	e150	228	506	344	73	159	180
4	32	36	153	e170	e500	e200	678	226	312	67	107	97
5	38	43	125	e160	e400	e500	4260	346	253	71	245	72
6	36	72	106	e180	e240	e900	1240	487	207	58	978	54
7	35	90	93	e210	e200	e600	1230	229	160	210	333	45
8	29	66	84	e240	e170	e500	1700	661	285	2290	345	33
9	30	50	76	298	e150	2400	740	1860	1160	1980	492	24
10	36	267	72	378	e140	949	481	3290	446	907	203	66
11	32	1290	64	478	e130	533	352	1170	252	1090	123	32
12	21	296	60	e300	e120	554	274	756	553	360	93	21
13	23	e200	79	e200	e110	1820	217	1170	2770	198	75	18
14	22	e140	411	e160	e100	1530	176	544	2550	126	57	23
15	22	e92	1080	e140	e92	1330	146	285	827	89	112	33
16	25	e80	379	e120	e88	1640	130	386	414	91	181	36
17	39	e68	1170	e100	e84	1340	110	299	267	66	178	35
18	36	e64	2780	e94	e80	874	101	196	208	60	113	33
19	124	e80	750	e90	e76	588	97	150	211	51	57	905
20	101	e90	444	e86	e74	500	101	502	183	44	42	609
21	70	e90	301	e82	e70	497	253	1780	137	970	36	171
22	50	74	e210	e78	e200	448	202	467	106	4680	36	242
23	43	57	e180	e74	e900	317	136	265	92	1410	27	773
24	40	49	e160	e72	e500	250	109	250	85	339	24	269
25	52	228	e150	e68	e300	243	95	196	66	169	24	139
26	162	254	e140	e66	e230	741	95	146	51	97	52	110
27	103	153	e130	e66	e200	515	80	125	57	145	100	3560
28	55	164	e120	e64	e180	319	71	127	46	1840	54	1490
29	43	911	e150	e64	---	862	60	107	42	499	105	461
30	40	1360	262	e62	---	901	57	82	50	195	97	220
31	44	---	331	e60	---	444	---	2110	---	109	69	---
TOTAL	1509	6474	11465	4795	5584	22765	14033	19890	15136	18419	4923	10422
MEAN	48.7	216	370	155	199	734	468	642	505	594	159	347
MAX	162	1360	2780	478	900	2400	4260	3290	2770	4680	978	3560
MIN	21	35	60	60	60	150	57	62	42	44	24	18
CFSM	0.18	0.81	1.39	0.58	0.75	2.75	1.75	2.40	1.89	2.23	0.59	1.30
IN.	0.21	0.90	1.60	0.67	0.78	3.17	1.96	2.77	2.11	2.57	0.69	1.45
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 2003, BY WATER YEAR (WY)												
MEAN	95.4	219	345	407	466	587	509	306	182	120	78.6	107
MAX	935	1080	1534	1398	1245	1253	1374	845	911	887	553	820
(WY)	1927	1986	1991	1930	1959	1984	1961	1984	1947	1992	1935	1924
MIN	1.25	9.14	8.15	32.4	17.0	141	40.9	17.6	10.1	4.25	0.90	0.94
(WY)	1934	1964	1964	1945	1934	1969	1946	1934	1933	1954	1933	1933

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1924 - 2003	
ANNUAL TOTAL	106493		135415			
ANNUAL MEAN	292		371		284	
HIGHEST ANNUAL MEAN					484	1997
LOWEST ANNUAL MEAN					79.5	1934
HIGHEST DAILY MEAN	3990	Feb 1	4680	Jul 22	14300	Jan 22 1959
LOWEST DAILY MEAN	14	Aug 9	18	Sep 13	0.20	Sep 2 1932
ANNUAL SEVEN-DAY MINIMUM	16	Aug 6	26	Oct 10	0.27	Aug 21 1933
MAXIMUM PEAK FLOW			6230	Jul 22a	21400	Jan 22 1959
MAXIMUM PEAK STAGE			5.62	Jul 22	18.60	Jun 29 1924
INSTANTANEOUS LOW FLOW					0.20	Sep 2 1932
ANNUAL RUNOFF (CFSM)	1.09		1.39		1.06	
ANNUAL RUNOFF (INCHES)	14.84		18.87		14.45	
10 PERCENT EXCEEDS	628		957		656	
50 PERCENT EXCEEDS	143		153		85	
90 PERCENT EXCEEDS	24		40		11	

a Peaks above base shown in table of peak discharges and stages at continuous-record surface-water-discharge stations.
e Estimated.

04202000 CUYAHOGA RIVER AT HIRAM RAPIDS, OHIO

LOCATION.—Latitude 41°20′26″, longitude 81°10′01″, in T.5 N., R.7 W., Portage County, Hydrologic Unit 04110002, on left bank at downstream side of bridge on Winchell Road at Hiram Rapids, Ohio, 0.6 mi downstream from Black Brook.
DRAINAGE AREA.—151 mi^2.
PERIOD OF RECORD.—August 1927 to December 1935 (published as "near Hiram"), October 1944 to current year.
REVISED RECORDS.—WSP 1054: 1945. WSP 1437: 1931. WSP 1912: Drainage area.
GAGE.—Water-stage recorder. Datum of gage is 1,087.46 ft above sea level. Prior to Aug. 26, 1927, nonrecording gage; Aug. 26, 1927-Dec. 31, 1935, water-stage recorder, at site 2.8 mi downstream at different datum; Oct. 20, 1944-Oct. 22, 1946, nonrecording gage at present site and datum.
REMARKS.—Records good except for periods estimated record, which are poor. Flow regulated by East Branch Reservoir, usable capacity, 4,140 acre-ft, 14.6 mi upstream since 1939, and by LaDue Reservoir, usable capacity, 18,110 acre-ft, 9.8 mi upstream since 1961. Water-quality data formerly collected at this site.
EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 3,670 ft^3/s Jan. 23, 1959, gage height 8.11 ft; minimum daily, 6.6 ft^3/s Sept. 10, 1933.

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	e37	e46	58	235	e40	292	322	51	305	e66	136	122
2	e36	e43	57	362	e45	269	293	91	348	e64	106	162
3	35	e40	57	442	e58	270	252	120	352	e62	89	190
4	32	e38	67	429	105	218	229	115	327	e60	86	180
5	32	e41	48	381	182	219	451	110	286	e78	e94	147
6	33	e50	46	312	266	248	711	134	236	e140	e105	117
7	33	e56	45	237	228	298	863	202	187	e200	e110	90
8	31	e66	42	205	e190	268	863	343	148	e240	e120	71
9	29	e54	42	182	e140	340	781	414	136	e190	e150	60
10	29	e58	55	176	e110	386	667	482	123	220	e130	54
11	29	e115	39	158	e90	403	546	723	108	228	e110	54
12	28	e200	41	166	e80	366	444	885	109	e219	e96	50
13	28	e100	51	215	e70	398	354	896	275	e160	e84	47
14	28	e80	71	151	e64	439	279	879	562	e110	e72	43
15	28	64	104	131	e60	474	216	790	835	e88	e62	43
16	30	57	123	120	e56	534	175	709	770	72	e52	43
17	33	57	124	e90	e52	621	136	606	614	59	e45	41
18	37	62	113	e76	e56	721	107	523	496	50	e41	39
19	40	66	98	e70	e66	741	89	442	412	44	e39	100
20	60	69	112	e66	76	671	77	368	345	39	38	187
21	61	70	138	e62	81	569	101	358	298	121	38	225
22	51	76	149	e58	80	499	123	356	e230	458	40	223
23	44	102	143	e54	170	443	124	345	e180	583	37	249
24	40	116	124	e50	270	394	115	319	e140	628	35	265
25	38	114	100	e48	297	347	99	280	e110	561	34	267
26	48	103	81	e46	334	332	84	235	e90	478	43	239
27	66	90	80	e45	353	331	76	192	e74	399	93	294
28	e70	77	78	e44	318	334	68	160	e68	352	92	396
29	e90	64	65	e43	---	342	66	138	e62	288	75	471
30	e60	58	65	e42	---	346	53	118	e64	231	122	480
31	e52	---	129	e41	---	337	---	201	---	175	133	---
TOTAL	1288	2232	2545	4737	3937	12450	8764	11585	8290	6663	2507	4949
MEAN	41.5	74.4	82.1	153	141	402	292	374	276	215	80.9	165
MAX	90	200	149	442	353	741	863	896	835	628	150	480
MIN	28	38	39	41	40	218	53	51	62	39	34	39
CFSM	0.28	0.49	0.54	1.01	0.93	2.66	1.93	2.47	1.83	1.42	0.54	1.09
IN.	0.32	0.55	0.63	1.17	0.97	3.07	2.16	2.85	2.04	1.64	0.62	1.22

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	108	191	267	266	344	432	349	206	135	101	93.4	108
MAX	315	616	816	707	883	835	649	569	542	325	307	374
(WY)	1991	1986	1978	1993	1976	1963	1961	1984	1989	1969	1992	1975
MIN	39.0	33.5	45.2	43.5	56.6	174	134	59.8	35.2	48.4	37.1	36.6
(WY)	1984	1992	1961	1961	1963	1989	1986	1987	1991	1991	1961	1967

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1961 - 2003	
ANNUAL TOTAL	54697		69947			
ANNUAL MEAN	150		192		216	
HIGHEST ANNUAL MEAN					318	1997
LOWEST ANNUAL MEAN					125	1999
HIGHEST DAILY MEAN	938	May 15	896	May 13	3250	Feb 18 1976
LOWEST DAILY MEAN	28	Oct 12	28	Oct 12	12	Sep 19 1967
ANNUAL SEVEN-DAY MINIMUM	28	Oct 9	28	Oct 9	13	Sep 16 1967
MAXIMUM PEAK FLOW			908	Apr 7	3320	Feb 18 1976
MAXIMUM PEAK STAGE			4.05	Apr 7	7.67	Feb 18 1976
INSTANTANEOUS LOW FLOW			27	Oct 14	12	Sep 19 1967
ANNUAL RUNOFF (CFSM)	0.99		1.27		1.43	
ANNUAL RUNOFF (INCHES)	13.48		17.23		19.45	
10 PERCENT EXCEEDS	342		447		502	
50 PERCENT EXCEEDS	85		112		125	
90 PERCENT EXCEEDS	40		41		44	

e Estimated.

04206000 CUYAHOGA RIVER AT OLD PORTAGE, OHIO

LOCATION.—Latitude 41°08′08″, longitude 81°32′50″, Summit County, Hydrologic Unit 04110002, on right bank 230 ft upstream from North Portage Path bridge at Old Portage, Ohio, 1.2 mi downstream from Little Cuyahoga River, and 4 mi northwest of Akron City Hall, Akron, Ohio.
DRAINAGE AREA.—404 mi^2.
PERIOD OF RECORD.—September 1921 to December 1935, March 1939 to current year.
REVISED RECORDS.—WSP 1307: 1924(M). WSP 1912: Drainage area. WDR OH-79-2: 1974(M), 1976(M).
GAGE.—Water-stage recorder. Datum of gage is 740.11 ft above sea level, unadjusted. Prior to Dec. 21, 1923, nonrecording gage at same site and datum.
REMARKS.—Records poor. Natural flow of stream affected by diversions, storage reservoirs, and power plants. An average of 63 ft^3/s was diverted upstream from gage for municipal supply of city of Akron. Sewage from city enters river 2.9 mi downstream from station. Some diversions from the Tuscarawas River Basin drainage into this basin at Portage Lakes (see REMARKS from station 0311700 in volume 1 of this report). Sediment data formerly collected at this 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	100	e90	173	1510	e82	597	456	e120	1660	168	760	721
2	93	e88	140	1610	e80	577	382	e350	1140	169	593	925
3	86	e84	136	1470	e110	499	293	e270	983	161	497	698
4	78	e82	113	1420	659	394	433	e180	853	182	458	618
5	82	e90	106	1370	475	523	1800	e280	692	229	488	597
6	70	183	115	1190	621	501	1840	e260	592	191	458	504
7	79	161	99	860	611	441	1860	e200	504	502	604	356
8	70	142	91	710	773	518	1790	179	551	3390	596	273
9	71	101	90	702	641	1090	1570	674	517	3350	706	218
10	72	179	94	667	e520	940	1310	1380	394	2640	630	175
11	75	377	98	541	e420	747	1090	1680	410	2200	466	157
12	244	197	143	454	e330	738	841	1620	674	1680	404	146
13	263	152	65	553	e250	1140	578	1640	1050	1260	338	127
14	255	146	152	481	e200	1180	427	1470	892	1030	294	119
15	127	128	109	489	e160	1070	378	1540	926	804	262	158
16	103	131	184	313	e130	1220	280	2390	1230	590	252	124
17	83	150	209	268	e110	1390	e310	1890	1290	436	202	115
18	75	124	153	165	e180	1310	e280	1550	1130	348	182	99
19	151	135	212	140	130	1300	e290	1360	941	296	166	1010
20	116	125	594	138	135	1250	e250	1500	710	246	143	618
21	95	110	374	125	144	1140	e260	1600	561	1620	129	518
22	99	260	364	e125	825	951	e250	1160	468	4350	124	840
23	94	218	309	e120	1350	739	e220	956	403	4080	105	935
24	75	180	212	e110	1000	589	e190	981	391	3090	96	721
25	143	204	201	e105	996	473	e160	815	317	2610	89	597
26	258	213	168	e100	1040	594	e140	643	218	1910	100	534
27	112	215	e150	e96	649	472	e120	512	206	1840	566	1650
28	e110	197	e130	e92	654	419	e130	429	162	2100	276	1670
29	e100	159	e120	e88	---	605	e100	388	153	1510	344	1250
30	e96	156	380	e86	---	620	e110	359	209	968	400	1190
31	e92	---	1810	e84	---	496	---	1280	---	867	288	---
TOTAL	3567	4777	7294	16182	13275	24523	18138	29656	20227	44817	11016	17663
MEAN	115	159	235	522	474	791	605	957	674	1446	355	589
MAX	263	377	1810	1610	1350	1390	1860	2390	1660	4350	760	1670
MIN	70	82	65	84	80	394	100	120	153	161	89	99
CFSM	0.28	0.39	0.58	1.29	1.17	1.96	1.50	2.37	1.67	3.58	0.88	1.46
IN.	0.33	0.44	0.67	1.49	1.22	2.26	1.67	2.73	1.86	4.13	1.01	1.63

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	216	321	469	565	659	857	736	479	320	243	184	212
MAX	1205	1307	1516	1807	1592	1416	1520	1253	1371	1446	772	1150
(WY)	1927	1986	1928	1952	1976	1927	1940	1996	1989	2003	1992	1926
MIN	50.8	56.5	48.3	83.3	86.1	282	166	77.0	72.4	50.4	56.9	47.1
(WY)	1934	1964	1964	1961	1963	1931	1935	1934	1988	1954	1962	1964

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1922 - 2003	
ANNUAL TOTAL	133853		211135			
ANNUAL MEAN	367		578		437	
HIGHEST ANNUAL MEAN					669	1927
LOWEST ANNUAL MEAN					181	1934
HIGHEST DAILY MEAN	2000	May 14	4350	Jul 22	6040	Jan 22 1959
LOWEST DAILY MEAN	55	Sep 2	65	Dec 13	24	Sep 24 1964
ANNUAL SEVEN-DAY MINIMUM	71	Aug 27	74	Oct 5	40	Oct 30 1944
MAXIMUM PEAK FLOW			5160	Jul 21	6500	Jan 21 1959
MAXIMUM PEAK STAGE			12.64	Jul 21	13.29	Sep 14 1979
INSTANTANEOUS LOW FLOW					26	Sep 2 1945
ANNUAL RUNOFF (CFSM)	0.91		1.43		1.08	
ANNUAL RUNOFF (INCHES)	12.33		19.44		14.71	
10 PERCENT EXCEEDS	888		1440		1030	
50 PERCENT EXCEEDS	200		356		266	
90 PERCENT EXCEEDS	89		99		79	

e Estimated.

04206014 POWERS BROOK AT HUDSON, OHIO

LOCATION.—Latitude 41°12′27", longitude 81°24′41", Summit County, Hydrologic Unit 04110002, on left upstream bank 620 ft south of intersection of Stow Road and Barlow Road, 4.7 miles upstream from confluence with Mud Brook, in City of Hudson, 1.0 mi west of Summit/Portage County line.
DRAINAGE AREA.—1.45 mi^2.
PERIOD OF RECORD.—October 2000 to current year.
GAGE.—Water-stage recorder. Elevation of gage is 1,027 ft above sea level (from topographic map).
REMARKS.—Records fair except for periods of estimated record and discharge between 0.0 ft^3/s and 0.2 ft^3/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	0.02	0.00	0.02	5.7	0.06	0.95	1.2	0.17	7.4	0.04	0.66	0.40
2	0.01	0.00	0.02	4.6	0.07	1.0	1.0	0.53	1.8	0.04	0.50	0.80
3	0.00	0.00	0.02	2.1	0.17	1.2	0.82	0.35	1.1	0.04	0.50	0.39
4	0.00	0.00	0.01	1.3	1.2	1.00	2.4	0.27	0.98	0.06	0.47	0.22
5	0.03	0.01	0.01	0.92	2.6	2.2	20	1.1	0.92	0.02	0.38	0.12
6	0.01	0.02	0.01	0.68	3.3	4.4	4.5	1.1	0.72	0.02	0.32	0.10
7	0.00	0.02	0.01	0.62	1.1	4.7	5.2	0.55	0.47	5.5	0.87	0.08
8	0.00	0.01	0.01	0.71	0.83	2.6	6.8	0.84	0.54	59	1.8	0.08
9	0.00	0.00	0.00	1.2	0.60	10	2.8	5.5	1.1	23	0.95	0.09
10	0.00	0.10	0.00	1.8	0.47	4.8	1.8	13	0.58	5.7	1.1	0.12
11	0.00	0.06	0.06	1.1	0.39	2.3	1.3	4.2	0.43	4.2	0.58	0.09
12	0.00	0.01	0.10	0.60	0.33	2.0	0.97	3.1	2.3	2.0	0.37	0.08
13	0.00	0.01	0.08	0.35	0.28	8.5	0.74	3.6	8.8	0.96	0.26	0.07
14	0.00	0.00	0.28	0.26	0.23	7.3	0.58	1.8	2.2	0.63	0.21	0.07
15	0.00	0.00	0.34	0.21	0.22	6.3	0.47	1.6	1.1	0.39	0.18	0.08
16	0.01	0.03	0.30	0.17	0.19	6.6	0.38	8.9	0.65	0.28	0.19	0.08
17	0.02	0.05	0.24	0.15	0.17	4.6	0.32	3.1	0.51	0.21	0.16	0.08
18	0.00	0.02	0.22	0.17	0.17	2.9	0.28	1.3	0.66	0.12	0.12	0.06
19	0.08	0.07	0.38	0.12	0.16	1.9	0.26	0.79	0.68	0.08	0.09	2.7
20	0.02	0.02	0.98	0.10	0.16	1.5	0.34	2.5	0.57	0.05	0.12	1.8
21	0.01	0.02	0.80	0.08	0.17	1.4	0.88	7.8	0.34	27	0.13	0.58
22	0.00	0.18	0.56	0.07	1.1	1.6	0.76	1.8	0.24	83	0.16	1.4
23	0.00	0.04	0.50	0.07	4.3	1.2	0.59	1.0	0.18	14	0.07	3.6
24	0.00	0.02	0.29	0.04	6.3	0.93	0.43	1.1	0.12	3.0	0.08	1.1
25	0.08	0.02	0.19	0.04	3.4	0.91	0.35	0.79	0.07	1.6	0.06	0.79
26	0.04	0.02	0.15	0.04	2.1	3.4	0.29	0.57	0.05	1.2	0.08	0.59
27	0.01	0.02	0.20	0.04	e1.7	2.1	0.24	0.44	0.04	6.5	0.11	13
28	0.01	0.01	0.18	0.04	1.1	1.2	0.21	0.40	0.04	18	0.06	5.6
29	0.01	0.01	0.17	0.05	---	3.9	0.19	0.33	0.04	2.9	0.07	1.6
30	0.02	0.02	0.66	0.05	---	3.5	0.17	0.27	0.04	1.2	0.07	0.96
31	0.01	---	5.9	0.06	---	1.6	---	12	---	0.81	0.06	---
TOTAL	0.39	0.79	12.69	23.44	32.87	98.49	56.27	80.80	34.67	261.55	10.78	36.73
MEAN	0.013	0.026	0.41	0.76	1.17	3.18	1.88	2.61	1.16	8.44	0.35	1.22
MAX	0.08	0.18	5.9	5.7	6.3	10	20	13	8.8	83	1.8	13
MIN	0.00	0.00	0.00	0.04	0.06	0.91	0.17	0.17	0.04	0.02	0.06	0.06
CFSM	0.01	0.02	0.28	0.52	0.81	2.19	1.29	1.80	0.80	5.82	0.24	0.84
IN.	0.01	0.02	0.33	0.60	0.84	2.53	1.44	2.07	0.89	6.71	0.28	0.94

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.13	0.23	1.12	0.86	1.81	2.39	1.98	1.92	1.07	2.71	0.21	0.33
MAX	0.21	0.48	1.68	0.96	2.26	3.18	2.63	3.02	2.01	8.44	0.46	1.22
(WY)	2002	2002	2001	2001	2001	2003	2002	2002	2002	2003	2000	2003
MIN	0.013	0.026	0.41	0.76	1.17	1.34	1.42	0.14	0.039	0.003	0.007	0.008
(WY)	2003	2003	2003	2003	2003	2001	2001	2001	2001	2001	2002	2002

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2000 - 2003	
ANNUAL TOTAL	412.85		649.47			
ANNUAL MEAN	1.13		1.78		1.18	
HIGHEST ANNUAL MEAN					1.78	2003
LOWEST ANNUAL MEAN					0.26	2000
HIGHEST DAILY MEAN	28	May 13	83	Jul 22	83	Jul 22 2003
LOWEST DAILY MEAN	0.00	Jul 10	0.00	Oct 3	0.00	Jun 18 2001
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 24	0.00	Oct 7	0.00	Jul 9 2001
MAXIMUM PEAK FLOW			198	Jul 21a	198	Jul 21 2003
MAXIMUM PEAK STAGE			14.21	Jul 21	14.21	Jul 21 2003
INSTANTANEOUS LOW FLOW			0.00	Oct 3	0.00	Jul 13 2001
ANNUAL RUNOFF (CFSM)	0.78		1.23		0.82	
ANNUAL RUNOFF (INCHES)	10.59		16.66		11.09	
10 PERCENT EXCEEDS	2.6		4.2		2.6	
50 PERCENT EXCEEDS	0.18		0.34		0.20	
90 PERCENT EXCEEDS	0.00		0.01		0.00	

a Peaks above base shown in table of peak discharges and stages at continuous-record surface-water-discharge stations.
e Estimated.

04206021 POWERS BROOK AT STOW, OHIO

LOCATION.—Latitude 41°12′04", longitude 81°27′16", Summit County, Hydrologic Unit 04110002, on right upstream bank at Meadowbrook Lake outlet structure, 650 ft south of intersection of Hudson Road and Norton Road, 1.4 mi upstream from confluence with Mud Brook, in City of Stow, 3.25 mi west of Summit/Portage County line.
DRAINAGE AREA.—5.87 mi^2.
PERIOD OF RECORD.—October 2000 to current year.
GAGE.—Water-stage recorder. Elevation of gage is 1,003 ft above sea level (from topographic map).
REMARKS.—Records fair except for periods of estimated record and discharge less than 4 ft^3/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	1.2	1.6	2.2	30	1.8	8.1	e5.0	e3.2	26	0.82	4.8	17
2	1.3	0.99	1.5	20	2.0	10	e4.6	e8.1	6.2	e3.2	4.0	15
3	2.0	0.95	1.3	7.3	2.6	11	e4.2	e3.5	4.6	e3.3	4.5	2.0
4	2.4	1.1	1.0	4.5	27	10	e18	e3.4	3.9	e8.1	4.8	0.97
5	2.8	2.0	1.0	3.1	8.3	23	e59	e9.8	3.1	e4.4	6.3	0.53
6	1.7	4.0	1.0	3.0	6.9	22	e14	e4.1	1.7	e4.6	5.3	0.37
7	1.2	2.8	0.98	2.3	4.8	20	e23	e3.7	1.3	e8.4	6.3	0.21
8	1.2	2.5	0.99	3.5	3.9	21	e12	e11	4.9	e180	10	0.22
9	1.1	3.6	0.98	6.9	3.3	57	e6.7	e30	8.2	e120	13	0.30
10	1.0	8.4	1.0	7.2	3.1	33	e5.9	e41	1.8	e60	11	0.52
11	1.1	11	1.5	3.8	3.2	16	e4.7	e17	2.8	e28	3.1	0.53
12	1.2	1.9	3.2	2.1	2.8	14	e4.2	e21	24	e7.0	1.8	0.53
13	1.2	0.96	3.9	1.4	2.8	41	e4.0	e10	46	e5.6	1.3	0.48
14	0.97	0.87	11	1.1	2.7	29	e3.9	e5.7	8.4	e4.4	0.99	0.52
15	0.96	0.94	5.3	1.0	2.4	23	e3.7	e38	3.7	e3.2	0.99	1.1
16	2.1	2.4	2.6	0.99	2.4	24	e4.2	e70	2.1	e3.3	0.99	0.85
17	1.1	3.7	1.5	0.98	2.4	20	e3.7	e17	2.4	e3.0	0.77	0.61
18	0.84	3.1	1.4	0.86	2.4	15	e3.5	4.9	3.0	e3.0	0.59	0.65
19	4.7	5.9	4.2	0.87	2.7	13	e3.4	3.0	4.7	e2.9	0.57	48
20	1.2	4.7	15	0.97	3.2	11	e3.9	24	2.1	e2.9	0.57	7.4
21	0.70	3.5	4.9	0.94	3.9	11	e6.5	34	1.1	e140	0.63	2.5
22	0.62	17	4.1	1.0	26	10	e3.8	7.0	0.67	e560	0.63	20
23	0.65	9.6	3.7	1.0	51	6.4	e3.6	5.0	0.48	e370	0.57	15
24	0.76	3.3	1.7	1.0	25	3.5	e3.5	5.2	0.42	e150	0.56	4.1
25	3.1	2.2	2.2	1.0	21	4.7	e3.4	3.1	0.42	e31	0.57	5.0
26	4.7	1.3	1.4	1.1	19	20	e3.4	2.4	0.41	e6.2	4.9	2.3
27	0.84	1.3	1.2	1.2	16	7.9	e3.3	2.1	0.48	e37	5.6	67
28	0.69	1.2	1.1	1.2	11	4.8	e3.3	1.9	0.39	e56	0.85	16
29	1.0	1.1	1.2	1.5	---	22	e3.2	1.4	0.40	13	0.54	5.0
30	0.79	1.8	13	1.4	---	11	e3.2	1.2	0.60	6.4	0.94	3.1
31	1.6	---	47	1.4	---	5.7	---	66	---	5.2	0.47	---
TOTAL	46.72	105.71	143.05	114.61	263.6	528.1	228.8	457.7	166.27	1830.92	97.93	237.79
MEAN	1.51	3.52	4.61	3.70	9.41	17.0	7.63	14.8	5.54	59.1	3.16	7.93
MAX	4.7	17	47	30	51	57	59	70	46	560	13	67
MIN	0.62	0.87	0.98	0.86	1.8	3.5	3.2	1.2	0.39	0.82	0.47	0.21
CFSM	0.26	0.60	0.79	0.63	1.60	2.90	1.30	2.52	0.94	10.1	0.54	1.35
IN.	0.30	0.67	0.91	0.73	1.67	3.35	1.45	2.90	1.05	11.60	0.62	1.51

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.33	3.98	6.22	4.50	8.39	10.7	8.55	10.4	6.29	20.5	2.84	3.87
MAX	5.29	6.18	7.70	5.00	9.41	17.0	11.5	14.8	11.3	59.1	5.76	7.93
(WY)	2002	2002	2001	2002	2003	2003	2002	2003	2002	2003	2000	2003
MIN	1.51	2.23	4.61	3.70	6.81	6.27	6.52	2.81	2.06	0.87	1.16	1.75
(WY)	2003	2001	2003	2003	2002	2001	2001	2001	2001	2001	2002	2001

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2000 - 2003	
ANNUAL TOTAL	2166.78		4221.20			
ANNUAL MEAN	5.94		11.6		7.40	
HIGHEST ANNUAL MEAN					11.6	2003
LOWEST ANNUAL MEAN					4.00	2001
HIGHEST DAILY MEAN	137	May 13	560	Jul 22	560	Jul 22 2003
LOWEST DAILY MEAN	0.12	Sep 12	0.21	Sep 7	0.12	Sep 12 2002
ANNUAL SEVEN-DAY MINIMUM	0.25	Sep 7	0.38	Sep 5	0.23	Jul 27 2001
MAXIMUM PEAK FLOW			646	Jul 22a	646	Jul 22 2003
MAXIMUM PEAK STAGE			13.21	Jul 22	13.21	Jul 22 2003
INSTANTANEOUS LOW FLOW			0.20	Jun 26	0.09	Sep 13 2002
ANNUAL RUNOFF (CFSM)	1.01		1.97		1.26	
ANNUAL RUNOFF (INCHES)	13.73		26.75		17.12	
10 PERCENT EXCEEDS	11		23		14	
50 PERCENT EXCEEDS	3.2		3.3		3.1	
90 PERCENT EXCEEDS	0.62		0.77		0.60	

a Peaks above base shown in table of peak discharges and stages at continuous-record surface-water-discharge stations.
e Estimated.

04206029 MUD BROOK AT STOW, OHIO

LOCATION.—Latitude 41°11′11", longitude 81°29′21", Summit County, Hydrologic Unit 04110002, on right upstream bank at Wyoga Lake outlet structure, 0.35 mi north of East Steel Corners Road and 0.28 mi east of Wyoga Lake Road, 7.2 mi upstream from confluence with Cuyahoga River, in City of Stow, 5.04 mi west of Summit/Portage County line.
DRAINAGE AREA.—17.2 mi^2.
PERIOD OF RECORD.—October 2000 to current year.
GAGE.—Water-stage recorder. Elevation of gage is 966 ft above sea level (from topographic map).
REMARKS.—Records fair except for discharge less than 1.4 ft^3/s or greater than 150 ft^3/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	3.3	2.3	3.9	112	3.6	16	20	3.4	129	1.8	23	10
2	2.8	2.0	3.7	109	3.9	16	15	9.3	79	1.6	17	48
3	2.7	1.9	3.5	72	4.2	16	11	9.0	34	1.3	14	22
4	2.5	1.8	3.2	38	28	15	15	7.6	22	2.8	14	9.9
5	2.5	1.9	3.0	22	41	28	128	10	17	7.0	15	6.2
6	2.4	2.6	2.8	17	23	47	143	17	13	3.9	23	4.9
7	2.1	2.7	2.6	13	17	32	94	9.1	10	5.4	19	4.3
8	1.9	2.8	2.7	12	12	32	98	13	9.0	225	18	4.1
9	1.9	2.5	2.5	15	8.5	90	68	48	25	373	16	3.9
10	2.0	2.8	2.5	22	7.4	76	37	128	17	260	21	3.6
11	1.6	10	2.7	19	6.8	43	23	162	9.8	141	15	3.5
12	1.3	11	3.0	13	6.0	28	15	98	20	71	10	3.2
13	1.3	6.2	3.9	9.4	5.3	53	11	71	99	31	8.1	3.1
14	1.3	3.9	9.4	7.5	4.9	83	8.7	43	81	16	6.8	3.2
15	1.3	3.0	17	6.3	4.4	71	7.8	34	38	9.0	5.6	3.6
16	1.7	3.4	12	5.5	4.2	66	7.0	179	20	5.9	5.0	3.7
17	2.0	4.8	7.6	5.1	4.7	61	6.2	149	13	3.7	4.6	3.5
18	1.8	6.5	5.8	4.7	4.4	48	5.9	75	12	2.5	4.2	3.3
19	2.9	6.9	6.7	4.5	4.2	34	6.9	35	12	1.9	3.9	48
20	4.4	8.0	23	4.5	4.2	27	7.7	33	12	1.3	3.7	70
21	3.0	6.9	24	4.2	4.7	22	21	100	7.4	68	3.6	23
22	2.4	11	15	4.0	13	22	13	80	5.3	732	3.5	18
23	2.2	24	13	3.9	94	20	8.1	40	4.1	680	3.2	59
24	1.9	17	9.2	3.9	75	16	6.3	27	3.2	404	2.9	31
25	2.2	10	8.1	3.9	50	13	4.9	19	2.7	199	2.8	16
26	8.4	7.2	7.1	3.9	30	28	4.5	13	2.5	91	5.6	11
27	7.7	5.8	6.0	3.8	23	30	4.1	10	2.2	66	10	84
28	4.5	4.9	5.4	3.4	19	19	3.8	8.7	2.0	191	8.1	142
29	3.2	4.1	5.0	3.7	---	27	3.6	7.6	1.7	157	5.2	71
30	3.0	3.6	8.2	3.6	---	47	3.4	6.4	1.8	73	4.8	25
31	2.9	---	75	3.6	---	29	---	50	---	35	4.3	---
TOTAL	85.1	181.5	297.5	553.4	506.4	1155	800.9	1495.1	704.7	3861.1	300.9	742.0
MEAN	2.75	6.05	9.60	17.9	18.1	37.3	26.7	48.2	23.5	125	9.71	24.7
MAX	8.4	24	75	112	94	90	143	179	129	732	23	142
MIN	1.3	1.8	2.5	3.4	3.6	13	3.4	3.4	1.7	1.3	2.8	3.1
CFSM	0.16	0.35	0.56	1.04	1.05	2.17	1.55	2.80	1.37	7.24	0.56	1.44
IN.	0.18	0.39	0.64	1.20	1.10	2.50	1.73	3.23	1.52	8.35	0.65	1.60

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7.42	7.27	17.1	11.3	23.0	28.3	27.7	32.5	18.9	43.6	6.74	10.2
MAX	12.4	10.9	21.2	17.9	25.5	37.3	37.4	48.2	28.9	125	10.7	24.7
(WY)	2002	2002	2001	2003	2002	2003	2002	2003	2002	2003	2000	2003
MIN	2.75	4.89	9.60	7.23	18.1	17.7	19.1	6.98	4.29	1.41	3.15	4.32
(WY)	2003	2001	2003	2002	2003	2001	2001	2001	2001	2001	2002	2001

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2000 - 2003	
ANNUAL TOTAL	6113.91		10683.6			
ANNUAL MEAN	16.8		29.3		19.5	
HIGHEST ANNUAL MEAN					29.3	2003
LOWEST ANNUAL MEAN					10.3	2001
HIGHEST DAILY MEAN	249	May 14	732	Jul 22	732	Jul 22 2003
LOWEST DAILY MEAN	0.40	Jun 27	1.3	Oct 12	0.10	Jul 18 2001
ANNUAL SEVEN-DAY MINIMUM	0.95	Aug 7	1.5	Oct 10	0.16	Jul 17 2001
MAXIMUM PEAK FLOW			819	Jul 22a	819	Jul 22 2003
MAXIMUM PEAK STAGE			18.07	Jul 22	18.07	Jul 22 2003
INSTANTANEOUS LOW FLOW			0.95	Jul 20	0.10	Jul 18 2001
ANNUAL RUNOFF (CFSM)	0.97		1.70		1.13	
ANNUAL RUNOFF (INCHES)	13.22		23.11		15.39	
10 PERCENT EXCEEDS	38		75		47	
50 PERCENT EXCEEDS	6.7		8.5		6.7	
90 PERCENT EXCEEDS	1.8		2.5		2.0	

a Peaks above base shown in table of peak discharges and stages at continuous-record surface-water-discharge stations.

04206038 CRYSTAL CREEK AT STOW, OHIO

LOCATION.—Latitude 41°10′19", longitude 81°28′41", Summit County, Hydrologic Unit 04110002, at double box concrete culvert under Hudson Road, 0.6 mi north of intersection of Hudson Road and Graham Road, 0.4 mi upstream from confluence with Mud Brook, in City of Stow, 4.47 mi west of Summit/Portage County line.
DRAINAGE AREA.—3.11 mi^2.
PERIOD OF RECORD.—October 2000 to current year.
GAGE.—Water-stage recorder. Elevation of gage is 969 ft above sea level (from topographic map).
REMARKS.—Records fair except for discharges less than 0.4 ft^3/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	0.66	0.71	1.1	17	0.62	1.6	1.8	0.40	7.7	0.49	1.4	18
2	0.61	0.71	1.1	8.7	0.67	2.6	1.5	4.2	1.9	0.39	0.54	11
3	0.65	0.76	1.1	3.3	0.91	2.1	1.2	0.63	2.1	0.44	0.67	1.4
4	0.70	0.82	0.95	2.3	17	1.8	12	0.55	1.5	4.2	0.74	0.93
5	0.92	1.0	0.90	1.8	2.8	13	44	5.5	1.5	1.3	1.9	0.71
6	0.78	1.6	0.86	1.6	1.6	4.3	8.6	1.1	1.0	1.5	0.87	0.58
7	0.71	1.0	0.84	1.6	1.2	2.8	16	0.75	0.83	4.5	0.46	0.55
8	0.70	0.88	0.84	2.1	0.95	11	6.9	6.1	5.6	143	0.40	0.55
9	0.73	0.88	0.82	3.6	0.80	22	3.1	22	3.9	94	2.1	0.55
10	0.67	2.3	0.76	3.1	0.80	3.3	2.5	30	1.2	44	0.94	0.52
11	0.65	5.7	0.76	1.7	0.80	2.1	1.5	11	1.5	19	0.29	0.43
12	0.65	1.1	1.1	1.2	0.67	4.7	1.2	14	15	3.3	0.22	0.45
13	0.65	0.94	1.8	0.98	0.61	19	1.0	6.0	25	2.2	0.22	0.46
14	0.68	0.84	5.5	0.86	0.60	6.0	0.89	2.3	3.2	1.3	0.20	0.41
15	0.71	0.80	2.2	0.79	0.57	6.4	0.80	27	1.8	0.35	0.25	0.86
16	0.89	1.8	1.6	0.71	0.52	5.7	1.2	52	1.3	0.42	0.29	0.53
17	0.96	2.5	1.4	0.71	0.53	4.0	0.73	11	1.7	0.20	0.23	0.44
18	0.79	1.7	1.2	0.71	0.56	2.9	0.62	3.5	1.6	0.20	0.22	0.47
19	3.5	2.7	3.4	0.71	0.55	2.4	0.56	2.7	4.5	0.17	0.20	44
20	1.1	1.5	7.1	0.71	0.57	2.1	0.91	15	2.4	0.14	0.20	3.3
21	0.73	1.0	2.4	0.61	0.65	2.5	3.0	15	0.88	104	0.19	1.3
22	0.71	7.0	2.3	0.60	20	2.4	0.86	3.1	0.74	437	0.17	23
23	0.71	3.1	2.1	0.60	24	1.5	0.68	2.9	0.69	289	0.19	8.4
24	0.71	1.7	1.3	0.61	4.7	1.2	0.58	1.7	0.58	117	0.12	2.0
25	3.3	1.4	1.2	0.60	2.7	2.2	0.54	1.3	0.58	22	0.14	4.5
26	3.7	1.1	1.4	0.60	1.9	9.1	0.50	1.1	0.52	2.7	1.9	1.4
27	0.93	1.1	1.3	0.60	1.6	2.4	0.47	0.79	0.64	27	14	56
28	0.78	1.1	1.2	0.60	1.6	1.6	0.44	0.82	0.41	41	0.74	7.8
29	0.88	1.0	1.1	0.59	---	12	0.40	0.73	0.69	9.2	1.2	2.9
30	1.0	1.0	12	0.56	---	3.3	0.40	1.2	1.0	2.3	1.1	1.9
31	0.80	---	27	0.55	---	2.1	---	39	---	2.0	0.50	---
TOTAL	31.96	49.74	88.63	60.70	90.48	160.1	114.88	283.37	91.96	1374.30	32.59	195.34
MEAN	1.03	1.66	2.86	1.96	3.23	5.16	3.83	9.14	3.07	44.3	1.05	6.51
MAX	3.7	7.0	27	17	24	22	44	52	25	437	14	56
MIN	0.61	0.71	0.76	0.55	0.52	1.2	0.40	0.40	0.41	0.14	0.12	0.41
CFSM	0.33	0.53	0.92	0.63	1.04	1.66	1.23	2.94	0.99	14.3	0.34	2.09
IN.	0.38	0.59	1.06	0.73	1.08	1.92	1.37	3.39	1.10	16.44	0.39	2.34

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.70	1.60	3.17	1.82	3.15	4.10	3.99	6.48	3.60	15.2	1.50	2.85
MAX	2.45	2.42	4.08	1.96	3.23	5.16	5.42	9.33	6.84	44.3	3.19	6.51
(WY)	2002	2002	2001	2003	2003	2003	2002	2002	2002	2003	2000	2003
MIN	1.03	0.72	2.58	1.69	3.01	2.82	2.73	0.98	0.90	0.66	0.88	0.90
(WY)	2003	2001	2002	2001	2001	2001	2001	2001	2001	2002	2001	2001

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2000 - 2003	
ANNUAL TOTAL	1207.93		2574.05			
ANNUAL MEAN	3.31		7.05		4.09	
HIGHEST ANNUAL MEAN					7.05	2003
LOWEST ANNUAL MEAN					1.74	2001
HIGHEST DAILY MEAN	109	May 13	437	Jul 22	437	Jul 22 2003
LOWEST DAILY MEAN	0.22	Aug 8	0.12	Aug 24	0.00	Oct 3 2001
ANNUAL SEVEN-DAY MINIMUM	0.24	Aug 7	0.17	Aug 19	0.04	Sep 2 2001
MAXIMUM PEAK FLOW			629	Jul 22a	629	Jul 22 2003
MAXIMUM PEAK STAGE			17.54	Jul 22	17.54	Jul 22 2003
INSTANTANEOUS LOW FLOW			0.08	Aug 24	0.01	Oct 1 2001
ANNUAL RUNOFF (CFSM)	1.06		2.27		1.31	
ANNUAL RUNOFF (INCHES)	14.45		30.79		17.86	
10 PERCENT EXCEEDS	6.0		12		7.0	
50 PERCENT EXCEEDS	1.0		1.2		0.93	
90 PERCENT EXCEEDS	0.44		0.47		0.32	

a Peaks above base shown in table of peak discharges and stages at continuous-record surface-water-discharge stations.

04206043 MUD BROOK AT CUYAHOGA FALLS, OHIO

LOCATION.—Latitude 41°09′10", longitude 81°30′32", Summit County, Hydrologic Unit 04110002, at State Road bridge, 190 feet north of intersection of State Road and Graham Road, 3.3 mi upstream from confluence with Cuyahoga River in City of Cuyahoga Falls, 6.08 mi west of Summit/Portage County line.
DRAINAGE AREA.—25.6 mi^2.
PERIOD OF RECORD.—October 2000 to current year.
GAGE.—Water-stage recorder. Elevation of gage is 942 ft above sea level (from topographic map).
REMARKS.—Records good except for periods of estimated record and discharge less than 2 ft^3/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	4.7	5.3	11	164	7.6	e22	e27	6.3	135	4.5	32	46
2	3.5	4.7	9.8	149	7.9	e22	e22	26	91	5.0	24	73
3	2.7	4.2	8.4	103	10	e22	e17	14	46	2.8	21	32
4	3.0	4.4	6.8	62	60	e21	e28	11	28	6.4	19	14
5	3.4	4.3	6.5	39	56	e52	e182	29	22	13	22	8.0
6	2.7	7.6	6.0	30	39	e56	e173	24	17	8.6	28	5.8
7	2.3	7.0	5.6	23	28	e46	e138	16	14	16	26	4.7
8	1.9	6.3	5.6	25	20	e54	e119	37	23	285	22	4.0
9	1.6	6.1	5.6	33	16	e124	e83	80	41	371	21	3.8
10	1.4	16	5.2	40	14	e103	50	150	25	292	26	3.4
11	1.3	31	6.3	33	13	e61	31	181	19	184	20	3.3
12	1.5	20	11	24	11	e40	21	135	50	90	14	3.2
13	1.6	13	13	18	9.8	e77	16	90	118	44	11	3.0
14	2.0	9.3	30	14	e9.0	e99	13	55	94	24	9.5	3.0
15	1.9	6.6	29	12	e8.3	e92	12	85	49	16	7.9	4.5
16	3.7	11	24	10	e7.9	e82	11	223	27	13	7.2	3.6
17	2.7	17	17	9.8	e7.6	e74	9.6	176	19	9.7	6.1	3.3
18	2.5	17	14	8.4	e7.4	e59	7.6	95	18	7.1	5.1	3.3
19	14	22	21	8.2	e7.0	e45	7.3	48	24	5.6	4.5	118
20	8.5	19	50	8.2	e7.0	e36	6.7	59	20	4.7	4.0	94
21	6.1	17	44	7.5	e7.1	e31	16	118	13	228	4.0	36
22	4.4	48	30	7.0	e48	e28	20	97	10	727	3.7	54
23	3.3	42	25	6.8	e122	e24	13	55	7.5	723	3.5	80
24	3.4	30	19	6.7	e99	e20	9.6	36	6.3	520	3.1	46
25	12	20	17	6.6	e68	e20	7.7	25	5.5	270	3.1	29
26	21	15	16	6.9	e47	e45	6.7	18	4.8	120	7.4	16
27	14	12	13	6.6	e33	e40	6.2	15	5.1	114	65	161
28	8.6	10	12	6.7	e24	e26	5.8	13	4.3	233	12	175
29	8.7	9.0	11	7.1	---	e45	5.8	12	5.5	197	8.8	101
30	6.8	9.0	35	6.9	---	e48	5.2	10	6.5	95	7.8	38
31	5.8	---	126	6.7	---	e38	---	96	---	50	5.4	---
TOTAL	161.0	443.8	633.8	889.1	794.6	1552	1070.2	2035.3	948.5	4679.4	454.1	1169.9
MEAN	5.19	14.8	20.4	28.7	28.4	50.1	35.7	65.7	31.6	151	14.6	39.0
MAX	21	48	126	164	122	124	182	223	135	727	65	175
MIN	1.3	4.2	5.2	6.6	7.0	20	5.2	6.3	4.3	2.8	3.1	3.0
CFSM	0.20	0.58	0.80	1.12	1.11	1.96	1.39	2.56	1.24	5.90	0.57	1.52
IN.	0.23	0.64	0.92	1.29	1.15	2.26	1.56	2.96	1.38	6.80	0.66	1.70

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	10.7	12.9	26.0	18.9	31.9	37.8	36.0	41.6	24.7	52.8	11.4	15.9
MAX	17.1	15.3	29.3	28.7	36.5	50.1	45.1	65.7	34.7	151	18.9	39.0
(WY)	2002	2002	2001	2003	2001	2003	2002	2003	2002	2003	2000	2003
MIN	5.19	8.60	20.4	12.6	28.4	24.9	27.3	10.9	7.78	3.40	5.60	7.03
(WY)	2003	2001	2003	2002	2003	2001	2001	2001	2001	2001	2001	2001

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2000 - 2003	
ANNUAL TOTAL	8144.00		14831.7			
ANNUAL MEAN	22.3		40.6		26.7	
HIGHEST ANNUAL MEAN					40.6	2003
LOWEST ANNUAL MEAN					15.4	2001
HIGHEST DAILY MEAN	214	May 14	727	Jul 22	727	Jul 22 2003
LOWEST DAILY MEAN	1.0	Aug 13	1.3	Oct 11	0.67	Jul 18 2001
ANNUAL SEVEN-DAY MINIMUM	1.3	Aug 7	1.6	Oct 8	0.95	Jul 18 2001
MAXIMUM PEAK FLOW			1120	Jul 21a	1120	Jul 21 2003
MAXIMUM PEAK STAGE			12.93	Jul 21	12.93	Jul 21 2003
INSTANTANEOUS LOW FLOW			1.2	Oct 10	0.40	Jul 19 2001
ANNUAL RUNOFF (CFSM)	0.87		1.59		1.04	
ANNUAL RUNOFF (INCHES)	11.83		21.55		14.16	
10 PERCENT EXCEEDS	50		100		62	
50 PERCENT EXCEEDS	12		16		11	
90 PERCENT EXCEEDS	2.4		4.1		3.0	

a Peaks above base shown in table of peak discharges and stages at continuous-record surface-water-discharge stations.
e Estimated.

04206212 NORTH FORK AT BATH CENTER, OHIO

LOCATION.—Latitude 41°10′08", longitude 81°38′04", Summit County, Hydrologic Unit 04110002, on left upstream side of bridge on Bath Road, 750 ft east of Cleveland-Massillon Road at Bath Center, Ohio, 3.1 mi northwest of Akron corporate boundary.
DRAINAGE AREA.—5.58 mi^2.
PERIOD OF RECORD.—October 1991 to current year.
GAGE.—Water-stage recorder. Datum of gage is 932.57 ft above sea level (North American Vertical Datum of 1988).
REMARKS.—Records fair except for discharge less than 2.3 ft^3/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	0.93	1.2	3.3	28	1.5	4.3	5.2	1.7	13	1.6	3.4	10
2	0.59	1.1	2.7	14	1.7	5.4	4.4	19	4.8	1.4	3.5	7.0
3	0.49	1.0	2.3	7.2	2.1	5.0	3.9	3.2	4.6	1.2	3.7	2.5
4	0.59	1.0	2.0	5.1	24	4.4	37	2.3	4.3	3.0	3.2	1.7
5	0.99	1.5	2.0	4.1	7.5	19	82	11	4.2	2.4	2.8	1.2
6	0.55	3.0	1.9	3.8	4.9	11	14	4.2	3.1	1.3	2.9	1.1
7	0.50	1.9	1.8	4.1	3.4	7.9	43	2.7	2.8	3.9	4.5	1.1
8	0.44	1.9	1.7	4.4	3.0	19	22	14	23	113	3.1	1.2
9	0.41	1.6	1.4	8.6	2.4	39	11	44	14	28	2.6	1.1
10	0.45	6.9	1.4	7.5	2.3	10	7.4	44	4.2	43	2.3	1.1
11	0.41	15	1.4	4.3	2.4	8.0	5.7	10	3.5	12	2.2	1.0
12	0.48	2.9	1.8	3.2	2.1	15	4.6	16	100	5.1	2.2	0.96
13	0.48	2.0	3.1	2.7	2.0	40	3.9	17	45	3.3	2.0	0.91
14	0.48	1.5	19	2.5	1.9	21	3.4	5.7	38	2.8	2.0	0.71
15	0.48	1.4	8.3	2.3	1.7	29	3.1	7.6	11	2.4	2.1	2.0
16	0.71	2.8	5.7	2.2	1.4	29	2.9	19	6.3	2.2	3.6	0.83
17	0.86	3.4	3.5	2.2	2.0	18	2.8	6.3	5.1	1.8	2.4	0.56
18	0.55	2.9	3.9	2.3	1.9	12	2.6	4.1	4.5	1.7	1.5	0.51
19	2.8	3.9	10	2.3	1.7	8.1	2.6	3.6	5.1	1.6	1.2	35
20	1.1	3.0	17	2.2	2.1	8.8	3.0	43	4.0	1.4	1.1	4.2
21	0.63	2.3	5.8	1.9	3.4	7.4	5.4	23	3.4	271	1.1	1.5
22	0.54	15	4.9	2.2	37	5.8	3.0	6.6	3.1	86	1.0	19
23	0.61	8.4	4.1	3.3	52	4.4	2.8	4.7	2.8	18	0.95	8.6
24	0.76	5.2	2.9	3.3	15	3.7	2.5	4.4	2.4	8.9	0.80	2.5
25	2.6	4.4	3.0	3.1	7.9	4.5	2.3	3.4	2.3	5.0	0.80	2.0
26	5.1	3.2	3.2	2.9	6.5	16	2.4	3.1	2.1	3.7	0.80	1.3
27	1.9	3.2	2.4	2.9	6.1	5.7	2.1	2.9	1.9	50	8.3	74
28	1.4	2.8	2.5	2.9	4.5	4.4	2.0	2.8	1.7	29	1.5	9.3
29	1.5	2.5	2.3	2.6	---	23	1.9	2.4	1.5	9.2	1.4	3.8
30	2.2	3.1	14	2.7	---	9.1	1.4	2.3	1.8	5.3	1.8	2.6
31	1.7	---	71	1.8	---	5.7	---	52	---	4.0	1.1	---
TOTAL	33.23	110.0	210.3	142.6	204.4	403.6	290.3	386.0	323.5	723.2	71.85	199.28
MEAN	1.07	3.67	6.78	4.60	7.30	13.0	9.68	12.5	10.8	23.3	2.32	6.64
MAX	5.1	15	71	28	52	40	82	52	100	271	8.3	74
MIN	0.41	1.0	1.4	1.8	1.4	3.7	1.4	1.7	1.5	1.2	0.80	0.51
CFSM	0.19	0.66	1.22	0.82	1.31	2.33	1.73	2.23	1.93	4.18	0.42	1.19
IN.	0.22	0.73	1.40	0.95	1.36	2.69	1.94	2.57	2.16	4.82	0.48	1.33

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.88	5.80	6.62	9.15	8.27	10.6	11.4	6.95	5.09	4.80	2.23	2.88
MAX	7.75	15.3	18.3	17.4	12.6	22.3	17.5	12.5	11.7	23.3	6.94	7.21
(WY)	1997	1993	1997	1993	1996	1993	1998	2003	1997	2003	1992	1992
MIN	0.66	1.14	1.97	3.32	4.16	4.52	6.97	1.98	1.01	0.44	0.27	1.01
(WY)	1995	1995	1992	2002	1993	2000	2001	1999	1999	2001	1993	2001

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1992 - 2003	
ANNUAL TOTAL	2016.94		3098.26			
ANNUAL MEAN	5.53		8.49		6.38	
HIGHEST ANNUAL MEAN					8.97	1993
LOWEST ANNUAL MEAN					3.51	2001
HIGHEST DAILY MEAN	90	Apr 3	271	Jul 21	271	Jul 21 2003
LOWEST DAILY MEAN	0.20	Sep 12	0.41	Oct 9	0.07	Jul 3 1992
ANNUAL SEVEN-DAY MINIMUM	0.26	Sep 7	0.45	Oct 8	0.10	Aug 7 1993
MAXIMUM PEAK FLOW			1810	Jul 21a	1810	Jul 21 2003
MAXIMUM PEAK STAGE			15.93	Jul 21	15.93	Jul 21 2003
INSTANTANEOUS LOW FLOW			0.30	Oct 2	0.01	Jul 27 1997
ANNUAL RUNOFF (CFSM)	0.99		1.52		1.14	
ANNUAL RUNOFF (INCHES)	13.45		20.66		15.53	
10 PERCENT EXCEEDS	13		19		14	
50 PERCENT EXCEEDS	2.8		3.0		2.7	
90 PERCENT EXCEEDS	0.55		1.1		0.53	

a Peaks above base shown in table of peak discharges and stages at continuous-record surface-water-discharge stations.

04206220 YELLOW CREEK AT BOTZUM, OHIO

LOCATION.—Latitude 41°09′47″, longitude 81°35′02″, Summit County, Hydrologic Unit 04110002, on right downstream bank near Bath Road bridge over Yellow Creek, 0.5 mi upstream from confluence with Cuyahoga River, 0.7 mi west of Akron sewage treatment plant.
DRAINAGE AREA.—30.7 mi^2.
PERIOD OF RECORD.—October 1991 to current year.
GAGE.—Water-stage recorder. Datum of gage is 739.09 ft above sea level (North American Vertical Datum of 1988).
REMARKS.—Records fair except for periods of estimated record, 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	8.0	8.1	16	138	e15	e20	34	e10	e200	e10	30	47
2	6.8	7.4	15	72	e15	e23	e30	e40	e135	e10	29	43
3	6.5	7.4	e13	41	e22	e19	e25	e20	e70	12	28	19
4	6.7	7.6	e12	29	142	e24	e50	e15	e40	14	25	14
5	11	8.4	e11	23	e36	75	e270	e45	e35	16	23	11
6	7.8	13	e10	e21	e26	e50	e260	e35	e25	12	24	10
7	8.8	10	e9.0	e20	e22	e27	e205	e25	e20	18	28	9.4
8	9.5	9.6	e8.0	e21	e19	68	e180	e55	e35	463	29	9.1
9	7.1	8.8	e7.0	e26	e16	196	e125	e120	e60	268	22	8.7
10	6.3	15	e7.0	37	e14	e48	e75	e225	e40	113	19	8.2
11	6.1	60	e8.0	e22	e13	e27	e45	e270	e30	65	17	7.9
12	5.9	17	e9.0	e19	e12	55	e30	e200	e75	32	16	7.6
13	5.8	12	e15	e16	e11	172	e25	e135	e175	24	15	9.4
14	5.9	10	60	e14	e11	104	e20	e80	e140	20	14	7.4
15	5.8	9.2	38	e12	e10	114	e20	e130	e75	18	13	16
16	7.3	13	29	e11	e10	123	e15	e335	e40	16	17	8.8
17	8.0	16	20	e10	e10	91	e15	e265	e30	15	18	7.4
18	6.9	14	18	e10	e11	61	e10	e140	e25	14	14	7.4
19	14	16	33	e9.0	e12	44	e10	e70	e35	13	13	143
20	11	16	72	e9.0	e13	43	e10	e90	e30	12	12	36
21	7.9	13	35	e10	e14	39	e25	e175	e20	553	14	18
22	8.5	54	27	e10	e100	34	e30	e145	e15	891	11	66
23	8.5	41	25	e10	221	27	e20	e80	e10	126	10	60
24	7.2	23	18	e11	e66	24	e15	e55	e10	58	9.8	23
25	11	20	e16	e11	e34	25	e10	e40	e10	38	9.4	21
26	25	16	e15	e12	e26	75	e10	e25	e10	29	9.4	15
27	11	15	e15	e12	e21	38	e10	e20	e10	312	29	354
28	8.8	14	e14	e13	e20	28	e10	e20	e10	364	12	75
29	8.6	13	14	e13	---	96	e10	e20	e10	75	9.9	33
30	10	14	45	e14	---	57	e10	e15	e10	43	12	24
31	9.2	---	244	e14	---	37	---	e145	---	33	10	---
TOTAL	270.9	501.5	878.0	690.0	942	1864	1604	3045	1430	3687	542.5	1119.3
MEAN	8.74	16.7	28.3	22.3	33.6	60.1	53.5	98.2	47.7	119	17.5	37.3
MAX	25	60	244	138	221	196	270	335	200	891	30	354
MIN	5.8	7.4	7.0	9.0	10	19	10	10	10	10	9.4	7.4
CFSM	0.28	0.54	0.92	0.73	1.10	1.96	1.74	3.20	1.55	3.87	0.57	1.22
IN.	0.33	0.61	1.06	0.84	1.14	2.26	1.94	3.69	1.73	4.47	0.66	1.36

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	15.5	29.8	34.3	49.0	42.7	51.8	59.6	43.6	31.2	26.0	14.6	16.7
MAX	40.3	76.2	94.0	98.2	66.8	108	95.4	98.2	70.5	119	41.1	48.3
(WY)	1997	1993	1997	1993	1997	1993	1994	2003	1997	2003	1992	1992
MIN	6.31	9.23	12.1	17.8	25.4	23.8	34.0	16.3	9.11	8.05	5.68	4.85
(WY)	1995	1992	1992	1992	1995	2000	2001	1999	1999	2001	1993	1995

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1992 - 2003	
ANNUAL TOTAL	11191.3		16574.2			
ANNUAL MEAN	30.7		45.4		34.5	
HIGHEST ANNUAL MEAN					50.2	1997
LOWEST ANNUAL MEAN					20.5	2001
HIGHEST DAILY MEAN	447	May 13	891	Jul 22	891	Jul 22 2003
LOWEST DAILY MEAN	3.4	Sep 11	5.8	Oct 13	2.3	Sep 12 2001
ANNUAL SEVEN-DAY MINIMUM	4.0	Sep 6	6.1	Oct 9	2.6	Sep 6 2001
MAXIMUM PEAK FLOW			2960	Jul 21a	2960	Jul 21 2003
MAXIMUM PEAK STAGE			19.53	Jul 21	19.53	Jul 21 2003
INSTANTANEOUS LOW FLOW					2.1	Sep 11 2001
ANNUAL RUNOFF (CFSM)	1.00		1.48		1.12	
ANNUAL RUNOFF (INCHES)	13.56		20.08		15.28	
10 PERCENT EXCEEDS	62		121		70	
50 PERCENT EXCEEDS	16		18		18	
90 PERCENT EXCEEDS	5.7		8.8		6.1	

a Peaks above base shown in table of peak discharges and stages at continuous-record surface-water-discharge stations.
e Estimated.

04207200 TINKERS CREEK AT BEDFORD, OHIO

LOCATION.—Latitude 41°23′04″, longitude 81°31′39″, in T.6 N., R.11 W., Cuyahoga County, Hydrologic Unit 04110002, on left bank at downstream side of bridge on State Highway 14 in Bedford, Ohio, 5.5 mi upstream from mouth.
DRAINAGE AREA.—83.9 mi^2.
PERIOD OF RECORD.—November 1962 to current year.
REVISED RECORDS.—WSP 1912: Drainage area.
GAGE.—Water-stage recorder. Datum of gage is 876.18 ft above sea level.
REMARKS.—Records good except for periods of estimated record, 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	31	30	62	587	e23	115	134	48	743	47	66	162
2	28	29	54	417	e30	153	115	259	503	51	69	193
3	25	24	48	236	e70	134	97	78	162	79	91	89
4	33	40	49	156	e300	116	615	48	121	63	62	55
5	56	68	42	125	e170	e100	1230	133	109	91	56	42
6	65	70	39	113	e120	e120	750	178	79	419	86	35
7	41	99	34	103	e90	182	556	77	65	205	105	29
8	24	59	35	129	e76	306	452	93	205	685	193	27
9	23	48	34	196	e64	e600	273	325	198	1440	98	28
10	22	397	33	188	e56	333	179	1350	95	1350	68	26
11	21	215	43	126	e50	178	139	680	73	535	57	24
12	20	95	81	e90	e44	185	111	478	891	195	45	23
13	20	61	95	e80	e41	631	91	424	1080	100	39	22
14	22	50	224	e70	e38	535	80	234	625	71	35	21
15	21	47	141	e60	e36	409	71	179	266	58	32	63
16	41	87	99	e54	e33	422	66	788	130	51	38	34
17	32	115	74	e48	e30	345	59	432	105	43	32	27
18	27	102	69	e44	e48	243	52	190	109	46	29	27
19	102	104	135	e39	59	185	42	109	145	35	29	590
20	49	83	218	e36	69	175	52	515	122	31	27	303
21	32	64	139	e33	72	165	114	472	89	564	25	147
22	27	266	101	e31	475	165	76	285	69	1510	26	267
23	25	188	85	e29	e800	122	61	142	61	1900	22	266
24	25	123	70	e28	470	104	51	124	54	827	21	126
25	78	92	66	e27	307	130	48	99	53	255	23	78
26	96	73	68	e26	e300	337	43	80	50	114	67	60
27	54	71	64	e26	e160	186	37	66	56	133	77	938
28	36	59	59	e25	e100	132	37	72	45	309	36	523
29	34	52	64	e25	---	417	34	56	43	320	110	382
30	34	62	421	e24	---	285	33	61	48	108	118	141
31	29	---	940	e24	---	168	---	940	---	72	48	---
TOTAL	1173	2873	3686	3195	4131	7678	5698	9015	6394	11707	1830	4748
MEAN	37.8	95.8	119	103	148	248	190	291	213	378	59.0	158
MAX	102	397	940	587	800	631	1230	1350	1080	1900	193	938
MIN	20	24	33	24	23	100	33	48	43	31	21	21
CFSM	0.45	1.14	1.42	1.23	1.76	2.95	2.26	3.47	2.54	4.50	0.70	1.89
IN.	0.52	1.27	1.63	1.42	1.83	3.40	2.53	4.00	2.84	5.19	0.81	2.11

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	71.4	135	169	150	193	236	195	127	91.4	84.6	63.9	75.0
MAX	261	402	506	396	463	457	323	339	257	378	255	289
(WY)	1991	1986	1991	1993	1976	1963	1998	1989	1975	2003	1992	1990
MIN	8.55	13.4	16.9	33.1	39.0	79.8	54.1	33.4	16.5	13.1	11.3	8.73
(WY)	1964	1965	1964	1977	1963	2000	1971	1965	1964	1967	1963	1964

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1963 - 2003	
ANNUAL TOTAL	41369		62128			
ANNUAL MEAN	113		170		133	
HIGHEST ANNUAL MEAN					185	1975
LOWEST ANNUAL MEAN					81.7	1964
HIGHEST DAILY MEAN	957	Apr 3	1900	Jul 23	2920	Dec 30 1990
LOWEST DAILY MEAN	18	Aug 11	20	Oct 12	5.8	Aug 10 1964
ANNUAL SEVEN-DAY MINIMUM	20	Aug 6	21	Oct 9	6.5	Oct 4 1963
MAXIMUM PEAK FLOW			3570	Jun 12a	7220	Jul 20 1969
MAXIMUM PEAK STAGE			7.71	Jun 12	10.10	Jul 20 1969
INSTANTANEOUS LOW FLOW			14	Oct 14	5.2	Aug 19 1963
ANNUAL RUNOFF (CFSM)	1.35		2.03		1.59	
ANNUAL RUNOFF (INCHES)	18.34		27.55		21.59	
10 PERCENT EXCEEDS	245		440		320	
50 PERCENT EXCEEDS	70		77		64	
90 PERCENT EXCEEDS	24		28		22	

a Peaks above base shown in table of peak discharges and stages at continuous-record surface-water-discharge stations.
e Estimated.

04208000 CUYAHOGA RIVER AT INDEPENDENCE, OHIO

LOCATION.—Latitude 41°23′43″, longitude 81°37′48″, in T.6 N., R.12 W., Cuyahoga County, Hydrologic Unit 04110002, on left bank 240 ft downstream from bridge on Old Rockside Road, 0.8 mi northeast of Independence, Ohio, and 3.0 mi downstream from Tinkers Creek.
DRAINAGE AREA.—707 mi^2.
PERIOD OF RECORD.—September 1903 to December 1905 (fragmentary), January to July 1906 (gage heights and discharge measurements only), September 1921 to May 1923, September 1927 to December 1935, March 1940 to current year.
REVISED RECORDS.—WSP 1307: 1922-23(M), 1928-30(M), 1933(M), 1940(M), 1947(M), 1950(M). WSP 1912: Drainage area.
GAGE.—Water-stage recorder. Datum of gage is 583.57 ft above sea level. Sept. 21, 1903-July 21, 1906, nonrecording gage at bridge 240 ft upstream at present datum; Sept. 28, 1921-May 30, 1923, nonrecording gage at bridge 240 ft upstream at datum 2.42 ft higher; Sept. 29-Oct. 8, 1927, nonrecording gage; Oct. 9, 1927-Dec. 31, 1935 and Mar. 5, 1940-June 19, 1969, water-stage recorder at site 100 ft upstream at present datum.
REMARKS.—Records excellent except for period of estimated record, which are poor. Natural flow of stream affected by diversion, storage reservoirs, and powerplants. Some diversion from the Tuscarawas River Basin drainage into this basin at Portage Lakes (see REMARKS for station 03117000). Water diverted into Ohio Canal at Brecksville, 6 mi upstream from station, bypasses station. These records do not include flow in canal except above about 15,000 ft^3/s, when channels merge. Satellite telemeter at gage. Water-quality data collected at this 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	247	235	391	3040	e210	981	1240	349	3750	395	1500	1000
2	227	227	351	2590	e230	1090	1130	1650	2350	348	1200	2030
3	218	216	319	1810	e340	978	978	701	1480	385	967	1230
4	212	209	290	1440	2040	905	2010	448	1330	347	883	986
5	251	252	277	1290	e1000	1730	6740	890	1140	489	939	878
6	238	362	275	1180	e700	1740	3460	1040	969	1090	1010	791
7	216	407	266	974	e600	1270	3500	611	850	731	1020	619
8	200	333	261	882	e520	1520	3740	976	1040	6470	1490	487
9	192	298	249	1110	e470	3490	2790	2570	1830	8140	1080	421
10	191	826	240	1180	e430	2110	2250	6360	871	6180	1180	359
11	189	1830	259	852	e390	1530	1900	3680	699	4000	842	324
12	224	588	343	648	e360	1540	1600	3470	2060	2400	725	307
13	323	413	423	542	e340	3230	1320	3350	5870	1690	619	283
14	328	351	1140	490	e320	2960	1090	2590	2670	1350	535	269
15	294	327	841	449	e300	2650	990	2100	1670	1130	488	378
16	232	405	599	e380	e280	2930	880	4390	1500	887	516	323
17	254	473	523	e360	e270	2760	826	3010	1500	654	490	270
18	207	504	481	e330	e330	2320	778	2160	1450	527	388	257
19	404	428	606	e310	367	2000	753	1690	1360	444	361	3130
20	351	429	1470	e290	355	1980	547	2720	1150	392	326	1690
21	250	340	933	e280	392	1850	704	3830	915	2650	307	1070
22	247	1100	728	e270	1150	1720	558	2100	783	11400	304	1560
23	244	1100	700	e260	4130	1430	532	1440	695	9460	283	2340
24	237	613	564	e250	1850	1270	458	1390	607	5650	262	1360
25	248	533	523	e250	1330	1150	423	1210	526	3750	258	1050
26	737	455	543	e240	1100	2060	398	1010	461	2590	340	869
27	369	456	467	e240	1040	1430	362	865	437	2210	890	5610
28	276	412	399	e230	1030	1180	351	787	383	5110	585	3220
29	253	360	405	e230	---	2190	348	677	360	2840	653	2510
30	288	368	959	e220	---	1870	327	609	413	1740	912	1660
31	250	---	4220	e220	---	1400	---	4130	---	1310	568	---
TOTAL	8397	14850	20045	22837	21874	57264	42983	62803	41119	86759	21921	37281
MEAN	271	495	647	737	781	1847	1433	2026	1371	2799	707	1243
MAX	737	1830	4220	3040	4130	3490	6740	6360	5870	11400	1500	5610
MIN	189	209	240	220	210	905	327	349	360	347	258	257

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	382	641	933	1109	1292	1634	1456	961	641	484	368	385
MAX	1747	2713	2889	3585	3217	3008	3175	2396	2450	2799	1363	1866
(WY)	1955	1986	1978	1952	1959	1963	1957	1984	1989	2003	1992	1979
MIN	65.8	74.9	115	191	194	584	244	120	111	82.9	62.3	61.0
(WY)	1934	1931	1964	1945	1934	1931	1946	1934	1934	1954	1933	1933

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1922 - 2003	
ANNUAL TOTAL	292218		438133			
ANNUAL MEAN	801		1200		858	
HIGHEST ANNUAL MEAN					1393	1975
LOWEST ANNUAL MEAN					278	1934
HIGHEST DAILY MEAN	5840	Apr 3	11400	Jul 22	16700	Jan 22 1959
LOWEST DAILY MEAN	165	Sep 13	189	Oct 11	21	Aug 28 1933
ANNUAL SEVEN-DAY MINIMUM	173	Sep 7	207	Oct 6	37	Aug 26 1933
MAXIMUM PEAK FLOW			14200	Jul 22	24800	Jan 22 1959
MAXIMUM PEAK STAGE			21.12	Jul 22	22.41	Jan 22 1959
INSTANTANEOUS LOW FLOW			175	Oct 8	21	Aug 28 1933
10 PERCENT EXCEEDS	1820		2740		2010	
50 PERCENT EXCEEDS	473		704		490	
90 PERCENT EXCEEDS	205		252		136	

e Estimated.

04208460 MILL CREEK AT GARFIELD HEIGHTS, OHIO

LOCATION.—Latitude 41°25′26″, longitude 81°36′16″, Cuyahoga County, Hydrologic Unit 04110002, on left bank 1,000 ft downstream from General Chemical Company plant railroad bridge, 0.6 mi upstream from mouth at Cuyahoga River.
DRAINAGE AREA.—17.9 mi^2.
PERIOD OF RECORD.—August 2001 to current year.
GAGE.—Water-stage recorder. Elevation of gage is 600 ft above sea level (from topographic map)..
REMARKS.—Records good except for periods of estimated record and discharges above 1,000 ft^3/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	4.7	5.3	10	66	e5.0	19	19	17	68	7.8	4.9	53
2	4.0	8.1	8.4	40	e15	e35	17	61	23	7.7	13	28
3	4.2	9.6	10	43	e30	e38	15	9.9	21	7.2	6.0	13
4	5.1	9.2	e8.8	21	137	27	231	8.4	19	9.4	5.5	6.5
5	11	10	e8.0	19	18	69	236	42	22	9.0	9.0	5.0
6	4.1	13	e7.6	19	e15	e26	29	75	14	400	6.2	4.6
7	4.6	27	e7.4	18	e13	e28	90	12	13	74	7.2	4.4
8	3.9	6.5	e7.2	28	e12	59	37	15	68	33	15	4.4
9	4.1	6.0	e7.0	40	e11	e52	20	95	41	45	15	4.4
10	3.9	280	e7.8	31	e10	e23	15	464	14	82	6.2	4.4
11	3.9	122	12	20	e9.4	e23	13	51	19	28	4.8	4.3
12	3.8	12	23	e17	e9.0	30	13	72	154	7.5	4.7	4.2
13	4.0	7.8	23	e15	e8.6	86	10	65	91	5.4	4.7	4.2
14	4.0	6.3	90	e14	e8.2	e37	9.7	32	53	4.8	4.4	4.3
15	3.8	5.7	27	e13	e7.8	43	9.5	44	18	4.5	4.3	17
16	6.3	22	18	e12	e7.4	45	9.3	76	13	6.7	5.3	7.7
17	5.2	24	10	e11	e7.0	37	8.9	31	13	4.4	5.1	4.7
18	4.1	17	12	e10	e6.6	29	8.5	25	16	6.3	4.4	4.2
19	43	16	37	e9.2	e6.2	23	8.4	22	32	4.2	4.4	242
20	6.2	8.0	52	e8.6	e7.8	37	23	211	12	3.8	4.9	31
21	4.3	6.9	20	e8.0	22	45	26	74	10	269	5.3	16
22	4.2	104	15	e7.6	150	40	9.8	29	9.6	57	7.4	92
23	4.5	48	11	e7.2	86	21	11	31	9.1	15	6.0	39
24	5.3	31	7.9	e6.8	e31	18	8.6	30	8.8	7.0	5.7	17
25	33	23	12	e6.4	e31	51	8.1	22	8.9	5.9	5.7	13
26	22	12	11	e6.2	e28	67	9.7	19	8.3	5.5	21	11
27	6.3	15	9.7	e6.0	e29	24	7.7	18	14	31	26	445
28	5.3	10	12	e5.8	e20	18	8.1	28	7.9	33	7.3	33
29	4.8	8.6	12	e5.6	---	101	7.4	18	7.6	8.2	32	127
30	6.3	13	110	e5.4	---	30	7.2	17	9.7	5.5	13	36
31	4.6	---	194	e5.2	---	22	---	275	---	5.2	6.3	---
TOTAL	234.5	887.0	800.8	525.0	741.0	1203	925.9	1989.3	817.9	1193.0	270.7	1280.3
MEAN	7.56	29.6	25.8	16.9	26.5	38.8	30.9	64.2	27.3	38.5	8.73	42.7
MAX	43	280	194	66	150	101	236	464	154	400	32	445
MIN	3.8	5.3	7.0	5.2	5.0	18	7.2	8.4	7.6	3.8	4.3	4.2

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	19.3	23.5	25.1	15.4	24.4	38.6	33.1	54.8	19.9	29.4	18.6	32.5
MAX	31.1	29.6	25.8	16.9	26.5	38.8	35.3	64.2	27.3	38.5	34.1	42.7
(WY)	2002	2003	2003	2003	2003	2003	2002	2003	2003	2003	2001	2003
MIN	7.56	17.4	24.4	13.9	22.4	38.4	30.9	45.5	12.6	20.3	8.73	26.6
(WY)	2003	2002	2002	2002	2002	2002	2003	2002	2002	2002	2003	2002

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2001 - 2003	
ANNUAL TOTAL	8842.5		10868.4			
ANNUAL MEAN	24.2		29.8		27.4	
HIGHEST ANNUAL MEAN					29.8	2003
LOWEST ANNUAL MEAN					25.1	2002
HIGHEST DAILY MEAN	304	May 13	464	May 10	479	Aug 31 2001
LOWEST DAILY MEAN	3.1	Sep 13	3.8	Oct 12	0.00	Oct 3 2001
ANNUAL SEVEN-DAY MINIMUM	3.3	Sep 8	3.9	Oct 9	3.3	Sep 8 2002
MAXIMUM PEAK FLOW			3810	Jul 6	3900	Aug 31 2001
MAXIMUM PEAK STAGE			7.57	Jul 6	7.64	Aug 31 2001
INSTANTANEOUS LOW FLOW					0.00	Oct 3 2001
10 PERCENT EXCEEDS	53		66		66	
50 PERCENT EXCEEDS	10		13		11	
90 PERCENT EXCEEDS	3.9		4.7		4.1	

e Estimated.

04208504 CUYAHOGA RIVER AT LTV STEEL AT CLEVELAND, OHIO

LOCATION.—Latitude 41°27′45″, longitude 81°40′52″, Cuyahoga County, Hydrologic Unit 04110002, on left bank at LTV Steel Company footbridge, 1.2 mi downstream from Big Creek, and 5.5 mi upstream from mouth at Cleveland, Ohio.
DRAINAGE AREA.—788 mi^2.
PERIOD OF RECORD.—October 1991 to current year.
GAGE.—Water-stage and acoustic velocity meter recorder. Elevation of gage is 583.57 ft above sea level (from topographic map).
REMARKS.—Records fair except for periods of estimated record, which are poor.
EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 15,500 ft^3/s Aug. 13, 1994; minimum daily discharge, 310 ft^3/s Aug. 29, 1993.
EXTREMES FOR CURRENT YEAR.—Maximum daily discharge, 13,000 ft^3/s July 22; minimum daily discharge, 396 ft^3/s Nov. 4.

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	1140	419	730	3650	653	1320	1510	517	4490	521	1510	1660
2	1610	418	636	2830	689	1530	1380	2190	2610	461	1280	2280
3	2050	401	639	2110	739	1360	1230	962	1730	492	1050	1390
4	2050	396	710	1700	3100	1270	e3400	675	1540	473	962	1110
5	1650	493	749	1580	1720	2410	e10000	1230	1330	659	985	991
6	1060	642	638	1580	1160	2280	e5000	1590	1150	1690	1110	909
7	1000	751	578	1420	1100	1690	e4200	878	1020	1180	1050	778
8	943	590	648	1300	979	2030	e4400	1210	1380	e7600	1550	657
9	927	520	605	1630	945	4350	e3700	3110	2220	e1100	1210	597
10	936	817	578	1620	928	2580	e3000	7730	1100	e8000	1230	543
11	941	2880	618	1300	901	1950	e2400	4060	912	e5400	933	503
12	946	921	791	1030	827	1900	e2000	3830	2370	e4000	861	473
13	1120	674	872	837	759	3940	e1600	3690	6660	e2700	774	453
14	1100	594	2140	811	729	3650	e1300	2750	3460	e1900	672	418
15	1050	561	1410	816	719	3160	e1200	2220	1900	e1300	622	614
16	948	789	999	743	621	3480	e1100	4560	1620	e1100	700	524
17	950	972	865	777	614	3300	e1000	3160	1610	e940	662	428
18	825	963	820	672	686	2710	e970	2280	1570	e780	576	416
19	1480	909	1090	710	703	2340	902	1820	1600	e650	532	4260
20	1060	808	2220	652	724	2370	774	3150	1310	e550	475	1990
21	844	664	1530	623	755	2170	976	4400	1060	e3200	460	1220
22	754	2280	1150	564	2070	2050	757	2330	912	e13000	e460	1820
23	e540	1750	1040	584	5200	1710	740	1680	826	e8800	e450	2580
24	436	1030	905	588	2390	1490	654	1590	767	e6000	e420	1490
25	594	926	865	575	1740	1500	604	1380	691	e3900	e410	1160
26	1140	795	1000	610	1450	2470	629	1180	573	e3000	e480	997
27	652	866	1010	557	1390	1680	542	1050	612	e2400	e1100	7000
28	506	833	854	595	1350	1440	502	986	499	e6000	e820	3370
29	466	682	906	622	---	2820	522	860	453	e3400	1050	e2500
30	523	727	1930	600	---	2280	487	810	532	e2000	1110	1860
31	445	---	5380	606	---	1710	---	5110	---	e1300	748	---
TOTAL	30686	26071	34906	34292	35641	70940	57479	72988	48507	94496	26252	44991
MEAN	990	869	1126	1106	1273	2288	1916	2354	1617	3048	847	1500
MAX	2050	2880	5380	3650	5200	4350	10000	7730	6660	13000	1550	7000
MIN	436	396	578	557	614	1270	487	517	453	461	410	416

CAL YR 2002	TOTAL 428370	MEAN 1174	MAX 5710	MIN 396
WTR YR 2003	TOTAL 577249	MEAN 1582	MAX 13000	MIN 396

e Estimated.

04209000 CHAGRIN RIVER AT WILLOUGHBY, OHIO

LOCATION.—Latitude 41°37′51″, longitude 81°24′13″, in T.9 N., R.10 W., Lake County, Hydrologic Unit 04110003, on left bank, 150 ft downstream from city waterworks dam, 800 ft downstream from East Branch, 1 mi southeast of Willoughby, and 5 mi upstream from mouth.
DRAINAGE AREA.—246 mi^2.
PERIOD OF RECORD.—July 1925 to November 1935, October 1939 to 1984, March 25, 1988 to September 1994, October 1995 to September 1996, October 1997 to October 1999, October 2001 to September 2002. (July 1925 to September 1932 monthly runoff in inches, adjusted for diversion, published in WSP 1307; previously published runoff was unadjusted and should not be used).
REVISED RECORDS.—WSP 1084: 1929(M), 1931(M). WSP 1307: 1926-28(M), 1930(M), 1932-35(M), 1942(M). WSP 1912: Drainage area. See also PERIOD OF RECORD.
GAGE.—Water-stage recorder. Datum of gage is 594.57 ft above sea level. Prior to Dec. 20, 1939, nonrecording gage at site 150 ft upstream at datum 7 ft higher.
REMARKS.—Records fair except for periods of estimated record, which are poor. Water diverted 200 ft upstream from station for municipal supply of City of Willoughby until 1988. Water-quality and sediment data formerly collected at this 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	71	73	129	2100	e66	e260	206	117	2310	102	113	e260
2	64	78	128	1110	e110	e270	181	203	1000	97	108	e500
3	60	72	137	450	e180	e240	150	206	407	93	91	228
4	58	68	124	240	1380	e220	440	144	264	92	e78	122
5	65	67	125	183	683	e360	3690	137	235	114	e120	95
6	69	76	121	162	e520	e580	1890	1650	222	163	e100	74
7	50	80	e110	156	e340	e800	995	1050	201	489	e200	63
8	39	79	e100	157	e240	e700	1400	352	186	229	e240	57
9	36	79	e96	190	e200	e540	732	547	292	437	e280	54
10	36	83	e90	263	e170	e480	369	3130	238	836	e160	51
11	36	901	e86	175	e150	e740	266	1830	192	770	e84	48
12	36	255	e110	133	e130	e560	226	1090	390	227	e78	43
13	42	151	226	e120	e120	e440	196	1650	3510	135	75	41
14	43	132	477	e110	e110	e1200	180	921	1600	109	67	40
15	38	126	569	e105	e100	e2000	168	434	502	99	61	50
16	42	129	273	e100	e98	e1600	161	2630	248	149	59	65
17	70	145	199	e96	e96	e1300	154	1180	176	111	72	55
18	74	176	161	e94	e92	799	148	489	189	102	66	48
19	112	155	169	e92	e90	392	143	296	611	101	57	1260
20	133	161	552	e90	e88	335	142	457	288	94	51	1030
21	86	142	333	e88	e120	360	184	2120	168	521	48	169
22	74	273	202	e86	e500	416	189	882	142	2540	46	136
23	68	516	179	e84	e2000	240	167	345	127	647	45	628
24	63	242	156	e82	e1500	177	153	279	116	493	45	213
25	60	210	163	e80	e1200	154	142	257	107	227	43	106
26	120	179	178	e78	e680	705	136	218	100	143	e42	83
27	99	149	158	e76	e460	396	132	194	115	116	e58	3310
28	80	139	160	e74	e340	199	128	190	101	312	e90	1920
29	74	129	158	e72	---	599	124	190	102	158	e70	2020
30	69	124	258	e70	---	770	120	174	102	107	e56	1460
31	66	---	2180	e68	---	261	---	1060	---	91	e110	---
TOTAL	2033	5189	8107	6984	11763	18093	13312	24422	14241	9904	2813	14229
MEAN	65.6	173	262	225	420	584	444	788	475	319	90.7	474
MAX	133	901	2180	2100	2000	2000	3690	3130	3510	2540	280	3310
MIN	36	67	86	68	66	154	120	117	100	91	42	40
CFSM	0.27	0.70	1.06	0.92	1.71	2.37	1.80	3.20	1.93	1.30	0.37	1.93
IN.	0.31	0.78	1.23	1.06	1.78	2.74	2.01	3.69	2.15	1.50	0.43	2.15
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 2003, BY WATER YEAR (WY)												
MEAN	158	308	413	467	540	676	550	363	217	130	122	132
MAX	976	850	1284	1312	1242	1234	1409	1088	781	698	602	641
(WY)	1927	1984	1991	1952	1982	1963	1957	1989	1947	1969	1992	1926
MIN	21.9	44.3	60.4	115	48.1	179	120	53.4	23.1	20.3	16.8	17.6
(WY)	1954	1965	1964	1977	1934	1990	1946	1934	1934	1934	1930	1933

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1925 - 2003	
ANNUAL TOTAL	97081.2		131090			
ANNUAL MEAN	266		359		340	
HIGHEST ANNUAL MEAN					465	1975
LOWEST ANNUAL MEAN					148	1934
HIGHEST DAILY MEAN	3350	May 13	3690	Apr 5	12300	Mar 22 1948
LOWEST DAILY MEAN	6.1	Sep 13	36	Oct 9	3.0	Jul 25 1934
ANNUAL SEVEN-DAY MINIMUM	9.6	Sep 8	38	Oct 9	7.0	Aug 25 1933
MAXIMUM PEAK FLOW			5660	Sep 27a	28000	Mar 22 1948
MAXIMUM PEAK STAGE			11.57	Feb 23b	17.95	Mar 22 1948
INSTANTANEOUS LOW FLOW			36	Oct 9	3.0	Jul 25 1934
ANNUAL RUNOFF (CFSM)	1.08		1.46		1.38	
ANNUAL RUNOFF (INCHES)	14.68		19.82		18.76	
10 PERCENT EXCEEDS	548		951		768	
50 PERCENT EXCEEDS	140		154		150	
90 PERCENT EXCEEDS	38		63		37	

a Peaks above base shown in table of peak discharges and stages at continuous-record surface-water-discharge stations.
b Ice jam.
e Estimated.

04212100 GRAND RIVER NEAR PAINESVILLE, OHIO

LOCATION.—Latitude 41°43′08″, longitude 81º13′41″, Lake County, Hydrologic Unit 04110004, on downstream left abutment of bridge on State Highway 84 (Walnut Avenue), 0.9 mi downstream from Big Creek in Painesville, Ohio.
DRAINAGE AREA.—685 mi^2.
PERIOD OF RECORD.—October 1974 to current year.
GAGE.—Water-stage recorder. Datum of gage is 596.37 ft above sea level. Previously published in error as 620.37 ft above sea level.
REMARKS.—Records good except for periods of estimated record, which are poor. Water-quality data formerly collected at this 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	121	75	329	4580	e160	e960	1420	114	3070	e50	198	506
2	80	79	354	3400	e180	e1000	1180	191	2540	e48	141	1040
3	57	70	872	2030	e320	e900	955	440	1600	e44	98	793
4	43	72	624	1520	e800	e850	1480	492	1430	e48	112	595
5	34	68	491	1220	e1200	e1100	6790	450	1070	e44	202	394
6	28	69	319	952	1930	e1500	6680	3090	597	e42	140	240
7	20	69	e220	671	e1200	e2000	4480	4930	377	e40	423	143
8	16	69	e180	615	e800	e1900	5020	2600	281	288	442	89
9	14	67	e160	823	e600	e1700	4290	1630	258	701	492	61
10	12	100	e140	1370	e500	e4400	2890	2500	725	840	646	e50
11	11	425	e160	1280	e400	e2700	1910	2510	698	811	584	e40
12	9.7	241	220	968	e350	e1700	1230	3090	947	621	436	e35
13	9.5	284	453	670	e320	e1600	799	3700	8100	550	284	e31
14	10	229	1380	e540	e300	e4200	571	2950	8640	451	147	e28
15	9.1	183	1980	e470	e280	e5200	463	1990	3780	269	e130	e36
16	9.9	169	1380	e410	e270	5590	400	1510	1670	207	e90	e47
17	22	170	960	e370	e260	6900	327	912	852	144	e70	e40
18	37	220	673	e340	e250	5560	287	802	553	113	e56	e100
19	86	373	574	e310	e240	3770	253	730	1500	100	e47	627
20	79	366	1060	e280	e230	2580	224	630	1760	67	e42	893
21	77	293	1180	e260	e250	1710	269	1010	1280	1170	e38	1090
22	71	621	986	e240	e350	1880	366	1290	784	3250	e36	835
23	70	1410	771	e220	e5000	1960	412	1040	479	5720	e34	1730
24	73	1120	569	e210	e5800	1530	355	1700	304	5300	e32	2210
25	65	828	438	e200	e5400	1200	291	3150	208	4510	e31	1360
26	120	645	988	e190	e3000	2420	240	1650	152	3930	e30	919
27	95	477	1450	e180	e1700	2570	201	1170	83	2840	e50	3190
28	107	371	1580	e180	e1100	1620	172	787	69	1580	e110	4920
29	96	307	1330	e170	---	1780	145	490	45	593	e60	5650
30	95	304	1350	e170	---	2540	125	354	e40	322	86	5510
31	79	---	3240	e165	---	1890	---	960	---	280	65	---
TOTAL	1656.2	9774	26411	25004	33190	77210	44225	48862	43892	34973	5352	33202
MEAN	53.4	326	852	807	1185	2491	1474	1576	1463	1128	173	1107
MAX	121	1410	3240	4580	5800	6900	6790	4930	8640	5720	646	5650
MIN	9.1	67	140	165	160	850	125	114	40	40	30	28
CFSM	0.08	0.48	1.24	1.18	1.73	3.64	2.15	2.30	2.14	1.65	0.25	1.62
IN.	0.09	0.53	1.43	1.36	1.80	4.19	2.40	2.65	2.38	1.90	0.29	1.80

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	450	1099	1487	1379	1740	1917	1496	865	668	276	221	401
MAX	1880	4026	3816	3327	4044	3753	2598	3214	2851	1128	1106	1854
(WY)	1991	1986	1978	1993	1981	1993	1987	1989	1986	2003	1980	1990
MIN	42.1	67.1	141	109	322	577	450	106	39.8	30.5	17.0	11.0
(WY)	1992	1979	1999	1977	1987	1990	1975	1987	1988	1991	1991	1995

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1975 - 2003	
ANNUAL TOTAL	272108.4		383751.2			
ANNUAL MEAN	746		1051		995	
HIGHEST ANNUAL MEAN					1406	1997
LOWEST ANNUAL MEAN					524	1999
HIGHEST DAILY MEAN	8890	May 14	8640	Jun 14	15300	Nov 6 1985
LOWEST DAILY MEAN	4.7	Sep 12	9.1	Oct 15	4.7	Sep 12 2002
ANNUAL SEVEN-DAY MINIMUM	5.1	Sep 8	10	Oct 10	5.1	Sep 8 2002
MAXIMUM PEAK FLOW			10000	Jun 14a	18700	Jun 11 1986
MAXIMUM PEAK STAGE			9.12	Jun 14	13.16	Dec 25 1979
INSTANTANEOUS LOW FLOW			7.7	Oct 16	4.2	Sep 10 2002
ANNUAL RUNOFF (CFSM)	1.09		1.53		1.45	
ANNUAL RUNOFF (INCHES)	14.78		20.84		19.74	
10 PERCENT EXCEEDS	1830		3030		2710	
50 PERCENT EXCEEDS	280		442		394	
90 PERCENT EXCEEDS	14		48		36	

a Peaks above base shown in table of peak discharges and stages at continuous-record surface-water-discharge stations.
e Estimated.

04213000 CONNEAUT CREEK AT CONNEAUT, OHIO

LOCATION.—Latitude 41°55′37″, longitude 80°36′15″, Ashtabula County, Hydrologic Unit 04120101, on right bank at downstream side of Keefus Road bridge at Conneaut, Ohio, and 6.4 mi upstream from mouth.
DRAINAGE AREA.—175 mi^2.
PERIOD OF RECORD.—July 1922 to December 1935, March 1950 to September 1961 (published as "at Amboy"), October 1961 to current year.
REVISED RECORDS.—WSP 714: 1926. WSP 784: 1933. WSP 1437: 1923-25(M), 1926-30, 1931-32(M), 1933, 1935(M). WSP 1912: Drainage area.
GAGE.—Water-stage recorder. Datum of gage is 610.3 ft above sea level. Prior to Aug. 17, 1924, nonrecording gage at same site and datum.
REMARKS.—Records good except for periods of estimated record, which are poor. Water-quality and sediment data formerly collected at this 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	23	e32	e130	e700	e64	e250	e400	59	1090	33	57	52
2	18	e31	e280	e900	e74	e200	e280	97	750	33	47	329
3	16	e34	e220	e660	e94	e180	e200	268	279	31	49	295
4	14	e39	e180	e420	e200	e160	e330	194	169	28	51	111
5	12	e36	e140	e280	e330	e200	e900	134	136	28	66	54
6	11	e33	e110	e200	e440	e300	e1700	147	128	27	63	36
7	9.2	e30	e84	e160	e560	e390	e1400	653	117	26	87	29
8	8.6	e33	e70	e140	e300	e560	e760	354	98	38	79	24
9	8.1	e32	e60	e165	e200	e400	e900	545	421	73	73	21
10	8.7	e31	e52	e240	e160	e700	e640	570	529	52	122	19
11	8.7	e48	e56	e400	e140	e1000	e400	458	197	49	71	17
12	8.6	e280	e68	e300	e120	e700	e240	348	575	51	64	17
13	8.5	e150	e210	e250	e110	e430	e180	687	2610	45	48	16
14	7.4	e100	e310	e210	e100	e600	e160	948	4990	34	36	14
15	6.9	e82	e450	e180	e94	e940	e140	478	771	29	30	15
16	9.2	e70	e600	e170	e90	e780	e120	261	357	26	28	16
17	14	e90	e380	e160	e86	e900	e100	183	213	28	26	37
18	e17	e140	e240	e150	e84	e1300	e86	146	269	46	25	30
19	e36	e180	e170	e140	e82	934	e72	119	642	30	24	50
20	e41	e160	e200	e130	e80	608	e62	103	672	52	23	217
21	e46	e110	e240	e120	e88	518	e70	111	330	286	21	229
22	e37	e160	e300	e110	e230	888	e100	177	204	1550	19	101
23	e33	e300	e250	e100	e600	729	e150	147	161	1740	17	359
24	e35	e470	e200	e94	e1000	476	e190	877	104	720	16	562
25	e29	e340	e150	e86	e2000	362	142	1060	75	514	15	200
26	e32	e210	e210	e80	e1400	802	114	384	59	255	16	96
27	e41	e150	e270	e76	e560	e600	96	200	51	128	19	488
28	e50	e130	e310	e72	e300	e560	82	140	43	96	33	2020
29	e46	e120	e370	e70	---	e390	69	111	39	168	37	993
30	e40	e110	e320	e68	---	e440	62	97	36	100	30	899
31	e35	---	e500	e66	---	e580	---	133	---	70	28	---
TOTAL	709.9	3731	7130	6897	9586	17877	10145	10189	16115	6386	1320	7346
MEAN	22.9	124	230	222	342	577	338	329	537	206	42.6	245
MAX	50	470	600	900	2000	1300	1700	1060	4990	1740	122	2020
MIN	6.9	30	52	66	64	160	62	59	36	26	15	14
CFSM	0.13	0.71	1.31	1.27	1.96	3.30	1.93	1.88	3.07	1.18	0.24	1.40
IN.	0.15	0.79	1.52	1.47	2.04	3.80	2.16	2.17	3.43	1.36	0.28	1.56

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	132	313	411	417	456	526	392	239	140	76.3	68.2	102
MAX	804	1373	1049	929	1115	987	839	670	1013	415	493	709
(WY)	1927	1986	1928	1990	1981	1972	1957	1953	1986	1969	1980	1990
MIN	4.95	17.1	35.1	81.0	39.6	147	69.9	20.2	5.46	2.79	3.19	3.56
(WY)	1924	1954	1961	1977	1934	2000	1935	1934	1934	1934	1923	1932

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1922 - 2003	
ANNUAL TOTAL	85431.6		97431.9			
ANNUAL MEAN	234		267		272	
HIGHEST ANNUAL MEAN					401	1986
LOWEST ANNUAL MEAN					140	1931
HIGHEST DAILY MEAN	3700	May 14	4990	Jun 14	11000	Jan 31 1968
LOWEST DAILY MEAN	2.5	Sep 12	6.9	Oct 15	0.30	Jul 30 1933
ANNUAL SEVEN-DAY MINIMUM	2.7	Sep 7	8.1	Oct 9	0.64	Aug 27 1933
MAXIMUM PEAK FLOW	x		7060	Jun 14a	17000	Jan 22 1959
MAXIMUM PEAK STAGE	x		11.79	Mar 17b	12.94	Mar 4 1934
INSTANTANEOUS LOW FLOW	x		6.6	Oct 15	0.20	Jul 31 1933
ANNUAL RUNOFF (CFSM)	1.34		1.53		1.56	
ANNUAL RUNOFF (INCHES)	18.16		20.71		21.13	
10 PERCENT EXCEEDS	520		678		680	
50 PERCENT EXCEEDS	110		128		98	
90 PERCENT EXCEEDS	9.6		25		10	

a Peaks above base shown in table of peak discharges and stages at continuous-record surface-water-discharge stations.
b Ice jam.
e Estimated.

For continuous-record surface-water-discharge stations meeting certain criteria, all peak discharges and stages occurring during the water year and greater than a selected base discharge are presented in this table. The peaks greater than the base discharge, excluding the highest one, are referred to as secondary peaks. The peaks are listed in chronological order. Peak discharges are not published for canals, ditches, drains, or streams for which the peaks are subject to substantial control by human intervention. The time of occurrence for peaks is expressed in 24-hour local standard time. For example, 12:30 a.m. is 0030 and 1:30 p.m. is 1330. The maximum peak discharge and gage height for the water year are flagged with an asterisk (*).

PEAK DISCHARGES EQUAL TO OR GREATER THAN BASE DISCHARGES
WATER YEAR OCTOER 2002 TO SEPTEMBER 2003

[FT^3/S, cubic feet per second; *, maximum peak discharge and gage height; --, no data;, e, estimated; b, ice jam]

DATE	TIME	DISCHARGE (FT^3/S)	GAGE HEIGHT (FEET)	DATE	TIME	DISCHARGE (FT^3/S)	GAGE HEIGHT (FEET)
LAKE ERIE BASIN							
Ottawa River Basin							
04177000 OTTAWA RIVER AT TOLEDO UNIVERSITY, TOLEDO, OHIO (Base discharge: 1,150 ft^3/s)							
Mar. 17	1500	1180	9.84	Apr. 6	0830	*1220	*9.96
Maumee River Basin							
04184500 BEAN CREEK AT POWERS, OHIO (Base discharge: 1,200 ft3/s)							
Mar. 15	2145	--	*15.61b	Mar. 16	--	*1300e	--b
04185000 TIFFIN RIVER AT STRYKER, OHIO (Base discharge: 1,850 ft^3/s)							
Mar. 16	--	*3300e	*14.20	May 12	1130	1590	12.36
04185440 UNNAMED TRIBUTARY TO LOST CREEK NEAR FARMER, OHIO (Base discharge: 120 ft^3/s)							
Mar. 13	0945	145	3.53	Aug. 2	0130	376	4.61
Apr.5	0200	248	4.09	Sept. 1	1000	151	3.57
May 5	0915	*699	*5.55	Sept. 27	0330	150	3.56
May 9	1045	508	5.04				
04186500 AUGLAIZE RIVER NEAR FORT JENNINGS, OHIO (Base discharge: 2,700 ft^3/s)							
Apr. 6	0700	2760	10.56	July 9	1500	*6880	*15.95
May 11	0730	4820	14.12	Aug. 4	1230	4680	13.97
June 15	1000	3520	12.00	Sept. 3	1830	4450	13.60
04189000 BLANCHARD RIVER NEAR FINDLAY, OHIO (Base discharge: 2,800 ft^3/s)							
Jan. 1	0200	3470	8.09	May 10	0800	*7710	*13.16
Apr. 5	1930	3830	8.60	July 10	0330	6130	11.52
Portage River Basin							
04195500 PORTAGE RIVER AT WOODVILLE, OHIO (Base discharge: 3,500 ft^3/s)							
Mar. 14	1730	--	*10.45	May 6	0330	3510	8.33
Mar. 15	--	5000	--	May 10	2100	*5630	10.28
Apr. 6	0500	5570	10.24	Aug. 5	2100	4680	9.48
04195820 PORTAGE RIVER AT ELMORE, OHIO (Base discharge: 3,800 ft^3/s)							
Jan. 1	1130	4020	8.12	May 6	0800	3980	8.08
Mar. 15	2230	6000e	*11.21b	May 11	0200	6100	10.10
Apr. 6	0330	*6500	10.50	Aug. 6	0130	4850	8.95
Sandusky River Basin							
04196000 SANDUSKY RIVER NEAR BUCYRUS, OHIO (Base discharge: 1,200 ft^3/s)							
Dec. 31	1530	1430	6.46	May 10	0330	2200	8.07
Apr. 4	1830	1280	6.07	July 9	1700	*2290	*8.18
May 8	1500	1450	6.51	Sept. 28	0330	1620	6.94

PEAK DISCHARGES EQUAL TO OR GREATER THAN BASE DISCHARGES
WATER YEAR OCTOER 2002 TO SEPTEMBER 2003—Continued

[FT^3/S, cubic feet per second; *, maximum peak discharge and gage height; --, no data;, e, estimated; b, ice jam]

DATE	TIME	DISCHARGE (FT^3/S)	GAGE HEIGHT (FEET)	DATE	TIME	DISCHARGE (FT^3/S)	GAGE HEIGHT (FEET)
Sandusky River Basin—Continued							
04196500 SANDUSKY RIVER NEAR UPPER SANDUSKY, OHIO (Base discharge: 2,500 ft^3/s)							
Jan. 1	1045	3130	6.47	May 10	1015	*4690	*8.59
Mar. 9	2245	2690	6.23	July 10	1045	4560	8.46
Apr. 6	0015	2680	6.22				
04196800 TYMOCHTEE CREEK AT CRAWFORD, OHIO (Base discharge: 1,800 ft^3/s)							
Jan. 2	1115	2140	6.43	May 11	0830	*3790	7.85
Mar. 15	1645	2900	7.14	July 9	2000	2300	6.59
Apr. 7	0315	2000	6.28				
04197100 HONEY CREEK AT MELMORE, OHIO (Base discharge: 1,500 ft^3/s)							
July 11	0000	*2540	*8.74				
04198000 SANDUSKY RIVER NEAR FREMONT, OHIO (Base discharge: 10,000 ft^3/s)							
Feb. 23	1500	1200e	*10.94b	Mar. 9	0000	3500e	8.46b
Feb. 27	0530	990e	6.53b	May 10	1330	12200	6.77
Mar. 6	1230	1400e	10.87b	July 11	1900	*12500	6.87
Huron River Basin							
04199000 HURON RIVER AT MILAN, OHIO (Base discharge: 4,700 ft^3/s)							
Dec. 31	0830	*5920	16.35	Mar. 9	0345	--	17.29b
Feb. 23	0315	--	17.13b	Apr. 5	0930	5720	16.12
Mar. 5	2115	--	16.86b				
Old Woman Creek Basin							
04199155 OLD WOMAN CREEK AT BERLIN ROAD NEAR HURON,OHIO (Base discharge: 400 ft^3/s)							
Nov. 22	1430	484	7.68	Apr. 5	0645	817	9.28
Dec. 31	0230	684	8.74	June 14	0615	825	9.31
Mar. 5	1445	509	7.83	July 10	1845	562	8.13
Mar. 9	0000	*893	*9.56				
Black River Basin							
04199500 VERMILION RIVER NEAR VERMILION, OHIO (Base discharge: 3,200 ft^3/s)							
Dec. 31	1915	4150	6.21	Apr. 5	1500	*4510	6.20
Mar. 15	2100	--	*11.54b	May 10	0900	4370	6.13
04200500 BLACK RIVER AT ELYRIA, OHIO (Base discharge: 3,200 ft^3/s)							
Jan. 1	0000	4440	9.72	July 29	0930	3670	8.81
Apr. 5	1230	*5110	*10.45	Sept. 28	0900	3680	8.83
May 10	0700	4770	10.09				
Rocky River Basin							
04201500 ROCKY RIVER NEAR BEREA, OHIO (Base discharge: 4,000 ft^3/s)							
Apr. 5	0730	5630	5.25	July 22	1400	*6230	*5.62
May 10	1100	4920	5.05	Sept. 27	1630	5030	5.10
May 31	2300	4980	5.08				

PEAK DISCHARGES EQUAL TO OR GREATER THAN BASE DISCHARGES
WATER YEAR OCTOER 2002 TO SEPTEMBER 2003—Continued

[FT^3/S, cubic feet per second; *, maximum peak discharge and gage height; --, no data;, e, estimated; b, ice jam]

DATE	TIME	DISCHARGE (FT^3/S)	GAGE HEIGHT (FEET)	DATE	TIME	DISCHARGE (FT^3/S)	GAGE HEIGHT (FEET)
			Cuyahoga River Basin				
			04206014 POWERS BROOK AT HUDSON, OHIO (Base discharge: 30 ft^3/s)				
July 8	0605	93	12.81	July 27	1825	45	11.92
July 21	2350	*198	*14.21				
			04206021 POWERS BROOK AT STOW, OHIO (Base discharge: 70 ft^3/s)				
Feb. 22	2335	107	11.17	June 13	0025	108	11.18
Mar. 9	0225	84	11.01	July 22	--	*646e	*13.21e
May 20	2305	95	11.09	Sept. 19	1035	113	11.21
May 31	1340	130	11.32	Sept. 27	1020	127	11.30
			04206029 MUD BROOK AT STOW, OHIO (Base discharge: 140 ft^3/s)				
Apr. 5	2210	163	13.07	July 22	1615	*819	*18.07
May 11	0150	182	13.30	July 28	1605	203	13.60
May 16	1335	191	13.41	Sept. 28	0355	155	12.97
July 9	0505	391	15.32				
			04206038 CRYSTAL CREEK AT STOW, OHIO (Base discharge: 90 ft^3/s)				
Apr. 5	0355	98	13.08	July 27	2040	133	13.55
May 15	2225	175	14.08	Sept. 19	1000	98	13.08
July 8	1055	215	14.52	Sept. 27	1105	107	13.21
July 22	0040	*629	*17.54				
			04206043 MUD BROOK AT CUYAHOGA FALLS, OHIO (Base discharge: 220 ft^3/s)				
May 15	2100	336	11.66	July 27	1920	298	11.56
July 8	0725	391	11.79	Aug. 27	0240	272	11.49
July 21	2100	*1120	*12.93	Sept. 27	1030	238	11.40
			04206212 NORTH FORK AT BATH CENTER, OHIO (Base discharge: 230 ft^3/s)				
May 20	2030	246	11.79	July 8	1920	264	11.87
June 12	1920	468	12.63	July 21	2150	*1810	*15.93
July 3	1215	383	12.34	July 27	1840	300	12.02
July 8	0740	235	11.74				
			04206220 YELLOW CREEK AT BOTZUM, OHIO (Base discharge: 650 ft^3/s)				
Feb. 22	2235	678	13.52	July 21	2130	*2960	*19.53
July 8	0835	656	13.46	July 27	1920	1600	15.94
July 8	2000	949	14.16	Sept. 27	1000	736	13.67
			04207200 TINKERS CREEK AT BEDFORD, OHIO (Base discharge: 1,500 ft^3/s)				
Nov. 10	1900	2070	6.58	June 12	2145	*3570	*7.71
Dec. 31	1500	1570	6.12	July 6	1645	2630	7.02
Feb. 22	2315	1780	6.32	July 10	1345	2220	6.70
Apr. 4	1915	2810	7.16	July 22	2315	2600	7.00
May 10	0315	3520	7.68	Sept. 27	0615	2030	6.54
May 31	1145	2340	6.79				
			Chagrin River Basin				
			04209000 CHAGRIN RIVER AT WILLOUGHBY, OHIO (Base discharge: 4,800 ft^3/s)				
Feb. 23	1800	--	*11.57b	Sept. 27	0830	*5660	8.37

PEAK DISCHARGES EQUAL TO OR GREATER THAN BASE DISCHARGES
WATER YEAR OCTOER 2002 TO SEPTEMBER 2003—Continued

[FT^3/S, cubic feet per second; *, maximum peak discharge and gage height; --, no data;, e, estimated; b, ice jam]

DATE	TIME	DISCHARGE (FT^3/S)	GAGE HEIGHT (FEET)	DATE	TIME	DISCHARGE (FT^3/S)	GAGE HEIGHT (FEET)
			Grand River Basin				
			04212100 GRAND RIVER NEAR PAINESVILLE, OHIO (Base discharge: 6,500 ft^3/s)				
Feb. 25	0030	--	*9.92b	June 14	0800	*10000	9.12
Mar. 17	1530	8590	8.41	July 23	0130	7290	7.72
Apr. 6	0600	7560	7.87	Sept. 29	1130	6550	7.30
			Conneaut Creek Basin				
			04213000 CONNEAUT CREEK AT CONNEAUT, OHIO (Base discharge: 2,900 ft^3/s)				
Mar. 17	1600	--	*11.79b	June 14	0530	*7060	8.71

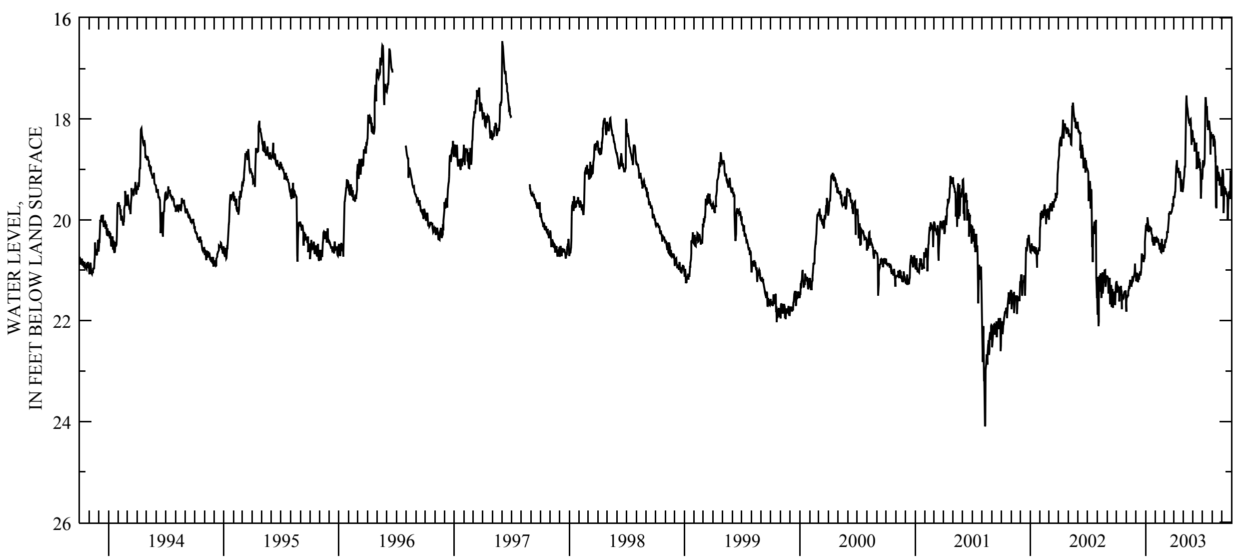
404838082563100. LOCAL NUMBER, CR-1

LOCATION.—Latitude 40°48′38″, longitude 82°56′31″, Hydrologic Unit 04100011, Timken Roller Bearing Company, U.S. 30 in Bucyrus. Owner: Timken Roller Bearing Company.
AQUIFER.—Sand and gravel of Pleistocene Age.
WELL CHARACTERISTICS.—Drilled test water-table well, diameter 6 in., depth 54 ft, cased.
INSTRUMENTATION.—Digital recorder, 60-minute punch.
DATUM.—Elevation of land-surface datum is 1039.13 ft above sea level. Measuring point: Floor of instrument shelter 3.50 ft above land-surface datum.
REMARKS.—Station operated by Ohio Department of Natural Resources (ODNR), Division of Water. Some historical records not published by the USGS are available from ODNR.
PERIOD OF RECORD.—January 1960 to current year.
EXTREMES FOR PERIOD OF RECORD.—Maximum daily low, 37.64 ft below land-surface datum, Dec. 11, 1962; minimum daily low, 16.04 ft below land-surface datum, Apr. 29, 1993.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.23	21.82	21.07	20.25	20.40	20.53	19.53	19.36	18.42	19.14	18.37	19.27
2	21.23	21.65	21.13	20.15	20.39	20.52	19.57	19.26	18.45	18.91	18.36	19.12
3	21.45	21.54	21.22	20.11	20.34	20.56	19.57	19.17	18.41	18.82	18.36	19.00
4	21.32	21.53	21.16	20.14	20.39	20.43	19.53	19.14	18.38	18.92	18.31	19.05
5	21.37	21.53	21.05	20.07	20.45	20.39	19.46	18.99	18.47	18.93	18.55	19.11
6	21.33	21.49	21.11	20.22	20.41	20.45	19.44	18.93	18.65	18.91	18.34	19.87
7	21.34	21.52	21.07	20.18	20.37	20.41	19.22	18.96	18.52	18.89	18.38	19.71
8	21.36	21.41	21.24	19.95	20.38	20.39	19.07	18.57	18.53	18.76	18.42	19.34
9	21.33	21.40	21.22	20.00	20.39	20.36	18.94	18.28	18.51	18.20	18.46	19.36
10	21.62	21.31	21.13	20.13	20.39	20.34	18.90	17.71	18.52	17.73	18.51	19.38
11	21.49	21.37	21.11	20.19	20.40	20.24	18.82	17.54	18.48	17.57	18.86	19.40
12	21.40	21.35	21.19	20.24	20.47	20.23	18.98	17.70	18.47	17.65	18.73	19.37
13	21.50	21.26	21.09	20.12	20.50	20.26	19.05	17.76	19.00	17.80	19.74	19.50
14	21.48	21.19	21.07	20.13	20.50	20.21	19.04	17.79	18.81	17.77	19.77	19.43
15	21.31	21.25	21.02	20.22	20.59	20.06	18.97	17.85	18.71	17.75	19.12	19.46
16	21.36	21.23	21.11	20.19	20.57	19.97	18.99	17.93	18.72	17.91	18.93	19.49
17	21.41	21.23	21.08	20.21	20.46	19.88	19.06	17.97	18.71	18.16	18.96	19.54
18	21.77	21.33	21.02	20.16	20.58	19.87	19.14	18.03	18.65	18.03	19.01	19.51
19	21.60	21.26	20.95	20.17	20.64	19.86	19.17	18.06	18.97	18.22	19.23	20.00
20	21.50	21.25	20.69	20.23	20.65	19.83	19.12	18.08	18.87	18.12	19.08	19.81
21	21.51	21.12	20.69	20.29	20.52	19.88	19.04	18.08	18.79	18.04	19.05	19.62
22	21.54	21.21	20.73	20.31	20.38	19.88	19.17	18.14	18.89	18.06	19.08	19.50
23	21.56	21.20	20.72	20.39	20.56	19.88	19.33	18.01	18.86	18.13	19.14	19.44
24	21.54	21.14	20.70	20.44	20.60	19.85	19.44	18.00	19.02	18.21	19.17	19.46
25	21.48	21.14	20.76	20.34	20.64	19.84	19.20	18.10	18.99	18.27	19.32	19.43
26	21.42	21.12	20.84	20.47	20.49	19.83	19.31	18.17	19.58	18.71	19.20	19.59
27	21.45	21.08	20.80	20.51	20.63	19.76	19.37	18.52	19.44	18.41	19.16	19.35
28	21.42	21.03	20.70	20.34	20.56	19.67	19.40	18.31	19.09	18.26	19.19	19.02
29	21.41	20.87	20.78	20.50	---	19.73	19.45	18.23	19.11	18.30	19.18	19.07
30	21.40	21.03	20.68	20.50	---	19.72	19.39	18.24	19.20	18.34	19.53	19.07
31	21.42	---	20.44	20.41	---	19.60	---	18.37	---	18.35	19.43	---
MAX	21.77	21.82	21.24	20.51	20.65	20.56	19.57	19.36	19.58	19.14	19.77	20.00

CAL YR 2002 LOW 22.11
WTR YR 2003 LOW 21.82



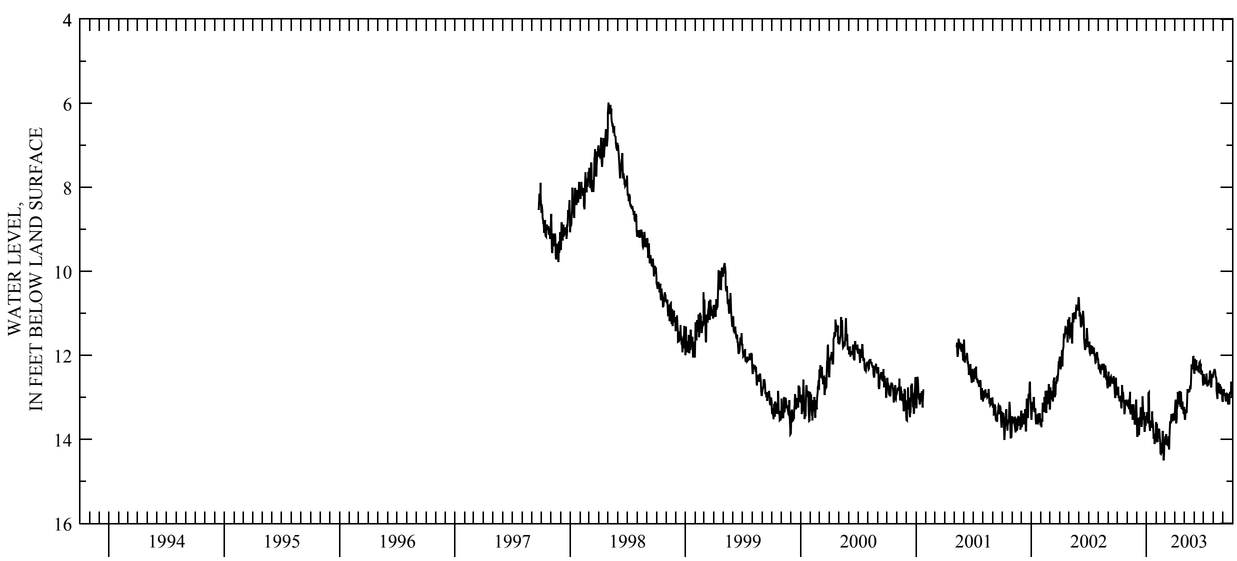
412518081221500. LOCAL NUMBER, GE-3A

LOCATION.—Latitude 41°25′18″, longitude 81°22′15″, Hydrologic Unit 04110003, 1.2 miles southeast of Chagrin Falls, Ohio. Owner: City of Chagrin Falls.
AQUIFER.—Sandstone of Pennsylvanian Age.
WELL CHARACTERISTICS.—Drilled unused artesian well, diameter 6 in., depth drilled 120 ft, present depth 89 ft, cased.
INSTRUMENTATION.—Digital recorder, 60-minute punch.
DATUM.—Elevation of land-surface datum is 1,130 ft above sea level (from topographic map). Measuring point: Floor of instrument shelter, 3.00 ft above land-surface datum.
REMARKS.—Station operated by Ohio Department of Natural Resources (ODNR), Division of Water. Some historical records not published by the USGS are available from ODNR. Water level affected by pumping wells nearby.
PERIOD OF RECORD.—October 1951 to September 1991 continuous. Discontinued October 1991 to March 1996. Periodic measurements April 1996 to September 1997. Continuous September 1997 to current year.
EXTREMES FOR PERIOD OF RECORD.—Maximum daily low, 52.85 ft below land-surface datum, Oct. 18, 1965; minimum daily low, 5.99 ft below land-surface datum, May 2, 1998.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.81	13.13	13.34	13.47	13.59	14.08	13.35	13.23	12.39	12.69	12.44	12.99
2	12.80	13.13	13.49	13.43	13.65	13.93	13.17	13.40	12.44	12.54	12.39	12.89
3	12.77	13.20	13.92	13.35	13.66	14.14	13.14	13.51	12.33	12.45	12.41	12.85
4	12.75	13.23	13.92	13.47	13.63	13.93	13.05	13.53	12.09	12.51	12.35	12.80
5	12.99	13.23	13.65	13.44	14.03	13.88	13.41	13.35	12.24	12.65	12.32	12.93
6	12.99	13.05	13.55	13.60	14.07	14.11	13.62	13.28	12.35	12.65	12.35	12.96
7	13.00	13.28	13.50	13.60	13.89	14.12	13.49	13.34	12.20	12.63	12.39	12.90
8	13.10	13.11	13.89	12.89	13.91	14.04	13.26	13.37	12.12	12.69	12.48	12.93
9	12.99	13.00	13.90	12.87	13.88	14.04	13.25	13.35	12.32	12.63	12.51	13.02
10	13.05	12.87	13.67	13.32	13.75	14.15	13.15	13.11	12.36	12.60	12.54	13.08
11	13.00	13.34	13.47	13.60	13.76	14.09	12.87	12.89	12.27	12.44	12.59	13.10
12	12.96	13.41	13.59	13.80	13.84	13.93	12.93	12.80	12.27	12.63	12.81	12.99
13	13.22	13.38	13.55	13.58	13.96	14.18	13.15	12.87	12.27	12.72	12.98	12.98
14	13.26	13.32	13.26	13.56	14.05	14.24	13.15	12.87	12.35	12.74	13.04	12.92
15	12.99	13.34	13.26	13.71	14.34	13.95	12.99	12.80	12.38	12.63	12.96	12.93
16	12.71	13.34	13.59	13.71	14.35	13.80	12.85	12.84	12.39	12.67	12.67	13.05
17	12.89	13.17	13.70	13.58	14.11	13.59	12.89	12.87	12.35	12.71	12.67	13.17
18	12.96	13.53	13.62	13.58	14.09	13.58	13.15	12.81	12.17	12.62	12.80	13.14
19	12.87	13.47	13.40	13.34	14.19	13.62	13.22	12.80	12.15	12.63	12.85	12.93
20	13.00	13.46	12.98	13.45	14.33	13.58	13.13	12.72	12.27	12.62	12.83	13.14
21	13.11	13.26	13.19	13.61	14.16	13.40	12.87	12.81	12.23	12.41	12.74	13.17
22	13.14	13.17	13.37	13.68	13.80	13.51	13.07	12.69	12.23	12.36	12.69	12.99
23	13.38	13.34	13.50	13.74	14.08	13.55	13.26	12.51	12.29	12.47	12.84	12.87
24	13.38	13.43	13.53	13.99	14.25	13.55	13.26	12.24	12.44	12.65	12.93	12.92
25	13.29	13.62	13.35	13.89	14.50	13.41	13.10	12.24	12.45	12.77	12.75	12.89
26	13.07	13.65	13.80	13.90	14.38	13.47	13.14	12.30	12.36	12.74	12.74	12.89
27	13.17	13.59	13.80	14.11	14.12	13.51	13.31	12.33	12.41	12.54	12.81	12.63
28	13.17	13.58	13.64	13.86	14.07	13.38	13.26	12.23	12.48	12.45	12.93	12.71
29	13.17	13.26	13.68	13.99	---	13.53	13.37	12.02	12.57	12.48	12.81	12.99
30	13.05	13.05	13.65	14.01	---	13.55	13.40	12.03	12.72	12.54	13.07	13.02
31	13.14	---	13.47	13.91	---	13.46	---	12.15	---	12.50	13.11	---
MAX	13.38	13.65	13.92	14.11	14.50	14.24	13.62	13.53	12.72	12.77	13.11	13.17

CAL YR 2002 LOW 13.92
WTR YR 2003 LOW 14.50



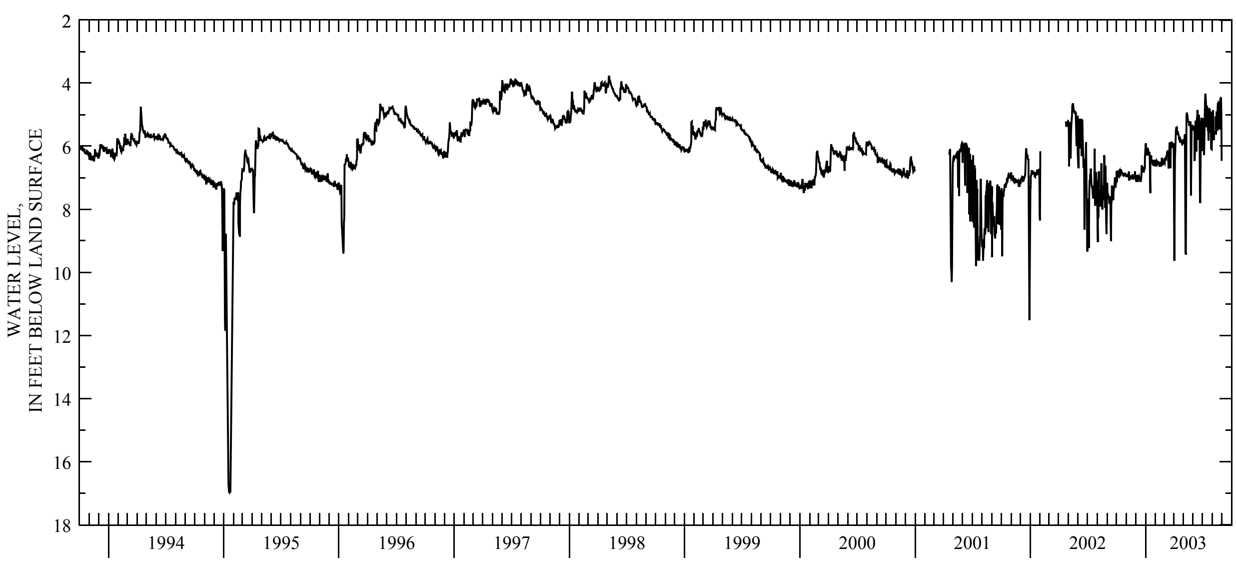
405940083275500. LOCAL NUMBER, HA-3

LOCATION.—Latitude 40°59′40″, longitude 83°27′55″, Hydrologic Unit 0410008, 2 miles north of Vanlue, Ohio. Owner: City of Findlay.
AQUIFER.—Limestone of Silurian Age.
WELL CHARACTERISTICS.—Drilled artesian well, diameter 10 in., diameter 6 in. below 55 ft., depth 240 ft, cased to 55 ft.
INSTRUMENTATION.—Type F continuous recorder.
DATUM.—Elevation of land-surface datum is 815 ft above sea level (from topographic map). Measuring point: Floor of instrument shelter 1.40 ft above land-surface datum.
REMARKS.—Station operated by Ohio Department of Natural Resources (ODNR), Division of Water. Some historical records not published by the USGS are available from ODNR.
PERIOD OF RECORD.—May 1947 to September 1972 and August 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.—Maximum daily low, 20.67 ft below land-surface datum, Sept. 22, 1988; minimum daily low, 3.76 ft below land-surface datum, May 7, 1998.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.16	6.94	6.99	6.01	6.48	6.46	5.90	5.85	5.47	5.27	5.85	---
2	6.79	6.93	7.03	5.91	6.48	6.52	8.23	5.89	5.46	5.11	4.94	---
3	7.12	6.94	7.12	6.02	6.46	6.55	9.63	5.91	5.40	5.15	4.89	---
4	6.77	6.92	7.09	6.06	6.59	6.39	7.81	5.90	5.39	5.16	4.86	---
5	6.85	6.92	6.92	6.10	6.63	6.35	6.38	5.78	5.43	5.78	5.56	---
6	6.99	6.95	6.95	6.26	6.61	6.42	6.11	5.62	6.46	6.28	5.80	---
7	6.84	6.97	6.91	6.26	6.50	6.42	5.77	7.69	6.36	5.40	5.52	---
8	6.83	6.88	7.10	6.08	6.51	6.37	5.50	9.30	5.59	5.04	---	---
9	6.78	6.86	7.10	6.08	6.50	6.28	5.41	9.44	5.22	4.58	---	---
10	6.78	6.80	6.96	6.14	6.49	6.28	5.40	6.50	5.21	4.33	---	---
11	6.76	7.05	6.94	6.21	6.50	6.21	5.40	5.06	6.17	4.47	---	---
12	6.92	7.05	7.03	6.25	6.55	6.13	5.55	4.93	5.37	4.61	5.05	---
13	6.90	6.98	6.99	6.18	6.58	6.19	5.61	4.99	5.21	5.40	5.63	---
14	6.90	6.92	7.01	6.20	6.58	6.19	5.61	5.03	4.98	4.75	5.40	---
15	6.73	6.98	6.98	6.29	6.65	6.71	5.59	5.11	4.85	4.72	4.90	---
16	6.76	6.98	7.10	7.49	6.62	6.53	5.65	5.17	4.89	4.82	5.09	---
17	6.81	6.95	7.10	6.36	6.49	6.59	5.67	5.21	5.73	4.84	5.50	---
18	6.83	7.04	7.04	6.33	6.55	5.93	5.76	5.24	5.79	5.52	4.90	---
19	6.85	6.98	6.95	6.29	6.62	5.90	5.79	5.27	5.02	5.43	4.66	---
20	6.87	6.98	6.60	6.40	6.62	5.87	5.75	5.32	5.00	5.82	4.60	---
21	6.89	6.89	6.63	6.46	6.51	6.70	5.74	5.34	5.48	4.88	5.31	---
22	6.91	7.01	6.68	6.46	6.36	6.45	5.83	5.27	5.68	5.43	4.64	---
23	6.94	7.02	6.68	6.51	6.49	5.98	5.88	5.25	7.46	4.83	4.67	---
24	6.93	7.00	6.68	6.58	6.57	5.87	5.85	5.25	7.81	4.84	5.47	---
25	6.87	7.02	6.72	6.47	6.61	5.86	5.78	6.95	6.68	5.57	4.73	---
26	6.87	7.02	6.83	6.59	6.48	5.89	5.87	7.56	5.36	5.26	4.63	---
27	6.89	6.97	6.79	6.62	6.39	5.90	5.90	5.52	5.14	4.91	4.48	---
28	6.88	6.92	6.68	6.43	6.46	5.89	5.87	5.41	5.09	5.65	4.46	---
29	6.87	6.80	6.74	6.61	---	6.02	5.91	5.36	5.13	6.08	4.47	---
30	6.90	6.94	6.65	6.61	---	6.02	5.88	5.36	6.15	6.10	4.95	---
31	6.94	---	6.39	6.50	---	5.96	---	5.46	---	4.96	6.46	---
MAX	7.16	7.05	7.12	7.49	6.65	6.71	9.63	9.44	7.81	6.28	6.46	---

CAL YR 2002 LOW 9.34
WTR YR 2003 LOW 9.63



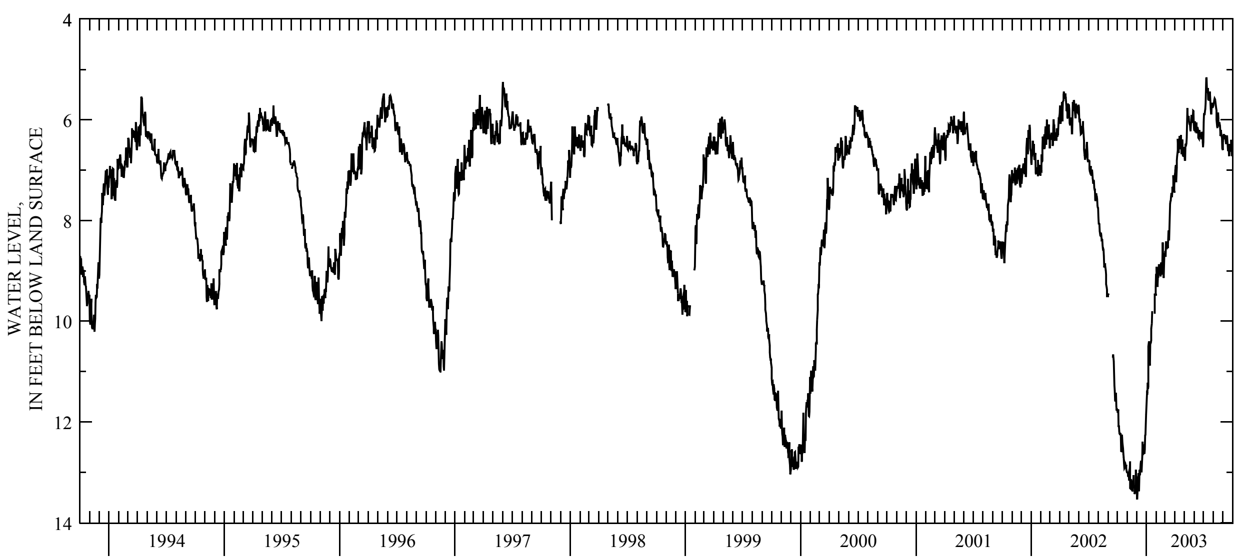
404648083412600. LOCAL NUMBER, HN-2A

LOCATION.—Latitude 40°46′48″, longitude 83°41′26″, Hydrologic Unit 04100007, at southeast edge of Dola, Ohio. Owner: Kevin Eikenbary.
AQUIFER.—Limestone of Silurian Age.
WELL CHARACTERISTICS.—Drilled unused artesian well, diameter 6 in., depth 51 ft, cased.
INSTRUMENTATION.—Electronic data logger, 60-minute log interval. Satellite telemeter at site.
DATUM.—Elevation of land-surface datum is 945 ft above sea level (from topographic map). Measuring point: Floor of instrument shelter 2.88 ft above land-surface datum.
REMARKS.—Station operated by Ohio Department of Natural Resources (ODNR), Division of Water. Some historical records not published by the USGS are available from ODNR.
PERIOD OF RECORD.—December 1954 to current year.
EXTREMES FOR PERIOD OF RECORD.—Maximum daily low, 15.86 ft below land-surface datum, Jan. 20, 21, 1965; minimum daily low, 5.16 ft below land-surface datum, July 10, 2003.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.76	13.01	13.22	11.75	9.07	8.68	7.08	6.54	6.18	6.44	5.72	6.43
2	11.80	12.99	13.31	11.61	9.06	8.61	7.04	6.72	6.22	6.05	5.68	6.36
3	11.80	13.02	13.54	11.41	8.92	8.72	7.01	6.80	6.10	5.87	5.66	6.28
4	11.75	13.08	13.43	11.42	9.12	8.44	6.90	6.80	6.03	5.89	5.61	6.30
5	12.10	13.06	13.08	11.22	9.32	8.42	7.16	6.49	6.19	5.89	5.58	6.37
6	12.07	13.09	13.15	11.34	9.27	8.57	7.24	6.49	6.25	5.83	5.59	6.37
7	12.17	13.16	13.02	11.29	9.11	8.54	6.95	6.50	6.09	5.78	5.61	6.30
8	12.24	12.97	13.37	10.50	9.13	8.48	6.81	6.47	6.06	5.68	5.66	6.33
9	12.21	12.92	13.34	10.40	9.04	8.48	6.72	6.36	6.25	5.35	5.72	6.38
10	12.26	12.78	13.07	10.66	8.87	8.55	6.61	6.09	6.25	5.16	5.77	6.43
11	12.22	13.32	12.95	10.81	8.89	8.37	6.38	5.77	6.18	5.17	5.81	6.48
12	12.26	13.33	13.06	10.88	8.94	8.20	6.53	5.96	6.14	5.37	5.99	6.34
13	12.59	13.26	12.93	10.47	8.99	8.38	6.66	6.01	6.19	5.44	6.13	6.37
14	12.58	13.13	12.83	10.44	8.98	8.38	6.62	5.96	6.30	5.45	6.16	6.31
15	12.25	13.22	12.77	10.42	9.11	8.06	6.42	5.92	6.36	5.37	6.08	6.43
16	12.29	13.22	12.99	10.38	9.08	7.89	6.32	6.03	6.38	5.59	5.86	6.53
17	12.41	13.21	12.98	10.14	8.84	7.67	6.35	6.07	6.31	5.61	5.97	6.62
18	12.47	13.38	12.85	10.04	8.91	7.62	6.54	6.09	6.20	5.57	6.07	6.56
19	12.52	13.27	12.69	9.80	9.02	7.61	6.58	6.10	6.27	5.62	6.13	6.54
20	12.63	13.27	12.39	---	9.07	7.52	6.44	6.18	6.34	5.59	6.11	6.70
21	12.70	13.06	12.52	---	8.84	7.46	6.30	6.23	6.30	5.44	6.05	6.72
22	12.82	13.26	12.60	---	8.44	7.52	6.55	6.11	6.27	5.52	6.12	6.48
23	12.91	13.27	12.61	---	8.81	7.52	6.68	5.99	6.29	5.63	6.25	6.57
24	12.90	13.31	12.58	---	9.04	7.43	6.64	5.90	6.37	5.78	6.32	6.63
25	12.81	13.43	12.45	---	9.14	7.33	6.39	5.93	6.37	5.88	6.20	6.61
26	12.82	13.41	12.63	---	8.93	7.37	6.59	6.01	6.24	5.88	6.23	6.57
27	12.91	13.38	12.54	9.85	8.68	7.33	6.72	6.06	6.33	5.69	6.28	6.40
28	12.88	13.29	12.27	9.45	8.69	7.10	6.64	5.93	6.34	5.66	6.35	6.50
29	12.85	12.95	12.25	9.47	---	7.43	6.73	5.82	6.45	5.72	6.33	6.70
30	12.93	13.12	12.04	9.47	---	7.43	6.65	5.83	6.54	5.76	6.57	6.72
31	12.99	---	11.85	9.32	---	7.29	---	6.08	---	5.72	6.60	---
MAX	12.99	13.43	13.54	11.75	9.32	8.72	7.24	6.80	6.54	6.44	6.60	6.72

CAL YR 2002 LOW 13.54
WTR YR 2003 LOW 13.54



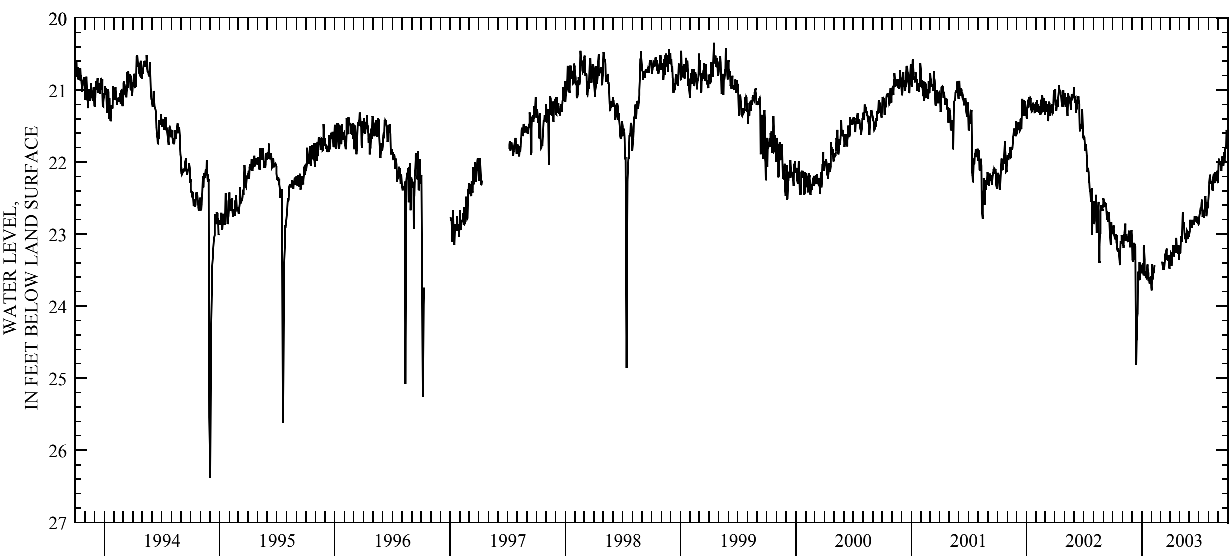
412123083574000. LOCAL NUMBER, HY-2

LOCATION.—Latitude 41°21′23″, longitude 83°57′40″, Hydrologic Unit 04100009, 1.4 mi southwest of McClure, Ohio. Owner: State of Ohio.
AQUIFER.—Limestone of Silurian Age.
WELL CHARACTERISTICS.—Drilled unused artesian well, diameter 12 in., depth drilled 300 ft, cased to 43 ft.
INSTRUMENTATION.—Digital recorder, 60-minute punch.
DATUM.—Elevation of land-surface datum is 680 ft above sea level (from topographic map). Measuring point: Floor of instrument shelter 3.00 ft above land-surface datum.
REMARKS.—Station operated by Ohio Department of Natural Resources (ODNR), Division of Water. Some historical records not published by the USGS are available from ODNR.
PERIOD OF RECORD.—June 1971 to current year.
EXTREMES FOR PERIOD OF RECORD.—Maximum daily low, 26.38 ft below land-surface datum, Dec. 3, 1994; minimum daily low, 14.55 ft below land-surface datum, Mar. 22, 1978.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.93	23.02	23.03	23.45	23.74	---	23.35	23.16	23.01	22.85	22.54	22.22
2	22.92	23.02	23.11	23.46	23.78	---	23.30	23.21	22.96	22.78	22.38	22.02
3	22.93	23.12	23.35	23.44	23.49	---	23.29	23.27	22.96	22.75	22.32	21.99
4	22.88	23.16	23.38	23.44	23.42	---	23.26	23.25	22.80	22.72	22.28	21.95
5	22.99	23.19	23.23	23.40	23.58	---	23.27	23.08	22.88	22.70	22.17	22.02
6	23.01	23.00	23.19	23.52	23.59	---	23.44	23.03	22.89	22.67	22.20	22.04
7	23.03	23.09	23.12	23.57	23.52	23.38	23.34	23.07	22.84	22.63	22.22	22.02
8	23.07	22.98	23.31	23.18	23.54	23.39	23.30	23.11	22.80	22.67	22.30	22.03
9	23.02	22.92	23.36	23.15	23.50	23.46	23.27	23.05	22.91	22.63	22.27	22.09
10	23.05	22.85	23.23	23.35	23.47	23.49	23.24	22.84	22.90	22.56	22.30	22.09
11	23.01	23.02	23.13	23.53	23.43	23.45	23.15	22.69	22.85	22.52	22.27	22.12
12	23.00	23.09	23.17	23.58	---	23.39	23.22	22.81	22.81	22.61	22.32	22.02
13	23.11	23.06	23.49	23.51	---	23.49	23.31	22.87	22.81	22.76	22.37	21.98
14	23.14	23.00	24.81	23.52	---	23.49	23.30	22.90	22.84	22.73	22.40	21.92
15	23.01	23.07	24.79	23.60	---	23.37	23.19	22.83	22.86	22.67	22.34	21.94
16	23.20	23.08	24.46	23.61	---	23.33	23.15	22.94	22.85	22.73	22.22	21.97
17	23.24	23.05	24.46	23.52	---	23.28	23.19	23.01	22.86	22.77	22.16	22.05
18	23.20	23.10	24.16	23.53	---	23.27	23.20	23.03	22.75	22.66	22.24	22.01
19	23.23	23.08	24.10	23.42	---	23.33	23.26	23.02	22.76	22.67	22.25	21.86
20	23.23	23.08	23.62	23.42	---	23.24	23.16	23.02	22.78	22.62	22.29	21.97
21	23.23	22.99	23.52	23.51	---	23.20	23.05	23.11	22.78	22.51	22.17	22.00
22	23.27	22.95	23.54	23.54	---	23.31	23.15	23.11	22.75	22.47	22.14	21.85
23	23.39	23.02	23.58	23.61	---	23.36	23.25	23.06	22.81	22.57	22.22	21.81
24	23.43	23.01	23.60	23.65	---	23.32	23.23	22.95	22.83	22.62	22.26	21.80
25	23.33	23.13	23.39	23.60	---	23.35	23.15	22.96	22.84	22.75	22.19	21.80
26	23.09	23.18	23.63	23.67	---	23.36	23.18	23.01	22.76	22.72	22.19	21.77
27	23.13	23.15	23.63	23.69	---	23.37	23.27	23.07	22.77	22.62	22.17	21.55
28	23.13	23.12	23.56	23.62	---	23.29	23.21	23.01	22.83	22.56	22.22	21.60
29	23.10	22.98	23.53	23.68	---	23.44	23.36	22.96	22.85	22.60	22.12	21.72
30	23.01	22.94	23.52	23.69	---	23.48	23.33	22.98	22.86	22.62	22.27	21.77
31	23.05	---	23.44	23.58	---	23.46	---	23.04	---	22.61	22.29	---
MAX	23.43	23.19	24.81	23.69	23.78	23.49	23.44	23.27	23.01	22.85	22.54	22.22

CAL YR 2002 LOW 24.81
WTR YR 2003 LOW 24.81



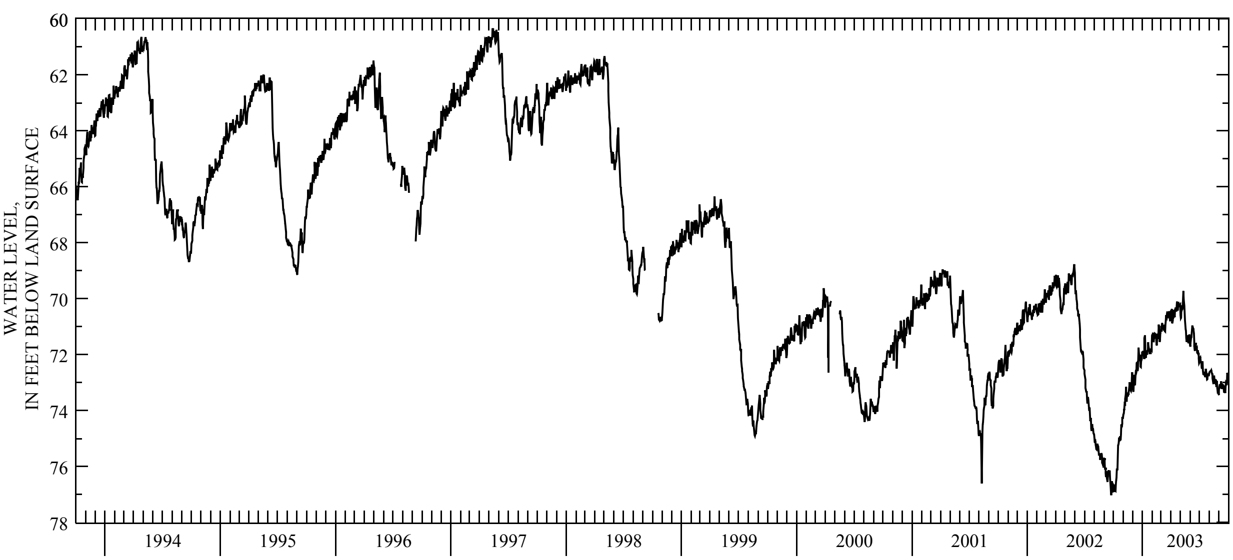
413704083362200. LOCAL NUMBER, LU-1

LOCATION.—Latitude 41°37′04″, longitude 83°36′22″, Hydrologic Unit 04100001, at Toledo State Hospital, Toledo, Ohio. Owner: State of Ohio.
AQUIFER.—Limestone of Silurian Age.
WELL CHARACTERISTICS.—Drilled unused artesian well, diameter 12 in., depth drilled 525 ft, present depth 523 ft, cased to 93 ft.
INSTRUMENTATION.—Type F continuous recorder.
DATUM.—Elevation of land-surface datum is 624 ft above sea level (from topographic map). Measuring point: Floor of instrument shelter 2.98 ft above land-surface datum (revised from 1978 and 1979).
REMARKS.—Station operated by Ohio Department of Natural Resources (ODNR), Division of Water. Some historical records not published by the USGS are available from ODNR. Prior to Aug. 23, 1978, measuring point was 3.10 ft above land-surface datum. Reported in 1979 as 3 ft above land-surface datum.
PERIOD OF RECORD.—June 1950 to July 1982 continuous, November 1982 to January 1985 periodic, continuous thereafter. This well replaced LU-1A, which has continuous record from March 1946 to June 1950.
EXTREMES FOR PERIOD OF RECORD.—Maximum daily low, 117.80 ft below land-surface datum, Nov. 5-7, 1957; minimum daily low, 56.87 ft below land-surface datum, Apr. 16, 1987.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76.66	74.19	72.78	71.97	71.32	71.15	70.50	70.20	71.67	72.28	72.65	73.29
2	76.69	74.17	72.85	71.96	71.33	70.97	70.41	70.58	71.72	72.13	72.62	73.15
3	76.74	74.10	73.28	71.87	71.29	71.18	70.48	70.69	71.60	72.10	72.61	73.07
4	76.64	73.95	73.32	71.93	71.21	70.89	70.37	70.66	71.41	72.09	72.59	73.05
5	76.88	73.99	73.03	71.88	71.54	70.87	70.73	70.24	71.37	72.24	72.58	73.18
6	76.88	73.69	72.84	72.13	71.56	71.06	70.88	70.31	71.38	72.26	72.57	73.18
7	76.86	73.83	72.72	72.13	71.43	71.06	70.78	70.38	71.11	72.25	72.55	73.06
8	76.87	73.58	73.06	71.41	71.42	70.99	70.72	70.36	70.96	72.43	72.60	72.95
9	76.63	73.42	73.10	71.30	71.38	71.01	70.69	70.26	70.97	72.51	72.66	73.11
10	76.50	73.15	72.83	71.70	71.25	71.13	70.64	70.03	71.05	72.28	72.70	73.17
11	76.39	73.55	72.65	71.94	71.26	71.02	70.40	69.72	71.10	72.24	72.67	73.22
12	76.11	73.68	72.68	72.12	71.28	70.93	70.50	70.02	71.06	72.56	72.84	73.14
13	76.11	73.59	72.63	71.89	71.34	71.17	70.66	70.13	71.23	72.67	72.99	73.14
14	76.10	73.46	72.30	71.90	71.41	71.18	70.64	70.26	71.52	72.72	73.05	73.09
15	75.60	73.46	72.29	71.98	71.63	70.90	70.40	70.48	71.70	72.60	72.96	73.10
16	75.24	73.48	72.54	72.01	71.67	70.79	70.32	70.78	71.87	72.67	72.74	73.20
17	75.21	73.35	72.58	71.86	71.43	70.59	70.35	70.94	71.77	72.75	72.87	73.36
18	75.15	73.44	72.50	71.84	71.25	70.67	70.40	71.08	71.61	72.71	72.97	73.31
19	74.96	73.32	72.18	71.56	71.32	70.69	70.46	71.14	71.61	72.80	73.01	73.11
20	75.00	73.26	71.75	71.61	71.44	70.54	70.30	71.41	71.74	72.70	72.94	73.33
21	75.02	73.04	71.92	71.77	71.28	70.46	70.11	71.54	71.77	72.50	72.88	73.37
22	74.92	72.98	72.04	71.81	70.93	70.63	70.30	71.47	71.74	72.58	72.93	73.12
23	75.06	73.08	72.17	71.86	71.09	70.65	70.42	71.39	71.74	72.65	73.16	73.01
24	75.04	73.06	72.23	71.98	71.31	70.62	70.38	71.31	71.93	72.78	73.16	73.03
25	74.86	73.28	72.01	71.89	71.54	70.54	70.12	71.42	71.97	72.90	72.94	73.09
26	74.49	73.31	72.44	71.89	71.46	70.61	70.22	71.54	71.84	72.88	73.00	73.05
27	74.57	73.24	72.45	71.98	71.24	70.62	70.29	71.59	71.94	72.68	73.19	72.66
28	74.55	73.18	72.23	71.79	71.14	70.44	70.18	71.47	71.96	72.70	73.39	72.70
29	74.46	72.84	72.19	71.81	---	70.78	70.30	71.29	72.14	72.73	73.20	72.86
30	74.23	72.63	72.15	71.84	---	70.80	70.21	71.31	72.30	72.77	73.40	72.87
31	74.29	---	71.96	71.67	---	70.72	---	71.54	---	72.73	73.44	---
MAX	76.88	74.19	73.32	72.13	71.67	71.18	70.88	71.59	72.30	72.90	73.44	73.37

CAL YR 2002 LOW 77.00
WTR YR 2003 LOW 76.88



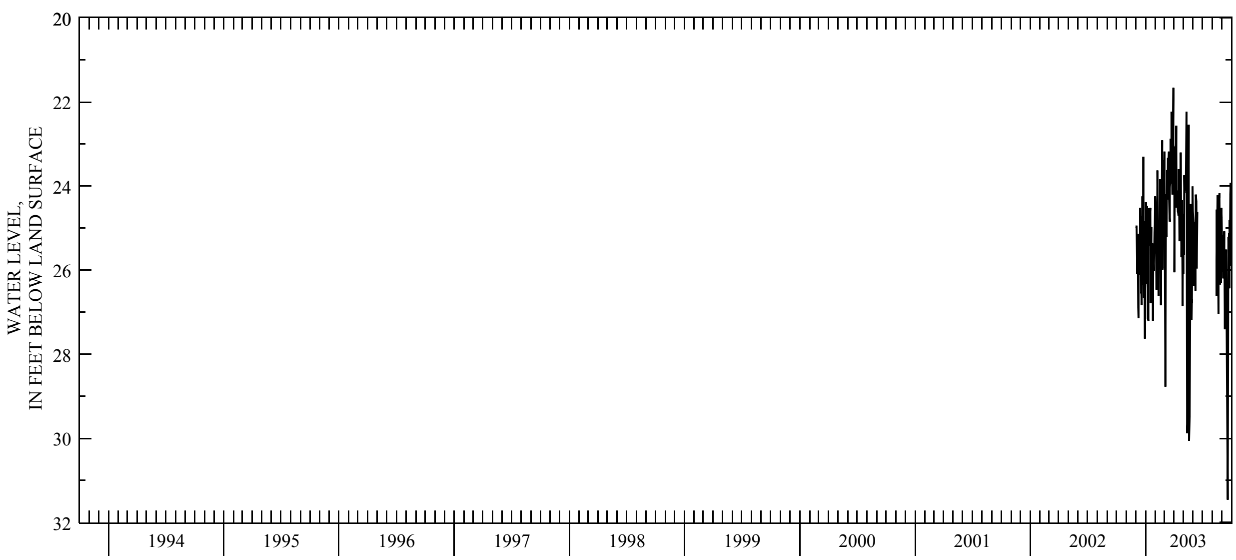
410142082005700. LOCAL NUMBER, MD-1A

LOCATION.—Latitude 41°01′42″, longitude 82°00′57″, Hydrologic Unit 04110001, at Lodi, Ohio. Owner: Village of Lodi.
AQUIFER.—Sand and gravel of Pleistocene Age.
WELL CHARACTERISTICS.—Drilled unused water-table well, diameter 6 in., depth 77 ft, cased to 71 ft.
INSTRUMENTATION.—Digital recorder, 60-minute punch.
DATUM.—Elevation of land-surface datum is 910 ft above sea level (from topographic map). Measuring point: Floor of instrument shelter 3.00 ft above land-surface datum.
REMARKS.—Station operated by Ohio Department of Natural Resources (ODNR), Division of Water. Some historical records not published by the USGS are available from ODNR.
PERIOD OF RECORD.—December 2002 to current year.
EXTREMES FOR PERIOD OF RECORD.—Maximum daily low, 31.46 ft below land-surface datum, Sept. 19, 2003; minimum daily low, 21.66 ft below land-surface datum, Mar. 30, 2003.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	25.97	24.24	23.87	23.12	26.10	24.60	---	---	25.27
2	---	---	---	25.76	24.45	23.18	23.78	24.68	24.86	---	---	25.17
3	---	---	25.00	24.38	25.50	24.80	26.05	25.64	26.37	---	---	26.04
4	---	---	24.94	25.74	25.61	26.34	23.91	23.74	24.86	---	---	25.67
5	---	---	25.32	26.32	26.46	28.77	23.06	24.17	25.43	---	---	26.20
6	---	---	26.10	24.47	25.35	26.38	23.09	23.96	25.66	---	---	25.49
7	---	---	25.66	24.79	25.82	24.62	23.58	23.89	24.94	---	---	25.78
8	---	---	25.77	26.36	23.63	24.20	23.56	24.11	26.48	---	---	25.08
9	---	---	26.88	27.14	24.81	25.21	22.56	23.94	25.32	---	---	26.89
10	---	---	27.14	27.20	25.50	23.90	24.51	23.06	24.20	---	---	27.41
11	---	---	25.14	24.53	26.34	23.62	24.11	22.23	24.37	---	---	26.07
12	---	---	26.11	24.85	26.61	24.32	24.31	22.82	24.59	---	---	26.20
13	---	---	25.46	25.41	24.81	23.33	24.46	29.88	25.96	---	---	25.76
14	---	---	25.70	25.31	24.93	24.09	24.60	29.66	24.62	---	24.56	25.51
15	---	---	24.52	24.74	25.43	23.57	24.63	27.83	---	---	26.61	26.20
16	---	---	25.73	24.52	23.84	23.18	24.70	23.85	---	---	26.10	26.92
17	---	---	24.72	25.79	24.02	24.09	23.60	24.46	---	---	24.22	28.34
18	---	---	26.55	26.78	24.84	24.74	24.52	22.54	---	---	24.76	30.88
19	---	---	26.53	24.98	26.84	24.85	25.31	27.99	---	---	25.43	31.46
20	---	---	26.83	26.68	24.85	24.03	24.40	30.06	---	---	27.03	25.81
21	---	---	26.46	26.78	25.06	23.85	23.77	29.48	---	---	25.09	25.20
22	---	---	24.24	26.46	24.55	22.87	24.94	27.98	---	---	24.21	25.79
23	---	---	26.35	25.36	22.91	23.29	23.20	27.19	---	---	24.27	25.12
24	---	---	24.99	25.45	25.99	23.93	25.17	24.43	---	---	24.17	26.43
25	---	---	23.30	27.20	25.94	22.23	25.69	26.31	---	---	25.08	24.81
26	---	---	25.95	25.72	23.39	23.47	24.94	26.67	---	---	26.34	25.26
27	---	---	26.66	25.81	23.43	24.20	24.34	27.18	---	---	26.05	24.19
28	---	---	25.45	26.02	24.44	22.66	25.65	26.70	---	---	25.99	23.92
29	---	---	24.84	25.63	---	23.36	26.85	26.77	---	---	26.31	25.90
30	---	---	27.63	25.10	---	21.66	24.85	24.01	---	---	24.52	24.94
31	---	---	26.60	24.94	---	23.00	---	24.49	---	---	24.75	---
MAX	---	---	27.63	27.20	26.84	28.77	26.85	30.06	26.48	---	27.03	31.46

WTR YR 2003 LOW 31.46



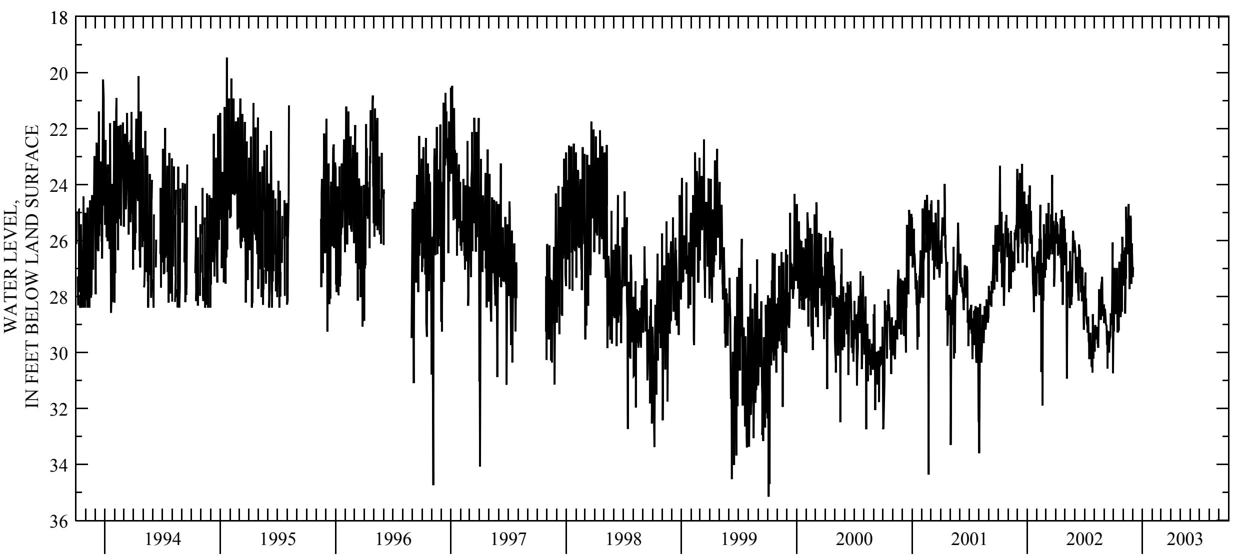
410142082005900. LOCAL NUMBER, MD-1

LOCATION.—Latitude 41°01′42″, longitude 82°00′59″, Hydrologic Unit 04110001, at Lodi, Ohio. Owner: Village of Lodi.
AQUIFER.—Sand and gravel of Pleistocene Age.
WELL CHARACTERISTICS.—Drilled unused water-table well, diameter 6 in., depth 65 ft, cased.
INSTRUMENTATION.—Digital recorder, 60-minute punch.
DATUM.—Elevation of land-surface datum is 910 ft above sea level (from topographic map). Measuring point: Floor of instrument shelter 1.90 ft above land-surface datum.
REMARKS.—Station operated by Ohio Department of Natural Resources (ODNR), Division of Water. Some historical records not published by the USGS are available from ODNR.
PERIOD OF RECORD.—September 1946 to December 2002 (discontinued).
EXTREMES FOR PERIOD OF RECORD.—Maximum daily low, 45.21 ft below land-surface datum, July 8, 1988; minimum daily low, 7.60 ft below land-surface datum, July 6, 1969.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30.02	27.61	27.08	---	---	---	---	---	---	---	---	---
2	28.73	27.27	27.30	---	---	---	---	---	---	---	---	---
3	29.24	26.37	26.95	---	---	---	---	---	---	---	---	---
4	28.00	26.88	---	---	---	---	---	---	---	---	---	---
5	26.97	27.11	---	---	---	---	---	---	---	---	---	---
6	27.28	26.38	---	---	---	---	---	---	---	---	---	---
7	27.70	26.24	---	---	---	---	---	---	---	---	---	---
8	27.69	28.60	---	---	---	---	---	---	---	---	---	---
9	27.43	26.94	---	---	---	---	---	---	---	---	---	---
10	28.62	27.36	---	---	---	---	---	---	---	---	---	---
11	28.02	24.78	---	---	---	---	---	---	---	---	---	---
12	26.98	25.93	---	---	---	---	---	---	---	---	---	---
13	27.76	25.85	---	---	---	---	---	---	---	---	---	---
14	29.28	25.98	---	---	---	---	---	---	---	---	---	---
15	28.56	25.22	---	---	---	---	---	---	---	---	---	---
16	29.28	26.34	---	---	---	---	---	---	---	---	---	---
17	28.25	26.49	---	---	---	---	---	---	---	---	---	---
18	29.21	24.70	---	---	---	---	---	---	---	---	---	---
19	27.02	26.26	---	---	---	---	---	---	---	---	---	---
20	26.75	25.77	---	---	---	---	---	---	---	---	---	---
21	27.35	27.73	---	---	---	---	---	---	---	---	---	---
22	27.94	25.66	---	---	---	---	---	---	---	---	---	---
23	28.56	25.57	---	---	---	---	---	---	---	---	---	---
24	28.73	25.14	---	---	---	---	---	---	---	---	---	---
25	28.55	25.11	---	---	---	---	---	---	---	---	---	---
26	27.05	25.22	---	---	---	---	---	---	---	---	---	---
27	26.48	27.42	---	---	---	---	---	---	---	---	---	---
28	28.54	27.54	---	---	---	---	---	---	---	---	---	---
29	26.23	26.10	---	---	---	---	---	---	---	---	---	---
30	25.86	26.63	---	---	---	---	---	---	---	---	---	---
31	26.53	---	---	---	---	---	---	---	---	---	---	---
MAX	30.02	28.60	27.30	---	---	---	---	---	---	---	---	---

CAL YR 2002 LOW 31.89
WTR YR 2003 LOW 30.02



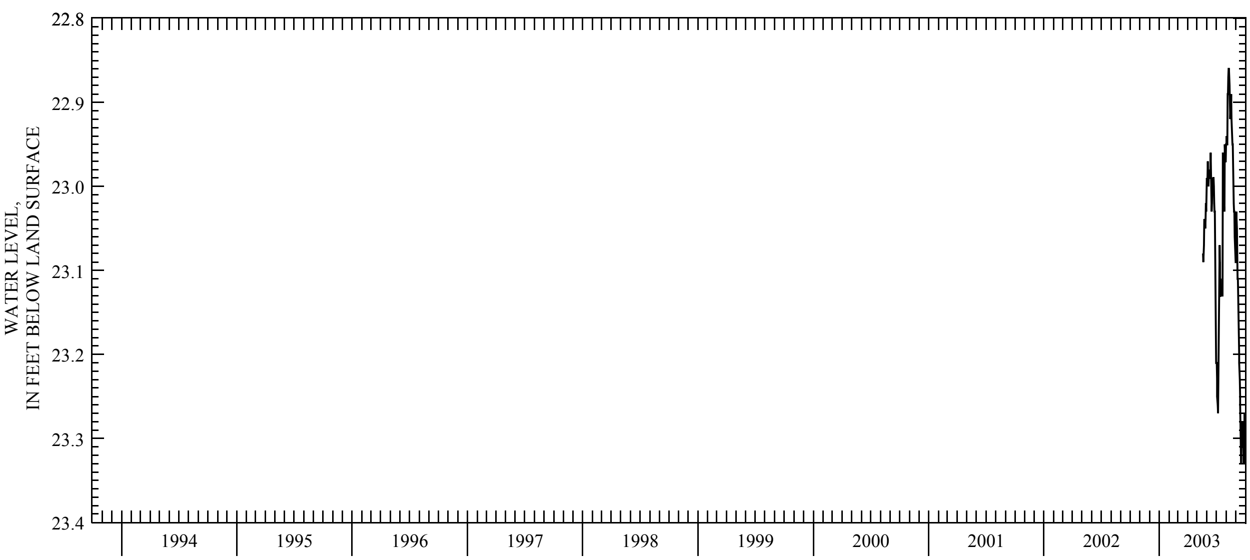
411233081474200. LOCAL NUMBER, MD-6

LOCATION.—Latitude 41°12′33″, longitude 81°47′42″, Hydrologic Unit 04110001, south of Brunswick. Owner: State of Ohio.
AQUIFER.—Sandstone of Mississippian Age.
WELL CHARACTERISTICS.—Drilled unused water-table well, diameter 6 in., depth 170 ft, cased to 70 ft.
INSTRUMENTATION.—Electronic data logger, 60-minute log interval.
DATUM.—Elevation of land-surface datum is 1,090 ft above sea level (from topographic map). Measuring point: Floor of instrument shelter 3.50 ft above land-surface datum.
REMARKS.—Station operated by Ohio Department of Natural Resources (ODNR), Division of Water. Some historical records not published by the USGS are available from ODNR.
PERIOD OF RECORD.—May 2003 to current year.
EXTREMES FOR PERIOD OF RECORD.—Maximum daily low, 23.33 ft below land-surface datum, Sept. 26 and 30, 2003; minimum daily low, 22.86 ft below land-surface datum, Aug. 9 and 10, 2003.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	22.99	23.21	22.95	23.09
2	---	---	---	---	---	---	---	---	23.00	23.21	22.95	23.03
3	---	---	---	---	---	---	---	---	22.99	23.23	22.94	23.04
4	---	---	---	---	---	---	---	---	22.97	23.25	22.95	23.05
5	---	---	---	---	---	---	---	---	22.99	23.26	22.95	23.09
6	---	---	---	---	---	---	---	---	23.00	23.27	22.89	23.11
7	---	---	---	---	---	---	---	---	22.99	23.27	22.89	23.11
8	---	---	---	---	---	---	---	---	22.99	23.19	22.87	23.15
9	---	---	---	---	---	---	---	---	22.98	23.13	22.86	23.15
10	---	---	---	---	---	---	---	---	22.99	23.12	22.86	23.18
11	---	---	---	---	---	---	---	---	22.99	23.07	22.87	23.20
12	---	---	---	---	---	---	---	---	22.98	23.09	22.88	23.21
13	---	---	---	---	---	---	---	---	22.96	23.13	22.90	23.23
14	---	---	---	---	---	---	---	---	22.98	23.13	22.92	23.25
15	---	---	---	---	---	---	---	---	23.01	23.11	22.91	23.26
16	---	---	---	---	---	---	---	---	23.03	23.12	22.91	23.29
17	---	---	---	---	---	---	---	---	23.02	23.13	22.89	23.32
18	---	---	---	---	---	---	---	---	23.00	23.13	22.92	23.33
19	---	---	---	---	---	---	---	---	22.99	23.13	22.93	23.29
20	---	---	---	---	---	---	---	23.08	23.00	23.13	22.94	23.28
21	---	---	---	---	---	---	---	23.09	22.99	23.11	22.95	23.31
22	---	---	---	---	---	---	---	23.08	22.99	22.96	22.95	23.31
23	---	---	---	---	---	---	---	23.07	23.00	22.97	22.97	23.28
24	---	---	---	---	---	---	---	23.04	23.02	22.99	23.00	23.29
25	---	---	---	---	---	---	---	23.04	23.03	23.02	23.02	23.32
26	---	---	---	---	---	---	---	23.04	23.03	23.03	23.03	23.33
27	---	---	---	---	---	---	---	23.05	23.05	23.01	23.03	23.30
28	---	---	---	---	---	---	---	23.04	23.09	22.95	23.06	23.27
29	---	---	---	---	---	---	---	23.02	23.18	22.96	23.07	23.31
30	---	---	---	---	---	---	---	23.03	23.21	22.97	23.08	23.33
31	---	---	---	---	---	---	---	23.01	---	22.97	23.09	---
MAX	---	---	---	---	---	---	---	23.09	23.21	23.27	23.09	23.33

WTR YR 2003 LOW 23.33



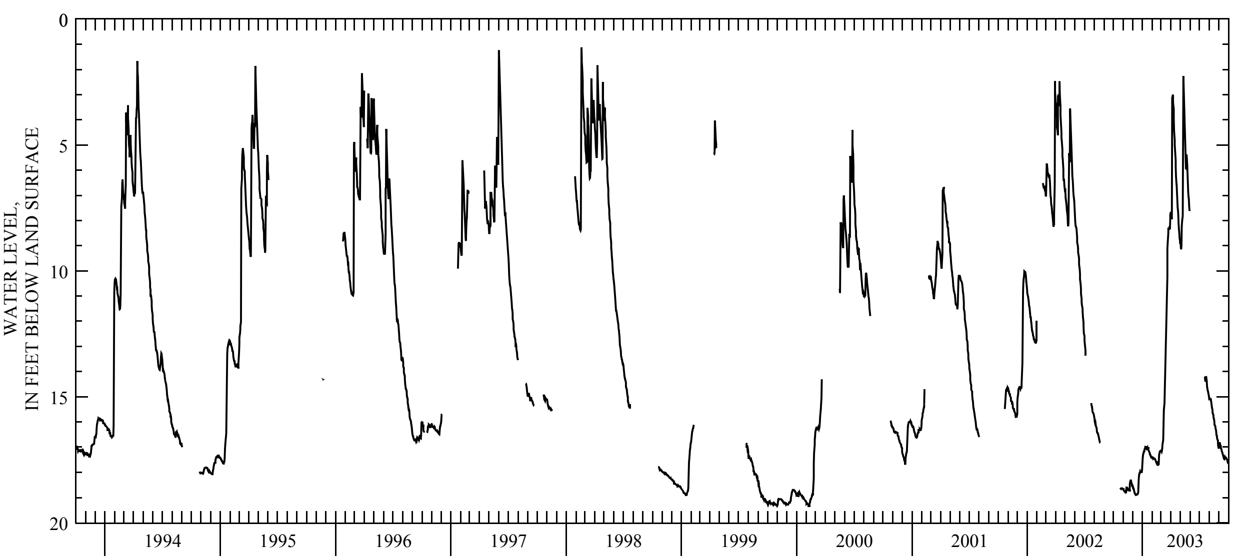
413434082494000. LOCAL NUMBER, O-2

LOCATION.—Latitude 41°34′34″, longitude 82°49′40″, Hydrologic Unit 04100010. Catawba Island near Port Clinton, Ohio. Owner: William Williams.
AQUIFER.—Limestone of Silurian Age.
WELL CHARACTERISTICS.—Drilled water table well, diameter 6 in., depth 62 ft, cased to 26 ft.
INSTRUMENTATION.—Type F continuous recorder.
DATUM.—Elevation of land-surface datum is 591 ft above sea level (from topographic map). Measuring point: Floor of instrument shelter 1.60 ft above land-surface datum.
REMARKS.—Station operated by Ohio Department of Natural Resources (ODNR), Division of Water. Some historical records not published by the USGS are available from ODNR.
PERIOD OF RECORD.—March 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.—Maximum daily low, 19.34 ft below land-surface datum, Oct. 31, 1999, Feb. 9, and 10, 2000; minimum daily low, 1.12 ft below land-surface datum, Feb. 18, 1998.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	18.66	18.57	17.62	17.42	17.14	7.66	8.92	---	---	15.10	17.04
2	---	18.68	18.55	17.41	17.46	17.16	7.85	8.88	---	---	15.10	16.86
3	---	18.73	18.63	17.30	17.45	17.19	7.89	9.04	---	---	15.09	16.80
4	---	18.75	18.64	17.26	17.41	17.13	7.91	9.14	---	---	15.08	16.84
5	---	18.74	18.67	17.19	17.44	17.02	4.13	9.00	---	---	15.08	16.91
6	---	18.74	18.72	17.19	17.45	16.85	3.20	8.22	---	---	15.11	16.95
7	---	18.75	18.78	17.17	17.44	16.79	3.23	8.04	---	---	15.20	17.01
8	---	18.78	18.83	17.12	17.45	16.71	3.00	7.91	---	---	15.29	17.06
9	---	18.80	18.86	17.05	17.45	15.99	3.36	7.83	---	---	15.39	17.10
10	---	18.82	18.89	17.03	17.47	15.51	3.58	5.05	---	---	15.46	17.14
11	---	18.70	18.90	17.02	17.49	15.37	3.95	2.27	---	---	15.52	17.20
12	---	18.63	18.89	17.04	17.53	15.24	4.45	2.73	---	---	15.61	17.23
13	---	18.61	18.88	17.01	17.56	14.82	4.82	3.28	---	---	15.70	17.29
14	---	18.61	18.89	17.00	17.59	14.43	5.00	3.81	---	---	15.73	17.32
15	---	18.65	18.88	17.01	17.63	13.85	5.19	4.34	---	---	15.81	17.36
16	---	18.68	18.88	17.00	17.66	12.95	5.62	4.88	---	---	15.91	17.41
17	---	18.67	18.85	17.06	17.63	12.02	5.86	5.28	---	---	16.00	17.47
18	---	18.68	18.84	17.04	17.69	11.44	6.26	5.66	---	14.19	16.09	17.48
19	---	18.69	18.77	17.04	17.69	11.10	6.46	5.94	---	14.31	16.15	17.45
20	---	18.72	18.41	17.11	17.71	10.79	6.59	5.95	---	14.39	16.18	17.39
21	---	18.72	18.16	17.15	17.70	10.23	6.84	5.38	---	14.33	16.22	17.42
22	18.62	18.67	18.07	17.18	17.67	9.11	7.20	5.55	---	14.17	16.33	17.41
23	18.64	18.42	18.03	17.18	17.33	8.68	7.47	5.78	---	14.28	16.44	17.42
24	18.65	18.34	18.03	17.23	17.23	8.48	7.58	6.18	---	14.37	16.50	17.45
25	18.66	18.32	17.96	17.27	17.20	8.34	7.76	6.56	---	14.60	16.56	17.46
26	18.63	18.29	17.99	17.29	17.16	8.35	8.12	6.86	---	14.66	16.62	17.48
27	18.63	18.38	17.99	17.35	17.15	8.34	8.33	7.04	---	14.76	16.68	17.49
28	18.63	18.43	17.97	17.33	17.16	8.29	8.45	7.12	---	14.79	16.75	17.56
29	18.63	18.46	17.99	17.39	---	8.30	8.68	7.41	---	14.85	16.83	17.61
30	18.63	18.56	17.98	17.40	---	7.97	8.76	7.61	---	14.92	16.97	17.66
31	18.66	---	17.87	17.41	---	7.75	---	7.56	---	14.99	17.06	---
MAX	18.66	18.82	18.90	17.62	17.71	17.19	8.76	9.14	---	14.99	17.06	17.66

CAL YR 2002 LOW 18.90
WTR YR 2003 LOW 18.90



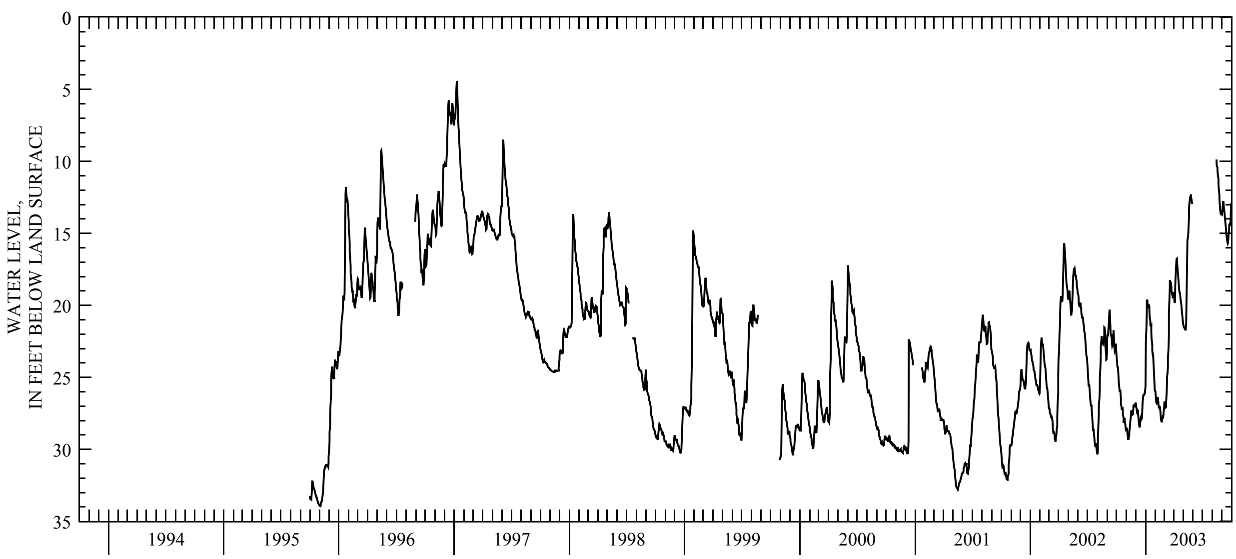
410931081192900. LOCAL NUMBER, PO-123

LOCATION.—Latitude 41°09′31″, longitude 81°19′29″, Hydrologic Unit 04110002, east of Kent, Ohio. Owner: City of Kent.
AQUIFER.—Sand and gravel of Pleistocene Age.
WELL CHARACTERISTICS.—Drilled unused artesian well, diameter 6 in., cased.
INSTRUMENTATION.—Digitial recorder, 60-minute punch.
DATUM.—Elevation of land-surface datum is 1,042 ft above sea level (from topographic map). Measuring point: Floor of instrument shelter 3.5 ft above land-surface datum.
REMARKS.—Station operated by Ohio Department of Natural Resources (ODNR), Division of Water. Some historical records not published by the USGS are available from ODNR.
PERIOD OF RECORD.—September 1995 to current year.
EXTREMES FOR PERIOD OF RECORD.—Maximum daily low, 33.97 ft below land-surface datum, Nov. 3, 1995; minimum daily low, 4.43 ft below land-surface datum, Jan. 9, 1997.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.39	28.74	26.74	25.59	25.97	27.10	19.22	21.36	---	---	---	13.65
2	23.65	28.74	26.85	24.12	25.98	26.74	19.45	21.41	---	---	---	13.46
3	23.96	28.51	27.05	22.57	26.29	26.74	19.66	21.54	---	---	---	13.18
4	24.25	28.67	27.16	21.42	26.64	26.97	19.83	21.56	---	---	---	12.93
5	24.33	28.80	27.33	20.42	26.79	27.12	19.75	21.58	---	---	---	12.77
6	24.33	29.00	27.51	19.60	26.84	27.11	18.55	21.64	---	---	---	12.89
7	24.83	29.13	27.51	19.69	26.82	27.08	18.00	21.63	---	---	---	13.28
8	25.22	29.27	27.25	19.84	26.79	26.81	17.60	21.74	---	---	---	13.38
9	25.51	29.27	27.60	20.08	26.36	26.14	17.07	21.64	---	---	---	13.59
10	25.72	29.00	27.84	20.20	26.56	25.42	16.79	21.30	---	---	---	13.83
11	25.95	28.83	28.08	20.20	26.74	25.03	16.78	18.90	---	---	---	14.07
12	25.95	28.63	28.30	19.93	26.98	24.62	17.19	17.03	---	---	---	14.36
13	25.88	28.45	28.42	20.09	27.12	24.35	17.39	16.20	---	---	---	14.61
14	26.19	28.19	28.43	20.43	27.17	23.69	17.65	15.47	---	---	9.86	14.82
15	26.45	27.89	28.29	20.80	27.19	22.95	17.93	15.32	---	---	10.10	15.07
16	26.81	27.76	27.98	21.09	27.02	22.11	18.26	15.31	---	---	10.37	15.30
17	27.08	27.36	27.84	21.40	27.26	20.65	18.59	14.85	---	---	10.45	15.44
18	27.25	27.29	27.75	21.42	27.55	19.51	18.88	14.32	---	---	10.65	15.62
19	27.24	27.42	27.81	21.37	27.80	18.76	19.07	13.80	---	---	10.93	15.70
20	27.08	27.44	27.85	21.90	28.00	18.25	19.13	13.19	---	---	11.20	15.64
21	27.32	27.50	27.73	22.33	28.08	18.50	19.22	12.77	---	---	11.58	15.35
22	27.59	27.59	27.15	22.70	28.08	18.52	19.47	12.60	---	---	11.93	15.05
23	27.78	27.57	26.67	23.11	27.82	18.38	19.68	12.57	---	---	12.33	14.78
24	28.00	27.05	26.48	23.36	27.78	18.78	19.76	12.40	---	---	12.63	14.38
25	28.09	26.89	26.25	23.37	27.81	19.05	19.97	12.29	---	---	12.93	14.36
26	28.10	26.96	26.25	23.58	27.76	19.09	20.25	12.46	---	---	13.28	14.36
27	27.83	27.03	26.30	24.02	27.57	19.27	20.47	12.66	---	---	13.51	14.39
28	28.07	27.03	26.26	24.46	27.29	19.31	20.71	12.88	---	---	13.60	13.99
29	28.27	26.95	26.09	24.92	---	19.43	20.96	12.97	---	---	13.69	13.28
30	28.38	26.86	26.16	25.46	---	19.39	21.17	---	---	---	13.69	12.87
31	28.55	---	26.13	25.93	---	19.08	---	---	---	---	13.62	---
MAX	28.55	29.27	28.43	25.93	28.08	27.12	21.17	21.74	---	---	13.69	15.70

CAL YR 2002 LOW 30.29
WTR YR 2003 LOW 29.27



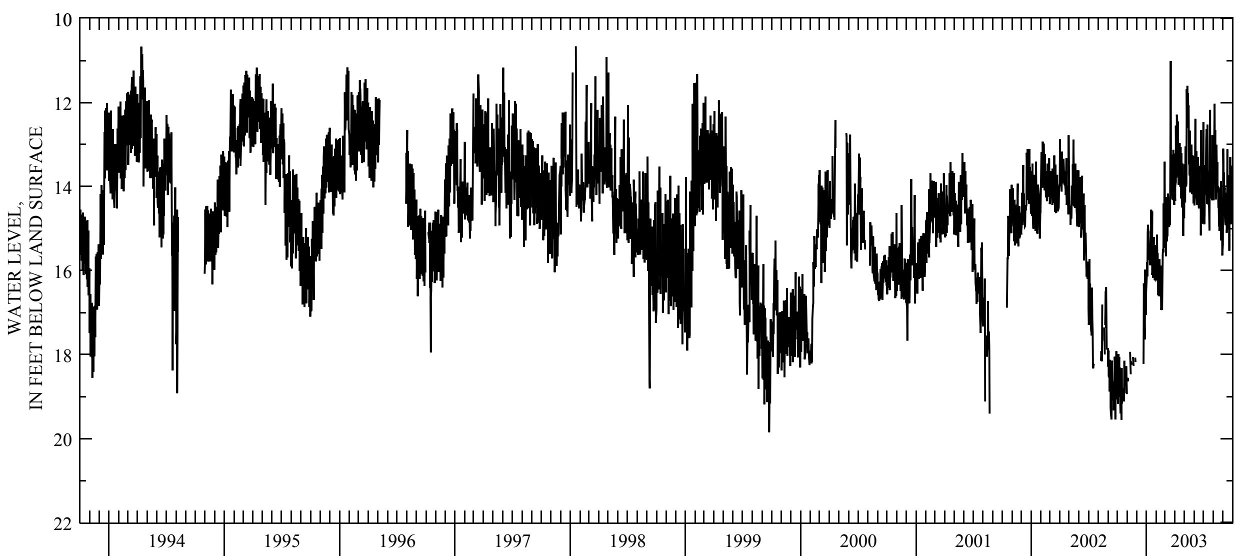
405505084032900. LOCAL NUMBER, PU-1

LOCATION.—Latitude 40°55′05″, longitude 84°03′29″, Hydrologic Unit 04100007, Center and Broadway Street, Columbus Grove, Ohio. Owner: Village of Columbus Grove.
AQUIFER.—Limestone of Silurian Age.
WELL CHARACTERISTICS.—Drilled unused artesian well, diameter 6 in., depth 110 ft, cased.
INSTRUMENTATION.—Digital recorder, 60-minute punch.
DATUM.—Elevation of land-surface datum is 770 ft above sea level (from topographic map). Measuring point: Floor of instrument shelter 3.00 ft above land-surface datum.
REMARKS.—Station operated by Ohio Department of Natural Resources (ODNR), Division of Water. Some historical records not published by the USGS are available from ODNR.
PERIOD OF RECORD.—July 1946 to current year.
EXTREMES FOR PERIOD OF RECORD.—Maximum daily low, 24.30 ft below land-surface datum, Aug. 24, 1962; minimum daily low, 8.80 ft below land-surface datum, Dec. 30, 1990.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.01	---	---	16.34	16.21	15.34	14.23	14.75	14.09	12.47	13.90	15.01
2	18.86	18.59	---	16.18	16.18	14.46	14.34	13.47	13.45	14.78	14.33	13.10
3	19.18	18.56	---	15.80	15.91	15.18	13.99	14.31	14.45	14.73	14.03	14.22
4	18.84	18.64	---	16.14	15.15	15.66	13.88	14.38	13.95	14.90	13.30	13.66
5	17.99	---	---	15.10	16.15	14.26	12.55	13.05	12.39	14.67	12.03	14.17
6	18.63	18.44	---	14.91	15.58	15.04	13.79	13.73	14.24	13.66	13.31	14.02
7	18.06	---	---	15.13	16.08	15.31	13.65	14.00	14.19	13.49	12.66	14.64
8	19.01	---	---	15.06	16.59	14.31	12.29	13.92	13.16	14.20	13.68	14.83
9	18.31	18.75	---	15.66	15.97	15.19	12.39	11.68	14.14	13.40	14.31	14.92
10	19.12	---	---	15.74	16.14	14.17	13.21	12.60	14.44	12.87	13.28	14.78
11	19.40	17.94	---	15.52	16.61	14.25	12.45	11.61	13.40	12.64	13.98	14.40
12	18.45	18.47	---	15.87	15.73	14.88	13.29	12.43	13.80	13.80	13.01	14.15
13	19.13	---	---	15.72	16.23	14.88	13.96	11.78	13.30	14.42	14.14	15.10
14	19.56	18.16	---	15.79	16.48	14.97	13.43	12.33	13.48	12.53	13.42	14.91
15	18.33	18.24	---	14.84	16.33	14.33	13.94	12.07	14.19	14.12	14.06	13.12
16	19.17	---	---	14.56	15.89	14.92	12.97	13.47	14.52	13.64	13.98	14.80
17	---	---	---	15.47	16.94	14.66	13.81	13.27	13.51	14.44	14.51	13.97
18	18.89	18.74	---	15.88	16.88	13.34	13.67	13.74	14.20	14.18	14.08	14.67
19	18.82	---	---	14.59	16.37	11.01	14.01	12.67	14.14	14.71	14.95	14.98
20	---	18.06	---	16.10	16.94	14.22	13.06	14.14	14.32	15.05	14.59	14.39
21	18.81	18.27	---	15.96	16.18	13.39	14.28	13.49	14.05	14.54	15.06	15.53
22	19.12	---	---	15.94	15.62	14.01	13.21	13.03	14.62	12.18	14.13	13.73
23	18.15	---	18.23	16.18	15.48	13.83	14.08	13.79	15.16	14.14	14.02	14.79
24	18.92	---	16.31	15.20	15.57	14.31	14.50	13.00	12.66	13.53	14.33	13.30
25	18.72	---	16.81	15.94	14.40	13.24	13.45	13.91	13.80	14.28	15.29	14.62
26	---	---	17.21	15.48	15.46	14.02	14.28	14.18	14.89	13.89	13.87	14.03
27	18.43	18.08	17.64	15.75	14.69	14.33	14.35	13.25	14.19	14.20	14.88	14.90
28	18.54	18.18	15.98	16.23	13.41	13.13	15.18	13.45	13.85	14.33	14.27	14.29
29	18.72	---	16.75	16.15	---	14.25	14.59	13.28	14.32	12.78	14.84	14.01
30	18.28	---	17.06	15.40	---	14.44	14.70	14.40	14.88	14.24	15.64	13.50
31	18.94	---	16.52	16.17	---	13.22	---	14.24	---	14.01	15.38	---
MAX	19.56	18.75	18.23	16.34	16.94	15.66	15.18	14.75	15.16	15.05	15.64	15.53

CAL YR 2002 LOW 19.56
WTR YR 2003 LOW 19.56



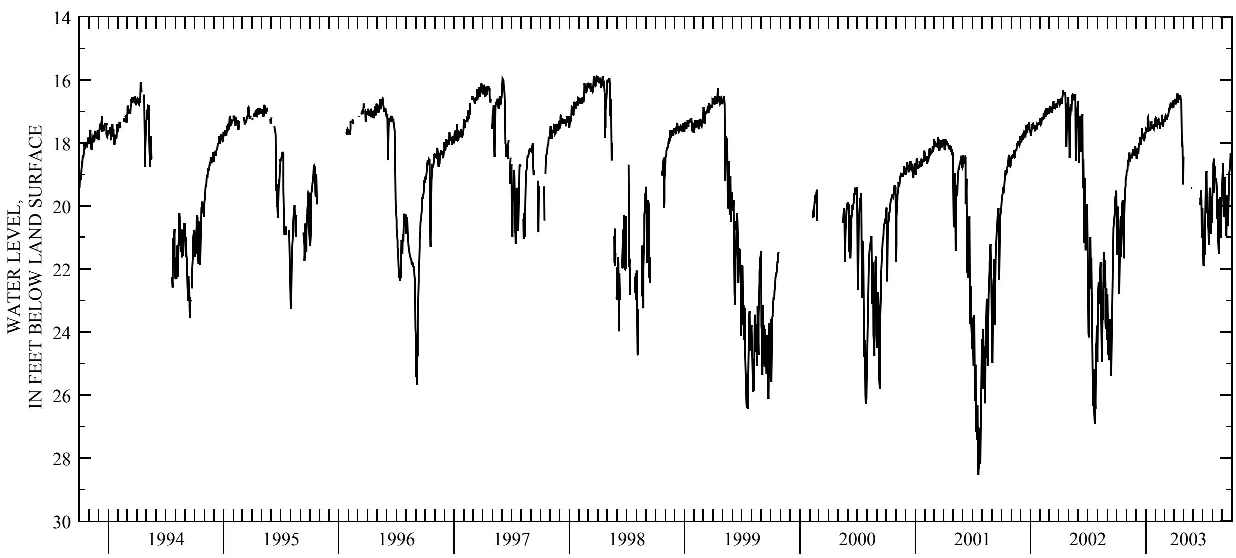
411914083045300. LOCAL NUMBER, S-3

LOCATION.—Latitude 41°19′14″, longitude 83°04′53″, Hydrologic Unit 04100011, 2.6 mi southeast of Fremont Post Office, Fremont, Ohio. Owner: State of Ohio.
AQUIFER.—Limestone of Silurian Age.
WELL CHARACTERISTICS.—Drilled test artesian well, diameter 12 in., depth 121 ft, cased to 93 ft.
INSTRUMENTATION.—Digital recorder, 60-minute punch.
DATUM.—Elevation of land-surface datum is 627 ft above sea level (from topographic map). Measuring point: Floor of instrument shelter 3.00 ft above land-surface datum.
REMARKS.—Station operated by Ohio Department of Natural Resources (ODNR), Division of Water. Some historical records not published by the USGS are available from ODNR.
PERIOD OF RECORD.—December 1974 to current year.
EXTREMES FOR PERIOD OF RECORD.—Maximum daily low, 28.53 ft below land-surface datum, July 20, 2001; minimum daily low, 14.02 ft below land-surface datum, Mar. 24, 1975.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.86	19.00	18.22	17.67	17.22	17.28	16.67	18.43	---	20.50	19.75	19.30
2	21.54	18.92	18.31	17.65	17.23	17.25	16.67	---	---	21.31	19.25	19.00
3	20.59	18.88	18.48	17.54	17.20	17.32	16.70	---	---	21.83	18.92	18.81
4	20.02	18.85	18.48	17.56	17.22	17.19	16.62	---	---	21.91	18.68	18.64
5	20.78	18.85	18.29	17.52	17.45	17.11	16.63	---	---	21.04	18.50	19.70
6	20.47	18.62	18.20	17.62	17.47	17.22	16.78	---	---	21.33	19.27	20.35
7	21.21	18.65	18.15	17.61	17.35	17.21	16.66	---	---	21.56	19.59	19.93
8	22.36	18.56	18.32	17.17	17.33	17.15	16.67	---	---	20.53	18.91	19.32
9	22.80	18.45	18.34	17.15	17.31	17.19	16.63	---	---	19.90	18.74	19.07
10	21.92	18.30	18.13	17.35	17.27	17.27	16.57	---	---	19.46	---	19.48
11	21.55	18.54	18.00	17.53	17.25	17.15	16.43	---	---	19.05	---	19.97
12	21.05	18.59	18.03	17.57	17.38	17.11	16.59	---	---	18.95	---	20.58
13	20.46	18.53	17.98	17.51	17.41	17.19	16.72	---	---	18.89	19.10	20.74
14	20.33	18.44	17.84	17.49	17.40	17.15	16.69	---	---	19.99	19.40	20.94
15	21.19	18.45	17.81	17.58	17.53	16.99	16.55	---	---	20.22	19.94	20.13
16	21.61	18.42	18.02	17.57	17.53	16.95	16.52	---	---	20.13	20.41	19.65
17	20.73	18.40	18.02	17.46	17.39	16.88	16.54	---	---	20.34	19.79	19.84
18	20.33	18.48	17.97	17.46	17.34	16.92	16.59	---	---	20.62	20.29	20.58
19	19.96	18.41	17.82	17.31	17.39	16.91	16.62	---	---	20.76	21.02	20.64
20	19.81	18.42	17.52	17.38	17.42	16.83	16.54	---	---	21.22	21.45	20.00
21	20.07	18.28	17.64	17.46	17.32	16.71	16.47	---	---	20.77	21.52	19.61
22	19.87	18.20	17.77	17.49	17.10	16.80	16.59	---	---	19.78	20.39	19.24
23	21.15	18.25	17.82	17.47	17.30	16.83	16.67	---	19.97	19.42	20.75	18.93
24	21.66	18.24	17.86	17.54	17.43	16.77	16.62	---	19.73	19.69	21.03	18.89
25	20.73	18.36	17.75	17.44	17.48	16.74	17.45	---	19.83	20.52	20.14	18.73
26	19.87	18.40	17.95	17.54	17.41	16.79	18.13	19.44	19.51	20.88	19.72	18.65
27	19.71	18.35	17.92	17.56	17.28	16.77	17.87	19.44	19.83	19.98	20.46	18.35
28	19.54	18.30	17.78	17.40	17.28	16.66	18.13	---	20.83	19.88	21.01	18.35
29	19.36	18.10	17.81	17.49	---	16.86	19.04	---	21.02	19.70	20.34	18.45
30	19.16	18.16	17.76	17.48	---	16.85	19.32	---	20.07	20.23	19.80	18.48
31	19.13	---	17.67	17.38	---	16.81	---	---	---	20.52	19.60	---
MAX	22.80	19.00	18.48	17.67	17.53	17.32	19.32	19.44	21.02	21.91	21.52	20.94

CAL YR 2002 LOW 26.92
WTR YR 2003 LOW 22.80



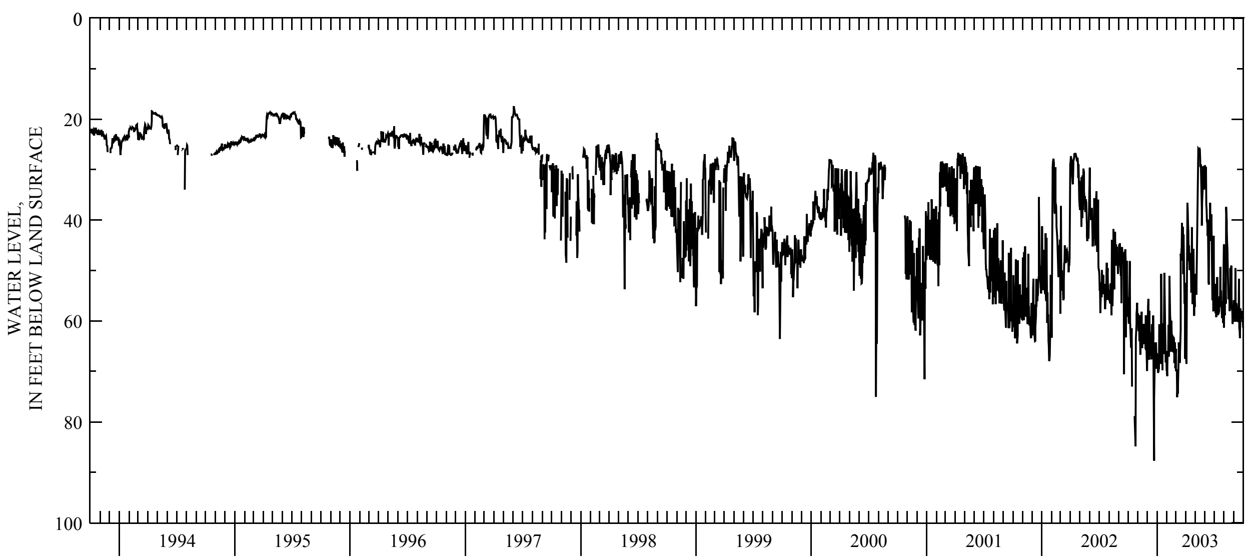
412703083213600. LOCAL NUMBER, S-2

LOCATION.—Latitude 41°27′03″, longitude 83°21′36″, Hydrologic Unit 04100010, at Woodville, Ohio. Owner: Village of Woodville.
AQUIFER.—Limestone of Silurian Age.
WELL CHARACTERISTICS.—Drilled unused artesian well, diameter 8 in., depth 198 ft cased.
INSTRUMENTATION.—Digital recorder, 60-minute punch.
DATUM.—Elevation of land-surface datum is 635 ft above sea level (from topographic map). Measuring point: Top of casing at land-surface datum.
REMARKS.—Station operated by Ohio Department of Natural Resources (ODNR), Division of Water. Some historical records not published by the USGS are available from ODNR.
PERIOD OF RECORD.—June 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.—Maximum daily low, 100.97 ft below land-surface datum, Jan. 29, 1982; minimum daily low, 17.43 ft below land-surface datum, June 3, 1997.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58.22	58.89	66.35	66.54	69.71	67.19	56.53	51.14	29.17	53.10	61.35	55.91
2	57.61	58.47	62.41	67.96	70.99	65.65	56.98	53.52	29.33	56.36	57.80	58.22
3	60.53	62.01	57.12	68.32	66.27	69.81	67.58	50.71	30.84	53.47	58.88	57.56
4	55.34	61.51	55.67	70.29	66.02	69.79	68.54	51.12	32.12	52.65	57.48	59.11
5	57.63	59.94	58.93	69.94	65.86	75.13	65.68	54.83	29.48	58.51	52.54	59.99
6	48.16	64.03	67.74	67.58	60.81	75.01	58.07	53.05	36.99	55.15	56.59	49.56
7	58.95	58.88	58.01	69.63	67.08	71.88	36.62	44.96	37.90	59.26	42.04	59.70
8	60.21	62.65	62.37	60.66	65.88	74.42	38.02	41.10	40.46	57.48	37.40	57.19
9	63.91	66.71	62.68	61.08	51.03	70.26	40.87	40.01	39.82	58.06	40.33	56.51
10	65.28	59.12	62.62	64.72	53.33	66.10	42.28	31.79	43.17	51.32	41.85	56.90
11	64.87	60.43	62.87	66.55	58.96	64.25	48.16	27.24	39.97	57.22	44.42	59.78
12	61.49	62.66	66.85	68.53	60.04	66.24	45.01	25.87	47.00	58.87	45.63	59.72
13	73.07	58.21	65.54	67.51	66.08	65.33	48.46	26.04	52.18	57.68	48.07	57.31
14	---	65.27	67.63	50.68	62.09	68.33	49.96	26.24	52.79	57.80	52.26	59.97
15	---	65.26	60.66	59.79	59.97	66.46	46.60	25.66	40.83	58.62	55.69	59.44
16	---	62.49	66.19	64.79	62.69	61.79	48.51	26.12	42.24	58.07	54.11	60.27
17	---	61.66	63.83	60.47	62.74	46.66	48.10	28.20	41.63	55.13	55.54	51.66
18	---	64.59	63.29	69.80	63.92	47.26	49.70	29.32	36.58	55.67	55.79	61.42
19	---	60.61	63.36	60.70	63.99	45.68	54.41	29.65	40.82	57.27	58.07	61.83
20	---	62.81	58.93	63.95	66.05	45.92	53.48	28.95	42.12	49.30	56.69	63.45
21	---	63.61	66.58	61.34	66.08	40.57	41.41	32.34	44.14	55.93	49.54	60.59
22	78.86	63.99	87.72	66.59	63.24	47.49	50.66	37.97	38.84	54.03	52.45	57.56
23	81.42	60.59	75.60	57.18	63.43	48.04	56.64	41.11	48.36	56.91	56.41	59.19
24	84.84	62.16	68.77	50.46	66.39	41.37	54.79	36.54	52.02	56.06	49.08	58.30
25	73.43	65.52	64.29	55.09	68.35	50.79	56.30	33.50	55.92	59.44	56.04	59.77
26	63.40	58.87	67.04	57.26	64.32	42.88	45.76	33.64	53.49	58.30	57.86	58.85
27	60.55	65.79	69.48	61.17	65.86	50.50	49.66	29.39	52.21	56.95	57.46	59.35
28	58.59	65.24	67.69	68.19	69.34	54.58	59.02	32.44	58.15	59.50	60.62	59.44
29	57.84	68.16	64.30	67.66	---	56.57	55.26	32.77	43.12	60.43	60.06	58.06
30	56.42	69.94	69.21	65.97	---	52.48	57.23	33.91	53.62	51.36	58.98	61.39
31	60.62	---	66.44	69.74	---	67.49	---	32.53	---	44.88	58.01	---
MAX	84.84	69.94	87.72	70.29	70.99	75.13	68.54	54.83	58.15	60.43	61.35	63.45

CAL YR 2002 LOW 87.72
WTR YR 2003 LOW 87.72



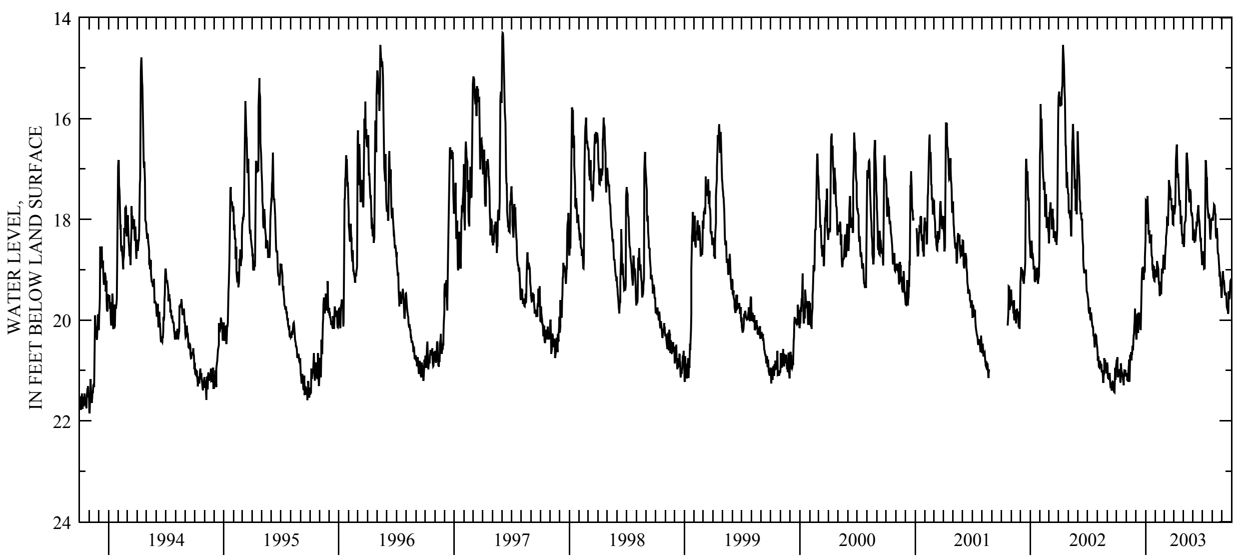
410802083093900. LOCAL NUMBER, SE-2

LOCATION.—Latitude 41°08′02″, longitude 83°09′39″, Hydrologic Unit 04100011, Tiffin State Hospital, Tiffin, Ohio. Owner: State of Ohio.
AQUIFER.—Limestone of Silurian Age.
WELL CHARACTERISTICS.—Drilled unused artesian well, diameter 12 in., depth 250 ft, cased.
INSTRUMENTATION.—Digital recorder, 60-minute punch.
DATUM.—Elevation of land-surface datum is 740 ft above sea level (from topographic map). Measuring point: Floor of instrument shelter 0.50 ft above land-surface datum.
REMARKS.—Station operated by Ohio Department of Natural Resources (ODNR), Division of Water. Some historical records not published by the USGS are available from ODNR.
PERIOD OF RECORD.—July 1962 to current year.
EXTREMES FOR PERIOD OF RECORD.—Maximum daily low, 23.76 ft below land-surface datum, Nov. 22, 1964; minimum daily low, 14.11 ft below land-surface datum, Jan. 2, 1991.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.85	21.08	20.05	18.41	19.00	18.87	17.72	18.37	18.40	18.82	18.00	19.44
2	20.86	21.08	20.15	17.94	19.02	18.92	17.79	18.51	18.41	18.73	18.01	19.27
3	20.85	21.05	20.37	17.63	19.00	19.00	17.90	18.55	18.24	18.64	18.03	19.12
4	20.74	21.15	20.37	17.65	19.04	18.77	17.85	18.45	18.23	18.78	17.96	19.03
5	21.12	21.20	20.00	17.73	19.15	18.64	17.78	18.11	18.42	18.89	17.83	19.15
6	21.12	21.10	19.90	18.06	19.09	18.54	17.74	18.06	18.47	18.98	17.74	19.23
7	21.06	21.22	19.87	18.09	18.83	18.49	17.23	18.04	18.37	18.97	17.71	19.21
8	21.11	21.06	20.23	17.54	18.88	18.35	16.83	18.03	18.39	18.97	17.73	19.28
9	21.01	20.98	20.26	17.76	18.91	18.25	16.71	17.93	18.36	18.40	17.82	19.39
10	21.04	20.78	19.97	18.07	18.95	18.14	16.58	17.38	18.33	17.52	17.88	19.46
11	20.99	21.20	19.85	18.23	18.97	17.99	16.52	16.77	18.12	16.83	17.91	19.51
12	20.97	21.20	20.01	18.30	19.19	18.01	16.95	16.68	18.05	16.87	18.12	19.47
13	21.23	20.97	19.95	18.22	19.28	18.13	17.16	16.77	18.14	17.06	18.33	19.47
14	21.24	20.69	19.93	18.26	19.28	18.13	17.16	16.84	18.06	17.21	18.38	19.46
15	20.86	20.75	19.89	18.46	19.51	17.67	17.09	16.94	17.91	17.20	18.31	19.62
16	20.90	20.75	20.19	18.46	19.52	17.42	17.24	17.23	17.89	17.59	18.17	19.74
17	21.01	20.64	20.18	18.44	19.24	17.22	17.37	17.35	17.81	17.76	18.39	19.76
18	21.05	20.80	20.04	18.45	19.28	17.32	17.61	17.41	17.72	17.81	18.53	19.75
19	21.04	20.68	19.82	18.30	19.41	17.37	17.73	17.47	17.88	17.92	18.67	19.75
20	21.11	20.69	19.25	18.55	19.49	17.35	17.65	17.61	17.99	17.98	18.71	19.88
21	21.13	20.51	19.05	18.71	19.28	17.42	17.62	17.67	18.02	17.91	18.71	19.84
22	21.15	20.52	18.96	18.77	18.98	17.57	17.92	17.50	18.09	17.92	18.83	19.43
23	21.24	20.60	19.01	18.88	19.03	17.62	18.10	17.40	18.21	18.00	19.04	19.55
24	21.29	20.40	19.03	19.01	19.04	17.58	18.08	17.46	18.37	18.17	19.14	19.58
25	21.18	20.30	18.94	18.90	19.08	17.72	17.93	17.66	18.45	18.34	19.04	19.55
26	20.98	20.27	19.20	19.11	18.92	17.80	18.20	17.82	18.37	18.40	19.09	19.44
27	21.11	20.10	19.17	19.17	18.71	17.83	18.33	17.91	18.59	18.24	19.19	19.25
28	21.04	20.03	18.99	18.93	18.86	17.72	18.29	17.90	18.66	18.16	19.33	19.20
29	20.99	19.77	19.06	19.22	---	18.10	18.49	17.87	18.76	18.02	19.26	19.19
30	21.01	19.97	19.01	19.23	---	18.11	18.43	17.99	18.91	17.98	19.51	19.19
31	21.12	---	18.77	19.10	---	17.89	---	18.20	---	17.97	19.56	---
MAX	21.29	21.22	20.37	19.23	19.52	19.00	18.49	18.55	18.91	18.98	19.56	19.88

CAL YR 2002 LOW 21.44
WTR YR 2003 LOW 21.29



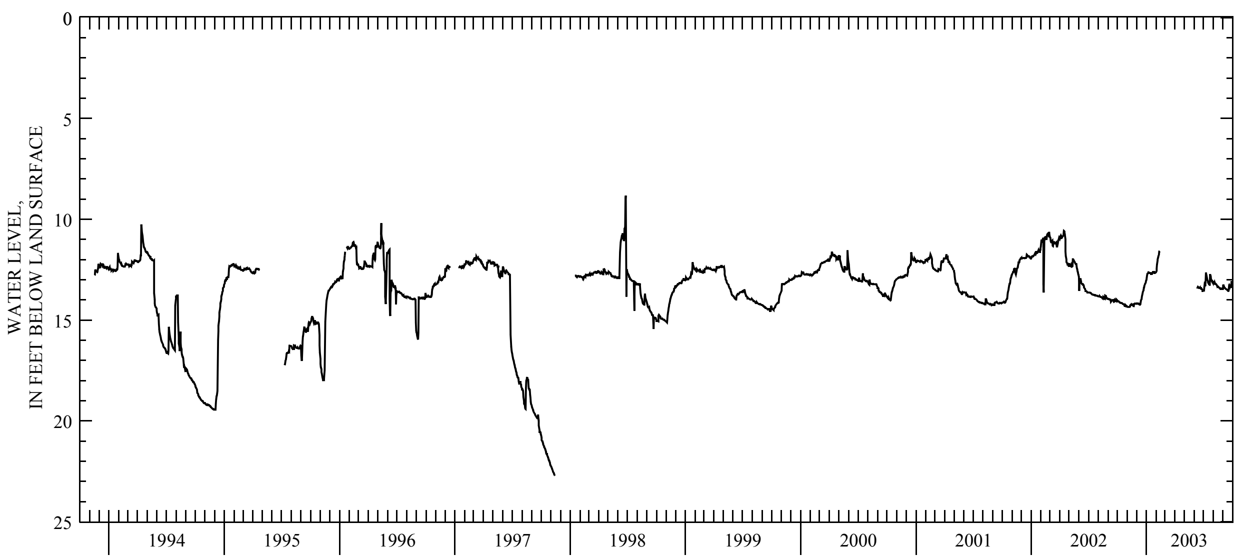
410330081282000. LOCAL NUMBER, SU-6

LOCATION.—Latitude 41°03′30″, longitude 81°28′20″, Hydrologic Unit 04110002, Seiberling Street, Akron, Ohio. Owner: Goodyear Tire and Rubber Company.
AQUIFER.—Sand and gravel of Pleistocene Age.
WELL CHARACTERISTICS.—Drilled unused artesian well, diameter 24 in., depth 89 ft, cased.
INSTRUMENTATION.—Digital recorder, 60-minute punch.
DATUM.—Elevation of land-surface datum is 1,000 ft above sea level (from topographic map). Measuring point: Floor of instrument shelter 2.63 ft above land-surface datum.
REMARKS.—Station operated by Ohio Department of Natural Resources (ODNR), Division of Water. Some historical records not published by the USGS are available from ODNR.
PERIOD OF RECORD.—July 1941 to February 1944 periodic, March 1944 to current year continuous. Records for May 14-Sept. 30, 1980, published in USGS-WDR-OH-80-1, are unreliable and should not be used.
EXTREMES FOR PERIOD OF RECORD.—Maximum daily low, 59.47 ft below land-surface datum, Oct. 18, 1946; minimum daily low, 8.82 ft below land-surface datum, June 26, 1998.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.07	14.33	14.19	13.02	12.61	---	---	---	---	13.53	13.07	13.46
2	14.05	14.33	14.18	12.89	12.54	---	---	---	---	13.54	13.12	13.24
3	14.07	14.34	14.19	12.78	12.45	---	---	---	---	13.53	13.15	13.31
4	14.07	14.35	14.18	12.70	12.24	---	---	---	---	13.35	13.18	13.34
5	14.08	14.35	14.17	12.68	12.03	---	---	---	---	13.22	13.13	13.37
6	14.08	14.34	14.18	12.66	11.95	---	---	---	---	13.25	13.18	13.39
7	14.10	14.35	14.19	12.68	11.92	---	---	---	---	13.32	13.20	13.41
8	14.12	14.35	14.19	12.64	11.88	---	---	---	---	13.07	13.21	13.43
9	14.13	14.35	14.22	12.64	11.78	---	---	---	---	12.64	13.21	13.44
10	14.14	14.33	14.23	12.66	11.74	---	---	---	---	12.73	13.22	13.46
11	14.14	14.27	14.23	12.67	11.61	---	---	---	13.42	12.79	13.24	13.46
12	14.14	14.24	14.24	12.67	11.61	---	---	---	13.43	12.89	13.26	13.48
13	14.15	14.25	14.23	12.67	11.59	11.42	---	---	13.34	12.97	13.30	13.49
14	14.15	14.25	14.11	12.67	---	---	---	---	13.36	13.03	13.34	13.49
15	14.15	14.26	14.01	12.67	---	---	---	---	13.38	13.07	13.34	13.50
16	14.16	14.26	13.97	12.70	---	---	---	---	13.41	13.15	13.33	13.54
17	14.18	14.23	13.93	12.71	---	---	---	---	13.41	13.19	13.35	13.55
18	14.20	14.25	13.81	12.71	---	---	---	---	13.41	13.22	13.37	13.55
19	14.20	14.24	13.75	12.68	---	---	---	---	13.38	13.24	13.39	13.52
20	14.21	14.24	13.67	12.67	---	---	---	---	13.40	13.25	13.41	13.35
21	14.23	14.23	13.59	12.64	---	---	---	---	13.41	13.26	13.41	13.38
22	14.24	14.35	13.54	12.64	---	---	---	---	13.42	12.71	13.42	13.39
23	14.26	14.19	13.50	12.62	---	---	---	---	13.44	12.80	13.43	13.30
24	14.30	14.18	13.42	12.62	---	---	---	---	13.46	12.85	13.44	13.33
25	14.30	14.18	13.36	12.62	---	---	---	---	13.47	12.97	13.45	13.37
26	14.24	14.18	13.26	12.61	---	---	---	---	13.46	13.03	13.45	13.37
27	14.26	14.19	13.22	12.62	---	---	---	---	13.49	13.07	13.45	13.36
28	14.30	14.19	13.20	12.65	---	---	---	---	13.51	13.00	13.45	13.07
29	14.30	14.19	13.14	12.65	---	---	---	---	13.53	13.07	13.46	13.15
30	14.31	14.19	13.11	12.64	---	---	---	---	13.53	13.14	13.46	13.20
31	14.32	---	13.04	12.65	---	---	---	---	---	13.17	13.46	---
MAX	14.32	14.35	14.24	13.02	12.61	11.42	---	---	13.53	13.54	13.46	13.55

CAL YR 2002 LOW 14.35
WTR YR 2003 LOW 14.35



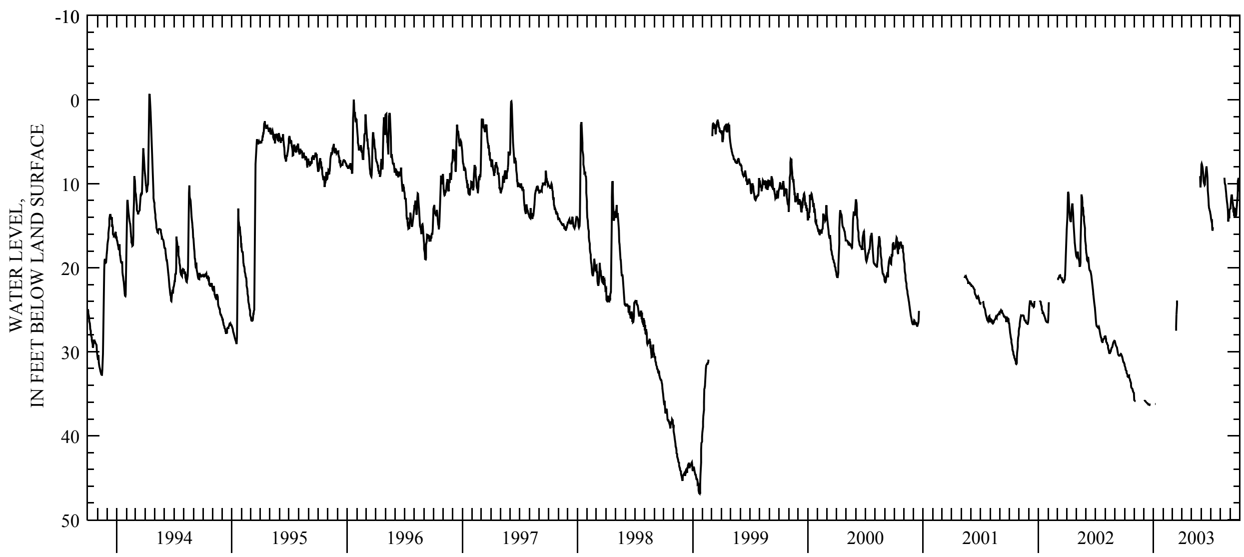
410846081271600. LOCAL NUMBER, SU-7

LOCATION.—Latitude 41°08′46″, longitude 81°27′16″, Hydrologic Unit 04110002, Monroe Falls Road, Cuyahoga Falls, Ohio. Owner: City of Cuyahoga Falls.
AQUIFER.—Sand and gravel of Pleistocene Age.
WELL CHARACTERISTICS.—Drilled unused water-table, diameter 6 in., depth 100 ft, cased.
INSTRUMENTATION.—Digital recorder, 60-minute punch.
DATUM.—Elevation of land-surface datum is 994 ft above sea level (from topographic map). Measuring point: Floor of instrument shelter 5.00 ft above land-surface datum.
REMARKS.—Station operated by Ohio Department of Natural Resources (ODNR), Division of Water. Some historical records not published by the USGS are available from ODNR.
PERIOD OF RECORD.—August 1968 to current year.
EXTREMES FOR PERIOD OF RECORD.—Maximum daily low, 46.90 ft below land-surface datum, Jan. 22, 1999; minimum daily low, 0.67 ft above land-surface datum, Apr. 15, 1994.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31.54	35.76	---	---	---	---	---	---	9.10	13.73	---	12.91
2	31.68	35.80	35.87	---	---	---	---	---	7.73	14.09	---	12.91
3	31.85	35.83	35.84	---	---	---	---	---	7.62	14.32	---	12.32
4	32.01	35.87	35.84	---	---	---	---	---	7.76	14.46	---	11.75
5	32.15	35.90	35.85	---	---	---	---	---	7.91	14.44	---	11.44
6	32.21	---	35.87	36.25	---	---	---	---	8.14	15.45	---	11.27
7	32.33	---	35.95	36.23	---	---	---	---	8.59	15.58	---	11.58
8	32.52	---	35.99	---	---	---	---	---	9.15	15.16	---	12.08
9	32.68	---	36.03	---	---	---	---	---	9.63	---	---	12.25
10	32.76	---	36.06	---	---	---	---	---	9.88	---	---	12.57
11	32.94	---	36.09	---	---	---	---	---	10.01	---	---	13.40
12	33.01	---	36.13	---	---	---	---	---	10.11	---	---	12.76
13	33.01	---	36.15	---	---	27.51	---	---	10.07	---	---	13.78
14	32.83	---	36.19	---	---	26.98	---	---	9.42	---	9.29	13.81
15	32.81	---	36.22	---	---	25.58	---	---	8.98	---	9.87	13.72
16	32.98	---	36.27	---	---	24.35	---	---	8.63	---	10.06	12.93
17	33.17	---	36.28	---	---	23.93	---	---	8.16	---	10.17	13.32
18	33.32	---	36.30	---	---	---	---	---	7.92	---	10.57	13.71
19	33.41	---	36.31	---	---	---	---	---	8.32	---	10.94	13.79
20	33.52	---	36.33	---	---	---	---	---	8.74	---	11.45	13.68
21	33.76	---	36.37	---	---	---	---	---	9.30	---	11.77	12.94
22	34.03	---	---	---	---	---	---	---	10.79	---	12.15	12.54
23	34.29	---	---	---	---	---	---	---	11.31	---	12.43	11.94
24	34.36	---	---	---	---	---	---	---	11.76	---	12.79	12.04
25	34.36	---	---	---	---	---	---	---	12.53	---	13.30	10.57
26	34.42	---	---	---	---	---	---	---	12.94	---	14.50	9.68
27	34.66	---	---	---	---	---	---	---	13.05	---	13.60	9.30
28	34.75	---	---	---	---	---	---	---	13.22	---	13.43	9.58
29	34.81	---	36.31	---	---	---	---	9.09	13.30	---	14.11	9.76
30	34.85	---	---	---	---	---	---	10.43	13.54	---	13.06	10.93
31	34.89	---	---	---	---	---	---	9.48	---	---	12.97	---
MAX	34.89	35.90	36.37	36.25	---	27.51	---	10.43	13.54	15.58	14.50	13.81

CAL YR 2002 LOW 36.37
WTR YR 2003 LOW 36.37



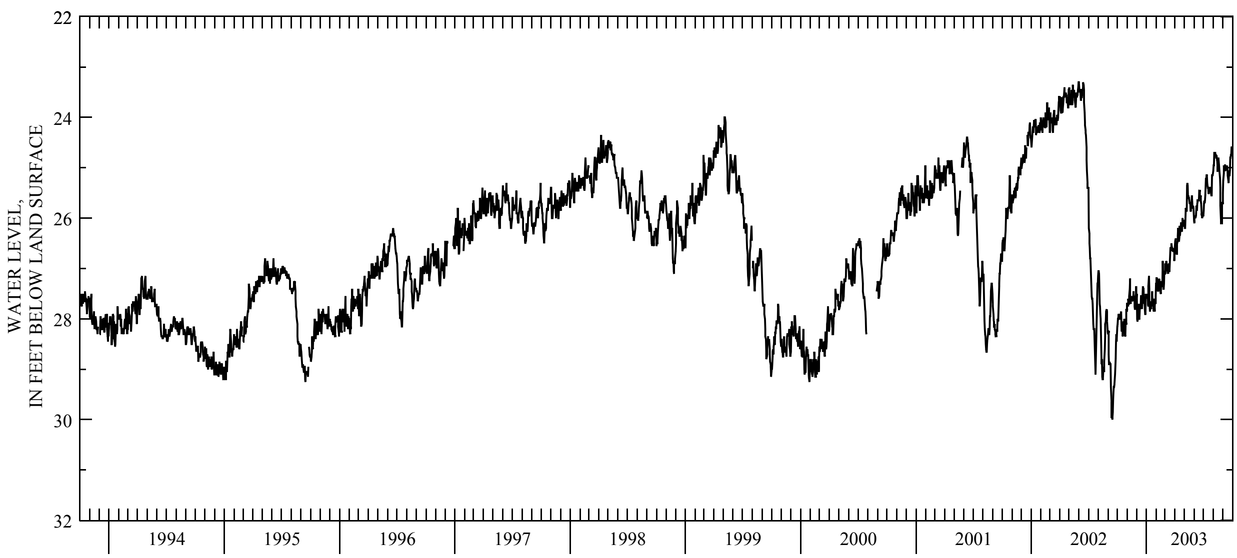
405215084335400. LOCAL NUMBER, VW-1

LOCATION.—Latitude 40°52′15″, longitude 84°33′54″, Hydrologic Unit 04100007, Ridge Road near Van Wert, Ohio. Owner: Marsh Foundation.
AQUIFER.—Limestone of Silurian Age.
WELL CHARACTERISTICS.—Drilled unused artesian well, diameter 8 in., depth 340 ft, cased.
INSTRUMENTATION.—Type F continuous recorder.
DATUM.—Elevation of land-surface datum is 790.37 ft above sea level. Measuring point: Floor of instrument shelter 6.15 ft above land-surface datum.
REMARKS.—Station operated by Ohio Department of Natural Resources (ODNR), Division of Water. Some historical records not published by the USGS are available from ODNR.
PERIOD OF RECORD.—August 1957 to current year.
EXTREMES FOR PERIOD OF RECORD.—Maximum daily low 33.20 ft below land-surface datum, Dec. 20-21, 1991; minimum daily low, 18.85 ft below land-surface datum, Mar. 6, 1959.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28.15	27.80	27.60	27.55	27.30	27.10	26.55	26.05	26.05	25.95	25.05	25.50
2	28.10	27.70	27.50	27.55	27.30	26.90	26.45	26.05	26.10	25.85	24.95	25.25
3	28.00	27.70	28.00	27.50	27.20	27.10	26.45	26.20	26.00	25.70	24.95	25.10
4	28.00	27.75	28.05	27.60	27.20	27.00	26.40	26.20	25.95	25.65	24.70	24.95
5	27.90	27.60	28.00	27.55	27.45	26.85	26.50	26.00	26.00	25.70	24.70	25.05
6	28.00	27.70	27.75	27.70	27.45	26.90	26.70	25.80	26.00	25.65	24.70	25.05
7	27.90	27.70	27.75	27.75	27.40	27.05	26.70	25.85	25.95	25.55	24.70	24.95
8	28.00	27.55	27.70	27.35	27.40	27.00	26.50	25.85	25.80	25.35	24.75	24.95
9	28.00	27.40	28.00	27.15	27.45	26.95	26.50	25.85	25.75	25.20	24.75	25.00
10	27.95	27.20	28.00	27.40	27.25	27.05	26.45	25.35	25.85	25.25	24.80	25.00
11	27.95	27.60	27.85	27.60	27.20	27.10	26.35	25.30	25.70	25.15	24.80	25.00
12	27.90	27.70	27.70	27.85	27.25	26.95	26.20	25.35	25.65	25.15	24.75	25.05
13	27.85	27.65	27.80	27.80	27.35	26.90	26.45	25.60	25.65	25.30	24.85	24.95
14	28.15	27.55	27.75	27.70	27.35	27.05	26.45	25.55	25.65	25.35	24.95	25.00
15	28.25	27.60	27.55	27.75	27.45	27.05	26.45	25.60	25.65	25.40	25.05	25.00
16	28.10	27.60	27.55	27.80	27.50	26.90	26.30	25.60	25.65	25.40	25.05	25.15
17	28.20	27.55	27.70	27.65	27.30	26.75	26.15	25.65	25.65	25.50	24.85	25.20
18	28.35	27.65	27.80	27.70	27.25	26.60	26.35	25.70	25.45	25.50	24.80	25.25
19	28.25	27.60	27.70	27.45	27.35	26.60	26.25	25.70	25.45	25.45	24.95	25.30
20	28.05	27.65	27.55	27.50	27.35	26.65	26.25	25.70	25.55	25.45	25.05	25.05
21	28.10	27.45	27.35	27.75	27.25	26.55	26.10	25.85	25.60	25.45	25.05	25.15
22	28.10	27.50	27.40	27.65	26.85	26.50	26.10	25.85	25.55	25.40	25.20	25.15
23	28.00	27.55	27.40	27.65	27.05	26.60	26.25	25.75	25.65	25.40	25.40	25.05
24	28.15	27.60	27.60	27.85	27.40	26.60	26.25	25.70	25.70	25.45	25.75	24.80
25	28.30	27.75	27.70	27.80	27.40	26.60	26.15	25.55	25.95	25.50	26.05	24.80
26	28.35	27.80	27.60	27.60	27.30	26.65	26.00	25.65	25.90	25.55	26.10	24.75
27	28.10	27.80	27.80	27.85	27.05	26.65	26.15	25.80	26.00	25.55	26.10	24.75
28	28.10	27.80	27.90	27.75	27.10	26.65	26.15	25.80	25.95	25.15	26.10	24.60
29	28.10	27.60	27.90	27.65	---	26.65	26.15	25.75	25.95	25.15	25.70	24.60
30	27.80	27.35	27.50	27.70	---	26.60	26.15	25.80	25.95	25.15	25.70	24.65
31	27.85	---	27.55	27.55	---	26.85	---	25.90	---	25.10	25.70	---
MAX	28.35	27.80	28.05	27.85	27.50	27.10	26.70	26.20	26.10	25.95	26.10	25.50

CAL YR 2002 LOW 30.00
WTR YR 2003 LOW 28.35



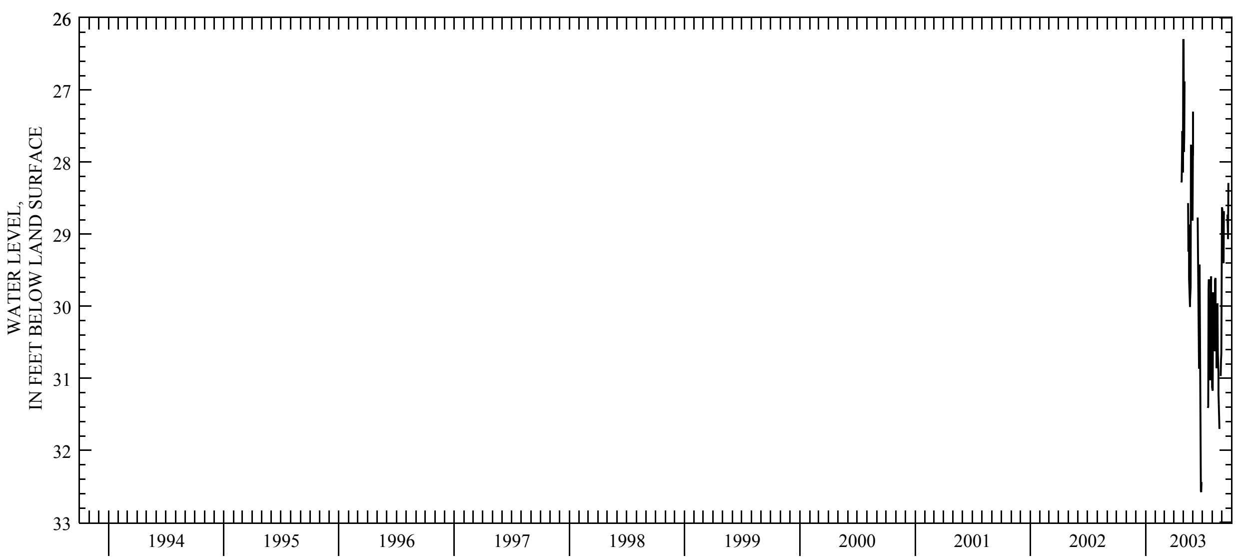
412819084323800. LOCAL NUMBER, WM-1A

LOCATION.—Latitude 41°28′19″, longitude 84°32′38″, Hydrologic Unit 04100006, at Bryan, Ohio. Owner: City of Bryan.
AQUIFER.—Sand and gravel of Pleistocene Age.
WELL CHARACTERISTICS.—Drilled unused production well, diameter 8 in., depth 143 ft, cased to 126 ft.
INSTRUMENTATION.—Electronic data logger. 60-minute log interval.
DATUM.—Elevation of land-surface datum is 745ft above sea level (from topographic map). Measuring point: Floor of instrument shelter 3.00 ft above land-surface datum.
REMARKS.—Station operated by Ohio Department of Natural Resources (ODNR), Division of Water. Some historical records not published by the USGS are available from ODNR.
PERIOD OF RECORD.—April 2003 to current year.
EXTREMES FOR PERIOD OF RECORD.—Maximum daily low, 32.58 ft below land-surface datum, June 27, 2003; minimum daily low, 26.31 ft below land-surface datum, May 1 and 2, 2003.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	26.31	27.30	---	31.12	28.63
2	---	---	---	---	---	---	---	26.31	---	---	31.17	28.65
3	---	---	---	---	---	---	---	27.86	---	---	30.21	28.74
4	---	---	---	---	---	---	---	27.67	---	---	29.81	29.28
5	---	---	---	---	---	---	---	26.88	---	---	30.05	29.36
6	---	---	---	---	---	---	---	---	---	---	30.20	29.40
7	---	---	---	---	---	---	---	---	---	---	30.36	28.68
8	---	---	---	---	---	---	---	---	---	---	30.62	---
9	---	---	---	---	---	---	---	---	---	---	30.58	---
10	---	---	---	---	---	---	---	---	---	---	29.64	---
11	---	---	---	---	---	---	---	---	---	---	29.61	---
12	---	---	---	---	---	---	---	---	---	---	30.08	---
13	---	---	---	---	---	---	---	---	---	---	30.28	---
14	---	---	---	---	---	---	---	---	---	---	30.65	---
15	---	---	---	---	---	---	---	---	---	---	30.86	---
16	---	---	---	---	---	---	---	28.57	28.77	---	30.30	---
17	---	---	---	---	---	---	---	29.24	28.99	---	29.96	---
18	---	---	---	---	---	---	---	28.87	29.64	31.41	30.20	28.73
19	---	---	---	---	---	---	---	28.93	30.14	31.39	30.65	28.95
20	---	---	---	---	---	---	---	29.61	30.75	29.77	30.93	29.07
21	---	---	---	---	---	---	---	29.87	30.87	29.63	31.21	28.29
22	---	---	---	---	---	---	---	30.01	29.42	30.18	31.36	---
23	---	---	---	---	---	---	---	29.94	30.14	30.16	31.70	---
24	---	---	---	---	---	---	---	29.74	30.91	30.34	---	---
25	---	---	---	---	---	---	28.28	28.77	31.41	31.03	---	---
26	---	---	---	---	---	---	28.26	27.76	32.56	30.94	---	---
27	---	---	---	---	---	---	27.77	28.25	32.58	30.04	---	---
28	---	---	---	---	---	---	27.57	28.38	32.44	29.59	30.97	---
29	---	---	---	---	---	---	27.90	28.71	---	30.17	30.75	---
30	---	---	---	---	---	---	28.14	28.81	---	30.59	30.66	---
31	---	---	---	---	---	---	---	27.91	---	30.84	29.78	---
MAX	---	---	---	---	---	---	28.28	30.01	32.58	31.41	31.70	29.40

WTR YR 2003 LOW 32.58



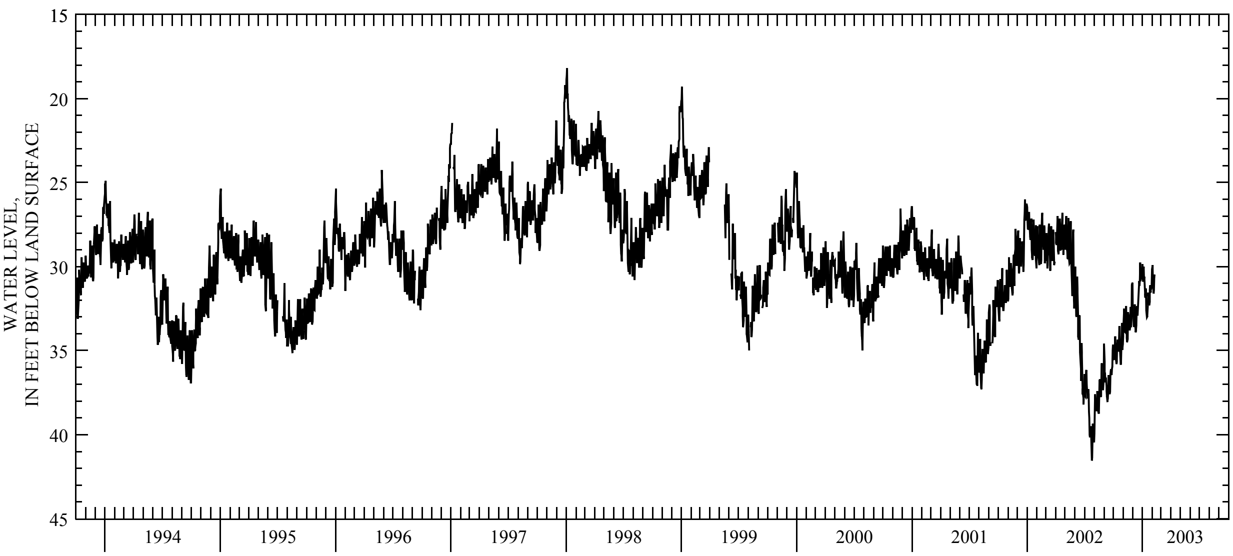
412821084313600. LOCAL NUMBER, WM-1

LOCATION.—Latitude 41°28′21″, longitude 84°31′36″, Hydrologic Unit 04100006, at Bryan, Ohio. Owner: City of Bryan.
AQUIFER.—Sand and gravel of Pleistocene Age.
WELL CHARACTERISTICS.—Drilled unused production well, diameter 8 in., depth 118 ft, cased.
INSTRUMENTATION.—Type F continuous recorder.
DATUM.—Elevation of land-surface datum is 747 ft above sea level (from topographic map). Measuring point: Floor of instrument shelter 3.3 ft above land-surface datum.
REMARKS.—Station operated by Ohio Department of Natural Resources (ODNR), Division of Water. Some historical records not published by the USGS are available from ODNR.
PERIOD OF RECORD.—May 1951 to May 1957, discontinued June 1957 to September 1984, reactivated October 1984 to current year.
EXTREMES FOR PERIOD OF RECORD.—Maximum daily low, 41.55 ft below land-surface datum, July 25, 2002; minimum daily low, 1.45 ft below land-surface datum, Jan. 27, 1952.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35.05	34.15	30.95	29.85	30.15	---	---	---	---	---	---	---
2	35.30	33.80	32.85	30.25	29.90	---	---	---	---	---	---	---
3	35.50	33.00	32.75	30.90	30.15	---	---	---	---	---	---	---
4	35.55	32.50	32.95	30.20	31.05	---	---	---	---	---	---	---
5	35.15	33.45	33.55	30.00	31.60	---	---	---	---	---	---	---
6	34.65	33.55	33.55	30.75	31.60	---	---	---	---	---	---	---
7	34.15	33.90	33.25	30.60	31.40	---	---	---	---	---	---	---
8	35.30	33.90	32.25	30.65	30.65	---	---	---	---	---	---	---
9	35.50	33.95	33.50	31.45	30.45	---	---	---	---	---	---	---
10	35.60	32.75	33.60	31.85	---	---	---	---	---	---	---	---
11	35.80	32.35	33.90	31.65	---	---	---	---	---	---	---	---
12	35.65	34.05	33.75	31.30	---	---	---	---	---	---	---	---
13	34.55	34.25	33.50	32.45	---	---	---	---	---	---	---	---
14	34.35	34.50	32.55	32.60	---	---	---	---	---	---	---	---
15	35.00	34.30	32.35	33.00	---	---	---	---	---	---	---	---
16	34.90	34.15	32.90	32.95	---	---	---	---	---	---	---	---
17	35.05	32.70	32.85	33.00	---	---	---	---	---	---	---	---
18	35.00	33.00	32.55	32.30	---	---	---	---	---	---	---	---
19	34.25	33.70	32.20	31.55	---	---	---	---	---	---	---	---
20	33.55	33.65	31.80	31.65	---	---	---	---	---	---	---	---
21	34.60	33.45	31.40	31.90	---	---	---	---	---	---	---	---
22	35.00	33.80	30.85	32.20	---	---	---	---	---	---	---	---
23	35.35	33.65	31.15	32.30	---	---	27.90	---	---	---	---	---
24	35.80	32.40	30.75	32.10	---	---	---	---	---	---	---	---
25	35.80	33.35	29.75	31.40	---	---	---	---	---	---	---	---
26	34.60	33.60	30.85	31.10	---	---	---	---	---	---	---	---
27	33.90	33.45	30.75	31.55	---	---	---	---	---	---	---	---
28	33.35	33.10	30.35	31.20	---	---	---	---	---	---	---	---
29	34.15	31.05	30.05	31.35	---	---	---	---	---	---	---	---
30	34.95	31.00	30.75	31.15	---	---	---	---	---	---	---	---
31	34.60	---	30.40	31.00	---	---	---	---	---	---	---	---
MAX	35.80	34.50	33.90	33.00	31.60	---	27.90	---	---	---	---	---

CAL YR 2002 LOW 41.55
WTR YR 2003 LOW 35.80



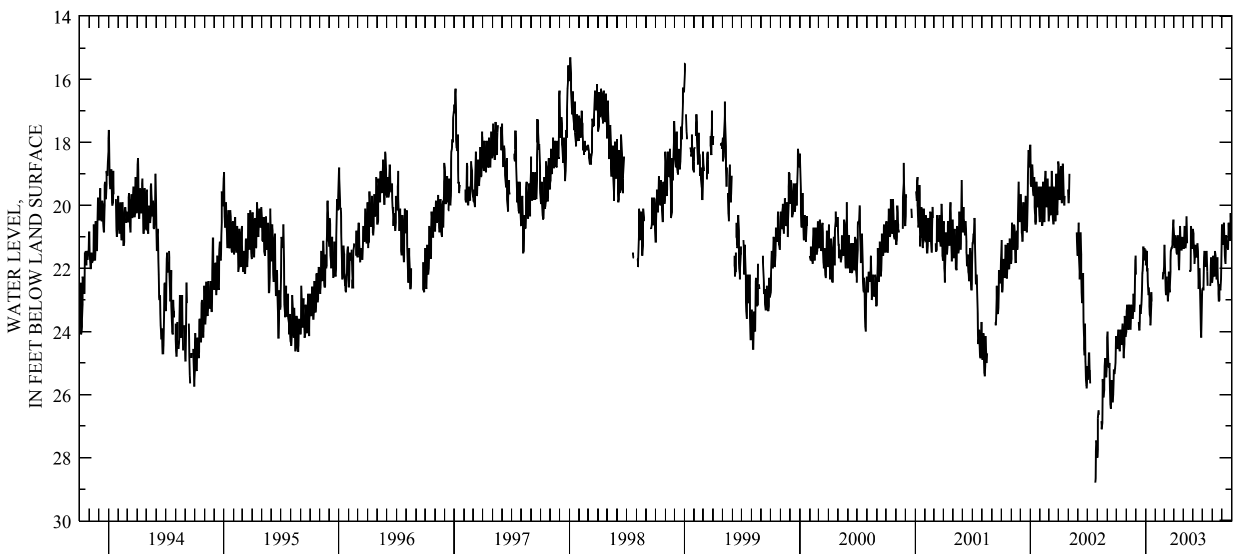
412930084320900. LOCAL NUMBER, WM-3

LOCATION.—Latitude 41°29′30″, longitude 84°32′09″, Hydrologic Unit 04100006, Union Street, Bryan, Ohio. Owner: City of Bryan.
AQUIFER.—Sand and gravel of Pleistocene Age.
WELL CHARACTERISTICS.—Drilled unused test well, diameter 8 in., depth 174 ft, cased.
INSTRUMENTATION.—Type F continuous recorder.
DATUM.—Elevation of land-surface datum is 760 ft above sea level (from topographic map). Measuring point: Floor of instrument shelter 2.00 ft above land-surface datum.
REMARKS.—Station operated by Ohio Department of Natural Resources (ODNR), Division of Water. Some historical records not published by the USGS are available from ODNR.
PERIOD OF RECORD.—October 1984 to current year.
EXTREMES FOR PERIOD OF RECORD.—Maximum daily low, 28.80 ft below land-surface datum, July 26, 2002; minimum daily low, 15.15 ft below land-surface datum, Jan. 4, 1987.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24.25	24.00	21.60	21.40	---	21.95	20.75	21.25	20.75	22.65	22.45	20.60
2	24.35	23.90	22.20	21.65	---	21.25	21.05	21.35	20.90	22.65	22.25	20.75
3	24.45	23.35	---	21.90	---	21.50	21.35	21.35	21.10	22.60	21.65	20.90
4	24.55	23.15	---	21.70	---	21.85	21.20	21.00	21.30	22.70	21.60	21.10
5	24.35	23.40	---	21.45	---	22.35	21.15	20.65	21.70	22.15	21.80	21.25
6	24.10	23.60	---	22.05	---	22.70	20.95	21.00	21.85	21.65	22.00	21.00
7	23.95	23.65	---	22.05	---	22.85	21.00	21.20	21.70	21.45	22.15	20.55
8	24.20	23.95	---	22.00	---	22.65	21.10	21.35	21.25	21.65	22.25	21.00
9	24.35	23.90	---	22.40	---	22.25	21.35	21.25	21.30	21.65	22.05	21.35
10	24.55	23.15	---	22.80	---	22.60	21.50	21.05	21.45	21.95	21.45	21.60
11	24.60	23.20	23.70	22.85	---	22.75	21.50	20.35	21.65	21.80	21.60	21.75
12	24.60	23.50	23.95	22.60	---	22.80	21.55	20.70	21.55	21.75	21.85	21.85
13	24.05	23.65	23.95	22.85	---	23.05	21.10	21.20	21.65	21.60	22.10	21.45
14	23.95	23.80	23.70	23.20	---	22.95	20.95	---	21.45	21.45	22.25	20.95
15	24.25	23.95	23.15	23.45	---	22.75	21.30	---	21.20	21.80	22.35	21.15
16	24.30	23.70	23.25	23.55	---	22.10	21.65	---	21.30	22.10	22.25	21.15
17	24.40	23.15	23.45	23.80	---	22.30	21.90	---	21.45	22.55	21.65	21.35
18	24.40	23.20	23.30	23.70	---	22.60	22.05	---	22.25	---	21.90	21.30
19	24.20	23.40	23.15	23.15	---	22.75	21.55	---	22.65	---	22.35	21.35
20	23.75	23.45	22.90	22.75	---	22.60	21.10	---	22.40	---	22.60	21.40
21	23.90	23.45	22.70	23.05	---	22.10	20.65	---	22.10	---	22.80	20.95
22	24.10	23.60	22.15	---	---	21.75	21.05	22.05	22.00	---	23.05	20.55
23	24.50	23.45	22.05	---	---	21.45	21.40	22.10	22.55	---	23.00	20.85
24	24.85	22.80	21.85	---	---	21.35	21.40	22.05	23.10	---	22.50	20.85
25	24.75	23.10	21.30	---	22.35	21.35	21.40	21.45	23.40	22.55	22.55	21.10
26	24.40	23.35	21.55	---	22.15	21.35	21.40	20.65	23.95	22.45	22.65	21.10
27	23.75	23.35	21.65	---	22.15	21.25	21.05	20.85	24.20	21.90	22.70	20.85
28	23.50	23.10	21.55	---	22.10	21.15	21.00	20.90	23.70	21.65	22.50	20.25
29	23.65	22.15	21.35	---	---	20.90	21.20	21.35	23.10	21.90	22.35	20.40
30	24.15	21.75	21.75	---	---	20.45	21.20	21.35	22.70	22.15	22.05	20.50
31	24.15	---	21.70	---	---	20.60	---	21.25	---	22.35	21.50	---
MAX	24.85	24.00	23.95	23.80	22.35	23.05	22.05	22.10	24.20	22.70	23.05	21.85

CAL YR 2002 LOW 28.80
WTR YR 2003 LOW 24.85



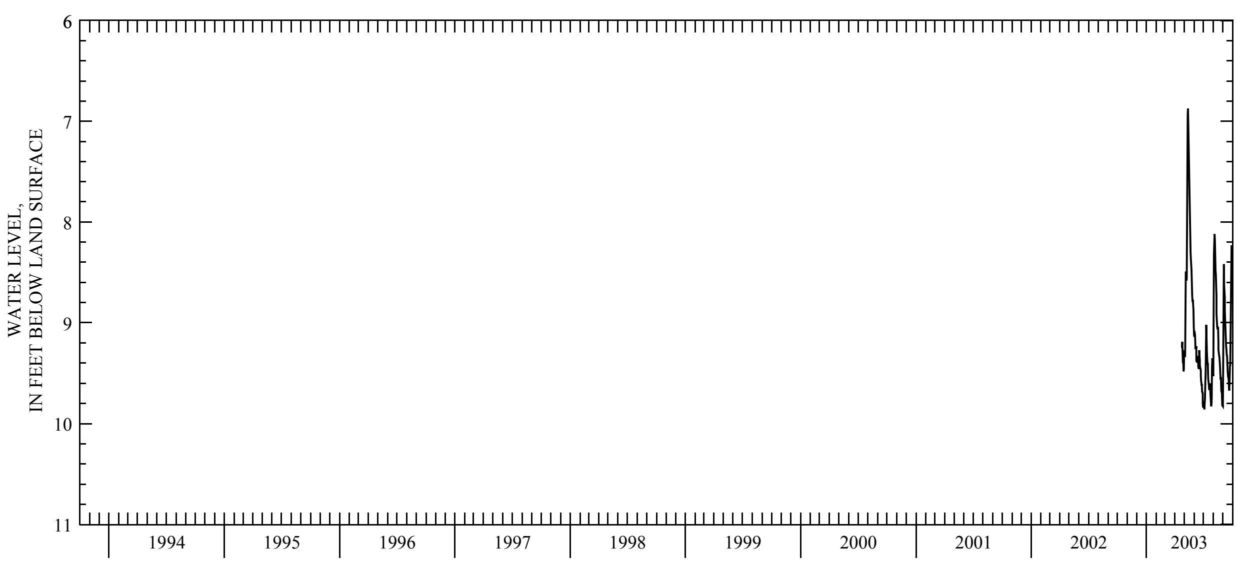
413108084415300. LOCAL NUMBER, WM-12

LOCATION.—Latitude 41°31′08″, longitude 84°41′53″, Hydrologic Unit 04100003, 1.7 mi east of Blakeslee, Ohio. Owner: State of Ohio.
AQUIFER.—Sand and gravel of Pleistocene Age.
WELL CHARACTERISTICS.—Drilled test artesian well, diameter 10 in., depth 115 ft, cased to 85 ft, screened 85 ft to 115 ft.
INSTRUMENTATION.—Electronic data logger. 60-minute log interval.
DATUM.—Elevation of land-surface datum is 830 ft above sea level (from topographic map). Measuring point: Floor of instrument shelter 1.50 ft above land-surface datum.
REMARKS.—Station operated by Ohio Department of Natural Resources (ODNR), Division of Water. Some historical records not published by the USGS are available from ODNR.
PERIOD OF RECORD.—December 1974 to October 1982 continuous, periodic November 1982 to December 1984, continuous January 1985 to November 1986, periodic December 1986 to April 2003, continuous thereafter.
EXTREMES FOR PERIOD OF RECORD.—Maximum measured low, 10.75 ft below land-surface datum, Nov. 29, 1999; minimum daily low, 3.83 ft below land-surface datum, Mar. 17, 1982.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	9.27	9.12	9.82	9.53	9.76
2	---	---	10.45	---	---	---	---	9.30	9.14	9.78	9.09	9.34
3	---	---	---	---	---	---	---	9.34	9.08	9.82	8.32	8.47
4	---	---	---	---	---	---	---	9.33	9.12	9.86	8.20	8.42
5	---	---	---	---	---	---	---	9.15	9.23	9.80	8.12	8.63
6	---	---	---	---	---	---	---	8.50	9.26	9.75	8.18	8.75
7	---	---	---	---	---	---	---	8.50	9.24	9.59	8.30	8.88
8	---	---	---	---	---	---	---	8.58	9.24	9.51	8.48	9.01
9	---	---	---	---	---	---	---	8.56	9.38	9.22	8.52	9.11
10	---	---	---	---	---	---	---	7.71	9.39	9.02	8.66	9.18
11	---	---	---	---	---	---	---	7.21	9.39	9.17	8.74	9.23
12	---	---	---	---	---	---	---	6.93	9.39	9.29	8.91	9.26
13	---	---	---	---	---	---	---	6.87	9.33	9.36	9.03	9.32
14	---	---	---	---	---	---	---	6.96	9.37	9.41	9.06	9.33
15	---	---	---	---	---	---	---	7.13	9.43	9.41	9.04	9.41
16	---	---	---	---	---	---	---	7.37	9.46	9.55	9.05	9.48
17	---	---	10.63	---	---	---	---	7.57	9.45	9.58	9.19	9.53
18	---	---	---	---	---	---	---	7.76	9.27	9.61	9.26	9.54
19	---	---	---	---	---	---	---	7.92	9.38	9.66	9.32	9.56
20	---	---	---	---	---	---	---	8.18	9.43	9.66	9.34	9.65
21	10.67	---	---	---	---	---	---	8.30	9.44	9.60	9.34	9.67
22	---	---	---	---	---	---	---	8.37	9.47	9.64	9.43	9.58
23	---	---	---	---	---	---	9.25	8.42	9.53	9.70	9.52	9.43
24	---	---	---	---	---	---	9.25	8.48	9.58	9.76	9.55	9.42
25	---	---	---	---	---	---	9.19	8.62	9.62	9.82	9.55	9.13
26	---	---	---	---	---	---	9.32	8.73	9.61	9.82	9.56	8.95
27	---	---	---	---	---	---	9.40	8.79	9.68	9.77	9.67	8.55
28	---	---	---	---	---	---	9.38	8.77	9.70	9.43	9.70	8.24
29	---	---	---	---	---	---	9.48	8.82	9.80	9.35	9.73	8.24
30	---	---	---	---	---	---	9.46	8.87	9.84	9.44	9.82	8.27
31	---	---	---	---	---	---	---	9.04	---	9.50	9.83	---
MAX	10.67	---	10.63	---	---	---	9.48	9.34	9.84	9.86	9.83	9.76

WTR YR 2003 LOW 10.67



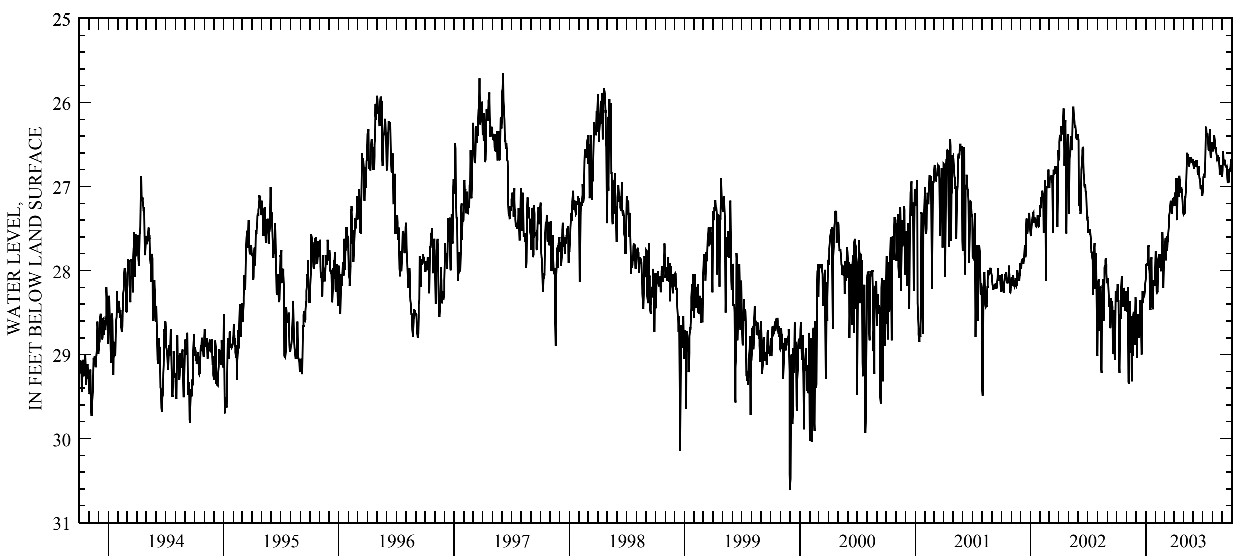
405009083172600. LOCAL NUMBER, WY-1

LOCATION.—Latitude 40°50'09", longitude 83°17'26", Hydrologic Unit 04100011, State Route 199, Upper Sandusky, Ohio. Owner: Karg Supply Company.
AQUIFER.—Limestone of Silurian Age.
WELL CHARACTERISTICS.—Drilled unused artesian well, diameter 5 in, depth 90 ft, cased.
INSTRUMENTATION.—Digital recorder, 60-minute punch.
DATUM.—Elevation of land-surface datum is 850 ft above sea level (from topographic map). Measuring point: Floor of instrument shelter 3.00 ft above land-surface datum.
REMARKS.—Station operated by Ohio Department of Natural Resources (ODNR), Division of Water. Some historical records not published by the USGS are available from ODNR.
PERIOD OF RECORD.—September 1951 to current year.
EXTREMES FOR PERIOD OF RECORD.—Maximum daily low, 40.90 ft below land-surface datum, July 12, 15, 17, 21, Aug. 26, 1961; minimum daily low, 25.45 ft below land-surface datum, Mar. 26 and Apr. 21, 1982.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28.34	28.27	28.36	28.10	27.86	27.79	27.12	27.33	26.72	27.07	26.52	26.88
2	28.33	28.42	28.43	28.01	27.77	27.69	27.23	27.32	26.77	27.02	26.57	26.81
3	28.25	28.48	28.69	27.93	27.81	27.66	27.22	27.32	26.79	26.89	26.58	26.66
4	28.16	28.49	28.96	27.92	28.12	27.66	27.07	27.32	26.75	26.88	26.58	26.58
5	28.25	28.38	29.04	27.92	28.25	27.61	27.12	27.31	26.70	26.89	26.50	26.67
6	28.36	28.20	28.69	27.91	28.26	27.88	27.12	27.13	26.74	26.89	26.47	26.71
7	28.36	28.96	28.57	27.94	28.25	27.73	27.11	27.13	26.75	26.89	26.39	26.72
8	28.91	29.32	28.52	27.87	28.26	27.67	26.90	27.07	26.75	26.76	26.46	26.71
9	29.13	29.35	28.78	27.71	27.99	27.59	27.08	27.03	26.74	26.71	26.52	26.68
10	29.22	28.82	28.80	27.71	27.86	27.63	27.36	26.90	26.70	26.56	26.55	26.71
11	28.91	28.47	28.71	27.84	27.84	27.77	27.40	26.75	26.70	26.30	26.55	26.74
12	28.58	28.37	28.60	27.94	27.81	27.61	27.18	26.61	26.71	26.29	26.53	26.76
13	28.52	28.84	28.52	28.02	27.94	27.66	26.91	26.61	26.72	26.37	26.58	26.77
14	28.56	28.98	28.42	28.15	27.97	27.58	26.90	26.63	26.78	26.38	26.64	26.77
15	28.56	28.97	28.35	28.45	27.83	27.49	27.03	26.63	26.83	26.38	26.66	26.76
16	28.22	28.59	28.38	28.47	27.81	27.43	27.05	26.68	26.84	26.38	26.68	26.79
17	28.07	28.54	28.71	28.04	27.89	27.35	27.12	26.73	26.86	26.44	26.66	26.90
18	28.25	29.21	28.79	27.92	27.95	27.30	26.87	26.75	26.81	26.47	26.64	26.95
19	28.30	29.32	29.00	27.84	28.00	27.25	26.91	26.75	26.76	26.56	26.64	26.95
20	28.40	28.84	28.95	27.95	28.01	27.25	26.92	26.74	26.86	26.57	26.68	26.92
21	28.43	29.02	28.39	28.29	27.86	27.17	27.05	26.70	26.90	26.57	26.65	26.95
22	28.30	28.93	28.24	28.36	27.77	27.21	27.07	26.66	26.91	26.51	26.69	26.94
23	28.21	28.53	28.38	28.44	27.54	27.26	27.01	26.66	26.92	26.32	26.81	26.80
24	28.22	28.50	28.38	28.45	27.63	27.27	27.04	26.66	27.02	26.37	26.86	26.79
25	28.23	28.50	28.28	28.43	28.11	27.24	27.03	26.66	27.03	26.60	26.85	26.79
26	28.35	28.77	28.28	28.13	28.21	27.33	27.06	26.69	27.00	26.66	26.79	26.80
27	28.45	28.89	28.32	28.11	28.00	27.20	27.12	26.71	27.01	26.65	26.78	26.76
28	28.48	28.69	28.32	28.14	27.86	27.15	27.18	26.71	27.06	26.60	26.74	26.69
29	28.39	28.55	28.25	28.13	---	27.14	27.27	26.70	27.10	26.50	26.77	26.69
30	28.31	28.32	28.25	28.18	---	27.20	27.31	26.68	27.10	26.47	26.84	26.72
31	28.24	---	28.17	28.01	---	27.20	---	26.68	---	26.50	26.88	---
MAX	29.22	29.35	29.04	28.47	28.26	27.88	27.40	27.33	27.10	27.07	26.88	26.95

CAL YR 2002 LOW 29.35
WTR YR 2003 LOW 29.35



PROJECT DATA
City of Akron Water Diversion

The Ohio and Erie Canal runs from the Little Cuyahoga River through the City of Akron, through Summit Lake, past Lake Nesmith to Wolf Creek, a tributary to the Tuscarawas River. Water is diverted from Long Lake, one of the Portage Lakes, into the canal system at the Long Lake Feeder Water Control structure near Lake Nesmith. The water can either flow north into the Little Cuyahoga River or south to the Tuscarawas River. The following three discharge gaging stations are on the Ohio and Erie Canal system in the Akron area. The Long Lake Feeder gage measures water flow into the canal, while the Ohio and Erie Canal at Lock 1 gage and the Wolf Creek Outlet gage measure water flow to the north and south, respectively. The tables contain the daily mean discharges at each gaging station.

410121081330300 LONG LAKE FEEDER TO OHIO & ERIE CANAL AT AKRON, OHIO

LOCATION.—Latitude 41°01′21″, longitude 81°33′03″, Summit County, Hydrologic Unit 05040001, in canal feeder gate house control structure at north end of Long Lake Channel on west side of State Route 93 (Manchester Road), 0.1 mi south of Lake Nesmith, at Akron, Ohio.
DRAINAGE AREA.—Not determined.
PERIOD OF RECORD.—June 12, 1998 to current year.
GAGE.—Acoustic Doppler Flow meter records water depth, discharge, and velocity.
REMARKS.—Records good except for periods of estimated daily discharge, which are fair, and Oct. 24, 25, Nov. 29 - Dec. 10, 28-31, Jan. 1, 9-31, Feb. 5-28, Mar. 5-7, Apr. 21-30, May 1-6, Aug. 3-7, 11-16, and 22-31, which are poor. Flow is completely regulated by operation of gates at flow control structure upstream of gage.

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	21	e23	e26	19	18	38	e26	22	19	27	e21
2	e31	22	e23	e31	22	24	37	e26	22	e22	25	e22
3	e23	20	e22	e26	24	21	35	e26	22	e35	e26	e22
4	e22	22	e22	e27	24	24	38	e26	22	38	e26	e25
5	16	21	e22	e26	e24	e27	36	e26	22	e37	e26	e25
6	16	19	e24	28	e24	e25	35	e26	24	e35	e26	e25
7	17	20	e21	27	e18	e22	37	23	22	e36	e26	e25
8	17	24	e21	e27	e18	24	33	24	21	60	29	e25
9	18	19	e24	e26	e17	20	32	28	23	47	25	e25
10	18	18	e26	26	e18	22	30	25	22	e36	24	e35
11	21	17	25	e24	e17	24	33	23	21	e36	e24	e33
12	18	19	26	e24	e16	27	32	26	22	e36	e24	e36
13	18	17	28	e24	e16	26	32	27	25	e36	e24	27
14	19	17	27	e25	e18	26	31	25	22	e36	e23	28
15	18	18	28	e25	e18	30	27	24	23	e35	e23	34
16	18	22	27	e25	e18	34	25	25	21	e41	e23	32
17	18	22	27	e26	e18	34	26	26	24	e42	23	27
18	21	23	e27	e26	e18	33	30	26	24	e44	21	27
19	18	19	e27	e26	e18	36	25	24	25	e51	23	38
20	19	18	32	e27	e18	36	25	23	26	e47	21	28
21	36	17	28	e27	e22	35	e28	23	23	e46	22	33
22	31	22	27	e27	e29	31	e30	22	25	e42	e24	43
23	30	21	27	e27	e29	33	e30	25	25	43	e25	38
24	e33	19	26	e27	e29	31	e30	21	21	40	e24	e35
25	e29	18	25	e27	e29	28	e28	21	18	33	e24	26
26	17	19	26	e27	e29	29	e26	21	19	30	e22	28
27	18	24	26	e27	e29	26	e26	22	23	e28	e23	46
28	18	30	e23	e27	e26	36	e26	21	20	e26	e23	47
29	20	e28	e26	e27	---	37	e26	19	18	25	e22	40
30	20	e23	e29	e27	---	40	e26	18	18	24	e22	39
31	19	---	e32	e26	---	39	---	19	---	24	e22	---
TOTAL	673	619	797	818	605	898	913	737	665	1130	742	935
MEAN	21.7	20.6	25.7	26.4	21.6	29.0	30.4	23.8	22.2	36.5	23.9	31.2
MAX	36	30	32	31	29	40	38	28	26	60	29	47
MIN	16	17	21	24	16	18	25	18	18	19	21	21

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	19.9	18.3	21.0	21.7	21.3	21.8	22.4	21.1	21.4	22.1	20.0	20.1
MAX	27.0	22.2	25.7	26.4	24.5	29.0	30.4	23.8	22.2	36.5	23.9	31.2
(WY)	1999	1999	2003	2003	1999	2003	2003	2003	2003	2003	2003	2003
MIN	10.8	10.9	17.5	17.6	18.6	15.8	18.4	18.0	20.6	17.7	18.3	12.7
(WY)	2001	2001	2002	2002	2002	2002	2001	2000	1999	2002	2001	2000

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1998 - 2003	
ANNUAL TOTAL	7347		9532			
ANNUAL MEAN	20.1		26.1		20.9	
HIGHEST ANNUAL MEAN					26.1	2003
LOWEST ANNUAL MEAN					17.8	2001
HIGHEST DAILY MEAN	37	Aug 31	60	Jul 8	73	Oct 16 1998
LOWEST DAILY MEAN	10	Sep 7	16	Oct 5	9.0	Nov 21 2000
ANNUAL SEVEN-DAY MINIMUM	12	Sep 7	17	Feb 7	9.2	Nov 19 2000
MAXIMUM PEAK FLOW			85	Jul 8	85	Jul 8 2003
MAXIMUM PEAK STAGE			4.33	Jul 8	4.33	Jul 8 2003
INSTANTANEOUS LOW FLOW			8.8	Nov 19	8.8	Nov 19 2002
10 PERCENT EXCEEDS	26		36		26	
50 PERCENT EXCEEDS	19		25		21	
90 PERCENT EXCEEDS	16		18		15	

e Estimated.

410433081312500 OHIO & ERIE CANAL AT LOCK 1 AT AKRON, OHIO

LOCATION.—Latitude 41°04′33″, longitude 81°31′25″, Summit County, Hydrologic Unit 05040001, at lower pool level of Lock 1, at south end of culvert under West Exchange Street, 1.6 mi. northeast of Summit Lake, at Akron, Ohio.
DRAINAGE AREA.—Not determined.
PERIOD OF RECORD.—June 1, 1998 to current year.
GAGE.—Water-stage recorder. Datum of gage approximately 954 ft above sea level.
REMARKS.—Record good except for periods of estimated record, flows greater than 175 ft^3/s, and a period of significant in-channel weed growth (May 10 to September 30), which are fair. Flow is completely regulated by operation of gate at Lock 1.

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	14	27	34	18	25	25	27	48	22	43	51
2	12	12	19	30	18	25	26	40	11	21	34	54
3	13	2.3	14	24	25	24	25	24	49	32	41	21
4	9.0	16	4.8	23	35	23	40	16	33	29	16	23
5	8.8	21	10	23	18	33	58	45	22	42	55	25
6	9.5	21	19	13	18	30	26	30	28	44	57	20
7	19	14	16	17	19	24	48	19	28	83	37	21
8	14	12	14	26	19	25	30	42	48	214	33	13
9	13	11	14	29	19	42	25	57	40	69	32	15
10	15	32	15	19	19	35	22	58	26	73	39	15
11	14	31	17	17	19	26	25	33	29	73	18	26
12	16	14	35	17	19	30	25	34	40	28	18	19
13	21	12	18	25	19	36	17	33	90	27	18	17
14	20	8.5	22	18	19	45	23	15	44	27	18	17
15	7.5	8.6	27	19	19	11	24	27	25	31	19	29
16	24	14	25	19	19	23	24	55	44	36	36	17
17	9.7	25	13	19	20	31	23	12	30	23	24	17
18	14	13	23	20	20	13	25	23	31	17	14	17
19	25	14	30	19	20	24	33	32	31	17	14	92
20	20	14	33	19	20	21	21	51	28	18	15	31
21	29	11	21	19	24	31	23	57	29	121	15	20
22	31	40	34	18	62	24	26	20	29	168	33	49
23	28	17	16	18	32	13	17	36	29	55	20	28
24	14	17	15	19	23	21	14	33	28	31	20	21
25	27	16	25	19	22	26	30	28	28	12	9.1	10
26	43	16	27	19	35	29	25	21	28	20	5.8	15
27	14	14	16	26	15	22	18	21	21	64	33	85
28	15	13	17	17	17	21	27	25	16	92	16	26
29	18	14	18	18	---	32	16	33	17	37	20	26
30	18	19	35	22	---	24	26	36	46	18	28	19
31	14	---	56	26	---	17	---	86	---	54	24	---
TOTAL	547.5	486.4	675.8	651	632	806	787	1069	996	1598	804.9	839
MEAN	17.7	16.2	21.8	21.0	22.6	26.0	26.2	34.5	33.2	51.5	26.0	28.0
MAX	43	40	56	34	62	45	58	86	90	214	57	92
MIN	7.5	2.3	4.8	13	15	11	14	12	11	12	5.8	10

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	17.9	12.7	15.1	16.9	16.8	17.3	20.2	23.6	21.6	25.0	21.4	19.7
MAX	21.7	16.2	21.8	21.0	22.6	26.0	26.2	34.5	33.2	51.5	26.0	28.0
(WY)	2002	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003
MIN	13.1	6.28	11.4	13.2	14.7	13.0	17.6	15.5	15.4	15.4	16.4	14.5
(WY)	2001	2001	2001	2001	2001	2001	2001	1999	1998	2001	2002	2001

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1998 - 2003	
ANNUAL TOTAL	6400.94		9892.6			
ANNUAL MEAN	17.5		27.1		19.2	
HIGHEST ANNUAL MEAN					27.1	2003
LOWEST ANNUAL MEAN					14.5	2001
HIGHEST DAILY MEAN	71	Jul 29	214	Jul 8	214	Jul 8 2003
LOWEST DAILY MEAN	0.94	Jul 2	2.3	Nov 3	0.70	Dec 15 2000
ANNUAL SEVEN-DAY MINIMUM	6.1	Aug 8	12	Oct 1	2.2	Nov 12 2000
MAXIMUM PEAK FLOW			311	Jul 7	337	Aug 25 1998
MAXIMUM PEAK STAGE			3.23	Jul 7	3.44	Aug 25 1998
INSTANTANEOUS LOW FLOW			1.0	Feb 27	0.60	Nov 21 2001
10 PERCENT EXCEEDS	29		44		32	
50 PERCENT EXCEEDS	15		23		16	
90 PERCENT EXCEEDS	8.1		14		8.4	

410014081362600 WOLF CREEK OUTLET OF OHIO & ERIE CANAL AT BARBERTON, OHIO

LOCATION. —Latitude 41°00′14″, longitude 81°36′26″, Summit County, Hydrologic Unit 05040001, at Wolf Road culvert for the Ohio and Erie Canal outlet, 0.1 mi. above confluence with Wolf Creek, 0.2 mi. from confluence of Wolf Creek and Tuscarawas River, 0.6 mi. east of Columbia Lake, at Barberton, Ohio.
DRAINAGE AREA.—Not determined.
PERIOD OF RECORD.—June 1, 1998 to current year.
GAGE.—Water-stage recorder. Datum of gage approximately 954 ft above sea level. Prior to Apr. 24, 2001 at site 150 ft downstream at datum 2.46 ft lower.
REMARKS.—Records good except Jan. 18, 23, 27, May 19-28, Jun. 12-25,Aug. 13, and 14, which are poor. Flow is completely regulated by operation of gate at outlet structure and by canal operations at other locations.

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	2.9	3.3	5.1	4.1	4.7	3.7	3.7	3.5	2.5	5.0	7.4
2	3.2	2.9	2.8	5.1	4.4	4.6	3.3	4.7	3.0	2.3	4.3	7.5
3	3.1	3.5	2.8	4.8	4.4	4.4	2.7	3.6	4.0	3.0	3.9	4.5
4	3.4	4.3	3.4	4.4	4.9	4.0	3.6	3.7	3.1	3.1	3.8	3.4
5	4.0	3.9	4.2	4.1	4.5	4.9	4.9	4.9	2.8	3.2	4.7	4.7
6	4.3	3.6	4.2	4.3	4.5	4.5	3.8	3.4	3.3	3.0	5.4	6.0
7	4.3	2.9	3.6	5.2	4.8	3.9	4.5	3.6	3.3	3.3	4.7	5.8
8	4.2	3.0	3.6	5.0	4.9	4.6	3.2	5.1	3.4	8.8	4.8	5.7
9	3.9	3.5	3.7	4.7	4.8	5.1	3.1	5.8	3.4	6.0	4.9	5.6
10	4.0	4.2	4.2	4.3	4.8	4.4	3.1	5.7	3.0	5.2	5.1	5.9
11	4.2	4.4	4.7	4.7	4.9	3.8	3.3	3.7	3.1	5.0	4.7	5.9
12	4.2	3.9	4.9	5.0	4.8	3.5	2.9	3.7	e3.5	4.1	4.7	5.7
13	4.0	3.5	3.9	4.8	4.8	5.3	3.2	3.5	e7.0	3.7	e4.8	5.5
14	3.7	e3.6	5.4	4.5	4.9	4.2	3.2	3.1	e4.8	3.6	e4.9	5.3
15	3.5	3.8	5.1	4.6	4.9	3.8	3.0	3.9	e4.2	3.6	5.2	5.5
16	4.2	4.5	4.8	4.7	5.1	4.8	3.1	4.4	e3.8	3.8	5.6	4.9
17	3.7	3.8	4.5	5.0	5.5	4.2	3.1	3.4	e3.7	3.6	5.5	4.7
18	4.1	3.0	4.8	e5.0	5.3	3.8	3.3	4.1	e3.6	3.7	5.3	4.7
19	4.8	3.1	4.7	4.9	5.0	4.7	3.2	e4.2	e3.4	4.2	5.3	8.3
20	4.1	3.0	5.4	4.9	5.0	4.2	2.4	e4.0	e3.3	4.4	5.5	6.2
21	4.5	3.2	4.9	4.8	5.2	4.4	3.2	e7.5	e3.2	6.6	5.7	5.2
22	5.1	4.2	4.7	4.4	6.0	3.3	3.8	e5.2	e3.1	8.9	5.9	6.0
23	4.2	3.2	3.6	e4.8	5.8	3.7	3.5	e4.5	e3.0	6.2	5.6	6.3
24	4.3	3.3	4.3	4.9	5.3	3.7	4.0	e4.3	e2.8	4.4	5.4	4.5
25	5.5	3.1	5.0	4.9	5.0	3.5	4.5	e4.0	e2.7	4.0	5.4	3.8
26	5.0	3.1	4.0	5.1	4.5	4.1	3.7	e4.5	2.6	4.3	5.8	4.4
27	3.7	3.2	4.1	e4.8	3.3	3.4	3.6	e4.0	2.5	5.1	6.3	7.6
28	3.8	3.4	4.6	4.4	4.8	3.3	3.5	e3.1	2.6	6.0	5.9	6.6
29	3.9	3.4	4.8	4.8	---	3.9	3.8	3.3	2.6	4.4	6.1	5.4
30	3.5	3.7	5.5	4.8	---	3.8	4.1	3.2	3.1	4.0	6.8	4.8
31	3.1	---	5.7	4.2	---	3.7	---	5.3	---	4.2	6.0	---
TOTAL	125.0	105.1	135.2	147.0	136.2	128.2	104.3	131.1	101.4	138.2	163.0	167.8
MEAN	4.03	3.50	4.36	4.74	4.86	4.14	3.48	4.23	3.38	4.46	5.26	5.59
MAX	5.5	4.5	5.7	5.2	6.0	5.3	4.9	7.5	7.0	8.9	6.8	8.3
MIN	3.1	2.9	2.8	4.1	3.3	3.3	2.4	3.1	2.5	2.3	3.8	3.4

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2003, BY WATER YEAR (WY)

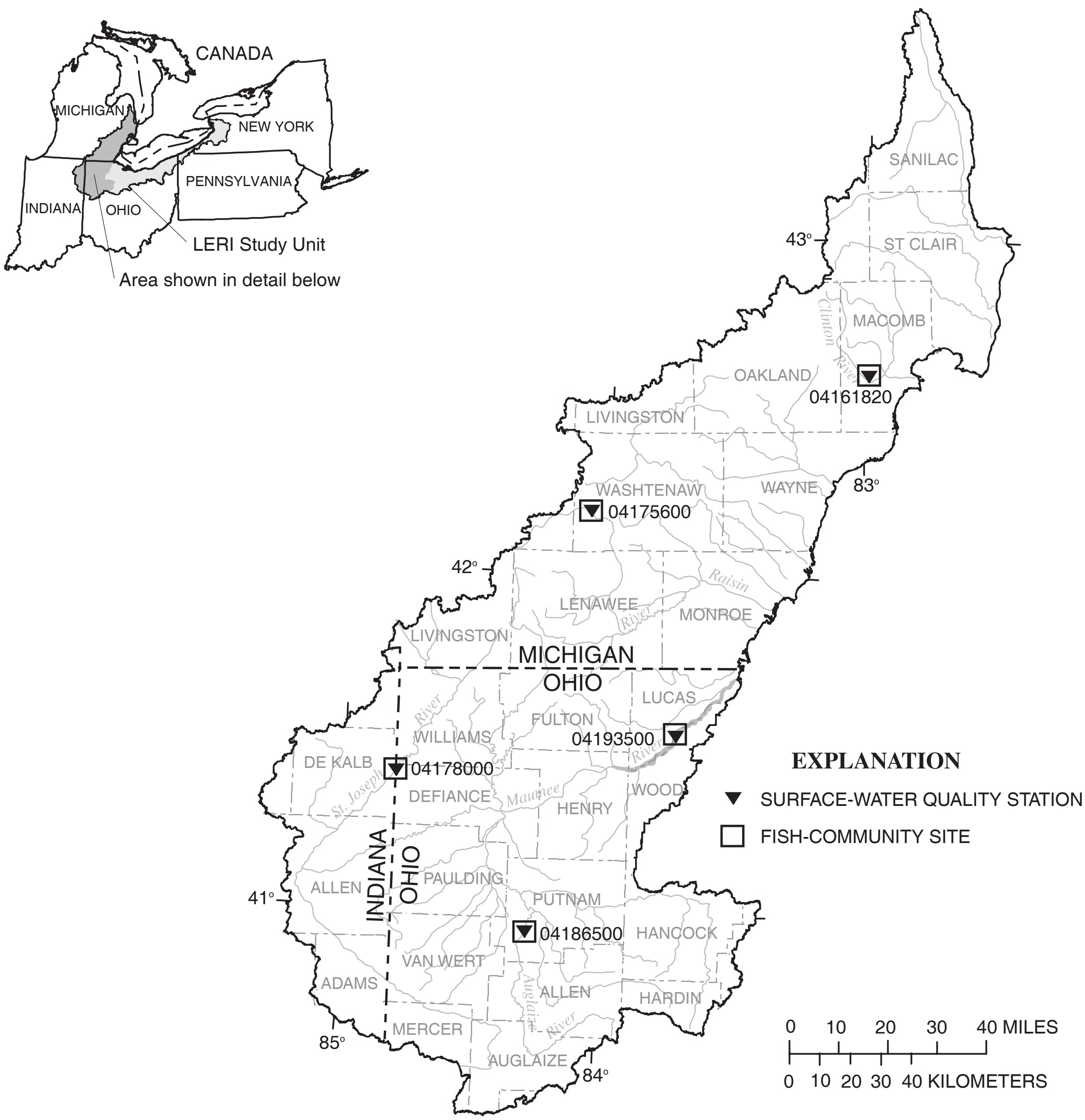
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.39	4.06	4.45	4.52	4.31	3.74	3.50	3.17	3.27	3.94	4.46	4.20
MAX	7.98	7.19	8.31	7.59	6.52	4.14	3.98	4.23	4.91	5.55	6.03	6.15
(WY)	1999	1999	1999	1999	1999	2003	2002	2003	1998	2002	2002	1998
MIN	2.72	2.93	3.00	2.88	3.29	3.03	3.08	2.64	1.92	2.80	2.92	1.66
(WY)	2000	2000	2000	2002	2000	2000	2001	2000	2000	2001	2000	2000

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1998 - 2003	
ANNUAL TOTAL	1478.1		1582.5			
ANNUAL MEAN	4.05		4.34		3.92	
HIGHEST ANNUAL MEAN					5.15	1999
LOWEST ANNUAL MEAN					2.81	2000
HIGHEST DAILY MEAN	10	Jun 19	8.9	Jul 22	13	Oct 8 1998
LOWEST DAILY MEAN	1.4	Jun 8	2.3	Jul 2	0.07	Jul 2 2000
ANNUAL SEVEN-DAY MINIMUM	1.8	Jun 7	2.6	Jun 26	1.2	Sep 12 2000
MAXIMUM PEAK FLOW			11	Jul 21	34	Mar 17 1999
MAXIMUM PEAK STAGE			10.94	Jul 21	10.94	Jul 21 2003
INSTANTANEOUS LOW FLOW			2.0	Jul 2	0.01	Jul 2 2000
10 PERCENT EXCEEDS	5.9		5.6		6.1	
50 PERCENT EXCEEDS	3.8		4.2		3.6	
90 PERCENT EXCEEDS	2.5		3.1		2.2	

e Estimated.

PROJECT DATA
Results from Selected Sites in the Lake Erie-Lake St. Clair Drainages
(National Water-Quality Assessment Program)

The data described in the following tables were collected and analyzed as part of NAWQA (National Water-Quality Assessment Program) project in the Lake Erie and Lake St. Clair Drainages (LERI). 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. The period of high-intensity data collection in the LERI drainage was in the water years 1996-1998. The following stream-water-quality data are being reported in this publication as part of the NAWQA National Surface-Water Trend Network for water year 2003: Clinton River at Sterling Heights, Michigan (04161820), River Raisin near Manchester, Michigan (04175600), St. Joseph River near Newville, Indiana (04178000), Auglaize River near Ft. Jennings, Ohio (04186500), and Maumee River at Waterville, Ohio (04193500).



WATER-QUALITY RECORDS

04161820 CLINTON RIVER AT STERLING HEIGHTS, MICHIGAN

LOCATION.—Latitude 40°36′52″, longitude 83°01′36″, Macomb County, Michigan, Hydrologic Unit 04090003, on right bank at upstream side of bridge on Riverland Road, in Sterling Heights, Michigan.
DRAINAGE AREA.—309 mi^2.
REMARKS.—Discharge is measured at this site and is published in the Michigan Annual Report.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

[(00061), USGS National Water Information System parameter code; cfs, cubic feet per second; uS/cm, microsiemens per centimeter; deg C, degrees Celsius; mm of Hg, millimeters of mercury; mg/L, milligrams per liter; <, concentration or value reported is less than that indicated]

Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)
OCT									
29...	1045	67	871	8.3	2.0	6.7	746	11.1	93
NOV									
12...	1115	113	739	7.2	5.5	9.1	747	9.1	81
DEC									
10...	1100	211	674	8.2	.5	.1	746	13.9	97
JAN									
30...	1130	120	1710	8.0	-7.0	.0	750	13.8	97
FEB									
12...	1000	156	1450	8.3	-13.0	.0	742	13.7	97
APR									
16...	0930	284	968	8.1	7.0	13.0	740	9.7	95
MAY									
14...	0945	292	942	8.1	10.0	12.9	746	9.7	94
JUN									
10...	1045	249	1010	8.0	22.5	16.3	746	9.0	94
JUL									
24...	0930	86	1050	8.1	22.0	19.5	750	8.9	99
AUG									
27...	0830	71	941	7.8	16.5	22.4	744	6.6	78

Date	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate water, fltrd, mg/L (00945)	Chloride, water, fltrd, mg/L (00940)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Phosphorus, water, unfltrd mg/L (00665)
OCT									
29...	245	201	42	120	.021	2.0	.1	.6	.05
NOV									
12...	209	171	38	110	.013	1.1	.1	.5	.07
DEC									
10...	232	190	35	140	.010	1.7	.1	.6	.08
JAN									
30...	259	212	45	390	.041	3.2	.4	1.0	.07
FEB									
12...	260	213	50	290	.023	3.2	.3	.8	.07
APR									
16...	211	173	41	170	.011	1.0	<.04	.7	.05
MAY									
14...	212	174	43	160	.022	1.3	<.04	.7	.06
JUN									
10...	214	175	44	170	.042	1.7	<.04	1.0	.13
JUL									
24...	234	192	46	180	.039	2.2	.1	.7	.09
AUG									
27...	188	154	42	160	.039	4.7	<.04	1.0	.20

WATER-QUALITY RECORDS—CONTINUED

04161820 CLINTON RIVER AT STERLING HEIGHTS, MICHIGAN—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(00671), USGS National Water Information System parameter code; mg/L, milligrams per liter; ug/L; micrograms per liter; <, concentration or value reported is less than that indicated; E, estimated; --, no data]

Date	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Sus-pended sedi-ment concen-tration mg/L (80154)	Aceto-chlor, water, fltrd, ug/L (49260)	Ala-chlor, water, fltrd, ug/L (46342)	Atra-zine, water, fltrd, ug/L (39632)	Deethyl-atra-zine, water, fltrd, ug/L (04040)	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)
OCT									
29...	.03	3	<.006	<.004	.03	E.010	<.050	<.010	<.002
NOV									
12...	.03	103	--	--	--	--	--	--	--
DEC									
10...	.05	5	<.006	<.004	.03	E.011	<.050	<.010	<.002
JAN									
30...	.03	4	--	--	--	--	--	--	--
FEB									
12...	.03	5	<.006	<.004	.02	E.010	<.050	<.010	<.002
APR									
16...	<.02	15	.012	<.004	.07	E.010	<.050	<.010	<.002
MAY									
14...	<.02	31	.020	<.004	.03	E.017	<.050	<.010	<.002
JUN									
10...	E.01	49	.065	.01	.10	E.032	<.050	<.010	<.002
JUL									
24...	.04	10	<.006	<.004	.03	<.006	<.050	<.010	<.002
AUG									
27...	.10	17	<.006	<.004	.02	E.007	<.050	<.010	<.002

Date	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)	Cyana-zine, water, fltrd, ug/L (04041)	DCPA, water fltrd 0.7u GF ug/L (82682)	p,p'-DDE, water, fltrd, ug/L (34653)	Diazi-non, water, fltrd, ug/L (39572)	Diel-drin, water, fltrd, ug/L (39381)	2,6-Di-ethyl-aniline water fltrd 0.7u GF ug/L (82660)
OCT									
29...	E.005	<.020	<.005	<.018	<.003	<.003	.006	<.005	<.006
NOV									
12...	--	--	--	--	--	--	--	--	--
DEC									
10...	<.041	<.020	<.005	<.018	<.003	<.003	E.009	<.005	<.006
JAN									
30...	--	--	--	--	--	--	--	--	--
FEB									
12...	<.041	<.020	<.005	<.018	<.003	<.003	<.005	<.005	<.006
APR									
16...	E.013	<.020	<.005	<.018	<.003	<.003	.005	<.005	<.006
MAY									
14...	E.038	<.020	<.005	<.018	<.003	<.003	.010	<.005	<.006
JUN									
10...	E.015	<.020	<.005	<.018	<.003	<.003	.016	<.005	<.006
JUL									
24...	E.007	<.020	<.005	<.018	<.003	<.003	.011	<.005	<.006
AUG									
27...	E.083	<.020	<.005	<.018	<.003	<.003	.012	<.005	<.006

WATER-QUALITY RECORDS—CONTINUED

04161820 CLINTON RIVER AT STERLING HEIGHTS, MICHIGAN—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(82677), USGS National Water Information System parameter code; ug/L; micrograms per liter; <, concentration or value reported is less than that indicated; E, estimated; --, no data]

Date	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)	Fonofos water, fltrd, ug/L (04095)	alpha-HCH, water, fltrd, ug/L (34253)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (82666)	Mala-thion, water, fltrd, ug/L (39532)
OCT									
29...	<.02	<.002	<.009	<.005	<.003	<.005	<.004	<.035	<.031
NOV									
12...	--	--	--	--	--	--	--	--	--
DEC									
10...	<.02	<.002	<.009	<.005	<.003	<.005	<.004	<.035	<.027
JAN									
30...	--	--	--	--	--	--	--	--	--
FEB									
12...	<.02	<.002	<.009	<.005	<.003	<.005	<.004	<.035	<.027
APR									
16...	<.02	<.002	<.009	<.005	<.003	<.005	<.004	<.035	<.027
MAY									
14...	<.02	<.002	<.009	<.005	<.003	<.005	<.004	<.035	<.027
JUN									
10...	<.02	<.002	<.009	<.005	<.003	<.005	<.004	<.035	<.027
JUL									
24...	<.02	<.002	<.009	<.005	<.003	<.005	<.004	<.035	<.027
AUG									
27...	<.02	<.030	<.009	<.005	<.003	<.005	<.004	<.035	<.027

Date	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)	Para-thion, water, fltrd, ug/L (39542)	Methyl para-thion, water, fltrd 0.7u GF ug/L (82667)	Peb-ulate, water, fltrd 0.7u GF ug/L (82669)	Pendi-meth-alin, water, fltrd 0.7u GF ug/L (82683)	cis-Per-methrin water fltrd 0.7u GF ug/L (82687)
OCT									
29...	E.009	<.006	<.002	<.007	<.010	<.006	<.004	<.022	<.006
NOV									
12...	--	--	--	--	--	--	--	--	--
DEC									
10...	E.003	<.006	<.002	<.007	<.010	<.006	<.004	<.022	<.006
JAN									
30...	--	--	--	--	--	--	--	--	--
FEB									
12...	<.013	<.006	<.002	<.007	<.010	<.006	<.004	<.022	<.006
APR									
16...	.13	<.006	<.002	<.007	<.010	<.006	<.004	<.022	<.006
MAY									
14...	.02	<.006	<.002	<.007	<.010	<.006	<.004	E.017	<.006
JUN									
10...	.04	<.006	<.002	<.007	<.010	<.006	<.004	<.022	<.006
JUL									
24...	E.008	<.006	<.002	<.007	<.010	<.006	<.004	<.022	<.006
AUG									
27...	E.006	<.006	<.002	<.007	<.010	<.006	<.004	<.022	<.006

WATER-QUALITY RECORDS—CONTINUED

04161820 CLINTON RIVER AT STERLING HEIGHTS, MICHIGAN—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(82664), USGS National Water Information System parameter code; ug/L; micrograms per liter;<, concentration or value reported is less than that indicated; E, estimated; --, no data]

Date	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)
OCT									
29...	<.011	E.01	<.004	<.010	<.011	<.02	.01	<.02	<.034
NOV									
12...	--	--	--	--	--	--	--	--	--
DEC									
10...	<.011	E.01	<.004	<.010	<.011	<.02	.01	<.02	<.034
JAN									
30...	--	--	--	--	--	--	--	--	--
FEB									
12...	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034
APR									
16...	<.011	E.01	<.004	<.010	<.011	<.02	.01	<.02	<.034
MAY									
14...	<.011	E.01	<.004	<.010	<.011	<.02	.01	<.02	<.034
JUN									
10...	<.011	E.01	<.004	<.010	<.011	<.02	.05	<.02	<.034
JUL									
24...	<.011	.02	<.004	<.010	<.011	<.02	<.005	.02	<.034
AUG									
27...	<.011	.21	<.004	<.010	<.011	<.02	E.003	<.02	<.050

Date	Terbu- fos, water, fltrd 0.7u GF ug/L (82675)	Thio- bencarb water fltrd 0.7u GF ug/L (82681)	Tri- allate, water, fltrd 0.7u GF ug/L (82678)	Tri- flur- alin, water, fltrd 0.7u GF ug/L (82661)
OCT				
29...	<.02	<.005	<.002	<.009
NOV				
12...	--	--	--	--
DEC				
10...	<.02	<.005	<.002	<.009
JAN				
30...	--	--	--	--
FEB				
12...	<.02	<.005	<.002	<.009
APR				
16...	<.02	<.005	<.002	<.009
MAY				
14...	<.02	<.005	<.002	<.009
JUN				
10...	<.02	<.005	<.002	<.009
JUL				
24...	<.02	<.005	<.002	<.009
AUG				
27...	<.02	<.005	<.002	<.009

WATER-QUALITY RECORDS—CONTINUED

04175600 RIVER RAISIN NEAR MANCHESTER, MICHIGAN

LOCATION.—Latitude 42°10′05″, longitude 84°04′34″, Washtenaw County, Michigan, Hydrologic Unit 04100002, on left bank at downstream side of bridge on Sharon Valley Road, 2.5 miles northwest of Manchester, Michigan.
DRAINAGE AREA.—132 mi^2.
REMARKS.—Discharge is measured at this site and is published in the Michigan Annual Report.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

[(00061), USGS National Water Information System parameter code; cfs, cubic feet per second; uS/cm, microsiemens per centimeter; deg C, degrees Celsius; mm of Hg, millimeters of mercury; mg/L, milligrams per liter; <, concentration or value reported is less than that indicated; E, estimated]

Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unf uS/cm 25 deg C (00095)	pH, water, unfltrd field, std units (00400)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301
OCT									
29...	1545	20	558	8.2	4.0	6.4	734	10.2	86
DEC									
10...	1400	36	581	8.3	6.0	.5	738	13.0	93
FEB									
12...	1400	27	586	8.2	-8.0	2.5	742	12.7	96
APR									
16...	1330	119	503	8.1	18.0	15.7	734	9.5	99
MAY									
13...	1615	187	483	8.2	12.5	14.7	744	11.3	114
JUN									
10...	1430	47	522	8.0	22.5	17.8	746	8.8	95
JUL									
23...	1500	27	530	8.0	24.5	22.1	746	8.4	99
AUG									
27...	1130	25	520	7.8	17.5	21.8	744	6.8	80

Date	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate water, fltrd, mg/L (00945)	Chloride, water, fltrd, mg/L (00940)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Phosphorus, water, unfltrd mg/L (00665)
OCT									
29...	250	205	29	26	E.004	.58	<.04	.4	.02
DEC									
10...	288	236	35	28	E.006	.87	.04	.4	.01
FEB									
12...	272	223	34	28	E.006	.87	.06	.4	.01
APR									
16...	220	180	34	26	<.008	.30	<.04	.7	.03
MAY									
13...	216	177	30	23	.008	.33	<.04	.6	.03
JUN									
10...	238	195	28	26	.010	.40	.04	.6	.03
JUL									
23...	239	196	28	26	.010	.43	<.04	.6	.02
AUG									
27...	232	190	28	26	.009	.36	<.04	.5	.02

WATER-QUALITY RECORDS—CONTINUED

04175600 RIVER RAISIN NEAR MANCHESTER, MICHIGAN—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(00671), USGS National Water Information System parameter code; mg/L, milligrams per liter; ug/L; micrograms per liter; <, concentration or value reported is less than that indicated; E, estimated]

Date	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Sus-pended sedi-ment concen-tration mg/L (80154)	Aceto-chlor, water, fltrd, ug/L (49260)	Ala-chlor, water, fltrd, ug/L (46342)	Atra-zine, water, fltrd, ug/L (39632)	Deethyl-atra-zine, water, fltrd, ug/L (04040)	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)
OCT									
29...	<.02	15	<.006	<.004	.01	<.006	<.050	<.010	<.002
DEC									
10...	<.02	3	<.006	<.004	.02	E.007	<.050	<.010	<.002
FEB									
12...	<.02	10	<.006	<.004	.02	E.007	<.050	<.010	<.002
APR									
16...	<.02	10	<.006	<.004	.03	E.011	<.050	<.010	<.002
MAY									
13...	<.02	8	.02	<.004	.06	E.026	<.050	<.010	<.002
JUN									
10...	<.02	9	.03	<.004	.05	E.013	<.050	<.010	<.002
JUL									
23...	<.02	9	<.006	<.004	.03	E.008	<.050	<.010	<.002
AUG									
27...	<.02	2	<.006	<.004	.05	E.007	<.050	<.010	<.002

Date	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)	Cyana-zine, water, fltrd, ug/L (04041)	DCPA, water fltrd 0.7u GF ug/L (82682)	p,p'-DDE, water, fltrd, ug/L (34653)	Diazi-non, water, fltrd, ug/L (39572)	Diel-drin, water, fltrd, ug/L (39381)	2,6-Di-ethyl-aniline water fltrd 0.7u GF ug/L (82660)
OCT									
29...	<.041	<.020	<.005	<.018	<.003	<.003	<.005	<.005	<.006
DEC									
10...	<.041	<.020	<.005	<.018	<.003	<.003	<.005	<.005	<.006
FEB									
12...	<.041	<.020	<.005	<.018	<.003	<.003	<.005	<.005	<.006
APR									
16...	<.041	<.020	<.005	<.018	<.003	<.003	<.005	<.005	<.006
MAY									
13...	<.041	<.020	<.005	<.018	<.003	<.003	<.005	<.005	<.006
JUN									
10...	<.041	<.020	<.005	<.018	<.003	<.003	<.005	<.005	<.006
JUL									
23...	<.041	<.020	<.005	<.018	<.003	<.003	<.005	<.005	<.006
AUG									
27...	<.041	<.020	<.005	<.018	<.003	<.003	<.005	<.005	<.006

WATER-QUALITY RECORDS—CONTINUED

04175600 RIVER RAISIN NEAR MANCHESTER, MICHIGAN—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(82677), USGS National Water Information System parameter code; ug/L; micrograms per liter; <, concentration or value reported is less than that indicated; E, estimated]

Date	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)	Fonofos water, fltrd, ug/L (04095)	alpha-HCH, water, fltrd, ug/L (34253)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (82666)	Mala-thion, water, fltrd, ug/L (39532)
OCT									
29...	<.02	<.002	<.009	<.005	<.003	<.005	<.004	<.035	<.027
DEC									
10...	<.02	<.002	<.009	<.005	<.003	<.005	<.004	<.035	<.027
FEB									
12...	<.02	<.002	<.009	<.005	<.003	<.005	<.004	<.035	<.027
APR									
16...	<.02	<.002	<.009	<.005	<.003	<.005	<.004	<.035	<.027
MAY									
13...	<.02	<.002	<.009	<.005	<.003	<.005	<.004	<.035	<.027
JUN									
10...	<.02	<.002	<.009	<.005	<.003	<.005	<.004	<.035	<.027
JUL									
23...	<.02	<.002	<.009	<.005	<.003	<.005	<.004	<.035	<.027
AUG									
27...	<.02	<.002	<.009	<.005	<.003	<.005	<.004	<.035	<.100

Date	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)	Para-thion, water, fltrd, ug/L (39542)	Methyl para-thion, water, fltrd 0.7u GF ug/L (82667)	Peb-ulate, water, fltrd 0.7u GF ug/L (82669)	Pendi-meth-alin, water, fltrd 0.7u GF ug/L (82683)	cis-Per-methrin water fltrd 0.7u GF ug/L (82687)
OCT									
29...	<.013	<.006	<.002	<.007	<.010	<.006	<.004	<.022	<.006
DEC									
10...	E.007	<.006	<.002	<.007	<.010	<.006	<.004	<.022	<.006
FEB									
12...	E.008	<.006	<.002	<.007	<.010	<.006	<.004	<.022	<.006
APR									
16...	E.004	<.006	<.002	<.007	<.010	<.006	<.004	<.022	<.006
MAY									
13...	E.012	<.006	<.002	<.007	<.010	<.006	<.004	<.022	<.006
JUN									
10...	.013	<.006	<.002	<.007	<.010	<.006	<.004	<.022	<.006
JUL									
23...	<.013	<.006	<.002	<.007	<.010	<.006	<.004	<.022	<.006
AUG									
27...	<.013	<.006	<.002	<.007	<.010	<.006	<.004	<.022	<.006

WATER-QUALITY RECORDS—CONTINUED

04175600 RIVER RAISIN NEAR MANCHESTER, MICHIGAN—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(82664), USGS National Water Information System parameter code; ug/L; micrograms per liter; <, concentration or value reported is less than that indicated; M, presence verified but not quantified]

Date	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)
OCT									
29...	<.011	<.01	<.004	<.010	<.011	<.02	.020	<.02	<.034
DEC									
10...	<.011	<.01	<.004	<.010	<.011	<.02	.032	<.02	<.034
FEB									
12...	<.011	<.01	<.004	<.010	<.011	<.02	.027	<.02	<.034
APR									
16...	<.011	M	<.004	<.010	<.011	<.02	.022	<.02	<.034
MAY									
13...	<.011	<.01	<.004	<.010	<.011	<.02	.014	<.02	<.034
JUN									
10...	<.011	<.01	<.004	<.010	<.011	<.02	.013	<.02	<.034
JUL									
23...	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034
AUG									
27...	<.011	M	<.004	<.010	<.011	<.02	.013	<.02	<.034

Date	Terbu-fos, water, fltrd 0.7u GF ug/L (82675)	Thio-bencarb water fltrd 0.7u GF ug/L (82681)	Tri-allate, water, fltrd 0.7u GF ug/L (82678)	Tri-flur-alin, water, fltrd 0.7u GF ug/L (82661)
OCT				
29...	<.02	<.005	<.002	<.009
DEC				
10...	<.02	<.005	<.002	<.009
FEB				
12...	<.02	<.005	<.002	<.009
APR				
16...	<.02	<.005	<.002	<.009
MAY				
13...	<.02	<.005	<.002	<.009
JUN				
10...	<.02	<.005	<.002	<.009
JUL				
23...	<.02	<.005	<.002	<.009
AUG				
27...	<.02	<.005	<.002	<.009

WATER-QUALITY RECORDS—CONTINUED

04178000 ST. JOSEPH RIVER NEAR NEWVILLE, INDIANA

LOCATION.—Latitude 41°23′08″, longitude 84°48′06″, Defiance County, Ohio, Hydrologic Unit 04100003, on left bank at bridge on State Highway 249, 3.5 miles northeast of Newville, Indiana at mile 42.3.
DRAINAGE AREA.—610 mi^2.
REMARKS.—Discharge is measured at this site and is published in the Indiana Annual Report.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

[(00061), USGS National Water Information System parameter code; cfs, cubic feet per second; uS/cm, microsiemens per centimeter; deg C, degrees Celsius; mm of Hg, millimeters of mercury; mg/L, milligrams per liter; <, concentration or value reported is less than that indicated]

Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unf uS/cm 25 deg C (00095)	pH, water, unfltrd field, std units (00400)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301
OCT									
30...	0915	64	692	8.1	3.9	6.7	737	8.7	74
DEC									
09...	1500	65	808	8.5	4.5	.4	747	11.8	84
FEB									
11...	1345	112	733	7.9	-8.0	.0	730	13.6	97
APR									
17...	1000	373	625	8.1	6.0	12.7	735	9.3	91
MAY									
12...	1515	2540	417	7.7	11.0	13.6	733	7.2	72
JUN									
09...	1400	140	662	8.0	22.0	17.5	740	9.2	99
JUL									
23...	1100	238	320	7.7	24.0	22.8	743	8.4	100
AUG									
26...	1400	83	654	8.0	17.5	20.0	742	7.3	83

Date	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate water, fltrd, mg/L (00945)	Chloride, water, fltrd, mg/L (00940)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Phosphorus, water, unfltrd mg/L (00665)
OCT									
30...	316	259	50	42	E.004	.23	<.04	.4	.06
DEC									
09...	340	279	58	49	.024	.27	<.04	.4	.04
FEB									
11...	272	223	68	61	.014	1.3	.22	.8	.09
APR									
17...	217	178	75	33	.106	2.6	<.04	1.1	.12
MAY									
12...	139	114	38	20	.155	3.9	.05	1.2	.23
JUN									
09...	272	223	60	34	.017	.92	<.04	.9	.14
JUL									
23...	237	194	44	32	.029	2.0	<.04	1.0	.24
AUG									
26...	260	213	51	34	.030	.27	<.04	.9	.14

WATER-QUALITY RECORDS—CONTINUED

04178000 ST. JOSEPH RIVER NEAR NEWVILLE, INDIANA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(00671), USGS National Water Information System parameter code; mg/L, milligrams per liter; ug/L; micrograms per liter; <, concentration or value reported is less than that indicated; E, estimated; --, no data]

Date	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Sus-pended sedi-ment concen-tration mg/L (80154)	Aceto-chlor, water, fltrd, ug/L (49260)	Ala-chlor, water, fltrd, ug/L (46342)	Atra-zine, water, fltrd, ug/L (39632)	Deethyl-atra-zine, water, fltrd, ug/L (04040)	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)
OCT									
30...	E.01	21	<.006	<.004	.07	E.011	<.050	<.010	<.002
DEC									
09...	<.02	3	.01	<.004	.08	E.010	<.050	<.010	<.002
FEB									
11...	.04	7	<.006	<.010	.10	E.019	<.050	<.010	<.002
APR									
17...	<.02	42	E.005	E.003	.11	E.029	<.050	<.010	<.002
MAY									
12...	E.01	65	1.2	.010	7.4	E.278	<.050	<.010	<.002
JUN									
09...	.02	114	.07	<.004	.64	E.055	<.050	<.010	<.002
JUL									
23...	.06	79	.02	<.004	.46	E.106	<.050	<.010	<.002
AUG									
26...	<.02	34	--	--	--	--	--	--	--

Date	Carbo-furan, water, fltrd 0.7u GF ug/L (82674)	Chlor-pyrifos water, fltrd, ug/L (38933)	Cyana-zine, water, fltrd, ug/L (04041)	DCPA, water fltrd 0.7u GF ug/L (82682)	p,p'-DDE, water, fltrd, ug/L (34653)	Diazi-non, water, fltrd, ug/L (39572)	Diel-drin, water, fltrd, ug/L (39381)	2,6-Di-ethyl-aniline water fltrd 0.7u GF ug/L (82660)	Disul-foton, water, fltrd 0.7 u GF ug/L (82677)
OCT									
30...	<.020	<.005	<.018	<.003	<.003	<.007	<.005	<.006	<.02
DEC									
09...	<.020	<.005	<.018	<.003	<.003	<.005	<.005	<.006	<.02
FEB									
11...	<.020	<.005	<.018	<.003	<.003	<.005	<.005	<.006	<.02
APR									
17...	<.020	<.005	<.018	<.003	<.003	<.005	<.005	<.006	<.02
MAY									
12...	<.020	.005	<.018	<.003	<.003	<.005	<.005	<.006	<.02
JUN									
09...	<.020	<.005	<.018	<.003	<.003	E.003	<.005	<.006	<.02
JUL									
23...	<.020	<.005	<.018	<.003	<.003	<.005	<.005	<.006	<.02
AUG									
26...	--	--	--	--	--	--	--	--	--

WATER-QUALITY RECORDS—CONTINUED

04178000 ST. JOSEPH RIVER NEAR NEWVILLE, INDIANA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(82668), USGS National Water Information System parameter code; ug/L; micrograms per liter; <, concentration or value reported is less than that indicated; E, estimated; --, no data]

Date	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)	Fonofos water, fltrd, ug/L (04095)	alpha-HCH, water, fltrd, ug/L (34253)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (82666)	Mala-thion, water, fltrd, ug/L (39532)	Metola-chlor, water, fltrd, ug/L (39415)
OCT									
30...	<.002	<.009	<.005	<.003	<.005	<.004	<.035	E.013	.02
DEC									
09...	<.002	<.009	<.005	<.003	<.005	<.004	<.035	<.027	.02
FEB									
11...	<.002	<.009	<.005	<.003	<.005	<.004	<.035	<.027	.05
APR									
17...	<.002	<.009	<.005	<.003	<.005	<.004	<.035	<.027	.04
MAY									
12...	<.007	<.009	<.005	<.003	<.005	<.004	<.035	<.027	1.8
JUN									
09...	<.002	<.009	<.005	<.003	<.005	<.004	<.035	<.027	.14
JUL									
23...	<.002	<.009	<.005	<.003	<.005	<.004	<.035	<.027	.40
AUG									
26...	--	--	--	--	--	--	--	--	--

Date	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)	Para-thion, water, fltrd, ug/L (39542)	Methyl para-thion, water, fltrd 0.7u GF ug/L (82667)	Peb-ulate, water, fltrd 0.7u GF ug/L (82669)	Pendi-meth-alin, water, fltrd 0.7u GF ug/L (82683)	cis-Per-methrin water fltrd 0.7u GF ug/L (82687)	Phorate water fltrd 0.7u GF ug/L (82664)
OCT									
30...	<.006	<.002	<.007	<.010	<.006	<.004	<.022	<.006	<.011
DEC									
09...	.007	<.002	<.007	<.010	<.006	<.004	<.022	<.006	<.011
FEB									
11...	.04	<.002	<.007	<.010	<.006	<.004	<.022	<.006	<.011
APR									
17...	.02	<.002	<.007	<.010	<.006	<.004	<.022	<.006	<.011
MAY									
12...	.15	<.002	<.007	<.010	<.006	<.004	<.022	<.006	<.011
JUN									
09...	E.005	<.002	<.007	<.010	<.006	<.004	<.022	<.006	<.011
JUL									
23...	<.006	<.002	<.007	<.010	<.006	<.004	<.022	<.006	<.011
AUG									
26...	--	--	--	--	--	--	--	--	--

WATER-QUALITY RECORDS—CONTINUED

04178000 ST. JOSEPH RIVER NEAR NEWVILLE, INDIANA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(04037), USGS National Water Information System parameter code; ug/L; micrograms per liter; <, concentration or value reported is less than that indicated; E, estimated; --, no data]

Date	Prometon, water, fltrd, ug/L (04037)	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)	Simazine, water, fltrd, ug/L (04035)	Tebuthiuron water fltrd 0.7u GF ug/L (82670)	Terbacil, water, fltrd 0.7u GF ug/L (82665)	Terbufos, water, fltrd 0.7u GF ug/L (82675)
OCT									
30...	E.01	<.004	<.010	<.011	<.02	.03	<.02	<.041	<.02
DEC									
09...	E.01	<.004	<.010	<.011	<.02	.04	<.02	<.034	<.02
FEB									
11...	.03	<.004	<.010	<.011	<.02	.06	<.02	<.034	<.02
APR									
17...	E.01	<.004	<.010	<.011	<.02	.09	<.02	<.034	<.02
MAY									
12...	E.01	<.004	<.010	<.011	<.02	1.8	E.01	<.034	<.02
JUN									
09...	E.01	<.004	<.010	<.011	<.02	.20	<.02	<.034	<.02
JUL									
23...	.04	<.004	<.010	<.011	<.02	.15	<.02	<.034	<.02
AUG									
26...	--	--	--	--	--	--	--	--	--

Date	Thiobencarb water fltrd 0.7u GF ug/L (82681)	Triallate, water, fltrd 0.7u GF ug/L (82678)	Trifluralin, water, fltrd 0.7u GF ug/L (82661)
OCT			
30...	<.005	<.002	<.009
DEC			
09...	<.005	<.002	<.009
FEB			
11...	<.005	<.002	<.009
APR			
17...	<.005	<.002	<.009
MAY			
12...	<.005	<.002	<.009
JUN			
09...	<.005	<.002	<.009
JUL			
23...	<.005	<.002	<.009
AUG			
26...	--	--	--

WATER-QUALITY RECORDS—CONTINUED

04186500 AUGLAIZE RIVER NEAR FT. JENNINGS, OHIO

LOCATION.—Latitude 40°56′55″, longitude 84°15′58″, Putnam County, Ohio, Hydrologic Unit 04100007, on left bank 200 feet upstream from bridge on US Highway 224, 3.5 miles northeast of Ft. Jennings, Ohio.
DRAINAGE AREA.—332 mi^2.
REMARKS.—Discharge is measured at this site and is published in surface-water records.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

[(00061), USGS National Water Information System parameter code; cfs, cubic feet per second; uS/cm, microsiemens per centimeter; deg C, degrees Celsius; mm of Hg, millimeters of mercury; mg/L, milligrams per liter; <, concentration or value reported is less than that indicated; E, estimated]

Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)
OCT									
28...	1045	5.6	1710	7.8	3.0	9.2	737	8.3	75
DEC									
09...	1100	8.6	904	8.4	-2.0	.5	751	13.6	96
FEB									
11...	1100	50	799	8.3	-10.0	.0	731	13.6	97
APR									
15...	1230	188	731	8.4	17.0	14.7	740	11.8	120
MAY									
13...	1200	2560	423	7.7	11.5	12.9	742	8.1	79
JUN									
11...	1030	123	797	8.2	21.5	19.7	743	8.4	94
JUL									
09...	1145	6840	290	7.4	27.5	24.0	745	5.9	72
AUG									
26...	1045	22	856	8.1	24.0	17.0	745	7.4	79

Date	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate water, fltrd, mg/L (00945)	Chloride, water, fltrd, mg/L (00940)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Phosphorus, water, unfltrd mg/L (00665)
OCT									
28...	228	187	330	250	E.005	.35	<.04	.6	.11
DEC									
09...	277	227	180	130	.06	10	<.04	.6	.08
FEB									
11...	200	164	100	73	.04	7.4	.14	.8	.11
APR									
15...	204	181	76	34	.06	7.3	<.04	.7	.06
MAY									
13...	139	114	33	18	.14	6.6	<.04	1.5	.35
JUN									
11...	257	211	90	51	.02	7.7	<.04	.7	.12
JUL									
09...	101	83	15	7.6	.09	3.1	<.04	1.1	.30
AUG									
26...	250	205	100	68	.02	.16	<.04	1.0	.15

WATER-QUALITY RECORDS—CONTINUED

04186500 AUGLAIZE RIVER NEAR FT. JENNINGS, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(00671), USGS National Water Information System parameter code; mg/L, milligrams per liter; ug/L; micrograms per liter; <, concentration or value reported is less than that indicated; E, estimated]

Date	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Sus-pended sedi-ment concen-tration mg/L (80154)	Aceto-chlor, water, fltrd, ug/L (49260)	Ala-chlor, water, fltrd, ug/L (46342)	Atra-zine, water, fltrd, ug/L (39632)	Deethyl-atra-zine, water, fltrd, ug/L (04040)	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)
OCT									
28...	.03	16	.02	<.004	.12	E.017	<.050	<.010	<.002
DEC									
09...	.04	2	.03	<.004	.13	E.020	<.050	<.010	<.002
FEB									
11...	.06	9	.03	<.004	.10	E.033	<.050	<.010	<.002
APR									
15...	<.02	22	.01	<.004	.08	E.031	<.050	<.010	<.002
MAY									
13...	<.02	125	3.4	.13	13	E.668	<.050	<.010	<.002
JUN									
11...	.05	61	.48	.02	2.4	E.191	<.050	<.010	<.002
JUL									
09...	.08	76	.17	.01	.81	E.244	<.050	<.010	<.002
AUG									
26...	<.02	22	.01	<.004	.26	E.053	<.050	<.010	<.002

Date	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)	Cyana-zine, water, fltrd, ug/L (04041)	DCPA, water fltrd 0.7u GF ug/L (82682)	p,p'-DDE, water, fltrd, ug/L (34653)	Diazi-non, water, fltrd, ug/L (39572)	Diel-drin, water, fltrd, ug/L (39381)	2,6-Di-ethyl-aniline water fltrd 0.7u GF ug/L (82660)
OCT									
28...	<.041	<.020	<.005	E.013	<.003	<.003	<.005	<.005	<.006
DEC									
09...	<.041	<.020	<.005	<.018	<.003	<.003	<.005	<.005	<.006
FEB									
11...	<.041	<.020	<.005	<.018	<.003	<.003	<.005	<.005	<.006
APR									
15...	<.041	<.020	<.005	<.018	<.003	<.003	<.005	<.005	<.006
MAY									
13...	E.010	<.020	.01	E.017	<.003	<.003	E.004	<.005	<.006
JUN									
11...	<.041	<.020	<.005	<.018	<.003	<.005	.006	<.005	<.006
JUL									
09...	E.008	<.020	<.010	<.018	<.003	<.003	.008	<.005	<.006
AUG									
26...	<.041	<.020	<.005	<.018	<.003	<.003	.007	<.005	<.006

WATER-QUALITY RECORDS—CONTINUED

04186500 AUGLAIZE RIVER NEAR FT. JENNINGS, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(82677), USGS National Water Information System parameter code; ug/L; micrograms per liter; <, concentration or value reported is less than that indicated]

Date	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)	Fonofos water, fltrd, ug/L (04095)	alpha- HCH, water, fltrd, ug/L (34253)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (82666)	Mala- thion, water, fltrd, ug/L (39532)
OCT									
28...	<.02	<.002	<.009	<.005	<.003	<.005	<.006	<.035	<.027
DEC									
09...	<.02	<.002	<.009	<.005	<.003	<.005	<.004	<.035	<.027
FEB									
11...	<.02	<.002	<.009	<.005	<.003	<.005	<.004	<.035	<.027
APR									
15...	<.02	<.002	<.009	<.005	<.003	<.005	<.004	<.035	<.027
MAY									
13...	<.02	<.002	<.009	<.005	<.003	<.005	<.004	<.035	<.027
JUN									
11...	<.02	<.002	<.009	<.005	<.003	<.005	<.004	<.035	<.027
JUL									
09...	<.02	<.002	<.009	<.005	<.003	<.005	<.004	<.035	<.027
AUG									
26...	<.02	<.002	<.009	<.005	<.003	<.005	<.004	<.035	<.027

Date	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)	Para- thion, water, fltrd, ug/L (39542)	Methyl para- thion, water, fltrd 0.7u GF ug/L (82667)	Peb- ulate, water, fltrd 0.7u GF ug/L (82669)	Pendi- meth- alin, water, fltrd 0.7u GF ug/L (82683)	cis- Per- methrin water fltrd 0.7u GF ug/L (82687)
OCT									
28...	.09	.01	<.002	<.007	<.010	<.006	<.004	<.022	<.006
DEC									
09...	.22	.01	<.002	<.007	<.010	<.006	<.004	<.022	<.006
FEB									
11...	.14	.05	<.002	<.007	<.010	<.006	<.004	<.022	<.006
APR									
15...	.06	.01	<.002	<.007	<.010	<.006	<.004	<.022	<.006
MAY									
13...	3.3	.28	<.002	<.007	<.010	<.006	<.004	<.022	<.006
JUN									
11...	.45	.01	<.002	<.007	<.010	<.006	<.004	<.022	<.006
JUL									
09...	.58	.02	<.002	<.007	<.010	<.006	<.004	<.022	<.006
AUG									
26...	.08	<.006	<.002	<.007	<.010	<.006	<.004	<.022	<.006

WATER-QUALITY RECORDS—CONTINUED

04186500 AUGLAIZE RIVER NEAR FT. JENNINGS, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(82664), USGS National Water Information System parameter code; ug/L; micrograms per liter; <, concentration or value reported is less than that indicated; E, estimated]

Date	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)
OCT									
28...	<.011	.11	<.004	<.010	<.011	<.02	.01	<.02	<.034
DEC									
09...	<.011	.03	<.004	<.010	<.011	<.02	.02	<.02	<.034
FEB									
11...	<.011	E.01	<.004	<.010	<.011	<.02	.02	<.02	<.034
APR									
15...	<.011	E.01	<.004	E.003	<.011	<.02	.02	<.02	<.034
MAY									
13...	<.011	E.01	<.004	E.008	<.011	<.02	1.1	<.02	<.034
JUN									
11...	<.011	.03	<.004	<.010	<.011	<.02	.14	<.02	<.034
JUL									
09...	<.011	.02	<.004	E.009	<.011	<.02	.04	<.02	<.034
AUG									
26...	<.011	.05	<.004	<.010	<.011	<.04	.02	<.02	E.012

Date	Terbu-fos, water, fltrd 0.7u GF ug/L (82675)	Thio-bencarb water fltrd 0.7u GF ug/L (82681)	Tri-allate, water, fltrd 0.7u GF ug/L (82678)	Tri-flur-alin, water, fltrd 0.7u GF ug/L (82661)
OCT				
28...	<.02	<.005	<.002	<.009
DEC				
09...	<.02	<.005	<.002	<.009
FEB				
11...	<.02	<.005	<.002	<.009
APR				
15...	<.02	<.005	<.002	<.009
MAY				
13...	<.02	<.005	<.002	<.009
JUN				
11...	<.02	<.005	<.002	<.009
JUL				
09...	<.02	<.005	<.002	<.009
AUG				
26...	<.02	<.005	<.002	<.009

WATER-QUALITY RECORDS—CONTINUED

04193500 MAUMEE RIVER AT WATERVILLE, OHIO

LOCATION.—Latitude 41°30′00″, longitude 83°42′46″, Lucas County, Ohio, Hydrologic Unit 04100009, on downstream side of first pier from left end of bridge on State Highway 64 at Waterville, Ohio, river mile 20.7.
DRAINAGE AREA.—6,330 mi^2.
REMARKS.—Discharge is measured at this site and is published in surface-water records.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

[(00061), USGS National Water Information System parameter code; cfs, cubic feet per second; uS/cm, microsiemens per centimeter; deg C, degrees Celsius; mm of Hg, millimeters of mercury; mg/L, milligrams per liter; <, concentration or value reported is less than that indicated; E, estimated]

Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unf uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)
OCT									
28...	1345	210	782	8.8	11.0	11.4	745	9.5	89
DEC									
11...	1000	620	855	8.4	1.0	1.0	744	13.5	98
FEB									
26...	1100	14900	772	8.1	-14.0	.1	748	15.2	106
APR									
15...	1530	3340	588	8.2	22.0	13.7	742	12.2	121
MAY									
13...	0945	40800	319	7.7	11.0	14.4	742	8.1	82
JUN									
11...	0730	1770	673	8.4	20.5	20.1	743	8.8	100
JUL									
11...	1130	39900	320	7.7	20.5	22.9	742	8.4	101
AUG									
28...	0900	487	417	8.5	17.5	23.7	750	9.0	109

Date	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Sulfate water, fltrd, mg/L (00945)	Chloride, water, fltrd, mg/L (00940)	Nitrite water, fltrd, mg/L as N (00613)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Phosphorus, water, unfltrd mg/L (00665)
OCT									
28...	135	139	110	96	<.008	<.06	<.04	.7	.06
DEC									
11...	195	160	110	72	.08	7.0	<.04	.9	.11
FEB									
26...	173	142	79	83	.04	5.0	.47	1.8	.23
APR									
15...	161	132	59	34	.17	9.8	<.04	1.0	.14
MAY									
13...	95	78	23	13	.16	6.0	E.03	2.3	.71
JUN									
11...	161	144	98	50	.04	3.2	<.04	1.6	.09
JUL									
11...	109	89	18	10	.07	4.5	<.04	1.4	.36
AUG									
28...	1090	894	48	28	.01	E.05	<.04	1.6	.11

WATER-QUALITY RECORDS—CONTINUED

04193500 MAUMEE RIVER AT WATERVILLE, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(00671), USGS National Water Information System parameter code; mg/L, milligrams per liter; ug/L; micrograms per liter; <, concentration or value reported is less than that indicated; E, estimated]

Date	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Sus-pended sedi-ment concen-tration mg/L (80154)	Aceto-chlor, water, fltrd, ug/L (49260)	Ala-chlor, water, fltrd, ug/L (46342)	Atra-zine, water, fltrd, ug/L (39632)	Deethyl-atra-zine, water, fltrd, ug/L (04040)	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)
OCT									
28...	<.02	6	.01	<.004	.42	E.053	<.050	<.010	<.002
DEC									
11...	.05	9	.09	.01	.35	E.037	<.050	<.010	<.002
FEB									
26...	.14	24	.02	<.004	.15	E.036	<.050	<.010	<.002
APR									
15...	<.02	44	.02	.01	.11	E.040	<.050	<.010	<.002
MAY									
13...	.03	416	3.8	.21	17	E.674	<.050	<.010	<.002
JUN									
11...	<.02	7	.28	.01	2.5	E.185	<.050	<.010	<.002
JUL									
11...	.12	149	.20	.01	1.1	E.261	<.050	<.010	<.002
AUG									
28...	<.02	14	.03	<.004	.26	E.019	<.050	<.010	<.002

Date	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)	Cyana-zine, water, fltrd, ug/L (04041)	DCPA, water fltrd 0.7u GF ug/L (82682)	p,p'-DDE, water, fltrd, ug/L (34653)	Diazi-non, water, fltrd, ug/L (39572)	Diel-drin, water, fltrd, ug/L (39381)	2,6-Di-ethyl-aniline water fltrd 0.7u GF ug/L (82660)
OCT									
28...	<.041	<.020	<.005	E.012	<.003	<.003	.010	<.005	<.006
DEC									
11...	<.041	<.020	<.005	<.018	<.003	<.003	<.005	<.005	<.006
FEB									
26...	<.041	<.020	<.005	<.018	<.003	<.003	<.005	<.005	<.006
APR									
15...	<.041	<.020	<.005	<.018	<.003	<.003	<.005	<.005	<.006
MAY									
13...	E.015	<.020	.011	E.013	<.003	<.003	.009	<.005	<.006
JUN									
11...	E.004	<.020	<.005	<.018	<.003	<.003	<.005	<.005	<.006
JUL									
11...	E.006	<.020	<.005	<.018	<.003	<.003	E.005	<.005	<.006
AUG									
28...	E.113	<.020	<.005	<.018	<.003	<.003	.011	<.020	<.006

WATER-QUALITY RECORDS—CONTINUED

04193500 MAUMEE RIVER AT WATERVILLE, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(82677), USGS National Water Information System parameter code; ug/L; micrograms per liter; <, concentration or value reported is less than that indicated; E, estimated]

Date	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)	Fonofos water, fltrd, ug/L (04095)	alpha-HCH, water, fltrd, ug/L (34253)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (82666)	Mala-thion, water, fltrd, ug/L (39532)
OCT									
28...	<.02	<.002	<.009	<.005	<.003	<.005	<.004	<.035	<.027
DEC									
11...	<.02	<.002	<.009	<.005	<.003	<.005	<.004	<.035	<.027
FEB									
26...	<.02	<.002	<.009	<.005	<.003	<.005	<.004	<.035	<.027
APR									
15...	<.02	<.002	<.009	<.005	<.003	<.005	<.004	<.035	<.027
MAY									
13...	<.02	E.007	<.009	<.005	<.003	<.005	<.004	<.035	<.027
JUN									
11...	<.02	<.002	<.009	<.005	<.003	<.005	<.004	<.035	<.027
JUL									
11...	<.02	<.002	<.009	<.005	<.003	<.005	<.004	<.035	<.027
AUG									
28...	<.02	<.002	<.009	<.005	<.003	<.005	<.004	<.035	<.027

Date	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)	Para-thion, water, fltrd, ug/L (39542)	Methyl para-thion, water, fltrd 0.7u GF ug/L (82667)	Peb-ulate, water, fltrd 0.7u GF ug/L (82669)	Pendi-meth-alin, water, fltrd 0.7u GF ug/L (82683)	cis-Per-methrin water fltrd 0.7u GF ug/L (82687)
OCT									
28...	.07	<.006	<.002	<.007	<.010	<.006	<.004	<.022	<.006
DEC									
11...	.28	.09	<.002	<.007	<.010	<.006	<.004	<.022	<.006
FEB									
26...	.20	.05	<.002	<.007	<.010	<.006	<.004	<.022	<.006
APR									
15...	.12	.02	<.002	<.007	<.010	<.006	<.004	<.022	<.006
MAY									
13...	4.6	.50	<.002	<.007	<.010	<.006	<.004	E.011	<.006
JUN									
11...	.64	.01	<.002	<.007	<.010	<.006	<.004	<.022	<.006
JUL									
11...	.91	.07	<.002	<.007	<.010	<.006	<.004	<.022	<.006
AUG									
28...	.18	<.006	<.002	<.007	<.010	<.006	<.004	<.022	<.006

WATER-QUALITY RECORDS—CONTINUED

04193500 MAUMEE RIVER AT WATERVILLE, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(82664), USGS National Water Information System parameter code; ug/L; micrograms per liter; <, concentration or value reported is less than that indicated; E, estimated]

Date	Phorate water fltrd 0.7u GF ug/L (82664)	Prometon, water, fltrd, ug/L (04037)	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)	Simazine, water, fltrd, ug/L (04035)	Tebuthiuron water fltrd 0.7u GF ug/L (82670)	Terbacil, water, fltrd 0.7u GF ug/L (82665)
OCT									
28...	<.011	.08	<.004	<.010	<.011	<.02	.06	.03	<.034
DEC									
11...	<.011	.04	<.004	<.010	<.011	<.02	.09	.02	<.034
FEB									
26...	<.011	E.01	<.004	<.010	<.011	<.02	.08	<.02	<.034
APR									
15...	<.011	E.01	<.004	<.010	<.011	<.02	.08	E.01	<.034
MAY									
13...	<.011	.02	<.004	E.007	<.011	<.02	3.3	E.01	<.034
JUN									
11...	<.011	.04	<.004	<.010	<.011	<.02	.41	E.01	<.034
JUL									
11...	<.011	.02	<.004	<.010	<.011	<.02	.09	E.01	<.034
AUG									
28...	<.011	.04	<.004	<.010	<.011	<.02	.02	<.02	E.021

Date	Terbufos, water, fltrd 0.7u GF ug/L (82675)	Thiobencarb water fltrd 0.7u GF ug/L (82681)	Triallate, water, fltrd 0.7u GF ug/L (82678)	Trifluralin, water, fltrd 0.7u GF ug/L (82661)
OCT				
28...	<.02	<.005	<.002	<.009
DEC				
11...	<.02	<.005	<.002	<.009
FEB				
26...	<.02	<.005	<.002	<.009
APR				
15...	<.02	<.005	<.002	<.009
MAY				
13...	<.02	<.005	<.002	<.009
JUN				
11...	<.02	<.005	<.002	<.009
JUL				
11...	<.02	<.005	<.002	<.009
AUG				
28...	<.02	<.005	<.002	<.009

FISH-COMMUNITY RESULTS

Fish community surveys were conducted at five sites in the Lake Erie River Basins as part of the National Water-Quality Assessment Program (NAWQA). Fish were collected by electrofishing with pulsed-DC current in a mapped reach at each site. Two electrofishing passes and seining were done at each reach in a single day. Electrofishing was done by use of a barge electroshocker at all sites. Fish were identified, measured, weighed, and checked for external anomalies such as parasites, lesions, and skeletal anomalies. Representative specimens were preserved, identified, and vouchered in the field. Vouchers were verified by icthyologist Terry Keiser of Ohio Northern University. More details regarding collection methods can be found in: Meador, M.R., Cuffney, T.R., and Gurtz, M.E., 1993, *Methods for collecting samples of fish communities as part of the National Water-Quality Assessment Program*: U.S. Geological Survey Open-File Report 93-104, 40 p. Taxonomy is based on Robins, C.R., Bailey, R.M., Bond, C.E., Brooker, J.R., Lachner, E.A., Lea, R.N., and Scott, W.B., 1991, *Common and scientific names of fishes from the United States and Canada, Fifth Edition*: American Fisheries Society Special Publication 20, Bethesda, MD, 183 p.

CALENDER YEAR 2003

STATION NUMBER	STATION NAME	DATE SAMPLED	DRAINAGE AREA (SQUARE MILES)	REACH LENGTH (METERS)
04161820	Clinton River at Sterling Heights, Michigan	09/09/03	309	286
04193500	Maumee River at Waterville, Ohio	09/16/03	6,330	300
04175600	River Raisin near Manchester, Michigan	09/08/03	132	247
04178000	St. Joseph River near Newville, Indiana	09/17/03	610	300
04186500	Auglaize River near Fort Jennings, Ohio	09/10/03	322	241

[--, not present at indicated site]

Family	Scientific name	Common name	STATION NAME: River Raisin near Manchester, Michigan		Maumee River at Waterville, Ohio		Clinton River at Sterling Heights, Michigan	
			Abundance	Batch weight (grams)	Abundance	Batch weight (grams)	Abundance	Batch weight (grams)
Petromyzontidae	*Ichthyomyson fosser*	northern brook lamprey	4	19.1	--	--	--	--
Lepisosteidae	*Lepisosteus osseus*	longnose gar	--	--	2	721	--	--
Clupeidae	*Dorosoma cepedianum*	gizzard shad	--	--	7	158	19	256
Cyprinidae	*Campostoma anomalum*	central stoneroller	9	83.2	--	--	--	--
	Cyprinella spiloptera	spotfin shiner	41	148.7	31	64.3	7	37.9
	Cyprinus carpio	common carp	--	--	25	36464	--	--
	Luxilus chrysocephalus	striped shiner	168	967.1	31	60.8	--	--
	Nocomis biguttatus	hornyhead chub	10	214.2	--	--	--	--
	Nocomis micropogon	river chub	9	475.3	--	--	1	20
	Notropis atherinoides	emerald shiner	12	23.8	73	148.4	--	--
	Notropis stramineus	sand shiner	--	--	9	6.5	--	--
	Phenacobius mirabilis	suckermouth minnow	--	--	--	--	--	--
	Pimephales notatus	bluntnose minnow	54	235	37	85.8	40	178.6
	Semotilus atromaculatus	creek chub	8	125.3	--	--	--	--
Catostomidae	*Carpiodes cyprinus*	quillback	--	--	2	1182	--	--
	Catostomus commersoni	white sucker	24	238.8	--	--	28	4876.8
	Hypentelium nigricans	northern hog sucker	52	2349.4	8	2165	29	1518
	Minytrema melanops	spotted sucker	--	--	--	--	--	--
	Moxostoma anisurum	silver redhorse	--	--	3	4508	--	--
	Moxostoma duquesnei	black redhorse	18	3914	1	743	--	--
	Moxostoma erythrurum	golden redhorse	3	75	--	--	--	--
	Moxostoma macrolepidotum	shorthead redhorse	--	--	16	5438	--	--
Ictaluridae	*Ameiurus natalis*	yellow bullhead	--	--	--	--	--	--
	Ictalurus punctatus	channel catfish	--	--	21	5961	--	--
	Noturus flavus	stonecat	1	50	1	1	--	--
	Noturus miurus	brindled madtom	2	16	--	--	--	--
	Cottus bairdi	mottled sculpin	1	6	--	--	--	--
Esocidae	*Esox americanus vermiculatus*	grass pickerel	3	268	--	--	1	60
	Esox lucius	northern pike	1	1070	--	--	3	3795
Salmonidae	*Oncorhynchus mykiss*	rainbow trout	--	--	--	--	6	174

FISH-COMMUNITY RESULTS—Continued

[--, not present at indicated site]

Family	Scientific name	Common name	STATION NAME: River Raisin near Manchester, Michigan		Maumee River at Waterville, Ohio		Clinton River at Sterling Heights, Michigan	
			Abun-dance	Batch weight (grams)	Abun-dance	Batch weight (grams)	Abun-dance	Batch weight (grams)
Cyprinodontidae	*Fundulus notatus*	blackstripe topminnow	--	--	--	--	--	--
Atherinidae	*Labidesthes sicculus*	brook silverside	--	--	1	0.3	--	--
Percichthyidae	*Morone chrysops*	white bass	--	--	8	77	--	--
Centrarchidae	*Ambloplites rupestris*	rock bass	13	1030	20	1310	21	1043
	Lepomis cyanellus	green sunfish	--	--	14	171	--	--
	Lepomis gibbosus	pumpkinseed	3	76	--	--	--	--
	Lepomis humilis	orangespotted sunfish	--	--	44	257	--	--
	Lepomis macrochirus	bluegill	--	--	5	35	10	152
	Lepomis megalotis	longear sunfish	--	--	--	--	--	--
	Micropterus dolomieu	smallmouth bass	8	1087	32	5243	--	--
	Micropterus punctulatus	spotted bass	--	--	1	6	--	--
	Micropterus salmoides	largemouth bass	--	--	--	--	1	170
	Pomoxis annularis	white crappie	--	--	1	79	--	--
	Pomoxis nigromaculatus	black crappie	--	--	--	--	--	--
Percidae	*Etheostoma blennioides*	greenside darter	39	111	21	70	--	--
	Etheostoma caeruleum	rainbow darter	6	5	--	--	--	--
	Etheostoma nigrum	johnny darter	9	12.2	--	--	6	14
	Perca flavescens	yellow perch	--	--	36	181	7	388
	Percina caprodes	logperch	--	--	31	212	1	4
Sciaenidae	*Aplodinotus grunniens*	freshwater drum	--	--	8	3290	--	--
Gobiidae	*Neogobius melanostomus*	round goby	--	--	--	--	29	248
NUMBER OF SPECIES			24	--	29	--	16	--
HYBRIDS			--	--	--	--	--	--
TOTAL NUMBER OF FISH			498	--	489	--	209	--

FISH COMMUNITY RESULTS—CONTINUED

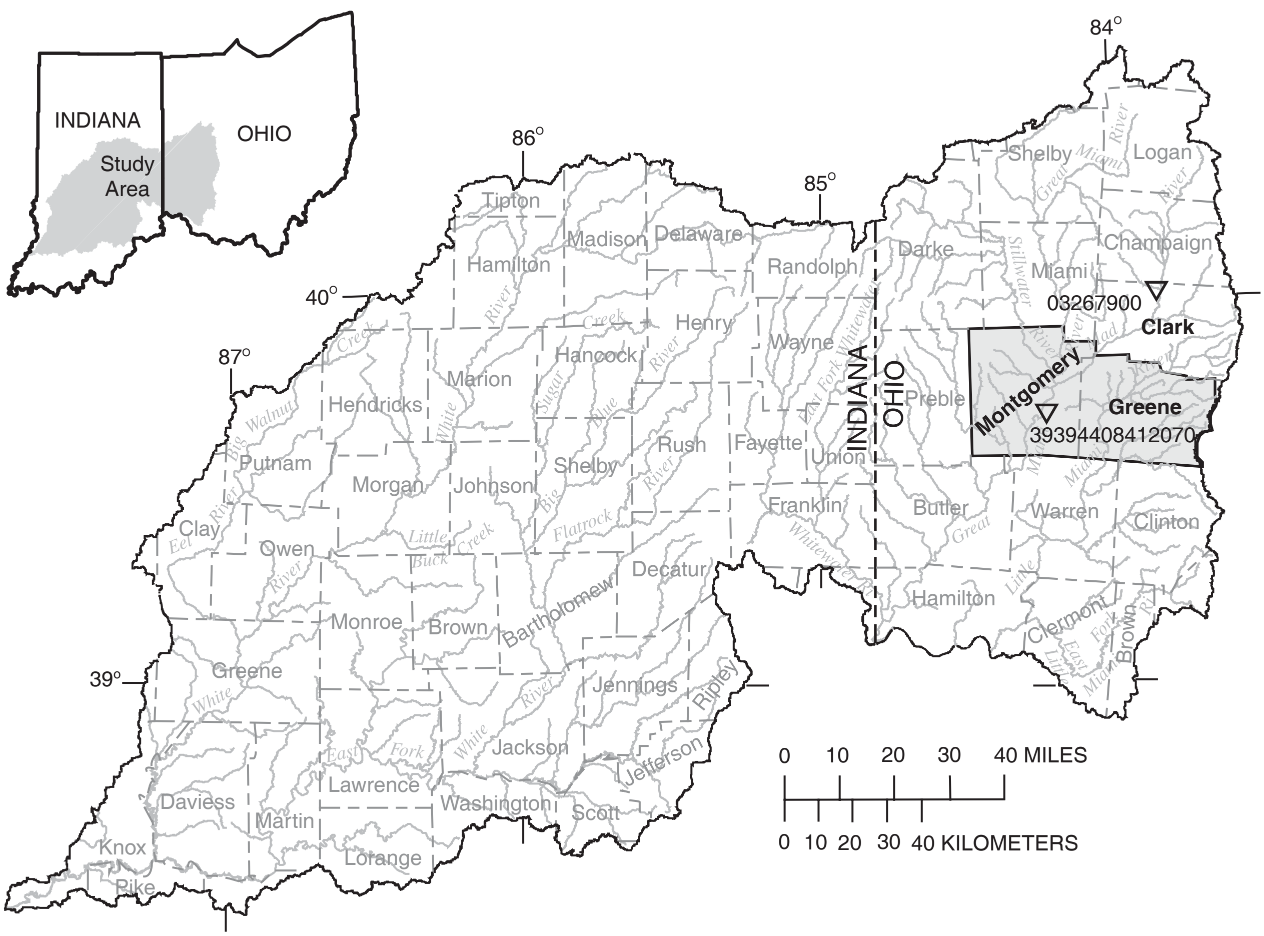
[--, not present at indicated site]

Family	Scientific name	Common name	STATION NAME: Auglaize River near Fort Jennings, Ohio		St. Joseph River near Newville, Indiana	
			Abun-dance	Batch weight (grams)	Abun-dance	Batch weight (grams)
Petromyzontidae	*Ichthyomyzon fosser*	northern brook lamprey	--	--	--	--
Lepisosteidae	*Lepisosteus osseus*	longnose gar	--	--	--	--
Clupeidae	*Dorosoma cepedianum*	gizzard shad	--	--	1	1
Cyprinidae	*Campostoma anomalum*	central stoneroller	--	--	--	--
	Cyprinella spiloptera	spotfin shiner	27	86	--	--
	Cyprinus carpio	common carp	3	5833	24	33597
	Luxilus chrysocephalus	striped shiner	15	145	--	--
	Nocomis biguttatus	hornyhead chub	--	--	--	--
	Nocomis micropogon	river chub	--	--	--	--
	Notropis atherinoides	emerald shiner	2	4	--	--
	Notropis stramineus	sand shiner	6	12	--	--
	Phenacobius mirabilis	suckermouth minnow	3	26	--	--
	Pimephales notatus	bluntnose minnow	53	158	--	--
	Semotilus atromaculatus	creek chub	--	--	--	--
Catostomidae	*Carpiodes cyprinus*	quillback	--	--	--	--
	Catostomus commersoni	white sucker	--	--	1	135
	Hypentelium nigricans	northern hog sucker	3	292	--	--
	Minytrema melanops	spotted sucker	6	1254	3	478
	Moxostoma anisurum	silver redhorse	--	--	5	1480
	Moxostoma duquesnei	black redhorse	2	524	1	338
	Moxostoma erythrurum	golden redhorse	8	1307	1	24
	Moxostoma macrolepidotum	shorthead redhorse	--	--	--	--
Ictaluridae	*Ameiurus natalis*	yellow bullhead	4	628	--	--
	Ictalurus punctatus	channel catfish	2	376	--	--
	Noturus flavus	stonecat	--	--	--	--
	Noturus miurus	brindled madtom	--	--	--	--
	Cottus bairdi	mottled sculpin	--	--	--	--
Esocidae	*Esox americanus vermiculatus*	grass pickerel	--	--	--	--
	Esox lucius	northern pike	--	--	1	414
Salmonidae	*Onycorhynchus mykiss*	rainbow trout	--	--	--	--
Cyprinodontidae	*Fundulus notatus*	blackstripe topminnow	4	8	--	--
Atherinidae	*Labidesthes sicculus*	brook silverside	1	2	1	--
Percichthyidae	*Morone chrysops*	white bass	--	--	--	--
Centrarchidae	*Ambloplites rupestris*	rock bass	27	1906	14	1911
	Lepomis cyanellus	green sunfish	6	200	51	348
	Lepomis gibbosus	pumpkinseed	45	164	--	--
	Lepomis humilis	orangespotted sunfish	--	--	--	--
	Lepomis macrochirus	bluegill	1	6	4	71
	Lepomis megalotis	longear sunfish	35	626	--	--
	Micropterus dolomieu	smallmouth bass	9	1271	--	--
	Micropterus punctulatus	spotted bass	--	--	1	760
	Micropterus salmoides	largemouth bass	--	--	--	--
	Pomoxis annularis	white crappie	--	--	--	--
	Pomoxis nigromaculatus	black crappie	--	--	6	618
Percidae	*Etheostoma blennioides*	greenside darter	6	17	--	--
	Etheostoma caeruleum	rainbow darter	--	--	--	--
	Etheostoma nigrum	johnny darter	--	--	--	--
	Perca flavescens	yellow perch	--	--	--	--
	Percina caprodes	logperch	2	40	--	--
Sciaenidae	*Aplodinotus grunniens*	freshwater drum	--	--	--	--
Gobiidae	*Neogobius melanostomus*	round goby	--	--	--	--
NUMBER OF SPECIES			23		14	
HYBRIDS			--		1	1
TOTAL NUMBER OF FISH			270		114	

Results from Selected Sites in the White, Great, and Little Miami River Basins (National Water-Quality Assessment Program)

The data described in the following tables were collected and analyzed as part of the NAWQA (National Water-Quality Assessment Program) project in the White, Great, and Little Miami River Basins. 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.

Data for two stream sites in Ohio are being reported in this publication as part of the NAWQA study: Mad River at St. Paris Pike near Eagle City, Ohio (03267900), and Holes Creek at Huffman Park near Kettering, Ohio (393944084120700). Also reported are water-quality data for selected public-supply wells in the glacial deposits aquifer near Dayton.



WATER-QUALITY RECORDS

03267900 MAD RIVER AT ST. PARIS PIKE NEAR EAGLE CITY, OHIO

LOCATION.—Latitude 39°57′51″, longitude 83°49′54″, Clark County, Hydrologic Unit 05080001, and at mile 28.8.
DRAINAGE AREA.—310 mi^2.
REMARKS.—Nine discharge measurements were made at this site. This station is maintained by the Miami Conservancy District. Continuous discharge data and water-quality-monitor data for this site are located in the surface-water section in volume 1 of this report.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

[(00061), USGS National Water Information System parameter code; cfs, cubic feet per second; mm of Hg; millimeters of mercury; mg/L, milligrams per liter; uS/cm, microsiemens per centimeter; deg C, degrees Celsius; <, concentration or value reporeted is less than that indicated; --, no data]

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)
OCT										
04...	1100	188	735	8.1	87	7.6	769	25.5	17.0	291
NOV										
06...	1030	191	736	10.8	96	7.8	736	7.0	8.8	--
DEC										
04...	1130	181	752	14.7	112	7.9	734	-3.0	3.2	288
17...	1300	181	743	12.7	101	8.1	727	1.0	4.8	290
JAN										
22...	1115	213	747	14.1	103	8.2	745	<-5.0	1.6	297
FEB										
12...	1130	191	743	13.3	98	8.3	864	<-5.0	1.7	284
MAR										
13...	1115	669	738	12.1	100	7.9	585	2.0	5.9	207
APR										
08...	1300	564	738	12.4	108	8.1	632	8.5	8.0	234
22...	1200	313	741	10.0	92	7.9	425	10.0	10.6	--
MAY										
13...	1200	560	741	10.4	98	8.0	674	17.5	11.6	248
28...	1330	377	737	9.9	102	8.2	720	26.5	14.8	--
JUN										
11...	1345	388	737	9.1	97	8.2	707	27.0	16.7	276
25...	1200	297	744	10.2	109	8.2	732	26.5	17.1	--
JUL										
08...	1015	1640	742	7.9	89	7.9	422	31.0	20.3	170
30...	1100	330	743	9.5	99	8.1	728	26.0	15.9	--
AUG										
06...	1115	501	738	9.3	100	8.0	677	26.5	16.9	271
26...	1045	252	741	9.2	99	8.1	735	27.5	17.8	--
SEP										
04...	1130	811	739	9.0	96	7.9	665	23.0	16.8	269

WATER-QUALITY RECORDS—CONTINUED

03267900 MAD RIVER AT ST. PARIS PIKE NEAR EAGLE CITY, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(00453), USGS National Water Information System parameter code; mg/L, milligrams per liter; <, concentration or value reported is less than that indicated; E, estimated; --, no data]

Date	Bicar-bonate wat flt incrm. titr., field, mg/L (00453)	Carbon-ate wat flt incrm. titr., field, mg/L (00452)	Chlor-ide, water, fltrd, mg/L (00940)	Sulfate water, fltrd, mg/L (00945)	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)
OCT										
04...	349	3	21	65	<.04	4.4	.010	.04	.06	.062
NOV										
06...	--	--	--	--	<.04	4.1	.012	.05	--	.080
DEC										
04...	345	3	22	66	<.04	4.3	E.006	.03	.04	.035
17...	346	3	24	63	<.04	3.9	E.006	E.01	.05	.030
JAN										
22...	358	2	24	66	<.04	4.2	.011	<.02	.05	.018
FEB										
12...	340	3	29	66	<.04	4.1	.021	<.02	.05	.017
MAR										
13...	250	1	19	44	.05	4.3	.011	.07	.16	.14
APR										
08...	282	2	18	49	<.04	4.6	.011	E.02	.13	.061
22...	--	--	--	--	<.04	3.9	.018	<.02	--	.033
MAY										
13...	298	2	19	56	E.02	4.5	.049	<.02	.10	.058
28...	--	--	--	--	E.02	4.1	.022	<.02	--	E.022
JUN										
11...	317	6	21	56	<.04	4.3	.026	<.02	.05	.047
25...	--	--	--	--	<.04	3.9	.086	<.02	--	.044
JUL										
08...	205	1	11	23	<.04	4.1	.042	.07	--	.50
30...	--	--	--	--	E.03	3.8	.023	E.01	--	.11
AUG										
06...	324	3	18	52	<.04	3.5	.017	.02	.12	.087
26...	--	--	--	--	<.04	4.0	.013	<.02	--	.048
SEP										
04...	324	2	18	48	.05	3.3	.017	<.18	.09	.097

WATER-QUALITY RECORDS—CONTINUED

03267900 MAD RIVER AT ST. PARIS PIKE NEAR EAGLE CITY, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(00694), USGS National Water Information System parameter code; mg/L, milligrams per liter; ug/L, micrograms per liter; <, concentration or value reported is less than that indicated; E, estimated; --, no data]

Date	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)	2,6-Diethyl-aniline water fltrd 0.7u GF ug/L (82660)	Deethyl-atrazine, 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)
OCT										
04...	.5	<.1	.5	1.7	<.006	E.008	<.006	<.004	<.005	<.1
NOV										
06...	--	--	--	--	<.006	E.009	<.006	<.004	<.005	<.1
DEC										
04...	.2	<.1	.2	2.2	<.006	E.007	<.006	<.004	<.005	<.1
17...	.4	<.1	.4	1.7	<.006	E.007	<.006	<.004	<.005	<.1
JAN										
22...	.3	<.1	.3	1.5	<.006	E.007	<.006	<.004	<.005	.1
FEB										
12...	.4	<.1	.4	1.7	<.006	E.007	<.006	<.004	<.005	<.1
MAR										
13...	1.8	<.1	E1.8	3.3	<.006	E.039	<.006	<.004	<.005	<.1
APR										
08...	1.2	<.1	1.2	3.2	<.006	E.034	<.006	<.004	<.005	<.1
22...	--	--	--	--	<.006	E.013	.008	<.004	<.005	<.1
MAY										
13...	1.1	<.1	1.1	3.3	<.006	E.087	.098	<.004	<.005	<.1
28...	--	--	--	--	<.006	E.039	.022	<.004	<.005	.1
JUN										
11...	.5	<.1	.5	2.1	<.006	E.037	.011	<.004	<.005	<.1
25...	--	--	--	--	<.006	E.016	<.006	<.004	<.005	<.1
JUL										
08...	--	--	--	8.4	<.006	E.29	.12	.009	<.005	<.1
30...	--	--	--	--	<.006	E.017	<.006	<.004	<.005	<.1
AUG										
06...	1.3	<.1	1.3	3.9	<.006	E.045	<.006	<.004	<.005	.2
26...	--	--	--	--	<.006	E.006	<.006	<.004	<.005	<.1
SEP										
04...	1.1	<.1	1.1	4.0	<.006	E.036	E.004	<.004	<.005	.1

WATER-QUALITY RECORDS—CONTINUED

03267900 MAD RIVER AT ST. PARIS PIKE NEAR EAGLE CITY, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(39632), USGS National Water Information System parameter code; ug/L, micrograms per liter; <, concentration or value reported is less than that indicated; E, estimated]

Date	Atrazine, water, fltrd, ug/L (39632)	Azinphos-methyl, water, fltrd 0.7u GF ug/L (82686)	Benfluralin, water, fltrd 0.7u GF ug/L (82673)	Butylate, water, fltrd, ug/L (04028)	Carbaryl, water, fltrd 0.7u GF ug/L (82680)	Carbofuran, water, fltrd 0.7u GF ug/L (82674)	Chlorpyrifos water, fltrd, ug/L (38933)	cis-Permethrin water fltrd 0.7u GF ug/L (82687)	Cyanazine, water, fltrd, ug/L (04041)	DCPA, water fltrd 0.7u GF ug/L (82682)
OCT										
04...	.018	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003
NOV										
06...	.015	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003
DEC										
04...	.013	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003
17...	.013	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003
JAN										
22...	.010	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003
FEB										
12...	.012	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003
MAR										
13...	.075	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003
APR										
08...	.40	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003
22...	.065	<.050	<.010	<.002	E.20	<.020	<.005	<.006	<.018	<.003
MAY										
13...	1.5	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003
28...	.26	<.050	<.010	<.002	E.013	<.020	<.005	<.006	<.018	<.003
JUN										
11...	.34	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003
25...	.078	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003
JUL										
08...	1.7	<.050	<.010	<.002	E.004	E.12	<.005	<.006	<.018	<.003
30...	.068	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003
AUG										
06...	.13	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003
26...	.020	<.050	<.010	<.002	E.006	<.020	<.005	<.006	<.018	<.003
SEP										
04...	.11	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003

WATER-QUALITY RECORDS—CONTINUED

03267900 MAD RIVER AT ST. PARIS PIKE NEAR EAGLE CITY, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(62170), USGS National Water Information System parameter code; ug/L, micrograms per liter; <, concentration or value reported is less than that indicated; --, no data]

Date	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)
OCT										
04...	--	<.005	<.005	<.02	<.002	<.009	<.005	--	--	--
NOV										
06...	<.004	<.005	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
DEC										
04...	<.004	<.005	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
17...	<.004	<.005	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
JAN										
22...	<.004	<.005	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
FEB										
12...	<.004	<.005	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
MAR										
13...	<.004	<.005	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
APR										
08...	<.004	<.005	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
22...	<.004	<.005	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
MAY										
13...	<.004	<.005	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
28...	<.004	<.005	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
JUN										
11...	<.004	<.005	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
25...	<.004	<.005	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
JUL										
08...	<.004	<.005	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
30...	<.004	<.005	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
AUG										
06...	<.004	<.005	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
26...	<.004	<.005	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
SEP										
04...	<.004	<.005	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005

WATER-QUALITY RECORDS—CONTINUED

03267900 MAD RIVER AT ST. PARIS PIKE NEAR EAGLE CITY, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(62166), USGS National Water Information System parameter code; ug/L, micrograms per liter; <, concentration or value reported is less than that indicated; e, estimated; --, no data]

Date	Fipro-nil, water, fltrd, ug/L (62166)	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)
OCT										
04...	--	<.003	<.1	<.1	<.004	<.035	<.027	<.006	E.011	<.006
NOV										
06...	<.007	<.003	<.1	<.1	<.004	<.035	<.027	<.006	E.009	<.006
DEC										
04...	<.007	<.003	<.1	<.1	<.004	<.035	<.027	<.006	E.002	<.006
17...	<.007	<.003	<.1	<.1	<.004	<.035	<.027	<.006	E.006	<.006
JAN										
22...	<.007	<.003	<.1	<.1	<.004	<.035	<.027	<.006	E.005	<.006
FEB										
12...	<.007	<.003	<.1	<.1	<.004	<.035	<.027	<.006	<.013	<.006
MAR										
13...	<.007	<.003	<.1	<.1	<.004	<.035	<.027	<.006	.052	<.006
APR										
08...	<.007	<.003	<.1	<.1	<.004	<.035	<.027	<.006	.14	<.006
22...	<.007	<.003	<.1	<.1	<.004	<.035	<.027	<.006	.018	<.006
MAY										
13...	<.007	<.003	<.1	<.1	<.004	<.035	<.027	<.006	.29	.008
28...	<.007	<.003	<.1	<.1	<.004	<.035	<.027	<.006	.059	<.006
JUN										
11...	<.007	<.003	<.1	<.1	<.004	<.035	<.027	<.006	.069	<.006
25...	<.007	<.003	<.1	<.1	<.004	<.035	<.027	<.006	.024	<.006
JUL										
08...	<.007	<.003	<.1	<.1	<.004	<.035	<.027	<.006	.73	.029
30...	<.007	<.003	<.1	<.1	<.004	<.035	<.027	<.006	.030	<.006
AUG										
06...	<.007	<.003	<.1	<.1	<.004	<.035	<.027	<.006	.060	<.006
26...	<.007	<.003	<.1	<.1	<.004	<.035	<.027	<.006	E.010	<.006
SEP										
04...	<.007	<.003	<.1	<.1	<.004	<.035	<.027	<.006	.061	<.006

WATER-QUALITY RECORDS—CONTINUED

03267900 MAD RIVER AT ST. PARIS PIKE NEAR EAGLE CITY, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(82671), USGS National Water Information System parameter code; ug/L, micrograms per liter; <, concentration or value reported is less than that indicated; E, estimated; M, presence of compound verified but concentration not quantified]

Date	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)	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)
OCT										
04...	<.002	<.007	<.003	<.010	<.004	<.022	<.011	.02	<.004	<.010
NOV										
06...	<.002	<.007	<.003	<.010	<.004	<.022	<.011	M	<.004	<.010
DEC										
04...	<.002	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.010
17...	<.002	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.010
JAN										
22...	<.002	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.010
FEB										
12...	<.002	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.010
MAR										
13...	<.002	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.010
APR										
08...	<.002	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.010
22...	<.002	<.007	<.003	<.010	<.004	<.022	<.011	M	<.004	<.010
MAY										
13...	<.002	<.007	<.003	<.010	<.004	<.022	<.011	M	<.004	<.010
28...	<.002	<.007	<.003	<.010	<.004	<.022	<.011	M	<.004	<.010
JUN										
11...	<.002	<.007	<.003	<.010	<.004	<.022	<.011	.04	<.004	<.010
25...	<.002	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.010
JUL										
08...	<.002	<.007	<.003	<.010	<.004	<.022	<.011	E.01	<.004	<.010
30...	<.002	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.010
AUG										
06...	<.002	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.010
26...	<.002	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.010
SEP										
04...	<.002	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.010

WATER-QUALITY RECORDS—CONTINUED

03267900 MAD RIVER AT ST. PARIS PIKE NEAR EAGLE CITY, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(82679), USGS National Water Information System parameter code; ug/L, micrograms per liter; mg/L, milligrams per liter; <, concentration or value reported is less than that indicated]

Date	Pro- panil, water, fltrd 0.7u GF ug/L (82679)	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)	Tri- allate, water, fltrd 0.7u GF ug/L (82678)	Tri- flur- alin, water, fltrd 0.7u GF ug/L (82661)	Sus- pended sedi- ment concen- tration mg/L (80154)
OCT									
04...	<.011	<.005	<.02	<.034	<.02	<.005	<.002	<.009	16
NOV									
06...	<.011	<.005	<.02	<.040	<.02	<.005	<.002	<.009	98
DEC									
04...	<.011	<.005	<.02	<.034	<.02	<.005	<.002	<.009	58
17...	<.011	.006	<.02	<.034	<.02	<.005	<.002	<.009	16
JAN									
22...	<.011	.005	<.02	<.034	<.02	<.005	<.002	<.009	114
FEB									
12...	<.011	<.005	<.02	<.034	<.02	<.005	<.002	<.009	94
MAR									
13...	<.011	.118	<.02	<.034	<.02	<.005	<.002	<.009	36
APR									
08...	<.011	.082	<.02	<.034	<.02	<.005	<.002	<.009	63
22...	<.011	.022	<.02	<.034	<.02	<.005	<.002	<.009	41
MAY									
13...	<.011	.145	<.02	<.034	<.02	<.005	<.002	<.009	71
28...	<.011	.032	<.02	<.034	<.02	<.005	<.002	<.009	27
JUN									
11...	<.011	.070	<.02	<.034	<.02	<.005	<.002	<.009	17
25...	<.011	.022	<.02	<.034	<.02	<.005	<.002	<.009	14
JUL									
08...	<.011	.087	<.02	<.034	<.02	<.005	<.002	<.009	431
30...	<.011	.011	<.02	<.034	<.02	<.005	<.002	<.009	9
AUG									
06...	<.011	.025	<.02	<.034	<.02	<.005	<.002	<.009	41
26...	<.011	.005	<.02	<.034	<.02	<.005	<.002	<.009	10
SEP									
04...	<.011	.013	<.02	<.034	<.02	<.005	<.002	<.009	16

WATER-QUALITY RECORDS

393944084120700 HOLES CREEK AT HUFFMAN PARK NEAR KETTERING, OHIO

LOCATION.—Latitude 39°39′44″, longitude 84°12′07″, Montgomery County, Hydrologic Unit 05080001, and at mile 2.6.
DRAINAGE AREA.—20 mi^2.
REMARKS.—Eleven discharge measurements were made at this site. Continuous stage data are collected at Holes Creek at Mad River Road (03271300), a station 0.6 mile upstream of the sampling site that is maintained by the Miami Conservancy District. Continuous discharge data and water-quality-monitor data for this site (03271300) are located in the surface-water section in volume 1 of this report.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(00061), USGS National Water Information System parameter code; cfs, cubic feet per second; mm of Hg; millimeters of mercury; mg/L, milligrams per liter; uS/cm, microsiemens per centimeter; deg C, degrees Celsius;; --, no data]

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)
OCT											
04...	1445	24	735	8.5	101	8.2	574	22.5	22.0	160	191
NOV											
06...	1330	30	742	11.7	101	7.9	540	7.5	7.9	--	--
DEC											
05...	1330	4.5	746	13.9	100	8.4	897	-1.0	1.1	258	308
18...	1130	38	745	12.7	100	8.4	900	12.5	4.1	190	227
JAN											
23...	1230	5.1	752	15.2	106	8.3	1690	<-5.0	.1	283	338
FEB											
13...	1230	6.2	749	14.2	101	8.6	3250	<-5.0	.4	243	288
MAR											
11...	1100	7.5	748	12.3	91	8.1	1120	3.0	2.1	210	250
APR											
09...	1230	28	740	12.0	102	8.4	926	4.0	7.0	202	241
23...	1130	7.0	748	12.4	114	8.4	962	12.0	10.4	--	--
MAY											
14...	1100	8.6	743	10.0	101	8.4	850	18.0	14.4	239	284
28...	1130	9.1	742	10.9	115	8.4	969	23.0	16.5	--	--
JUN											
11...	1100	108	741	8.8	100	8.0	462	25.0	19.8	111	133
26...	1200	4.2	743	8.3	98	8.4	922	31.0	22.4	--	--
JUL											
10...	1200	117	739	8.4	102	8.1	471	27.5	23.0	123	147
31...	1230	4.5	745	--	--	8.2	842	29.0	21.6	--	--
AUG											
05...	1230	5.8	742	9.9	112	8.4	733	29.5	20.5	208	248
27...	1315	134	744	8.3	96	8.2	620	21.0	20.0	--	--
SEP											
03...	1130	73	745	8.8	103	8.1	470	22.5	22.1	140	169

WATER-QUALITY RECORDS—CONTINUED

393944084120700 HOLES CREEK AT HUFFMAN PARK NEAR KETTERING, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(00452), USGS National Water Information System parameter code; mg/L, milligrams per liter; <, concentration or value reported is less than tt indicated; E, estimated; --, no data]

Date	Carbon-ate, wat flt incrm. titr., field, mg/L (00452)	Chlor-ide, water, fltrd, mg/L (00940)	Sulfate water, fltrd, mg/L (00945)	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)
OCT											
04...	2	55	36	<.04	1.02	.009	<.02	.21	.057	1.4	<.1
NOV											
06...	--	--	--	<.04	.80	.011	<.02	--	.074	--	--
DEC											
05...	3	100	50	<.04	1.21	E.007	<.02	.03	.015	.3	<.1
18...	2	165	40	<.04	1.10	.011	<.02	.10	.051	1.1	<.1
JAN											
23...	4	397	52	<.04	1.59	E.004	<.02	.04	.013	.3	<.1
FEB											
13...	4	927	55	<.04	1.43	.023	E.01	.03	.013	.3	<.1
MAR											
11...	3	213	41	<.04	1.40	.010	<.02	.06	.031	.6	<.1
APR											
09...	3	135	38	E.03	1.03	.010	<.02	.16	.064	1.3	<.1
23...	--	--	--	<.04	1.05	.009	<.02	--	.061	--	--
MAY											
14...	4	115	39	<.04	1.28	.036	<.02	.21	.20	2.6	<.1
28...	--	--	--	<.04	1.15	.031	<.02	--	E.013	--	--
JUN											
11...	1	54	18	<.04	.61	.073	<.02	.17	.19	1.9	.2
26...	--	--	--	<.04	1.41	.013	<.02	--	.019	--	--
JUL											
10...	1	54	20	<.04	.57	.035	<.02	.36	.15	4.3	.1
31...	--	--	--	<.04	1.28	<.008	<.02	--	.021	--	--
AUG											
05...	3	89	32	<.04	1.021	.046	<.02	.03	.030	.3	<.1
27...	--	--	--	.05	1.66	.015	<.02	--	.23	--	--
SEP											
03...	1	43	23	<.04	.69	.018	<.18	.21	.14	2.2	<.1

WATER-QUALITY RECORDS—CONTINUED

393944084120700 HOLES CREEK AT HUFFMAN PARK NEAR KETTERING, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(00689), USGS National Water Information System parameter code; mg/L, milligrams per liter; ug/L, micrograms per liter; <, concentration or value reported is less than that indicated; E, estimated; M, presence of compound verified but concentration not quantified; --, no data]

Date	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	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-Diethylaniline water fltrd 0.7u GF ug/L (82660)	2-[(2-Et-6-Me-Ph)-amino] propan-1-ol, ug/L (61615)	2Amino-N-isopropylbenzamide, wat flt ug/L (61617)	2Chloro-2',6'-diethyl acetanilide wat flt ug/L (61618)	Deethylatrazine water, fltrd, ug/L (04040)
OCT											
04...	1.4	4.6	<.05	<.09	<.01	<.03	<.006	--	<.005	<.005	E.012
NOV											
06...	--	--	M	E.01	<.01	<.03	<.006	<.1	<.005	<.005	E.009
DEC											
05...	.3	3.3	<.05	<.09	<.01	<.03	<.006	<.1	<.005	<.005	E.007
18...	1.1	4.8	<.05	<.09	<.01	<.03	<.006	<.1	<.005	<.005	E.008
JAN											
23...	.3	2.2	<.05	<.09	<.01	<.03	<.006	<.1	<.005	<.005	E.007
FEB											
13...	.3	2.8	<.05	<.09	<.01	<.03	<.006	<.1	<.005	<.005	E.007
MAR											
11...	E.5	4.4	<.05	<.09	<.01	<.03	<.006	<.1	<.005	<.005	<.006
APR											
09...	1.3	4.0	<.05	<.09	<.01	<.03	<.006	<.1	<.005	<.005	E.006
23...	--	--	<.05	<.09	<.01	<.03	<.006	<.1	<.005	<.005	E.011
MAY											
14...	2.6	4.0	<.05	<.09	<.01	<.03	<.006	<.1	<.005	<.005	E.082
28...	--	--	<.05	<.09	<.01	<.03	<.006	<.1	<.005	<.005	E.12
JUN											
11...	1.7	6.0	<.05	E.01	<.01	<.03	<.006	<.1	<.005	<.005	E.041
26...	--	--	<.05	<.09	<.01	<.03	<.006	<.1	<.005	<.005	E.025
JUL											
10...	4.2	5.9	<.05	E.01	<.01	<.03	<.006	<.1	<.005	<.005	E.025
31...	--	--	<.05	--	<.01	<.03	<.006	<.1	<.005	<.005	E.012
AUG											
05...	.3	3.5	M	E.01	<.01	<.03	<.006	<.1	<.005	<.005	E.007
27...	--	--	<.05	--	<.01	<.03	<.006	<.1	<.005	<.005	<.006
SEP											
03...	2.2	6.4	<.05	E.01	<.01	<.03	<.006	<.1	<.005	<.005	E.006

WATER-QUALITY RECORDS—CONTINUED

393944084120700 HOLES CREEK AT HUFFMAN PARK NEAR KETTERING, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(61620), USGS National Water Information System parameter code; ug/L, micrograms per liter; <, concentration or value reported is less than that indicated; E, estimated; --, no data]

Date	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)	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, mrthyl sulfone water, fltrd, ug/L (61634)	Aceto- chlor, water, fltrd, ug/L (49260)
OCT										
04...	<.004	<.01	<.004	E.003	--	--	<.003	E.007	--	<.006
NOV										
06...	<.004	<.01	<.004	<.005	<.05	--	<.003	E.010	<.03	.035
DEC										
05...	<.004	<.01	<.004	<.005	<.05	<.1	<.003	<.006	<.03	<.006
18...	<.004	<.01	<.004	<.005	<.05	<.1	<.003	<.006	<.03	.006
JAN										
23...	<.004	<.01	<.004	<.005	<.05	<.1	<.003	<.006	<.03	<.006
FEB										
13...	<.004	<.01	<.004	<.005	<.05	<.1	<.003	<.006	<.03	<.006
MAR										
11...	<.004	<.01	<.004	<.005	<.05	<.1	<.003	<.006	<.03	<.006
APR										
09...	<.004	<.01	<.004	<.005	--	--	<.003	E.014	<.03	<.006
23...	<.004	<.01	<.004	<.005	<.05	<.1	<.003	E.011	<.03	.026
MAY										
14...	<.004	<.01	<.004	<.005	<.05	<.1	<.003	E.007	<.03	.62
28...	<.004	<.01	<.004	<.005	<.05	<.1	<.003	E.011	<.03	.12
JUN										
11...	<.004	<.01	<.004	<.005	<.05	--	<.003	E.025	<.03	.029
26...	<.004	<.01	<.004	<.005	<.05	<.1	<.016	<.006	<.03	<.006
JUL										
10...	<.004	<.01	<.004	<.005	<.05	<.1	<.003	E.009	<.03	.007
31...	<.004	<.01	.013	E.002	--	--	<.003	<.006	<.03	E.006
AUG										
05...	<.004	<.01	.005	<.005	<.05	--	<.003	E.005	<.03	<.006
27...	<.004	<.01	<.004	<.005	--	--	<.003	E.013	<.03	<.006
SEP										
03...	<.004	<.01	.008	<.005	--	--	<.003	E.013	<.03	E.005

WATER-QUALITY RECORDS—CONTINUED

393944084120700 HOLES CREEK AT HUFFMAN PARK NEAR KETTERING, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(46342), USGS National Water Information System parameter code; ug/L, micrograms per liter; <, concentration or value reported is less than that indicated --, no data]

Date	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)	beta- Endo- sulfan, water, fltrd, ug/L (34357)	Bifen- thrin, water, fltrd, ug/L (61580)
OCT										
04...	<.004	<.005	<.005	.3	.035	<.02	<.050	<.010	<.01	<.005
NOV										
06...	<.004	<.005	<.005	<.1	.022	<.02	<.050	<.010	<.01	<.005
DEC										
05...	<.004	<.005	<.005	<.1	.015	<.02	<.050	<.010	<.01	<.005
18...	<.004	<.005	<.005	--	.015	<.02	<.050	<.010	<.01	<.005
JAN										
23...	<.004	<.005	<.005	<.1	.010	<.02	<.050	<.010	<.01	<.005
FEB										
13...	<.004	<.005	<.005	<.1	.011	<.12	<.050	<.010	<.01	<.005
MAR										
11...	<.004	<.005	<.005	<.1	.013	<.02	<.050	<.010	<.01	<.005
APR										
09...	<.004	<.005	<.005	<.1	.015	<.02	<.050	<.010	<.01	<.005
23...	<.004	<.005	<.005	<.1	.040	<.02	<.050	<.010	<.01	<.005
MAY										
14...	<.004	<.005	<.005	.1	2.8	<.02	<.050	<.010	<.01	<.005
28...	.007	<.005	<.005	<.1	.83	<.02	<.050	<.010	<.01	<.005
JUN										
11...	<.004	<.005	<.005	.2	.16	<.02	<.050	<.010	<.01	<.005
26...	<.004	<.005	<.005	<.1	.061	<.02	<.050	<.010	<.01	<.005
JUL										
10...	<.004	<.005	<.005	.2	.084	<.02	<.050	<.010	<.01	<.005
31...	<.004	<.005	<.005	.1	.033	<.02	<.050	<.010	<.01	<.005
AUG										
05...	<.004	<.005	<.005	.3	.022	<.02	<.050	<.010	<.01	<.005
27...	<.004	<.005	<.005	.1	.015	<.02	<.050	<.010	<.01	<.005
SEP										
03...	<.004	<.005	<.005	.2	.017	<.02	<.050	<.010	<.01	<.005

WATER-QUALITY RECORDS—CONTINUED

393944084120700 HOLES CREEK AT HUFFMAN PARK NEAR KETTERING, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(04028), USGS National Water Information System parameter code; ug/L, micrograms per liter; <, concentration or value reported is less than that indicated; E, estimated]

Date	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)
OCT										
04...	<.002	E.009	<.020	<.06	<.005	<.006	.011	<.018	<.005	<.008
NOV										
06...	<.002	E.12	<.020	<.06	<.005	<.006	<.008	<.018	<.005	<.008
DEC										
05...	<.002	E.004	<.020	<.06	<.005	<.006	<.008	<.018	<.005	<.008
18...	<.002	E.007	<.020	<.06	<.005	<.006	<.008	<.018	<.005	<.008
JAN										
23...	<.002	<.041	<.020	<.06	<.005	<.006	<.008	<.018	<.005	<.008
FEB										
13...	<.002	<.041	<.020	<.06	<.005	<.006	<.008	<.018	<.005	<.008
MAR										
11...	<.002	<.041	<.020	<.06	<.005	<.006	<.008	<.018	<.005	<.008
APR										
09...	<.002	E.008	<.020	<.06	<.005	<.006	<.008	<.018	<.005	<.008
23...	<.002	E.007	<.020	<.06	<.005	<.006	<.008	<.018	<.005	<.008
MAY										
14...	<.002	E.007	<.020	<.06	<.005	<.006	<.008	<.018	<.005	<.008
28...	<.002	E.024	<.020	<.06	<.005	<.006	<.008	<.018	<.005	<.008
JUN										
11...	<.002	E.044	<.020	<.06	<.005	<.006	.020	<.018	<.005	<.008
26...	<.002	<.041	<.020	<.02	.011	<.006	E.003	<.018	<.005	<.016
JUL										
10...	<.002	E.12	<.020	<.06	<.005	<.006	.028	<.018	<.005	<.008
31...	<.002	E.009	<.020	<.06	<.005	<.006	.026	<.018	<.005	<.008
AUG										
05...	<.002	E.17	<.020	<.06	<.005	<.006	.027	<.018	<.005	<.008
27...	<.002	E.026	<.020	<.06	<.005	<.006	.019	<.018	<.005	<.008
SEP										
03...	<.002	E.052	<.020	<.06	<.005	<.006	.038	<.018	<.005	<.008

WATER-QUALITY RECORDS—CONTINUED

393944084120700 HOLES CREEK AT HUFFMAN PARK NEAR KETTERING, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(61595), USGS National Water Information System parameter code; ug/L, micrograms per liter; <, concentration or value reported is less than that indicated; E, estimated; --, no data]

Date	Cyhalothrin, water, fltrd, ug/L (61595)	Cypermethrin water, fltrd, ug/L (61586)	DCPA, water fltrd 0.7u GF ug/L (82682)	Desulfinyl fipronil, water, fltrd, ug/L (62170)	Diazinon, water, fltrd, ug/L (39572)	Dicrotophos, water fltrd, ug/L (38454)	Dieldrin, water, fltrd, ug/L (39381)	Dimethoate, water, fltrd 0.7u GF ug/L (82662)	Disulfoton sulfone water, fltrd, ug/L (61640)	Disulfoton sulfoxide, water, fltrd, ug/L (61641)
OCT										
04...	<.009	<.009	<.003	--	.041	<.08	<.005	<.006	<.02	<.002
NOV										
06...	<.009	<.009	<.003	<.004	.053	<.08	<.005	<.006	<.02	<.002
DEC										
05...	<.009	<.009	<.003	<.004	E.017	<.08	<.005	<.006	<.02	<.002
18...	<.009	<.009	<.003	<.004	E.023	<.08	<.005	<.006	<.02	<.002
JAN										
23...	<.009	<.009	<.003	<.004	.007	<.08	<.005	<.006	<.02	<.002
FEB										
13...	<.009	<.009	<.003	<.004	<.005	<.08	<.005	<.006	<.02	<.002
MAR										
11...	<.009	<.009	<.003	<.004	<.005	<.08	<.005	<.006	<.02	<.002
APR										
09...	<.009	<.009	<.003	<.004	.020	<.08	<.005	<.006	<.02	<.002
23...	<.009	<.009	<.003	<.004	.011	<.08	<.005	<.006	<.02	<.002
MAY										
14...	<.009	<.009	<.003	<.004	.027	<.08	<.005	<.006	<.02	<.002
28...	<.009	<.009	<.003	<.004	.015	<.08	<.005	<.006	<.02	<.002
JUN										
11...	<.009	<.009	<.003	<.004	.066	<.08	<.005	<.006	<.02	<.002
26...	<.009	<.016	<.003	<.004	.010	<.08	<.005	<.006	<.02	<.002
JUL										
10...	<.009	<.009	<.003	<.004	.039	<.08	<.005	<.006	<.02	<.002
31...	<.009	<.009	<.003	<.004	.015	<.08	<.005	<.006	<.02	<.002
AUG										
05...	<.009	<.009	<.003	<.004	.059	<.08	<.005	<.006	<.02	<.002
27...	<.009	<.009	<.003	<.004	.011	<.08	<.005	<.006	<.02	<.002
SEP										
03...	<.009	<.009	<.003	<.004	.017	<.08	<.005	<.006	<.02	<.002

WATER-QUALITY RECORDS—CONTINUED

393944084120700 HOLES CREEK AT HUFFMAN PARK NEAR KETTERING, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(82677), USGS National Water Information System parameter code; ug/L, micrograms per liter; <, concentration or value reported is less than that indicated]

Date	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)	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)
OCT										
04...	<.02	<.02	<.004	<.006	<.002	<.009	<.03	<.004	<.005	<.008
NOV										
06...	<.02	<.02	<.004	<.006	<.002	<.009	<.03	<.004	<.005	<.008
DEC										
05...	<.02	<.02	<.004	<.006	<.002	<.009	<.03	<.004	<.005	<.008
18...	<.02	<.02	<.004	<.006	<.002	<.009	<.03	<.004	<.005	<.008
JAN										
23...	<.02	<.02	<.004	<.006	<.002	<.009	<.03	<.004	<.005	<.008
FEB										
13...	<.02	<.02	<.004	<.006	<.002	<.009	<.03	<.004	<.005	<.008
MAR										
11...	<.02	<.02	<.004	<.006	<.002	<.009	<.03	<.004	<.005	<.008
APR										
09...	<.02	<.02	<.004	<.006	<.002	<.009	<.03	<.004	<.005	<.008
23...	<.02	<.02	<.004	<.006	<.002	<.009	<.03	<.004	<.005	<.008
MAY										
14...	<.02	<.02	<.004	<.006	<.002	<.009	<.03	<.004	<.005	<.008
28...	<.02	<.02	<.004	<.006	<.002	<.009	<.03	<.004	<.005	<.008
JUN										
11...	<.02	<.02	<.004	<.006	<.002	<.009	<.03	<.004	<.005	<.008
26...	<.02	<.02	<.004	<.006	<.002	<.009	<.03	<.004	<.005	<.008
JUL										
10...	<.02	<.02	<.004	<.006	<.002	<.009	<.03	<.004	<.005	<.008
31...	<.02	<.02	<.004	<.006	<.002	<.009	<.03	<.004	<.005	<.008
AUG										
05...	<.02	<.02	<.004	<.006	<.002	<.009	<.03	<.004	<.005	<.008
27...	<.02	<.02	<.004	<.006	<.002	<.009	<.03	<.004	<.005	<.008
SEP										
03...	<.02	<.02	<.004	<.006	<.002	<.009	<.03	<.004	<.005	<.008

WATER-QUALITY RECORDS—CONTINUED

393944084120700 HOLES CREEK AT HUFFMAN PARK NEAR KETTERING, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(61646), USGS National Water Information System parameter code; ug/L, micrograms per liter; <, concentration or value reported is less than that indicated; E, estimated; --, no data]

Date	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)	Fipro-nil, water, fltrd, ug/L (62166)	Flume-tralin, water, fltrd, ug/L (61592)	Fonofos oxon, water, fltrd, ug/L (61649)
OCT										
04...	<.03	<.03	<.008	<.02	--	--	--	--	<.004	<.002
NOV										
06...	<.03	<.03	<.008	<.02	E.006	E.004	E.005	E.012	<.004	<.002
DEC										
05...	<.03	<.03	<.008	<.02	<.009	<.005	<.005	E.005	<.004	<.002
18...	<.03	<.03	<.008	<.02	<.009	<.005	<.005	E.009	<.004	<.002
JAN										
23...	<.03	<.03	<.008	<.02	<.009	<.005	<.005	E.020	<.004	<.002
FEB										
13...	--	<.03	<.008	<.02	<.009	<.005	<.005	E.017	<.004	<.002
MAR										
11...	<.03	<.03	<.008	<.02	<.009	<.005	<.005	E.015	<.004	<.002
APR										
09...	<.03	<.03	<.008	<.02	<.009	<.005	<.005	E.012	<.004	<.002
23...	<.03	<.03	<.008	<.02	<.009	<.005	<.005	E.010	<.004	<.002
MAY										
14...	<.03	<.03	<.008	<.02	<.009	<.005	<.005	E.021	<.004	<.002
28...	<.03	<.03	<.008	<.02	<.009	<.005	<.005	E.014	<.004	<.002
JUN										
11...	<.03	<.03	<.008	<.02	<.009	<.005	<.005	E.010	<.004	<.002
26...	<.03	<.03	<.008	<.02	<.009	<.005	<.005	E.009	<.004	<.002
JUL										
10...	<.03	<.03	<.008	<.02	<.009	<.005	<.005	E.016	<.004	<.002
31...	<.03	<.03	<.008	<.02	<.009	<.005	<.005	E.007	<.004	<.002
AUG										
05...	<.03	<.03	<.008	<.02	<.009	<.005	<.005	E.007	<.004	<.002
27...	<.03	<.03	<.008	<.02	<.009	<.005	<.005	<.007	<.004	<.002
SEP										
03...	<.03	<.03	<.008	<.02	<.009	<.005	<.005	E.023	<.004	<.002

WATER-QUALITY RECORDS—CONTINUED

393944084120700 HOLES CREEK AT HUFFMAN PARK NEAR KETTERING, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

(04095), USGS National Water Information System parameter code; ug/L, micrograms per liter; <, concentration or value reported is less than that indicated; E, estimated]

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)	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 ug/L (82666)	Mala-oxon, water, fltrd, ug/L (61652)	Mala-thion, water, fltrd, ug/L (39532)
OCT										
04...	<.003	<.1	<.1	<.013	<1	.014	<.004	<.035	<.008	E.016
NOV										
06...	<.003	<.1	<.1	<.013	<1	<.003	<.004	<.035	<.008	<.027
DEC										
05...	<.003	<.1	<.1	<.013	<1	<.003	<.004	<.035	<.008	<.027
18...	<.003	--	--	<.013	<1	<.003	<.004	<.035	<.008	<.027
JAN										
23...	<.003	<.1	<.1	<.013	<1	<.003	<.004	<.035	<.008	<.027
FEB										
13...	<.003	<.1	<.1	<.013	<1	<.003	<.004	<.035	<.008	<.027
MAR										
11...	<.003	<.1	<.1	<.013	<1	<.003	<.004	<.035	<.008	<.027
APR										
09...	<.003	<.1	<.1	<.013	<1	<.003	<.004	<.035	<.008	<.027
23...	<.003	<.1	<.1	<.013	<1	<.003	<.004	<.035	<.008	<.027
MAY										
14...	<.003	<.1	<.1	<.013	<1	<.003	<.004	<.035	<.008	<.027
28...	<.003	<.1	.2	<.013	<1	<.003	<.004	<.035	<.008	<.027
JUN										
11...	<.003	<.1	.7	.018	<1	<.003	<.004	<.035	<.008	<.027
26...	<.003	<.1	<.1	<.013	<1	<.003	<.004	<.035	<.008	<.027
JUL										
10...	<.003	<.1	<.1	<.013	<1	<.003	<.004	<.035	<.008	E.008
31...	<.003	<.1	<.1	<.013	<1	<.003	<.004	<.035	<.008	<.027
AUG										
05...	<.003	<.1	<.1	<.013	<1	<.003	<.004	<.035	<.008	<.027
27...	<.003	<.1	1.2	<.013	<1	<.003	<.015	<.035	.025	E.014
SEP										
03...	<.003	<.1	.4	<.013	<1	<.003	<.004	<.035	<.008	<.027

WATER-QUALITY RECORDS—CONTINUED

393944084120700 HOLES CREEK AT HUFFMAN PARK NEAR KETTERING, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

(61596), USGS National Water Information System parameter code; ug/L, micrograms per liter; <, concentration or value reported is less than that indicated; E, estimated]

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)
OCT										
04...	.013	<.006	<.04	<.03	<.006	<.03	E.009	<.006	<.002	E.006
NOV										
06...	.006	<.006	<.04	<.03	<.006	<.03	E.008	.014	<.002	<.008
DEC										
05...	<.005	<.006	<.04	<.03	<.006	<.03	E.001	<.006	<.002	<.008
18...	<.005	<.006	<.04	<.03	<.006	<.03	E.005	<.006	<.002	<.008
JAN										
23...	<.005	<.006	<.04	<.03	<.006	<.03	E.004	<.006	<.002	<.008
FEB										
13...	<.005	<.006	<.04	<.03	<.006	<.03	<.013	<.006	<.002	<.008
MAR										
11...	<.005	<.006	<.04	<.03	<.006	<.03	<.013	<.006	<.002	<.008
APR										
09...	<.005	<.006	<.04	<.03	<.006	<.03	E.008	<.006	<.002	<.008
23...	<.005	<.006	<.04	<.03	<.006	<.03	E.012	<.006	<.002	<.008
MAY										
14...	<.005	<.006	<.04	<.03	<.006	<.03	E.013	<.006	<.002	<.008
28...	<.005	<.006	<.04	<.03	<.006	<.03	.050	<.006	<.002	<.008
JUN										
11...	<.005	<.006	<.04	<.03	<.006	<.03	.015	<.006	<.002	<.008
26...	<.005	<.006	<.04	<.03	<.006	<.03	E.009	<.006	<.002	<.008
JUL										
10...	.040	<.006	<.04	<.03	<.006	<.03	E.012	<.006	<.002	.13
31...	.084	<.006	<.04	<.03	<.006	<.03	E.004	<.006	<.002	.015
AUG										
05...	.043	<.006	<.04	<.03	<.006	<.03	E.002	<.006	<.002	.010
27...	.008	<.006	<.04	<.03	<.006	<.03	E.003	<.006	<.002	E.006
SEP										
03...	.090	<.006	<.04	<.03	<.006	<.03	E.007	<.006	<.002	.030

WATER-QUALITY RECORDS—CONTINUED

393944084120700 HOLES CREEK AT HUFFMAN PARK NEAR KETTERING, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(82684), USGS National Water Information System parameter code; ug/L, micrograms per liter; <, concentration or value reported is less than that indicated; E, estimated]

Date	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)
OCT										
04...	<.007	<.008	<.007	<.003	<.008	<.010	<.004	<.022	<.10	<.011
NOV										
06...	<.007	<.008	<.007	<.003	<.008	<.010	<.004	<.022	<.10	<.011
DEC										
05...	<.007	<.008	<.007	<.003	<.008	<.010	<.004	<.022	<.10	<.011
18...	<.007	<.008	<.007	<.003	<.008	<.010	<.004	<.022	<.10	<.011
JAN										
23...	<.007	<.008	<.007	<.003	<.008	<.010	<.004	<.022	<.10	<.011
FEB										
13...	<.007	<.008	<.007	<.003	<.008	<.010	<.004	<.022	<.10	<.011
MAR										
11...	<.007	<.008	<.007	<.003	<.008	<.010	<.004	<.022	<.10	<.011
APR										
09...	<.007	<.008	<.007	<.003	<.008	<.010	<.004	.051	<.10	<.011
23...	<.007	<.008	<.007	<.003	<.008	<.010	<.004	E.021	<.10	<.011
MAY										
14...	<.007	<.008	<.007	<.003	<.008	<.010	<.004	<.022	<.10	<.011
28...	<.007	<.008	<.007	<.003	<.008	<.010	<.004	E.009	<.10	<.011
JUN										
11...	<.007	<.008	<.007	<.003	<.008	<.010	<.004	<.022	<.10	<.011
26...	<.007	<.008	<.007	<.003	<.016	<.010	<.004	<.022	<.10	<.011
JUL										
10...	<.007	<.008	<.007	<.003	<.008	<.010	<.004	<.022	<.10	<.011
31...	<.007	<.008	<.007	<.003	<.008	<.010	<.004	<.022	<.10	<.011
AUG										
05...	<.007	<.008	<.007	<.003	<.008	<.010	<.004	<.022	<.10	<.011
27...	<.007	<.008	<.007	<.003	<.008	<.010	<.004	<.022	<.10	<.011
SEP										
03...	<.007	<.008	<.007	<.003	<.008	<.010	<.004	<.022	<.10	<.011

WATER-QUALITY RECORDS—CONTINUED

393944084120700 HOLES CREEK AT HUFFMAN PARK NEAR KETTERING, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(61668), USGS National Water Information System parameter code; ug/L, micrograms per liter; <, concentration or value reported is less than that indicated; E, estimated]

Date	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)	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)
OCT										
04...	<.06	<.008	<.005	<.006	.04	<.005	<.004	<.010	<.011	<.02
NOV										
06...	<.06	<.008	<.005	<.006	.02	<.005	<.004	<.010	<.011	<.02
DEC										
05...	<.06	<.008	<.005	<.006	E.01	<.005	<.004	<.010	<.011	<.02
18...	<.06	<.008	<.005	<.006	E.01	<.005	<.004	<.010	<.011	<.02
JAN										
23...	<.06	<.008	<.005	<.006	E.01	<.005	<.004	<.010	<.011	<.02
FEB										
13...	<.06	<.008	<.005	<.006	E.01	<.005	<.004	<.010	<.011	<.02
MAR										
11...	<.06	<.008	<.005	<.006	.05	<.005	<.004	<.010	<.011	<.02
APR										
09...	<.06	<.008	<.005	<.006	.04	<.005	<.004	<.010	<.011	<.02
23...	<.06	<.008	<.005	<.006	.08	<.005	<.004	<.010	<.011	<.02
MAY										
14...	<.06	<.008	<.005	<.006	.02	<.005	<.004	<.010	<.011	<.02
28...	<.06	<.008	<.005	<.006	.02	<.005	<.004	<.010	<.011	<.02
JUN										
11...	<.06	<.008	<.005	<.006	.04	<.005	<.004	<.010	<.011	<.02
26...	<.06	<.008	<.005	<.006	.02	<.005	<.004	<.010	<.011	<.02
JUL										
10...	<.06	<.008	<.005	<.006	.04	<.005	<.004	<.010	<.011	<.02
31...	<.06	<.008	<.005	<.006	.02	<.005	<.004	<.010	<.011	<.02
AUG										
05...	<.06	<.008	<.005	<.006	.06	<.005	<.004	<.010	<.011	<.02
27...	<.06	<.008	<.005	<.006	.03	<.005	<.004	<.010	<.011	<.02
SEP										
03...	<.06	<.008	<.005	<.006	.05	<.005	<.004	<.010	<.011	<.02

WATER-QUALITY RECORDS—CONTINUED

393944084120700 HOLES CREEK AT HUFFMAN PARK NEAR KETTERING, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(61604), USGS National Water Information System parameter code; ug/L, micrograms per liter; <, concentration or value reported is less than that indicated; E, estimated; --, no data]

Date	Propet-amphos, water, fltrd, ug/L (61604)	Sima-zine, water, fltrd, ug/L (04035)	Sulfo-tepp, water, fltrd, ug/L (61605)	Sulpro-fos, water, fltrd, ug/L (38716)	Tebu-pirim-phos oxon, water, fltrd, ug/L (61669)	Tebu-thiuron water fltrd 0.7u GF ug/L (82670)	Teflu-thrin, water, fltrd, ug/L (61606)	Teme-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)
OCT										
04...	<.004	.011	<.003	<.02	<.006	<.02	<.008	<.3	<.034	<.07
NOV										
06...	<.004	.006	<.003	<.02	<.006	<.02	<.008	<.3	<.034	<.07
DEC										
05...	<.004	.007	<.003	<.02	<.006	<.02	<.008	<.3	<.034	<.07
18...	<.004	.007	<.003	<.02	<.006	<.02	<.008	<.3	<.034	<.07
JAN										
23...	<.004	E.004	<.003	<.02	<.006	<.02	<.008	<.3	<.034	<.07
FEB										
13...	<.004	<.005	<.003	<.02	<.006	<.02	<.008	<.3	<.034	<.07
MAR										
11...	<.004	<.005	<.003	<.02	<.006	<.02	<.008	<.3	<.034	<.07
APR										
09...	<.004	<.010	<.003	<.02	<.006	<.02	<.008	<.3	<.034	<.07
23...	<.004	.009	<.003	<.02	<.006	<.02	<.008	<.3	<.034	<.07
MAY										
14...	<.004	.040	<.003	<.02	<.006	<.02	<.008	<.3	<.034	<.07
28...	<.004	.023	<.003	<.02	<.006	<.02	<.008	<.3	<.034	<.07
JUN										
11...	<.004	.009	<.003	<.02	<.006	<.02	<.008	<.3	<.034	<.07
26...	<.004	<.005	<.003	<.02	<.006	<.02	<.008	<.3	<.034	<.07
JUL										
10...	<.004	.009	<.003	<.02	<.006	<.02	<.008	--	<.034	<.07
31...	<.004	.005	<.003	<.02	<.006	<.02	<.008	<.3	<.034	<.07
AUG										
05...	<.004	<.005	<.003	<.02	<.006	<.02	<.008	<.3	<.034	<.07
27...	<.004	<.005	<.003	<.02	<.006	<.02	<.008	<.3	<.095	<.07
SEP										
03...	<.004	<.005	<.003	<.02	<.006	<.02	<.008	<.3	<.034	<.07

WATER-QUALITY RECORDS—CONTINUED

393944084120700 HOLES CREEK AT HUFFMAN PARK NEAR KETTERING, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(82675), USGS National Water Information System parameter code; ug/L, micrograms per liter; <, concentration or value reported is less than that indicated; M, presence of compound verified but concentration not quantified; E, estimated; --, no data]

Date	Terbufos, water, fltrd 0.7u GF ug/L (82675)	Terbuthylazine, water, fltrd, ug/L (04022)	Thiobencarb water fltrd 0.7u GF ug/L (82681)	trans-Propiconazole, water, fltrd, ug/L (79847)	Triallate, water, fltrd 0.7u GF ug/L (82678)	Tribuphos, water, fltrd, ug/L (61610)	Trifluralin, water, fltrd 0.7u GF ug/L (82661)	z-Dimethomorph, water, fltrd, ug/L (79845)	Dichlorvos, water fltrd, ug/L (38775)	Suspended sediment concentration mg/L (80154)
OCT										
04...	<.02	<.01	<.005	E.01	<.002	<.004	<.009	<.05	M	14
NOV										
06...	<.02	<.01	<.005	<.01	<.002	<.004	<.009	<.05	E.02	49
DEC										
05...	<.02	<.01	<.005	<.01	<.002	<.004	<.009	<.05	<.01	72
18...	<.02	<.01	<.005	<.01	<.002	<.004	M	<.05	<.01	14
JAN										
23...	<.02	<.01	<.005	<.01	<.002	<.004	<.009	<.05	<.01	14
FEB										
13...	<.02	<.01	<.005	<.01	<.002	<.004	<.009	<.05	<.01	10
MAR										
11...	<.02	<.01	<.005	<.01	<.002	<.004	<.009	<.05	<.01	56
APR										
09...	<.02	<.01	<.005	<.01	<.002	<.004	E.004	<.05	<.01	40
23...	<.02	<.01	<.005	<.01	<.002	<.004	E.002	<.05	<.01	63
MAY										
14...	<.02	<.01	<.005	<.01	<.002	<.004	<.009	<.05	<.01	229
28...	<.02	<.01	<.005	<.01	<.002	<.004	<.009	<.05	<.01	42
JUN										
11...	<.02	<.01	<.005	.03	<.002	<.004	<.009	<.05	E.34	120
26...	<.02	<.01	<.005	E.01	<.002	<.004	<.009	<.05	<.01	15
JUL										
10...	<.02	<.01	<.005	.04	<.002	<.004	<.009	<.05	E.02	95
31...	<.02	<.01	<.005	.03	<.002	<.004	<.009	<.05	<.01	4
AUG										
05...	<.02	<.01	<.005	.04	<.002	<.004	<.009	<.05	<.01	6
27...	<.02	<.01	<.005	.02	<.002	<.004	E.002	<.05	<.01	130
SEP										
03...	<.02	<.01	<.005	.06	<.002	<.004	E.003	<.05	E.01	40

Results from Selected Sites in the White, Great, and Little Miami River Basins (National Water-Quality Assessment Program)

WATER QUALITY OF PUBLIC-SUPPLY WELLS IN THE GLACIAL DEPOSITS AQUIFER NEAR DAYTON, OHIO

The following tables include water-quality data from 15 public-supply wells that derive water from glacial valley-fill deposits in the vicinity of Dayton, Ohio. The wells selected for sampling were interpreted to be minimally influenced by infiltration of surface water. Wells were sampled for field parameters, inorganic constituents (major ions and trace elements) and organic constituents (pesticides, volatile organic compounds, and dissolved organic carbon). This is one of several networks of public-supply wells in urban areas throughout the Nation included in the National Water-Quality Assessement (NAWQA) Source-Water-Quality Assessment (SWQA).

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

[(72008), USGS National Water Information System parameter code; LSD, land surface datum; NTU, Nephelometric Turbidity Units; mg/L, milligrams per liter; uS/cm; microsiemens per centimeter; deg C, degrees Celsius]

Station name	Station number	Date	Depth of well, feet below LSD (72008)	Alti- tude of land surface feet (72000)	Tur- bidity, water, unfltrd field, NTU (61028)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 deg C (00095)
			GREENE COUNTY					
GR-670	395026084004800	12-02-02	94	920	.1	.2	7.7	659
GR-671	394307084003600	12-12-02	77	808	.2	.4	7.3	848
GR-672	394237084021700	12-19-02	125	800	.2	.1	7.5	661
GR-673	394842084024300	01-07-03	94	809	.2	4.3	7.0	1080
			MONTGOMERY COUNTY					
MT-1270	394024084251800	11-21-02	148	844	1.0	.1	7.2	650
MT-1271	393810084174400	11-26-02	123	692	.1	.1	7.2	1010
MT-1272	394823084101900	12-03-02	157	770	1.0	.1	7.4	847
MT-1273	394922084090800	12-04-02	146	758	.2	.2	7.0	780
MT-1274	394739084063400	12-05-02	158	782	.2	.1	7.2	736
MT-1275	394347084095100	12-11-02	80	890	.2	.4	7.1	1180
MT-1276	394836084091100	12-17-02	136	750	1.2	5.3	7.6	810
MT-1277	394724084061300	12-18-02	60	792	.2	3.4	7.3	792
MT-1278	394359084105300	01-06-03	83	785	.3	.5	7.3	1460
MT-1279	395140084161700	11-25-02	84	780	2.3	.5	7.3	767
MT-1280	394710084072700	01-08-03	152	776	.1	.1	7.1	962

Station name	Temper- ature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	Alka- linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bromide water, fltrd, mg/L (71870)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)
					GREENE COUNTY				
GR-670	12.8	81.0	32.5	1.74	11.3	260	.05	26.6	.49
GR-671	11.7	116	35.4	1.67	10.4	348	.05	31.0	.17
GR-672	12.1	77.5	33.5	1.07	15.2	378	.06	6.37	.39
GR-673	14.2	103	35.5	7.37	64.6	330	.07	120	.17
					MONTGOMERY COUNTY				
MT-1270	12.0	75.6	31.6	1.24	11.3	302	.06	5.78	.72
MT-1271	13.3	106	31.2	3.26	44.0	307	.11	87.8	.25
MT-1272	14.1	104	30.0	2.58	27.6	377	.06	49.2	.38
MT-1273	11.5	90.2	32.9	2.51	22.5	306	.06	42.1	.57
MT-1274	12.9	85.1	33.1	2.39	19.6	289	.06	39.7	.41
MT-1275	14.3	116	40.5	2.25	69.8	378	.08	134	.22
MT-1276	11.6	98.4	30.4	2.65	22.7	323	.09	42.8	.39
MT-1277	15.6	89.8	32.2	2.68	28.9	290	.05	49.3	.29
MT-1278	12.7	123	42.3	2.39	116	383	.11	207	.25
MT-1279	12.8	74.9	30.9	2.22	38.6	235	.08	69.7	.19
MT-1280	13.0	114	39.6	1.98	33.5	344	.08	66.7	.26

WATER-QUALITY OF PUBLIC-SUPPLY WELLS IN THE GLACIAL DEPOSITS AQUIFER NEAR DAYTON, OHIO—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(00955), USGS National Water Information System parameter code; mg/L, milligrams per liter; deg C, degrees Celsius; col/100mL, colonies per 100 milliliters; E, estimated; <, concentration or value reported is less than that indicated; pres, present; abs, absent; M, presence of compound verified but concentration not quantified]

Station name	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Sulfide water, fltrd, field, mg/L (99118)	Residue on evap. at 180 deg C wat flt mg/L (70300)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	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)
				GREENE COUNTY					
GR-670	11.8	56.9	.000	397	E.08	E.04	<.06	<.008	<.02
GR-671	11.5	60.2	.005	520	<.1	<.04	2.87	E.005	<.02
GR-672	15.7	.9	.005	382	1.3	1.3	<.06	<.008	.02
GR-673	11.3	54.9	.004	618	E.08	<.04	2.71	<.008	<.02
				MONTGOMERY COUNTY					
MT-1270	15.0	22.6	.000	371	.2	.2	<.06	<.008	<.02
MT-1271	9.06	61.8	.001	556	E.07	E.02	1.02	.019	<.02
MT-1272	10.7	80.5	.004	513	.2	.09	<.06	<.008	<.02
MT-1273	11.1	55.1	.000	473	<.1	E.02	.20	<.008	<.02
MT-1274	12.0	68.0	.001	456	E.09	.1	<.06	E.004	<.02
MT-1275	14.2	55.1	.005	722	<.1	<.04	.50	<.008	<.02
MT-1276	11.4	57.8	.003	494	.1	.07	.10	<.008	<.02
MT-1277	11.0	48.1	.000	462	.1	<.04	2.41	<.008	<.02
MT-1278	14.3	81.5	.004	857	E.06	<.04	1.26	<.008	<.02
MT-1279	8.80	39.5	.003	441	E.07	.05	.14	<.008	<.02
MT-1280	14.5	78.7	.000	578	.2	.2	<.06	<.008	<.02

Station name	Organic carbon, water, fltrd, mg/L (00681)	Colipge F-spec, FAMP, 2-step, pres(1) abs(2) /L (99335)	Colipge som, Ec CN13hst 2-step, pres(1) abs(2) /L (99332)	E coli, MI MF, water, col/ 100 mL (90901)	Total coli-form, MI MF, water, col/ 100 mL (90900)	Alum-inum, water, fltrd, ug/L (01106)	Anti-mony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)
				GREENE COUNTY					
GR-670	.5	2	2	<1	<1	<2	<.30	1.2	120
GR-671	.9	2	2	<1	<1	<2	<.30	E.2	152
GR-672	1.0	2	2	<1	<1	<2	<.30	29.7	206
GR-673	.6	2	2	<1	<1	<2	<.30	<.3	167
				MONTGOMERY COUNTY					
MT-1270	.6	2	2	<1	<1	<2	<.30	10.3	489
MT-1271	.8	2	2	<1	<1	<2	<.30	1.2	144
MT-1272	.8	2	2	<1	<1	<2	<.30	8.0	129
MT-1273	1.1	2	2	<1	<1	<2	<.30	.9	164
MT-1274	.6	2	2	<1	1	<2	<.30	15.0	164
MT-1275	.8	2	2	<1	<1	M	<.30	.3	213
MT-1276	.7	2	2	<1	<1	<2	<.30	1.1	214
MT-1277	.7	2	2	<1	<1	<2	<.30	.3	122
MT-1278	.6	2	2	<1	<1	<1	<.05	<.2	121
MT-1279	.9	2	2	<1	1	E1	<.30	E.2	145
MT-1280	.6	2	2	<1	<1	<2	<.30	4.4	302

WATER-QUALITY OF PUBLIC-SUPPLY WELLS IN THE GLACIAL DEPOSITS AQUIFER NEAR DAYTON, OHIO—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(01010), USGS National Water Information System parameter code; ug/L, micrograms per liter; E, estimated; <, concentration or value reported is less than that indicated]

Station name	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Cobalt water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Iron (II), water, fltrd, field, mg/L (99114)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)
				GREENE COUNTY					
GR-670	<.06	29	<.04	<.8	.15	.4	.240	210	<.08
GR-671	<.06	27	E.03	<.8	.35	2.0	.050	12	.16
GR-672	<.06	46	E.03	<.8	.37	E.2	2.63	2480	<.08
GR-673	<.06	72	E.02	<.8	.22	1.4	.010	<10	.43
				MONTGOMERY COUNTY					
MT-1270	<.06	53	E.03	<.8	.14	.3	3.30	1710	E.06
MT-1271	<.06	85	E.02	<.8	.52	1.6	.440	459	.09
MT-1272	<.06	76	<.04	<.8	.20	.4	3.28	3100	<.08
MT-1273	<.06	64	E.03	<.8	.44	1.2	.140	141	E.07
MT-1274	<.06	56	<.04	<.8	.17	.4	1.58	1480	E.06
MT-1275	<.06	48	E.03	<.8	.30	9.7	.010	12	.31
MT-1276	<.06	52	E.03	<.8	.42	1.1	.610	538	.20
MT-1277	<.06	49	E.02	<.8	.16	3.1	.010	<10	.35
MT-1278	<.06	82	E.03	<.8	.43	3.8	.030	<10	.11
MT-1279	<.06	54	<.04	<.8	.15	1.8	.010	11	.26
MT-1280	<.06	35	<.04	<.8	.32	.6	2.95	2760	<.08

Station name	Lithium water, fltrd, ug/L (01130)	Manganese, water, fltrd, ug/L (01056)	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)	Thallium, water, fltrd, ug/L (01057)	Vanadium, water, fltrd, ug/L (01085)
				GREENE COUNTY					
GR-670	2.7	44.3	4.8	3.12	<.5	<.20	661	<.04	.7
GR-671	3.0	216	1.8	6.00	E.4	<.20	404	.06	1.8
GR-672	1.7	10.8	12.3	2.22	.5	<.20	1810	.07	1.0
GR-673	3.2	<.2	2.2	5.01	1.9	<.20	181	<.04	1.8
				MONTGOMERY COUNTY					
MT-1270	3.7	18.3	13.7	2.83	<.5	<.20	5410	<.04	2.3
MT-1271	4.1	161	2.3	5.12	.6	<.20	709	.06	2.1
MT-1272	4.4	178	4.0	4.30	<.5	<.20	1310	<.04	.9
MT-1273	5.9	78.2	5.8	5.16	.6	<.20	2240	.10	4.1
MT-1274	5.4	156	5.9	5.04	<.5	<.20	992	E.02	3.7
MT-1275	4.8	23.6	3.1	5.76	.9	<.20	204	.04	2.3
MT-1276	5.0	422	3.8	8.35	<.5	<.20	1480	E.03	.2
MT-1277	3.1	<.2	4.0	2.95	1.3	<.20	542	.06	.6
MT-1278	7.5	23.6	2.1	6.60	1.0	<1	326	.06	2.0
MT-1279	2.0	.9	2.4	3.40	<.5	<.20	224	.09	2.2
MT-1280	4.7	205	3.5	5.62	<.5	<.20	442	<.04	.5

WATER-QUALITY OF PUBLIC-SUPPLY WELLS IN THE GLACIAL DEPOSITS AQUIFER NEAR DAYTON, OHIO—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(01090), USGS National Water Information System parameter code; ug/L, micrograms per liter; E, estimated; <, concentration or value reported is less than that indicated; M, presence of compound verified but concentration not quantified]

Station name	Zinc, water, fltrd, ug/L (01090)	1,4-Di-chloro-benzene water, fltrd, ug/L (34572)	1-Methyl-naphth-alene, water, fltrd, ug/L (62054)	1-Naph-thol, water, fltrd 0.7u GF ug/L (49295)	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)
GREENE COUNTY									
GR-670	M	<.5	<.5	<.09	<.009	<.02	<.02	<.006	<.5
GR-671	26	<.5	<.5	<.09	<.009	<.02	<.02	<.006	<.5
GR-672	M	<.5	<.5	<.09	<.009	<.02	<.02	<.006	<.5
GR-673	7	<.5	<.5	<.09	<.009	<.02	<.02	<.006	<.5
MONTGOMERY COUNTY									
MT-1270	4	<.5	<.5	<.09	<.009	<.02	<.02	<.006	<.5
MT-1271	4	<.5	<.5	<.09	<.009	<.02	<.02	<.006	<.5
MT-1272	18	<.5	<.5	<.09	<.009	<.02	<.02	<.006	<.5
MT-1273	2	<.5	<.5	<.09	<.009	<.02	<.02	<.006	<.5
MT-1274	8	<.5	<.5	<.09	<.009	<.02	<.02	<.006	<.5
MT-1275	M	<.5	<.5	<.09	<.009	<.02	<.02	<.006	<.5
MT-1276	1	<.5	<.5	<.09	<.009	<.02	<.02	<.006	<.5
MT-1277	3	<.5	<.5	<.09	<.009	<.02	<.02	<.006	<.5
MT-1278	3	<.5	<.5	<.09	<.009	<.02	<.02	<.006	<.5
MT-1279	9	<.5	<.5	<.09	<.009	<.02	<.02	<.006	<.5
MT-1280	6	<.5	<.5	<.09	<.009	<.02	<.02	<.006	<.5

Station name	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)	3-beta-Copros-tanol, water, fltrd, ug/L (62057)
GREENE COUNTY									
GR-670	<.1	<.005	<.006	<.04	<.004	<.008	<.5	<.004	<2
GR-671	<.1	<.005	E.008	<.04	<.004	<.008	<.5	<.004	<2
GR-672	<.1	<.005	<.006	<.04	<.004	<.008	<.5	<.004	<2
GR-673	<.1	<.005	E.001	<.04	<.004	<.008	<.5	<.004	<2
MONTGOMERY COUNTY									
MT-1270	<.1	<.005	<.006	<.04	<.004	<.008	<.5	<.004	<2
MT-1271	<.1	<.005	E.011	E.01	<.004	<.008	<.5	<.004	<2
MT-1272	<.1	<.005	<.006	<.04	<.004	<.008	<.5	<.004	<2
MT-1273	<.1	<.005	E.022	E.01	<.004	E.035	<.5	<.004	<2
MT-1274	<.1	<.005	<.006	<.04	<.004	<.008	<.5	<.004	<2
MT-1275	<.1	<.005	<.006	<.04	<.004	<.008	<.5	<.004	<2
MT-1276	<.1	<.005	E.002	<.04	<.004	<.008	<.5	<.004	<2
MT-1277	<.1	<.005	E.029	E.01	<.004	E.011	<.5	<.004	<2
MT-1278	<.1	<.005	<.006	<.04	<.004	<.008	<.5	<.004	<2
MT-1279	<.1	<.005	E.003	<.04	<.004	<.008	<.5	<.004	<2
MT-1280	<.1	<.005	<.006	<.04	<.004	<.008	<.5	<.004	<2

WATER-QUALITY OF PUBLIC-SUPPLY WELLS IN THE GLACIAL DEPOSITS AQUIFER NEAR DAYTON, OHIO—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(49308), USGS National Water Information System parameter code; ug/L, micrograms per liter; <, concentration or value reported is less than that indicated]

Station name	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)
				GREENE COUNTY					
GR-670	<.006	<2	<1	<5	<.006	<1	<1	<5	<1
GR-671	<.006	<2	<1	<5	<.006	<1	<1	<5	<1
GR-672	<.006	<2	<1	<5	<.006	<1	<1	<5	<1
GR-673	<.006	<2	<1	<5	<.006	<1	<1	<5	<1
				MONTGOMERY COUNTY					
MT-1270	<.006	<2	<1	<5	<.006	<1	<1	<5	<1
MT-1271	<.006	<2	<1	<5	<.006	<1	<1	<5	<1
MT-1272	<.006	<2	<1	<5	<.006	<1	<1	<5	<1
MT-1273	<.006	<2	<1	<5	<.006	<1	<1	<5	<1
MT-1274	<.006	<2	<1	<5	<.006	<1	<1	<5	<1
MT-1275	<.006	<2	<1	<5	<.006	<1	<1	<5	<1
MT-1276	<.006	<2	<1	<5	<.006	<1	<1	<5	<1
MT-1277	<.006	<2	<1	<5	<.006	<1	<1	<5	<1
MT-1278	<.006	<2	<1	<5	<.006	<1	<1	<5	<1
MT-1279	<.006	<2	<1	<5	<.006	<1	<1	<5	<1
MT-1280	<.006	<2	<1	<5	<.006	<1	<1	<5	<1

Station name	5-Meth-yl-1H-benzo-tri-azole, wat flt ug/L (62063)	9,10-Anthra-quinone water, fltrd, ug/L (62066)	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 ug/L (49315)	Ala-chlor, water, fltrd, ug/L (46342)	Aldi-carb sulfone water, fltrd 0.7u GF ug/L (49313)	Aldi-carb sulf-oxide, wat flt 0.7u GF ug/L (49314)
				GREENE COUNTY					
GR-670	<2	<.5	<.006	<.5	<.5	<.007	<.004	<.02	<.008
GR-671	<2	<.5	<.006	<.5	<.5	<.007	<.004	<.02	<.008
GR-672	<2	<.5	<.006	<.5	<.5	<.007	<.004	<.02	<.008
GR-673	<2	<.5	<.006	<.5	<.5	<.007	<.004	<.02	<.008
				MONTGOMERY COUNTY					
MT-1270	<2	<.5	<.006	<.5	<.5	<.007	<.004	<.02	<.008
MT-1271	<2	<.5	<.006	<.5	<.5	<.007	<.004	<.02	<.008
MT-1272	<2	<.5	<.006	<.5	<.5	<.007	<.004	<.02	<.008
MT-1273	<2	<.5	<.006	<.5	<.5	<.007	<.004	<.02	<.008
MT-1274	<2	<.5	<.006	<.5	<.5	<.007	<.004	<.02	<.008
MT-1275	<2	<.5	<.006	<.5	<.5	<.007	<.004	<.02	<.008
MT-1276	<2	<.5	<.006	<.5	<.5	<.007	<.004	<.02	<.008
MT-1277	<2	<.5	<.006	<.5	<.5	<.007	<.004	<.02	<.008
MT-1278	<2	<.5	<.006	<.5	<.5	<.007	<.004	<.02	<.008
MT-1279	<2	<.5	<.006	<.5	<.5	<.007	<.004	<.02	<.008
MT-1280	<2	<.5	<.006	<.5	<.5	<.007	<.004	<.02	<.008

WATER-QUALITY OF PUBLIC-SUPPLY WELLS IN THE GLACIAL DEPOSITS AQUIFER NEAR DAYTON, OHIO—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(49312), USGS National Water Information System parameter code; ug/L, micrograms per liter; E, estimated; <, concentration or value reported is less than that indicated; M, presence of compound verified but concentration not quantified]

Station name	Aldicarb, water, fltrd 0.7u GF ug/L (49312)	Anthracene, water, fltrd, ug/L (34221)	Atrazine, water, fltrd, ug/L (39632)	Azinphos-methyl oxon, water, fltrd, ug/L (61635)	Azinphos-methyl, water, fltrd 0.7u GF ug/L (82686)	Bendiocarb, water, fltrd, ug/L (50299)	Benfluralin, water, fltrd 0.7u GF ug/L (82673)	Benomyl water, fltrd, ug/L (50300)	Bensulfuron, water, fltrd, ug/L (61693)
				GREENE COUNTY					
GR-670	<.04	<.5	<.007	<.02	<.050	<.03	<.010	<.004	<.02
GR-671	<.04	<.5	<.007	<.02	<.050	<.03	<.010	<.004	<.02
GR-672	<.04	<.5	<.007	<.02	<.050	<.03	<.010	<.004	<.02
GR-673	<.04	<.5	E.001	<.02	<.050	<.03	<.010	<.004	<.02
				MONTGOMERY COUNTY					
MT-1270	<.04	<.5	<.007	<.02	<.050	<.03	<.010	<.004	<.02
MT-1271	<.04	<.5	E.004	<.02	<.050	<.03	<.010	<.004	<.02
MT-1272	<.04	<.5	<.007	<.02	<.050	<.03	<.010	<.004	<.02
MT-1273	<.04	<.5	.041	<.02	<.050	<.03	<.010	<.004	<.02
MT-1274	<.04	<.5	<.007	<.02	<.050	<.03	<.010	<.004	<.02
MT-1275	<.04	<.5	<.007	<.02	<.050	<.03	<.010	<.004	<.02
MT-1276	<.04	<.5	<.007	<.02	<.050	<.03	<.010	<.004	<.02
MT-1277	<.04	<.5	.024	<.02	<.050	<.03	<.010	<.004	<.02
MT-1278	<.04	<.5	<.007	<.02	<.050	<.03	<.010	<.004	<.02
MT-1279	<.04	<.5	E.002	<.02	<.050	<.03	<.010	<.004	<.02
MT-1280	<.04	<.5	<.007	<.02	<.050	<.03	<.010	<.004	<.02

Station name	Bentazon, water, fltrd 0.7u GF ug/L (38711)	Benzo-[a]-pyrene, water, fltrd, ug/L (34248)	Benzophenone water, fltrd, ug/L (62067)	beta-Sitosterol, water, fltrd, ug/L (62068)	beta-Stigmastanol, water, fltrd, ug/L (62086)	Bisphenol A, water, fltrd, ug/L (62069)	Bromacil, water, fltrd, ug/L (04029)	Bromoxynil, water, fltrd 0.7u GF ug/L (49311)	Caffeine, water, fltrd, ug/L (50305)
				GREENE COUNTY					
GR-670	<.01	<.5	<.5	<2	<2	<1	<.03	<.02	<.5
GR-671	<.01	<.5	<.5	<2	<2	<1	<.03	<.02	<.5
GR-672	<.01	<.5	<.5	<2	<2	<1	<.03	<.02	<.5
GR-673	<.01	<.5	<.5	<2	<2	<1	E.01	<.02	<.5
				MONTGOMERY COUNTY					
MT-1270	<.01	<.5	<.5	<2	<2	<1	<.03	<.02	<.5
MT-1271	<.01	<.5	<.5	<2	<2	<1	<.03	<.02	<.5
MT-1272	<.01	<.5	<.5	<2	<2	<1	<.03	<.02	<.5
MT-1273	<.01	<.5	<.5	<2	<2	<1	<.03	<.02	<.5
MT-1274	<.01	<.5	<.5	<2	<2	<1	<.03	<.02	<.5
MT-1275	<.01	<.5	<.5	<2	<2	<1	<.03	<.02	<.5
MT-1276	<.01	<.5	<.5	<2	<2	<1	<.03	<.02	<.5
MT-1277	<.01	<.5	<.5	<2	<2	<1	<.03	<.02	<.5
MT-1278	<.01	<.5	<.5	<2	<2	<1	<.03	<.02	<.5
MT-1279	<.01	<.5	<.5	<2	<2	<1	<.03	<.02	<.5
MT-1280	<.01	<.5	M	<2	<2	<1	<.03	<.02	<.5

WATER-QUALITY OF PUBLIC-SUPPLY WELLS IN THE GLACIAL DEPOSITS AQUIFER NEAR DAYTON, OHIO—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(62070), USGS National Water Information System parameter code; ug/L, micrograms per liter; E, estimated; <, concentration or value reported is less than that indicated]

Station name	Camphor water, fltrd, ug/L (62070)	Car-baryl, water, fltrd 0.7u GF ug/L (49310)	Car-baryl, water, fltrd 0.7u GF ug/L (82680)	Carba-zole, water, fltrd, ug/L (62071)	Carbo-furan, water, fltrd 0.7u GF ug/L (49309)	Chloro-amben methyl ester, water, fltrd, ug/L (61188)	Chlori-muron, water, fltrd, ug/L (50306)	Chloro-di-thalo-amino-s-tri-azine, wat flt ug/L (04039)	Chlor-nil, water, fltrd 0.7u GF ug/L (49306)
GREENE COUNTY									
GR-670	<.5	<.03	<.041	<.5	<.006	<.02	<.010	<.01	<.04
GR-671	<.5	<.03	<.041	<.5	<.006	<.02	<.010	<.01	<.04
GR-672	<.5	<.03	<.041	<.5	<.006	<.02	<.010	<.01	<.04
GR-673	<.5	<.03	<.041	<.5	<.006	<.02	<.010	<.01	<.04
MONTGOMERY COUNTY									
MT-1270	<.5	<.03	<.041	<.5	<.006	<.02	<.010	<.01	<.04
MT-1271	<.5	<.03	<.041	<.5	<.006	<.02	<.010	<.01	<.04
MT-1272	<.5	<.03	<.041	<.5	<.006	<.02	<.010	<.01	<.04
MT-1273	<.5	<.03	<.041	<.5	<.006	<.02	<.010	<.0020	<.04
MT-1274	<.5	<.03	<.041	<.5	<.006	<.02	<.010	<.0029	<.04
MT-1275	<.5	<.03	<.041	<.5	<.006	<.02	<.010	<.01	<.04
MT-1276	<.5	<.03	<.041	<.5	<.006	<.02	<.010	<.01	<.04
MT-1277	<.5	<.03	<.041	<.5	<.006	<.02	<.010	E.01	<.04
MT-1278	<.5	<.03	<.041	<.5	<.006	<.02	<.010	<.01	<.04
MT-1279	<.5	<.03	<.041	<.5	<.006	<.02	<.010	<.01	<.04
MT-1280	<.5	<.03	<.041	<.5	<.006	<.02	<.010	<.01	<.04

Station name	Chlor-pyrifos oxon, water, fltrd, ug/L (61636)	Chlor-pyrifos water, fltrd, ug/L (38933)	Choles-terol, water, fltrd, ug/L (62072)	cis-Per-methrin water fltrd 0.7u GF ug/L (82687)	Clopyr-alid, water, fltrd 0.7u GF ug/L (49305)	Cot-inine, water, fltrd, ug/L (62005)	Cyclo-ate, water, fltrd, ug/L (04031)	Cyflu-thrin, water, fltrd, ug/L (61585)	Cyper-methrin water, fltrd, ug/L (61586)
GREENE COUNTY									
GR-670	<.06	<.005	<2	<.006	<.01	<1	<.01	<.008	<.009
GR-671	<.06	<.005	<2	<.006	<.01	<1	<.01	<.008	<.009
GR-672	<.06	<.005	<2	<.006	<.01	<1	<.01	<.008	<.009
GR-673	<.06	<.005	<2	<.006	<.01	<1	<.01	<.008	<.009
MONTGOMERY COUNTY									
MT-1270	<.06	<.005	<2	<.006	<.01	<1	<.01	<.008	<.009
MT-1271	<.06	<.005	<2	<.006	<.01	<1	<.01	<.008	<.009
MT-1272	<.06	<.005	<2	<.006	<.01	<1	<.01	<.008	<.009
MT-1273	<.06	<.005	<2	<.006	<.01	<1	<.01	<.008	<.009
MT-1274	<.06	<.005	<2	<.006	<.01	<1	<.01	<.008	<.009
MT-1275	<.06	<.005	<2	<.006	<.01	<1	<.01	<.008	<.009
MT-1276	<.06	<.005	<2	<.006	<.01	<1	<.01	<.008	<.009
MT-1277	<.06	<.005	<2	<.006	<.01	<1	<.01	<.008	<.009
MT-1278	<.06	<.005	<2	<.006	<.01	<1	<.01	<.008	<.009
MT-1279	<.06	<.005	<2	<.006	<.01	<1	<.01	<.008	<.009
MT-1280	<.06	<.005	<2	<.006	<.01	<1	<.01	<.008	<.009

WATER-QUALITY OF PUBLIC-SUPPLY WELLS IN THE GLACIAL DEPOSITS AQUIFER NEAR DAYTON, OHIO—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(49304), USGS National Water Information System parameter code; ug/L, micrograms per liter; E, estimated; <, concentration or value reported is less than that indicated; --, no data]

Station name	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 fipro-nil, water, fltrd, ug/L (62170)	Diaz-inon oxon, water, fltrd, ug/L (61638)	Diazi-non, water, fltrd, ug/L (39572)	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)
				GREENE COUNTY					
GR-670	<.01	<.003	<.5	<.004	--	<.005	<.01	<.01	<.08
GR-671	<.01	<.003	<.5	<.004	<.04	<.005	<.01	<.01	<.08
GR-672	<.01	<.003	<.5	<.004	--	<.005	<.01	<.01	<.08
GR-673	<.01	<.003	<.5	<.004	--	<.005	<.01	<.01	<.08
				MONTGOMERY COUNTY					
MT-1270	<.01	<.003	<.5	<.004	--	<.005	<.01	<.01	<.08
MT-1271	<.01	<.003	<.5	<.004	--	<.005	<.01	<.01	<.08
MT-1272	<.01	<.003	<.5	<.004	--	<.005	<.01	<.01	<.08
MT-1273	<.01	<.003	<.5	<.004	--	<.005	<.01	<.01	<.08
MT-1274	<.01	<.003	<.5	<.004	--	<.005	<.01	<.01	<.08
MT-1275	<.01	<.003	<.5	<.004	<.04	<.005	<.01	<.01	<.08
MT-1276	<.01	<.003	<.5	<.004	<.04	<.005	<.01	<.01	<.08
MT-1277	<.01	<.003	<.5	<.004	--	<.005	<.01	<.01	<.08
MT-1278	<.01	<.003	<.5	<.004	--	<.005	<.01	<.01	<.08
MT-1279	<.01	<.003	<.5	<.004	<.04	<.005	<.01	<.01	<.08
MT-1280	<.01	<.003	E.1	<.004	--	<.005	<.01	<.01	<.08

Station name	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-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)	Ethion monoxon water, fltrd, ug/L (61644)
				GREENE COUNTY					
GR-670	<.005	<5	<1	<.006	<.01	<.03	<.01	<.5	<.03
GR-671	<.005	<5	<1	<.006	<.01	<.03	<.01	<.5	<.03
GR-672	<.005	<5	<1	<.006	<.01	<.03	<.01	<.5	<.03
GR-673	<.005	<5	<1	<.006	<.01	<.03	<.01	<.5	<.03
				MONTGOMERY COUNTY					
MT-1270	<.005	<5	<1	<.006	<.01	<.03	<.01	<.5	<.03
MT-1271	<.005	<5	<1	<.006	<.01	<.03	<.01	<.5	<.03
MT-1272	<.005	<5	<1	<.006	<.01	<.03	<.01	<.5	<.03
MT-1273	<.005	<5	<1	<.006	<.01	<.03	<.01	<.5	<.03
MT-1274	<.005	<5	<1	<.006	<.01	<.03	<.01	<.5	<.03
MT-1275	<.005	<5	<1	<.006	<.01	<.03	<.01	<.5	<.03
MT-1276	<.005	<5	<1	<.006	<.01	<.03	<.01	<.5	<.03
MT-1277	<.005	<5	<1	<.006	<.01	<.03	<.01	<.5	<.03
MT-1278	<.005	<5	<1	<.006	<.01	<.03	<.01	<.5	<.03
MT-1279	<.005	<5	<1	<.006	<.01	<.03	<.01	<.5	<.03
MT-1280	<.005	<5	<1	<.006	<.01	<.03	<.02	<.5	<.03

WATER-QUALITY OF PUBLIC-SUPPLY WELLS IN THE GLACIAL DEPOSITS AQUIFER NEAR DAYTON, OHIO—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(82346), USGS National Water Information System parameter code; ug/L, micrograms per liter; E, estimated; <, concentration or value reported is less than that indicated]

Station name	Ethion, water, fltrd, ug/L (82346)	Ethoxy-octyl-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)
				GREENE COUNTY					
GR-670	<.004	<1	<.008	<.03	<.03	<.03	<.009	<.005	<.005
GR-671	<.004	<1	<.008	<.03	<.03	<.03	<.009	<.005	<.005
GR-672	<.004	<1	<.008	<.03	<.03	<.03	<.009	<.005	<.005
GR-673	<.004	<1	<.008	<.03	<.03	<.03	<.009	<.005	<.005
				MONTGOMERY COUNTY					
MT-1270	<.004	<1	<.008	<.03	<.03	<.03	<.009	<.005	<.005
MT-1271	<.004	<1	<.008	<.03	<.03	<.03	<.009	<.005	<.005
MT-1272	<.004	<1	<.008	<.03	<.03	<.03	<.009	<.005	<.005
MT-1273	<.004	<1	<.008	<.03	<.03	<.03	<.009	<.005	<.005
MT-1274	<.004	<1	<.008	<.03	<.03	<.03	<.009	<.005	<.005
MT-1275	<.004	<1	<.008	<.03	<.03	<.03	<.009	<.005	<.005
MT-1276	<.004	<1	<.008	<.03	<.03	<.03	<.009	<.005	<.005
MT-1277	<.004	<1	<.008	<.03	<.03	<.03	<.009	<.005	<.005
MT-1278	<.004	<1	<.008	<.03	<.03	<.03	<.009	<.005	<.005
MT-1279	<.004	<1	<.008	<.03	<.03	<.03	<.009	<.005	<.005
MT-1280	<.004	<1	<.008	<.03	<.03	<.03	<.009	<.005	<.005

Station name	Fipro-nil, water, fltrd, ug/L (62166)	Flumet-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)	Imaza-quin, water, fltrd, ug/L (50356)	Imaze-thapyr, water, fltrd, ug/L (50407)
				GREENE COUNTY					
GR-670	<.007	<.01	<.03	<.5	<.002	<.003	<.5	<.02	<.02
GR-671	<.007	<.01	<.03	<.5	<.002	<.003	<.5	<.02	<.02
GR-672	<.007	<.01	<.03	<.5	<.002	<.003	<.5	<.02	<.02
GR-673	<.007	<.01	<.03	<.5	<.002	<.003	<.5	<.02	<.02
				MONTGOMERY COUNTY					
MT-1270	<.007	<.01	<.03	<.5	<.002	<.003	<.5	<.02	<.02
MT-1271	<.007	<.01	<.03	<.5	<.002	<.003	<.5	<.02	<.02
MT-1272	<.007	<.01	<.03	<.5	<.002	<.003	<.5	<.02	<.02
MT-1273	<.007	<.01	<.03	<.5	<.002	<.003	<.5	<.02	<.02
MT-1274	<.007	<.01	<.03	<.5	<.002	<.003	<.5	<.02	<.02
MT-1275	<.007	<.01	<.03	<.5	<.002	<.003	<.5	<.02	<.02
MT-1276	<.007	<.01	<.03	<.5	<.002	<.003	<.5	E.01	<.02
MT-1277	<.007	<.01	<.03	<.5	<.002	<.003	<.5	<.02	<.02
MT-1278	<.007	<.01	<.03	<.5	<.002	<.003	<.5	<.02	<.02
MT-1279	<.007	<.01	<.03	<.5	<.002	<.003	<.5	<.02	<.02
MT-1280	<.007	<.01	<.03	<.5	<.002	<.003	<.5	<.02	<.02

WATER-QUALITY OF PUBLIC-SUPPLY WELLS IN THE GLACIAL DEPOSITS AQUIFER NEAR DAYTON, OHIO—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(61695), USGS National Water Information System parameter code; ug/L, micrograms per liter; <, concentration or value reported is less than that indicated]

Station name	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)	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 ug/L (38478)
GREENE COUNTY									
GR-670	<.007	<.5	<1	<.5	<.003	<.5	<.5	<.5	<.01
GR-671	<.007	<.5	<1	<.5	<.003	<.5	<.5	<.5	<.01
GR-672	<.007	<.5	<1	<.5	<.003	<.5	<.5	<.5	<.01
GR-673	<.007	<.5	<1	<.5	<.003	<.5	<.5	<.5	<.01
MONTGOMERY COUNTY									
MT-1270	<.007	<.5	<1	<.5	<.003	<.5	<.5	<.5	<.01
MT-1271	<.007	<.5	<1	<.5	<.003	<.5	<.5	<.5	<.01
MT-1272	<.007	<.5	<1	<.5	<.003	<.5	<.5	<.5	<.01
MT-1273	<.007	<.5	<1	<.5	<.003	<.5	<.5	<.5	<.01
MT-1274	<.007	<.5	<1	<.5	<.003	<.5	<.5	<.5	<.01
MT-1275	<.007	<.5	<1	<.5	<.003	<.5	<.5	<.5	<.01
MT-1276	<.007	<.5	<1	<.5	<.003	<.5	<.5	<.5	<.01
MT-1277	<.007	<.5	<1	<.5	<.003	<.5	<.5	<.5	<.01
MT-1278	<.007	<.5	<1	<.5	<.003	<.5	<.5	<.5	<.01
MT-1279	<.007	<.5	<1	<.5	<.003	<.5	<.5	<.5	<.01
MT-1280	<.007	<.5	<1	<.5	<.003	<.5	<.5	<.5	<.01

Station name	Mala-oxon, water, fltrd, ug/L (61652)	Mala-thion, water, fltrd, ug/L (39532)	MCPA, water, fltrd 0.7u GF ug/L (38482)	MCPB, water, fltrd 0.7u GF ug/L (38487)	Menthol water, fltrd, ug/L (62080)	Meta-laxyl, water, fltrd, ug/L (50359)	Meta-laxyl, water, fltrd, ug/L (61596)	Methi-althion water, fltrd, ug/L (61598)	Methio-carb, water, fltrd 0.7u GF ug/L (38501)
GREENE COUNTY									
GR-670	<.008	<.027	<.02	<.01	<.5	<.02	<.005	<.006	<.008
GR-671	<.008	<.027	<.02	<.01	<.5	<.02	<.005	<.006	<.008
GR-672	<.008	<.027	<.02	<.01	<.5	<.02	<.005	<.006	<.008
GR-673	<.008	<.027	<.02	<.01	<.5	<.02	<.005	<.006	<.008
MONTGOMERY COUNTY									
MT-1270	<.008	<.027	<.02	<.01	<.5	<.02	<.005	<.006	<.008
MT-1271	<.008	<.027	<.02	<.01	<.5	<.02	<.005	<.006	<.008
MT-1272	<.008	<.027	<.02	<.01	<.5	<.02	<.005	<.006	<.008
MT-1273	<.008	<.027	<.02	<.01	<.5	<.02	<.005	<.006	<.008
MT-1274	<.008	<.027	<.02	<.01	<.5	<.02	<.005	<.006	<.008
MT-1275	<.008	<.027	<.02	<.01	<.5	<.02	<.005	<.006	<.008
MT-1276	<.008	<.027	<.02	<.01	<.5	<.02	<.005	<.006	<.008
MT-1277	<.008	<.027	<.02	<.01	<.5	<.02	<.005	<.006	<.008
MT-1278	<.008	<.027	<.02	<.01	<.5	<.02	<.005	<.006	<.008
MT-1279	<.008	<.027	<.02	<.01	<.5	<.02	<.005	<.006	<.008
MT-1280	<.008	<.027	<.02	<.01	<.5	<.02	<.005	<.006	<.008

WATER-QUALITY OF PUBLIC-SUPPLY WELLS IN THE GLACIAL DEPOSITS AQUIFER NEAR DAYTON, OHIO—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(49296), USGS National Water Information System parameter code; ug/L, micrograms per liter; <, concentration or value reported is less than that indicated]

Station name	Methomyl, water, fltrd 0.7u GF ug/L (49296)	Methyl acetate water unfltrd ug/L (77032)	Methyl paraoxon, water, fltrd, ug/L (61664)	Methyl parathion, water, fltrd 0.7u GF ug/L (82667)	Methyl salicylate, water, fltrd, ug/L (62081)	Metolachlor, water, fltrd, ug/L (39415)	Metribuzin, water, fltrd, ug/L (82630)	Metsulfuron, water, fltrd, ug/L (61697)	Myclobutanil water, fltrd, ug/L (61599)
GREENE COUNTY									
GR-670	<.004	<.4	<.03	<.006	<.5	<.013	<.006	<.03	<.008
GR-671	<.004	<.4	<.03	<.006	<.5	<.013	<.006	<.03	<.008
GR-672	<.004	<.4	<.03	<.006	<.5	<.013	<.006	<.03	<.008
GR-673	<.004	<.4	<.03	<.006	<.5	<.013	<.006	<.03	<.008
MONTGOMERY COUNTY									
MT-1270	<.004	<.4	<.03	<.006	<.5	<.013	<.006	<.03	<.008
MT-1271	<.004	<.4	<.03	<.006	<.5	<.013	<.006	<.03	<.008
MT-1272	<.004	<.4	<.03	<.006	<.5	<.013	<.006	<.03	<.008
MT-1273	<.004	<.4	<.03	<.006	<.5	.031	<.007	<.03	<.008
MT-1274	<.004	<.4	<.03	<.006	<.5	<.013	<.006	<.03	<.008
MT-1275	<.004	<.4	<.03	<.006	<.5	<.013	<.006	<.03	<.008
MT-1276	<.004	<.4	<.03	<.006	<.5	<.013	<.006	<.03	<.008
MT-1277	<.004	<.4	<.03	<.006	<.5	<.013	<.006	<.03	<.008
MT-1278	<.004	<.4	<.03	<.006	<.5	<.013	<.006	<.03	<.008
MT-1279	<.004	<.4	<.03	<.006	<.5	<.013	<.006	<.03	<.008
MT-1280	<.004	<.4	<.03	<.006	<.5	<.013	<.006	<.03	<.008

Station name	N-(4-Chlorophenyl)-N'-methylurea, ug/L (61692)	Naphthalene, water, fltrd, ug/L (34443)	Neburon water, fltrd 0.7u GF ug/L (49294)	Nicosulfuron, water, fltrd, ug/L (50364)	Norflurazon, water, fltrd 0.7u GF ug/L (49293)	Oryzalin, water, fltrd 0.7u GF ug/L (49292)	Oxamyl, water, fltrd 0.7u GF ug/L (38866)	p-Cresol, water, fltrd, ug/L (62084)	Pendimethalin, water, fltrd 0.7u GF ug/L (82683)
GREENE COUNTY									
GR-670	<.02	<.5	<.01	<.01	<.02	<.02	<.01	<1	<.022
GR-671	<.02	<.5	<.01	<.01	<.02	<.02	<.01	<1	<.022
GR-672	<.02	<.5	<.01	<.01	<.02	<.02	<.01	<1	<.022
GR-673	<.02	<.5	<.01	<.01	<.02	<.02	<.01	<1	<.022
MONTGOMERY COUNTY									
MT-1270	<.02	<.5	<.01	<.01	<.02	<.02	<.01	<1	<.022
MT-1271	<.02	<.5	<.01	<.01	<.02	<.02	<.01	<1	<.022
MT-1272	<.02	<.5	<.01	<.01	<.02	<.02	<.01	<1	<.022
MT-1273	<.02	<.5	<.01	<.01	<.02	<.02	<.01	<1	<.022
MT-1274	<.02	<.5	<.01	<.01	<.02	<.02	<.01	<1	<.022
MT-1275	<.02	<.5	<.01	<.01	<.02	<.02	<.01	<1	<.022
MT-1276	<.02	<.5	<.01	<.01	<.02	<.02	<.01	<1	<.022
MT-1277	<.02	<.5	<.01	<.01	<.02	<.02	<.01	<1	<.022
MT-1278	<.02	<.5	<.01	<.01	<.02	<.02	<.01	<1	<.022
MT-1279	<.02	<.5	<.01	<.01	<.02	<.02	<.01	<1	<.022
MT-1280	<.02	<.5	<.01	<.01	<.02	<.02	<.01	<1	<.022

WATER-QUALITY OF PUBLIC-SUPPLY WELLS IN THE GLACIAL DEPOSITS AQUIFER NEAR DAYTON, OHIO—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(34459), USGS National Water Information System parameter code; ug/L, micrograms per liter; E, estimated; <, concentration or value reported is less than that indicated; M, presence of compound verified but concentration not quantified]

Station name	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)	Phosmet oxon, water, fltrd, ug/L (61668)	Phosmet water, fltrd, ug/L (61601)	Pic-loram, water, fltrd 0.7u GF ug/L (49291)	Prome-ton, water, fltrd, ug/L (04037)
				GREENE COUNTY					
GR-670	<2	<.5	<.5	<.10	<.011	<.06	<.008	<.02	<.01
GR-671	<2	<.5	.7	<.10	<.011	<.06	<.008	<.02	<.01
GR-672	<2	<.5	<.5	<.10	<.011	<.06	<.008	<.02	<.01
GR-673	<2	<.5	<.5	<.10	<.011	<.06	<.008	<.02	E.01
				MONTGOMERY COUNTY					
MT-1270	<2	<.5	E.4	<.10	<.011	<.06	<.008	<.02	<.01
MT-1271	<2	<.5	E.2	<.10	<.011	<.06	<.008	<.02	M
MT-1272	<2	<.5	<.5	<.10	<.011	<.06	<.008	<.02	<.01
MT-1273	<2	<.5	E.4	<.10	<.011	<.06	<.008	<.02	E.01
MT-1274	<2	<.5	.5	<.10	<.011	<.06	<.008	<.02	<.01
MT-1275	<2	<.5	E.5	<.10	<.011	<.06	<.008	<.02	M
MT-1276	<2	<.5	<.5	<.10	<.011	<.06	<.008	<.02	<.01
MT-1277	<2	<.5	<.5	<.10	<.011	<.06	<.008	<.02	.04
MT-1278	<2	<.5	<.5	<.10	<.011	<.06	<.008	<.02	<.01
MT-1279	<2	<.5	.6	<.10	<.011	<.06	<.008	<.02	M
MT-1280	<2	<.5	<.5	<.10	<.011	<.06	<.008	<.02	<.01

Station name	Prome-tryn, water, fltrd, ug/L (04036)	Pron-amide, water, fltrd 0.7u GF ug/L (82676)	Propham water fltrd 0.7u GF ug/L (49236)	Propi-cona-zole, water, fltrd, ug/L (50471)	Pro-poxur, water, fltrd 0.7u GF ug/L (38538)	Pyrene, water, fltrd, ug/L (34470)	Siduron water, fltrd, ug/L (38548)	Sima-zine, water, fltrd, ug/L (04035)	Sulfo-met-ruron, water, fltrd, ug/L (50337)
				GREENE COUNTY					
GR-670	<.005	<.004	<.010	<.02	<.008	<.5	<.02	<.005	<.009
GR-671	<.005	<.004	<.010	<.02	<.008	<.5	<.02	<.005	<.009
GR-672	<.005	<.004	<.010	<.02	<.008	<.5	<.02	<.005	<.009
GR-673	<.005	<.004	<.010	<.02	<.008	<.5	<.02	E.002	<.009
				MONTGOMERY COUNTY					
MT-1270	<.005	<.004	<.010	<.02	<.008	<.5	<.02	<.005	<.009
MT-1271	<.005	<.004	<.010	<.02	<.008	<.5	<.02	E.002	<.009
MT-1272	<.005	<.004	<.010	<.02	<.008	<.5	<.02	<.005	<.009
MT-1273	<.005	<.004	<.010	<.02	<.008	<.5	<.02	.009	<.009
MT-1274	<.005	<.004	<.010	<.02	<.008	<.5	<.02	<.005	<.009
MT-1275	<.005	<.004	<.010	<.02	<.008	<.5	<.02	<.005	<.009
MT-1276	<.005	<.004	<.010	<.02	<.008	<.5	<.02	<.005	<.009
MT-1277	<.005	<.004	<.010	<.02	<.008	<.5	<.02	.007	<.009
MT-1278	<.005	<.004	<.010	<.02	<.008	<.5	<.02	E.002	<.009
MT-1279	<.005	<.004	<.010	<.02	<.008	<.5	<.02	<.005	<.009
MT-1280	<.005	<.004	<.010	<.02	<.008	<.5	<.02	<.005	<.009

WATER-QUALITY OF PUBLIC-SUPPLY WELLS IN THE GLACIAL DEPOSITS AQUIFER NEAR DAYTON, OHIO—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(82670), USGS National Water Information System parameter code; ug/L, micrograms per liter; E, estimated; <, concentration or value reported is less than that indicated; M, presence of compound verified but concentration not quantified]

Station name	Tebu- thiuron water fltrd 0.7u GF ug/L (82670)	Terba- cil, water, fltrd, ug/L (04032)	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)	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)
				GREENE COUNTY					
GR-670	<.02	<.010	<.07	<.02	<.01	<.4	<1	<.5	<.5
GR-671	<.02	<.010	<.07	<.02	<.01	<.4	<1	<.5	<.5
GR-672	<.02	<.010	<.07	<.02	<.01	<.4	<1	<.5	<.5
GR-673	<.02	<.010	<.07	<.02	<.01	<.4	<1	<.5	<.5
				MONTGOMERY COUNTY					
MT-1270	<.02	<.010	<.07	<.02	<.01	<.43	<1	<.5	<.5
MT-1271	<.02	<.010	<.07	<.02	<.01	<.43	<1	<.5	<.5
MT-1272	<.02	<.010	<.07	<.02	<.01	<.4	<1	<.5	<.5
MT-1273	<.02	<.010	<.07	<.02	<.01	<.4	<1	<.5	<.5
MT-1274	<.02	<.010	<.07	<.02	<.01	<.4	<1	<.5	<.5
MT-1275	<.02	<.010	<.07	<.02	<.01	<.4	<1	<.5	<.5
MT-1276	<.02	<.010	<.07	<.02	<.01	<.4	<1	<.5	<.5
MT-1277	M	<.010	<.07	<.02	<.01	<.4	<1	E.1	<.5
MT-1278	<.02	<.010	<.07	<.02	<.01	<.4	<1	<.5	<.5
MT-1279	<.02	<.010	<.07	<.02	<.01	<.4	<1	E.1	<.5
MT-1280	<.02	<.010	<.07	<.02	<.01	<.4	<1	<.5	<.5

Station name	Tri- butyl phos- phate, 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)	Tri- flur- alin, water, fltrd 0.7u GF ug/L (82661)	Tri- phenyl phos- phate, water, fltrd, ug/L (62092)	Tris(2- butoxy- ethyl) phos- phate, wat flt ug/L (62093)	Tris(2- chloro- ethyl) phos- phate, wat flt ug/L (62087)	Tris(di chloro- i-Pr) phos- phate, wat flt ug/L (62088)
				GREENE COUNTY					
GR-670	<.5	<.02	<1	<.5	<.009	<.5	<.5	<.5	<.5
GR-671	<.5	<.02	<1	<.5	<.009	<.5	<.5	<.5	<.5
GR-672	<.5	<.02	<1	<.5	<.009	<.5	<.5	<.5	<.5
GR-673	<.5	<.02	<1	<.5	<.009	<.5	<.5	M	<.5
				MONTGOMERY COUNTY					
MT-1270	<.5	<.02	<1	<.5	<.009	<.5	<.5	<.5	<.5
MT-1271	<.5	<.02	<1	<.5	<.009	<.5	<.5	<.5	<.5
MT-1272	<.5	<.02	<1	<.5	<.009	<.5	<.5	<.5	<.5
MT-1273	<.5	<.02	<1	<.5	<.009	<.5	<.5	<.5	<.5
MT-1274	<.5	<.02	<1	<.5	<.009	<.5	<.5	<.5	<.5
MT-1275	<.5	<.02	<1	<.5	<.009	<.5	<.5	<.5	<.5
MT-1276	<.5	<.02	<1	<.5	<.009	<.5	<.5	<.5	<.5
MT-1277	<.5	<.02	<1	<.5	<.009	<.5	<.5	<.5	<.5
MT-1278	<.5	<.02	<1	<.5	<.009	<.5	<.5	<.5	<.5
MT-1279	<.5	<.02	<1	<.5	<.009	<.5	<.5	<.5	<.5
MT-1280	<.5	<.02	<1	<.5	<.009	<.5	<.5	<.5	<.5

WATER-QUALITY OF PUBLIC-SUPPLY WELLS IN THE GLACIAL DEPOSITS AQUIFER NEAR DAYTON, OHIO—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(77562), USGS National Water Information System parameter code; ug/L, micrograms per liter; E, estimated; <, concentration or value reported is less than that indicated; --, no data]

Station name	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)	1,2,3,4 Tetra-methyl-benzene water unfltrd ug/L (49999)
GREENE COUNTY									
GR-670	<.03	<.03	<.09	<.06	<.06	<.04	<.04	<.05	<.2
GR-671	<.03	<.03	<.09	<.06	<.06	<.04	<.04	<.05	<.2
GR-672	<.03	<.03	<.09	<.06	<.06	<.04	<.04	<.05	<.2
GR-673	<.03	.21	<.09	<.06	<.06	<.04	<.04	<.05	<.2
MONTGOMERY COUNTY									
MT-1270	<.03	<.03	<.09	<.06	<.06	<.04	<.04	<.05	<.2
MT-1271	<.03	E.09	<.09	<.06	<.06	E.04	<.04	<.05	<.2
MT-1272	<.03	<.03	<.09	<.06	<.06	<.04	<.04	<.05	<.2
MT-1273	<.03	<.03	<.09	<.06	<.06	<.04	<.04	<.05	<.2
MT-1274	<.03	<.03	<.09	<.06	<.06	<.04	<.04	<.05	<.2
MT-1275	<.03	<.03	<.09	<.06	--	<.04	<.04	<.05	<.2
MT-1276	<.03	<.03	<.09	<.06	<.06	<.04	<.04	<.05	<.2
MT-1277	<.03	E.05	<.09	<.06	<.06	<.04	<.04	<.05	<.2
MT-1278	<.03	E.01	<.09	<.06	<.06	<.04	<.04	<.05	<.2
MT-1279	<.03	E.03	<.09	<.06	<.06	E.02	<.04	<.05	<.2
MT-1280	<.03	<.03	<.09	<.06	<.06	<.04	<.04	<.05	<.2

Station name	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 chloro-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)
GREENE COUNTY									
GR-670	<.2	<.3	<.16	<.1	<.1	<.06	<.5	<.04	<.03
GR-671	<.2	<.3	<.16	<.1	<.1	<.06	<.5	<.04	<.03
GR-672	<.2	<.3	<.16	<.1	<.1	<.06	<.5	<.04	<.03
GR-673	<.2	<.3	<.16	<.1	<.1	<.06	<.5	<.04	<.03
MONTGOMERY COUNTY									
MT-1270	<.2	<.3	<.16	<.1	<.1	<.06	<.5	<.04	<.03
MT-1271	<.2	<.3	<.16	<.1	<.1	<.06	<.5	<.04	<.03
MT-1272	<.2	<.3	<.16	<.1	<.1	<.06	<.5	<.04	<.03
MT-1273	<.2	<.3	<.16	<.1	<.1	<.06	<.5	<.04	<.03
MT-1274	<.2	<.3	<.16	<.1	<.1	<.06	<.5	<.04	<.03
MT-1275	<.2	<.3	<.16	<.1	<.1	<.06	<.5	<.04	<.03
MT-1276	<.2	<.3	<.16	<.1	<.1	<.06	<.5	<.04	<.03
MT-1277	<.2	<.3	<.16	<.1	<.1	<.06	<.5	<.04	<.03
MT-1278	<.2	<.3	<.16	<.1	<.1	<.06	<.5	<.04	<.03
MT-1279	<.2	<.3	<.16	<.1	<.1	<.06	<.5	<.04	<.03
MT-1280	<.2	<.3	<.16	<.1	<.1	<.06	<.5	<.04	<.03

WATER-QUALITY OF PUBLIC-SUPPLY WELLS IN THE GLACIAL DEPOSITS AQUIFER NEAR DAYTON, OHIO—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(32103), USGS National Water Information System parameter code; ug/L, micrograms per liter; E, estimated; <, concentration or value reported is less than that indicated]

Station name	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)	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)
GREENE COUNTY									
GR-670	<.1	<.03	<.04	<.03	<.1	<.05	<.05	<.04	<.06
GR-671	<.1	<.03	<.04	<.03	<.1	<.05	<.05	<.04	<.06
GR-672	<.1	<.03	<.04	<.03	<.1	<.05	<.05	<.04	<.06
GR-673	<.1	<.03	<.04	<.03	<.1	<.05	<.05	<.04	<.06
MONTGOMERY COUNTY									
MT-1270	<.1	<.03	<.04	<.03	<.1	<.05	<.05	<.04	<.06
MT-1271	<.1	<.03	<.04	<.03	<.1	<.05	<.05	<.04	<.06
MT-1272	<.1	<.03	<.04	<.03	<.1	<.05	<.05	<.04	<.06
MT-1273	<.1	<.03	<.04	<.03	<.1	<.05	<.05	<.04	<.06
MT-1274	<.1	<.03	<.04	<.03	<.1	<.05	<.05	<.04	<.06
MT-1275	<.1	<.03	<.04	<.03	<.1	<.05	<.05	<.04	<.06
MT-1276	<.1	<.03	<.04	<.03	<.1	<.05	<.05	<.04	<.06
MT-1277	<.1	<.03	<.04	<.03	<.1	<.05	<.05	<.04	<.06
MT-1278	<.1	<.03	<.04	<.03	<.1	<.05	<.05	<.04	<.06
MT-1279	<.1	<.03	<.04	<.03	<.1	<.05	<.05	<.04	<.06
MT-1280	<.1	<.03	<.04	<.03	<.1	<.05	<.05	<.04	<.06

Station name	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)	Bromo-chloro-methane water unfltrd ug/L (77297)	Bromo-di-chloro-methane water unfltrd ug/L (32101)
GREENE COUNTY									
GR-670	<.12	<.05	<.12	<7	<1	<.04	<.04	<.12	<.05
GR-671	<.12	<.05	<.12	<7	<1	<.04	<.04	<.12	<.05
GR-672	<.12	<.05	<.12	<7	<1	<.04	<.04	<.12	<.05
GR-673	<.12	<.05	<.12	<7	<1	<.04	<.04	<.12	<.05
MONTGOMERY COUNTY									
MT-1270	<.12	<.05	<.12	<7	<1	<.04	<.04	<.12	<.05
MT-1271	<.12	<.05	<.12	<7	<1	<.04	<.04	<.12	<.05
MT-1272	<.12	<.05	<.12	<7	<1	<.04	<.04	<.12	<.05
MT-1273	<.12	<.05	<.12	<7	<1	<.04	<.04	<.12	<.05
MT-1274	<.12	<.05	<.12	<7	<1	<.04	<.04	<.12	<.05
MT-1275	<.12	<.05	<.12	<7	<1	<.04	<.04	<.12	<.05
MT-1276	<.12	<.05	<.12	<7	<1	<.04	<.04	<.12	<.05
MT-1277	<.12	<.05	<.12	<7	<1	<.04	<.04	<.12	<.05
MT-1278	<.12	<.05	<.12	<7	<1	<.04	<.04	<.12	E.02
MT-1279	<.12	<.05	<.12	<7	<1	<.04	<.04	<.12	<.05
MT-1280	<.12	<.05	<.12	<7	<1	<.04	<.04	<.12	<.05

WATER-QUALITY OF PUBLIC-SUPPLY WELLS IN THE GLACIAL DEPOSITS AQUIFER NEAR DAYTON, OHIO—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(50002), USGS National Water Information System parameter code; ug/L, micrograms per liter; E, estimated; <, concentration or value reported is less than that indicated]

Station name	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)	cis- 1,3-Di- chloro- propene water unfltrd ug/L (34704)	Di- bromo- chloro- methane water unfltrd ug/L (32105)
GREENE COUNTY									
GR-670	<.1	<.3	<.07	<.03	<.1	<.2	<.04	<.09	<.2
GR-671	<.1	<.3	<.07	<.03	<.1	<.2	<.04	<.09	<.2
GR-672	<.1	<.3	<.07	<.03	<.1	<.2	<.04	<.09	<.2
GR-673	<.1	<.3	<.07	<.03	<.1	<.2	<.04	<.09	<.2
MONTGOMERY COUNTY									
MT-1270	<.1	<.3	<.07	<.03	<.1	<.2	<.04	<.09	<.2
MT-1271	<.1	<.3	<.07	<.03	<.1	<.2	E.03	<.09	<.2
MT-1272	<.1	<.3	<.07	<.03	<.1	<.2	<.04	<.09	<.2
MT-1273	<.1	<.3	<.07	<.03	<.1	<.2	.14	<.09	<.2
MT-1274	<.1	<.3	<.07	<.03	<.1	<.2	E.05	<.09	<.2
MT-1275	<.1	<.3	<.07	<.03	<.1	<.2	<.04	<.09	<.2
MT-1276	<.1	<.3	<.07	<.03	<.1	<.2	<.04	<.09	<.2
MT-1277	<.1	<.3	<.07	<.03	<.1	<.2	<.04	<.09	<.2
MT-1278	<.1	<.3	<.07	<.03	<.1	<.2	<.04	<.09	<.2
MT-1279	<.1	<.3	<.07	<.03	<.1	<.2	<.04	<.09	<.2
MT-1280	<.1	<.3	.21	<.03	<.1	<.2	<.04	<.09	<.2

Station name	Di- bromo- methane water unfltrd ug/L (30217)	Di- chloro- di- fluoro- methane wat unf ug/L (34668)	Di- chloro- methane water unfltrd ug/L (34423)	Di- ethyl ether, water, unfltrd ug/L (81576)	Diiso- propyl ether, water, unfltrd ug/L (81577)	Ethyl methac- rylate, water, unfltrd ug/L (73570)	Ethyl methyl ketone, water, unfltrd ug/L (81595)	Ethyl- benzene water unfltrd ug/L (34371)	Hexa- chloro- buta- diene, water, unfltrd ug/L (39702)
GREENE COUNTY									
GR-670	<.05	<.18	<.2	<.2	<.10	<.2	<5.0	<.03	<.1
GR-671	<.05	<.18	<.2	<.2	<.10	<.2	<5.0	<.03	<.1
GR-672	<.05	<.18	<.2	<.2	<.10	<.2	<5.0	<.03	<.1
GR-673	<.05	<.18	<.2	<.2	<.10	<.2	<5.0	<.03	<.1
MONTGOMERY COUNTY									
MT-1270	<.05	<.18	<.2	<.2	<.10	<.2	<5.0	<.03	<.1
MT-1271	<.05	<.18	<.2	<.2	<.10	<.2	<5.0	<.03	<.1
MT-1272	<.05	<.18	<.2	<.2	<.10	<.2	<5.0	<.03	<.1
MT-1273	<.05	<.18	<.2	<.2	<.10	<.2	<5.0	<.03	<.1
MT-1274	<.05	<.18	<.2	<.2	<.10	<.2	<5.0	<.03	<.1
MT-1275	<.05	<.18	<.2	<.2	<.10	<.2	<5.0	<.03	<.1
MT-1276	<.05	<.18	<.2	<.2	<.10	<.2	<5.0	<.03	<.1
MT-1277	<.05	<.18	<.2	<.2	<.10	<.2	<5.0	<.03	<.1
MT-1278	<.05	<.18	<.2	<.2	<.10	<.2	<5.0	<.03	<.1
MT-1279	<.05	<.18	<.2	<.2	<.10	<.2	<5.0	<.03	<.1
MT-1280	<.05	<.18	<.2	<.2	<.10	<.2	<5.0	<.03	<.1

WATER-QUALITY OF PUBLIC-SUPPLY WELLS IN THE GLACIAL DEPOSITS AQUIFER NEAR DAYTON, OHIO—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(34396), USGS National Water Information System parameter code; ug/L, micrograms per liter; <, concentration or value reported is less than that indicated; M, presence of compound verified but concentration not quantified]

Station name	Hexa- chloro- ethane, water, unfltrd ug/L (34396)	Iodo- methane water unfltrd ug/L (77424)	Iso- butyl methyl ketone, water, unfltrd ug/L (78133)	Iso- propyl- benzene water unfltrd ug/L (77223)	Meth- acrylo- nitrile water unfltrd ug/L (81593)	Methyl acryl- ate, water, unfltrd ug/L (49991)	Methyl methac- rylate, water, unfltrd ug/L (81597)	Methyl tert- pentyl ether, water, unfltrd ug/L (50005)	meta- + para- Xylene, water, unfltrd ug/L (85795)
				GREENE COUNTY					
GR-670	<.2	<.35	<.4	<.06	<.6	<2.0	<.3	<.08	<.06
GR-671	<.2	<.35	<.4	<.06	<.6	<2.0	<.3	<.08	<.06
GR-672	<.2	<.35	<.4	<.06	<.6	<2.0	<.3	<.08	<.06
GR-673	<.2	<.35	<.4	<.06	<.6	<2.0	<.3	<.08	<.06
				MONTGOMERY COUNTY					
MT-1270	<.2	<.35	<.4	<.06	<.6	<2.0	<.3	<.08	<.06
MT-1271	<.2	<.35	<.4	<.06	<.6	<2.0	<.3	<.08	<.06
MT-1272	<.2	<.35	<.4	<.06	<.6	<2.0	<.3	<.08	<.06
MT-1273	<.2	<.35	<.4	<.06	<.6	<2.0	<.3	<.08	<.06
MT-1274	<.2	<.35	<.4	<.06	<.6	<2.0	<.3	<.08	<.06
MT-1275	<.2	<.35	<.4	<.06	<.6	<2.0	<.3	<.08	<.06
MT-1276	<.2	<.35	<.4	<.06	<.6	<2.0	<.3	<.08	<.06
MT-1277	<.2	<.35	<.4	<.06	<.6	<2.0	<.3	<.08	<.06
MT-1278	<.2	<.35	<.4	<.06	<.6	<2.0	<.3	<.08	<.06
MT-1279	<.2	<.35	<.4	<.06	<.6	<2.0	<.3	<.08	<.06
MT-1280	<.2	<.35	<.4	<.06	<.6	<2.0	<.3	<.08	<.06

Station name	Naphth- alene, water, unfltrd ug/L (34696)	Methyl n-butyl ketone, water, unfltrd ug/L (77103)	n-Butyl benzene water unfltrd ug/L (77342)	n- propyl- benzene water unfltrd ug/L (77224)	o- Xylene, water, unfltrd ug/L (77135)	sec- Butyl- benzene 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)
				GREENE COUNTY					
GR-670	<.5	<.7	<.2	<.04	<.07	<.06	<.04	<.05	<.2
GR-671	<.5	<.7	<.2	<.04	<.07	<.06	<.04	<.05	<.2
GR-672	<.5	<.7	<.2	<.04	<.07	<.06	<.04	<.05	<.2
GR-673	<.5	<.7	<.2	<.04	<.07	<.06	<.04	<.05	<.2
				MONTGOMERY COUNTY					
MT-1270	<.5	<.7	<.2	<.04	<.07	<.06	<.04	<.05	<.2
MT-1271	<.5	<.7	<.2	<.04	<.07	<.06	<.04	<.05	<.2
MT-1272	<.5	<.7	<.2	<.04	<.07	<.06	<.04	<.05	<.2
MT-1273	<.5	<.7	<.2	<.04	<.07	<.06	<.04	<.05	<.2
MT-1274	<.5	<.7	<.2	<.04	<.07	<.06	<.04	<.05	<.2
MT-1275	<.5	<.7	<.2	<.04	<.07	<.06	<.04	<.05	<.2
MT-1276	<.5	<.7	<.2	<.04	<.07	<.06	<.04	<.05	M
MT-1277	<.5	<.7	<.2	<.04	<.07	<.06	<.04	<.05	<.2
MT-1278	<.5	<.7	<.2	<.04	<.07	<.06	<.04	<.05	<.2
MT-1279	<.5	<.7	<.2	<.04	<.07	<.06	<.04	<.05	<.2
MT-1280	<.5	<.7	<.2	<.04	<.07	<.06	<.04	<.05	<.2

WATER-QUALITY OF PUBLIC-SUPPLY WELLS IN THE GLACIAL DEPOSITS AQUIFER NEAR DAYTON, OHIO—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

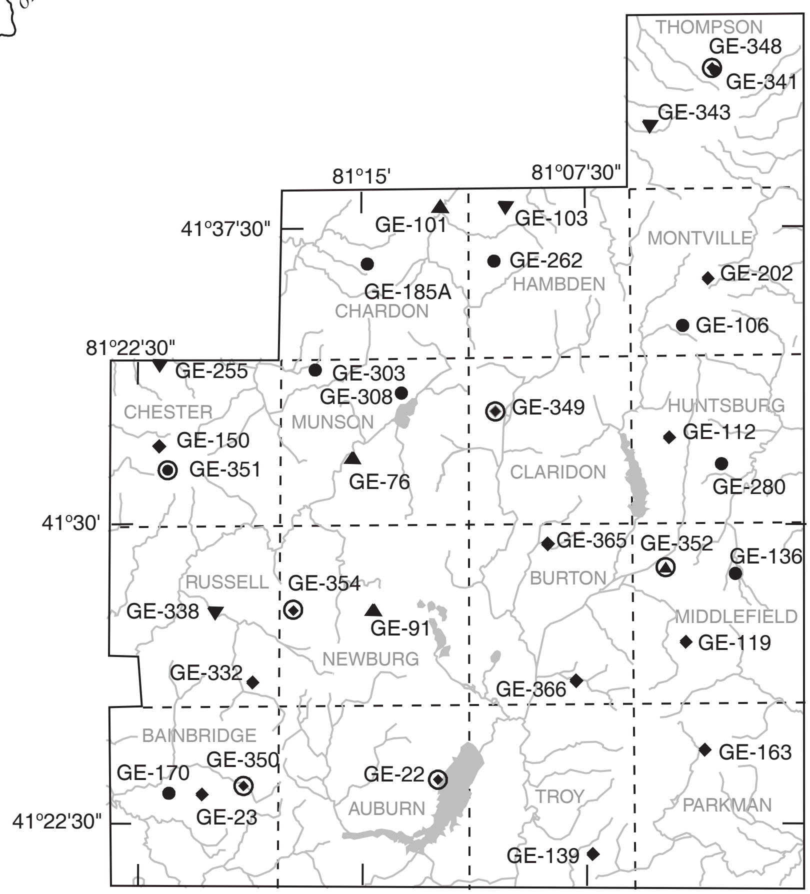
[(77353), USGS National Water Information System parameter code; ug/L, micrograms per liter; E, estimated; <, concentration or value reported is less than that indicated]

Station name	tert-Butyl-benzene water unfltrd ug/L (77353)	Tetra-chloro-ethene, water, unfltrd ug/L (34475)	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 unf ug/L (73547)	Tri-bromo-methane water unfltrd ug/L (32104)
				GREENE COUNTY					
GR-670	<.10	<.03	<.06	<2	<.05	<.03	<.09	<.7	<.10
GR-671	<.10	<.03	<.06	<2	<.05	<.03	<.09	<.7	<.10
GR-672	<.10	<.03	<.06	<2	<.05	<.03	<.09	<.7	<.10
GR-673	<.10	E.06	.68	<2	<.05	<.03	<.09	<.7	<.10
				MONTGOMERY COUNTY					
MT-1270	<.10	<.03	<.06	<2	<.05	<.03	<.09	<.7	<.10
MT-1271	<.10	<.03	<.06	<2	<.05	<.03	<.09	<.7	<.10
MT-1272	<.10	<.03	<.06	<2	<.05	<.03	<.09	<.7	<.10
MT-1273	<.10	<.03	<.06	<2	<.05	<.03	<.09	<.7	<.10
MT-1274	<.10	<.03	<.06	<2	<.05	<.03	<.09	<.7	<.10
MT-1275	<.10	<.03	<.06	<2	<.05	<.03	<.09	<.7	<.10
MT-1276	<.10	<.03	<.06	<2	E.03	<.03	<.09	<.7	<.10
MT-1277	<.10	.11	<.06	<2	E.04	<.03	<.09	<.7	<.10
MT-1278	<.10	<.03	<.06	<2	<.05	<.03	<.09	<.7	<.10
MT-1279	<.10	.13	<.06	<2	<.05	<.03	<.09	<.7	<.10
MT-1280	<.10	<.03	<.06	<2	<.05	<.03	<.09	<.7	<.10

Station name	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)	Uranium natural water, fltrd, ug/L (22703)
			GREENE COUNTY			
GR-670	<.04	<.09	E.03	<.1	<.01	1.13
GR-671	<.04	<.09	<.02	<.1	<.01	1.63
GR-672	<.04	<.09	<.02	<.1	<.01	E.02
GR-673	4.82	<.09	1.40	<.1	<.01	.81
			MONTGOMERY COUNTY			
MT-1270	<.04	<.09	<.02	<.1	<.01	.65
MT-1271	E.02	<.09	E.02	<.1	<.01	1.59
MT-1272	<.04	<.09	<.02	<.1	<.01	1.22
MT-1273	E.04	<.09	<.02	<.1	<.01	2.13
MT-1274	<.04	<.09	<.02	<.1	<.01	1.44
MT-1275	<.04	<.09	E.04	<.1	<.01	1.16
MT-1276	<.04	<.09	<.02	<.1	<.01	2.17
MT-1277	.28	<.09	E.05	<.1	<.01	1.71
MT-1278	E.03	<.09	E.05	<.1	<.01	1.67
MT-1279	E.06	<.09	<.02	<.1	<.01	.58
MT-1280	<.04	<.09	<.02	<.1	<.01	.52

Ground-Water Data for Geauga County, Ohio

Ground-water-level data were collected as part of a USGS cooperative study with the Geauga County Planning Commission and the Board of County Commissioners. Measurements from 33 wells that comprise the long-term ground-water monitoring network in Geauga County are shown on the following pages. The purpose of the water-level study is to determine whether fluctuations in water levels represent consistent, long-term trends caused by human activity or are predominantly the result of seasonal and annual variations in recharge. Land-surface datums are accurate within ± 5 ft. Water levels known to have been measured after a well had been recently pumped are designated with an asterisk (*).



EXPLANATION

- ▲ Well completed in glacial deposits
- ◆ Well completed in Pottsville Formation
- ● Well completed in Cuyahoga Group
- ▼ Well completed in Berea Sandstone
- ○ Well instrumented to continuously record water levels

0 1 2 3 4 MILES

0 1 2 3 4 KILOMETERS

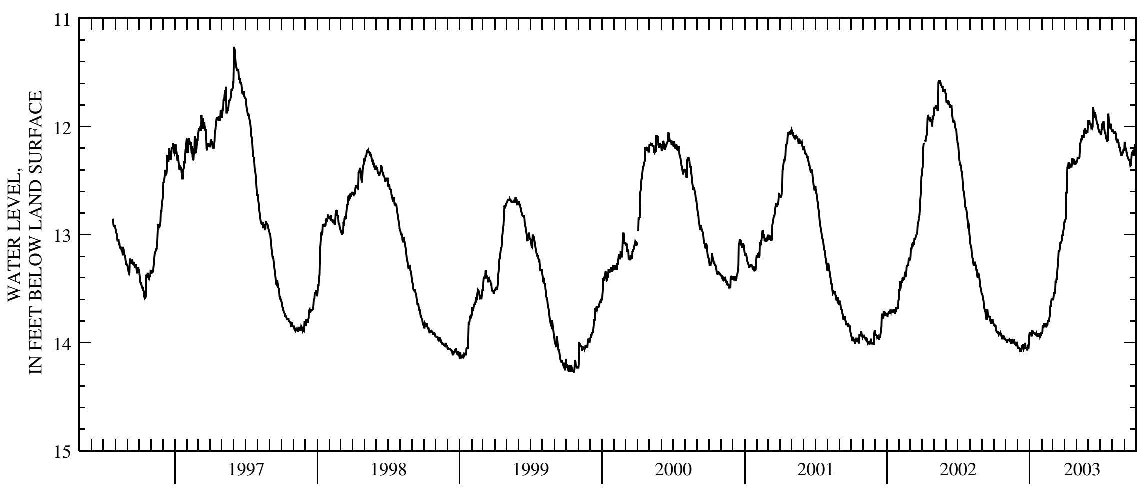
412331081123000. LOCAL NUMBER, GE-22

LOCATION.—Latitude 41°23′31″, longitude 81°12′30″, Geauga County, west of Valley View Road by La Due Reservoir at old Sugar House, Auburn Township. Owner City of Akron.
AQUIFER.—Pottsville Formation (sandstone) of Pennsylvanian age.
WELL CHARACTERISTICS.—Water-supply well not currently in use; diameter 6.25 in., depth 80 ft.
INSTRUMENTATION.—Pressure transducer and CR10 data logger (records hourly) with SM192 storage module.
DATUM.—Elevation of land-surface datum is 1,160 ft above sea level. Measuring point: mark on wooden base of instrument shelter; changed from 3.96 ft below land-surface datum to 3.20 ft above land-surface datum on May 13, 1997.
PERIOD OF RECORD.—Periodic water-level measurements from June 8, 1978 through September 8, 1994. Continuous water-level data from July 24, 1996 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 11.26 ft below land-surface datum, June 2, 1997; lowest measured, 14.34 ft below land-surface datum, Nov. 12, 1980.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.83	13.97	14.02	13.91	13.91	13.60	12.88	12.33	11.94	12.05	12.04	12.21
2	13.84	13.98	14.04	13.90	13.91	13.60	12.88	12.31	11.96	12.05	12.04	12.14
3	13.84	13.98	14.05	13.92	13.90	13.60	12.87	12.32	11.95	12.07	12.05	12.15
4	13.83	14.00	14.05	13.92	13.84	13.57	12.85	12.31	11.95	12.07	12.04	12.18
5	13.85	13.99	14.05	13.92	13.85	13.53	12.61	12.29	11.97	12.02	12.05	12.20
6	13.85	13.98	14.05	13.94	13.84	13.55	12.61	12.29	11.98	12.03	12.06	12.21
7	13.88	13.98	14.06	13.93	13.82	13.53	12.51	12.29	11.98	11.97	12.06	12.24
8	13.88	13.98	14.08	13.89	13.83	13.52	12.38	12.29	11.98	11.99	12.04	12.25
9	13.90	13.98	14.08	13.89	13.83	13.44	12.37	12.28	12.01	11.97	12.05	12.27
10	13.90	13.98	14.07	13.90	13.84	13.44	12.37	12.21	12.00	11.95	12.06	12.28
11	13.90	13.97	14.07	13.91	13.83	13.41	12.33	12.16	12.01	11.98	12.08	12.29
12	13.90	13.98	14.05	13.91	13.84	13.41	12.38	12.15	12.00	12.03	12.12	12.30
13	13.91	13.99	14.03	13.91	13.83	13.36	12.39	12.11	11.82	12.05	12.14	12.31
14	13.92	13.99	14.02	13.91	13.83	13.32	12.37	12.12	11.85	12.06	12.14	12.31
15	13.91	14.01	14.02	13.92	13.84	13.26	12.34	12.12	11.89	12.06	12.14	12.31
16	13.91	13.99	14.05	13.91	13.83	13.19	12.37	12.08	11.91	12.11	12.13	12.34
17	13.91	13.97	14.06	13.93	13.79	13.14	12.37	12.09	11.91	12.11	12.15	12.36
18	13.92	14.00	14.05	13.92	13.80	13.15	12.37	12.09	11.87	12.11	12.18	12.35
19	13.91	13.99	14.03	13.91	13.80	13.15	12.37	12.09	11.89	12.13	12.19	12.30
20	13.92	14.00	14.00	13.93	13.80	13.12	12.35	12.10	11.91	12.13	12.19	12.25
21	13.93	14.00	14.02	13.92	13.77	13.08	12.29	12.04	11.92	12.12	12.20	12.25
22	13.95	13.97	14.03	13.92	13.75	13.08	12.32	12.03	11.94	11.88	12.23	12.24
23	13.96	13.98	14.05	13.93	13.69	13.07	12.33	12.02	11.96	11.91	12.25	12.22
24	13.96	13.99	14.05	13.94	13.66	13.06	12.32	12.02	11.98	11.97	12.25	12.23
25	13.96	14.01	14.05	13.91	13.66	13.05	12.30	12.04	11.98	12.00	12.27	12.26
26	13.93	14.01	14.06	13.94	13.61	13.00	12.34	12.06	11.99	12.01	12.26	12.26
27	13.94	14.02	14.05	13.94	13.59	13.01	12.34	12.06	12.02	12.00	12.23	12.23
28	13.96	14.01	14.04	13.91	13.60	12.98	12.32	12.03	12.03	11.97	12.24	12.16
29	13.96	14.00	14.06	13.94	---	12.97	12.35	12.05	12.05	12.00	12.24	12.18
30	13.96	14.01	14.04	13.93	---	12.94	12.34	12.05	12.05	12.02	12.22	12.20
31	13.97	---	13.93	13.91	---	12.90	---	11.99	---	12.03	12.22	---
MEAN	13.91	13.99	14.04	13.92	13.79	13.26	12.44	12.14	11.96	12.03	12.15	12.25
MAX	13.97	14.02	14.08	13.94	13.91	13.60	12.88	12.33	12.05	12.13	12.27	12.36
MIN	13.83	13.97	13.93	13.89	13.59	12.90	12.29	11.99	11.82	11.88	12.04	12.14

CAL YR 2002	MEAN 13.10	HIGH 11.57	LOW 14.08
WTR YR 2003	MEAN 12.99	HIGH 11.82	LOW 14.08



412309081202400. LOCAL NUMBER, GE-23

LOCATION.—Latitude 41°23′09″, longitude 81°20′24″, Geauga County, Alltel building on Bainbridge Road, west of State Route 306, Bainbridge Township. Owner: Alltel Telephone Company.
AQUIFER.—Pottsville Formation (sandstone) of Pennsylvanian age.
WELL CHARACTERISTICS.—Commercial water-supply well; diameter 5.63 in., depth 40 ft.
INSTRUMENTATION.—Periodic measurement with steel or electric tape by USGS personnel.
DATUM.—Elevation of land-surface datum is 1,162 ft above sea level. Measuring point: top of casing, 1.32 ft above land-surface datum.
PERIOD OF RECORD.—April 26, 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 10.46 ft below land-surface datum, Apr. 26, 1978; lowest measured, 20.61 ft below land-surface datum, Nov. 6, 2002.

WATER LEVEL,
IN FEET BELOW LAND-SURFACE DATUM
INSTANTANEOUS OBSERVATION

DATE	WATER LEVEL
11/06/02	20.61
01/08/03	20.23
03/12/03	20.25
05/20/03	19.67
07/22/03	18.90
09/08/03	19.35

413138081152000. LOCAL NUMBER, GE-76

LOCATION.—Latitude 41°31′38″, longitude 81°15′20″, Geauga County, 10755 Mayfield Road, Munson Township. Owner: Fowler’s Mill Christian Church.
AQUIFER.—Sand and gravel of Quaternary age.
WELL CHARACTERISTICS.—Private water-supply well; diameter 6 in., depth 150 ft.
INSTRUMENTATION.—Periodic measurement with steel or electric tape by USGS personnel.
DATUM.—Elevation of land-surface datum is 1,170 ft above sea level. Measuring point: top of casing, 1.68 ft above land-surface datum.
PERIOD OF RECORD.—June 15, 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 21.19 ft below land-surface datum, June 15, 1978; lowest measured, 25.29 ft below land-surface datum, July 11, 2001.

WATER LEVEL,
IN FEET BELOW LAND-SURFACE DATUM
INSTANTANEOUS OBSERVATION

DATE	WATER LEVEL
11/07/03	24.94
01/09/03	24.55
03/13/03	24.58
05/21/03	24.20
07/23/03	24.04
09/09/03	24.59

412748081143900. LOCAL NUMBER, GE-91

LOCATION.—Latitude 41°27′48″, longitude 81°14′39″, Geauga County, northeast corner of Auburn Road and State Route 87 intersection, Newbury Township. Owner: Dairy Mart.
AQUIFER.—Pottsville Formation (sandstone) of Pennsylvanian age.
WELL CHARACTERISTICS.—Commercial water-supply well; diameter 5.63 in., depth 85 ft.
INSTRUMENTATION.—Periodic measurement with steel or electric tape by USGS personnel.
DATUM.—Elevation of land-surface datum is 1,250 ft above sea level. Measuring point: top of casing, 1.16 ft above land-surface datum.
PERIOD OF RECORD.—October 19, 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 40.10 ft below land-surface datum, Oct. 19, 1978; lowest measured, 47.73* ft below land-surface datum, May 21, 2003.

WATER LEVEL,
IN FEET BELOW LAND-SURFACE DATUM
INSTANTANEOUS OBSERVATION

DATE	WATER LEVEL
11/07/03	46.81*
01/09/03	47.09*
03/13/03	47.42*
05/21/03	47.73*
07/22/03	47.52*
09/08/03	46.72*

413757081122300. LOCAL NUMBER, GE-101

LOCATION.—Latitude 41°37′57″, longitude 81°12′23″, Geauga County, 12080 Clark Road, Chardon Township. Owner: privately owned.
AQUIFER.—Sand and gravel of Quaternary age.
WELL CHARACTERISTICS.—Domestic water-supply well; diameter 6.25 in., depth 48 ft.
INSTRUMENTATION.—Periodic measurement with steel or electric tape by USGS personnel.
DATUM.—Elevation of land-surface datum is 990 ft above sea level. Measuring point: top of casing, 0.90 ft above land-surface datum.
PERIOD OF RECORD.—May 7, 1980 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 20.81 ft below land-surface datum, Mar. 17, 1997; lowest measured, 25.46 ft below land-surface datum, Sept. 23, 2002.

WATER LEVEL,
IN FEET BELOW LAND-SURFACE DATUM
INSTANTANEOUS OBSERVATION

DATE	WATER LEVEL
11/06/02	25.09
01/08/03	23.23
03/12/03	22.88
05/21/03	22.09
07/23/03	23.71
09/08/03	24.29

413755081101200. LOCAL NUMBER, GE-103

LOCATION.—Latitude 41°37′55″, longitude 81°10′12″, Geauga County, 8755 Old State Road (State Route 608), Hambden Township. Owner: privately owned.
AQUIFER.—Berea Sandstone of Mississippian age.
WELL CHARACTERISTICS.—Domestic water-supply well; diameter 5.63 in., depth 136 ft.
INSTRUMENTATION.—Periodic measurement with steel or electric tape by USGS personnel.
DATUM.—Elevation of land-surface datum is 1,158 ft above sea level. Measuring point: top of casing, 0.40 ft above land-surface datum.
PERIOD OF RECORD.—May 7, 1980 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 79.44 ft below land-surface datum, May 7, 1980; lowest measured, 92.71 ft below land-surface datum, May 20, 2003.

WATER LEVEL,
IN FEET BELOW LAND-SURFACE DATUM
INSTANTANEOUS OBSERVATION

DATE	WATER LEVEL
11/06/02	91.94
01/08/03	91.58
03/12/03	92.30
05/20/03	92.71
07/23/03	92.21
09/08/03	92.40

413456081035600. LOCAL NUMBER, GE-106

LOCATION.—Latitude 41°34′56″, longitude 81°03′56″, Geauga County, 10691 Clay Street, Montville Township. Owner: privately owned.
AQUIFER.—Cuyahoga Group (interbedded shales and sandstones) of Mississippian age.
WELL CHARACTERISTICS.—Domestic water-supply well; diameter 5.63 in., depth 72 ft.
INSTRUMENTATION.—Periodic measurement with steel or electric tape by USGS personnel.
DATUM.—Elevation of land-surface datum is 1,255 ft above sea level. Measuring point: top of casing, 1.20 ft above land-surface datum.
PERIOD OF RECORD.—May 7, 1980 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 30.84 ft below land-surface datum, May 7, 1980; lowest measured, 37.44 ft below land-surface datum, May 29, 1996.

WATER LEVEL,
IN FEET BELOW LAND-SURFACE DATUM
INSTANTANEOUS OBSERVATION

DATE	WATER LEVEL
11/06/02	36.53
01/08/03	36.74
03/12/03	37.11
05/20/03	36.94
07/23/03	36.66
09/08/03	36.73

413207081044400. LOCAL NUMBER, GE-112

LOCATION.—Latitude 41°32′07″, longitude 81°04′44″, Geauga County, by golf course maintenance building at 15900 Mayfield Road, Huntsburg Township. Owner: Rolling Green Golf Course.
AQUIFER.—Pottsville Formation (sandstone) of Pennsylvanian age.
WELL CHARACTERISTICS.—Commercial water-supply well for shop and house (not used for irrigation); diameter 5.63 in., depth 80 ft.
INSTRUMENTATION.—Periodic measurement with steel or electric tape by USGS personnel.
DATUM.—Elevation of land-surface datum is 1,265 ft above sea level. Measuring point: top of casing, 1.30 ft above land-surface datum.
PERIOD OF RECORD.—May 8, 1980 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 43.86 ft below land-surface datum, May 5, 1980; lowest measured, 50.61 ft below land-surface datum, Jan. 15, 2002.

WATER LEVEL,
IN FEET BELOW LAND-SURFACE DATUM
INSTANTANEOUS OBSERVATION

DATE	WATER LEVEL
11/06/02	49.65
01/08/03	49.45
03/12/03	49.89
05/20/03	49.96
07/22/03	49.90
09/08/03	49.94

412657081040500. LOCAL NUMBER, GE-119

LOCATION.—Latitude 41°26′58″, longitude 81°04′12″, Geauga County, 15400 State Route 608, Middlefield Township. Owner: Geauga County Airport.
AQUIFER.—Pottsville Formation (sandstone) of Pennsylvanian age.
WELL CHARACTERISTICS.—Commercial water-supply well; diameter 5.63 in., depth 79 ft.
INSTRUMENTATION.—Periodic measurement with steel or electric tape by USGS personnel.
DATUM.—Elevation of land-surface datum is 1,185 ft above sea level. Measuring point: top of casing, 1.50 ft above land-surface datum.
PERIOD OF RECORD.—August 20, 1980 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 7.96 ft below land-surface datum, Aug. 20, 1980; lowest measured, 16.61 ft below land-surface datum, Mar. 12, 2003.

WATER LEVEL,
IN FEET BELOW LAND-SURFACE DATUM
INSTANTANEOUS OBSERVATION

DATE	WATER LEVEL
11/06/02	16.21
01/08/03	16.36
03/12/03	16.61
05/20/03	16.39
07/22/03	16.28
09/08/03	16.41

412841081023200. LOCAL NUMBER, GE-136

LOCATION.—Latitude 41°28′41″, longitude 81°02′32″, Geauga County, 16826 Nauvoo Road, Middlefield Township. Owner: privately owned.
AQUIFER.—Cuyahoga Group (interbedded shales and sandstones) of Mississippian age.
WELL CHARACTERISTICS.—Domestic water-supply well; diameter 5.63 in., depth 58 ft; water level not static in spring and summer months (pump removes approximately 1 gallon per minute of water from well during the growing season).
INSTRUMENTATION.—Periodic measurement with steel or electric tape by USGS personnel.
DATUM.—Elevation of land-surface datum is 1,130 ft above sea level. Measuring point: top of casing 1.20 ft above land-surface datum.
PERIOD OF RECORD.—August 8, 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 13.31 ft below land-surface datum, May 8, 1986; lowest measured, 24.27* ft below land-surface datum, May 28, 1996.

WATER LEVEL,
IN FEET BELOW LAND-SURFACE DATUM
INSTANTANEOUS OBSERVATION

DATE	WATER LEVEL
11/06/02	20.75
01/08/03	20.92
03/12/03	21.41*
05/20/03	19.25
07/22/03	18.69
09/08/03	19.10

412138081072000. LOCAL NUMBER, GE-139

LOCATION.—Latitude 41°21′38″, longitude 81°07′20″, Geauga County, 14515 Hoover Road, Troy Township. Owner: privately owned.
AQUIFER.—Pottsville Formation (sandstone) of Pennsylvanian age.
WELL CHARACTERISTICS.—Domestic water-supply well; diameter 5.63 in., depth 90 ft.
INSTRUMENTATION.—Periodic measurement with steel or electric tape by USGS personnel.
DATUM.—Elevation of land-surface datum is 1,171 ft above sea level. Measuring point: top of casing, 0.37 ft above land-surface datum.
PERIOD OF RECORD.—August 15, 1985 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 32.85 ft below land-surface datum, May 14, 1997; lowest measured, 39.94 ft below land-surface datum, Oct. 26, 1999.

WATER LEVEL,
IN FEET BELOW LAND-SURFACE DATUM
INSTANTANEOUS OBSERVATION

DATE	WATER LEVEL
11/06/02	38.84
01/08/03	38.07
03/12/03	36.81
05/20/03	35.25
07/22/03	34.63
09/08/03	34.65

413155081214900. LOCAL NUMBER, GE-150

LOCATION.—Latitude 41°31′55″, longitude 81°21′49″, Geauga County, 12390 Caves Road, Chester Township. Owner: privately owned.
AQUIFER.—Pottsville Formation (sandstone) of Pennsylvanian age.
WELL CHARACTERISTICS.—Domestic water-supply well; diameter 6.63 in., depth 90 ft.
INSTRUMENTATION.—Periodic measurement with steel or electric tape by USGS personnel.
DATUM.—Elevation of land-surface datum is 1,220 ft above sea level. Measuring point: top of casing, 1.55 ft above land-surface datum.
PERIOD OF RECORD.—February 13, 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 22.07 ft below land-surface datum, May 14, 1997; lowest measured, 30.75 ft below land-surface datum, Sept. 19, 2001 (water level has been lower than 30.75 but blockage prevents measurement beyond this point).

WATER LEVEL,
IN FEET BELOW LAND-SURFACE DATUM
INSTANTANEOUS OBSERVATION

DATE	WATER LEVEL
05/21/03	28.79
07/23/03	29.26
09/09/03	29.55

412415081033500. LOCAL NUMBER, GE-163

LOCATION.—Latitude 41°24′15″, longitude 81°03′35″, Geauga County, 17115 Madison Road, Parkman Township. Owner: privately owned.
AQUIFER.—Pottsville Formation (sandstone) of Pennsylvanian age.
WELL CHARACTERISTICS.—Domestic water-supply well; diameter 5.63 in., depth 60 ft.
INSTRUMENTATION.—Periodic measurement with steel or electric tape by USGS personnel.
DATUM.—Elevation of land-surface datum is 1,182 ft above sea level. Measuring point: top of casing, 1.10 ft above land-surface datum.
PERIOD OF RECORD.—February 5, 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 8.17 ft below land-surface datum, Feb. 5, 1986; lowest measured, 17.11 ft below land-surface datum, Sept. 23, 2002.

WATER LEVEL,
IN FEET BELOW LAND-SURFACE DATUM
INSTANTANEOUS OBSERVATION

DATE	WATER LEVEL
11/06/03	16.95
01/08/03	16.20
03/12/03	15.88
05/20/03	15.44
07/22/03	15.05
09/08/03	15.30

412311081213000. LOCAL NUMBER, GE-170

LOCATION.—Latitude 41°23′11", longitude 81°21′30", Geauga County, 7956 Bainbridge Road, Bainbridge Township. Owner: privately owned.
AQUIFER.—Cuyahoga Group (interbedded shales and sandstones) of Mississippian age.
WELL CHARACTERISTICS.—Domestic water-supply well; diameter 5.63 in., depth 92 ft.
INSTRUMENTATION.—Periodic measurement with steel or electric tape by USGS personnel.
DATUM.—Elevation of land-surface datum is 1,110 ft above sea level. Measuring point: top of casing, 1.47 ft above land-surface datum.
PERIOD OF RECORD.—February 4, 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 43.82 ft below land-surface datum, Nov. 19, 1996; lowest measured, 51.66 ft below land-surface datum, Nov. 6, 2002.

WATER LEVEL,
IN FEET BELOW LAND-SURFACE DATUM
INSTANTANEOUS OBSERVATION

DATE	WATER LEVEL
11/06/02	51.66
01/08/03	48.38
03/12/03	46.22
05/20/03	45.34
07/22/03	46.02
09/08/03	46.83

413630081145001. LOCAL NUMBER, GE-185A

LOCATION.—Latitude 41°36′30″, longitude 81°14′50″, Geauga County, 9673 Mentor Road, Chardon Township. Owner: privately owned.
AQUIFER.—Cuyahoga Group (interbedded shales and sandstones) of Mississippian age.
WELL CHARACTERISTICS.—Domestic water-supply well; diameter 5.5 in., depth 90 ft.
INSTRUMENTATION.—Periodic measurement with steel or electric tape by USGS personnel.
DATUM.—Elevation of land-surface datum is 1,260 ft above sea level. Measuring point: top of casing 0.84 ft above land-surface datum.
PERIOD OF RECORD.—January 1, 1996 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 32.39 ft below land-surface datum, Nov. 21, 1996; lowest measured, 37.19 ft below land-surface datum, Dec. 15, 1998.

WATER LEVEL,
IN FEET BELOW LAND-SURFACE DATUM
INSTANTANEOUS OBSERVATION

DATE	WATER LEVEL
11/06/02	35.81
01/08/03	34.51
03/12/03	34.11

413607081032500. LOCAL NUMBER, GE-202

LOCATION.—Latitude 41°36′07″, longitude 81°03′25″, Geauga County, 9915 Plank Road, Montville Township. Owner: privately owned.
AQUIFER.—Pottsville Formation (sandstone) of Pennsylvanian age.
WELL CHARACTERISTICS.—Domestic water-supply well; diameter 5.63 in., depth 74 ft.
INSTRUMENTATION.—Periodic measurement with steel or electric tape by USGS personnel.
DATUM.—Elevation of land-surface datum is 1,247 ft above sea level. Measuring point: top of casing, 1.60 ft above land-surface datum.
PERIOD OF RECORD.—February 10, 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 27.60 ft below land-surface datum, Feb. 10, 1986; lowest measured, 30.81 ft below land-surface datum, Oct. 27, 1999.

WATER LEVEL,
IN FEET BELOW LAND-SURFACE DATUM
INSTANTANEOUS OBSERVATION

DATE	WATER LEVEL
11/06/02	30.71
01/08/03	30.16
03/12/03	30.35
05/20/03	30.18
07/23/03	30.27
09/08/03	30.49

413357081214800. LOCAL NUMBER, GE-255

LOCATION.—Latitude 41°33′57″, longitude 81°21′48″, Geauga County, 11240 Caves Road, Chester Township. Owner: privately owned.
AQUIFER.—Berea Sandstone of Mississippian age.
WELL CHARACTERISTICS.—Domestic water-supply well; diameter 5.63 in., depth 123 ft.
INSTRUMENTATION.—Periodic measurement with steel or electric tape by USGS personnel.
DATUM.—Elevation of land-surface datum is 1,075 ft above sea level. Measuring point: Top of casing, 2.08 ft above land-surface datum.
PERIOD OF RECORD.—September 8, 1994 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 51.32 ft below land surface datum, May 14, 1997; lowest measured, 55.82* ft below land-surface datum, Jan. 15, 2002.

WATER LEVEL,
IN FEET BELOW LAND-SURFACE DATUM
INSTANTANEOUS OBSERVATION

DATE	WATER LEVEL
11/07/03	53.25
01/09/03	52.85
03/13/03	53.86*
05/21/03	55.72*
07/23/03	52.76
09/09/03	53.49

413634081103500. LOCAL NUMBER, GE-262

LOCATION.—Latitude 41°36′34″, longitude 81°10′35″, Geauga County, 9593 Wildwood Road, Hambden Township. Owner: privately owned.
AQUIFER.—Cuyahoga Group (interbedded shales and sandstones) of Mississippian age.
WELL CHARACTERISTICS.—Domestic water-supply well; diameter 6 in., depth 100 ft.
INSTRUMENTATION.—Periodic measurement with steel or electric tape by USGS personnel.
DATUM.—Elevation of land-surface datum is 1,200 ft above sea level. Measuring point: top of casing 1.60 ft above land-surface datum.
PERIOD OF RECORD.—September 7, 1994 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 34.19 ft below land-surface datum, Sept. 10, 1996; lowest measured, 42.55 ft below land-surface datum, Jan. 16, 2002.

WATER LEVEL,
IN FEET BELOW LAND-SURFACE DATUM
INSTANTANEOUS OBSERVATION

DATE	WATER LEVEL
11/06/02	41.19
01/08/03	42.15
03/12/03	41.43
05/21/03	40.59
07/23/03	38.37
09/08/03	37.65

413127081025900. LOCAL NUMBER, GE-280

LOCATION.—Latitude 41°31′27″, longitude 81°02′59″, Geauga County, 12972 Madison Road, Huntsburg Township. Owner: privately owned.
AQUIFER.—Cuyahoga Group (interbedded shales and sandstones) of Mississippian age.
WELL CHARACTERISTICS.—Domestic water-supply well; diameter 6 in., depth 162 ft.
INSTRUMENTATION.—Periodic measurement with steel or electric tape by USGS personnel.
DATUM.—Elevation of land-surface datum is 1,145 ft above sea level. Measuring point: top of casing 1.45 ft above land-surface datum.
PERIOD OF RECORD.—September 8, 1994 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 32.26 ft below land-surface datum, Apr. 20, 1998; lowest measured, 35.96 ft below land-surface datum, Dec. 14, 1998.

WATER LEVEL,
IN FEET BELOW LAND-SURFACE DATUM
INSTANTANEOUS OBSERVATION

DATE	WATER LEVEL
11/06/02	35.41
01/08/03	35.15
03/12/03	34.56
05/20/03	33.52
07/22/03	33.71
09/08/03	34.04

413350081163500. LOCAL NUMBER, GE-303

LOCATION.—Latitude 41°33′50″, longitude 81°16′35″, Geauga County, 10250 Mulberry Road, Munson Township. Owner: privately owned.
AQUIFER.—Cuyahoga Group (interbedded shales and sandstones) of Mississippian age.
WELL CHARACTERISTICS.—Domestic water-supply well; diameter 6 in., depth 95 ft.
INSTRUMENTATION.—Periodic measurement with steel or electric tape by USGS personnel.
DATUM.—Elevation of land-surface datum is 1,230 ft above sea level. Measuring point: top of casing 1.60 ft above land-surface datum.
PERIOD OF RECORD.—September 7, 1994 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 57.23 ft below land-surface datum, May 14, 1997; lowest measured, 63.15 ft below land-surface datum, Jan. 15, 2002.

WATER LEVEL,
IN FEET BELOW LAND-SURFACE DATUM
INSTANTANEOUS OBSERVATION

DATE	WATER LEVEL
11/07/02	62.80
01/09/03	62.82
03/13/03	62.71
05/21/03	62.32
07/23/03	62.28
09/09/03	62.55*

413315081134200. LOCAL NUMBER, GE-308

LOCATION.—Latitude 41°33′15″, longitude 81°13′42″, Geauga County, 11675 Chestnutdale Drive, Munson Township. Owner: privately owned.
AQUIFER.—Cuyahoga Group (interbedded shales and sandstones) of Mississippian age.
WELL CHARACTERISTICS.—Domestic water-supply well; diameter 6 in., depth 98 ft.
INSTRUMENTATION.—Periodic measurement with steel or electric tape by USGS personnel.
DATUM.—Elevation of land-surface datum is 1,165 ft above sea level. Measuring point: top of casing 1.68 ft above land-surface datum.
PERIOD OF RECORD.—September 7, 1994 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 20.05 ft below land-surface datum, Apr. 20, 1999; lowest measured, 27.74 ft below land-surface datum, Sept. 24, 2002.

WATER LEVEL,
IN FEET BELOW LAND-SURFACE DATUM
INSTANTANEOUS OBSERVATION

DATE	WATER LEVEL
11/07/02	26.68
01/09/03	25.94
03/13/03	26.07
05/21/03	24.73
07/23/03	24.24
09/09/03	25.15

412558081184200. LOCAL NUMBER, GE-332

LOCATION.—Latitude 41°25′58″, longitude 81°18′42″, Geauga County, 103 Silver Springs, Russell Township. Owner: privately owned.
AQUIFER.—Pottsville Formation (sandstone) of Pennsylvanian age.
WELL CHARACTERISTICS.—Domestic water-supply well; diameter 5.63 in., depth 104 ft.
INSTRUMENTATION.—Periodic measurement with steel or electric tape by USGS personnel.
DATUM.—Elevation of land-surface datum is 1,180 ft above sea level. Measuring point: top of casing, 1.14 ft above land-surface datum.
PERIOD OF RECORD.—September 8, 1994 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 33.83 ft below land-surface datum, May 14, 1997; lowest measured, 36.10 ft below land-surface datum, Jan. 16, 2002.

WATER LEVEL,
IN FEET BELOW LAND-SURFACE DATUM
INSTANTANEOUS OBSERVATION

DATE	WATER LEVEL
11/07/03	36.08
01/09/03	35.95
03/13/03	36.00
05/22/03	35.66
07/23/03	35.60*
09/09/03	35.55

412743081195700. LOCAL NUMBER, GE-338

LOCATION.—Latitude 41°27′43″, longitude 81°19′57″, Geauga County, 14940 Surrey Downs, Russell Township. Owner: privately owned.
AQUIFER.—Berea Sandstone of Mississippian age.
WELL CHARACTERISTICS.—Domestic water-supply well; diameter 5.56 in., depth 160 ft.
INSTRUMENTATION.—Periodic measurement with steel or electric tape by USGS personnel.
DATUM.—Elevation of land-surface datum is 1,078 ft above sea level. Measuring point: top of casing, 1.38 ft above land-surface datum.
PERIOD OF RECORD.—September 8, 1994 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 58.84 ft below land-surface datum, Sept. 8, 1994; lowest measured, 73.29 ft below land-surface datum, Jan. 22, 1997.

WATER LEVEL,
IN FEET BELOW LAND-SURFACE DATUM
INSTANTANEOUS OBSERVATION

DATE	WATER LEVEL
11/07/03	60.95
01/09/03	61.78
03/13/03	61.38
05/21/03	60.39*
07/23/03	59.44
09/09/03	60.76

414121081030800. LOCAL NUMBER, GE-341

LOCATION.—Latitude 41°41′21″, longitude 81°03′08″, Geauga County, 6758 Madison Road, Thompson Township. Owner: Thompson United Methodist Church.
AQUIFER.—Cuyahoga Group (interbedded shales and sandstones) of Mississippian age.
WELL CHARACTERISTICS.—Private water-supply well; diameter 6.63 in., depth 120 ft.
INSTRUMENTATION.—Periodic measurement with steel or electric tape by USGS personnel.
DATUM.—Elevation of land-surface datum is 1,267 ft above sea level. Measuring point: top of casing 2.00 ft above land-surface datum.
PERIOD OF RECORD.—September 7, 1994 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 4.12 ft below land-surface datum, Nov. 20, 1996; lowest measured, 10.11 ft below land-surface datum, Sept. 7, 1994.

WATER LEVEL,
IN FEET BELOW LAND-SURFACE DATUM
INSTANTANEOUS OBSERVATION

DATE	WATER LEVEL
11/06/02	9.20
01/08/03	5.76
03/12/03	5.07
05/20/03	5.27
07/23/03	5.91*
09/08/03	6.59

413957081052100. LOCAL NUMBER, GE-343

LOCATION.—Latitude 41°39′57″, longitude 81°05′21″, Geauga County, 15554 Valentine Road, Thompson Township. Owner: privately owned.
AQUIFER.—Berea Sandstone of Mississippian age.
WELL CHARACTERISTICS.—Domestic water-supply well; diameter 5.63 in., depth 120 ft.
INSTRUMENTATION.—Periodic measurement with steel or electric tape by USGS personnel.
DATUM.—Elevation of land-surface datum is 1,145 ft above sea level. Measuring point: top of casing, 1.60 ft above land-surface datum.
PERIOD OF RECORD.—September 7, 1994 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 69.40 ft below land-surface datum, May 14, 1997; lowest measured, 72.93 ft below land-surface datum, Sept. 7, 1994.

WATER LEVEL,
IN FEET BELOW LAND-SURFACE DATUM
INSTANTANEOUS OBSERVATION

DATE	WATER LEVEL
11/06/02	72.85
01/08/03	71.26
03/13/03	70.83
05/20/03	70.39
07/23/03	70.52
09/08/03	71.71

414125081031500. LOCAL NUMBER, GE-348

LOCATION.—Latitude 41°41′25″, longitude 81°03′15″, Geauga County, 16506 W. Thompson Road, Thompson Township. Owner: privately owned.
AQUIFER.—Pottsville Formation (sandstone) of Pennsylvanian age.
WELL CHARACTERISTICS.—Domestic water-supply well, not currently in use; diameter 6 in., depth 53 ft.
INSTRUMENTATION.— Instumentation removed on May 21, 2002 due to new owner use of the well. Periodic water level measurements by steel or electric tape will continue.
DATUM.—Elevation of land-surface datum is 1,265 ft above sea level. Measuring point: mark on wooden base of instrument shelter, 2.55 ft above land-surface datum.
PERIOD OF RECORD.—July 23, 1996 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 0.93 ft below land-surface datum, June 2, 1997; lowest measured, 7.74 ft below land-surface datum, Sept. 11, 2001.

WATER LEVEL,
IN FEET BELOW LAND-SURFACE DATUM
INSTANTANEOUS OBSERVATION

DATE	WATER LEVEL
11/06/02	6.43
01/08/03	2.33
03/12/03	1.77
05/20/03	2.58
07/23/03	2.35
09/08/03	4.30

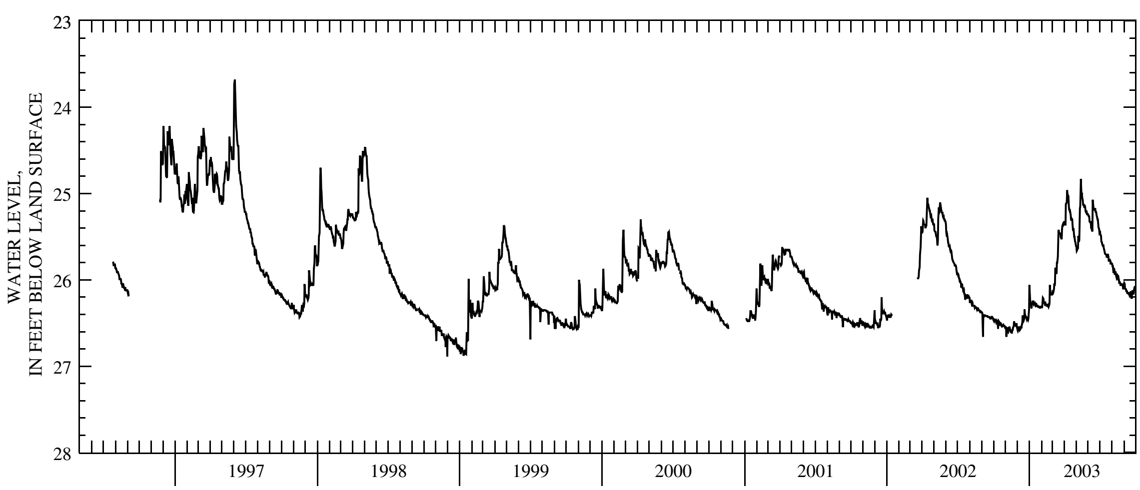
413247081103300. LOCAL NUMBER, GE-349

LOCATION.—Latitude 41°32′47″, longitude 81°10′33″, Geauga County, 121 Berkshire Drive, Aquilla Village, Claridon Township. Owner: privately owned.
AQUIFER.—Pottsville Formation (sandstone) of Pennsylvanian age.
WELL CHARACTERISTICS.—Domestic water-supply well, not currently in use; diameter 5.63 in., depth 58.19 ft.
INSTRUMENTATION.—Pressure transducer and CR10 data logger (records hourly) with SM192 storage module.
DATUM.—Elevation of land-surface datum is 1,190 ft above sea level. Measuring point: mark on wooden base of instrument shelter, 1.05 ft above land-surface datum.
PERIOD OF RECORD.—July 24, 1996 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 23.68 ft below land-surface datum, June 3, 1997; lowest measured, 26.89 ft below land-surface datum, Nov. 30, 1998.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26.47	26.54	26.56	26.06	26.32	26.16	25.33	25.61	25.24	25.44	25.81	26.08
2	26.48	26.55	26.58	26.14	26.32	26.14	25.35	25.62	25.26	25.44	25.82	26.04
3	26.46	26.66	26.59	26.22	26.31	26.15	25.36	25.66	25.26	25.48	25.84	26.05
4	26.45	26.56	26.57	26.28	26.27	26.14	25.36	25.65	25.27	25.49	25.84	26.10
5	26.48	26.55	26.55	26.28	26.21	26.10	25.12	25.64	25.32	25.56	25.92	26.11
6	26.47	26.60	26.55	26.33	26.22	26.04	25.11	25.63	25.33	25.57	25.87	26.11
7	26.48	26.61	26.55	26.31	26.25	26.07	25.09	25.49	25.33	25.57	25.87	26.13
8	26.49	26.57	26.58	26.28	26.26	26.04	24.96	25.56	25.33	25.59	25.89	26.13
9	26.48	26.58	26.57	26.26	26.27	25.86	25.00	25.54	25.40	25.61	25.94	26.13
10	26.49	26.57	26.55	26.24	26.28	25.88	25.02	25.41	25.41	25.59	25.90	26.15
11	26.48	26.54	26.54	26.27	26.27	25.91	25.03	25.17	25.43	25.62	25.92	26.15
12	26.50	26.56	26.56	26.28	26.29	25.93	25.12	25.15	25.43	25.65	25.95	26.14
13	26.57	26.59	26.53	26.27	26.29	25.80	25.18	24.83	25.07	25.67	25.98	26.16
14	26.51	26.60	26.49	26.28	26.28	25.80	25.19	24.94	25.15	25.69	25.97	26.16
15	26.48	26.60	26.41	26.29	26.30	25.73	25.18	25.01	25.18	25.70	25.98	26.18
16	26.49	26.58	26.45	26.28	26.30	25.55	25.22	24.99	25.19	25.71	25.95	26.17
17	26.51	26.62	26.48	26.29	26.28	25.43	25.24	25.04	25.19	25.71	25.96	26.18
18	26.53	26.59	26.47	26.28	26.31	25.43	25.29	25.08	25.18	25.71	25.99	26.19
19	26.49	26.58	26.45	26.27	26.30	25.46	25.31	25.13	25.18	25.74	26.00	26.13
20	26.51	26.58	26.34	26.31	26.31	25.46	25.29	25.13	25.21	25.73	26.04	26.16
21	26.51	26.55	26.40	26.30	26.29	25.47	25.30	25.13	25.21	25.71	26.02	26.22
22	26.53	26.54	26.41	26.30	26.27	25.47	25.37	25.15	25.22	25.71	26.04	26.15
23	26.54	26.48	26.42	26.29	26.06	25.50	25.41	25.14	25.25	25.73	26.07	26.12
24	26.54	26.50	26.43	26.31	26.13	25.51	25.43	25.15	25.28	25.78	26.05	26.14
25	26.53	26.51	26.45	26.31	26.17	25.53	25.40	25.18	25.30	25.78	26.05	26.16
26	26.52	26.51	26.46	26.32	26.17	25.41	25.50	25.21	25.30	25.78	26.05	26.16
27	26.53	26.53	26.45	26.32	26.17	25.38	25.50	25.22	25.34	25.77	26.06	26.12
28	26.53	26.54	26.44	26.30	26.18	25.37	25.53	25.21	25.39	25.78	26.07	26.08
29	26.54	26.50	26.46	26.33	---	25.38	25.56	25.23	25.41	25.82	26.06	26.11
30	26.55	26.55	26.44	26.31	---	25.34	25.57	25.25	25.45	25.80	26.10	26.07
31	26.54	---	26.34	26.31	---	25.33	---	25.23	---	25.81	26.10	---
MEAN	26.51	26.56	26.49	26.28	26.25	25.70	25.28	25.27	25.28	25.67	25.97	26.13
MAX	26.57	26.66	26.59	26.33	26.32	26.16	25.57	25.66	25.45	25.82	26.10	26.22
MIN	26.45	26.48	26.34	26.06	26.06	25.33	24.96	24.83	25.07	25.44	25.81	26.04

CAL YR 2002 MEAN 26.08 HIGH 25.05 LOW 26.66
WTR YR 2003 MEAN 25.95 HIGH 24.83 LOW 26.66



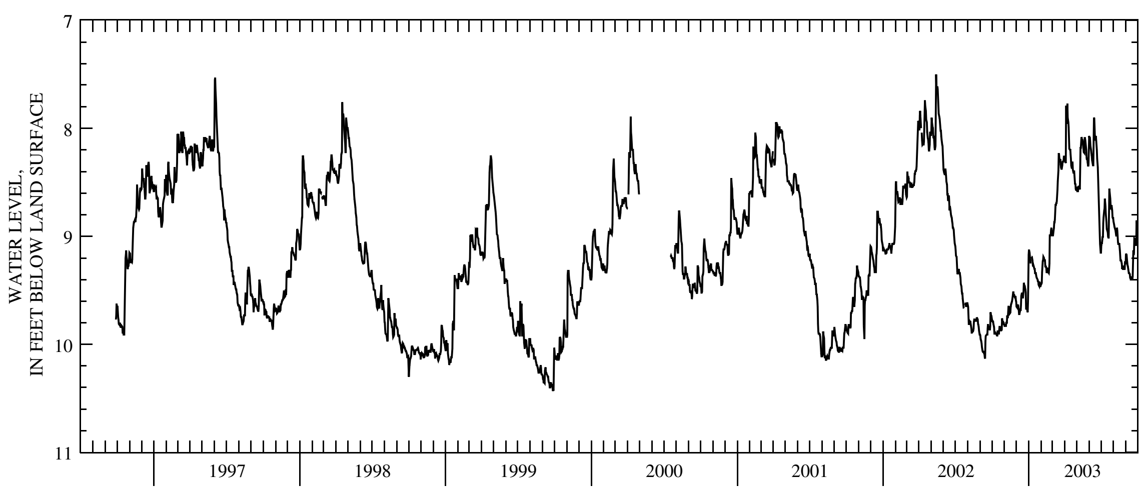
412322081190000. LOCAL NUMBER, GE-350

LOCATION.—Latitude 41°23′32″, longitude 81°19′00″, Geauga County, 9100 Bainbridge Road, Bainbridge Township. Owner: privately owned.
AQUIFER.—Pottsville Formation (sandstone) of Pennsylvanian age.
WELL CHARACTERISTICS.—Domestic water-supply well, not currently in use; diameter 6 in., depth 59.87 ft.
INSTRUMENTATION.—Pressure transducer and CR10X data logger (records hourly).
DATUM.—Elevation of land-surface datum is 1,120 ft above sea level. Measuring point: mark on wooden base of instrument shelter, 0.77 ft above land-surface datum.
PERIOD OF RECORD.—September 26, 1996 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 7.50 ft below land-surface datum, May 14, 2002; lowest measured, 10.41 ft below land-surface datum, Sept. 27, 1999.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.78	9.81	9.60	9.17	9.44	8.99	8.26	8.57	8.07	9.15	8.83	9.25
2	9.78	9.83	9.65	9.12	9.44	8.99	8.29	8.54	8.09	9.08	8.86	9.16
3	9.79	9.83	9.66	9.15	9.43	8.99	8.31	8.58	8.08	9.06	8.89	9.17
4	9.79	9.83	9.65	9.19	9.33	8.94	8.32	8.58	8.11	9.06	8.91	9.21
5	9.81	9.83	9.63	9.20	9.23	8.92	7.79	8.58	8.16	9.00	8.93	9.24
6	9.84	9.80	9.65	9.25	9.22	8.87	7.95	8.53	8.20	9.01	8.94	9.27
7	9.90	9.80	9.68	---	9.19	8.87	7.95	8.54	8.23	8.88	8.96	9.28
8	9.90	9.73	9.72	9.19	9.20	8.84	7.77	8.56	8.25	8.82	8.98	9.32
9	9.88	9.75	9.72	9.19	9.22	8.71	7.90	8.56	8.29	8.76	9.00	9.34
10	9.90	9.75	9.69	9.22	9.22	8.71	7.94	8.42	8.31	8.74	8.92	9.34
11	9.90	9.65	9.68	9.26	9.22	8.69	7.99	8.18	8.34	8.65	8.95	9.35
12	9.90	9.65	9.69	9.28	9.28	8.69	8.11	8.18	8.34	8.72	9.00	9.38
13	9.92	9.66	9.64	9.27	9.28	8.67	8.19	8.08	7.90	8.79	9.05	9.38
14	9.92	9.67	9.55	9.28	9.29	8.57	8.20	8.09	7.91	8.83	9.07	9.40
15	9.88	9.71	9.52	9.30	9.33	8.49	8.19	8.14	8.00	8.87	9.07	9.40
16	9.88	9.70	9.53	9.30	9.33	8.39	8.24	8.10	8.08	8.93	9.06	9.37
17	9.90	9.65	9.57	9.34	9.29	8.23	8.28	8.13	8.11	8.95	9.13	9.39
18	9.90	9.63	9.54	9.34	9.33	8.24	8.34	8.18	8.07	8.96	9.18	9.39
19	9.87	9.62	9.51	9.33	9.33	8.28	8.37	8.22	8.12	9.00	9.23	9.37
20	9.84	9.60	9.43	9.37	9.34	8.29	8.36	8.23	8.16	9.01	9.22	9.13
21	9.84	9.58	9.45	9.38	9.30	8.29	8.31	8.09	8.20	9.01	9.22	9.17
22	9.86	9.56	9.46	9.39	9.25	8.33	8.38	8.09	8.28	8.56	9.25	9.15
23	9.87	9.51	9.48	9.40	8.99	8.36	8.41	8.11	8.36	8.59	9.30	9.02
24	9.87	9.54	9.49	9.42	8.99	8.37	8.41	8.14	8.43	8.65	9.29	9.03
25	9.86	9.54	9.52	9.41	8.98	8.38	8.39	8.20	8.55	8.71	9.30	9.08
26	9.76	9.54	9.67	9.45	8.94	8.34	8.47	8.27	8.73	8.74	9.30	9.08
27	9.78	9.56	9.67	9.46	8.92	8.31	8.52	8.29	8.90	8.75	9.27	9.08
28	9.79	9.57	9.67	9.42	8.96	8.31	8.51	8.27	9.00	8.71	9.30	8.85
29	9.79	9.55	9.70	9.46	---	8.30	8.56	8.31	9.07	8.76	9.30	8.88
30	9.80	9.59	9.60	9.46	---	8.26	8.57	8.35	9.15	8.82	9.23	8.91
31	9.82	---	9.29	9.46	---	8.26	---	8.33	---	8.83	9.25	---
MEAN	9.85	9.67	9.59	9.32	9.22	8.54	8.24	8.30	8.32	8.85	9.10	9.21
MAX	9.92	9.83	9.72	9.46	9.44	8.99	8.57	8.58	9.15	9.15	9.30	9.40
MIN	9.76	9.51	9.29	9.12	8.92	8.23	7.77	8.08	7.90	8.56	8.83	8.85

CAL YR 2002	MEAN 9.09	HIGH 7.50	LOW 10.13
WTR YR 2003	MEAN 9.02	HIGH 7.77	LOW 9.92



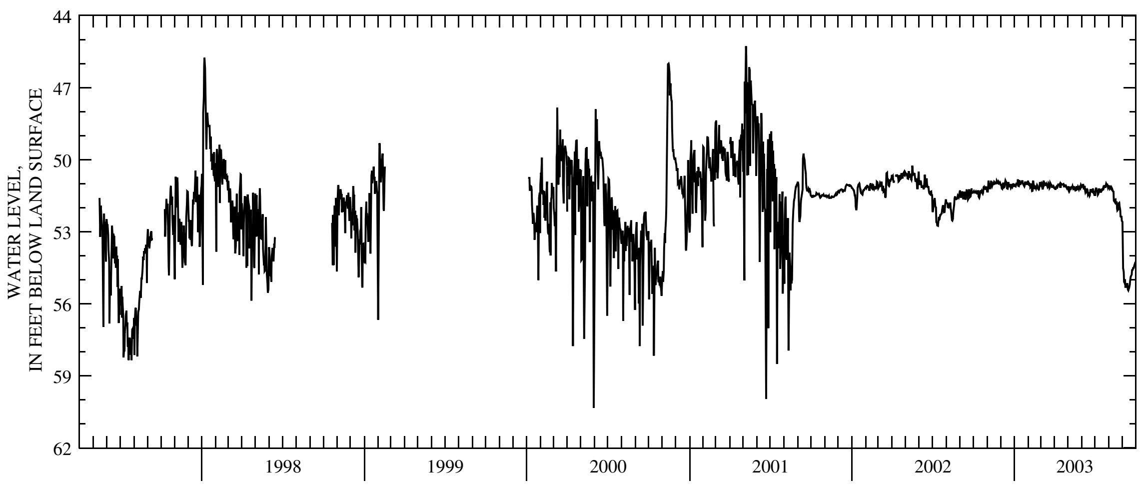
413119081213200. LOCAL NUMBER, GE-351

LOCATION.—Latitude 41°31′19″, longitude 81°21′32″, Geauga County, south side of State Route 322, east of intersection with Caves Road and west of Bloom Brothers Hardware, Chester Township. Owner: privately owned.
AQUIFER.—Cuyahoga Group (interbedded shales and sandstones) of Mississippian age.
WELL CHARACTERISTICS.—Domestic water-supply well, not currently in use; diameter 6 in., depth 126.5 ft.
INSTRUMENTATION.—Pressure transducer and CR10X data logger (records hourly).
DATUM.—Elevation of land-surface datum is 1,135 ft above sea level. Measuring point: mark on wooden base of instrument shelter, 1.25 ft above land-surface datum.
PERIOD OF RECORD.—May 15, 1997 through February 16, 1999, and January 6, 2000 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 45.27 ft below land-surface datum, May 8, 2001; lowest measured, 60.33 ft below land-surface datum, May 31, 2000.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51.32	51.32	51.04	51.09	50.87	51.07	51.18	51.14	51.10	51.47	51.10	52.59
2	51.29	51.32	51.04	51.00	51.03	51.08	51.16	51.13	51.04	51.47	51.09	53.67
3	51.35	51.15	51.04	51.09	51.05	50.99	51.18	51.25	51.12	51.25	51.18	54.51
4	51.36	50.87	51.20	51.11	50.98	51.01	51.24	51.32	51.12	51.16	51.16	54.67
5	51.32	50.97	51.21	51.05	51.02	51.20	51.14	51.29	51.00	51.29	51.13	55.10
6	51.33	51.14	51.08	50.95	51.16	51.20	51.11	51.11	51.20	51.29	51.21	55.12
7	51.30	51.19	50.95	51.00	51.15	50.93	51.15	51.22	51.20	51.34	51.22	54.97
8	51.36	51.18	51.05	50.98	51.01	50.86	51.16	51.22	51.08	51.44	51.16	55.29
9	51.40	51.01	51.15	50.82	50.99	51.04	51.10	51.15	51.25	51.39	51.18	55.29
10	51.40	50.87	51.13	51.08	51.29	51.02	51.03	51.14	51.33	51.18	51.27	55.29
11	51.33	51.07	50.94	51.10	51.28	50.93	51.04	51.14	51.26	51.31	51.31	55.19
12	51.26	51.11	50.86	50.98	50.90	51.06	51.04	51.10	51.19	51.30	51.32	55.14
13	51.53	51.03	50.93	50.84	50.86	51.06	50.98	51.20	51.29	51.21	51.71	55.41
14	51.59	50.97	50.93	51.01	51.10	51.06	51.13	51.19	51.24	51.34	51.75	55.44
15	51.53	51.01	51.01	51.01	51.18	51.02	51.13	51.10	51.27	51.33	51.65	55.40
16	51.38	51.01	51.18	50.93	51.18	51.09	50.98	51.22	51.44	51.20	51.64	55.32
17	51.27	50.90	51.20	50.94	51.11	51.14	51.00	51.22	51.39	51.28	51.80	55.26
18	51.36	50.93	51.13	50.95	51.13	51.10	51.02	51.13	51.39	51.27	51.79	55.19
19	51.35	50.95	50.92	50.85	51.18	50.98	51.03	51.26	51.49	51.20	51.73	55.03
20	51.30	50.99	51.05	50.99	51.15	51.02	51.02	51.25	51.47	51.16	52.03	54.84
21	51.39	50.99	51.08	51.01	51.06	51.16	51.00	51.10	51.21	51.18	52.10	54.81
22	51.42	50.97	51.04	51.05	51.08	51.14	51.04	51.23	51.30	51.09	52.06	54.76
23	51.38	50.87	51.04	51.11	51.18	50.96	51.11	51.23	51.32	51.06	52.10	54.59
24	51.14	50.92	51.16	51.07	51.22	51.02	51.11	51.12	51.21	51.14	51.81	54.57
25	51.12	50.97	51.13	50.90	51.24	51.07	51.07	51.15	51.29	51.14	51.79	54.51
26	51.19	50.98	51.00	50.98	51.21	51.01	51.09	51.22	51.30	51.06	51.93	54.51
27	51.21	50.92	51.08	51.02	51.07	51.13	51.08	51.19	51.19	50.98	52.08	54.45
28	51.21	50.97	51.12	51.01	50.92	51.13	51.16	51.15	51.37	51.04	52.36	54.40
29	51.15	50.97	51.06	50.90	---	51.11	51.18	51.18	51.40	50.99	52.38	54.33
30	51.11	50.95	50.97	51.00	---	51.09	51.16	51.10	51.29	51.10	52.34	54.36
31	51.24	---	51.09	51.00	---	51.17	---	51.04	---	51.16	52.54	---
MEAN	51.32	51.02	51.06	50.99	51.09	51.06	51.09	51.18	51.26	51.22	51.67	54.80
MAX	51.59	51.32	51.21	51.11	51.29	51.20	51.24	51.32	51.49	51.47	52.54	55.44
MIN	51.11	50.87	50.86	50.82	50.86	50.86	50.98	51.04	51.00	50.98	51.09	52.59

CAL YR 2002	MEAN 51.24	HIGH 50.24	LOW 52.75
WTR YR 2003	MEAN 51.48	HIGH 50.82	LOW 55.44



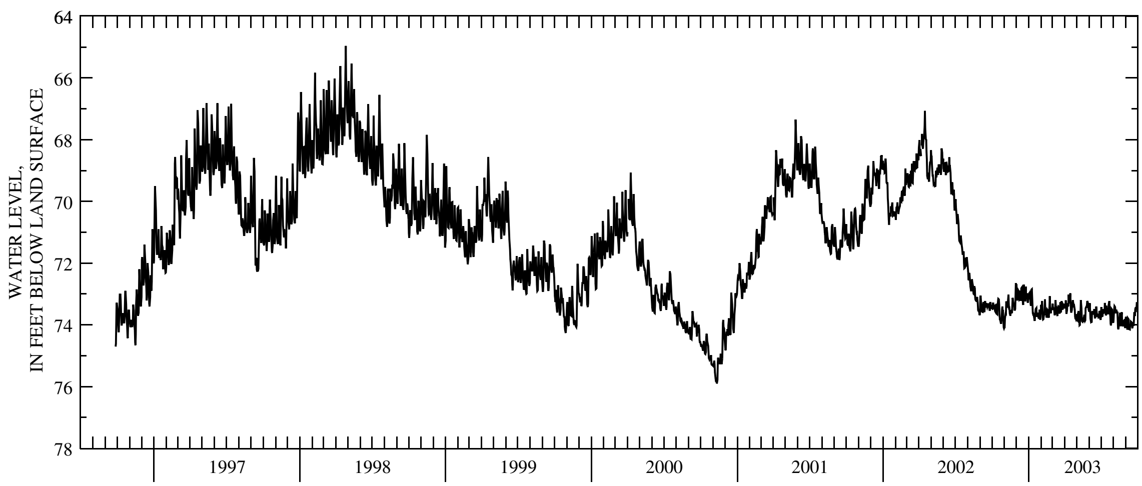
412851081045200. LOCAL NUMBER, GE-352

LOCATION.—Latitude 41°28′51″, longitude 81° 04′52″, Geauga County, west side of State Route 608, north of Middlefield Village, by hunters' parking lot, Middlefield Township. Owner: City of Akron.
AQUIFER.—Glacial deposits of Quaternary age.
WELL CHARACTERISTICS.—Domestic water-supply well, not currently in use; diameter 6 in., depth 122.3 ft.
INSTRUMENTATIO.— Pressure transducer and CR10X data logger (records hourly).
DATUM.—Elevation of land-surface datum is 1,140 ft above sea level. Measuring point: mark on wooden base of instrument shelter, 1.15 ft above land-surface datum.
PERIOD OF RECORD.—September 25, 1996 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 64.96 ft below land-surface datum, Apr. 26,1998; lowest measured, 75.90 ft below land-surface datum, Nov. 11, 2000.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	73.36	74.08	72.84	73.17	73.35	73.52	73.44	73.75	73.57	73.69	73.93	73.78
2	73.49	74.08	72.68	72.97	73.47	73.31	73.39	73.65	73.46	73.42	73.88	73.74
3	73.51	73.79	73.16	72.94	73.46	73.46	73.42	73.86	73.30	73.59	73.51	73.84
4	73.28	73.63	73.21	73.09	73.22	73.49	73.20	73.87	73.53	73.71	73.39	73.97
5	73.40	73.64	73.02	73.05	73.73	73.43	73.39	73.63	73.78	73.70	73.42	74.13
6	73.47	73.24	72.89	73.31	73.83	73.56	73.64	73.55	73.91	73.48	73.55	74.13
7	73.34	73.39	72.91	73.38	73.82	73.66	73.52	73.73	73.90	73.55	73.62	73.79
8	73.42	73.40	73.04	72.85	73.66	73.66	73.30	74.01	73.90	73.63	73.54	73.81
9	73.56	73.34	73.16	72.84	73.69	73.19	73.38	74.00	73.59	73.57	73.51	74.00
10	73.58	73.27	73.13	73.38	73.46	73.41	73.37	73.70	73.55	73.58	73.62	74.14
11	73.45	73.02	72.90	73.62	73.18	73.41	73.02	73.62	73.63	73.29	73.57	74.15
12	73.32	73.33	73.19	73.65	73.48	73.42	73.25	73.19	73.64	73.51	73.76	74.00
13	73.65	73.51	73.19	73.64	73.55	73.61	73.30	73.46	73.64	73.69	74.08	74.03
14	73.66	73.48	72.80	73.68	73.64	73.71	73.18	73.78	73.49	73.64	74.14	73.89
15	73.36	73.62	72.77	73.82	73.76	73.47	72.98	73.89	73.65	73.38	74.01	73.91
16	73.27	73.70	73.03	73.87	73.73	73.40	73.25	73.90	73.77	73.54	73.92	73.92
17	73.15	73.52	73.28	73.70	73.50	73.41	73.52	73.86	73.76	73.63	73.61	74.04
18	73.18	73.61	73.35	73.60	73.54	73.48	73.60	73.91	73.70	73.63	73.81	74.11
19	73.34	73.58	73.10	73.47	73.67	73.61	73.52	73.78	73.40	73.59	74.02	73.92
20	73.64	73.62	72.70	73.44	73.76	73.61	73.36	73.67	73.50	73.60	74.03	74.02
21	73.81	73.38	72.88	73.69	73.55	73.27	73.28	73.82	73.66	73.34	73.80	74.03
22	73.81	73.12	72.86	73.73	73.41	73.56	73.19	73.86	73.74	73.22	73.59	73.84
23	73.93	73.27	73.19	73.60	73.07	73.60	73.34	73.84	73.67	73.50	73.90	73.59
24	73.96	73.33	73.24	73.70	73.43	73.41	73.38	73.44	73.68	73.70	74.04	73.71
25	73.75	73.30	72.76	73.73	73.62	73.23	73.37	73.40	73.77	73.95	74.00	73.49
26	73.48	73.39	73.08	73.76	73.50	73.46	73.51	73.44	73.76	74.01	73.85	73.44
27	73.40	73.54	73.16	73.75	73.46	73.50	73.72	73.36	73.55	73.93	73.94	73.43
28	73.59	73.49	72.97	73.51	73.49	73.35	73.79	73.23	73.57	73.49	74.04	73.43
29	73.58	72.96	73.26	73.77	---	73.37	73.78	73.25	73.75	73.52	73.82	73.27
30	74.08	72.64	73.26	73.83	---	73.36	73.81	73.33	73.84	73.74	74.08	73.59
31	74.11	---	73.14	73.77	---	73.44	---	73.48	---	73.88	74.08	---
MEAN	73.55	73.44	73.04	73.49	73.54	73.46	73.41	73.65	73.66	73.60	73.81	73.84
MAX	74.11	74.08	73.35	73.87	73.83	73.71	73.81	74.01	73.91	74.01	74.14	74.15
MIN	73.15	72.64	72.68	72.84	73.07	73.19	72.98	73.19	73.30	73.22	73.39	73.27

CAL YR 2002	MEAN 71.10	HIGH 67.07	LOW 74.11
WTR YR 2003	MEAN 73.54	HIGH 72.64	LOW 74.15



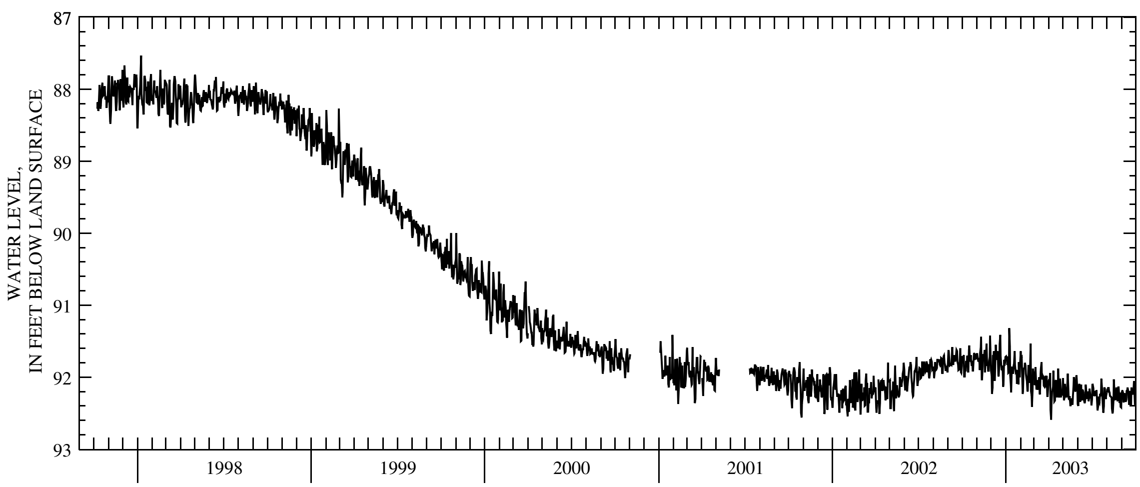
412748081172000. LOCAL NUMBER, GE-354

LOCATION.—Latitude 41°27′48″, longitude 81°17′20", Geauga County, northwest corner of intersection of Sperry Road and State Route 87, Newbury Township. Owner: privately owned.
AQUIFER.—Pottsville Formation (sandstone) of Pennsylvanian age.
WELL CHARACTERISTICS.—Domestic water-supply well, not currently in use; diameter 6 in., depth 113.9 ft.
INSTRUMENTATION.—Pressure transducer and CR10X data logger (records hourly).
DATUM.—Elevation of land-surface datum is 1,275 ft above sea level. Measuring point: mark on wooden base of instrument shelter, 4.15 ft above land-surface datum.
PERIOD OF RECORD.—October 7, 1997 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 87.53 ft below land-surface datum, Jan. 8, 1998; lowest measured, 92.59 ft below land-surface datum, Apr. 6, 2003.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	91.72	91.68	91.90	91.71	91.64	91.95	92.06	92.01	92.37	92.30	92.21	92.24
2	91.72	91.68	91.97	91.73	91.73	91.94	92.03	92.22	92.40	92.09	92.18	92.19
3	91.71	91.74	92.23	91.71	91.72	92.11	92.05	92.32	92.26	92.10	92.19	92.19
4	91.69	91.77	92.14	91.83	91.93	91.86	91.94	92.28	92.09	92.15	92.15	92.22
5	91.99	91.77	91.69	91.78	92.23	91.94	92.45	92.09	92.26	92.26	92.15	92.35
6	91.99	91.73	91.71	91.94	92.20	92.17	92.59	92.18	92.34	92.24	92.19	92.32
7	91.88	91.90	91.64	91.93	91.88	92.16	92.38	92.23	92.17	92.19	92.22	92.22
8	91.92	91.66	92.04	91.32	91.88	92.04	92.19	92.28	92.10	92.26	92.26	92.25
9	91.77	91.58	92.04	91.57	91.88	92.07	92.18	92.26	92.30	92.20	92.27	92.32
10	91.82	91.44	91.68	91.97	91.80	92.17	92.13	92.06	92.32	92.19	92.27	92.34
11	91.77	92.03	91.55	92.11	91.84	92.05	91.91	91.95	92.18	92.19	92.28	92.31
12	91.70	92.03	91.76	92.21	91.95	92.00	92.17	92.17	92.18	92.38	92.43	92.19
13	91.91	91.85	91.72	91.87	92.02	92.22	92.33	92.30	92.21	92.46	92.50	92.18
14	91.93	91.68	91.65	91.85	92.04	92.24	92.32	92.31	92.30	92.40	92.48	92.14
15	91.62	91.74	91.64	91.94	92.20	91.95	92.07	92.26	92.34	92.27	92.32	92.19
16	91.56	91.73	91.97	91.94	92.18	91.88	92.04	92.39	92.36	92.35	92.03	92.28
17	91.75	91.62	91.99	91.83	91.83	91.79	92.06	92.39	92.30	92.36	92.20	92.38
18	91.78	91.93	91.83	91.81	91.93	91.98	92.26	92.34	92.10	92.23	92.29	92.28
19	91.69	91.80	91.54	91.64	92.00	92.03	92.28	92.31	92.20	92.26	92.32	92.19
20	91.78	91.75	91.41	91.83	92.08	91.98	92.14	92.29	92.30	92.21	92.25	92.40
21	91.84	91.53	91.70	91.92	91.86	92.00	91.88	92.38	92.23	92.02	92.14	92.38
22	91.77	91.72	91.83	91.91	91.53	92.12	92.15	92.27	92.20	92.15	92.19	92.14
23	91.92	91.83	91.89	91.91	92.19	92.13	92.27	92.12	92.23	92.27	92.30	92.19
24	91.90	91.83	91.90	92.09	92.25	92.10	92.27	92.00	92.33	92.42	92.33	92.23
25	91.72	91.91	91.84	91.90	92.41	91.98	92.02	92.12	92.28	92.49	92.14	92.23
26	91.66	91.91	92.13	91.97	92.18	92.08	92.16	92.18	92.16	92.40	92.14	92.22
27	91.76	91.77	92.10	92.10	91.88	92.14	92.28	92.20	92.23	92.14	92.27	92.05
28	91.73	91.72	91.76	91.79	91.96	91.98	92.17	92.08	92.28	92.16	92.36	92.14
29	91.70	91.42	91.84	91.99	---	92.26	92.25	91.97	92.28	92.25	92.21	92.38
30	91.67	91.69	91.80	91.99	---	92.26	92.22	92.02	92.39	92.30	92.41	92.40
31	91.75	---	91.72	91.80	---	92.13	---	92.18	---	92.25	92.42	---
MEAN	91.78	91.75	91.83	91.87	91.97	92.06	92.17	92.20	92.26	92.26	92.26	92.25
MAX	91.99	92.03	92.23	92.21	92.41	92.26	92.59	92.39	92.40	92.49	92.50	92.40
MIN	91.56	91.42	91.41	91.32	91.53	91.79	91.88	91.95	92.09	92.02	92.03	92.05

CAL YR 2002 MEAN 91.99 HIGH 91.41 LOW 92.54
WTR YR 2003 MEAN 92.05 HIGH 91.32 LOW 92.59



412934081084600. LOCAL NUMBER, GE-365

LOCATION.—Latitude 41°29′34″, longitude 81°08′46″, Geauga County, 13800 Claridon-Troy Road, Burton Township. Owner: privately owned.
AQUIFER.—Pottsville Formation (sandstone) of Pennsylvanian age.
WELL CHARACTERISTICS.—Domestic water-supply well; diameter 6 in., depth 57 ft.
INSTRUMENTATION.—Periodic measurement with steel or electric tape by USGS personnel.
DATUM.—Elevation of land-surface datum is 1,190 ft above sea level. Measuring point: top of casing 1.17 ft above land-surface datum.
PERIOD OF RECORD.—March 21, 2002 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 13.08 ft below land-surface datum, May 22, 2002; lowest measured, 14.83 ft below land-surface datum, Sept. 24, 2002.

WATER LEVEL,
IN FEET BELOW LAND-SURFACE DATUM
INSTANTANEOUS OBSERVATION

DATE	WATER LEVEL
11/07/02	14.70
01/09/03	14.10
03/13/03	13.66*
05/21/03	13.16
07/22/03	13.89
09/09/03	14.48

412603081074000. LOCAL NUMBER, GE-366

LOCATION.—Latitude 41°26′03″, longitude 81°07′40″, Geauga County, 14350 Hubbard Road, Burton Township. Owner: privately owned.
AQUIFER.—Pottsville Formation (sandstone) of Pennsylvanian age.
WELL CHARACTERISTICS.—Private water-supply well; diameter 5.63 in., depth 86 ft.
INSTRUMENTATION.—Periodic measurement with steel or electric tape by USGS personnel.
DATUM.—Elevation of land-surface datum is 1,170 ft above sea level. Measuring point: top of casing 1.45 ft above land-surface datum.
PERIOD OF RECORD.—May 22, 2002 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 22.87 ft below land-surface datum, July 22, 2003; lowest measured, 27.63* ft below land-surface datum, Nov. 7, 2002.

WATER LEVEL,
IN FEET BELOW LAND-SURFACE DATUM
INSTANTANEOUS OBSERVATION

DATE	WATER LEVEL
11/07/02	27.63*
01/09/03	27.13
03/13/03	26.54*
05/21/03	24.04*
07/22/03	22.87
09/09/03	23.62

Ground-Water Data for Former Air Force Plant 36

The following tables contain ground-water-level data collected as part of a cooperative study with the U. S. Environmental Protection Agency. The location of the study area is shown below.

SHORT-TERM GROUND-WATER MONITORING NETWORK

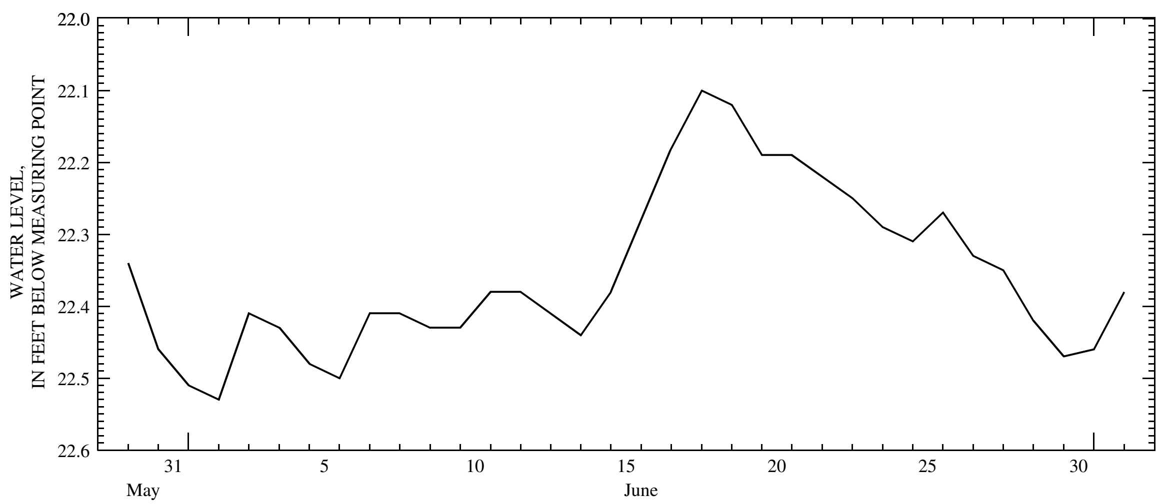
391411084264000. LOCAL NUMBER, AF-3S

LOCATION.—Latitude 39°14′11″, longitude 84°26′40″, Hamilton County, Ohio.
WELL CHARACTERISTICS.—Monitoring well, diameter 2 in.; depth 52 ft.
INSTRUMENTATION.—Pressure transducer data logger, records in 15 min intervals.
DATUM.—Elevation of land-surface datum is 560.40 ft above sea level. Measuring point: top of casing, 1.94 ft above land-surface datum.
PERIOD OF RECORD.—Continuous water-level data from May 30, 2003 to July 2, 2003.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 22.10 ft below measuring point, June 18, 2003; lowest measured, 22.53 ft below measuring point, June 2, 2003.

DEPTH BELOW MEASURING POINT (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	22.51	22.46	---	---
2	---	---	---	---	---	---	---	---	22.53	22.38	---	---
3	---	---	---	---	---	---	---	---	22.41	---	---	---
4	---	---	---	---	---	---	---	---	22.43	---	---	---
5	---	---	---	---	---	---	---	---	22.48	---	---	---
6	---	---	---	---	---	---	---	---	22.50	---	---	---
7	---	---	---	---	---	---	---	---	22.41	---	---	---
8	---	---	---	---	---	---	---	---	22.41	---	---	---
9	---	---	---	---	---	---	---	---	22.43	---	---	---
10	---	---	---	---	---	---	---	---	22.43	---	---	---
11	---	---	---	---	---	---	---	---	22.38	---	---	---
12	---	---	---	---	---	---	---	---	22.38	---	---	---
13	---	---	---	---	---	---	---	---	22.41	---	---	---
14	---	---	---	---	---	---	---	---	22.44	---	---	---
15	---	---	---	---	---	---	---	---	22.38	---	---	---
16	---	---	---	---	---	---	---	---	22.28	---	---	---
17	---	---	---	---	---	---	---	---	22.18	---	---	---
18	---	---	---	---	---	---	---	---	22.10	---	---	---
19	---	---	---	---	---	---	---	---	22.12	---	---	---
20	---	---	---	---	---	---	---	---	22.19	---	---	---
21	---	---	---	---	---	---	---	---	22.19	---	---	---
22	---	---	---	---	---	---	---	---	22.22	---	---	---
23	---	---	---	---	---	---	---	---	22.25	---	---	---
24	---	---	---	---	---	---	---	---	22.29	---	---	---
25	---	---	---	---	---	---	---	---	22.31	---	---	---
26	---	---	---	---	---	---	---	---	22.27	---	---	---
27	---	---	---	---	---	---	---	---	22.33	---	---	---
28	---	---	---	---	---	---	---	---	22.35	---	---	---
29	---	---	---	---	---	---	---	---	22.42	---	---	---
30	---	---	---	---	---	---	---	22.34	22.47	---	---	---
31	---	---	---	---	---	---	---	22.46	---	---	---	---
MEAN	---	---	---	---	---	---	---	22.40	22.35	22.42	---	---
MAX	---	---	---	---	---	---	---	22.46	22.53	22.46	---	---
MIN	---	---	---	---	---	---	---	22.34	22.10	22.38	---	---

WTR YR 2003 MEAN 22.36 MAX 22.53 MIN 22.10



SHORT-TERM GROUND-WATER MONITORING NETWORK—CONTINUED

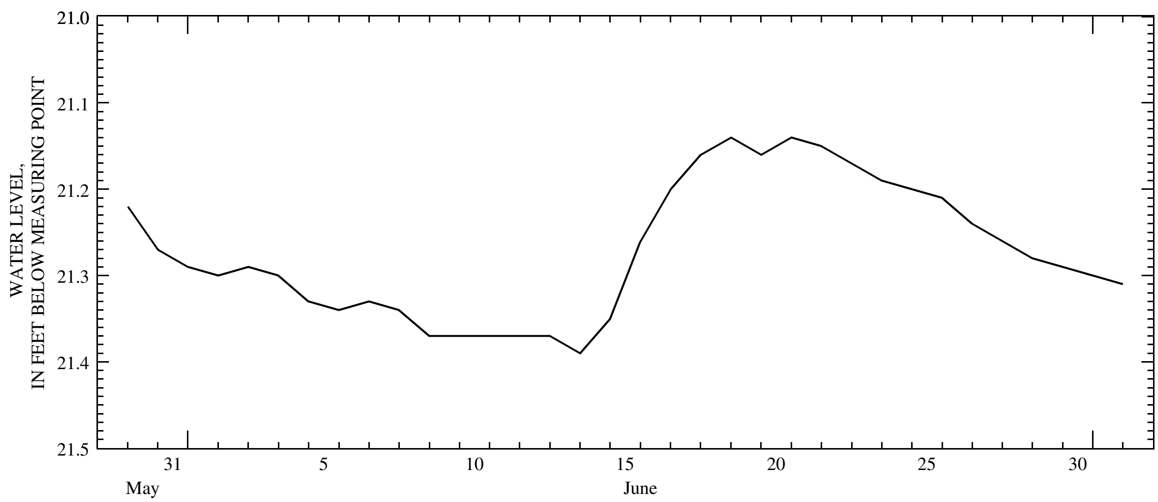
391411084264001. LOCAL NUMBER, H-41

LOCATION.—Latitude 39°14′11″, longitude 84°26′40″, Hamilton County, Ohio.
WELL CHARACTERISTICS.—Monitoring well, diameter 2 in.; depth 31 ft.
INSTRUMENTATION.—Pressure transducer data logger, records in 15 min intervals.
DATUM.—Elevation of land-surface datum is 559.38 ft above sea level. Measuring point: top of casing, 1.93 ft above land-surface datum.
PERIOD OF RECORD.—Continuous water-level data from May 30, 2003 to July 2, 2003.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 21.14 ft below measuring point, June 19, 2003; lowest measured, 21.39 ft below measuring point, June 14, 2003.

DEPTH BELOW MEASURING POINT (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	21.29	21.30	---	---
2	---	---	---	---	---	---	---	---	21.30	21.31	---	---
3	---	---	---	---	---	---	---	---	21.29	---	---	---
4	---	---	---	---	---	---	---	---	21.30	---	---	---
5	---	---	---	---	---	---	---	---	21.33	---	---	---
6	---	---	---	---	---	---	---	---	21.34	---	---	---
7	---	---	---	---	---	---	---	---	21.33	---	---	---
8	---	---	---	---	---	---	---	---	21.34	---	---	---
9	---	---	---	---	---	---	---	---	21.37	---	---	---
10	---	---	---	---	---	---	---	---	21.37	---	---	---
11	---	---	---	---	---	---	---	---	21.37	---	---	---
12	---	---	---	---	---	---	---	---	21.37	---	---	---
13	---	---	---	---	---	---	---	---	21.37	---	---	---
14	---	---	---	---	---	---	---	---	21.39	---	---	---
15	---	---	---	---	---	---	---	---	21.35	---	---	---
16	---	---	---	---	---	---	---	---	21.26	---	---	---
17	---	---	---	---	---	---	---	---	21.20	---	---	---
18	---	---	---	---	---	---	---	---	21.16	---	---	---
19	---	---	---	---	---	---	---	---	21.14	---	---	---
20	---	---	---	---	---	---	---	---	21.16	---	---	---
21	---	---	---	---	---	---	---	---	21.14	---	---	---
22	---	---	---	---	---	---	---	---	21.15	---	---	---
23	---	---	---	---	---	---	---	---	21.17	---	---	---
24	---	---	---	---	---	---	---	---	21.19	---	---	---
25	---	---	---	---	---	---	---	---	21.20	---	---	---
26	---	---	---	---	---	---	---	---	21.21	---	---	---
27	---	---	---	---	---	---	---	---	21.24	---	---	---
28	---	---	---	---	---	---	---	---	21.26	---	---	---
29	---	---	---	---	---	---	---	---	21.28	---	---	---
30	---	---	---	---	---	---	---	21.22	21.29	---	---	---
31	---	---	---	---	---	---	---	21.27	---	---	---	---
MEAN	---	---	---	---	---	---	---	21.25	21.27	21.30	---	---
MAX	---	---	---	---	---	---	---	21.27	21.39	21.31	---	---
MIN	---	---	---	---	---	---	---	21.22	21.14	21.30	---	---

WTR YR 2003 MEAN 21.27 MAX 21.39 MIN 21.14



SHORT-TERM GROUND-WATER MONITORING NETWORK—CONTINUED

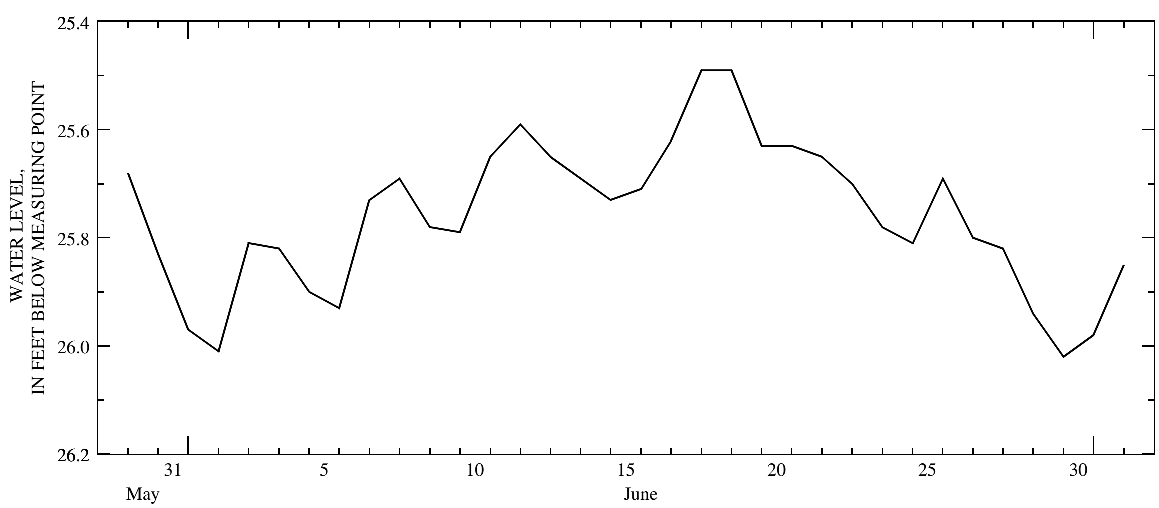
391403084264300. LOCAL NUMBER, H-47

LOCATION.—Latitude 39°14′03″, longitude 84°26′43″, Hamilton County, Ohio.
WELL CHARACTERISTICS.—Monitoring well, diameter 4 in.; depth 119 ft.
INSTRUMENTATION.—Pressure transducer data logger, records in 15 min intervals.
DATUM.—Elevation of land-surface datum is 559.63 ft above sea level. Measuring point: top of casing, 1.60 ft above land-surface datum.
PERIOD OF RECORD.—Continuous water-level data from May 30, 2003 to July 2, 2003.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 25.49 ft below measuring point, June 18 and 19, 2003; lowest measured, 26.02 ft below measuring point, June 30, 2003.

DEPTH BELOW MEASURING POINT (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	25.97	25.98	---	---
2	---	---	---	---	---	---	---	---	26.01	25.85	---	---
3	---	---	---	---	---	---	---	---	25.81	---	---	---
4	---	---	---	---	---	---	---	---	25.82	---	---	---
5	---	---	---	---	---	---	---	---	25.90	---	---	---
6	---	---	---	---	---	---	---	---	25.93	---	---	---
7	---	---	---	---	---	---	---	---	25.73	---	---	---
8	---	---	---	---	---	---	---	---	25.69	---	---	---
9	---	---	---	---	---	---	---	---	25.78	---	---	---
10	---	---	---	---	---	---	---	---	25.79	---	---	---
11	---	---	---	---	---	---	---	---	25.65	---	---	---
12	---	---	---	---	---	---	---	---	25.59	---	---	---
13	---	---	---	---	---	---	---	---	25.65	---	---	---
14	---	---	---	---	---	---	---	---	25.69	---	---	---
15	---	---	---	---	---	---	---	---	25.73	---	---	---
16	---	---	---	---	---	---	---	---	25.71	---	---	---
17	---	---	---	---	---	---	---	---	25.62	---	---	---
18	---	---	---	---	---	---	---	---	25.49	---	---	---
19	---	---	---	---	---	---	---	---	25.49	---	---	---
20	---	---	---	---	---	---	---	---	25.63	---	---	---
21	---	---	---	---	---	---	---	---	25.63	---	---	---
22	---	---	---	---	---	---	---	---	25.65	---	---	---
23	---	---	---	---	---	---	---	---	25.70	---	---	---
24	---	---	---	---	---	---	---	---	25.78	---	---	---
25	---	---	---	---	---	---	---	---	25.81	---	---	---
26	---	---	---	---	---	---	---	---	25.69	---	---	---
27	---	---	---	---	---	---	---	---	25.80	---	---	---
28	---	---	---	---	---	---	---	---	25.82	---	---	---
29	---	---	---	---	---	---	---	---	25.94	---	---	---
30	---	---	---	---	---	---	---	25.68	26.02	---	---	---
31	---	---	---	---	---	---	---	25.83	---	---	---	---
MEAN	---	---	---	---	---	---	---	25.75	25.75	25.91	---	---
MAX	---	---	---	---	---	---	---	25.83	26.02	25.98	---	---
MIN	---	---	---	---	---	---	---	25.68	25.49	25.85	---	---

WTR YR 2003 MEAN 25.76 MAX 26.02 MIN 25.49



SHORT-TERM GROUND-WATER MONITORING NETWORK—CONTINUED

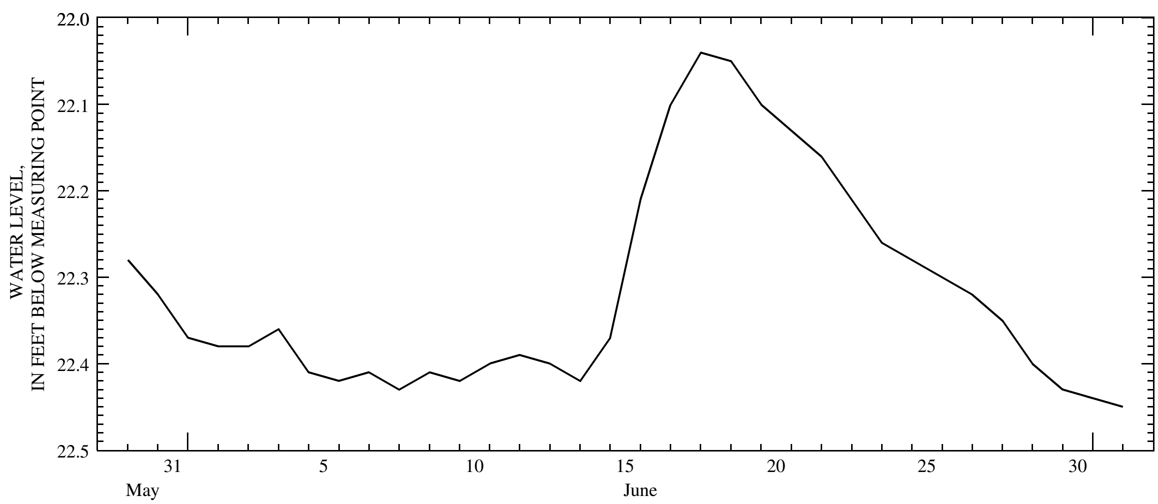
391403084264301. LOCAL NUMBER, H-48

LOCATION.—Latitude 39°14′03″, longitude 84°26′43″, Hamilton County, Ohio.
WELL CHARACTERISTICS.—Monitoring well, diameter 2 in.; depth 36.5 ft.
INSTRUMENTATION.—Pressure transducer data logger, records in 15 min intervals..
DATUM.—Elevation of land-surface datum is 559.37 ft above sea level. Measuring point: top of casing, 1.70 ft above land-surface datum.
PERIOD OF RECORD.—Continuous water-level data from May 30, 2003 to July 2, 2003.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 22.04 ft below measuring point, June 18, 2003; lowest measured, 22.45 ft below measuring point, July 2, 2003.

DEPTH BELOW MEASURING POINT (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	22.37	22.44	---	---
2	---	---	---	---	---	---	---	---	22.38	22.45	---	---
3	---	---	---	---	---	---	---	---	22.38	---	---	---
4	---	---	---	---	---	---	---	---	22.36	---	---	---
5	---	---	---	---	---	---	---	---	22.41	---	---	---
6	---	---	---	---	---	---	---	---	22.42	---	---	---
7	---	---	---	---	---	---	---	---	22.41	---	---	---
8	---	---	---	---	---	---	---	---	22.43	---	---	---
9	---	---	---	---	---	---	---	---	22.41	---	---	---
10	---	---	---	---	---	---	---	---	22.42	---	---	---
11	---	---	---	---	---	---	---	---	22.40	---	---	---
12	---	---	---	---	---	---	---	---	22.39	---	---	---
13	---	---	---	---	---	---	---	---	22.40	---	---	---
14	---	---	---	---	---	---	---	---	22.42	---	---	---
15	---	---	---	---	---	---	---	---	22.37	---	---	---
16	---	---	---	---	---	---	---	---	22.21	---	---	---
17	---	---	---	---	---	---	---	---	22.10	---	---	---
18	---	---	---	---	---	---	---	---	22.04	---	---	---
19	---	---	---	---	---	---	---	---	22.05	---	---	---
20	---	---	---	---	---	---	---	---	22.10	---	---	---
21	---	---	---	---	---	---	---	---	22.13	---	---	---
22	---	---	---	---	---	---	---	---	22.16	---	---	---
23	---	---	---	---	---	---	---	---	22.21	---	---	---
24	---	---	---	---	---	---	---	---	22.26	---	---	---
25	---	---	---	---	---	---	---	---	22.28	---	---	---
26	---	---	---	---	---	---	---	---	22.30	---	---	---
27	---	---	---	---	---	---	---	---	22.32	---	---	---
28	---	---	---	---	---	---	---	---	22.35	---	---	---
29	---	---	---	---	---	---	---	---	22.40	---	---	---
30	---	---	---	---	---	---	---	22.28	22.43	---	---	---
31	---	---	---	---	---	---	---	22.32	---	---	---	---
MEAN	---	---	---	---	---	---	---	22.30	22.31	22.45	---	---
MAX	---	---	---	---	---	---	---	22.32	22.43	22.45	---	---
MIN	---	---	---	---	---	---	---	22.28	22.04	22.44	---	---

WTR YR 2003 MEAN 22.32 MAX 22.45 MIN 22.04



SHORT-TERM GROUND-WATER MONITORING NETWORK—CONTINUED

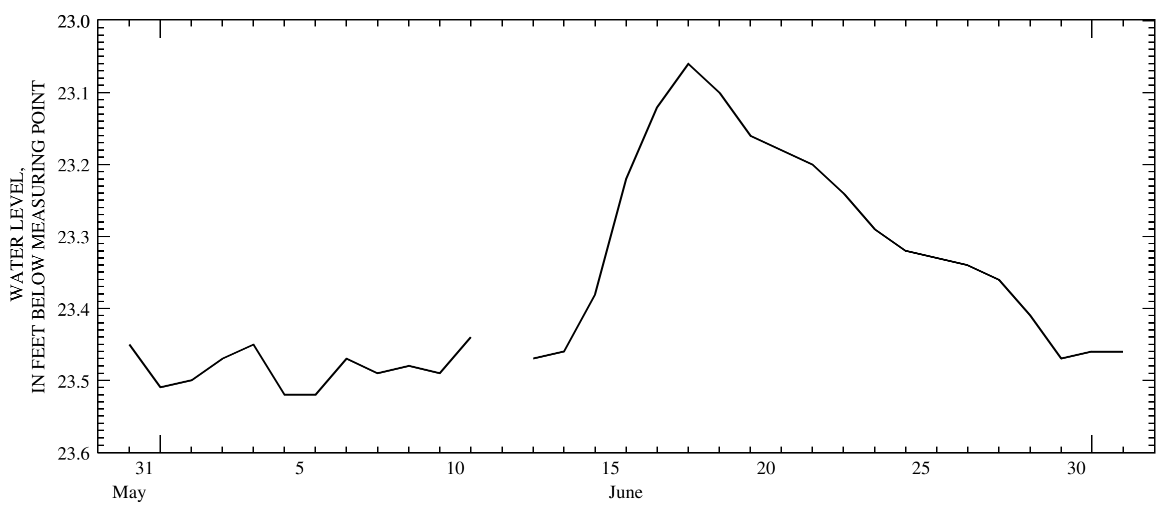
391403084264302. LOCAL NUMBER, H-49

LOCATION.—Latitude 39°14′03″, longitude 84°26′43″, Hamilton County, Ohio.
WELL CHARACTERISTICS.—Monitoring well, diameter 2 in.; depth 55 ft.
INSTRUMENTATION.—Pressure transducer data logger, records in 15 min intervals.
DATUM.—Elevation of land-surface datum is 559.58 ft above sea level. Measuring point: top of casing, 2.44 ft above land-surface datum.
PERIOD OF RECORD.—Continuous water-level data from May 31, 2003 to July 2, 2003.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 23.06 ft below measuring point, June 18, 2003; lowest measured, 23.52 ft below measuring point, June 5, 2003.

DEPTH BELOW MEASURING POINT (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	23.51	23.46	---	---
2	---	---	---	---	---	---	---	---	23.50	23.46	---	---
3	---	---	---	---	---	---	---	---	23.47	---	---	---
4	---	---	---	---	---	---	---	---	23.45	---	---	---
5	---	---	---	---	---	---	---	---	23.52	---	---	---
6	---	---	---	---	---	---	---	---	23.52	---	---	---
7	---	---	---	---	---	---	---	---	23.47	---	---	---
8	---	---	---	---	---	---	---	---	23.49	---	---	---
9	---	---	---	---	---	---	---	---	23.48	---	---	---
10	---	---	---	---	---	---	---	---	23.49	---	---	---
11	---	---	---	---	---	---	---	---	23.44	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	23.47	---	---	---
14	---	---	---	---	---	---	---	---	23.46	---	---	---
15	---	---	---	---	---	---	---	---	23.38	---	---	---
16	---	---	---	---	---	---	---	---	23.22	---	---	---
17	---	---	---	---	---	---	---	---	23.12	---	---	---
18	---	---	---	---	---	---	---	---	23.06	---	---	---
19	---	---	---	---	---	---	---	---	23.10	---	---	---
20	---	---	---	---	---	---	---	---	23.16	---	---	---
21	---	---	---	---	---	---	---	---	23.18	---	---	---
22	---	---	---	---	---	---	---	---	23.20	---	---	---
23	---	---	---	---	---	---	---	---	23.24	---	---	---
24	---	---	---	---	---	---	---	---	23.29	---	---	---
25	---	---	---	---	---	---	---	---	23.32	---	---	---
26	---	---	---	---	---	---	---	---	23.33	---	---	---
27	---	---	---	---	---	---	---	---	23.34	---	---	---
28	---	---	---	---	---	---	---	---	23.36	---	---	---
29	---	---	---	---	---	---	---	---	23.41	---	---	---
30	---	---	---	---	---	---	---	---	23.47	---	---	---
31	---	---	---	---	---	---	---	23.45	---	---	---	---
MEAN	---	---	---	---	---	---	---	23.45	23.36	23.46	---	---
MAX	---	---	---	---	---	---	---	23.45	23.52	23.46	---	---
MIN	---	---	---	---	---	---	---	23.45	23.06	23.46	---	---

WTR YR 2003 MEAN 23.37 MAX 23.52 MIN 23.06



SHORT-TERM GROUND-WATER MONITORING NETWORK—CONTINUED

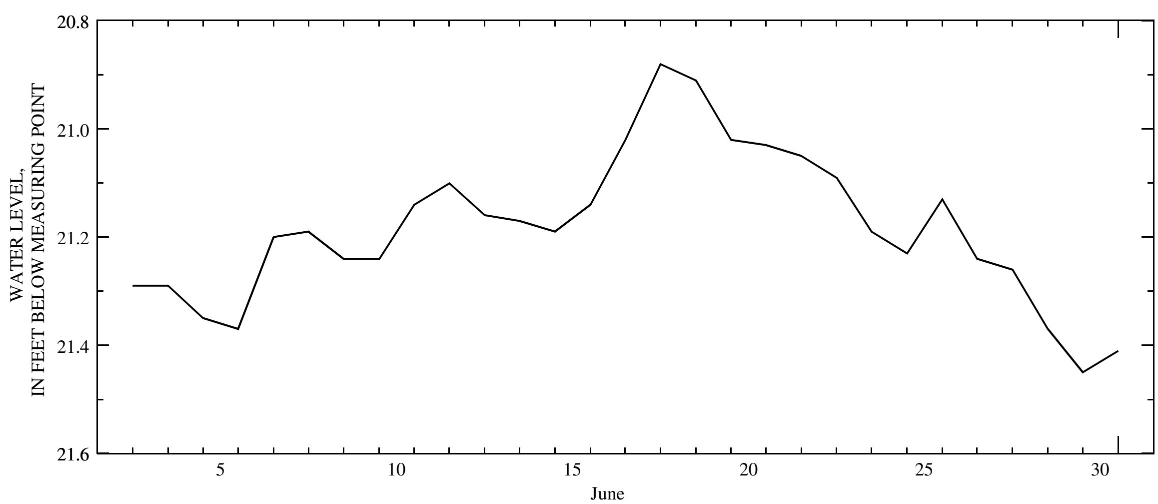
391417084262300. LOCAL NUMBER, H-85

LOCATION.—Latitude 39°14′17″, longitude 84°26′23″, Hamilton County, Ohio.
WELL CHARACTERISTICS.—Monitoring well, diameter 4 in.; depth 111.3 ft.
INSTRUMENTATION.—Pressure transducer data logger, records in 15 min intervals.
DATUM.—Elevation of land-surface datum is 558.70 ft above sea level. Measuring point: top of casing, 1.41 ft above land-surface datum.
PERIOD OF RECORD.—Continuous water-level data from June 2, 2003 to July 1, 2003.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 20.88 ft below measuring point, June 18, 2003; lowest measured, 21.45 ft below measuring point, June 30, 2003.

DEPTH BELOW MEASURING POINT (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	21.41	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	21.29	---	---	---
4	---	---	---	---	---	---	---	---	21.29	---	---	---
5	---	---	---	---	---	---	---	---	21.35	---	---	---
6	---	---	---	---	---	---	---	---	21.37	---	---	---
7	---	---	---	---	---	---	---	---	21.20	---	---	---
8	---	---	---	---	---	---	---	---	21.19	---	---	---
9	---	---	---	---	---	---	---	---	21.24	---	---	---
10	---	---	---	---	---	---	---	---	21.24	---	---	---
11	---	---	---	---	---	---	---	---	21.14	---	---	---
12	---	---	---	---	---	---	---	---	21.10	---	---	---
13	---	---	---	---	---	---	---	---	21.16	---	---	---
14	---	---	---	---	---	---	---	---	21.17	---	---	---
15	---	---	---	---	---	---	---	---	21.19	---	---	---
16	---	---	---	---	---	---	---	---	21.14	---	---	---
17	---	---	---	---	---	---	---	---	21.02	---	---	---
18	---	---	---	---	---	---	---	---	20.88	---	---	---
19	---	---	---	---	---	---	---	---	20.91	---	---	---
20	---	---	---	---	---	---	---	---	21.02	---	---	---
21	---	---	---	---	---	---	---	---	21.03	---	---	---
22	---	---	---	---	---	---	---	---	21.05	---	---	---
23	---	---	---	---	---	---	---	---	21.09	---	---	---
24	---	---	---	---	---	---	---	---	21.19	---	---	---
25	---	---	---	---	---	---	---	---	21.23	---	---	---
26	---	---	---	---	---	---	---	---	21.13	---	---	---
27	---	---	---	---	---	---	---	---	21.24	---	---	---
28	---	---	---	---	---	---	---	---	21.26	---	---	---
29	---	---	---	---	---	---	---	---	21.37	---	---	---
30	---	---	---	---	---	---	---	---	21.45	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	---	---	---	---	---	---	---	---	21.18	21.41	---	---
MAX	---	---	---	---	---	---	---	---	21.45	21.41	---	---
MIN	---	---	---	---	---	---	---	---	20.88	21.41	---	---

WTR YR 2003 MEAN 21.18 MAX 21.45 MIN 20.88



SHORT-TERM GROUND-WATER MONITORING NETWORK—CONTINUED

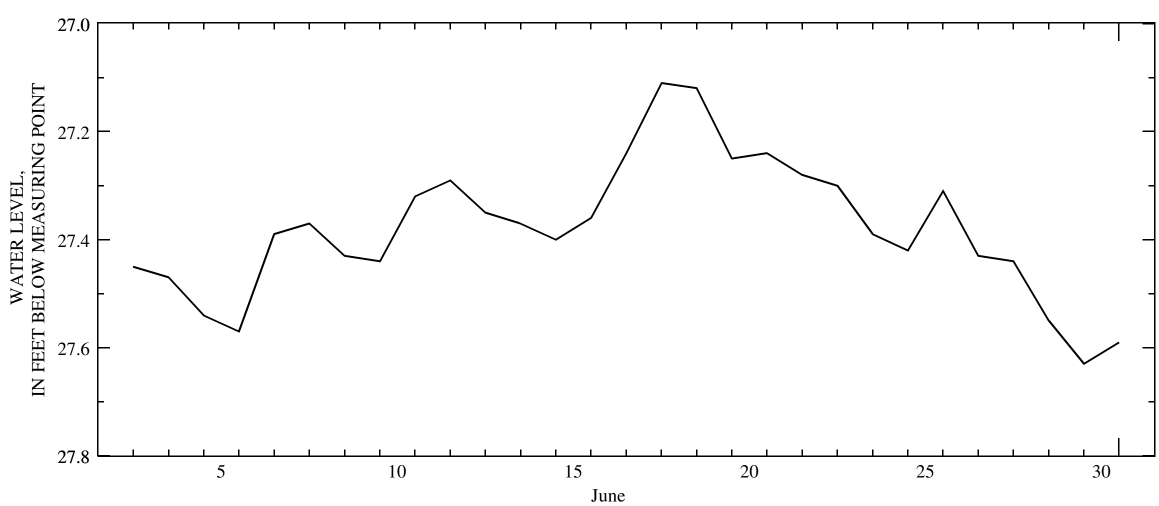
391419084262900. LOCAL NUMBER, H-178

LOCATION.—Latitude 39°14′19″, longitude 84°26′29″, Hamilton County, Ohio.
WELL CHARACTERISTICS.—Monitoring well, diameter 4 in.; depth 124 ft.
INSTRUMENTATION.—Pressure transducer data logger, records in 15 min intervals.
DATUM.—Elevation of land-surface datum is 564.10 ft above sea level. Measuring point: top of casing, 1.71 ft above land-surface datum.
PERIOD OF RECORD.—Continuous water-level data from June 3, 2003 to July 1, 2003.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 27.11 ft below measuring point, June 18, 2003; lowest measured, 27.63 ft below measuring point, June 30, 2003.

DEPTH BELOW MEASURING POINT (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	27.59	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	27.45	---	---	---
4	---	---	---	---	---	---	---	---	27.47	---	---	---
5	---	---	---	---	---	---	---	---	27.54	---	---	---
6	---	---	---	---	---	---	---	---	27.57	---	---	---
7	---	---	---	---	---	---	---	---	27.39	---	---	---
8	---	---	---	---	---	---	---	---	27.37	---	---	---
9	---	---	---	---	---	---	---	---	27.43	---	---	---
10	---	---	---	---	---	---	---	---	27.44	---	---	---
11	---	---	---	---	---	---	---	---	27.32	---	---	---
12	---	---	---	---	---	---	---	---	27.29	---	---	---
13	---	---	---	---	---	---	---	---	27.35	---	---	---
14	---	---	---	---	---	---	---	---	27.37	---	---	---
15	---	---	---	---	---	---	---	---	27.40	---	---	---
16	---	---	---	---	---	---	---	---	27.36	---	---	---
17	---	---	---	---	---	---	---	---	27.24	---	---	---
18	---	---	---	---	---	---	---	---	27.11	---	---	---
19	---	---	---	---	---	---	---	---	27.12	---	---	---
20	---	---	---	---	---	---	---	---	27.25	---	---	---
21	---	---	---	---	---	---	---	---	27.24	---	---	---
22	---	---	---	---	---	---	---	---	27.28	---	---	---
23	---	---	---	---	---	---	---	---	27.30	---	---	---
24	---	---	---	---	---	---	---	---	27.39	---	---	---
25	---	---	---	---	---	---	---	---	27.42	---	---	---
26	---	---	---	---	---	---	---	---	27.31	---	---	---
27	---	---	---	---	---	---	---	---	27.43	---	---	---
28	---	---	---	---	---	---	---	---	27.44	---	---	---
29	---	---	---	---	---	---	---	---	27.55	---	---	---
30	---	---	---	---	---	---	---	---	27.63	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	---	---	---	---	---	---	---	---	27.37	27.59	---	---
MAX	---	---	---	---	---	---	---	---	27.63	27.59	---	---
MIN	---	---	---	---	---	---	---	---	27.11	27.59	---	---

WTR YR 2003 MEAN 27.38 MAX 27.63 MIN 27.11



SHORT-TERM GROUND-WATER MONITORING NETWORK—CONTINUED

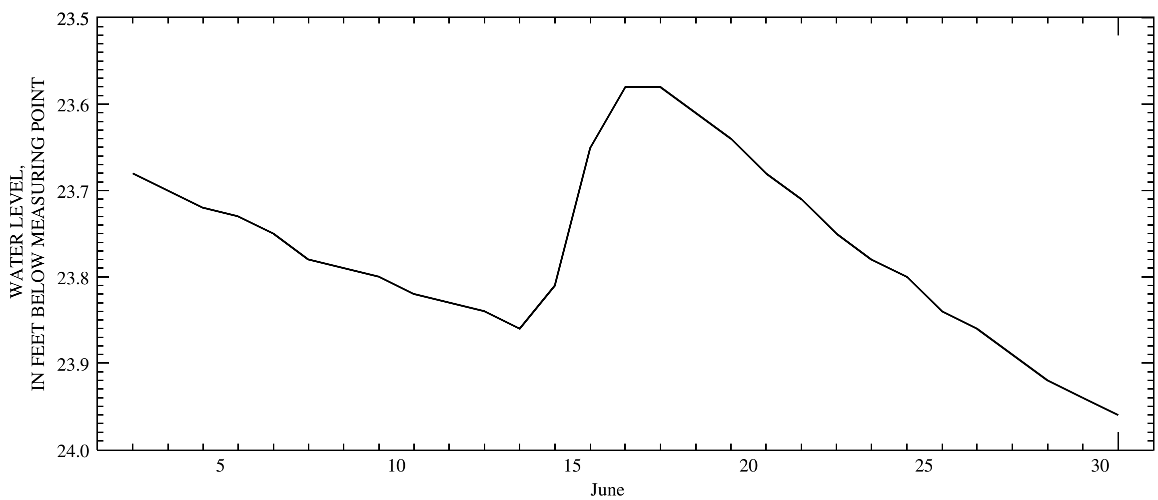
391418084262800. LOCAL NUMBER, H-185

LOCATION.—Latitude 39°14′18″, longitude 84°26′28″, Hamilton County, Ohio.
WELL CHARACTERISTICS.—Monitoring well, diameter 2 in.; depth 29 ft.
INSTRUMENTATION.—Pressure transducer data logger, records in 15 min intervals.
DATUM.—Elevation of land-surface datum is 564.40 ft above sea level. Measuring point: top of casing, 2.32 ft above land-surface datum.
PERIOD OF RECORD.—Continuous water-level data from June 3, 2003 to July 1, 2003.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 23.58 ft below measuring point, June 17 and 18, 2003; lowest measured, 23.96 ft below measuring point, July 1, 2003.

DEPTH BELOW MEASURING POINT (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	23.96	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	23.68	---	---	---
4	---	---	---	---	---	---	---	---	23.70	---	---	---
5	---	---	---	---	---	---	---	---	23.72	---	---	---
6	---	---	---	---	---	---	---	---	23.73	---	---	---
7	---	---	---	---	---	---	---	---	23.75	---	---	---
8	---	---	---	---	---	---	---	---	23.78	---	---	---
9	---	---	---	---	---	---	---	---	23.79	---	---	---
10	---	---	---	---	---	---	---	---	23.80	---	---	---
11	---	---	---	---	---	---	---	---	23.82	---	---	---
12	---	---	---	---	---	---	---	---	23.83	---	---	---
13	---	---	---	---	---	---	---	---	23.84	---	---	---
14	---	---	---	---	---	---	---	---	23.86	---	---	---
15	---	---	---	---	---	---	---	---	23.81	---	---	---
16	---	---	---	---	---	---	---	---	23.65	---	---	---
17	---	---	---	---	---	---	---	---	23.58	---	---	---
18	---	---	---	---	---	---	---	---	23.58	---	---	---
19	---	---	---	---	---	---	---	---	23.61	---	---	---
20	---	---	---	---	---	---	---	---	23.64	---	---	---
21	---	---	---	---	---	---	---	---	23.68	---	---	---
22	---	---	---	---	---	---	---	---	23.71	---	---	---
23	---	---	---	---	---	---	---	---	23.75	---	---	---
24	---	---	---	---	---	---	---	---	23.78	---	---	---
25	---	---	---	---	---	---	---	---	23.80	---	---	---
26	---	---	---	---	---	---	---	---	23.84	---	---	---
27	---	---	---	---	---	---	---	---	23.86	---	---	---
28	---	---	---	---	---	---	---	---	23.89	---	---	---
29	---	---	---	---	---	---	---	---	23.92	---	---	---
30	---	---	---	---	---	---	---	---	23.94	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	---	---	---	---	---	---	---	---	23.76	23.96	---	---
MAX	---	---	---	---	---	---	---	---	23.94	23.96	---	---
MIN	---	---	---	---	---	---	---	---	23.58	23.96	---	---

WTR YR 2003 MEAN 23.77 MAX 23.96 MIN 23.58



SHORT-TERM GROUND-WATER MONITORING NETWORK—CONTINUED

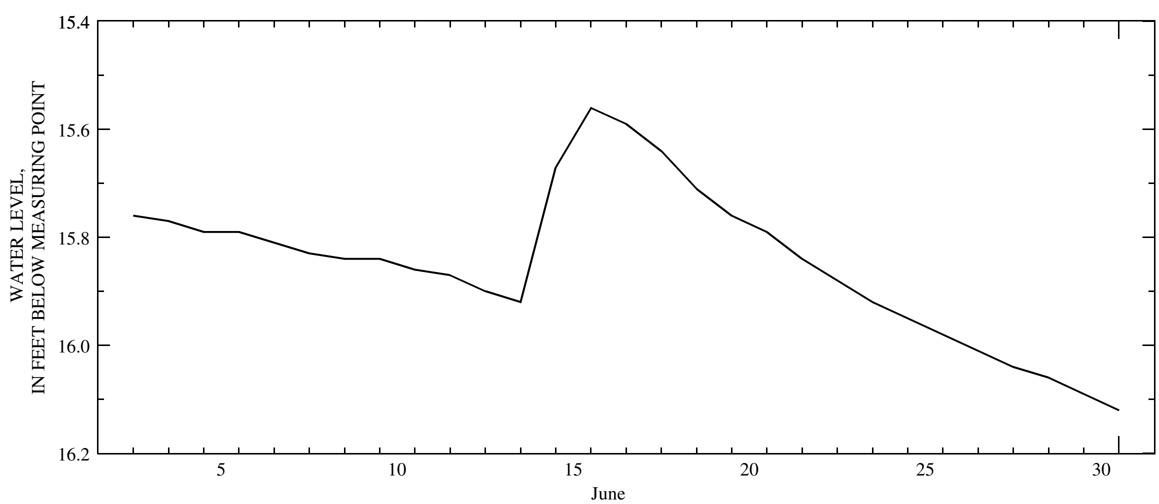
391418084262300. LOCAL NUMBER, H-192

LOCATION.—Latitude 39°14′18″, longitude 84°26′23″, Hamilton County, Ohio.
WELL CHARACTERISTICS.—Monitoring well, diameter 2 in.; depth 23 ft.
INSTRUMENTATION.—Pressure transducer data logger, records in 15 min intervals.
DATUM.—Elevation of land-surface datum is 559.0 ft above sea level. Measuring point: top of casing, 1.62 ft above land-surface datum.
PERIOD OF RECORD.—Continuous water-level data from June 3, 2003 to July 1, 2003.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 15.56 ft below measuring point, June 16, 2003; lowest measured, 16.12 ft below measuring point, July 1, 2003.

DEPTH BELOW MEASURING POINT (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	16.12	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	15.76	---	---	---
4	---	---	---	---	---	---	---	---	15.77	---	---	---
5	---	---	---	---	---	---	---	---	15.79	---	---	---
6	---	---	---	---	---	---	---	---	15.79	---	---	---
7	---	---	---	---	---	---	---	---	15.81	---	---	---
8	---	---	---	---	---	---	---	---	15.83	---	---	---
9	---	---	---	---	---	---	---	---	15.84	---	---	---
10	---	---	---	---	---	---	---	---	15.84	---	---	---
11	---	---	---	---	---	---	---	---	15.86	---	---	---
12	---	---	---	---	---	---	---	---	15.87	---	---	---
13	---	---	---	---	---	---	---	---	15.90	---	---	---
14	---	---	---	---	---	---	---	---	15.92	---	---	---
15	---	---	---	---	---	---	---	---	15.67	---	---	---
16	---	---	---	---	---	---	---	---	15.56	---	---	---
17	---	---	---	---	---	---	---	---	15.59	---	---	---
18	---	---	---	---	---	---	---	---	15.64	---	---	---
19	---	---	---	---	---	---	---	---	15.71	---	---	---
20	---	---	---	---	---	---	---	---	15.76	---	---	---
21	---	---	---	---	---	---	---	---	15.79	---	---	---
22	---	---	---	---	---	---	---	---	15.84	---	---	---
23	---	---	---	---	---	---	---	---	15.88	---	---	---
24	---	---	---	---	---	---	---	---	15.92	---	---	---
25	---	---	---	---	---	---	---	---	15.95	---	---	---
26	---	---	---	---	---	---	---	---	15.98	---	---	---
27	---	---	---	---	---	---	---	---	16.01	---	---	---
28	---	---	---	---	---	---	---	---	16.04	---	---	---
29	---	---	---	---	---	---	---	---	16.06	---	---	---
30	---	---	---	---	---	---	---	---	16.09	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	---	---	---	---	---	---	---	---	15.84	16.12	---	---
MAX	---	---	---	---	---	---	---	---	16.09	16.12	---	---
MIN	---	---	---	---	---	---	---	---	15.56	16.12	---	---

WTR YR 2003 MEAN 15.85 MAX 16.12 MIN 15.56



SHORT-TERM GROUND-WATER MONITORING NETWORK—CONTINUED

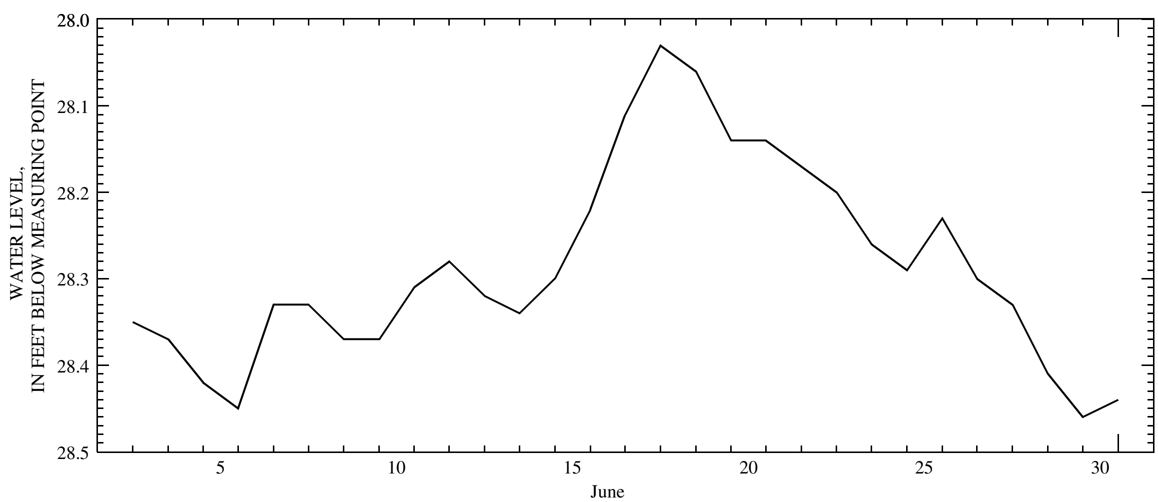
391418084262700. LOCAL NUMBER, H-209

LOCATION.—Latitude 39°14′18″, longitude 84°26′27″, Hamilton County, Ohio.
WELL CHARACTERISTICS.—Monitoring well, diameter 2 in.; depth 57 ft.
INSTRUMENTATION.—Pressure transducer data logger, records in 15 min intervals.
DATUM.—Elevation of land-surface datum is 565.80 ft above sea level. Measuring point: top of casing, 2.81 ft above land-surface datum.
PERIOD OF RECORD.—Continuous water-level data from June 3, 2003 to July 1, 2003.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 28.03 ft below measuring point, June 18, 2003; lowest measured, 28.46 ft below measuring point, June 30, 2003.

DEPTH BELOW MEASURING POINT (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	28.44	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	28.35	---	---	---
4	---	---	---	---	---	---	---	---	28.37	---	---	---
5	---	---	---	---	---	---	---	---	28.42	---	---	---
6	---	---	---	---	---	---	---	---	28.45	---	---	---
7	---	---	---	---	---	---	---	---	28.33	---	---	---
8	---	---	---	---	---	---	---	---	28.33	---	---	---
9	---	---	---	---	---	---	---	---	28.37	---	---	---
10	---	---	---	---	---	---	---	---	28.37	---	---	---
11	---	---	---	---	---	---	---	---	28.31	---	---	---
12	---	---	---	---	---	---	---	---	28.28	---	---	---
13	---	---	---	---	---	---	---	---	28.32	---	---	---
14	---	---	---	---	---	---	---	---	28.34	---	---	---
15	---	---	---	---	---	---	---	---	28.30	---	---	---
16	---	---	---	---	---	---	---	---	28.22	---	---	---
17	---	---	---	---	---	---	---	---	28.11	---	---	---
18	---	---	---	---	---	---	---	---	28.03	---	---	---
19	---	---	---	---	---	---	---	---	28.06	---	---	---
20	---	---	---	---	---	---	---	---	28.14	---	---	---
21	---	---	---	---	---	---	---	---	28.14	---	---	---
22	---	---	---	---	---	---	---	---	28.17	---	---	---
23	---	---	---	---	---	---	---	---	28.20	---	---	---
24	---	---	---	---	---	---	---	---	28.26	---	---	---
25	---	---	---	---	---	---	---	---	28.29	---	---	---
26	---	---	---	---	---	---	---	---	28.23	---	---	---
27	---	---	---	---	---	---	---	---	28.30	---	---	---
28	---	---	---	---	---	---	---	---	28.33	---	---	---
29	---	---	---	---	---	---	---	---	28.41	---	---	---
30	---	---	---	---	---	---	---	---	28.46	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	---	---	---	---	---	---	---	---	28.28	28.44	---	---
MAX	---	---	---	---	---	---	---	---	28.46	28.44	---	---
MIN	---	---	---	---	---	---	---	---	28.03	28.44	---	---

WTR YR 2003 MEAN 28.29 MAX 28.46 MIN 28.03



SHORT-TERM GROUND-WATER MONITORING NETWORK—CONTINUED

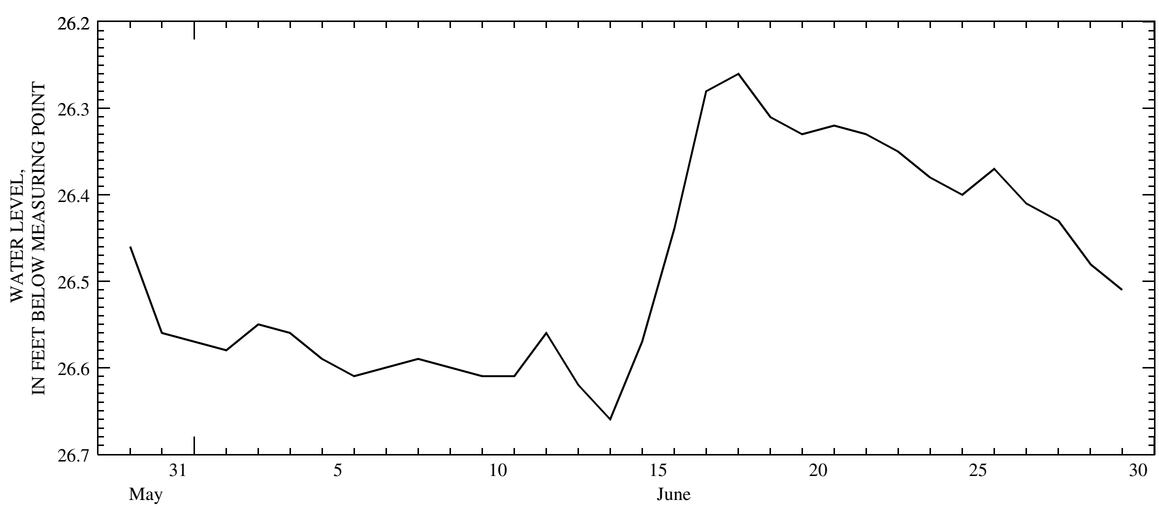
391338084265701. LOCAL NUMBER, H-219

LOCATION.—Latitude 39°13′37″, longitude 84°26′57″, Hamilton County, Ohio.
WELL CHARACTERISTICS.—Monitoring well, diameter 2 in.; depth 58 ft.
INSTRUMENTATION.—Pressure transducer data logger, records in 15 min intervals.
DATUM.—Elevation of land-surface datum is 559.08 ft above sea level. Measuring point: top of casing, 0.27 ft below land-surface datum.
PERIOD OF RECORD.—Continuous water-level data from May 30, 2003 to June 30, 2003.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 26.26 ft below measuring point, June 18, 2003; lowest measured, 26.66 ft below measuring point, June 14, 2003.

DEPTH BELOW MEASURING POINT (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	26.57	---	---	---
2	---	---	---	---	---	---	---	---	26.58	---	---	---
3	---	---	---	---	---	---	---	---	26.55	---	---	---
4	---	---	---	---	---	---	---	---	26.56	---	---	---
5	---	---	---	---	---	---	---	---	26.59	---	---	---
6	---	---	---	---	---	---	---	---	26.61	---	---	---
7	---	---	---	---	---	---	---	---	26.60	---	---	---
8	---	---	---	---	---	---	---	---	26.59	---	---	---
9	---	---	---	---	---	---	---	---	26.60	---	---	---
10	---	---	---	---	---	---	---	---	26.61	---	---	---
11	---	---	---	---	---	---	---	---	26.61	---	---	---
12	---	---	---	---	---	---	---	---	26.56	---	---	---
13	---	---	---	---	---	---	---	---	26.62	---	---	---
14	---	---	---	---	---	---	---	---	26.66	---	---	---
15	---	---	---	---	---	---	---	---	26.57	---	---	---
16	---	---	---	---	---	---	---	---	26.44	---	---	---
17	---	---	---	---	---	---	---	---	26.28	---	---	---
18	---	---	---	---	---	---	---	---	26.26	---	---	---
19	---	---	---	---	---	---	---	---	26.31	---	---	---
20	---	---	---	---	---	---	---	---	26.33	---	---	---
21	---	---	---	---	---	---	---	---	26.32	---	---	---
22	---	---	---	---	---	---	---	---	26.33	---	---	---
23	---	---	---	---	---	---	---	---	26.35	---	---	---
24	---	---	---	---	---	---	---	---	26.38	---	---	---
25	---	---	---	---	---	---	---	---	26.40	---	---	---
26	---	---	---	---	---	---	---	---	26.37	---	---	---
27	---	---	---	---	---	---	---	---	26.41	---	---	---
28	---	---	---	---	---	---	---	---	26.43	---	---	---
29	---	---	---	---	---	---	---	---	26.48	---	---	---
30	---	---	---	---	---	---	---	26.46	26.51	---	---	---
31	---	---	---	---	---	---	---	26.56	---	---	---	---
MEAN	---	---	---	---	---	---	---	26.51	26.48	---	---	---
MAX	---	---	---	---	---	---	---	26.56	26.66	---	---	---
MIN	---	---	---	---	---	---	---	26.46	26.26	---	---	---

WTR YR 2003 MEAN 26.48 MAX 26.66 MIN 26.26



SHORT-TERM GROUND-WATER MONITORING NETWORK—CONTINUED

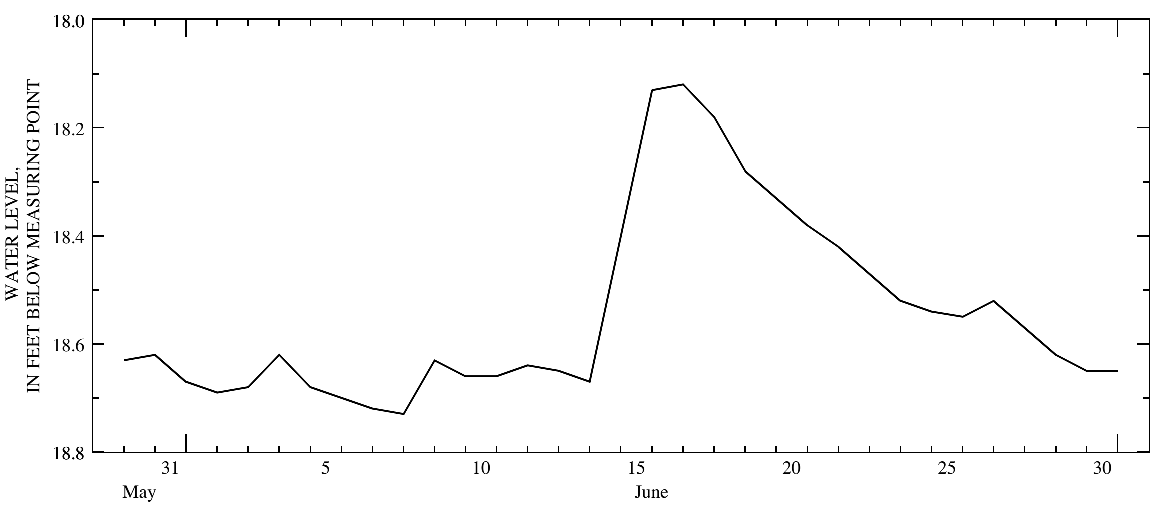
391354084264600. LOCAL NUMBER, H-221

LOCATION.—Latitude 39°13′54″, longitude 84°26′46″, Hamilton County, Ohio.
WELL CHARACTERISTICS.—Monitoring well, diameter 2 in.; depth 30 ft.
INSTRUMENTATION.—Pressure transducer data logger, records in 15 min intervals.
DATUM.—Elevation of land-surface datum is 554.74 ft above sea level. Measuring point: top of casing, 0.37 ft below land-surface datum.
PERIOD OF RECORD.—Continuous water-level data from May 30, 2003 to July 1, 2003.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 18.12 ft below measuring point, June 17, 2003; lowest measured, 18.73 ft below measuring point, June 8, 2003.

DEPTH BELOW MEASURING POINT (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	18.67	18.65	---	---
2	---	---	---	---	---	---	---	---	18.69	---	---	---
3	---	---	---	---	---	---	---	---	18.68	---	---	---
4	---	---	---	---	---	---	---	---	18.62	---	---	---
5	---	---	---	---	---	---	---	---	18.68	---	---	---
6	---	---	---	---	---	---	---	---	18.70	---	---	---
7	---	---	---	---	---	---	---	---	18.72	---	---	---
8	---	---	---	---	---	---	---	---	18.73	---	---	---
9	---	---	---	---	---	---	---	---	18.63	---	---	---
10	---	---	---	---	---	---	---	---	18.66	---	---	---
11	---	---	---	---	---	---	---	---	18.66	---	---	---
12	---	---	---	---	---	---	---	---	18.64	---	---	---
13	---	---	---	---	---	---	---	---	18.65	---	---	---
14	---	---	---	---	---	---	---	---	18.67	---	---	---
15	---	---	---	---	---	---	---	---	18.40	---	---	---
16	---	---	---	---	---	---	---	---	18.13	---	---	---
17	---	---	---	---	---	---	---	---	18.12	---	---	---
18	---	---	---	---	---	---	---	---	18.18	---	---	---
19	---	---	---	---	---	---	---	---	18.28	---	---	---
20	---	---	---	---	---	---	---	---	18.33	---	---	---
21	---	---	---	---	---	---	---	---	18.38	---	---	---
22	---	---	---	---	---	---	---	---	18.42	---	---	---
23	---	---	---	---	---	---	---	---	18.47	---	---	---
24	---	---	---	---	---	---	---	---	18.52	---	---	---
25	---	---	---	---	---	---	---	---	18.54	---	---	---
26	---	---	---	---	---	---	---	---	18.55	---	---	---
27	---	---	---	---	---	---	---	---	18.52	---	---	---
28	---	---	---	---	---	---	---	---	18.57	---	---	---
29	---	---	---	---	---	---	---	---	18.62	---	---	---
30	---	---	---	---	---	---	---	18.63	18.65	---	---	---
31	---	---	---	---	---	---	---	18.62	---	---	---	---
MEAN	---	---	---	---	---	---	---	18.62	18.54	18.65	---	---
MAX	---	---	---	---	---	---	---	18.63	18.73	18.65	---	---
MIN	---	---	---	---	---	---	---	18.62	18.12	18.65	---	---

WTR YR 2003 MEAN 18.54 MAX 18.73 MIN 18.12



SHORT-TERM GROUND-WATER MONITORING NETWORK—CONTINUED

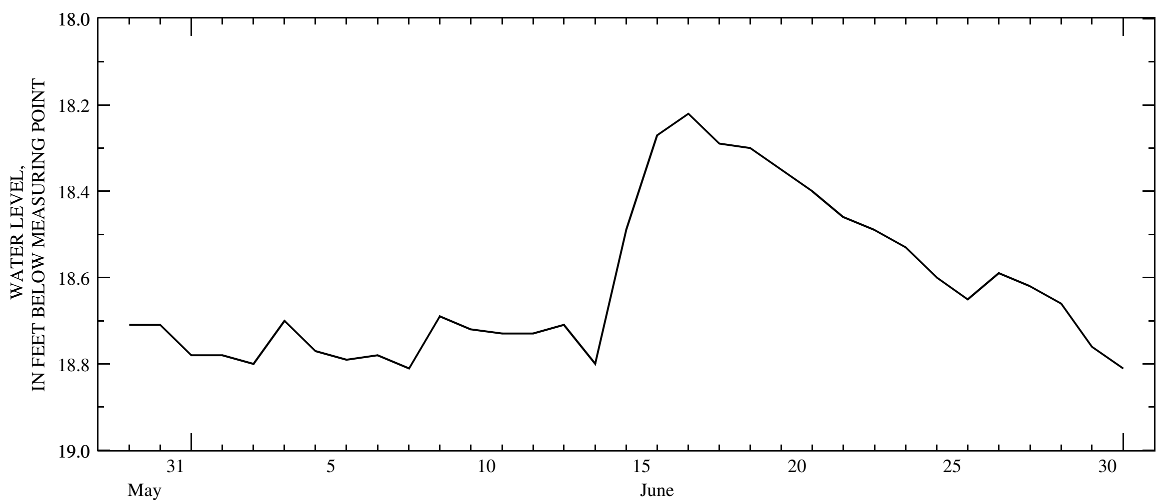
391354084264601. LOCAL NUMBER, H-222

LOCATION.—Latitude 39°13′54″, longitude 84°26′46″, Hamilton County, Ohio.
WELL CHARACTERISTICS.—Monitoring well, diameter 2 in.; depth 48 ft.
INSTRUMENTATION.—Pressure transducer data logger, records in 15 min intervals.
DATUM.—Elevation of land-surface datum is 554.73 ft above sea level. Measuring point: top of casing, 0.31 ft below land-surface datum.
PERIOD OF RECORD.—Continuous water-level data from May 30, 2003 to July 1, 2003.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 18.22 ft below measuring point, June 17, 2003; lowest measured, 18.81 ft below measuring point, July 1, 2003.

DEPTH BELOW MEASURING POINT (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	18.78	18.81	---	---
2	---	---	---	---	---	---	---	---	18.78	---	---	---
3	---	---	---	---	---	---	---	---	18.80	---	---	---
4	---	---	---	---	---	---	---	---	18.70	---	---	---
5	---	---	---	---	---	---	---	---	18.77	---	---	---
6	---	---	---	---	---	---	---	---	18.79	---	---	---
7	---	---	---	---	---	---	---	---	18.78	---	---	---
8	---	---	---	---	---	---	---	---	18.81	---	---	---
9	---	---	---	---	---	---	---	---	18.69	---	---	---
10	---	---	---	---	---	---	---	---	18.72	---	---	---
11	---	---	---	---	---	---	---	---	18.73	---	---	---
12	---	---	---	---	---	---	---	---	18.73	---	---	---
13	---	---	---	---	---	---	---	---	18.71	---	---	---
14	---	---	---	---	---	---	---	---	18.80	---	---	---
15	---	---	---	---	---	---	---	---	18.49	---	---	---
16	---	---	---	---	---	---	---	---	18.27	---	---	---
17	---	---	---	---	---	---	---	---	18.22	---	---	---
18	---	---	---	---	---	---	---	---	18.29	---	---	---
19	---	---	---	---	---	---	---	---	18.30	---	---	---
20	---	---	---	---	---	---	---	---	18.35	---	---	---
21	---	---	---	---	---	---	---	---	18.40	---	---	---
22	---	---	---	---	---	---	---	---	18.46	---	---	---
23	---	---	---	---	---	---	---	---	18.49	---	---	---
24	---	---	---	---	---	---	---	---	18.53	---	---	---
25	---	---	---	---	---	---	---	---	18.60	---	---	---
26	---	---	---	---	---	---	---	---	18.65	---	---	---
27	---	---	---	---	---	---	---	---	18.59	---	---	---
28	---	---	---	---	---	---	---	---	18.62	---	---	---
29	---	---	---	---	---	---	---	---	18.66	---	---	---
30	---	---	---	---	---	---	---	18.71	18.76	---	---	---
31	---	---	---	---	---	---	---	18.71	---	---	---	---
MEAN	---	---	---	---	---	---	---	18.71	18.61	18.81	---	---
MAX	---	---	---	---	---	---	---	18.71	18.81	18.81	---	---
MIN	---	---	---	---	---	---	---	18.71	18.22	18.81	---	---

WTR YR 2003 MEAN 18.62 MAX 18.81 MIN 18.22



SHORT-TERM GROUND-WATER MONITORING NETWORK—CONTINUED

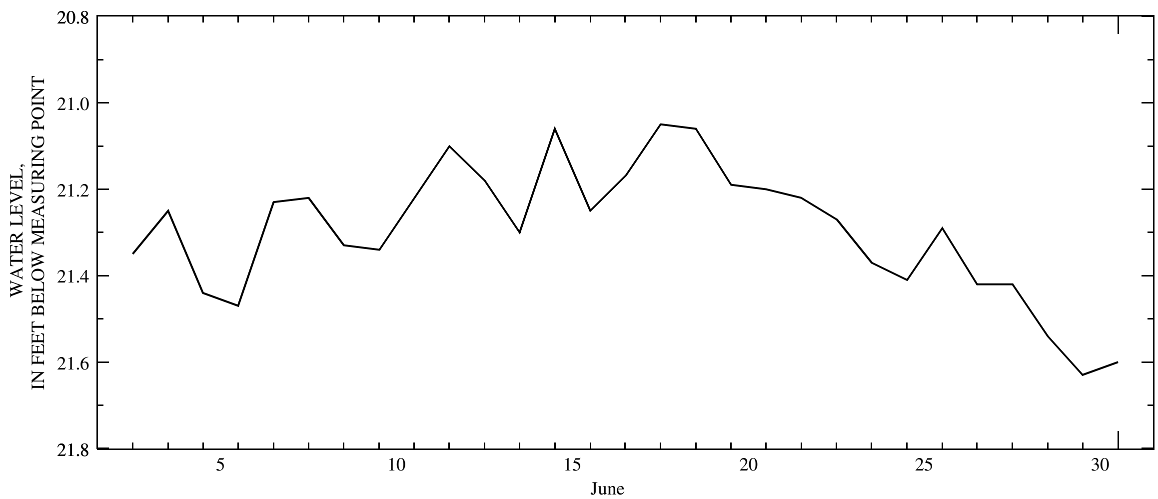
391354084264602. LOCAL NUMBER, H-223

LOCATION.—Latitude 39°13′54″, longitude 84°26′46″, Hamilton County, Ohio.
WELL CHARACTERISTICS.—Monitoring well, diameter 2 in.; depth 162 ft.
INSTRUMENTATION.—Pressure transducer data logger, records in 15 min intervals.
DATUM.—Elevation of land-surface datum is 554.96 ft above sea level. Measuring point: top of casing, 0.32 ft below land-surface datum.
PERIOD OF RECORD.—Continuous water-level data from June 3, 2003 to July 1, 2003.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 21.05 ft below measuring point, June 18, 2003; lowest measured, 21.63 ft below measuring point, June 30, 2003.

DEPTH BELOW MEASURING POINT (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	21.60	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	21.35	---	---	---
4	---	---	---	---	---	---	---	---	21.25	---	---	---
5	---	---	---	---	---	---	---	---	21.44	---	---	---
6	---	---	---	---	---	---	---	---	21.47	---	---	---
7	---	---	---	---	---	---	---	---	21.23	---	---	---
8	---	---	---	---	---	---	---	---	21.22	---	---	---
9	---	---	---	---	---	---	---	---	21.33	---	---	---
10	---	---	---	---	---	---	---	---	21.34	---	---	---
11	---	---	---	---	---	---	---	---	21.22	---	---	---
12	---	---	---	---	---	---	---	---	21.10	---	---	---
13	---	---	---	---	---	---	---	---	21.18	---	---	---
14	---	---	---	---	---	---	---	---	21.30	---	---	---
15	---	---	---	---	---	---	---	---	21.06	---	---	---
16	---	---	---	---	---	---	---	---	21.25	---	---	---
17	---	---	---	---	---	---	---	---	21.17	---	---	---
18	---	---	---	---	---	---	---	---	21.05	---	---	---
19	---	---	---	---	---	---	---	---	21.06	---	---	---
20	---	---	---	---	---	---	---	---	21.19	---	---	---
21	---	---	---	---	---	---	---	---	21.20	---	---	---
22	---	---	---	---	---	---	---	---	21.22	---	---	---
23	---	---	---	---	---	---	---	---	21.27	---	---	---
24	---	---	---	---	---	---	---	---	21.37	---	---	---
25	---	---	---	---	---	---	---	---	21.41	---	---	---
26	---	---	---	---	---	---	---	---	21.29	---	---	---
27	---	---	---	---	---	---	---	---	21.42	---	---	---
28	---	---	---	---	---	---	---	---	21.42	---	---	---
29	---	---	---	---	---	---	---	---	21.54	---	---	---
30	---	---	---	---	---	---	---	---	21.63	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	---	---	---	---	---	---	---	---	21.29	21.60	---	---
MAX	---	---	---	---	---	---	---	---	21.63	21.60	---	---
MIN	---	---	---	---	---	---	---	---	21.05	21.60	---	---

WTR YR 2003 MEAN 21.30 MAX 21.63 MIN 21.05



SHORT-TERM GROUND-WATER MONITORING NETWORK—CONTINUED

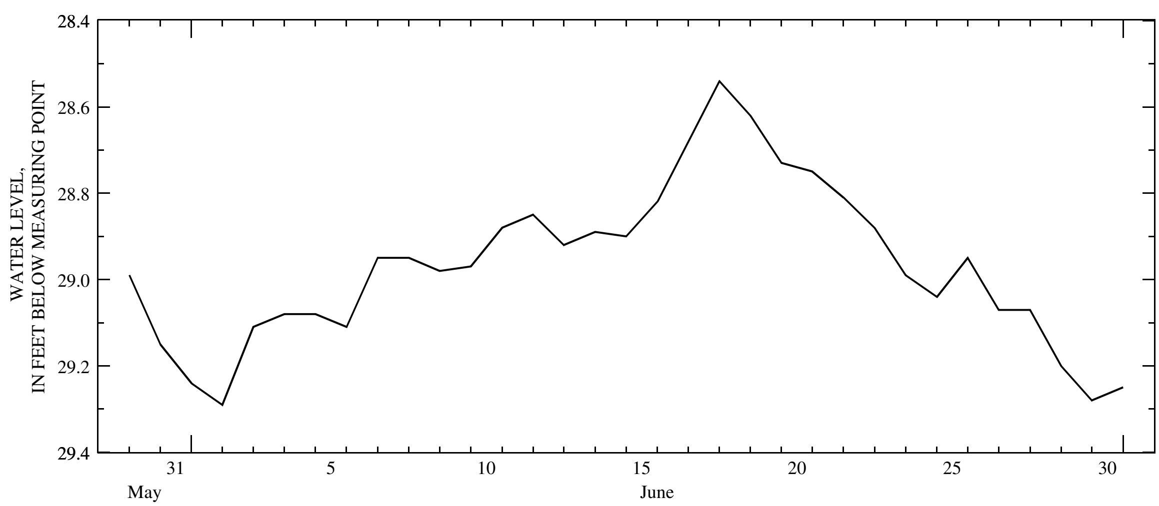
391412084263700. LOCAL NUMBER, H-225

LOCATION.—Latitude 39°14′12″, longitude 84°26′37″, Hamilton County, Ohio.
WELL CHARACTERISTICS.—Monitoring well, diameter 4 in.; depth 66 ft.
INSTRUMENTATION.—Pressure transducer data logger, records in 15 min intervals.
DATUM.—Elevation of land-surface datum is 565.8 ft above sea level. Measuring point: top of casing, 2.32 ft above land-surface datum.
PERIOD OF RECORD.—Continuous water-level data from May 30, 2003 to July 1, 2003.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 28.54 ft below measuring point, June 18, 2003; lowest measured, 29.29 ft below measuring point, June 2, 2003.

DEPTH BELOW MEASURING POINT (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	29.24	29.25	---	---
2	---	---	---	---	---	---	---	---	29.29	---	---	---
3	---	---	---	---	---	---	---	---	29.11	---	---	---
4	---	---	---	---	---	---	---	---	29.08	---	---	---
5	---	---	---	---	---	---	---	---	29.08	---	---	---
6	---	---	---	---	---	---	---	---	29.11	---	---	---
7	---	---	---	---	---	---	---	---	28.95	---	---	---
8	---	---	---	---	---	---	---	---	28.95	---	---	---
9	---	---	---	---	---	---	---	---	28.98	---	---	---
10	---	---	---	---	---	---	---	---	28.97	---	---	---
11	---	---	---	---	---	---	---	---	28.88	---	---	---
12	---	---	---	---	---	---	---	---	28.85	---	---	---
13	---	---	---	---	---	---	---	---	28.92	---	---	---
14	---	---	---	---	---	---	---	---	28.89	---	---	---
15	---	---	---	---	---	---	---	---	28.90	---	---	---
16	---	---	---	---	---	---	---	---	28.82	---	---	---
17	---	---	---	---	---	---	---	---	28.68	---	---	---
18	---	---	---	---	---	---	---	---	28.54	---	---	---
19	---	---	---	---	---	---	---	---	28.62	---	---	---
20	---	---	---	---	---	---	---	---	28.73	---	---	---
21	---	---	---	---	---	---	---	---	28.75	---	---	---
22	---	---	---	---	---	---	---	---	28.81	---	---	---
23	---	---	---	---	---	---	---	---	28.88	---	---	---
24	---	---	---	---	---	---	---	---	28.99	---	---	---
25	---	---	---	---	---	---	---	---	29.04	---	---	---
26	---	---	---	---	---	---	---	---	28.95	---	---	---
27	---	---	---	---	---	---	---	---	29.07	---	---	---
28	---	---	---	---	---	---	---	---	29.07	---	---	---
29	---	---	---	---	---	---	---	---	29.20	---	---	---
30	---	---	---	---	---	---	---	28.99	29.28	---	---	---
31	---	---	---	---	---	---	---	29.15	---	---	---	---
MEAN	---	---	---	---	---	---	---	29.07	28.95	29.25	---	---
MAX	---	---	---	---	---	---	---	29.15	29.29	29.25	---	---
MIN	---	---	---	---	---	---	---	28.99	28.54	29.25	---	---

WTR YR 2003 MEAN 28.97 MAX 29.29 MIN 28.54



WATER LEVELS IN WELLS IN THE EVENDALE, LOCKLAND, AND READING, OHIO, AREA, JULY 2-3, 2003

[ft, feet; BMP, below measuring point; ASL, above sea level; BLS, below land surface; MP, measuring point; W, water-table aquifer; S, shallow aquifer; L, lower aquifer; AF, Former Air Force Plant 36; GE, General Electric Aircraft Engines; MI, Morton International, Inc.; PR, Pristine Superfund Site; RL, Reading/Lockland; --, no data]

Well	Aquifer	Location	Date	Time	Water level, in ft BMP	Water altitude, in ft ASL	Northing	Easting	Well depth, in ft BLS	MP altitude, in ft ASL
AF-10P	W	AF	7/3/2003	1013	20.93	540.48	456127.6	1416977.8	22.4	561.41
AF-12P	W	AF	7/2/2003	1340	11.88	562.89	456296.4	1416183.2	19.5	574.77
AF-14P	W	AF	7/3/2003	1103	14.22	544.21	456528.8	1416790.6	27.5	558.43
AF-16P	W	AF	7/3/2003	1330	20.63	541.88	457009.4	1417281.0	30.5	562.51
AF-17P	W	AF	7/3/2003	1058	20.56	540.40	456483.2	1417474.1	31.5	560.96
AF-18P	W	AF	7/2/2003	1333	12.51	565.46	457042.9	1415971.4	24.1	577.97
AF-1P	W	AF	7/3/2003	1312	18.50	540.88	456926.9	1417966.2	29.0	559.38
AF-2P	W	AF	7/3/2003	1054	22.77	540.44	456378.8	1418008.9	33.0	563.21
AF-3P	W	AF	7/3/2003	0910	21.34	540.28	456297.2	1417884.3	31.0	561.62
AF-4P	W	AF	7/3/2003	1050	21.62	540.10	456180.6	1417877.6	34.5	561.72
AF-5P	W	AF	7/3/2003	1042	21.61	539.62	455882.6	1417831.5	33.0	561.23
AF-6P	W	AF	7/3/2003	1038	21.78	539.82	456059.7	1417402.7	33.0	561.60
AF-7P	W	AF	7/3/2003	0927	22.47	538.61	455478.1	1417577.2	36.5	561.08
123-MW1S	W	GE	7/3/2003	1508	17.09	542.78	458092.3	1418919.4	24.7	559.87
18-MW1S	W	GE	7/2/2003	1525	16.71	542.81	456875.3	1419560.6	33.6	559.52
20-MW1S	W	GE	7/3/2003	1610	12.30	553.27	461568.6	1418761.2	23.5	565.57
20-MW3S	W	GE	7/2/2003	1421	13.95	555.35	461702.3	1418616.9	22.4	569.30
27_28-MW1S	W	GE	7/2/2003	1507	16.96	546.71	457643.3	1419566.1	22.9	563.67
32-MW1S	W	GE	7/3/2003	1602	16.88	550.51	461133.0	1419209.0	27.9	567.39
61_67-MW1S	W	GE	7/3/2003	1550	16.15	551.19	460996.8	1419376.0	28.0	567.34
61_67-MW3S	W	GE	7/3/2003	1559	14.08	550.39	461084.2	1419409.4	25.2	564.47
62_63-MW2S	W	GE	7/3/2003	1359	18.40	542.90	457548.0	1418590.0	--	561.30
62_63-MW4S	W	GE	7/3/2003	1404	18.98	542.49	457528.6	1418586.9	28.8	561.47
64_68-MW1S	W	GE	7/3/2003	1450	17.84	544.06	459124.1	1419265.8	24.5	561.90
70-MW1S	W	GE	7/3/2003	1540	20.55	540.80	460440.0	1419626.1	24.6	561.35
86-MW4S	W	GE	7/3/2003	1538	12.48	547.94	460142.8	1419608.7	25.6	560.42
93_94-MW2S	W	GE	7/3/2003	1530	20.22	542.48	458959.4	1419111.9	29.7	562.70
98_99-MW1S	W	GE	7/3/2003	1504	17.29	542.72	458160.7	1418845.3	27.0	560.01
AOCLD-MW2S	W	GE	7/3/2003	1411	13.93	542.21	457825.5	1417836.0	24.6	556.14
AOCLD-MW3S	W	GE	7/3/2003	1419	13.68	543.11	457883.5	1417368.1	22.5	556.79
AOCPST-MW1	W	GE	7/3/2003	1430	13.55	542.73	459053.5	1417796.7	20.1	556.28
AOCPST-MW2S	W	GE	7/3/2003	1439	17.11	542.59	459057.0	1417960.4	26.1	559.70
AOCPST-MW3S	W	GE	7/3/2003	1427	15.13	542.75	459065.0	1417684.4	25.9	557.88
AOCW6-MW1S	W	GE	7/3/2003	1502	17.13	542.63	458281.6	1418822.0	28.8	559.76
EBG-MW3S	W	GE	7/2/2003	1535	13.30	546.30	457133.9	1420054.1	17.7	559.60
EBG-MW4S	W	GE	7/2/2003	1450	10.07	553.15	458181.6	1420083.6	17.7	563.22
EBG-MW5S	W	GE	7/2/2003	1240	13.92	541.74	456843.2	1418466.0	21.3	555.66
GM-10P	W	GE	7/2/2003	1215	15.91	544.71	456971.6	1419129.0	24.2	560.62
GM-11P	W	GE	7/2/2003	1240	23.97	542.75	456978.5	1418810.5	30.8	566.72
GM-1P	W	GE	7/2/2003	1521	18.03	546.58	457105.9	1419565.5	24.1	564.61
GM-3P	W	GE	7/3/2003	1345	18.66	540.58	457074.6	1418304.2	29.3	559.24
GM-4	W	GE	7/3/2003	1457	18.75	542.32	458770.2	1418874.2	37.0	561.07
GM-6P	W	GE	7/2/2003	1456	10.11	552.69	457944.9	1420504.3	20.1	562.80
GM-9P	W	GE	7/3/2003	1150	18.42	541.53	457100.6	1417244.4	28.0	559.95
NEBG-MW1S	W	GE	7/3/2003	1537	15.43	552.28	461485.4	1419811.4	28.0	567.71
NWBG-MW1	W	GE	7/2/2003	1426	12.42	558.68	462331.5	1418673.8	22.0	571.10
WBG-MW2S	W	GE	7/3/2003	1420	16.66	554.62	459160.2	1416931.0	28.0	571.28
H-221	W	RL	7/2/2003	0802	18.68	535.69	454547.8	1417263.9	30.0	554.37
AF-10S	S	AF	7/3/2003	1013	26.80	535.10	456134.1	1416979.3	71.0	561.90
AF-11S	S	AF	7/3/2003	1017	30.53	534.46	456094.7	1416578.2	63.0	564.99
AF-12S	S	AF	7/2/2003	1340	40.93	534.19	456296.6	1416186.0	74.0	575.12
AF-14S	S	AF	7/3/2003	1103	23.40	535.05	456526.3	1416789.3	65.0	558.45
AF-15S	S	AF	7/3/2003	1125	25.40	536.56	456989.5	1416851.2	54.0	561.96
AF-19S	S	AF	7/3/2003	1005	29.62	534.17	455823.1	1417037.9	62.4	563.79
AF-1S	S	AF	7/3/2003	1313	19.84	539.61	456921.2	1417977.2	48.5	559.45

WATER LEVELS IN WELLS IN THE EVENDALE, LOCKLAND, AND READING, OHIO, AREA, JULY 2-3, 2003—Continued

[ft, feet; BMP, below measuring point; ASL, above sea level; BLS, below land surface; MP, measuring point; W, water-table aquifer; S, shallow aquifer; L, lower aquifer; AF, Former Air Force Plant 36; GE, General Electric Aircraft Engines; MI, Morton International, Inc.; PR, Pristine Superfund Site; RL, Reading/Lockland; --, no data]

Well	Aquifer	Location	Date	Time	Water level, in ft BMP	Water altitude, in ft ASL	Northing	Easting	Well depth, in ft BLS	MP altitude, in ft ASL
AF-20S	S	AF	7/3/2003	1008	27.56	534.82	455927.7	1416940.5	69.0	562.38
AF-22S	S	AF	7/3/2003	1620	33.40	535.12	457011.5	1416445.7	77.5	568.52
AF-2S	S	AF	7/3/2003	1053	23.08	539.39	456373.8	1418005.8	49.0	562.47
AF-3S	S	AF	7/3/2003	0904	22.46	539.33	456296.0	1417879.8	52.0	561.79
AF-4S	S	AF	7/3/2003	1050	22.89	539.18	456183.3	1417880.1	53.0	562.07
AF-5S	S	AF	7/3/2003	1042	22.68	538.88	455886.7	1417833.2	51.0	561.56
AF-6S	S	AF	7/3/2003	1038	23.60	538.99	456056.3	1417402.7	51.0	562.59
AF-7S	S	AF	7/3/2003	0935	23.43	538.47	455482.2	1417577.6	55.0	561.90
AF-8S	S	AF	7/3/2003	0958	25.67	535.40	455524.8	1417088.3	60.0	561.07
AF-9S	S	AF	7/3/2003	1030	29.54	534.54	455790.5	1416793.3	60.0	564.08
GM-1	S	GE	7/2/2003	1521	20.66	543.75	457082.5	1419573.7	57.0	564.41
GM-11S	S	GE	7/2/2003	1234	28.33	540.28	456983.3	1418868.8	60.9	568.61
GM-3S	S	GE	7/3/2003	1345	21.93	540.93	457151.7	1418264.4	55.6	562.86
GM-5S	S	GE	7/2/2003	1328	26.26	538.06	457228.9	1416751.8	61.7	564.32
GM-6S	S	GE	7/2/2003	1457	18.71	544.88	457931.7	1420510.3	47.4	563.59
GM-7S	S	GE	7/2/2003	1445	24.90	545.01	458741.5	1420167.2	54.4	569.91
GM-8S	S	GE	7/2/2003	1405	24.62	537.93	457988.5	1416732.5	70.3	562.55
GM-9S	S	GE	7/3/2003	1150	20.12	540.53	457094.3	1417248.6	55.2	560.65
H-219	S	RL	7/1/2003	1345	26.47	532.34	452896.2	1416419.7	58.0	558.81
H-222	S	RL	7/2/2003	0807	18.74	535.68	454552.1	1417266.2	48.0	554.42
AF-11D	L	AF	7/3/2003	1017	31.63	534.45	456088.0	1416583.9	102.0	566.08
AF-12D	L	AF	7/2/2003	1340	41.05	534.09	456298.1	1416192.1	112.0	575.14
AF-15B	L	AF	7/3/2003	1138	23.35	536.12	457003.2	1416853.7	186.8	559.47
AF-15D	L	AF	7/3/2003	1125	24.93	536.57	456991.9	1416852.2	113.0	561.50
AF-16D	L	AF	7/3/2003	1330	25.20	537.22	457003.9	1417280.7	101.0	562.42
AF-17D	L	AF	7/3/2003	1058	25.00	536.16	456484.5	1417468.2	100.0	561.16
AF-18D	L	AF	7/2/2003	1333	43.93	534.56	457036.6	1415970.5	80.0	578.49
AF-19D	L	AF	7/3/2003	1005	29.14	534.88	455818.2	1417039.4	91.1	564.02
AF-1D	L	AF	7/3/2003	1311	22.24	537.42	456926.7	1417977.6	118.0	559.66
AF-20D	L	AF	7/3/2003	1008	27.58	534.84	455933.7	1416941.3	91.1	562.42
AF-21D	L	AF	7/3/2003	1026	24.86	534.61	455941.1	1416777.2	90.1	559.47
AF-22D	L	AF	7/3/2003	1620	32.73	535.41	457010.5	1416451.5	126.0	568.14
AF-5D	L	AF	7/3/2003	1042	25.75	535.90	455889.4	1417834.6	110.0	561.65
AF-7D	L	AF	7/3/2003	0929	25.86	535.24	455489.1	1417578.8	119.0	561.10
AF-8D	L	AF	7/3/2003	0957	26.11	534.65	455517.7	1417092.1	96.0	560.76
20-MW3D	L	GE	7/2/2003	1421	22.15	546.92	461643.0	1418599.1	131.3	569.07
27_28-MW1D	L	GE	7/2/2003	1506	22.08	541.14	457657.3	1419571.9	151.0	563.22
27_28-MW2D	L	GE	7/2/2003	1251	27.44	538.37	457008.9	1418666.3	123.4	565.81
27_31-MW5D	L	GE	7/2/2003	1220	21.26	538.85	456884.1	1419199.6	111.3	560.11
EBG-MW4D	L	GE	7/2/2003	1439	13.98	544.14	459067.0	1419613.9	101.8	558.12
GM-3D	L	GE	7/3/2003	1345	23.85	538.62	457163.3	1418266.1	147.1	562.47
GM-5D	L	GE	7/2/2003	1327	27.41	536.66	457241.0	1416753.8	117.9	564.07
GM-6D	L	GE	7/2/2003	1458	19.03	543.79	457934.5	1420519.8	160.0	562.82
GM-7D	L	GE	7/2/2003	1445	24.03	545.15	458766.3	1420096.1	112.0	569.18
GM-8D	L	GE	7/2/2003	1405	24.57	537.98	457997.9	1416733.3	112.0	562.55
GM-9D	L	GE	7/3/2003	1150	23.38	537.34	457099.8	1417254.0	111.5	560.72
H-7 ODNR	L	GE	7/3/2003	1448	19.84	543.34	459390.7	1418915.0	180.0	563.18
NEBG-MW1D	L	GE	7/3/2003	1537	19.14	547.86	461481.4	1419853.8	132.0	567.00
WBG-MW2D	L	GE	7/3/2003	1420	31.05	539.75	459156.1	1416931.0	121.1	570.80
H-217	L	RL	7/2/2003	0835	34.45	525.01	452491.1	1416290.5	150.0	559.46
H-218	L	RL	7/1/2003	1500	32.92	525.36	452888.1	1416421.1	108.5	558.28
H-220	L	RL	7/1/2003	1500	33.22	525.40	452892.0	1416429.8	152.0	558.62
H-223	L	RL	7/2/2003	0755	21.43	533.21	454519.1	1417253.3	162.0	554.64
H-224	L	RL	7/1/2003	1740	29.42	524.73	452978.0	1417714.3	151.0	554.15
H-78	L	RL	7/2/2003	0858	23.53	533.24	454266.0	1416763.3	150.0	556.77

The following tables contain ground-water-level measurements from a network of wells in southern Franklin County. The data were collected as part of a cooperative study with the City of Columbus.

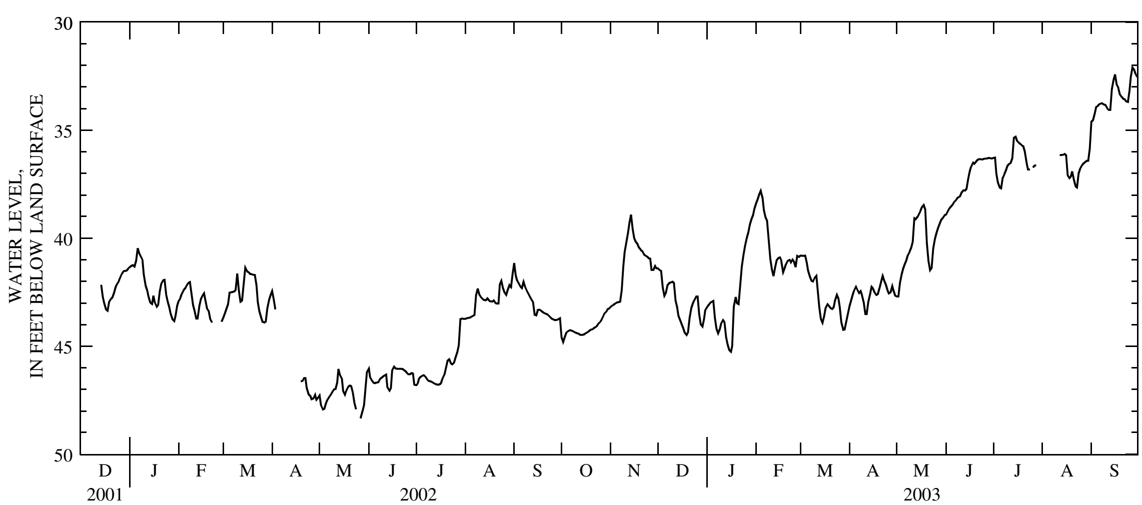
395039082585800. LOCAL NUMBER, FR-115

LOCATION.—Latitude 39°50′39″, longitude 82°58′58″, Hydrologic Unit 05060001, near Hamilton Meadows. Owner: City of Columbus.
AQUIFER.—Sand and gravel of Quaternary age.
WELL CHARACTERISTICS.—Drilled observation well, diameter 6 in., depth 116 ft.
INSTRUMENTATION.—Data logger and pressure transducer, 60-minute record.
DATUM.—Elevation of land-surface datum is 720.52 ft above sea level. Measuring point: Floor of instrument shelter, 2.10 ft above land-surface datum.
PERIOD OF RECORD.—August 1982 to current year.
EXTREMES FOR PERIOD OF RECORD.—Maximum daily low, 48.35 ft below land-surface datum, May 27, 2002; minimum daily low, 27.21 ft below land-surface datum, May 3, 1984.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44.60	43.18	41.40	43.18	38.37	40.81	43.17	42.70	38.92	36.29	---	34.60
2	44.81	43.12	41.47	43.08	38.19	40.83	42.91	42.70	38.77	36.27	---	34.54
3	44.58	43.08	41.52	42.98	37.99	40.82	42.64	42.07	38.64	37.00	---	34.26
4	44.37	43.01	42.27	42.94	37.81	40.80	42.41	41.70	38.55	37.42	---	33.91
5	44.29	42.96	42.66	42.89	38.16	41.14	42.24	41.41	38.46	37.66	---	33.88
6	44.25	42.96	42.51	43.69	38.70	41.50	42.40	41.20	38.35	37.69	---	33.80
7	44.27	42.93	42.17	44.20	39.03	41.80	42.54	41.02	38.27	37.19	---	33.75
8	44.30	42.39	42.08	44.41	39.21	41.98	42.45	40.76	38.16	37.04	---	33.77
9	44.34	41.28	42.05	44.23	40.04	42.00	42.60	40.62	38.09	36.86	---	33.81
10	44.37	40.64	42.00	43.92	40.96	41.85	42.98	40.44	38.05	36.64	---	33.84
11	44.41	40.16	42.07	43.79	41.44	41.74	43.51	40.16	37.87	36.55	---	34.01
12	44.44	39.71	42.88	43.89	41.75	42.39	43.51	39.07	37.78	36.51	36.15	34.06
13	44.48	39.28	43.19	44.58	41.35	43.19	42.95	39.11	37.80	36.30	36.16	34.07
14	44.48	38.91	43.59	44.94	41.01	43.74	42.57	39.00	37.71	35.34	36.13	33.08
15	44.46	39.56	43.83	45.18	40.92	43.92	42.26	38.84	37.27	35.29	36.09	32.69
16	44.41	40.01	44.02	45.26	40.89	43.62	42.35	38.74	36.97	35.50	36.15	32.42
17	44.36	40.19	44.17	44.98	41.03	43.20	42.52	38.56	36.69	35.56	37.10	32.89
18	44.32	40.28	44.38	43.16	41.57	43.05	42.62	38.47	36.49	35.64	37.23	33.05
19	44.26	40.45	44.47	42.71	41.39	43.15	42.59	38.67	36.55	35.71	37.13	33.36
20	44.22	40.54	44.34	43.01	41.19	43.23	42.31	40.21	36.46	35.73	36.92	33.46
21	44.18	40.60	43.67	43.05	41.04	43.28	42.03	41.05	36.37	35.99	37.34	33.55
22	44.12	40.75	43.25	42.17	41.00	43.18	41.76	41.47	36.35	36.53	37.61	33.58
23	44.07	40.80	43.03	41.32	41.11	42.89	41.97	41.37	36.35	36.82	37.65	33.66
24	43.99	40.85	42.85	40.79	40.98	42.62	42.16	40.46	36.36	36.83	37.01	33.69
25	43.90	40.94	42.69	40.36	41.08	42.81	42.41	40.04	36.34	---	36.74	33.17
26	43.78	40.95	42.70	40.02	41.33	43.19	42.55	39.77	36.31	36.73	36.63	32.54
27	43.66	41.47	43.53	39.76	40.82	43.90	42.49	39.53	36.32	36.64	36.54	32.12
28	43.50	41.47	44.01	39.39	40.86	44.24	42.22	39.33	36.29	36.63	36.48	32.22
29	43.41	41.29	44.10	39.13	---	44.22	42.43	39.15	36.30	---	36.43	32.41
30	43.30	41.40	43.74	38.93	---	43.87	42.65	39.08	36.32	---	36.43	32.53
31	43.26	---	43.31	38.66	---	43.51	---	38.93	---	---	35.85	---
MEAN	44.17	41.17	43.03	42.60	40.33	42.66	42.54	40.18	37.31	36.46	36.69	33.42
MAX	44.81	43.18	44.47	45.26	41.75	44.24	43.51	42.70	38.92	37.69	37.65	34.60

WTR YR 2003 MEAN 40.21 LOW 45.26



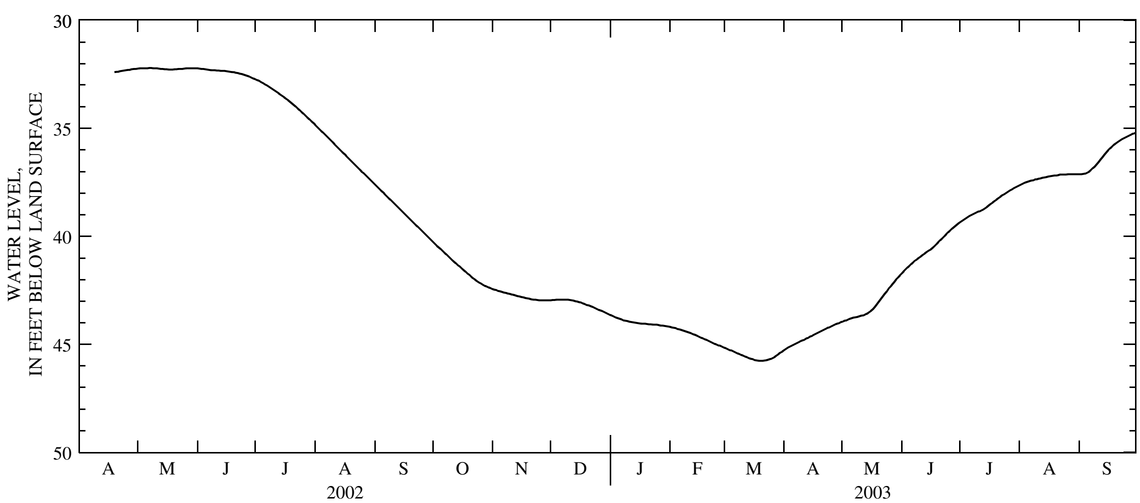
395058083002400. LOCAL NUMBER, FR-119

LOCATION.—Latitude 39°50′58″, longitude 83°00′24″, Hydrologic Unit 05060001. Owner: Franklin County.
AQUIFER.—Sand and gravel of Quaternary age.
WELL CHARACTERISTICS.—Drilled observation water well, diameter 2 in., depth 85 ft.
INSTRUMENTATION.—Data logger and pressure transducer, 60-minute record.
DATUM.—Elevation of land-surface datum is 700 ft above sea level. Measuring point: Floor of shelter, 2.48 ft above land-surface datum.
PERIOD OF RECORD.—January 1982 to current year.
EXTREMES FOR PERIOD OF RECORD.—Maximum daily low, 52.34 ft below land-surface datum, Mar. 4-7, 1992; minimum daily low, 11.10 ft below land-surface datum, June 17, 1981.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40.25	42.45	42.96	43.64	44.20	45.16	45.26	43.96	41.72	39.35	37.63	37.13
2	40.34	42.48	42.95	43.68	44.22	45.19	45.21	43.92	41.62	39.29	37.59	37.13
3	40.43	42.50	42.95	43.72	44.24	45.23	45.15	43.89	41.53	39.23	37.55	37.12
4	40.51	42.53	42.94	43.76	44.26	45.27	45.10	43.86	41.44	39.17	37.52	37.10
5	40.59	42.55	42.94	43.80	44.29	45.30	45.06	43.83	41.36	39.11	37.48	37.06
6	40.67	42.58	42.93	43.83	44.31	45.34	45.01	43.80	41.28	39.06	37.45	37.01
7	40.76	42.61	42.93	43.86	44.34	45.38	44.97	43.77	41.20	39.01	37.42	36.94
8	40.84	42.63	42.93	43.89	44.37	45.42	44.92	43.75	41.12	38.97	37.40	36.85
9	40.92	42.66	42.93	43.91	44.40	45.46	44.88	43.73	41.05	38.92	37.37	36.77
10	41.01	42.68	42.94	43.93	44.43	45.49	44.84	43.71	40.98	38.88	37.36	36.67
11	41.09	42.70	42.95	43.96	44.46	45.53	44.80	43.68	40.92	38.85	37.33	36.57
12	41.17	42.72	42.97	43.97	44.50	45.57	44.75	43.66	40.85	38.81	37.32	36.45
13	41.25	42.74	42.98	43.99	44.53	45.61	44.71	43.62	40.79	38.76	37.29	36.34
14	41.33	42.77	43.01	44.00	44.57	45.64	44.66	43.58	40.72	38.70	37.27	36.22
15	41.40	42.79	43.03	44.02	44.61	45.68	44.62	43.52	40.66	38.64	37.26	36.12
16	41.48	42.82	43.05	44.03	44.65	45.70	44.57	43.45	40.60	38.57	37.24	36.02
17	41.56	42.84	43.08	44.04	44.69	45.73	44.52	43.36	40.54	38.50	37.22	35.93
18	41.64	42.86	43.11	44.05	44.73	45.75	44.47	43.26	40.46	38.43	37.21	35.85
19	41.72	42.88	43.14	44.05	44.77	45.76	44.43	43.15	40.37	38.36	37.19	35.77
20	41.79	42.90	43.18	44.06	44.81	45.76	44.38	43.03	40.28	38.29	37.18	35.69
21	41.87	42.92	43.21	44.07	44.85	45.76	44.34	42.91	40.19	38.23	37.17	35.62
22	41.94	42.93	43.25	44.08	44.89	45.75	44.30	42.79	40.09	38.16	37.15	35.56
23	42.01	42.94	43.28	44.09	44.94	45.74	44.26	42.68	40.00	38.10	37.14	35.50
24	42.08	42.95	43.32	44.09	44.98	45.71	44.22	42.56	39.90	38.04	37.14	35.46
25	42.13	42.96	43.36	44.10	45.01	45.67	44.18	42.44	39.81	37.98	37.14	35.41
26	42.18	42.96	43.40	44.11	45.05	45.63	44.14	42.34	39.73	37.93	37.13	35.36
27	42.24	42.96	43.44	44.13	45.08	45.58	44.10	42.23	39.65	37.87	37.13	35.32
28	42.29	42.96	43.48	44.14	45.11	45.52	44.06	42.12	39.57	37.82	37.13	35.28
29	42.33	42.96	43.52	44.15	---	45.45	44.03	42.01	39.50	37.77	37.13	35.24
30	42.37	42.96	43.56	44.17	---	45.39	43.99	41.91	39.42	37.72	37.13	35.20
31	42.41	---	43.60	44.18	---	45.33	---	41.81	---	37.67	37.13	---
MEAN	41.44	42.77	43.14	43.98	44.62	45.53	44.60	43.17	40.58	38.52	37.28	36.16
MAX	42.41	42.96	43.60	44.18	45.11	45.76	45.26	43.96	41.72	39.35	37.63	37.13

WTR YR 2003 MEAN 41.80 LOW 45.76



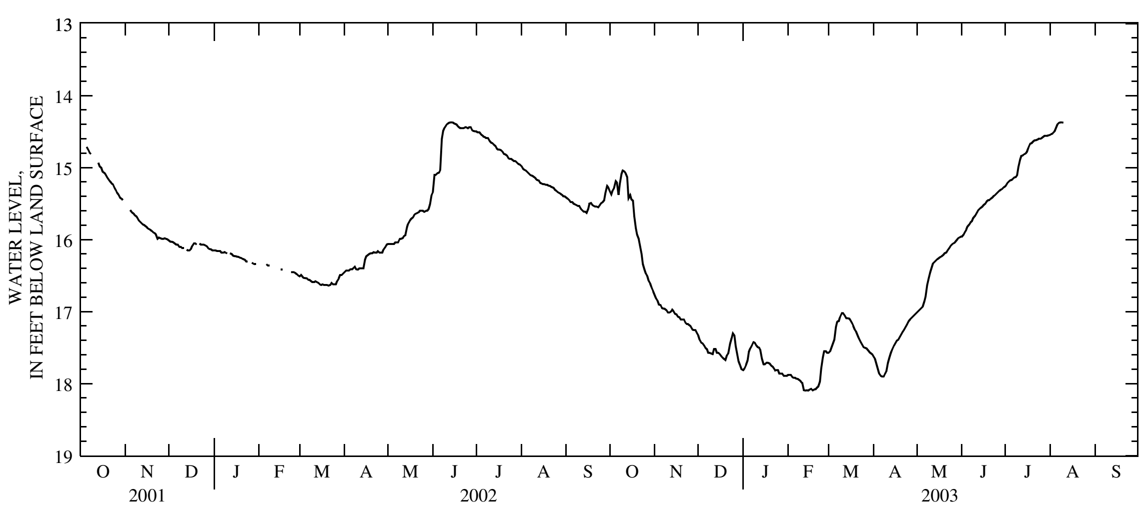
395131082592400. LOCAL NUMBER, FR-123

LOCATION.—Latitude 39°51′31″, longitude 82°59′24″, Hydrologic Unit 05060001, near Hamilton Meadows. Owner: Franklin County.
AQUIFER.—Sand and gravel of Quaternary age.
WELL CHARACTERISTICS.—Drilled observation water well, diameter 2 in., depth 36.5 ft.
INSTRUMENTATION.—Data logger and pressure transducer, 60-minute record.
DATUM.—Elevation of land-surface datum is 705.87 ft above sea level. Measuring point: Floor of shelter, 2.25 ft above land-surface datum.
PERIOD OF RECORD.—April 1982 to current year.
EXTREMES FOR PERIOD OF RECORD.—Maximum daily low, 18.55 ft below land-surface datum, May 12, 1992; minimum daily low, 6.87 ft below land-surface datum, Apr. 1, 1980.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.34	16.77	17.33	17.81	17.88	17.57	17.62	17.01	15.96	15.26	14.54	---
2	15.38	16.82	17.39	17.79	17.88	17.55	17.66	16.99	15.93	15.22	14.53	---
3	15.31	16.85	17.43	17.74	17.88	17.50	17.72	16.97	15.90	15.20	14.52	---
4	15.28	16.90	17.44	17.68	17.91	17.44	17.80	16.95	15.86	15.18	14.50	---
5	15.19	16.91	17.47	17.56	17.92	17.39	17.86	16.93	15.82	15.17	14.45	---
6	15.21	16.95	17.50	17.50	17.92	17.21	17.89	16.86	15.79	15.16	14.40	---
7	15.38	16.96	17.52	17.47	17.93	17.14	17.90	16.79	15.76	15.14	14.38	---
8	15.22	16.96	17.57	17.42	17.94	17.13	17.90	16.63	15.74	15.13	14.37	---
9	15.09	16.98	17.57	17.43	17.95	17.07	17.86	16.53	15.70	15.10	14.37	---
10	15.04	17.01	17.58	17.47	17.98	17.02	17.82	16.46	15.67	14.99	14.38	---
11	15.05	17.01	17.59	17.49	17.99	17.02	17.72	16.39	15.63	14.89	---	---
12	15.08	17.00	17.52	17.50	18.09	17.05	17.64	16.33	15.60	14.84	---	---
13	15.13	16.97	17.52	17.54	18.10	17.09	17.58	16.31	15.58	14.83	---	---
14	15.42	17.00	17.57	17.66	18.09	17.09	17.52	16.29	15.56	14.81	---	---
15	15.38	17.03	17.57	17.73	18.10	17.10	17.47	16.27	15.54	14.80	---	---
16	15.44	17.04	17.59	17.73	18.08	17.12	17.44	16.26	15.52	14.78	---	---
17	15.46	17.07	17.62	17.71	18.07	17.16	17.40	16.24	15.50	14.71	---	---
18	15.67	17.08	17.64	17.71	18.09	17.20	17.39	16.23	15.47	14.67	---	---
19	15.84	17.11	17.66	17.72	18.08	17.25	17.35	16.21	15.45	14.66	---	---
20	15.93	17.11	17.67	17.74	18.08	17.28	17.32	16.19	15.45	14.64	---	---
21	15.99	17.11	17.60	17.76	18.05	17.33	17.28	16.18	15.43	14.62	---	---
22	16.08	17.15	17.57	17.78	18.04	17.38	17.25	16.15	15.41	14.62	---	---
23	16.20	17.17	17.45	17.82	17.97	17.42	17.21	16.12	15.39	14.61	---	---
24	16.34	17.17	17.37	17.81	17.79	17.45	17.18	16.09	15.38	14.60	---	---
25	16.42	17.19	17.30	17.81	17.64	17.49	17.14	16.07	15.36	14.60	---	---
26	16.47	17.21	17.33	17.86	17.55	17.50	17.11	16.05	15.34	14.59	---	---
27	16.51	17.25	17.48	17.86	17.55	17.51	17.09	16.04	15.32	14.57	---	---
28	16.57	17.26	17.60	17.86	17.57	17.53	17.07	16.02	15.30	14.56	---	---
29	16.61	17.26	17.69	17.89	---	17.56	17.05	15.99	15.29	14.56	---	---
30	16.68	17.29	17.75	17.89	---	17.57	17.03	15.97	15.27	14.56	---	---
31	16.72	---	17.80	17.89	---	17.59	---	15.96	---	14.55	---	---
MEAN	15.72	17.05	17.54	17.70	17.93	17.31	17.48	16.37	15.56	14.83	14.44	---
MAX	16.72	17.29	17.80	17.89	18.10	17.59	17.90	17.01	15.96	15.26	14.54	---

WTR YR 2003 MEAN 16.67 LOW 18.10



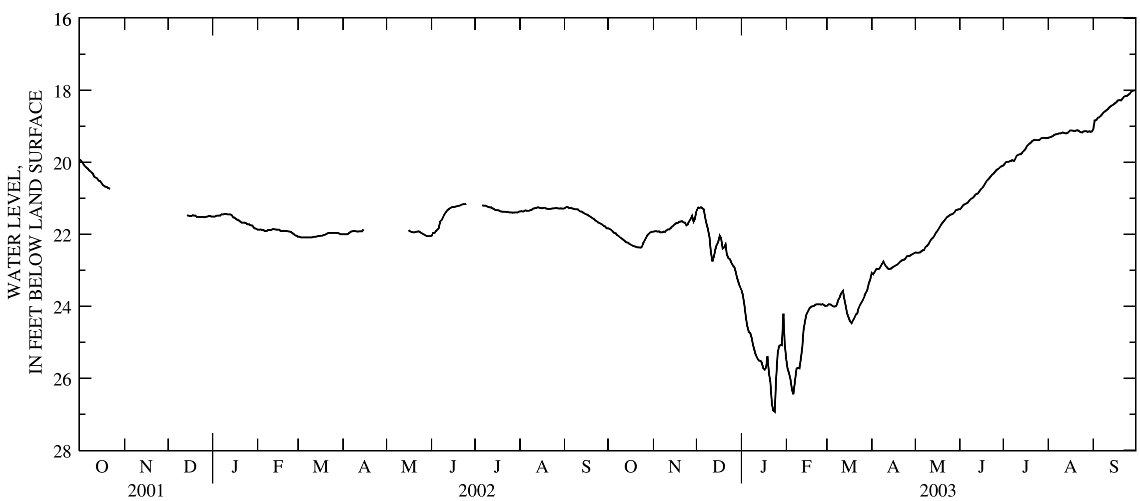
395055082592400. LOCAL NUMBER, FR-271

LOCATION.—Latitude 39°50′55″, longitude 82°59′24″, Hydrologic Unit 0506000. Owner: Franklin County.
AQUIFER.—Sand and gravel of Quaternary age.
WELL CHARACTERISTICS.—Drilled observation water well, diameter 2 in., depth 86 ft..
INSTRUMENTATION.—Data logger and pressure transducer, 60-minute record.
DATUM.—Elevation of land-surface datum is 708.28 ft above sea level. Measuring point: Top of PVC casing, 2.53 ft above land-surface datum.
PERIOD OF RECORD.—September 1987 to current year.
EXTREMES FOR PERIOD OF RECORD.—Maximum daily low, 26.93 ft below land-surface datum, Jan. 24, 2003; minimum daily low, 13.92 ft below land-surface datum, Mar. 18, 1991.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.83	21.93	21.35	23.57	25.49	23.99	23.08	22.51	21.31	20.08	19.32	19.07
2	21.85	21.92	21.26	23.68	25.74	23.95	23.11	22.52	21.25	20.03	19.31	18.84
3	21.88	21.91	21.27	23.97	25.88	23.95	23.04	22.52	21.20	19.99	19.29	18.83
4	21.91	21.93	21.25	24.33	26.03	23.97	22.96	22.51	21.17	19.99	19.28	18.77
5	21.96	21.92	21.27	24.55	26.33	24.00	22.97	22.48	21.15	19.98	19.25	18.76
6	21.98	21.95	21.31	24.72	26.45	24.01	22.96	22.45	21.13	19.96	19.23	18.72
7	22.02	21.95	21.52	24.74	26.10	24.00	22.90	22.44	21.08	19.94	19.22	18.67
8	22.05	21.93	21.72	24.89	25.73	23.93	22.82	22.35	21.04	19.96	19.20	18.62
9	22.08	21.94	21.86	25.08	25.71	23.81	22.76	22.33	21.00	19.91	19.20	18.59
10	22.11	21.90	22.09	25.24	25.73	23.72	22.85	22.28	20.98	19.82	19.19	18.56
11	22.14	21.87	22.48	25.37	25.49	23.63	22.90	22.21	20.93	19.80	19.18	18.53
12	22.17	21.87	22.76	25.46	25.14	23.56	22.95	22.14	20.89	19.78	19.19	18.48
13	22.22	21.83	22.61	25.51	24.65	23.78	22.97	22.11	20.87	19.78	19.20	18.45
14	22.23	21.79	22.43	25.52	24.39	24.00	22.96	22.05	20.82	19.73	19.19	18.42
15	22.24	21.76	22.28	25.57	24.22	24.20	22.92	21.98	20.77	19.69	19.16	18.39
16	22.28	21.72	22.22	25.73	24.13	24.32	22.90	21.92	20.73	19.64	19.12	18.36
17	22.30	21.69	22.05	25.76	24.06	24.42	22.87	21.86	20.67	19.57	19.12	18.33
18	22.32	21.69	22.11	25.69	24.02	24.47	22.86	21.79	20.60	19.52	19.13	18.29
19	22.34	21.66	22.39	25.39	24.00	24.39	22.83	21.73	20.54	19.48	19.14	18.28
20	22.35	21.66	22.36	25.88	23.99	24.31	22.79	21.67	20.50	19.45	19.12	18.29
21	22.36	21.64	22.27	26.09	23.96	24.23	22.75	21.63	20.45	19.41	19.11	18.24
22	22.37	21.67	22.56	26.71	23.95	24.20	22.72	21.57	20.39	19.38	19.13	18.18
23	22.38	21.68	22.67	26.89	23.95	24.05	22.71	21.53	20.34	19.39	19.17	18.16
24	22.36	21.75	22.70	26.93	23.95	23.95	22.68	21.50	20.31	19.39	19.18	18.16
25	22.27	21.73	22.79	26.04	23.96	23.89	22.62	21.47	20.27	19.39	19.15	18.14
26	22.18	21.64	22.87	25.32	23.94	23.81	22.60	21.45	20.22	19.38	19.14	18.10
27	22.10	21.57	22.90	25.11	23.97	23.72	22.60	21.44	20.19	19.34	19.14	18.05
28	22.03	21.48	23.05	25.08	23.99	23.61	22.57	21.40	20.16	19.33	19.16	18.02
29	21.99	21.65	23.21	25.09	---	23.55	22.55	21.34	20.13	19.33	19.14	18.01
30	21.95	21.58	23.35	24.21	---	23.36	22.53	21.33	20.11	19.34	19.16	18.00
31	21.94	---	23.47	25.04	---	23.27	---	21.31	---	19.33	19.15	---
MEAN	22.14	21.77	22.27	25.26	24.82	23.94	22.82	21.93	20.71	19.65	19.18	18.41
MAX	22.38	21.95	23.47	26.93	26.45	24.47	23.11	22.52	21.31	20.08	19.32	19.07

WTR YR 2003 MEAN 21.90 LOW 26.93



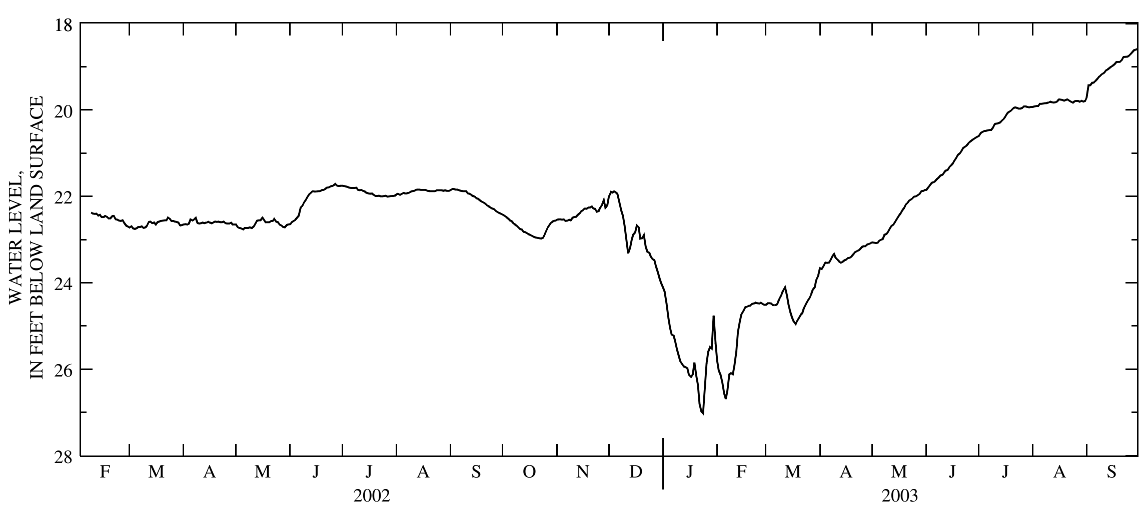
395055082592401. LOCAL NUMBER, FR-272

LOCATION.—Latitude 39°50′55″, longitude 82°59′24″, Hydrologic Unit 05060001. Owner: City of Columbus.
AQUIFER.—Sand and gravel of Quaternary age.
WELL CHARACTERISTICS.—Drilled observation water well, diameter 2 in., depth 45 ft.
INSTRUMENTATION.—Data logger and pressure transducer, 60-minute record.
DATUM.—Elevation of land-surface datum is 708.87 ft above sea level. Measuring point: Floor of shelter, 2.36 ft above land-surface datum.
PERIOD OF RECORD.—August 1991 to current year.
EXTREMES FOR PERIOD OF RECORD.—Maximum daily low, 27.02 ft below land-surface datum, Jan. 24, 2003; minimum daily low, 12.43 ft below land-surface datum, June 19, 1996.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.42	22.54	21.99	24.11	25.80	24.51	23.66	23.06	21.85	20.60	19.93	19.71
2	22.44	22.53	21.90	24.21	26.03	24.47	23.68	23.07	21.79	20.54	19.92	19.43
3	22.47	22.53	21.91	24.48	26.14	24.47	23.61	23.08	21.74	20.51	19.91	19.43
4	22.51	22.54	21.88	24.82	26.30	24.48	23.53	23.07	21.69	20.49	19.91	19.37
5	22.55	22.53	21.91	25.04	26.56	24.52	23.54	23.02	21.67	20.49	19.86	19.37
6	22.57	22.57	21.95	25.20	26.69	24.52	23.53	23.00	21.65	20.47	19.86	19.33
7	22.62	22.56	22.15	25.22	26.50	24.51	23.46	22.99	21.60	20.46	19.85	19.28
8	22.64	22.54	22.34	25.35	26.12	24.45	23.39	22.89	21.57	20.46	19.84	19.23
9	22.68	22.55	22.46	25.55	26.09	24.34	23.33	22.87	21.52	20.42	19.84	19.20
10	22.72	22.50	22.68	25.69	26.12	24.25	23.42	22.82	21.50	20.33	19.83	19.16
11	22.75	22.48	23.04	25.82	25.91	24.16	23.46	22.74	21.45	20.32	19.81	19.13
12	22.77	22.47	23.32	25.89	25.58	24.10	23.51	22.68	21.41	20.31	19.82	19.08
13	22.82	22.43	23.19	25.94	25.13	24.29	23.53	22.65	21.39	20.30	19.83	19.06
14	22.83	22.39	23.01	25.95	24.89	24.50	23.51	22.59	21.33	20.26	19.82	19.03
15	22.85	22.34	22.88	25.98	24.72	24.69	23.48	22.52	21.29	20.22	19.80	18.99
16	22.88	22.32	22.83	26.13	24.64	24.81	23.46	22.46	21.24	20.17	19.75	18.97
17	22.90	22.28	22.67	26.18	24.57	24.90	23.43	22.40	21.18	20.10	19.76	18.94
18	22.92	22.29	22.72	26.11	24.55	24.95	23.42	22.33	21.11	20.05	19.77	18.89
19	22.94	22.26	22.98	25.84	24.53	24.87	23.39	22.27	21.04	20.03	19.78	18.89
20	22.95	22.26	22.97	26.15	24.53	24.80	23.34	22.20	21.01	20.00	19.77	18.89
21	22.96	22.23	22.89	26.36	24.49	24.73	23.29	22.16	20.95	19.95	19.75	18.85
22	22.97	22.28	23.17	26.80	24.48	24.70	23.26	22.10	20.89	19.94	19.78	18.78
23	22.98	22.29	23.28	26.98	24.46	24.56	23.25	22.07	20.85	19.95	19.81	18.77
24	22.96	22.35	23.30	27.02	24.47	24.47	23.22	22.04	20.82	19.97	19.83	18.77
25	22.88	22.34	23.40	26.44	24.48	24.41	23.17	22.01	20.78	19.97	19.80	18.75
26	22.79	22.25	23.45	25.86	24.46	24.34	23.15	22.00	20.73	19.95	19.79	18.71
27	22.71	22.18	23.47	25.60	24.49	24.26	23.15	21.97	20.70	19.92	19.79	18.66
28	22.64	22.09	23.62	25.49	24.51	24.15	23.12	21.94	20.67	19.92	19.81	18.62
29	22.61	22.26	23.76	25.52	---	24.10	23.10	21.88	20.64	19.93	19.78	18.61
30	22.57	22.20	23.90	24.76	---	23.92	23.08	21.87	20.62	19.94	19.81	18.59
31	22.56	---	24.01	25.38	---	23.82	---	21.85	---	19.93	19.79	---
MEAN	22.74	22.38	22.87	25.67	25.26	24.45	23.38	22.47	21.22	20.19	19.82	19.02
MAX	22.98	22.57	24.01	27.02	26.69	24.95	23.68	23.08	21.85	20.60	19.93	19.71

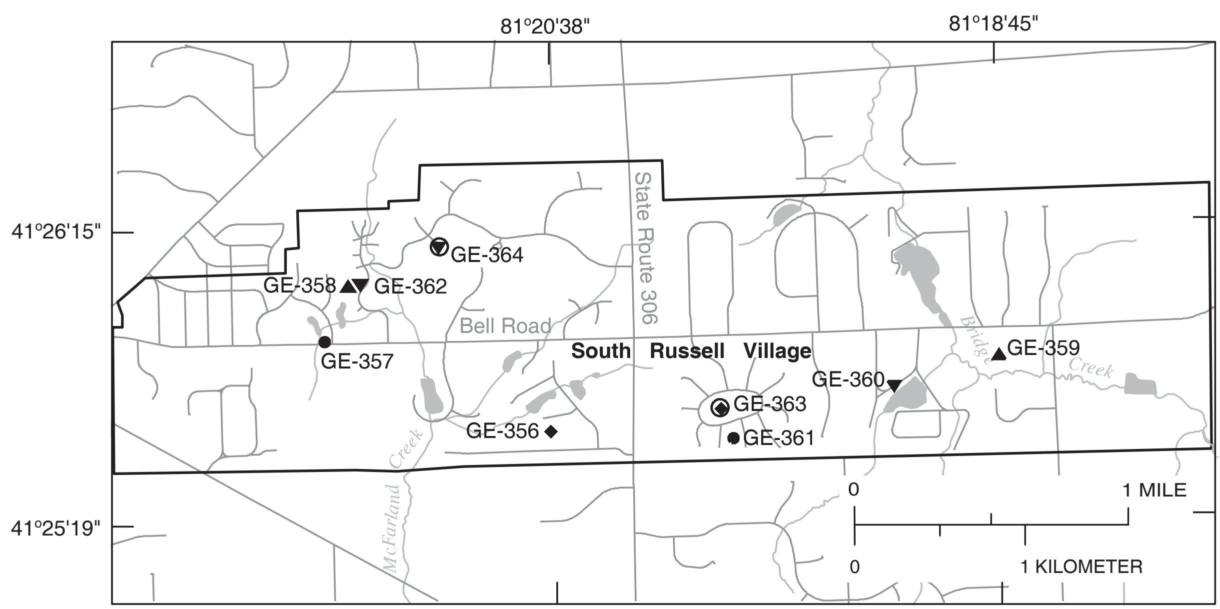
WTR YR 2003 MEAN 22.44 LOW 27.02



The following tables contain ground-water-level data collected as part of a cooperative study with the Village of South Russell, Ohio. Data-collection sites are shown below.

EXPLANATION

- ▲ Well completed in glacial deposits
- ◆ Well completed in Pottsville Formation
- ● Well completed in Cuyahoga Group
- ▼ Well completed in Berea Sandstone
- ○ Well instrumented to continuously record water levels



LONG-TERM GROUND-WATER MONITORING NETWORK

Ground-water-level measurements from the 9 wells that comprise the long-term ground-water monitoring network in South Russell Village are shown on the following pages. The purpose of the water-level study is to determine whether fluctuations in water levels represent consistent, long-term trends caused by human activity or are predominantly the result of seasonal and annual variations in recharge. Land-surface datums are accurate within ± 5 ft. Water levels known to have been measured after a well had been recently pumped are designated with an asterisk (*).

412536081203800. LOCAL NUMBER. GE-356

LOCATION.—Latitude 41°25′36″, longitude 81°20′38″, Geauga County, 6006 Parkland Drive, South Russell Village. Owner: Privately owned.
AQUIFER.—Pottsville Formation (sandstone).
WELL CHARACTERISTICS.—Domestic water-supply well; diameter 5.63 in.; depth 80 ft.
INSTRUMENTATION.—Periodic measurement with steel or electric tape by USGS personnel.
DATUM.—Elevation of land-surface datum is 1,155 ft above sea level. Measuring point: top of casing, 1.30 ft above land-surface datum.
PERIOD OF RECORD.—May 2, 2000 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 11.31 ft below land-surface datum, May 2, 2000; lowest measured, 13.25 ft below land-surface datum, Nov. 7, 2002.

WATER LEVEL,
IN FEET BELOW LAND-SURFACE DATUM
INSTANTANEOUS OBSERVATION

DATE	WATER LEVEL
11/07/02	13.25
01/09/03	12.48
03/13/03	12.22*
05/22/03	11.74
07/23/03	11.70
09/09/03	12.29

412553081213500. LOCAL NUMBER. GE-357

LOCATION.—Latitude 41°25′53″, longitude 81°21′35″, Geauga County, 101 Spring Drive, South Russell Village. Owner: Privately owned.
AQUIFER.—Cuyahoga Formation (shale).
WELL CHARACTERISTICS.—Domestic water-supply well; diameter 6 in.; depth 71 ft.
INSTRUMENTATION.—Periodic measurement with steel or electric tape by USGS personnel.
DATUM.—Elevation of land-surface datum is 1,120 ft above sea level. Measuring point: top of casing, 1.40 ft above land-surface datum.
PERIOD OF RECORD.—May 3, 2000 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 12.43 ft below land-surface datum, May 23, 2001; lowest measured, 14.32 ft below land-surface datum, Nov. 14, 2001.

WATER LEVEL,
IN FEET BELOW LAND-SURFACE DATUM
INSTANTANEOUS OBSERVATION

DATE	WATER LEVEL
11/07/02	14.02
01/09/03	14.21
03/13/03	14.07
05/22/03	13.21
07/23/03	12.63
09/09/03	12.84

LONG-TERM GROUND-WATER MONITORING NETWORK—CONTINUED

412604081212600. LOCAL NUMBER, GE-358

LOCATION.—Latitude 41°26′04″, longitude 81°21′26″, Geauga County, 127 Alderwood Drive, South Russell Village. Owner: Privately owned.
AQUIFER.—Berea Formation (sandstone).
WELL CHARACTERISTICS.—Domestic water-supply well; diameter 6 in.; depth 258 ft.
INSTRUMENTATION.—Periodic measurement with steel or electric tape by USGS personnel.
DATUM.—Elevation of land-surface datum is 1,105 ft above sea level. Measuring point: top of casing, 1.35 ft above land-surface datum.
PERIOD OF RECORD.—May 3, 2000 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 163.27 ft below land-surface datum, May 3, 2000; lowest measured, 177.21* ft below land-surface datum, July 31, 2002.

WATER LEVEL,
IN FEET BELOW LAND-SURFACE DATUM
INSTANTANEOUS OBSERVATION

DATE	WATER LEVEL
11/07/02	168.37
01/09/03	172.41
03/13/03	172.46
05/22/03	168.97*
07/23/03	171.51
09/09/03	171.49

412548081184300. LOCAL NUMBER, GE-359

LOCATION.—Latitude 41°25'48", longitude 81°18'43", Geauga County, 1478 Bell Road, South Russell Village. Owner: Privately owned.
AQUIFER.—Sand and gravel.
WELL CHARACTERISTICS.—Domestic water-supply well; diameter 5.63 in.; depth 90 ft.
INSTRUMENTATION.—Periodic measurement with steel or electric tape by USGS personnel.
DATUM.—Elevation of land-surface datum is 1,153 ft above sea level. Measuring point: top of casing, 2.05 ft above land-surface datum.
PERIOD OF RECORD.—August 29, 2000 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 11.14 ft below land-surface datum, May 23, 2002; lowest measured, 12.87 ft below land-surface datum, Nov. 14, 2001.

WATER LEVEL,
IN FEET BELOW LAND-SURFACE DATUM
INSTANTANEOUS OBSERVATION

DATE	WATER LEVEL
11/07/02	12.06
01/09/03	11.78
03/13/03	11.70
05/22/03	11.40
07/23/03	11.42
09/09/03	11.66

LONG-TERM GROUND-WATER MONITORING NETWORK—CONTINUED

412545081191000. LOCAL NUMBER, GE-360

LOCATION.—Latitude 41°25′45″, longitude 81°19′10″, Geauga County, 55 Garden Park, South Russell Village. Owner: Privately owned.
AQUIFER.—Berea Formation (sandstone).
WELL CHARACTERISTICS.—Domestic water-supply well; diameter 6 in.; depth 290 ft.
INSTRUMENTATION.—Periodic measurement with steel or electric tape by USGS personnel.
DATUM.—Elevation of land-surface datum is 1,162 ft above sea level. Measuring point: top of casing, 1.05 ft above land-surface datum.
PERIOD OF RECORD.—August 29, 2000 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 151.17 ft below land-surface datum, May 23, 2002; lowest measured, 164.50* ft below land-surface datum, Sept. 20, 2001.

WATER LEVEL,
IN FEET BELOW LAND-SURFACE DATUM
INSTANTANEOUS OBSERVATION

DATE	WATER LEVEL
11/07/02	153.88
01/09/03	153.85
03/13/03	155.46
05/22/03	157.55*
07/23/03	156.39
09/09/03	154.94

412533081195100. LOCAL NUMBER, GE-361

LOCATION.—Latitude 41°25′33″, longitude 81°19′51″, Geauga County, 60 Potomac Drive, South Russell Village. Owner: Privately owned.
AQUIFER.—Cuyahoga Formation (shale).
WELL CHARACTERISTICS.—Domestic water-supply well; diameter 6 in.; depth 120 ft.
INSTRUMENTATION.—Periodic measurement with steel or electric tape by USGS personnel.
DATUM.—Elevation of land-surface datum is 1,240 ft above sea level. Measuring point: top of casing, 2.10 ft above land-surface datum.
PERIOD OF RECORD.—August 29, 2000 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 67.55 ft below land-surface datum, Jan. 5, 2001; lowest measured, 69.69 ft below land-surface datum, Jan. 9, 2003.

WATER LEVEL,
IN FEET BELOW LAND-SURFACE DATUM
INSTANTANEOUS OBSERVATION

DATE	WATER LEVEL
11/07/02	68.88
01/09/03	69.69
03/13/03	69.44
05/22/03	69.56
07/23/03	69.20
09/09/03	69.15

LONG-TERM GROUND-WATER MONITORING NETWORK—CONTINUED

412604081212700. LOCAL NUMBER, GE-362

LOCATION.—Latitude 41°26′04″, longitude 81°21′27″, Geauga County, 125 Button Bush Circle, South Russell Village. Owner: Privately owned.
AQUIFER.—Sand and gravel.
WELL CHARACTERISTICS.—Domestic water-supply well; diameter 5.63 in.; depth 35 ft.
INSTRUMENTATION.—Periodic measurement with steel or electric tape by USGS personnel.
DATUM.—Elevation of land-surface datum is 1,106 ft above sea level. Measuring point: top of casing, 1.90 ft above land-surface datum.
PERIOD OF RECORD.—August 29, 2000 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 7.68 ft below land-surface datum, Feb. 28, 2001; lowest measured, 9.51 ft below land-surface datum, Sept. 24, 2002.

WATER LEVEL,
IN FEET BELOW LAND-SURFACE DATUM
INSTANTANEOUS OBSERVATION

DATE	WATER LEVEL
11/07/02	9.00
01/09/03	8.31
03/13/03	8.60
05/22/03	7.82
07/23/03	8.57
09/09/03	9.02

LONG-TERM GROUND-WATER MONITORING NETWORK—CONTINUED

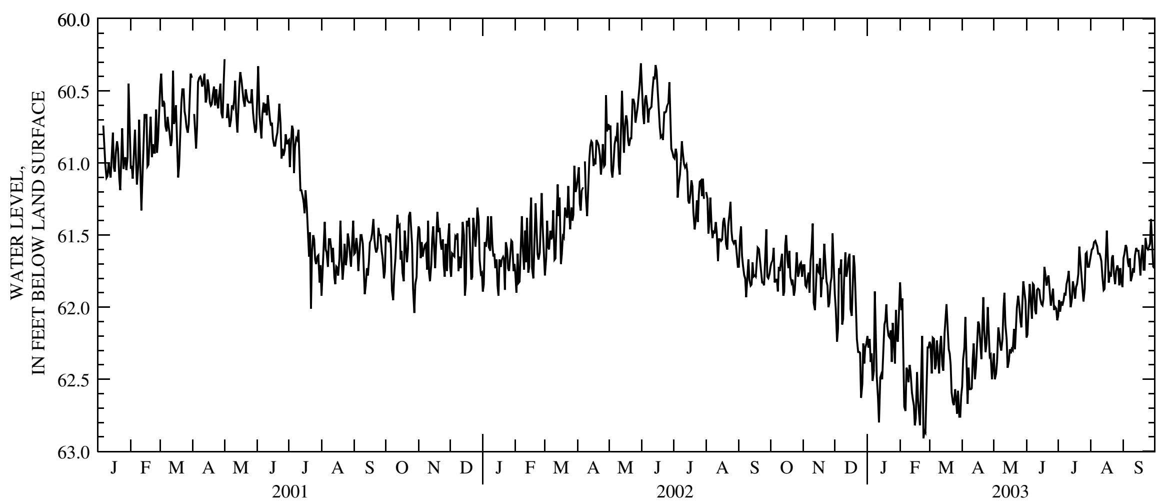
412541081194500. LOCAL NUMBER, GE-363

LOCATION.—Latitude 41°25′41″, longitude 81°19′45″, Geauga County, Kensington Green, South Russell Village. Owner: South Russell Village.
WELL CHARACTERISTICS.—Water-supply well, not currently in use; diameter 6.25 in.; depth 93.7 ft.
INSTRUMENTATION.—Pressure transducer data logger (records hourly).
DATUM.—Elevation of land-surface datum is 1,232 ft above sea level. Measuring point: top of casing.
PERIOD OF RECORD.—Continuous water-level data from January 6, 2001 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 60.28 ft below land-surface datum, May 1, 2001; lowest measured, 62.91 ft below land-surface datum, Feb. 23, 2003.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61.72	61.71	61.91	62.20	61.83	62.24	62.55	62.32	62.21	62.06	61.64	61.66
2	61.69	61.71	62.01	62.28	62.02	62.26	62.36	62.50	62.19	61.95	61.60	61.63
3	61.67	61.85	62.24	62.22	61.94	62.46	62.28	62.46	62.00	62.03	61.59	61.57
4	61.59	61.86	62.15	62.38	62.33	62.21	62.07	62.38	61.84	61.96	61.55	61.59
5	61.83	61.81	61.73	62.32	62.69	62.22	62.48	62.14	61.99	61.99	61.54	61.69
6	61.81	61.76	61.77	62.51	62.72	62.43	62.67	62.19	62.08	61.95	61.56	61.72
7	61.81	61.90	61.67	62.44	62.42	62.40	62.42	62.26	61.84	61.90	61.58	61.66
8	61.89	61.68	62.12	61.89	62.44	62.23	62.57	62.30	61.85	61.92	61.63	61.82
9	61.72	61.61	62.08	62.10	62.52	62.35	62.57	62.22	62.02	61.84	61.63	61.78
10	61.75	61.42	61.81	62.48	62.40	62.46	62.56	62.01	62.05	61.80	61.65	61.73
11	61.68	61.97	61.62	62.63	62.46	62.27	62.36	61.90	61.88	61.75	61.68	61.76
12	61.63	62.02	61.79	62.80	62.59	62.20	62.25	62.12	61.87	61.89	61.78	61.64
13	61.92	61.88	61.73	62.49	62.64	62.40	62.50	62.22	61.88	62.00	61.88	61.59
14	61.89	61.70	61.66	62.47	62.68	62.44	62.42	62.42	61.94	61.94	61.87	61.61
15	61.57	61.75	61.63	62.50	62.82	62.18	62.23	62.37	61.98	61.82	61.65	61.61
16	61.50	61.76	62.01	62.34	62.77	62.08	62.10	62.29	61.99	61.88	61.47	61.68
17	61.67	61.66	62.06	62.12	62.45	61.98	62.12	62.32	61.94	61.94	61.66	61.78
18	61.73	61.93	61.87	62.09	62.64	62.09	62.23	62.29	61.72	61.86	61.83	61.65
19	61.61	61.80	61.64	61.98	62.72	62.29	62.36	62.30	61.79	61.84	61.77	61.57
20	61.79	61.80	61.72	62.13	62.82	62.32	62.17	62.15	61.85	61.77	61.79	61.74
21	61.83	61.56	62.04	62.20	62.54	62.40	61.93	62.29	61.80	61.58	61.66	61.74
22	61.81	61.68	62.22	62.21	62.20	62.59	62.16	62.15	61.78	61.66	61.64	61.52
23	61.92	61.82	62.31	62.16	62.91	62.66	62.31	62.00	61.91	61.76	61.76	61.59
24	61.88	61.85	62.31	62.38	62.86	62.68	62.25	61.92	61.99	61.88	61.84	61.60
25	61.74	62.00	62.32	62.11	62.87	62.57	62.00	61.98	61.92	61.96	61.75	61.58
26	61.62	61.97	62.63	62.23	62.54	62.64	62.14	62.09	61.87	61.87	61.71	61.56
27	61.79	61.83	62.53	62.39	62.28	62.74	62.34	62.14	62.02	61.63	61.74	61.39
28	61.76	61.79	62.25	62.02	62.28	62.58	62.33	61.95	62.00	61.62	61.85	61.51
29	61.70	61.49	62.39	62.22	---	62.76	62.50	61.82	62.01	61.72	61.73	61.72
30	61.69	61.66	62.28	62.24	---	62.76	62.42	61.90	62.09	61.72	61.83	61.73
31	61.79	---	62.26	62.03	---	62.61	---	61.96	---	61.68	61.86	---
MAX	61.92	62.02	62.63	62.80	62.91	62.76	62.67	62.50	62.21	62.06	61.88	61.82

WTR YR 2003 LOW 62.91



LONG-TERM GROUND-WATER MONITORING NETWORK—CONTINUED

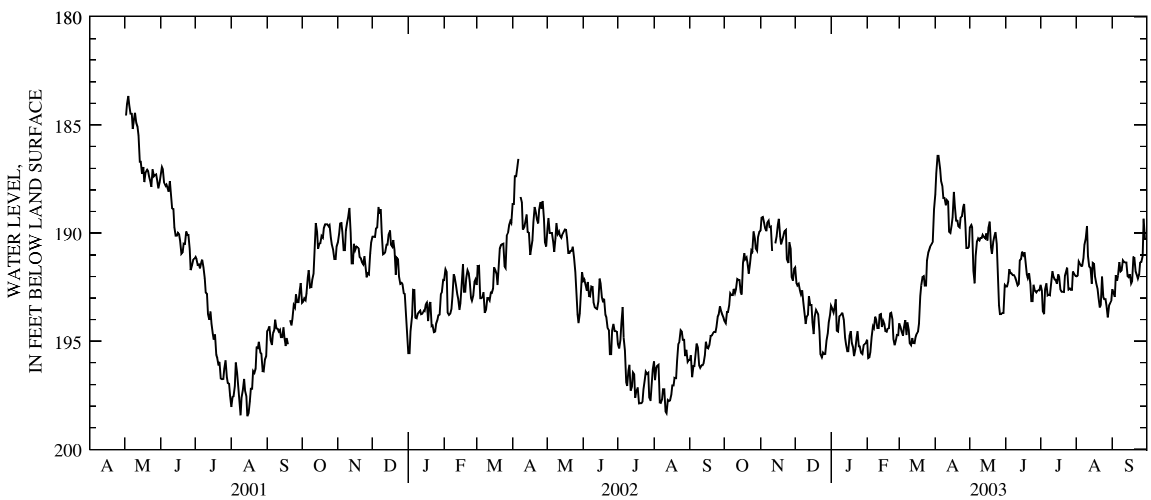
412611081210600. LOCAL NUMBER, GE-364

LOCATION.—Latitude 41°26′11″, longitude 81°21′06″, Geauga County, cul-de-sac at the end of Fawn Court, South Russell Village. Owner: South Russell Village.
AQUIFER.—Berea Formation (sandstone).
WELL CHARACTERISTICS.—Monitoring well; diameter 5.63 in.; depth 241.2 ft.
INSTRUMENTATION.—Pressure transducer data logger (records hourly).
DATUM.—Elevation of land-surface datum is 1,130 ft above sea level. Measuring point: top of casing, 1.22 ft above land-surface datum.
PERIOD OF RECORD.—Continuous water-level data from May 2, 2001 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 183.65 ft below land-surface datum, May 4, 2001; lowest measured, 198.46 ft below land-surface datum, Aug. 15, 2001.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	194.07	189.86	191.57	193.36	194.92	194.18	188.19	189.71	192.46	192.38	192.00	192.59
2	194.17	189.27	192.31	193.49	195.77	194.34	187.22	189.61	192.46	192.66	191.95	192.76
3	193.64	189.24	192.41	193.67	195.73	194.55	186.42	189.73	192.23	193.63	191.32	192.94
4	193.64	189.45	192.34	193.46	195.49	194.74	186.42	191.72	191.67	193.74	191.43	191.94
5	193.31	189.76	192.65	193.07	194.80	194.35	187.02	192.32	191.86	192.59	191.52	192.19
6	192.78	189.90	192.82	194.50	194.31	194.01	187.57	191.04	191.86	192.32	191.50	191.96
7	192.86	189.49	192.64	194.54	194.39	194.71	187.81	190.39	191.95	192.87	191.14	191.33
8	192.86	189.40	193.12	193.85	193.86	194.12	188.36	190.24	191.95	192.84	190.52	191.77
9	192.57	189.71	193.62	193.80	194.00	194.46	188.38	190.33	192.07	192.87	190.24	191.73
10	192.76	189.69	194.19	193.72	194.38	195.09	188.71	190.21	192.20	192.46	189.66	191.26
11	192.59	190.83	193.85	193.72	194.38	195.18	188.48	190.21	192.41	191.74	191.04	191.33
12	192.11	---	193.75	194.00	193.75	194.84	188.56	190.08	192.34	191.99	191.56	191.35
13	192.15	---	192.90	194.83	193.73	195.08	189.94	190.19	191.25	192.14	191.62	191.35
14	192.17	190.46	193.32	195.14	194.33	195.09	189.99	190.25	191.17	192.15	192.33	191.99
15	192.74	190.14	193.31	195.47	194.05	194.83	189.62	190.01	190.85	192.33	191.38	192.04
16	192.84	189.60	194.10	195.47	194.22	194.63	189.25	190.34	191.02	191.91	191.42	191.88
17	191.38	189.32	194.67	194.75	194.52	194.52	188.09	189.74	190.88	192.03	192.00	192.32
18	190.92	190.13	193.85	194.53	194.55	194.18	188.73	189.46	191.31	192.61	192.32	192.22
19	191.20	190.51	193.55	195.08	194.41	192.90	189.42	190.65	191.90	192.70	192.57	191.12
20	191.10	190.31	193.66	195.29	194.37	192.41	189.42	190.95	192.06	192.71	192.98	191.14
21	191.38	190.06	193.76	195.69	193.70	192.03	189.69	190.40	191.84	192.72	193.43	191.78
22	191.87	189.90	194.55	195.37	193.67	191.97	189.74	190.17	192.33	191.98	193.31	191.96
23	191.39	189.85	195.62	194.82	193.98	192.43	189.28	189.93	193.15	191.75	192.01	192.10
24	190.81	191.20	195.75	194.53	194.88	192.43	189.23	190.50	193.15	191.60	192.95	191.90
25	190.86	191.39	195.53	195.24	195.18	191.25	188.81	191.66	192.38	192.60	193.06	191.35
26	189.92	190.42	195.59	195.24	194.92	190.90	188.65	193.33	192.66	192.56	193.07	191.32
27	190.23	190.72	195.58	195.54	194.70	190.72	189.62	193.74	192.74	192.61	193.36	191.05
28	190.72	192.02	194.96	195.60	194.72	190.58	190.69	193.74	192.66	192.61	193.89	189.33
29	190.83	192.19	194.62	195.18	---	190.46	190.69	193.68	192.63	191.77	193.34	190.26
30	190.17	191.64	194.11	195.13	---	190.38	190.61	193.68	192.64	191.88	193.24	190.26
31	189.93	---	193.78	195.08	---	188.89	---	192.41	---	191.98	193.10	---
MAX	194.17	192.19	195.75	195.69	195.77	195.18	190.69	193.74	193.15	193.74	193.89	192.94

WTR YR 2003 LOW 195.77



Water Quality of Domestic Wells in Selected Parts of Preble and Shelby Counties

The following tables include data from a water-quality study in two counties in southwestern Ohio where elevated arsenic concentrations had been previously detected. Twenty-eight domestic wells that derive water from carbonate bedrock or glacial deposits were sampled for arsenic and other water-quality constituents. The goal was to determine which aquifer types, hydrogeologic settings, or depth intervals were most (and least) likely to produce water with elevated concentrations of arsenic.

WATER-QUALITY RECORDS

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

[(72008), USGS National Water Information System parameter code; LSD, land-surface datum; NTU, Nephelometric turbidity units; *, sample affected by water softener]

Local number	Identification number	Date	Geologic unit	Depth of well, feet below LSD (72008)	Depth to water level, feet below LSD (72019)	Altitude of land surface feet (72000)	Turbidity, water, unfltrd field, NTU (61028)
			PREBLE COUNTY				
PR-29	395427084415200	07-09-03	112OTSH	42	24.95	1150	4.6
PR-70	395435084414100	07-10-03	355LCKP	102	22.36	1150	80
PR-83	395425084415100	07-10-03	355LCKP	101	24.83	1150	6.0
PR-212	395310084421600	07-07-03	350SLRN	121	60.02	1195	4.7
PR-213	395252084420600	07-08-03	350SLRN	141	49.09	1185	4.0
PR-214	395250084415200	07-08-03	112OTSH	98	38.73	1175	11
PR-215	395316084421200	07-09-03	350SLRN	141	54.30	1178	5.5
PR-219	395428084425300	07-11-03	350SLRN	131	33.92	1173	62
PR-219		08-19-03	350SLRN	131	34.79	1173	1.8
PR-220	395333084404900	07-28-03	112OTSH	56	15.52	1140	3.7
PR-221	395338084403700	07-29-03	350SLRN	57	9.89	1129	6.3
PR-222*	395237084403600	07-29-03	112OTSH	93	15.89	1132	14
PR-222*		08-19-03	112OTSH	93	16.12	1132	2.0
PR-223	395408084411100	07-30-03	112OTSH	55	13.76	1140	17
PR-224	395223084421400	07-30-03	350SLRN	141	33.73	1175	8.6
			SHELBY COUNTY				
SH-116	401523084180600	08-11-03	350SLRN	106	56.02	972	20
SH-117	401336084161600	08-12-03	112OTSH	181	66.31	972	1.6
SH-118	401551084165800	08-12-03	112OTSH	127	69.76	975	11
SH-119	401546084164800	08-13-03	112OTSH	123	67.89	982	4.0
SH-120	401447084175800	07-31-03	112OTSH	123	76.62	980	2.5
SH-121	401425084180500	07-31-03	112OTSH	152	69.40	982	2.4
SH-122	401459084174200	08-01-03	112OTSH	115	81.21	985	5.6
SH-123	401351084161900	08-13-03	112OTSH	119	60.58	970	10
SH-124	401407084174200	08-14-03	112OTSH	159	91.46	995	6.7
SH-125	401527084164100	08-14-03	350SLRN	200	47.21	952	1.8
SH-126	401339084160100	08-18-03	112OTSH	130	61.60	960	16
SH-127	401537084162400	08-20-03	350SLRN	221	52.80	982	1.2
SH-128	401442084175900	08-20-03	112OTSH	132	74.35	979	2.9
SH-129	401432084190800	08-21-03	112OTSH	185	52.75	976	3.7
SH-130	401420084162700	08-21-03	350SLRN	118	87.00	982	1.3

WATER-QUALITY RECORDS—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(00300), USGS National Water Information System parameter code; mg/L, milligrams per liter; uS/cm, microsiemens per centimeter; deg C, degrees Celsius; *, sample affected by water softener; M, presence verified but not quantified; --, no data]

Local number	Dis-solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)
				PREBLE COUNTY				
PR-29	.2	7.1	936	16.4	107	69.9	2.20	18.2
PR-70	.1	7.3	752	16.6	84.5	38.9	1.54	15.6
PR-83	.1	7.3	735	14.1	73.3	39.2	1.54	17.1
PR-212	M	7.4	654	17.0	72.2	38.1	1.45	15.1
PR-213	.1	7.4	632	15.9	81.2	36.7	1.32	11.0
PR-214	.5	7.2	620	15.8	80.4	34.4	1.37	10.1
PR-215	.1	7.4	625	17.1	78.7	37.2	1.30	15.1
PR-219	.1	7.3	656	13.6	76.8	31.7	1.31	12.7
PR-219	.3	7.3	647	14.3	--	--	--	--
PR-220	.1	7.4	698	16.7	73.5	41.7	1.59	16.8
PR-221	.1	7.4	704	15.5	72.0	44.4	1.55	16.9
PR-222*	.2	7.8	638	17.0	.09	.014	.17	165
PR-222*	.1	7.7	619	13.8	--	--	--	--
PR-223	.1	7.3	834	16.3	98.6	55.7	1.84	17.4
PR-224	.1	7.3	594	13.3	86.9	33.5	1.02	6.53
				SHELBY COUNTY				
SH-116	.1	7.2	790	15.0	83.7	37.5	1.75	49.6
SH-117	.1	7.4	633	14.9	65.0	28.9	1.59	36.9
SH-118	.1	7.2	904	14.0	99.4	51.7	2.11	27.8
SH-119	.1	7.1	922	17.9	104	51.0	2.40	27.0
SH-120	.1	7.6	820	15.6	74.5	42.9	2.01	45.0
SH-121	.1	7.3	841	13.7	20.2	7.69	.38	7.72
SH-122	.1	7.1	1040	13.7	39.4	21.3	.84	5.77
SH-123	.1	7.2	646	14.5	84.6	31.6	1.47	16.4
SH-124	.1	7.3	801	15.4	91.2	38.6	1.82	25.3
SH-125	.1	7.0	914	13.6	97.6	51.4	2.27	17.9
SH-126	.1	7.3	745	13.3	81.3	34.6	1.41	32.2
SH-127	.1	7.1	1030	14.6	111	71.5	3.07	22.1
SH-128	.1	7.6	950	12.5	94.3	47.5	2.46	58.1
SH-129	.1	7.1	762	14.8	107	44.0	1.63	10.5
SH-130	.1	7.1	765	13.9	77.6	30.3	1.98	45.5

WATER-QUALITY RECORDS—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(39086), USGS National Water Information System parameter code; mg/L, milligrams per liter; uS/cm, microsiemens per centimeter; deg C, degrees Celsius; *, sample affected by water softener; --, no data; <, concentration or value reported is less than that indicated; E, estimated]

Local number	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Bromide water, fltrd, mg/L (71870)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Sulfide water, fltrd, field, mg/L (99118)
PREBLE COUNTY								
PR-29	373	453	.06	4.80	1.4	20.9	123	.053
PR-70	305	371	.04	3.98	1.3	18.6	57.3	.006
PR-83	332	403	.05	1.94	1.5	17.1	56.8	.006
PR-212	328	398	.04	1.19	1.5	17.1	11.1	.023
PR-213	326	395	.05	2.12	1.2	19.3	14.8	.002
PR-214	292	355	.03	2.17	1.1	16.6	12.6	.022
PR-215	297	361	.03	1.20	1.4	17.0	10.0	.033
PR-219	299	364	.03	1.35	1.2	17.8	33.6	.253
PR-219	317	386	--	--	--	--	--	.029
PR-220	338	410	.03	1.64	1.5	18.8	22.1	.011
PR-221	338	410	.05	2.04	1.5	20.3	24.9	.032
PR-222*	307	372	<.02	4.30	1.2	13.1	.4	.039
PR-222*	338	410	--	--	--	--	--	.026
PR-223	366	445	.05	2.55	1.5	22.4	45.5	.660
PR-224	305	371	.03	1.86	.9	17.8	13.3	.002
SHELBY COUNTY								
SH-116	321	391	.07	4.52	.9	20.5	54.8	.122
SH-117	291	354	.06	2.03	1.1	17.5	2.3	.007
SH-118	352	428	.08	3.39	1.5	19.6	116	.013
SH-119	326	396	.04	3.10	1.5	20.8	119	.002
SH-120	E423	E513	.31	4.86	.9	17.4	<.2	.030
SH-121	445	541	.57	2.91	1.0	4.10	E.2	.019
SH-122	474	576	.36	3.44	1.7	8.96	97.8	.009
SH-123	307	373	.03	4.26	.8	21.8	26.3	.020
SH-124	404	492	.05	3.68	1.3	23.5	41.0	.155
SH-125	430	520	.05	3.99	1.6	22.4	82.8	.030
SH-126	421	512	.03	2.41	.9	18.7	2.1	.013
SH-127	476	579	.05	3.05	1.7	23.5	115	.022
SH-128	484	585	E.01	4.35	.7	16.6	39.4	.034
SH-129	378	460	.04	4.06	1.1	23.2	44.5	.010
SH-130	404	492	--	2.52	.7	14.1	E.1	.023

WATER-QUALITY RECORDS—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(70300), USGS National Water Information System parameter code; mg/L, milligrams per liter; deg C, degrees Celsius; *, sample affected by water softener; M, presence verified but not quantified; --, no data; <, concentration or value reported is less than that indicated; E, estimated]

Local number	Residue on evap. at 180 deg C wat flt mg/L (70300)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	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)	Organic carbon, water, fltrd, mg/L (00681)	Alum-inum, water, fltrd, ug/L (01106)
PREBLE COUNTY								
PR-29	614	.5	.37	<.06	<.008	<.02	1.4	<2
PR-70	473	.6	.53	<.06	<.008	<.02	1.3	E1
PR-83	459	.7	.69	<.06	<.008	<.02	1.5	E2
PR-212	375	1.2	1.1	<.06	<.008	<.02	1.6	<2
PR-213	374	.6	.50	E.04	E.004	<.02	1.5	E1
PR-214	360	.5	.43	<.06	<.008	<.02	1.5	<2
PR-215	363	1.3	1.2	<.06	<.008	<.02	2.1	<2
PR-219	405	.4	.33	<.06	<.008	<.02	1.3	E1
PR-219	--	--	--	--	--	--	--	<2
PR-220	412	1.1	.99	<.06	<.008	<.02	1.4	E1
PR-221	398	1.1	1.0	<.06	<.008	<.09	1.4	<2
PR-222*	402	.2	<.04	<.06	<.008	.13	4.1	E1
PR-222*	--	--	--	--	--	--	--	<2
PR-223	540	.7	.63	<.06	E.005	<.02	1.3	E1
PR-224	362	.3	.23	<.06	<.008	<.02	1.3	E1
SHELBY COUNTY								
SH-116	491	1.0	.83	<.06	<.008	<.02	2.3	E1
SH-117	385	1.2	1.1	<.06	<.008	<.18	2.1	2
SH-118	617	.8	.71	<.06	<.008	<.18	1.7	2
SH-119	615	1.0	.88	<.06	<.008	<.18	1.9	M
SH-120	477	5.8	5.0	<.06	<.008	.05	5.1	E1
SH-121	500	7.0	6.3	.18	<.008	.36	5.4	M
SH-122	105	1.0	.93	<.06	<.008	.02	1.5	<2
SH-123	400	.5	.39	<.06	<.008	<.18	1.4	<2
SH-124	518	1.0	.83	<.06	<.008	<.18	2.0	E2
SH-125	610	.6	.55	<.06	<.008	<.18	1.5	M
SH-126	445	1.0	.89	<.06	<.008	<.02	2.4	<2
SH-127	712	1.0	.77	<.06	E.005	.02	1.8	E1
SH-128	561	7.1	5.6	<.06	<.008	<.02	5.7	E1
SH-129	486	.5	.41	<.06	<.008	<.18	1.5	<2
SH-130	432	13	11	<.06	<.008	1.6	9.0	2

WATER-QUALITY RECORDS—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(01095), USGS National Water Information System parameter code; ug/L, micrograms per liter; *, sample affected by water softener; M, presence verified but not quantified; --, no data; <, concentration or value reported is less than that indicated; E, estimated]

Local number	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)
PREBLE COUNTY								
PR-29	<.30	22.5	23	59	<.06	85	.04	<.8
PR-70	<.30	8.6	33	102	<.06	94	.07	<.8
PR-83	<.30	10.9	9	89	<.06	126	.10	<.8
PR-212	<.30	4.4	5	143	<.06	93	.04	<.8
PR-213	<.30	4.2	4	223	<.06	49	.05	<.8
PR-214	E.20	.7	M	217	<.06	46	.04	<.8
PR-215	<.30	1.9	<2	183	<.06	77	E.03	<.8
PR-219	<.30	11.5	23	135	<.06	78	.09	<.8
PR-219	<.30	11.1	10	141	<.06	79	.06	<.8
PR-220	<.30	9.8	9	206	<.06	109	.06	<.8
PR-221	<.30	7.7	9	181	<.06	94	E.04	<.8
PR-222*	<.30	82.5	94	M	<.06	149	.04	<.8
PR-222*	<.30	67.6	67	M	<.06	171	.04	<.8
PR-223	<.30	21.2	34	118	<.06	98	.05	<.8
PR-224	<.30	6.0	5	290	<.06	33	E.02	<.8
SHELBY COUNTY								
SH-116	<.30	4.8	6	133	<.06	166	.04	<.8
SH-117	<.30	E.2	<2	305	<.06	151	E.03	<.8
SH-118	<.30	6.4	7	63	<.06	146	.08	<.8
SH-119	<.30	3.0	4	68	<.06	149	.05	<.8
SH-120	<.30	27.0	27	592	<.06	137	<.04	<.8
SH-121	<.30	.3	<2	254	<.06	106	<.04	<.8
SH-122	<.30	7.1	7	104	<.06	77	.05	<.8
SH-123	<.30	1.8	3	221	<.06	66	.04	<.8
SH-124	<.30	4.0	4	104	<.06	105	.04	<.8
SH-125	<.30	14.8	12	58	<.06	101	.06	<.8
SH-126	<.30	1.6	E1	239	<.06	133	<.04	<.8
SH-127	<.30	5.1	22	43	<.06	139	.12	<.8
SH-128	<.30	18.0	15	490	<.06	192	E.03	<.8
SH-129	<.30	10.1	10	172	<.06	55	.05	<.8
SH-130	<.30	49.1	52	138	<.06	228	E.03	1.2

WATER-QUALITY RECORDS—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(01035), USGS National Water Information System parameter code; ug/L, micrograms per liter; mg/L, milligrams per liter; *, sample affected by water softener; --, no data; <, concentration or value reported is less than that indicated; E, estimated]

Local number	Cobalt water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Iron (II) water, fltrd, field mg/L (99114)	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)	Molyb- denum, water, fltrd, ug/L (01060)
				PREBLE COUNTY				
PR-29	.24	.4	3.12	3610	<.08	37.2	22.0	24.7
PR-70	.40	.5	1.70	1730	<.08	7.8	60.6	23.5
PR-83	.30	.5	1.20	1120	<.08	11.1	31.6	28.9
PR-212	.30	.3	.430	574	<.08	7.0	49.5	19.2
PR-213	.24	18.1	.270	463	.11	7.6	72.1	24.7
PR-214	.78	.7	.230	313	E.04	7.5	395	18.6
PR-215	.12	<.2	.460	451	<.08	5.4	26.2	13.5
PR-219	.43	.5	1.61	1460	.11	6.1	24.5	26.6
PR-219	.34	.4	1.43	--	E.06	6.1	23.4	26.6
PR-220	.18	.3	1.97	2150	<.08	10.2	43.7	22.6
PR-221	.18	.4	2.20	2240	E.05	11.2	35.9	22.6
PR-222*	.07	<.2	.020	37	.20	E.4	E.1	20.5
PR-222*	.07	E.2	.010	--	<.08	<.5	<.2	19.5
PR-223	.24	.5	2.91	3190	<.08	18.3	21.9	23.2
PR-224	.25	.3	1.14	1230	<.08	5.5	33.5	12.5
				SHELBY COUNTY				
SH-116	.45	.6	.510	598	E.07	11.7	19.6	18.8
SH-117	.29	.3	1.17	1270	<.08	7.5	19.4	10.8
SH-118	.38	1.0	2.10	2140	<.08	18.6	30.2	31.4
SH-119	.22	.6	1.41	1420	<.08	18.1	33.1	25.0
SH-120	.28	.2	2.54	3390	<.08	6.4	9.5	8.6
SH-121	.32	.2	4.68	1080	<.08	5.4	54.8	.7
SH-122	.28	.5	3.04	1050	<.08	34.3	35.2	25.8
SH-123	.19	.4	1.31	1350	<.08	7.6	45.3	18.9
SH-124	.22	.4	2.74	2580	<.08	11.4	40.1	18.5
SH-125	.22	.7	1.94	1890	<.08	25.2	22.1	29.6
SH-126	.24	.3	2.31	2090	<.08	8.7	31.7	8.1
SH-127	.30	1.1	2.06	2350	<.08	42.5	25.0	36.3
SH-128	.37	.7	1.38	1580	<.08	6.0	8.3	10.4
SH-129	.26	.5	1.97	2100	<.08	17.6	16.4	24.2
SH-130	.27	.3	7.80	9600	.12	1.5	59.2	11.8

WATER-QUALITY RECORDS—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(01065), USGS National Water Information System parameter code; ug/L, micrograms per liter; *, sample affected by water softener; M, presence verified but not quantified; --, no data; <, concentration or value reported is less than that indicated; E, estimated]

Local number	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Strontium, water, fltrd, ug/L (01080)	Thallium, water, fltrd, ug/L (01057)	Vanadium, water, fltrd, ug/L (01085)	Zinc, water, fltrd, ug/L (01090)	Uranium natural water, fltrd, ug/L (22703)
PREBLE COUNTY								
PR-29	2.17	<.5	<.20	7220	<.04	.3	17	2.43
PR-70	2.52	<.5	<.20	13800	<.04	1.3	7	.65
PR-83	2.30	<.5	<.20	18800	<.04	1.3	2	.52
PR-212	3.23	<.5	<.20	14500	<.04	1.9	28	1.65
PR-213	1.87	E.3	<.20	6990	<.04	2.0	6	.75
PR-214	2.91	E.3	<.20	6200	<.04	2.2	143	3.09
PR-215	1.50	<.5	<.20	12100	<.04	.6	2	.35
PR-219	2.52	<.5	<.20	10400	<.04	.8	86	.45
PR-219	2.58	<.5	<.20	9830	<.04	.9	94	.47
PR-220	.71	<.5	<.20	14100	<.04	1.5	4	.60
PR-221	1.11	<.5	<.20	13600	<.04	.3	21	.63
PR-222*	.20	<.5	<.20	4.29	<.04	.7	55	.02
PR-222*	.16	<.5	<.20	2.35	<.04	.8	20	.02
PR-223	1.41	<.5	<.20	10200	<.04	.9	24	1.04
PR-224	1.52	<.5	<.20	2790	<.04	.9	M	.53
SHELBY COUNTY								
SH-116	2.71	<.5	<.20	5170	<.04	2.2	52	.61
SH-117	1.82	<.5	<.20	5350	<.04	.4	10	.02
SH-118	2.74	<.5	<.20	20900	<.04	.6	M	.47
SH-119	3.44	<.5	M	22900	<.04	2.5	2	.78
SH-120	1.10	<.5	<.20	4910	<.04	.5	11	E.01
SH-121	1.46	<.5	<.20	6790	<.04	.7	<1	<.02
SH-122	1.73	<.5	<.20	42800	<.04	.4	5	.71
SH-123	2.74	<.5	M	4780	<.04	1.7	M	.32
SH-124	3.30	<.5	<.20	10000	<.04	1.6	6	.44
SH-125	3.44	<.5	<.20	21200	<.04	1.9	2	1.13
SH-126	3.04	<.5	<.20	4620	<.04	1.2	1	.07
SH-127	1.14	<.5	<.20	34400	<.04	1.7	6	.73
SH-128	1.18	<.5	<.20	2730	<.04	2.2	M	.28
SH-129	3.47	<.5	<.20	7160	<.04	1.0	3	.54
SH-130	2.47	<.5	<.20	2730	<.04	1.7	24	<.02

PROJECT DATA
Ohio Department of Health—Septic System

The following table contains data from an investigation of ground-water quality near residential septic systems. Temporary drive-point wells were installed to various depths near systems in three different soil regions. When water was available, samples were analyzed for nutrients, chloride, *Escherichia coli* bacteria, and coliphage.

[(72008), USGS National Water Information System parameter code; uS/cm, microsiemens per centimeter; deg. C, degrees Celsius; mg/L, milligrams per liter; plaques/100 mL, plaques per 100 milliliters; MPN/100 mL, most probable number per 100 milliliter; col/100 mL, colonies per 100 milliliters; --, no data; <, concentration or value reported is less than that indicated; >, concentration or value reported is greater than that indicated; E, estimated]

Site id	Local well number	Date	Depth of well, feet below land surface (72008)	Specific conductance, wat, unf, lab uS/cm 25 deg.C (90095)	Chloride water flitered mg/L (00940)	Ammonia water filtered mg/L as N (00608)	Nitrite + nitrate water, filtered mg/L as N (00631)
393617083461601	GR-750 01	Jul 30	8	3330	984	0.51	<.06
393617083461602	GR-750 02	Jul 31	16	952	126	0.7	<.06
393617083461603	GR-750 03	Sep 15	8	3650	950	0.15	<.06
393617083461603	GR-750 03	Sep 17	8	--	--	--	--
393617083461604	GR-750 04	Sep 15	8	4050	1050	0.23	<.06
393617083461604	GR-750 04	Sep 17	8	--	--	--	--
393617083461605	GR-750 05	Sep 16	8	2780	834	E.03	<.06
393617083461606	GR-750 06	Sep 16	8	4040	1120	E.02	<.06
393617083461607	GR-750 07	Sep 16	8	3480	1090	<.04	<.06
393617083461608	GR-750 08	Sep 16	8	3920	1150	0.12	<.06
393742083460802	GR-751 02	Jul 31	16	1600	312	1.96	<.06
393647083582201	GR-752 01	Aug 1	8	2320	468	2.08	<.06
393647083582202	GR-752 02	Aug 1	16	810	24.1	0.53	<.06
394416083411801	GR-753 01	Aug 1	8	566	18.4	E.03	0.28
394416083411802	GR-753 02	Aug 1	16	748	31.8	0.34	4.41
403423083434801	HN-139 01	Aug 7	8	1080	26.4	0.59	<.06
402744082183001	K-10 01	Aug 26	7	--	--	0.12	0.86
402744082183002	K-10 02	Aug 26	13	--	--	0.13	<.06
403123082293702	K-11 02	Aug 29	16	--	--	--	--

Local well number	Nitrite water filtered mg/L as N (00613)	Ortho-phosphate water filtered mg/L as P (00671)	Coliphage e. coli c13host mf plaques/100mL (90903)	Coliphage e. coli famp mf plaques/100mL (90904)	E. coli colilert quantry water MPN/100mL (50468)	E. coli m-tec mf water col/100mL (31633)	Total coliform colert quantry MPN/100 mL (50569)
GR-750 01	<.008	<.02	E2	<1	--	E160	--
GR-750 02	<.008	<.02	<1	<1	<.18	<100	<1
GR-750 03	<.008	<.02	--	--	--	590	--
GR-750 03	--	--	--	--	--	E4500	--
GR-750 04	<.008	<.18	--	--	--	<3	--
GR-750 04	--	--	--	--	--	510	--
GR-750 05	E.004	<.18	--	--	--	<1	--
GR-750 06	E.004	<.18	--	--	--	<2	--
GR-750 07	E.004	<.18	--	--	--	E 8	--
GR-750 08	E.006	<.18	--	--	--	E3600	--
GR-751 02	<.008	<.02	--	--	--	<4	--
GR-752 01	<.008	<.02	<1	<1	54	870	>2400
GR-752 02	<.008	<.02	<1	<1	<1	<3	<1
GR-753 01	0.025	<.02	<1	<1	10	<30	64
GR-753 02	0.19	<.02	<1	<1	<1	<7	<1
HN-139 01	<.008	<.02	--	--	--	E3	--
K-10 01	0.023	<.02	--	--	--	<1	--
K-10 02	<.008	<.02	--	--	--	<2	--
K-11 02	--	--	<1	<1	<1	--	>49

Low-Flow Magnitude and Frequency of Ohio Streams

The low-flow network is part of a cooperative study with the Ohio Department of Natural Resources to define the low-flow characteristics of 180 sites that have essentially unregulated streamflow and drainage areas less than 150 square miles. The following table lists the sites of the low-flow partial record network including discharge measurements made in the 2003 water year. The second table lists the discontinued streamflow-gaging stations for which a discharge measurement was performed in 2003 that were used for index stations for this project. The discontinued stations are not shown.

LOW-FLOW PARTIAL-RECORD STATIONS

[mi², square miles; wy, water year; ft³/s, cubic foot per second; --, no data]

Station number	Station name	Location	Drainage Area (mi²)	Period of record (wy)	Measurements Date	Measurements Discharge (ft³/s)
		BEAVER RIVER BASIN				
03092754	Eagle Creek at Mahoning, Ohio	Latitude 41°16′19″, longitude 81°03′00", Portage County, Hydrologic Unit 05030103, at Silica Sand Road bridge, just east of Parkman Road, 1.1 mi uptream from Mahoning Creek, 0.7 mi north of Mahoning, 2.7 mi east, southeast of Garrettsville, Ohio. (Garrettsville 1:24000 quad)	38.4	2002-03	09/12/03	21.3
03098390	Mill Creek near Youngstown, Ohio	Latitude 41°02′00″, longitude 80°41′37", Mahoning County, Hydrologic Unit 05030103, at pedestrian bridge over Mill Creek at end of extra parking lot next to Mill Creek Park Golf Course, 0.8 mi northeast of park entrance at State Route 224, 0.8 mi downstream of Indian Run, 3.1 mi upstream of Newport Lake Dam, 3 mi southwest of South Side Youngstown, Ohio. (Youngstown 1:24000 quad)	51.5	1995-99 2001-03	09/12/03	24.0
		CROSS CREEK BASIN				
03110950	Cross Creek at Broadacre, Ohio	Latitude 40°21′56″, longitude 80°47′05", Jefferson County, Hydrologic Unit 05030101, at State Route 152 bridge, 0.3 mi upstream of Clay Lick Creek, 1.4 mi downstream of Salem Creek, at Broadacre, Ohio. (Smithfield 1:24000 quad)	53.5	1981-82 1986 2002	--	--
		SUNFISH CREEK BASIN				
03114241	Sunfish Creek at Coats, Ohio	Latitude 39°46′14″, longitude 81°02′34", Monroe County, Hydrologic Unit 05030201, at riffle beside Sunfish Creek Road, 800 ft downstream from confluence of unnamed tributary, 0.7 mi downstream from confluence of Standingstone Run, 1.0 mi southeast of Coats, 4.0 mi east of Woodsfield, Ohio. (Woodsfield 1:24000 quad)	51.3	1995 1997-99 2001-02	--	--
		LITTLE MUSKINGUM RIVER BASIN				
03115385	Clear Fork near Rinard Mills, Ohio	Latitude 39°36′08″, longitude 81°09′17", Monroe County, Hydrologic Unit 05030201, at State Route 26 bridge over Clear Fork, 0.3 mi above confluence with Little Muskingum River, 1.2 mi north of Rinard Mills, Ohio. (Rinard Mills 1:24000 quad)	48.8	1997-99 2001-02	--	--
		MUSKINGUM RIVER BASIN				
03123166	South Fork Sugar Creek near Sugarcreek, Ohio	Latitude 40°31′25″, longitude 81°36′52″, Tuscarawas County, Hydrologic Unit 05040001, at Tuscarawas County Road 75, 0.2 mi downstream from confluence with East Branch, 0.2 mi northeast of Sugarcreek, Ohio. (Strasburg 1:24000 quad)	63.3	1997-00 2002-03	09/11/03	38.4
03123299	Walnut Creek at Dundee, Ohio	Latitude 40°35′12″, longitude 81°37′16″, Tuscarawas County, Hydrologic Unit 05040001, at private road bridge, 0.5 mi upstream from mouth, 0.7 mi.west of Dundee, Ohio. (Strasburg 1:24000 quad)	48.0	1997-00 2002-03	09/11/03	24.2

LOW-FLOW PARTIAL-RECORD STATIONS—Continued

[mi^2, square miles; wy, water year; ft^3/s, cubic foot per second; --, no data]

Station number	Station name	Location	Drainage Area (mi^2)	Period of record (wy)	Measurements Date	Measurements Discharge (ft^3/s)
		MUSKINGUM RIVER BASIN—CONTINUED				
03129205	Black Fork Mohican River near Shelby, Ohio	Latitude 40°54′57″, longitude 82°38′02″, Richland County, Hydrologic Unit 05040002, at bridge on Plymouth-Spring Road, 0.3 mi downstream from Bear Run, 2.8 mi northeast of Shelby, 2000 ft north of London, Ohio. (Shelby 1:24000 quad)	60.4	2000-03	09/10/03	8.81
03133950	Jerome Fork near Ashland, Ohio	Latitude 40°53′02″, longitude 82°17′03″, Ashland County, Hydrologic Unit 05040002, at bridge on U.S. Highway 42, 0.7 mi upstream from Lang Creek, 2.0 mi northeast of Ashland, 1000 ft north of Cleveland Ave., concrete block building on downstream, left of bridge (gray-no paint), at entrance to well-field. (Ashland North 1:24000 quad)	38.6	2000-02	--	--
03136142	Kokosing River at Chesterville, Ohio	Latitude 40°28′28″, longitude 82°41′02″, Morrow County, Hydrologic Unit 05040003, at State Route 314 bridge, 0.5 mi downstream from confluence with South Branch, 0.4 mi south of Chesterville, Ohio. (Chesterville 1:24000 quad)	38.7	1996 1998-00 2002-03	08/26/03	2.64
03142185	Salt Fork Creek near Old Washington, Ohio	Latitude 40°03′27″, longitude 81°24′53″, Guernsey County, Hydrologic Unit 05040005, just upstream from outlet of wetland, 2.8 miles upstream of Coon Run, 4.3 miles upstream from Salt Fork Reservoir, 2.1 miles northeast of Old Washington, Ohio. (Old Washington 1:24000 quad)	44.6	2002	--	--
03144471	Little Wakatomika Creek near Trinway, Ohio	Latitude 40°09′18″, longitude 82°01′55″, Muskingum County, Hydrologic Unit 05040004, at new road bridge just upstream of new State Route 16 bridge, 0.8 mi upstream from mouth, 1.4 miles northwest of Trinway, 2.3 mi northwest of Dresden, Ohio. (Trinway 1:24000 quad)	40.6	2002-03	09/11/03	19.6
03145329	Raccoon Creek at Alexandria, Ohio	Latitude 40°05′05″, longitude 82°36′18″, Licking County, Hydrologic Unit 05040006, at State Route 37 bridge over Raccoon Creek, 0.8 mi above confluence with Lobdell Creek, 0.9 mi below confluence with Simpson Run, 0.7 mi north of intersection of State Route 37 and 161, 0.2 mi southeast of Alexandria, Ohio. (Granville 1:24000 quad)	40.6	1997-99 2002-03	09/18/03	7.21
03145533	Raccoon Creek at Newark, Ohio	Latitude 40°02′34″, longitude 82°24′44″, Licking County, Hydrologic Unit 05040006, at West Main Street bridge over Raccoon Creek, 0.7 mi. above confluence with South Fork Licking River, in Newark, Ohio. (Newark 1:24000 quad)	101	1997-99 2002-03	09/18/03	30.9

LOW-FLOW PARTIAL-RECORD STATIONS—Continued

[mi^2, square miles; wy, water year; ft^3/s, cubic foot per second; --, no data]

Station number	Station name	Location	Drainage Area (mi^2)	Period of record (wy)	Measurements	
					Date	Discharge (ft^3/s)
		MUSKINGUM RIVER BASIN—CONTINUED				
03150200	Meigs Creek near Reinersville, Ohio	Latitude 39°37′43″, longitude 81°43′12″, Morgan County, Hydrologic Unit 05040004, at county road bridge at Unionville, 0.1 mi upstream from Dyes Fork, 5.1 mi southwest of Reinersville, Ohio. (Reinersville 1:24000 quad)	73.0	1981-82 1996 1998-99 2002-03	09/16/03	8.45
		HOCKING RIVER BASIN				
03158165	Monday Creek near Greendale, Ohio	Latitude 39°36′08″, longitude 81°09′17", Latitude 39°31′24″, longitude 82°16′17″, Hocking County, Hydrologic Unit 05030204, at Dawley Road over Monday Creek, 0.7 mi above confluence with Sand Run, 0.9 mi above proposed reservoir site, 1.3 mi southeast of Greendale, 4 mi northeast of Haydenville, Ohio. (Gore 1:24000 quad)	67.2	1995-96 1998-99 2001-023	09/17/03	15.2
		SYMMES CREEK BASIN				
03205260	Symmes Creek near Centerpoint, Ohio	Latitude 38°52′12″, longitude 82°28′44″, Jackson County, Hydrologic Unit 05090101, at Jenkins Alban Road bridge over Symmes Creek, 2.5 mi above confluence with Black Fork, 1.9 mi northwest of Centerpoint, Ohio.(Patriot 1:24000 quad)	45.9	1997-99 2001-03	09/15/03	1.34
		PINE CREEK BASIN				
03216620	Pine Creek near South Webster, Ohio	Latitude 38°46′12″, longitude 82°42′25″, Scioto County, Hydrologic Unit 05090103, at Lick Run Lyra Road bridge over Pine Creek, 3.0 mi southeast of South Webster, Ohio. (South Webster 1:24000 quad)	33.2	1998-99 2001-03	09/15/03	4.05
		LITTLE SCIOTO RIVER BASIN				
03216662	Little Scioto River near Mabee Corner, Ohio	Latitude 38°54′18″, longitude 82°46′46″, Scioto County, Hydrologic Unit 05090103, at Sulphur Spring Road bridge, just west of White Gravel Road, 0.6 mi downstream from Buckhorn Creek, 0.9 mi from intersection of State Route 139 and White Gravel Road, 3.1 mi west of Mabee Corner, Ohio. (Stockdale 1:24000 quad)	60.5	2000-03	09/15/03	5.40
03216673	Little Scioto River at Wallace Mills, Ohio	Latitude 38°51′06″, longitude 82°47′36″, Scioto County, Hydrologic Unit 05090103, 1000 ft upstream of the confluence with Rocky Fork, near Kentucky Trail Road, 0.5 mi north of Wallace Mills, Ohio. Site can be reached 2.1 mi from State Route 139 on Stockham Road and right 0.3 mi on Kentucky Trail Road. (Minford 1:24000 quad)	108	2000-03	09/15/03	8.75
03216689	Rocky Fork at Wallace Mills, Ohio	Latitude 38°51′27″, longitude 82°47′47″, Scioto County, Hydrologic Unit 05090103, from State Route 139 , heading southeast on Stockham Road about 0.4 mi to Glades Road, head south on Glades Road about 1.3 mi to bridge, at Glades Road bridge, 0.6 mi above mouth in Wallace Mills, Ohio. (Minford 1:24000 quad)	68.8	2000-03	09/15/03	5.94

LOW-FLOW PARTIAL-RECORD STATIONS—Continued

[mi^2, square miles; wy, water year; ft^3/s, cubic foot per second; --, no data]

Station number	Station name	Location	Drainage Area (mi^2)	Period of record (wy)	Measurements	
					Date	Discharge (ft^3/s)
		SCIOTO RIVER BASIN				
03219838	Mill Creek near New Dover, Ohio	Latitude 40°13′39″, longitude 83°17′52″, Union County, Hydrologic Unit 05060001, at Hinton Mill Road bridge, 0.4 miles upstream from Tombstone Creek, 1.4 miles south of New Dover, 3.5 miles east of Marysville, Ohio. (Marysville 1:24000 quad)	102	2002-03	09/12/03	16.7
03230088	Big Darby Creek near Milford Center, Ohio	Latitude 40°11′42″, longitude 83°28′27″, Union County, Hydrologic Unit 05060001, just upstream of unnamed tributary, near intersection of Middleburg Road and Collins Road, 2.3 miles northwest of Milford Center, Ohio. (Milford Center 1:24000 quad)	66.0	2002-03	09/12/03	17.1
03232170	West Branch Rattlesnake Creek at Glendon, Ohio	Latitude 39°30′40″, longitude 83°33′54″, Fayette County, Hydrologic Unit 05060003, at West Fork Road bridge, 0.2 mi upstream from mouth, 0.8 mi west of Glendon, 4.0 mi east of Sabina, 6.6 mi west of Washington Court House, Ohio. (Milledgeville 1:24000 quad)	59.8	2000 2002-03	09/17/03	3.76
03232171	Rattlesnake Creek at Glendon, Ohio	Latitude 39°30′20″, longitude 83°33′18″, Fayette County, Hydrologic Unit 05060003, at State Route 3 bridge in Glendon, 4.4 mi east of Sabina, 6.2 mi west of Washington Court House, Ohio. (Milledgeville 1:24000 quad)	106	2000 2002-03	09/17/03	11.7
03232295	Lees Creek near Leesburg, Ohio	Latitude 39°20′39″, longitude 83°30′33″, Highland County, Hydrologic Unit 05060003, at bridge on Monroe Road, 1.2 mi upstream from mouth, 2.4 mi east of Leesburg, Ohio. (Leesburg 1:24000 quad)	74.3	1981-82 2000 2002-03	09/17/03	4.37
03234050	North Fork Paint Creek near Plano, Ohio	Latitude 39°30′19″, longitude 83°16′22″, Ross County, Hydrologic Unit 05060003, at Dogtown Road bridge, 0.6 mi above confluence with Compton Creek, 1.2 mi northeast of Plano, Ohio. (New Holland 1:24000 quad)	60.4	2000 2002-03	09/17/03	12.4
03234066	Compton Creek near Plano, Ohio	Latitude 39°30′54″, longitude 83°17′47″, Fayette County, Hydrologic Unit 05060003, at Good Hope-New Holland Road bridge, 3.4 mi above mouth, 1.7 mi north of Plano, Ohio. (New Holland 1:24000 quad)	49.8	2000-03	09/17/03	11.2
		OHIO BRUSH CREEK BASIN				
03237288	Ohio Brush Creek at Louden, Ohio	Latitude 39°01′48″, longitude 83°27′19″, Adams County, Hydrologic Unit 05090201, at Ford on Heron Road, 0.3 mi north-northwest of Louden, 4.8 mi southwest of Sinking Springs, Ohio. (Sinking Spring 1:24000 quad)	64.9	2000 2002	--	--

LOW-FLOW PARTIAL-RECORD STATIONS—Continued

[mi^2, square miles; wy, water year; ft^3/s, cubic foot per second; --, no data]

Station number	Station name	Location	Drainage Area (mi^2)	Period of record (wy)	Measurements	
					Date	Discharge (ft^3/s)
		OHIO BRUSH CREEK BASIN—CONTINUED				
03237289	Baker Fork near Louden, Ohio	Latitude 39°02′29″, longitude 83°25′21″, Adams County, Hydrologic Unit 05090201, at Horner Chapel Road bridge, 1.3 mi north of Serpent Mound State Memorial, 2.0 mi northeast of Louden, 3.0 mi southwest of Sinking Springs, Ohio. (Sinking Spring 1:24000 quad)	43.1	2000 2002	--	--
03237400	West Fork Ohio Brush Creek at Lawshe, Ohio	Latitude 38°56′22″, longitude 83°28′28″, Adams County, Hydrologic Unit 05090201, at Township Road C-13 bridge in Lawshe, 0.4 mi upstream from mouth, 1.1 mi southwest from Peebles on State Highway 41 to Township Road C-13, turn right, 3.6 mi to bridge and station. (Peebles 1:24000 quad)	134	1959-60 1972-77 2000-02	--	--
		LITTLE MIAMI RIVER BASIN				
03243150	Todd Fork near Clarksville, Ohio	Latitude 39°26′10″, longitude 83°56′41″, Clinton County, Hydrologic Unit 05090202, at U.S. Highway 22 bridge, 1.0 mi upstream from Lytle Creek, 2.7 mi northeast of Clarksville, Ohio. (Clarksville 1:24000 quad)	56.6	1981-82 1995-96 1998-00 2002	--	--
03244950	O'Bannon Creek at Loveland, Ohio	Latitude 39°16′08″, longitude 84°15′21″, Clermont County, Hydrologic Unit 05090202, at State Route 48 bridge, in Loveland, Ohio. (Mason 1:24000 quad)	59.0	1956 1980-83 1996 1998-00 2002	--	--
03247300	Stonelick Creek near Perintown, Ohio	Latitude 39°07′20″, longitude 84°11′56″, Clermont County, Hydrologic Unit 05090202, at U.S. Highway 50 bridge, 1.9 mi east of Perintown, Ohio. (Batavia 1:24000 quad)	76.0	1981-82 1996 1998-00 2002	--	--
		GREAT MIAMI RIVER BASIN				
03263168	Stillwater River near Ansonia, Ohio	Latitude 40°13′01″, longitude 84°36′44″, Darke County, Hydrologic Unit 05080001, at Beisner Road over Stillwater River, 0.1 mi north of State Route 47, 1.2 mi east of Ansonia, 1.8 mi west of Dawn, Ohio. (Dawn 1:24000 quad	74.3	1995-99 2002-03	08/26/03	3.35
03272429	Four Mile Creek near College Corner, Ohio	Latitude 39°35′31″, longitude 84°46′14″, Preble County, Hydrologic Unit 05080002, at bridge over Four Mile Creek, 0.1 mi below confluence with East Fork Four Mile Creek, 0.8 mi above confluence with Little Four Mile Creek, 0.8 mi northwest from Acton Lake, in Hueston Woods State Park, 3 mi northeast of College Corner, Ohio & Indiana.(College Corner 1:24000 quad)	50.1	1996 1998-99 2001-02	--	--
03276588	Dry Fork Whitewater River at New Haven, Ohio	Latitude 39°15′57″, longitude 84°44′54″, Hamilton County, Hydrologic Unit 05080003, at Mt. Hope Road bridge, 0.9 mi below confluence with Howard Creek, 1.2 mi.above confluence with Lee Creek, next to Miami Whitewater Forest, 0.8 mi southwest of New Haven, Ohio.(Shandon 1:24000 quad)	59.8	1996 1998-00 2002	--	--

LOW-FLOW PARTIAL-RECORD STATIONS—Continued

[mi^2, square miles; wy, water year; ft^3/s, cubic foot per second; --, no data]

Station number	Station name	Location	Drainage Area (mi^2)	Period of record (wy)	Measurements Date	Measurements Discharge (ft^3/s)
		MAUMEE RIVER BASIN				
04180911	St. Marys River above Kopp Creek at St. Marys, Ohio	Latitude 40°32′07″, longitude 84°22′38″, Auglaize County, Hydrologic Unit 04100004, at Aqueduct Road over St. Mary's River, 150 ft upstream of Miami and Erie Canal aqueduct, 0.3 mi above confluence of Kopp Creek, 2.1 mi east of Grand Lake, 0.5 mi. southeast of St.Mary's, Ohio. (St. Marys 1:24000 quad)	67.0	1994-99 2002-03	09/26/03	3.51
04185299	Brush Creek at Evansport, Ohio	Latitude 41°26′00″, longitude 84°23′24″, Williams County, Hydrologic Unit 04100006, at county road over Brush Creek, 1.0 mi above mouth, 0.4 mi north of Williams/Defiance county line, 0.6 mi northeast of Evansport, Ohio. (Evansport 1:24000 quad)	64.8	1994-96 1998-99 2001-03	09/12/03	8.63
04185410	Lick Creek near Brunersburg, Ohio	Latitude 41°22′08″, longitude 84°26′17″, Defiance County, Hydrologic Unit 04100006, at bridge on Trinity Road, 1.2 mi upstream from mouth, 5.0 mi northwest of Brunersburg, Ohio. (Defiance West 1:24000 quad)	105	1980-82 2001-03	09/12/03	14.4
04185498	Mud Creek near Brunersburg, Ohio	Latitude 41°20′34″, longitude 84°26′51″, Defiance County, Hydrologic Unit 04100006, at bridge on State Route 15, 2.4 mi upstream from mouth, 4.0 mi northwest of Brunersburg, Ohio. (Defiance West 1:24000 quad)	58.0	1980-82 2001-03	09/12/03	15.8
04187995	Sugar Creek near Kalida, Ohio	Latitude 40°57′16″, longitude 84°10′45″, Putnam County, Hydrologic Unit 04100007, at bridge on Putnam County Road 16P, 0.6 mi upstream from mouth, 2.2 mi southeast from Kalida, Ohio. (Kalida 1:24000 quad)	64.2	1981-82 2000-03	09/17/03	5.55
04188097	Plum Creek at Kalida, Ohio	Latitude 40°59′12″, longitude 84°12′33″, Putnam County, Hydrologic Unit 04100007, at State Route 114, 0.3 mi northwest of Kalida, Ohio. (Kalida 1:24000 quad)	39.8	1999-03	09/16/03	1.75
04189172	Riley Creek near Bluffton, Ohio	Latitude 40°54′12″, longitude 83°56′19″, Allen County, Hydrologic Unit 04100007, at Phillips Road bridge over Riley Creek, 3.7 mi downstream from confluence of Little Riley Creek, 2.5 mi northwest of Bluffton, Ohio. (Bluffton 1:24000 quad)	64.4	1994-96 1999-03	09/12/03	5.58
04191007	Town Creek near Hoaglin, Ohio	Latitude 40°58′36″, longitude 84°28′36″, Van Wert County, Hydrologic Unit 04100007, at State Route 637 bridge over Town Creek, 2.1 mi above confluence with Maddox Creek, 0.9 mi south of Paulding/Van Wert County line, 2.3 mi northeast of Hoaglin, 3.1 mi north of State Route 224, 10 mi northeast of Van Wert, Ohio. (Wetsel 1:24000 quad)	51.7	1995-96 1998-99 2002-03	09/16/03	13.3

LOW-FLOW PARTIAL-RECORD STATIONS—Continued

[mi^2, square miles; wy, water year; ft^3/s, cubic foot per second; --, no data]

Station number	Station name	Location	Drainage Area (mi^2)	Period of record (wy)	Measurements Date	Measurements Discharge (ft^3/s)
		MAUMEE RIVER BASIN—CONTINUED				
04191100	Flatrock Creek near Payne, Ohio	Latitude 41°05′57″, longitude 84°40′06″, Paulding County, Hydrologic Unit 04100007, at Township Road 71 bridge, 2.0 mi downstream from Wildcat Creek, 3.5 mi northeast of Payne, Ohio. Proceed 3.4 minortheast from Payne on State Highway 500 to Township Road 71, turn right and go 0.1 mi to bridge and station. (Payne 1:24000 quad)	147	1972–77 1995–96 1998–99 2003	09/16/03	11.7
04192600	South Turkeyfoot Creek near Malinta, Ohio	Latitude 41°22′15″, longitude 84°01′22″, Henry County, Hydrologic Unit 04100009, at U.S. Highway 6 bridge, 1.8 mi upstream from Little Turkeyfoot Creek, 3.5 mi north of Malinta. Proceed north from Malinta on State Highway 109 for 3.4 mi to U.S. Highway 6, turn right and go 0.8 mi to bridge and station. (Malinta 1:24000 quad)	121	1955–56 1972–77 2001–03	09/10/03	3.49
04192710	Bad Creek at Colton, Ohio	Latitude 41°27′29″, longitude 83°57′34″, Henry County, Hydrologic Unit 04100009, at County Road U bridge, 0.5 mi southwest of Colton, Ohio, 2.0 mi south of Fulton/Henry county line, and 3.9 mi upstream from confluence with Maumee River. (Colton 1:24000 quad)	56.5	1999 2001–03	09/10/03	7.47
04192782	Yellow Creek near Deshler, Ohio	Latitude 41°12′16″, longitude 83°51′39″, Wood County, Hydrologic Unit 04100009, at State Route 18 bridge, 1.9 mi east of Deshler, 4.1 mi.west of Hoytville. (Hoytville 1:24000 quad)	53.3	2000–03	09/12/03	1.08
		PORTAGE RIVER BASIN				
04194362	South Branch Portage River near Jerry City, Ohio	Latitude 41°16′22″, longitude 83°30′56″, Wood County, Hydrologic Unit 04100010, at Portage View Road over South Branch Portage River, 0.6 mi above confluence with East Branch, 2.1 mi southeast of Six Points, 4.5 mi northeast of Jerry City, Ohio. (Jerry City 1:24000 quad)	54.0	1995–96 1999–03	09/12/03	0.46
		SANDUSKY RIVER BASIN				
04196580	Little Tymochtee Creek near Marseilles, Ohio	Latitude 40°41′13″, longitude 83°24′44″, Marion County, Hydrologic Unit 04100011, at County Road 22 bridge, 1.3 mi above mouth, 1.4 mi southwest of Marseilles, Ohio. (Marseilles 1:24000 quad)	43.7	1978 1980–82 1997–03	09/11/03	1.46
		HURON RIVER BASIN				
04198017	West Branch Huron River near New Haven, Ohio	Latitude 41°03′08″, longitude 82°39′37″, Huron County, Hydrologic Unit 04100012, at Boughtonville Road bridge, 0.5 mi below confluence with Marsh Run, 3.3 mi east of Willard, Ohio. (Willard 1:24000 quad)	69.4	1981–82 1997–03	09/10/03	11.7

LOW-FLOW PARTIAL-RECORD STATIONS—Continued

[mi^2, square miles; wy, water year; ft^3/s, cubic foot per second; --, no data]

Station number	Station name	Location	Drainage Area (mi^2)	Period of record (wy)	Measurements	
					Date	Discharge (ft^3/s)
		VERMILION RIVER BASIN				
04199251	Vermilion River near New London, Ohio	Latitude 41°03′51″, longitude 82°27′10″, Huron County, Hydrologic Unit 04100012, at U.S. Route 250 bridge, 0.8 mi west of New London Reservior, 0.2 mi north of Akron Canton Youngstown Penn Central Railroad, 3.0 mi southwest of New London, Ohio. (New London 1:24000 quad)	68.9	1997-03	09/10/03	2.79
		BLACK RIVER BASIN				
04199617	West Fork East Branch Black River at Lodi, Ohio	Latitude 41°01′36″, longitude 82°02′29″, Medina County, Hydrologic Unit 04110001, at bridge of State Route 421, 0.6 mi east of intersection of State Route 42 and 224, 1.6 mi west of Lodi, Ohio. (Lodi 1:24000 quad)	40.6	2000-03	09/12/03	1.61
04199706	East Branch Black River near Penfield, Ohio	Latitude 41°08′12″, longitude 82°07′00″, Medina/Lorain County, Hydrologic Unit 04110001, at Smith Road bridge over East Branch Black River, on Medina/ Lorain county line, 0.3 mi east of State Route 301, 2.2 mi south of Penfield, 3.2 mi north of Spencer, Ohio. (Lagrange 1:24000 quad)	105	1995-96 1998-03	09/12/03	5.71
		ROCKY RIVER BASIN				
04201079	West Branch Rocky River near Medina, Ohio	Latitude 41°09′09″, longitude 81°50′02″, Medina County, Hydrologic Unit 04110001, at Weymouth Road bridge over West Branch Rocky River, 0.3 mi below confluence with North Branch, 1.9 mi northeast of Medina, Ohio. (Medina 1:24000 quad)	61.2	1995-96 1998-99 2001-02	--	--
		CUYAHOGA RIVER BASIN				
04205645	Little Cuyahoga River above Ohio & Erie Canal at Akron, Ohio	Latitude 41°05′27″, longitude 81°30′40″, Summit County, Hydrologic Unit 04110002, in Akron. Station is reached by driving east on State Route 18 (West Market Street). Turn right (north) onto North Main Street. Travel for 0.4 mi. Turn right (east) onto East North Street. Travel for 0.2 mi to station at Stuber Street bridge on left (north). (Akron West 1:24000 quad)	55.1	1998-99 2001-02	--	--
		ASHTABULA RIVER BASIN				
04212453	Ashtabula River near Kelloggsville, Ohio	Latitude 41°50′00″, longitude 80°37′13″, Ashtabula County, Hydrologic Unit 04110003, at Root Road Covered Bridge over Ashtabula River, 1.7 mi downstream of confluence of East and West Branches of Ashtabula River, 1.6 mi south of Kelloggsville, 2.4 mi east of Sheffield Center, 7.5 mi southeast of Ashtabula, Ohio. (Pierpont 1:24000 quad)	66.5	1995-99 2001-03	09/12/03	1.33

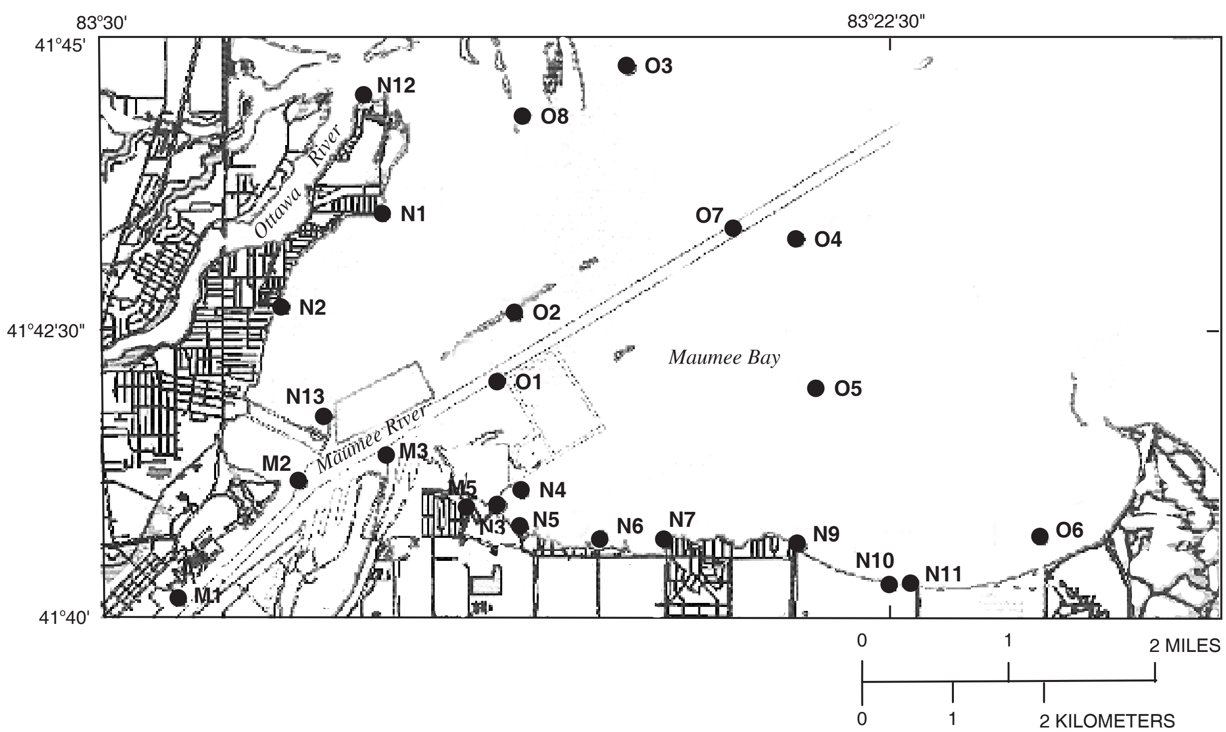
DISCONTINUED STREAMFLOW-GAGING STATIONS

[mi^2, square miles; wy, water year; ft^3/s, cubic foot per second]

Station number	Station name	Location	Drainage area (mi^2)	Period of record (wy)	Measurements	
					Date	Discharge (ft3/s)
		MUSKINGUM RIVER BASIN				
03123000	Sugar Creek above Beach City Dam at Beach City, Ohio	Latitude 40°39′24″, longitude 81°34′37″, in NE 1/4 sec. 35, T. 11 N., R. 10 W., Stark County, on right bank at downstream side of 3rd Avenue bridge at Beach City, 2.3 mi upstream from Beach City Dam.	160	1945-75	09/11/03	55.5
		SCIOTO RIVER BASIN				
03223000	Olentangy River at Claridon, Ohio	Latitude 40°34′58″, longitude 82°59′20″, in NW 1/4 sec. 26, T.5 S., R.16 E., Marion County, Hydrologic Unit 05060001, on left bank 900 ft downstream from bridge on State Highway 95, 0.5 mi east of Claridon, 0.8 mi downstream from Otter Creek, and 1.4 mi upstream from Beaver Run.	157	1947-98	--	--
		LITTLE MIAMI RIVER BASIN				
03242050	Little Miami River near Spring Valley, Ohio	Latitude 39°35′00″, longitude 84°01′49″, (SE 14 sec Waynesville Quadrangle) in Greene County on right bank at downstream side of bridge on New Burlington Road, 3/4 mi west of Roxanna, and 2.2 mi southwest of Spring Valley, Ohio.	366	1968-85	--	--
		GREAT MIAMI RIVER BASIN				
03271800	Twin Creek near Ingomar, Ohio	Latitude 39°42′28″, longitude 84°31′30″, in sec. 15, T.5 N., R.3 E., Preble County, Hydrologic Unit 05080002, on left bank at downstream side of bridge on Halderman Road, 0.5 mi downstream from Bantas Fork, 1.4 mi west of Ingomar, and 4.8 mi upstream from Aukerman Creek.	197	1963-98	--	--

Escherichia coli in Water and Bed Sediments in Maumee Bay, Toledo and Oregon, Ohio

Field studies were done during the recreational season of 2003 (April through September) at 24 sampling sites within Maumee Bay and in the lower Maumee and Ottawa Rivers. These sites included nearshore and offshore locations. Bed-sediment and lake-water samples were collected at each site and analyzed for *Escherichia coli* concentrations. These analyses were conducted as part of a study to identify proximate sources of fecal contamination to Maumee Bay so that future corrective measures can be taken and (or) accurate and timely predictions of recreational water quality can be made.



WATER-QUALITY RECORDS

The following tables list the results of bacteriological, water-quality, and physical measurements of water samples collected in the nearshore and offshore sites within Maumee Bay and in the lower Maumee and Ottawa Rivers, June through September 2003.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

[(00076), USGS National Water Information System parameter code; NTU, nephelometric turbidity units; mg/L, milligrams per liter; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; *E. coli*, *Escherichia coli*; col/100mL, colonies per 100 milliliters; --, no data; E, estimated; <, concentration or value is less than that indicated]

Date	Time	Turb-idity (NTU) (00076)	Dis-solved oxygen (mg/L) (00300)	pH water, unfiltered field (standard units) (00400)	Specific conduct-ance water unfiltered (µS/cm) (00095)	Temper-ature water (deg C) (00010)	*E. coli*, modified MTEC, water (col/100 mL) (90902)
(M1) 414059083290500—MAUMEE RIVER UPSTREAM TOLEDO WASTEWATER PLANT							
JUN							
24...	1133	180	7.4	7.3	360	24.0	120
JUL							
29...	0820	64	6.2	7.6	392	23.0	250
30...	0830	61	--	7.7	388	--	130
SEP							
07...	1009	62	6.4	7.6	362	20.4	87
11...	0909	70	6.4	7.0	444	22.2	220
(N10) 414111083223200—MAUMEE BAY AT MAUMEE BAY STATE PARK							
JUN							
24...	1015	14	5.4	7.1	429	23.8	E53
JUL							
29...	0910	12	--	8.3	366	--	93
30...	1012	13	7.9	8.3	365	23.5	22
SEP							
07...	0942	27	10.2	8.9	450	20.8	130
11...	1009	28	--	8.4	432	22.5	E19
(N11) 414112083222000—MAUMEE BAY AT MOUTH OF BERGER DITCH							
JUN							
25...	0905	19	5.5	7.0	451	24.7	220
JUL							
29...	0915	14	--	8.3	354	--	E14
30...	1016	14	7.5	8.2	408	23.1	150
AUG							
14...	0953	--	7.8	8.1	371	25.2	24
SEP							
07...	0935	22	7.5	8.4	505	20.9	42
11...	1000	35	--	8.3	435	22.3	40
(N9) 414126083232200—MAUMEE BAY NEAR MOUTH OF MCHENRY DITCH							
JUN							
25...	0913	21	3.0	7.0	417	23.6	29
JUL							
29...	0920	18	--	8.2	391	--	49
30...	1007	15	6.5	8.0	398	23.3	E12
SEP							
07...	0948	26	7.5	8.4	493	21.0	E16
11...	1018	72	--	8.7	418	23.1	21
(N7) 414127083243800—MAUMEE BAY NEAR MOUTH OF BIG DITCH							
JUN							
24...	1028	50	5.4	7.5	413	25.7	E61
JUL							
29...	0936	40	--	8.1	399	--	70
30...	1001	23	6.1	7.9	397	24.6	42
SEP							
07...	0958	24	9.9	8.7	507	22.0	62
11...	1034	45	--	8.2	409	23.8	E32

WATER-QUALITY RECORDS—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(00076), USGS National Water Information System parameter code; NTU, nephelometric turbidity units; mg/L, milligrams per liter; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; *E. coli*, *Escherichia coli*; col/100mL, colonies per 100 milliliters; --, no data; E, estimated; <, concentration or value is less than that indicated]

Date	Time	Turbidity (NTU) (00076)	Dissolved oxygen (mg/L) (00300)	pH water, unfiltered field (standard units) (00400)	Specific conductance water unfiltered (µS/cm) (00095)	Temperature water (deg C) (00010)	*E. coli*, modified MTEC, water (col/100 mL) (90902)
(N6) 414128083251200—MAUMEE BAY NEAR BAYSHORE							
JUN							
25...	0924	15	2.0	7.1	434	23.3	<1
JUL							
29...	0943	39	--	8.1	397	--	64
30...	0953	30	6.0	7.8	390	25.5	55
AUG							
14...	1008	--	8.8	8.1	378	27.8	240
SEP							
07...	1002	34	9.7	8.8	487	23.0	65
11...	1041	33	--	7.9	403	25.3	23
(N5) 414131083255700—MAUMEE BAY NEAR MOUTH OF HECKMAN DITCH							
JUN							
16...	1015	65	9.7	8.6	513	21.9	120
24...	1123	58	3.0	7.6	415	25.5	680
JUL							
29...	0948	50	--	8.1	396	--	97
30...	0935	29	5.2	7.6	396	26.0	E22
AUG							
14...	1014	--	8.6	8.0	389	27.5	23
SEP							
07...	1136	19	6.7	8.0	487	23.8	E37
11...	1250	58	--	8.4	405	26.0	E52
(O6) 414133083210900—MAUMEE BAY NEAR MOUTH OF ANDERSON DITCH							
JUN							
25...	1010	19	8.6	8.2	418	25.5	45
JUL							
29...	1134	8	5.8	8.0	384	22.8	E2
30...	1236	4.7	--	7.8	371	--	E2
SEP							
07...	1404	11	8.7	8.4	396	21.7	E5
11...	1332	20	9.2	8.5	398	23.0	E3
(N3) 414140083260900—MAUMEE BAY NEAR OUTFALL BAY SHORE POWER PLANT							
JUN							
16...	1000	50	10.1	8.2	605	24.2	77
25...	1008	76	5.2	7.7	407	25.8	93
JUL							
29...	0957	50	--	8.1	393	--	120
30...	0943	34	6.3	7.8	397	27.1	35
SEP							
07...	1130	52	5.8	7.9	429	24.9	110
11...	1244	56	--	8.0	411	28.2	80
(M5) 414140083262700—MAUMEE RIVER NEAR INTAKE BAY SHORE POWER PLANT							
JUN							
25...	1248	150	7.3	7.4	396	25.3	57
JUL							
29...	0928	68	5.0	7.5	404	23.0	170
30...	0936	53	--	7.5	398	--	100
SEP							
07...	1119	57	6.2	7.6	383	20.8	87
11...	1014	53	6.4	7.7	400	22.4	130

WATER-QUALITY RECORDS—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(00076), USGS National Water Information System parameter code; NTU, nephelometric turbidity units; mg/L, milligrams per liter; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; *E. coli*, *Escherichia coli*; col/100mL, colonies per 100 milliliters; --, no data; E, estimated; <, concentration or value is less than that indicated]

Date	Time	Turbidity (NTU) (00076)	Dissolved oxygen (mg/L) (00300)	pH water, unfiltered field (standard units) (00400)	Specific conductance water unfiltered (µS/cm) (00095)	Temperature water (deg C) (00010)	*E. coli*, modified MTEC, water (col/100 mL) (90902)
(N4) 414147083255600—MAUMEE BAY NEAR OUTFALL OREGON WASTEWATER PLANT							
JUN							
24...	1118	130	3.6	7.6	409	26.0	E40
JUL							
29...	1117	61	--	8.1	381	--	200
30...	0946	56	4.7	7.6	395	26.7	77
AUG							
14...	1027	--	7.1	7.8	390	30.5	90
SEP							
07...	1125	64	6.0	7.9	395	25.8	82
11...	1235	54	--	8.1	408	27.4	E53
(M2) 414149083280000—MAUMEE RIVER NEAR MOUTH							
JUN							
25...	1224	170	6.6	7.3	403	24.4	64
JUL							
29...	0842	58	5.4	7.5	410	22.9	200
30...	0855	56	--	7.6	398	--	110
AUG							
14...	1055	--	8.9	8.0	382	25.2	130
SEP							
07...	1029	66	6.1	7.6	384	20.5	100
11...	0933	55	6.5	7.7	400	22.3	220
(M3) 414201083271200—MAUMEE RIVER NEAR MOUTH OF OTTER CREEK							
JUN							
24...	1223	160	7.2	7.4	365	24.0	E85
JUL							
29...	0902	62	4.8	7.5	403	23.0	180
30...	0910	41	--	7.6	382	--	83
SEP							
07...	1051	71	6.1	7.6	369	20.5	90
11...	0948	48	6.4	7.7	397	22.4	E57
(N13) 414215083274600—MAUMEE BAY WEST OF GRASSY ISLAND							
JUN							
24...	1100	170	5.8	7.8	407	23.4	80
JUL							
29...	1100	67	--	8.2	396	--	180
30...	1110	53	8.0	8.3	396	24.2	220
AUG							
14...	1101	--	10.7	8.4	369	26.1	87
SEP							
07...	1107	74	5.5	8.0	421	20.8	150
11...	1208	97	--	8.4	403	23.3	240
(O1) 414233083261100—MAUMEE BAY NEAR SPOIL							
JUN							
25...	1312	140	7.3	7.4	404	23.8	33
JUL							
29...	0945	52	4.7	7.5	405	23.2	100
30...	1001	37	--	7.6	388	--	E51
AUG							
14...	1042	--	8.4	8.0	374	26.2	61
SEP							
07...	1230	54	6.3	7.6	381	21.0	62
11...	1042	51	7.2	7.8	398	22.8	68

WATER-QUALITY RECORDS—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(00076), USGS National Water Information System parameter code; NTU, nephelometric turbidity units; mg/L, milligrams per liter; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; *E. coli*, *Escherichia coli*; col/100mL, colonies per 100 milliliters; --, no data; E, estimated; <, concentration or value is less than that indicated]

Date	Time	Turbidity (NTU) (00076)	Dissolved oxygen (mg/L) (00300)	pH water, unfiltered field (standard units) (00400)	Specific conductance water unfiltered (µS/cm) (00095)	Temperature water (deg C) (00010)	*E. coli*, modified MTEC, water (col/100 mL) (90902)
(O2) 414259083260300—MAUMEE BAY NEAR SHOAL							
JUN							
24...	1247	160	6.5	7.3	378	23.0	E46
JUL							
29...	1002	56	4.6	7.5	409	22.9	72
30...	1028	44	--	7.6	399	--	67
SEP							
07...	1140	64	6.0	7.6	371	20.8	74
11...	1104	41	7.1	7.8	395	23.0	58
(N2) 414300083281200—MAUMEE BAY NEAR POINT PLACE							
JUN							
24...	1050	22	9.5	8.7	472	22.6	E7
JUL							
29...	1050	57	--	8.5	381	--	E14
30...	1104	63	7.2	8.1	375	24.7	22
SEP							
07...	1100	48	10.2	9.1	472	22.1	73
11...	1156	56	--	9.4	373	23.7	E19
(O4) 414334083232800—MAUMEE BAY NEAR SHIPPING CHANNEL							
JUN							
25...	1037	16	10.1	8.5	436	24.7	<1
JUL							
29...	1104	42	5.4	7.8	381	22.7	E9
30...	1150	19	--	7.9	373	--	E5
SEP							
07...	1307	26	6.1	7.0	380	20.4	E13
11...	1131	28	10.5	8.6	413	22.5	E4
(O5) 414334083240100—MAUMEE BAY NORTH OF TOBIAS DITCH							
JUN							
25...	1100	46	7.9	7.8	412	24.4	E7
JUL							
29...	1118	20	5.3	7.8	393	23.0	E3
30...	1215	8.4	--	7.8	384	--	E3
SEP							
07...	1343	24	7.3	7.9	466	21.4	E24
11...	1306	20	11.8	8.7	413	23.2	E3
(O7) 414334083240200—MAUMEE BAY AT SHIPPING CHANNEL							
JUN							
25...	1130	24	9.1	8.2	444	25.1	E4
JUL							
29...	1024	53	5.3	7.8	380	22.9	20
30...	1106	19	--	7.7	378	--	E4
AUG							
14...	0904	--	8.1	8.0	371	25.0	E13
SEP							
07...	1231	47	6.2	7.6	378	20.4	48
11...	1213	38	8.7	8.0	408	23.0	E5

WATER-QUALITY RECORDS—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(00076), USGS National Water Information System parameter code; NTU, nephelometric turbidity units; mg/L, milligrams per liter; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; *E. coli*, *Escherichia coli*; col/100mL, colonies per 100 milliliters; --, no data; E, estimated; <, concentration or value is less than that indicated]

Date	Time	Turb- idity (NTU) (00076)	Dis- solved oxygen (mg/L) (00300)	pH water, unfiltered field (standard units) (00400)	Specific conduct- ance water unfiltered (µS/cm) (00095)	Temper- ature water (deg C) (00010)	*E. coli*, modified MTEC, water (col/100 mL) (90902)
(N1) 414340083271700—MAUMEE BAY NEAR DRY TREE POINT							
JUN							
25...	0942	12	8.8	8.2	485	25.2	E4
JUL							
29...	1043	15	--	8.1	388	--	E11
30...	1100	16	6.2	7.9	367	24.1	E5
SEP							
07...	1052	21	10.4	9.0	478	22.0	E12
11...	1147	45	--	9.2	365	23.4	<1
(O8) 414421083260100—MAUMEE BAY SOUTHWEST OF WOODTICK PENINSULA							
JUN							
25...	1152	6.0	8.1	8.1	470	25.3	<1
JUL							
29...	1030	5.9	--	--	--	--	E2
30...	1044	8.1	9.0	8.6	346	23.0	<1
SEP							
07...	1026	24	10.5	9.1	464	21.0	E3
11...	1117	23	--	8.2	365	22.9	E2
(N12) 414428083273000—OTTAWA RIVER NEAR MOUTH							
JUN							
25...	0950	27	9.1	8.2	625	25.4	36
JUL							
29...	1036	18	--	8.6	413	--	40
30...	1052	19	10.8	9.0	421	24.0	E12
SEP							
07...	1045	20	9.0	8.7	500	21.2	29
11...	1131	38	--	8.8	524	23.0	53
(O3) 414443083250400—MAUMEE BAY EAST OF WOODTICK PENINSULA							
JUN							
24...	1332	5.6	11.8	8.8	445	25.0	<1
JUL							
29...	1048	8.8	5.9	8.0	348	22.7	<1
30...	1132	16	--	7.8	364	--	E7
SEP							
07...	1206	22	15.5	9.7	323	21.2	E7
11...	1240	15	7.4	7.8	382	22.7	E3

SEDIMENT-QUALITY RECORDS

The following tables list the results of bacteriological and physical measurements of bed-sediment samples collected in the nearshore and offshore sites within Maumee Bay and in the lower Maumee and Ottawa Rivers April through September 2003. Samples were collected as part of a study to investigate the spatial and temporal distribution of *Escherichia coli* (*E. coli*) in sediments of Maumee Bay.

SEDIMENT-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

[(81903), USGS National Water Information System parameter code; *E. coli*, *Escherichia coli*; MPN/g_{DW}, most probable number of colonies per gram dry weight of sediment; mm, millimeters; --, no data]

Date	Time	Depth at sample location feet (81903)	E coli, Colilert Quantitray bed sediment MPN/g_{DW} (50467)	Bed sediment, fall diameter (deionized water), percent < .125mm (80165)	Bed sediment, fall diameter (deionized water), percent < .031mm (80283)	Bed sediment, fall diameter (deionized water), percent < .016mm (80282)	Bed sediment, fall diameter (deionized water), percent < .008mm (80293)	Bed sediment, fall diameter (deionized water), percent < .004mm (80157)	Bed sediment, fall diameter (deionized water), percent < .002mm (80294)
(M1) 414059083290500—MAUMEE RIVER UPSTREAM TOLEDO WASTEWATER PLANT									
APR									
28...	1105	4	4	--	--	--	--	--	--
JUN									
24...	1143	10	--	--	--	--	--	--	--
JUL									
29...	0830	3	280	63	51	48	43	40	37
30...	0840	3	190	--	--	--	--	--	--
SEP									
07...	1019	4	290	--	--	--	--	--	--
11...	0919	3	87	--	--	--	--	--	--
(N10) 414111083223200—MAUMEE BAY AT MAUMEE BAY STATE PARK									
MAY									
28...	0949	--	1	--	--	--	--	--	--
JUN									
24...	1025	3	1	--	--	--	--	--	--
JUL									
29...	0920	3	6	69	63	53	42	39	35
30...	1022	3	4	--	--	--	--	--	--
SEP									
07...	0952	3	4	--	--	--	--	--	--
11...	1019	3	4	--	--	--	--	--	--
(N11) 414112083222000—MAUMEE BAY AT MOUTH OF BERGER DITCH									
JUN									
25...	0915	4	11	--	--	--	--	--	--
JUL									
29...	0925	4	110	7.3	5.3	4.0	3.2	2.9	2.6
30...	1026	3	120	--	--	--	--	--	--
AUG									
14...	1003	4	660	--	--	--	--	--	--
SEP									
07...	0945	4	260	--	--	--	--	--	--
11...	1010	2	33	--	--	--	--	--	--
(N9) 414126083232200—MAUMEE BAY NEAR MOUTH OF MCHENRY DITCH									
JUN									
25...	0923	4	86	--	--	--	--	--	--
JUL									
29...	0930	3	40	74	64	50	42	36	31
30...	1017	4	35	--	--	--	--	--	--
SEP									
07...	0958	3	30	--	--	--	--	--	--
11...	1028	2	100	--	--	--	--	--	--

SEDIMENT-QUALITY RECORDS—CONTINUED

SEDIMENT-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(81903), USGS National Water Information System parameter code; *E. coli*, *Escherichia coli*; MPN/g_{DW}, most probable number of colonies per gram dry weight of sediment; mm, millimeters; --, no data]

Date	Time	Depth at sample location feet (81903)	E coli, Colilert Quantitray bed sediment MPN/g_{DW} (50467)	Bed sediment, fall diameter (deionized water), percent < .125mm (80165)	Bed sediment, fall diameter (deionized water), percent < .031mm (80283)	Bed sediment, fall diameter (deionized water), percent < .016mm (80282)	Bed sediment, fall diameter (deionized water), percent < .008mm (80293)	Bed sediment, fall diameter (deionized water), percent < .004mm (80157)	Bed sediment, fall diameter (deionized water), percent < .002mm (80294)
(N7) 414127083243800—MAUMEE BAY NEAR MOUTH OF BIG DITCH									
JUN									
24...	1038	3	4	--	--	--	--	--	--
JUL									
29...	0946	4	82	2.5	0.8	0.7	0.6	0.5	0.4
30...	1011	3	42	--	--	--	--	--	--
SEP									
07...	1008	3	13	--	--	--	--	--	--
11...	1044	4	26	--	--	--	--	--	--
(N6) 414128083251200—MAUMEE BAY NEAR BAYSHORE									
JUN									
25...	0934	4	28	--	--	--	--	--	--
JUL									
29...	0953	3	280	7.5	1.6	1.1	1.0	0.9	0.8
30...	1003	3	63	--	--	--	--	--	--
AUG									
14...	1018	3	18	--	--	--	--	--	--
SEP									
07...	1012	4	52	--	--	--	--	--	--
11...	1051	4	46	--	--	--	--	--	--
(N5) 414131083255700—MAUMEE BAY NEAR MOUTH OF HECKMAN DITCH									
JUN									
16...	1025	3	21	--	--	--	--	--	--
24...	1133	3	18	--	--	--	--	--	--
JUL									
29...	0958	3	34	31	5.0	2.5	2.3	2.2	1.9
30...	0945	3	25	--	--	--	--	--	--
AUG									
14...	1024	2	13	--	--	--	--	--	--
SEP									
07...	1146	2	32	--	--	--	--	--	--
11...	1300	1	20	--	--	--	--	--	--
(O6) 414133083210900—MAUMEE BAY NEAR MOUTH OF ANDERSON DITCH									
APR									
28...	1030	4	<1	--	--	--	--	--	--
JUN									
25...	1010	5	3	--	--	--	--	--	--
JUL									
29...	1144	5	<1	76	71	64	50	44	42
30...	1246	5	1	--	--	--	--	--	--
SEP									
07...	1414	4	36	--	--	--	--	--	--
11...	1342	4	20	--	--	--	--	--	--

SEDIMENT-QUALITY RECORDS—CONTINUED

SEDIMENT-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(81903), USGS National Water Information System parameter code; *E. coli*, *Escherichia coli*; MPN/g_{DW}, most probable number of colonies per gram dry weight of sediment; mm, millimeters; --, no data]

Date	Time	Depth at sample location feet (81903)	E coli, Colilert Quantitray bed sediment MPN/g_{DW} (50467)	Bed sediment, fall diameter (deionized water), percent < .125mm (80165)	Bed sediment, fall diameter (deionized water), percent < .031mm (80283)	Bed sediment, fall diameter (deionized water), percent < .016mm (80282)	Bed sediment, fall diameter (deionized water), percent < .008mm (80293)	Bed sediment, fall diameter (deionized water), percent < .004mm (80157)	Bed sediment, fall diameter (deionized water), percent < .002mm (80294)
			(N3) 414140083260900—MAUMEE BAY NEAR OUTFALL BAY SHORE POWER PLANT						
JUN									
16...	1010	4	120	--	--	--	--	--	--
25...	1018	4	46	--	--	--	--	--	--
JUL									
29...	1007	3	24	60	24	6.9	6.1	5.7	5.2
30...	0953	3	12	--	--	--	--	--	--
SEP									
07...	1140	3	170	--	--	--	--	--	--
11...	1254	3	26	--	--	--	--	--	--
			(M5) 414140083262700—MAUMEE RIVER NEAR INTAKE BAY SHORE POWER PLANT						
JUN									
25...	1258	14	--	--	--	--	--	--	--
JUL									
29...	0938	14	130	99	95	87	80	77	69
30...	0946	13	68	--	--	--	--	--	--
SEP									
07...	1129	14	330	--	--	--	--	--	--
11...	1024	5	64	--	--	--	--	--	--
			(N4) 414147083255600—MAUMEE BAY NEAR OUTFALL OREGON WASTEWATER PLANT						
JUN									
24...	1128	5	27	--	--	--	--	--	--
JUL									
29...	1127	4	110	38	18	15	14	14	13
30...	0956	4	66	--	--	--	--	--	--
AUG									
14...	1037	4	54	--	--	--	--	--	--
SEP									
07...	1135	4	86	--	--	--	--	--	--
11...	1245	5	120	--	--	--	--	--	--
			(M2) 414149083280000—MAUMEE RIVER NEAR MOUTH						
JUN									
25...	1234	4	--	--	--	--	--	--	--
JUL									
29...	0852	4	74	88	74	62	55	52	46
30...	0905	4	65	--	--	--	--	--	--
AUG									
14...	1105	6	3	--	--	--	--	--	--
SEP									
07...	1039	26	560	--	--	--	--	--	--
11...	0943	26	1900	--	--	--	--	--	--
			(M3) 414201083271200—MAUMEE RIVER NEAR MOUTH OF OTTER CREEK						
JUN									
24...	1233	7	34	--	--	--	--	--	--
JUL									
29...	0912	3	72	89	76	67	57	54	48
30...	0920	2	53	--	--	--	--	--	--
SEP									
07...	1101	4	36	--	--	--	--	--	--
11...	0958	4	54	--	--	--	--	--	--

SEDIMENT-QUALITY RECORDS—CONTINUED

SEDIMENT-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(81903), USGS National Water Information System parameter code; *E. coli*, *Escherichia coli*; MPN/g_{DW}, most probable number of colonies per gram dry weight of sediment; mm, millimeters; --, no data]

Date	Time	Depth at sample location feet (81903)	E coli, Colilert Quantitray bed sediment MPN/g_{DW} (50467)	Bed sediment, fall diameter (deionized water), percent < .125mm (80165)	Bed sediment, fall diameter (deionized water), percent < .031mm (80283)	Bed sediment, fall diameter (deionized water), percent < .016mm (80282)	Bed sediment, fall diameter (deionized water), percent < .008mm (80293)	Bed sediment, fall diameter (deionized water), percent < .004mm (80157)	Bed sediment, fall diameter (deionized water), percent < .002mm (80294)
(N13) 414215083274600—MAUMEE BAY WEST OF GRASSY ISLAND									
JUN									
24...	1110	4	31	--	--	--	--	--	--
JUL									
29...	1110	3	85	47	42	34	28	25	23
30...	1120	3	120	--	--	--	--	--	--
AUG									
14...	1111	2	36	--	--	--	--	--	--
SEP									
07...	1117	3	82	--	--	--	--	--	--
11...	1218	3	120	--	--	--	--	--	--
(O1) 414233083261100—MAUMEE BAY NEAR SPOIL									
JUN									
25...	1322	29	200	--	--	--	--	--	--
JUL									
29...	0955	28	53	95	89	78	72	68	63
30...	1011	28	120	--	--	--	--	--	--
AUG									
14...	1052	10	54	--	--	--	--	--	--
SEP									
07...	1240	7	320	--	--	--	--	--	--
11...	1052	13	140	--	--	--	--	--	--
(O2) 414259083260300—MAUMEE BAY NEAR SHOAL									
JUN									
24...	1257	6	30	--	--	--	--	--	--
JUL									
29...	1012	4	240	5.6	4.4	4.0	3.6	3.4	3.1
30...	1038	4	150	--	--	--	--	--	--
SEP									
07...	1150	4	70	--	--	--	--	--	--
11...	1114	5	29	--	--	--	--	--	--
(N2) 414300083281200—MAUMEE BAY NEAR POINT PLACE									
JUN									
24...	1100	4	2	--	--	--	--	--	--
JUL									
29...	1100	3	7	86	61	28	23	21	19
30...	1114	3	38	--	--	--	--	--	--
SEP									
07...	1110	4	17	--	--	--	--	--	--
11...	1206	4	5	--	--	--	--	--	--
(O4) 414334083232800—MAUMEE BAY NEAR SHIPPING CHANNEL									
JUN									
25...	1047	6	7	--	--	--	--	--	--
JUL									
29...	1114	8	15	1.0	--	--	--	--	--
30...	1200	7	3	--	--	--	--	--	--
SEP									
07...	1317	6	15	--	--	--	--	--	--
11...	1141	6	2	--	--	--	--	--	--

SEDIMENT-QUALITY RECORDS—CONTINUED

SEDIMENT-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(81903), USGS National Water Information System parameter code; *E. coli*, *Escherichia coli*; MPN/g_{DW}, most probable number of colonies per gram dry weight of sediment; mm, millimeters; --, no data]

Date	Time	Depth at sample location feet (81903)	E coli, Colilert Quantitray bed sediment MPN/g_{DW} (50467)	Bed sediment, fall diameter (deionized water), percent < .125mm (80165)	Bed sediment, fall diameter (deionized water), percent < .031mm (80283)	Bed sediment, fall diameter (deionized water), percent < .016mm (80282)	Bed sediment, fall diameter (deionized water), percent < .008mm (80293)	Bed sediment, fall diameter (deionized water), percent < .004mm (80157)	Bed sediment, fall diameter (deionized water), percent < .002mm (80294)
			(O5) 414334083240100—MAUMEE BAY NORTH OF TOBIAS DITCH						
JUN									
25...	1110	8	6	--	--	--	--	--	--
JUL									
29...	1128	8	30	44	38	32	30	28	27
30...	1225	8	180	--	--	--	--	--	--
SEP									
07...	1353	6	4	--	--	--	--	--	--
11...	1316	6	38	--	--	--	--	--	--
			(O7) 414334083240200—MAUMEE BAY AT SHIPPING CHANNEL						
JUN									
25...	1140	29	>660	--	--	--	--	--	--
JUL									
29...	1034	32	140	98	93	84	78	68	53
30...	1116	27	720	--	--	--	--	--	--
AUG									
14...	0914	29	200	--	--	--	--	--	--
SEP									
07...	1241	30	730	--	--	--	--	--	--
11...	1223	30	390	--	--	--	--	--	--
			(N1) 414340083271700—MAUMEE BAY NEAR DRY TREE POINT						
JUN									
25...	0952	3	4	--	--	--	--	--	--
JUL									
29...	1053	3	13	2.8	1.8	1.5	1.3	1.2	1.1
30...	1110	3	84	--	--	--	--	--	--
SEP									
07...	1102	3	37	--	--	--	--	--	--
11...	1157	3	27	--	--	--	--	--	--
			(O8) 414421083260100—MAUMEE BAY SOUTHWEST OF WOODTICK PENINSULA						
JUN									
25...	1202	8	16	--	--	--	--	--	--
JUL									
29...	1040	4	2	4.6	2.1	1.6	1.4	1.4	1.3
30...	1054	4	6	77	46	37	33	32	31
SEP									
07...	1036	5	3	--	--	--	--	--	--
11...	1127	3	1	--	--	--	--	--	--
			(N12) 414428083273000—OTTAWA RIVER NEAR MOUTH						
JUN									
25...	1000	3	11	--	--	--	--	--	--
JUL									
29...	1046	4	16	8.7	5.7	4.5	4.0	3.8	3.4
30...	1102	4	22	--	--	--	--	--	--
SEP									
07...	1055	4	130	--	--	--	--	--	--
11...	1141	3	10	--	--	--	--	--	--

SEDIMENT-QUALITY RECORDS—CONTINUED

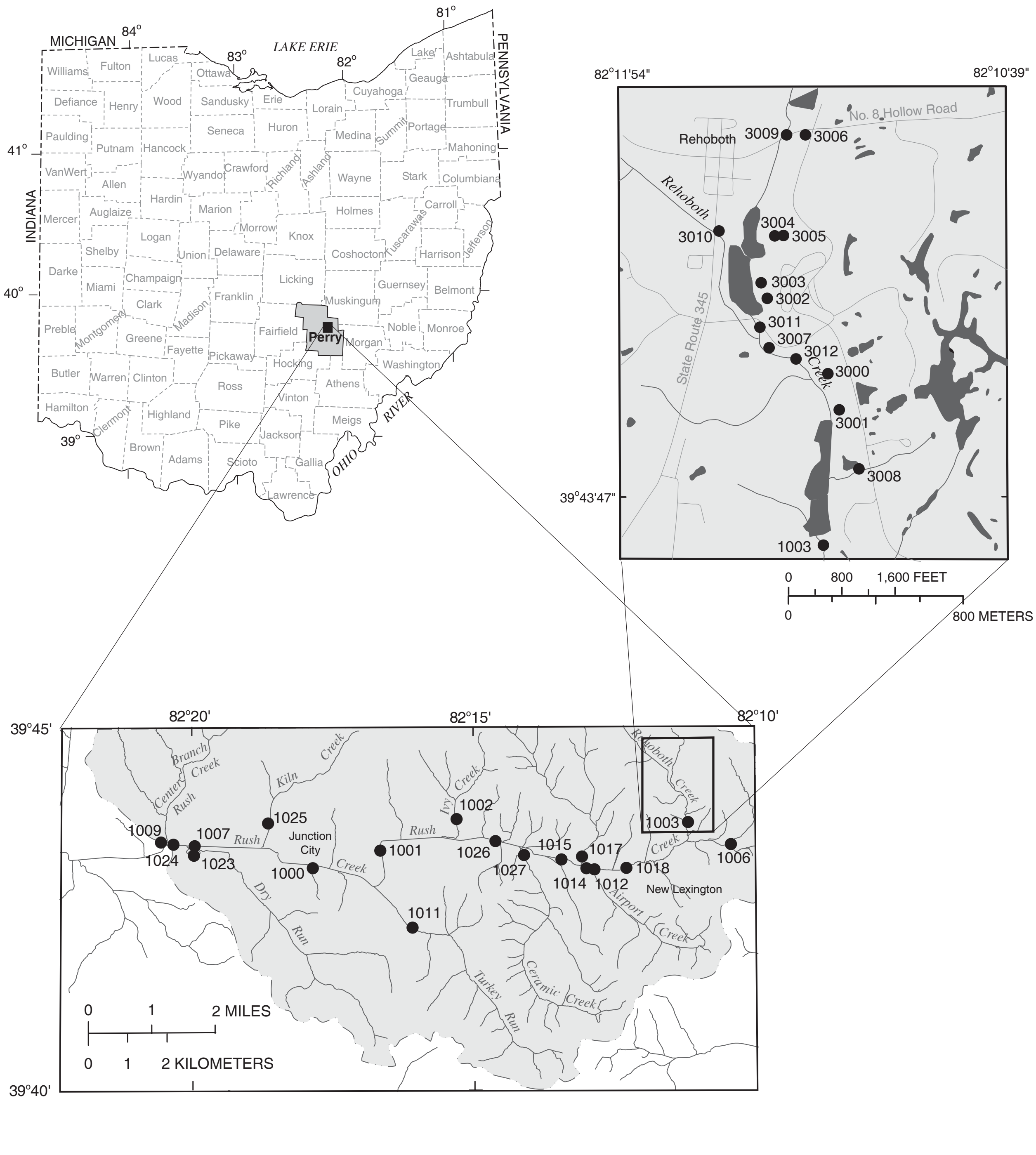
SEDIMENT-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(81903), USGS National Water Information System parameter code; *E. coli*, *Escherichia coli*; MPN/g_{DW}, most probable number of colonies per gram dry weight of sediment; mm, millimeters; --, no data]

Date	Time	Depth at sample location feet (81903)	E coli, Colilert Quantitray bed sediment MPN/g_{DW} (50467)	Bed sediment, fall diameter (deionized water), percent < .125mm (80165)	Bed sediment, fall diameter (deionized water), percent < .031mm (80283)	Bed sediment, fall diameter (deionized water), percent < .016mm (80282)	Bed sediment, fall diameter (deionized water), percent < .008mm (80293)	Bed sediment, fall diameter (deionized water), percent < .004mm (80157)	Bed sediment, fall diameter (deionized water), percent < .002mm (80294)
		(O3) 414443083250400—MAUMEE BAY EAST OF WOODTICK PENINSULA							
APR									
28...	1210	5	1	--	--	--	--	--	--
JUN									
24...	1342	8	1	--	--	--	--	--	--
JUL									
29...	1058	6	9	18	6.4	3.3	2.9	2.7	2.3
30...	1142	6	6	--	--	--	--	--	--
SEP									
07...	1216	5	11	--	--	--	--	--	--
11...	1250	5	4	--	--	--	--	--	--

PROJECT DATA
Rush Creek Watershed Assessment

The following tables contain water-quality data for the main stem of and tributaries to Rush Creek in southeastern Ohio. The data are being collected in cooperation with the Ohio Department of Natural Resources, Division of Minerals Resources Management, to help identify specific sources of acid mine drainage and assess their relative influence on the overall water quality within the Rush Creek Watershed.



WATER-QUALITY RECORDS

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

[(00061), USGS National Water Information System parameter code; cfs, cubic feet per second; mi2, square mile; mg/L, milligrams per liter; uS/cm, microsiemens per centimeter; deg C, degrees Celsius; E, estimated; --, no data; *, indicates volumetric measurement]

Map identifier	Station number	Date	Instantaneous discharge, cfs (00061)	Drainage area, mi2 (81024)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, uS/cm 25 deg C (90095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)
1000	394307082175400	08-06-03	10	35.3	8.0	3.8	1090	19.1	88.5
1001	394317082164300	08-06-03	8.3	28.10	10.2	3.5	1200	19.2	97.6
1001	394317082164300	09-24-03	37	28.10	9.5	5.4	602	14.4	55.0
1002	394344082152200	08-05-03	.23	1.7	7.5	7.1	505	19.4	49.8
1003	394339082111500	07-15-03	2.0	3.9	7.9	2.8	2150	28.4	127
1003	394339082111500	08-05-03	2.2	3.9	7.1	2.7	2290	23.3	137
1003	394339082111500	09-10-03	2.2	3.9	8.0	2.9	1940	23.7	124
1006	394324082102900	08-05-03	1.4	2.6	8.6	3.6	1990	20.0	179
1007	394323082200000	08-06-03	10	39.5	9.3	4.5	1000	20.1	95.8
1007	394323082200000	09-24-03	52	39.5	9.0	6.0	530	14.4	52.2
1009	03156549	08-06-03	6.2	24.90	7.7	E6.8	376	21.1	35.7
1011	394214082160900	08-06-03	1.4	4.70	8.1	4.7	857	18.9	77.8
1012	394302082125500	08-05-03	1.2	2.4	8.8	3.8	1010	19.1	64.5
1014	394305082130000	08-05-03	5.5	12.2	8.6	3.0	1820	20.8	122
1015	394312082132800	08-05-03	7.1	16.8	9.1	3.1	1640	20.7	108
1017	394313082130600	08-05-03	.94	4.70	9.5	7.1	605	19.8	54.6
1018	394306082121900	08-05-03	4.0	9.40	7.7	2.9	2070	21.4	148
1018	394306082121900	09-24-03	10	9.40	9.0	3.1	1400	15.8	89.9
1023	394316082200000	08-06-03	1.1	5.2	7.4	6.9	427	21.4	38.7
1024	394324082202400	08-06-03	12	45.3	9.2	4.5	940	20.4	79.2
1025	394341082184300	08-06-03	.36	2.1	9.8	7.2	353	19.4	37.9
1026	394327082143800	08-05-03	9.1	23.0	9.3	3.4	1250	20.8	87.3
1027	394314082140900	08-05-03	1.2	3.8	8.2	E6.9	436	20.0	38.4
3000	394404082111400	08-26-03	.04*	--	5.5	2.8	4750	26.0	473
3001	394359082111200	08-26-03	.02*	--	5.6	2.7	3480	25.9	329
3002	394416082112600	08-27-03	.004*	--	1.2	2.8	8180	20.1	472
3003	394418082112700	08-27-03	.002*	--	8.2	2.8	9980	27.8	443
3004	394425082112300	08-27-03	.07*	--	2.2	2.9	6370	15.5	443
3005	394426082112200	08-27-03	.004*	--	3.9	2.6	3900	25.9	414
3006	394441082111800	08-27-03	.07*	--	7.1	2.8	2060	24.0	132
3007	394409082112500	08-29-03	.003*	--	6.0	2.9	3660	22.3	493
3008	394351082110800	08-29-03	.04	--	6.4	2.8	2230	22.1	160
3009	394440082112300	09-09-03	.61	--	--	3.5	1180	20.6	103
3010	394426082113600	09-09-03	1.1	1.60	--	3.2	1520	19.7	105
3011	394412082112800	09-09-03	.72	--	--	2.8	2150	24.1	141
3012	394407082112000	09-10-03	1.5	--	8.1	2.9	1930	23.3	128

WATER-QUALITY RECORDS—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(00925), USGS National Water Information System parameter code; mg/L, milligrams per liter; <, concentration or value reported is less than that indicated; E, estimated; --, no data]

Map identifier	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	Acidity water, unfltrd heated, mg/L as CaCO3 (70508)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Bromide water, fltrd, mg/L (71870)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)
1000	52.5	4.69	32.1	52	--	--	.18	43.5	.6
1001	54.1	5.11	33.5	81	--	--	.14	41.4	.6
1001	28.6	3.77	17.5	4	4	4	.13	29.4	.3
1002	23.3	2.52	11.6	--	48	59	.06	20.3	.2
1003	79.8	1.72	12.6	276	--	--	.27	26.9	.8
1003	85.7	5.88	14.2	311	--	--	.40	28.8	.8
1003	73.6	5.68	12.0	272	--	--	.30	22.8	.9
1006	101	6.43	68.5	50	--	--	.13	20.5	.5
1007	51.1	5.12	33.9	38	--	--	.16	43.8	.6
1007	25.6	3.91	16.6	--	E8	E10	.11	30.0	.2
1009	13.7	3.13	15.5	--	86	104	.07	34.2	.2
1011	41.3	3.46	15.2	16	1	2	.27	32.9	.5
1012	38.7	3.25	22.4	114	--	--	.21	49.6	.8
1014	70.1	5.22	30.5	183	--	--	.22	35.7	.7
1015	60.6	4.80	28.9	153	--	--	.16	35.3	.6
1017	24.7	2.91	25.6	--	74	90	.13	46.5	.3
1018	87.7	6.27	30.2	226	--	--	.24	26.1	.7
1018	53.1	4.84	13.4	69	--	--	.11	20.8	.6
1023	19.6	2.96	13.5	--	65	79	.05	26.6	.2
1024	46.0	4.49	30.0	23	--	--	.16	43.1	.6
1025	13.0	2.75	14.9	--	72	88	.10	32.4	<.2
1026	48.0	4.82	34.9	73	--	--	.14	42.8	.6
1027	21.1	2.55	10.8	--	48	58	.04	20.2	.3
3000	235	14.1	21.1	1853	--	--	10.7	27.9	1.9
3001	180	10.0	21.8	608	--	--	3.02	31.8	.8
3002	228	34.0	17.5	6910	--	--	35.6	24.1	1.4
3003	235	62.2	20.5	983	--	--	110	34.8	2.9
3004	167	66.5	37.8	4560	--	--	11.4	71.9	<.8
3005	49.3	3.35	2.75	1070	--	--	1.05	12.8	1.2
3006	82.0	5.72	7.60	282	--	--	.31	9.40	.9
3007	239	11.7	25.9	490	--	--	3.14	21.9	.4
3008	97.0	10.2	9.69	246	--	--	.38	13.9	.6
3009	61.9	4.50	13.1	46	--	--	.07	21.0	.6
3010	75.3	3.98	10.2	146	--	--	.13	16.7	1.2
3011	65.5	6.88	12.4	449	--	--	.57	23.6	.6
3012	75.4	5.51	12.6	298	--	--	.26	22.9	.9

WATER-QUALITY RECORDS—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(00955), USGS National Water Information System parameter code; mg/L, milligrams per liter; ug/L, micrograms per liter; <, concentration or value reported is less than that indicated; E, estimated; --, no data]

Map identifier	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 180degC wat flt mg/L (70300)	Alum-inum, water, fltrd, ug/L (01106)	Alum-inum, water, unfltrd recover-able, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chrom-ium, water, fltrd, ug/L (01030)
1000	18.4	526	--	5800	--	--	100	--	--
1001	20.9	577	889	8190	7400	<2	120	<2	E4
1001	14.4	268	--	380	--	--	70	--	--
1002	11.5	173	--	3	--	--	40	--	--
1003	21.2	1060	--	13200	--	--	170	--	--
1003	24.2	1190	--	15600	--	--	230	--	--
1003	21.5	1340	1360	14400	13000	E2	170	<2	6
1006	13.9	1180	--	2550	--	--	150	--	--
1007	20.6	494	780	6090	5280	<2	110	<2	E4
1007	13.9	215	--	60	--	--	70	--	--
1009	5.00	46.4	--	6	--	--	40	--	--
1011	15.9	405	--	1810	--	--	60	--	--
1012	26.4	492	--	23600	--	--	70	--	--
1014	23.4	949	--	17800	--	--	150	--	--
1015	21.3	834	--	16200	--	--	130	--	--
1017	10.8	158	--	26	--	--	50	--	--
1018	25.3	1050	1410	13100	11400	<2	200	<2	6
1018	17.4	737	--	8190	--	--	120	--	--
1023	6.78	103	--	4	--	--	40	--	--
1024	16.1	437	--	3260	--	--	90	--	--
1025	9.26	48.0	--	4	--	--	40	--	--
1026	18.2	584	--	6800	--	--	110	--	--
1027	11.8	132	--	3	--	--	40	--	--
3000	45.6	4660	5670	33900	29300	3	4020	<6	<15
3001	31.0	2380	3050	5760	6980	E2	1220	<6	E13
3002	57.7	10100	14000	394000	401000	29	11300	<10	<25
3003	43.8	13200	18600	520000	489000	39	14600	<10	<25
3004	84.1	6780	9660	299000	256000	27	9210	<6	<15
3005	28.0	2710	3490	72500	91500	12	1330	<6	61
3006	38.8	1150	1400	10500	11900	E2	220	<2	E13
3007	39.1	2840	3590	11100	11200	E2	900	<6	25
3008	24.8	1170	1450	2310	2260	<2	220	<6	E8
3009	19.5	636	896	7580	2400	2	110	<2	E4
3010	23.4	902	1190	27500	10800	E1	70	E2	9
3011	21.8	1230	1580	23300	19700	3	480	<6	E8
3012	23.1	1100	1390	16800	18500	<2	250	2	9

WATER-QUALITY RECORDS—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(01035), USGS National Water Information System parameter code; ug/L, micrograms per liter; <, concentration or value reported is less than that indicated; --, no data; M, presence verified but not quantified]

Map identifier	Cobalt water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover -able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lithium water, fltrd, ug/L (01130)	Mangan- ese, water, fltrd, ug/L (01056)	Mangan- ese, water, unfltrd recover -able, ug/L (01055)	Nickel, water, fltrd, ug/L (01065)
1000	--	--	974	--	--	--	8800	--	--
1001	85	<7	1700	3110	3	72	8610	7800	100
1001	--	--	466	--	--	--	3700	--	--
1002	--	--	12	--	--	--	546	--	--
1003	--	--	20700	--	--	--	13900	--	--
1003	--	--	31700	--	--	--	14400	--	--
1003	128	<7	27100	25700	2	114	13800	15300	700
1006	--	--	7680	--	--	--	23900	--	--
1007	75	<7	240	510	2	62	6780	6510	90
1007	--	--	300	--	--	--	2870	--	--
1009	--	--	11	--	--	--	76.9	--	--
1011	--	--	333	--	--	--	7750	--	--
1012	--	--	1920	--	--	--	9050	--	--
1014	--	--	19200	--	--	--	14800	--	--
1015	--	--	16800	--	--	--	14000	--	--
1017	--	--	16	--	--	--	614	--	--
1018	155	<7	18600	20000	3	113	15700	15000	160
1018	--	--	13500	--	--	--	10500	--	--
1023	--	--	E8	--	--	--	428	--	--
1024	--	--	196	--	--	--	8000	--	--
1025	--	--	9	--	--	--	152	--	--
1026	--	--	3940	--	--	--	9410	--	--
1027	--	--	18	--	--	--	463	--	--
3000	531	<21	887000	840000	2	245	37700	36300	560
3001	447	<21	271000	273000	3	152	33300	35100	460
3002	794	<35	2650000	2500000	2	1010	51600	55400	1150
3003	692	<35	3970000	4010000	6	1350	51300	51600	1220
3004	89	<21	1810000	1760000	4	1360	22500	19200	250
3005	102	78	96000	120000	M	279	3630	3740	240
3006	123	<7	29700	30000	2	146	12600	14300	180
3007	91	<21	168000	155000	M	96	29900	29800	100
3008	149	<21	26700	30900	2	81	17800	20300	160
3009	39	<7	7680	7220	1	63	5520	5030	190
3010	175	<21	6410	6220	1	112	16600	15600	540
3011	58	<21	88700	79900	1	126	7460	7600	870
3012	127	<21	45700	57600	2	126	13700	13800	420

WATER-QUALITY RECORDS—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

[(01145), USGS National Water Information System parameter code; ug/L, micrograms per liter; <, concentration or value reported is less than that indicated; E, estimated; --, no data]

Map identifier	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)
1000	--	--	--	--	--
1001	<3	<5	389	<6	184
1001	--	--	--	--	--
1002	--	--	--	--	--
1003	--	--	--	--	--
1003	--	--	--	--	--
1003	3	<5	371	<6	283
1006	--	--	--	--	--
1007	<3	<5	384	<6	164
1007	--	--	--	--	--
1009	--	--	--	--	--
1011	--	--	--	--	--
1012	--	--	--	--	--
1014	--	--	--	--	--
1015	--	--	--	--	--
1017	--	--	--	--	--
1018	<3	<5	592	<6	293
1018	--	--	--	--	--
1023	--	--	--	--	--
1024	--	--	--	--	--
1025	--	--	--	--	--
1026	--	--	--	--	--
1027	--	--	--	--	--
3000	6	<15	1090	<18	1430
3001	4	<15	822	<18	840
3002	14	<25	1070	<30	3910
3003	18	<25	999	<30	4670
3004	11	<15	1230	<18	1470
3005	5	<15	562	<18	640
3006	<3	<5	342	<6	276
3007	4	<15	1530	<18	157
3008	E2	<15	412	<18	205
3009	3	<5	280	<6	90
3010	<3	<5	360	<6	348
3011	4	<15	353	<18	227
3012	<3	<5	376	<6	291

PROJECT DATA
Determining the Presence of Glyphosate and Other Herbicides in Midwest Streams

Since 1989, the Toxic Substances Hydrology Program has studied periodic reconnaissance of streams in 10 states in the Midwest to determine the geographic and seasonal distribution of herbicide compounds. Early studies indicate peak herbicide concentrations during the first runoff event after herbicide application. Herbicide concentrations can be high after runoff events for several weeks to several months. More recent studies have focused on collecting water samples during these post-application runoff events.

In Ohio, nine streams have been sampled as part of the Midwest herbicide investigation. Data presented in the following tables list chemical analyses of surface-water samples collected to characterize trends in herbicide use.

03157000. CLEAR CREEK NEAR ROCKBRIDGE, OHIO

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

[00061, USGS National Water Information System parameter code; mg/L, milligrams per liter; uS/cm, microsiemens per centimeter; deg C, degrees Celsius; ug/L, micrograms per liter; <, concentration or value reported is less than that indicated]

Date	Time	Dis- charge, inst. (cubic feet per second) (00061)	Oxygen, dis- solved (mg/L) (00300)	pH water whole field (standard units) (00400)	Spe- cific conduc- tance (uS/cm) (00095)	Temper- ature air (deg C) (00020)	Temper- ature water (deg C) (00010)	Aceto- chlor esa fltrd 0.7 um gf rec (ug/L) (61029)	Aceto- chlor oa fltrd 0.7 um gf rec (ug/L) (61030)	Aceto- chlor, water fltrd rec (ug/L) (49260)
OCT										
26...	1300	78	9.8	8.0	506	11.9	11.1	.11	.07	<.05

Date	Alachlor oa fltrd 0.7 um gf rec (ug/L) (61031)	Alachlor esa wat flt gf 0.7u rec (ug/L) (50009)	Alachlor water, diss, rec (ug/L) (46342)	Ametryn water, diss, rec, (ug/L) (38401)	Amino- methyl- phos- phonic acid, wat flt (ug/L) (62649)	Atra- zine, water, diss, rec (ug/L) (39632)	Cyana- zine, water, diss, rec (ug/L) (04041)	Cyana- zine- amide water fltrd rec (ug/L) (61709)	Deethyl atra- zine, water, diss, rec (ug/L) (04040)	Deiso- propyl atrazin water, diss, rec (ug/L) (04038)
OCT										
26...	<.05	.08	<.05	<.05	<.1	.04	<.02	<.02	.04	<.02

Date	Dimeth- enamid oa, water flt, rec (ug/L) (62482)	Dimeth- enamid, esa, wat flt (ug/L) (61951)	Di- methen- amid water fltrd rec (ug/L) (61588)	Flufe- nacet, esa, wat flt (ug/L) (61952)	Flufe- nacet oa, water flt, rec (ug/L) (62483)	Flufe- nacet, water, flt, rec (ug/L) (62481)	Glufo- sinate, water, fltrd, gf 0.7u rec (ug/L) (62721)	Glypho- sate, water, fltrd, gf 0.7u rec (ug/L) (62722)	Metola- chlor esa fltrd 0.7 um gf rec (ug/L) (61043)	Metola- chlor oa fltrd 0.7 um gf rec (ug/L) (61044)
OCT										
26...	<.05	<.05	<.05	<.05	<.05	<.05	<.1	<.1	.49	.12

Date	Meto- lachlor water dissolv (ug/L) (39415)	Metri- buzin sencor water dissolv (ug/L) (82630)	Pro- meton, water, diss, rec (ug/L) (04037)	Pro- metryn, water, diss, rec (ug/L) (04036)	Propa- chlor, water, diss, rec (ug/L) (04024)	Prop- azine water diss, rec (ug/L) (38535)	Si- mazine, water, diss, rec (ug/L) (04035)	Ter- butryn water, diss, rec (ug/L) (38888)
OCT								
26...	<.05	<.05	<.05	<.05	<.05	<.02	.14	<.05

03219500. SCIOTO RIVER NEAR PROSPECT, OHIO

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

[00061, USGS National Water Information System parameter code; mg/L, milligrams per liter; uS/cm, microsiemens per centimeter; deg C, degrees Celsius; ug/L, micrograms per liter; <, concentration or value reported is less than that indicated]

Date	Time	Dis- charge, inst. (cubic feet per second) (00061)	Oxygen, dis- solved (mg/L) (00300)	pH water whole field (standard units) (00400)	Spe- cific conduc- tance (uS/cm) (00095)	Temper- ature air (deg C) (00020)	Temper- ature water (deg C) (00010)	Aceto- chlor esa fltrd 0.7 um gf rec (ug/L) (61029)	Aceto- chlor oa fltrd 0.7 um gf rec (ug/L) (61030)	Aceto- chlor, water fltrd rec (ug/L) (49260)
OCT										
01...	1030	188	7.6	7.3	521	22.0	18.2	1.20	1.67	.05

Date	Alachlor oa fltrd 0.7 um gf rec (ug/L) (61031)	Alachlor esa wat flt gf 0.7u rec (ug/L) (50009)	Alachlor water, diss, rec (ug/L) (46342)	Ametryn water, diss, rec, (ug/L) (38401)	Amino- methyl- phos- phonic acid, wat flt (ug/L) (62649)	Atra- zine, water, diss, rec (ug/L) (39632)	cYana- zine, water, diss, rec (ug/L) (04041)	Cyana- zine- amide water fltrd rec (ug/L) (61709)	Deethyl atra- zine, water, diss, rec (ug/L) (04040)	Deiso- propyl atrazin water, diss, rec (ug/L) (04038)
OCT										
01...	.17	.29	<.05	<.05	.5	.60	<.02	<.02	.17	.11

Date	Dimeth- enamid oa, water flt, rec (ug/L) (62482)	Dimeth- enamid, esa, wat flt (ug/L) (61951)	Di- methen- amid water fltrd rec (ug/L) (61588)	Flufe- nacet, esa, wat flt (ug/L) (61952)	Flufe- nacet oa, water flt, rec (ug/L) (62483)	Flufe- nacet, water, flt, rec (ug/L) (62481)	Glufo- sinate, water, fltrd, gf 0.7u rec (ug/L) (62721)	Glypho- sate, water, fltrd, gf 0.7u rec (ug/L) (62722)	Metola- chlor esa fltrd 0.7 um gf rec (ug/L) (61043)	Metola- chlor oa fltrd 0.7 um gf rec (ug/L) (61044)
OCT										
01...	.11	.10	<.05	.07	.05	<.05	<.1	.3	2.30	1.76

Date	Meto- lachlor water dissolv (ug/L) (39415)	Metri- buzin sencor water dissolv (ug/L) (82630)	Pro- meton, water, diss, rec (ug/L) (04037)	Pro- metryn, water, diss, rec (ug/L) (04036)	Propa- chlor, water, diss, rec (ug/L) (04024)	Prop- azine water diss, rec (ug/L) (38535)	Si- mazine, water, diss, rec (ug/L) (04035)	Ter- butryn water, diss, rec (ug/L) (38888)
OCT								
01...	.44	<.05	<.05	<.05	<.05	<.02	.06	<.05

03223000. OLENTANGY RIVER AT CLARIDON, OHIO

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

[00061, USGS National Water Information System parameter code; mg/L, milligrams per liter; uS/cm, microsiemens per centimeter; deg C, degrees Celsius; ug/L, micrograms per liter; <, concentration or value reported is less than that indicated]

Date	Time	Dis-charge, inst. (cubic feet per second) (00061)	Oxygen, dis-solved (mg/L) (00300)	pH water whole field (standard units) (00400)	Spe-cific conduc-tance (uS/cm) (00095)	Temper-ature air (deg C) (00020)	Temper-ature water (deg C) (00010)	Aceto-chlor esa fltrd 0.7 um gf rec (ug/L) (61029)	Aceto-chlor oa fltrd 0.7 um gf rec (ug/L) (61030)	Aceto-chlor, water fltrd rec (ug/L) (49260)
OCT										
26...	1500	5.3	8.7	7.9	772	9.8	8.7	.18	.18	<.05

Date	Alachlor oa fltrd 0.7 um gf rec (ug/L) (61031)	Alachlor esa wat flt gf 0.7u rec (ug/L) (50009)	Alachlor water, diss, rec (ug/L) (46342)	Ametryn water, diss, rec, (ug/L) (38401)	Amino-methyl-phos-phonic acid, wat flt (ug/L) (62649)	Atra-zine, water, diss, rec (ug/L) (39632)	Cyana-zine, water, diss, rec (ug/L) (04041)	Cyana-zine-amide water fltrd rec (ug/L) (61709)	Deethyl atra-zine, water, diss, rec (ug/L) (04040)	Deiso-propyl atrazin water, diss, rec (ug/L) (04038)
OCT										
26...	.05	.20	<.05	<.05	.1	.12	<.02	<.02	.03	<.02

Date	Dimeth-enamid oa, water flt, rec (ug/L) (62482)	Dimeth-enamid, esa, wat flt (ug/L) (61951)	Di-methen-amid water fltrd rec (ug/L) (61588)	Flufe-nacet, esa, wat flt (ug/L) (61952)	Flufe-nacet oa, water flt, rec (ug/L) (62483)	Flufe-nacet, water, flt, rec (ug/L) (62481)	Glufo-sinate, water, fltrd, gf 0.7u rec (ug/L) (62721)	Glypho-sate, water, fltrd, gf 0.7u rec (ug/L) (62722)	Metola-chlor esa fltrd 0.7 um gf rec (ug/L) (61043)	Metola-chlor oa fltrd 0.7 um gf rec (ug/L) (61044)
OCT										
26...	<.05	.05	<.05	<.05	<.05	<.05	<.1	<.1	.69	.33

Date	Meto-lachlor water dissolv (ug/L) (39415)	Metri-buzin sencor water dissolv (ug/L) (82630)	Pro-meton, water, diss, rec (ug/L) (04037)	Pro-metryn, water, diss, rec (ug/L) (04036)	Propa-chlor, water, diss, rec (ug/L) (04024)	Prop-azine water diss, rec (ug/L) (38535)	Si-mazine, water, diss, rec (ug/L) (04035)	Ter-butryn water, diss, rec (ug/L) (38888)
OCT								
26...	.06	<.05	<.05	<.05	<.05	<.02	.02	<.05

03230500. BIG DARBY CREEK AT DARBYVILLE, OHIO

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

[00061, USGS National Water Information System parameter code; mg/L, milligrams per liter; uS/cm, microsiemens per centimeter; deg C, degrees Celsius; ug/L, micrograms per liter; <, concentration or value reported is less than that indicated]

Date	Time	Dis-charge, inst. (cubic feet per second) (00061)	Oxygen, dis-solved (mg/L) (00300)	pH water whole field (standard units) (00400)	Spe-cific conduc-tance (uS/cm) (00095)	Temper-ature air (deg C) (00020)	Temper-ature water (deg C) (00010)	Aceto-chlor esa fltrd 0.7 um gf rec (ug/L) (61029)	Aceto-chlor oa fltrd 0.7 um gf rec (ug/L) (61030)	Aceto-chlor, water fltrd rec (ug/L) (49260)
OCT										
01...	1105	195	8.1	7.8	488	25.5	18.5	.57	.76	<.05

Date	Alachlor oa fltrd 0.7 um gf rec (ug/L) (61031)	Alachlor esa wat flt gf 0.7u rec (ug/L) (50009)	Alachlor water, diss, rec (ug/L) (46342)	Ametryn water, diss, rec, (ug/L) (38401)	Amino-methyl-phos-phonic acid, wat flt (ug/L) (62649)	Atra-zine, water, diss, rec (ug/L) (39632)	Cyana-zine, water, diss, rec (ug/L) (04041)	Cyana-zine-amide water fltrd rec (ug/L) (61709)	Deethyl atra-zine, water, diss, rec (ug/L) (04040)	Deiso-propyl atrazin water, diss, rec (ug/L) (04038)
OCT										
01...	.07	.13	<.05	<.05	.3	.12	<.02	<.02	.15	.05

Date	Dimeth-enamid oa, water flt, rec (ug/L) (62482)	Dimeth-enamid, esa, wat flt (ug/L) (61951)	Di-methen-amid water fltrd rec (ug/L) (61588)	Flufe-nacet, esa, wat flt (ug/L) (61952)	Flufe-nacet oa, water flt, rec (ug/L) (62483)	Flufe-nacet, water, flt, rec (ug/L) (62481)	Glufo-sinate, water, fltrd, gf 0.7u rec (ug/L) (62721)	Glypho-sate, water, fltrd, gf 0.7u rec (ug/L) (62722)	Metola-chlor esa fltrd 0.7 um gf rec (ug/L) (61043)	Metola-chlor oa fltrd 0.7 um gf rec (ug/L) (61044)
OCT										
01...	.14	.15	<.05	<.05	<.05	<.05	<.1	.2	1.35	.90

Date	Meto-lachlor water dissolv (ug/L) (39415)	Metri-buzin sencor water dissolv (ug/L) (82630)	Pro-meton, water, diss, rec (ug/L) (04037)	Pro-metryn, water, diss, rec (ug/L) (04036)	Propa-chlor, water, diss, rec (ug/L) (04024)	Prop-azine water diss, rec (ug/L) (38535)	Si-mazine, water, diss, rec (ug/L) (04035)	Ter-butryn water, diss, rec (ug/L) (38888)
OCT								
01...	.16	<.05	<.05	<.05	<.05	<.02	<.02	<.05

03234500. SCIOTO RIVER AT HIGBY, OHIO

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

[00061, USGS National Water Information System parameter code; mg/L, milligrams per liter; uS/cm, microsiemens per centimeter; deg C, degrees Celsius; ug/L, micrograms per liter; <, concentration or value reported is less than that indicated]

Date	Time	Discharge, inst. (cubic feet per second) (00061)	Oxygen, dissolved (mg/L) (00300)	pH water whole field (standard units) (00400)	Specific conductance (uS/cm) (00095)	Temperature air (deg C) (00020)	Temperature water (deg C) (00010)	Acetochlor esa fltrd 0.7 um gf rec (ug/L) (61029)	Acetochlor oa fltrd 0.7 um gf rec (ug/L) (61030)	Acetochlor, water fltrd rec (ug/L) (49260)
OCT										
28...	1000	1910	11.0	8.0	610	8.3	12.7	.19	.22	<.05

Date	Alachlor oa fltrd 0.7 um gf rec (ug/L) (61031)	Alachlor esa wat flt gf 0.7u rec (ug/L) (50009)	Alachlor water, diss, rec (ug/L) (46342)	Ametryn water, diss, rec, (ug/L) (38401)	Aminomethylphosphonic acid, wat flt (ug/L) (62649)	Atrazine, water, diss, rec (ug/L) (39632)	Cyanazine, water, diss, rec (ug/L) (04041)	Cyanazineamide water fltrd rec (ug/L) (61709)	Deethyl atrazine, water, diss, rec (ug/L) (04040)	Deisopropyl atrazin water, diss, rec (ug/L) (04038)
OCT										
28...	.05	.09	<.05	<.05	.9	.72	<.02	<.02	.23	.16

Date	Dimethenamid oa, water flt, rec (ug/L) (62482)	Dimethenamid, esa, wat flt (ug/L) (61951)	Dimethenamid water fltrd rec (ug/L) (61588)	Flufenacet, esa, wat flt (ug/L) (61952)	Flufenacet oa, water flt, rec (ug/L) (62483)	Flufenacet, water, flt, rec (ug/L) (62481)	Glufosinate, water, fltrd, gf 0.7u rec (ug/L) (62721)	Glyphosate, water, fltrd, gf 0.7u rec (ug/L) (62722)	Metolachlor esa fltrd 0.7 um gf rec (ug/L) (61043)	Metolachlor oa fltrd 0.7 um gf rec (ug/L) (61044)
OCT										
28...	<.05	.05	<.05	<.05	<.05	<.05	<.1	.3	.37	.25

Date	Metolachlor water dissolv (ug/L) (39415)	Metribuzin sencor water dissolv (ug/L) (82630)	Prometon, water, diss, rec (ug/L) (04037)	Prometryn, water, diss, rec (ug/L) (04036)	Propachlor, water, diss, rec (ug/L) (04024)	Propazine water diss, rec (ug/L) (38535)	Simazine, water, diss, rec (ug/L) (04035)	Terbutryn water, diss, rec (ug/L) (38888)
OCT								
28...	.59	<.05	<.05	<.05	<.05	<.02	.12	<.05

03240000. LITTLE MIAMI RIVER NEAR OLDTOWN, OHIO

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

[00061, USGS National Water Information System parameter code; mg/L, milligrams per liter; uS/cm, microsiemens per centimeter; deg C, degrees Celsius; ug/L, micrograms per liter; <, concentration or value reported is less than that indicated]

Date	Time	Dis- charge, inst. (cubic feet per second) (00061)	Oxygen, dis- solved (mg/L) (00300)	pH water whole field (standard units) (00400)	Spe- cific conduc- tance (uS/cm) (00095)	Temper- ature air (deg C) (00020)	Temper- ature water (deg C) (00010)	Aceto- chlor esa fltrd 0.7 um gf rec (ug/L) (61029)	Aceto- chlor oa fltrd 0.7 um gf rec (ug/L) (61030)	Aceto- chlor, water fltrd rec (ug/L) (49260)
OCT										
27...	0700	149	9.7	7.9	628	7.6	9.9	.28	.30	<.05

Date	Alachlor oa fltrd 0.7 um gf rec (ug/L) (61031)	Alachlor esa wat flt gf 0.7u rec (ug/L) (50009)	Alachlor water, diss, rec (ug/L) (46342)	Ametryn water, diss, rec, (ug/L) (38401)	Amino- methyl- phos- phonic acid, wat flt (ug/L) (62649)	Atra- zine, water, diss, rec (ug/L) (39632)	Cyana- zine, water, diss, rec (ug/L) (04041)	Cyana- zine- amide water fltrd rec (ug/L) (61709)	Deethyl atra- zine, water, diss, rec (ug/L) (04040)	Deiso- propyl atrazin water, diss, rec (ug/L) (04038)
OCT										
27...	.08	.19	<.05	<.05	.2	.09	<.02	<.02	.12	.08

Date	Dimeth- enamid oa, water flt, rec (ug/L) (62482)	Dimeth- enamid, esa, wat flt (ug/L) (61951)	Di- methen- amid water fltrd rec (ug/L) (61588)	Flufe- nacet, esa, wat flt (ug/L) (61952)	Flufe- nacet oa, water flt, rec (ug/L) (62483)	Flufe- nacet, water, flt, rec (ug/L) (62481)	Glufo- sinate, water, fltrd, gf 0.7u rec (ug/L) (62721)	Glypho- sate, water, fltrd, gf 0.7u rec (ug/L) (62722)	Metola- chlor esa fltrd 0.7 um gf rec (ug/L) (61043)	Metola- chlor oa fltrd 0.7 um gf rec (ug/L) (61044)
OCT										
27...	<.05	<.05	<.05	<.05	<.05	<.05	<.1	.5	1.34	.70

Date	Meto- lachlor water dissolv (ug/L) (39415)	Metri- buzin sencor water dissolv (ug/L) (82630)	Pro- meton, water, diss, rec (ug/L) (04037)	Pro- metryn, water, diss, rec (ug/L) (04036)	Propa- chlor, water, diss, rec (ug/L) (04024)	Prop- azine water diss, rec (ug/L) (38535)	Si- mazine, water, diss, rec (ug/L) (04035)	Ter- butryn water, diss, rec (ug/L) (38888)
OCT								
27...	.25	.32	<.05	<.05	<.05	<.02	<.02	<.05

03267900. MAD RIVER AT ST. PARIS PIKE AT EAGLE CITY, OHIO

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

[00061, USGS National Water Information System parameter code; mg/L, milligrams per liter; uS/cm, microsiemens per centimeter; deg C, degrees Celsius; ug/L, micrograms per liter; <, concentration or value reported is less than that indicated]

Date	Time	Dis- charge, inst. (cubic feet per second) (00061)	Oxygen, dis- solved (mg/L) (00300)	pH, water whole field (standard units) (00400)	spec- ific conduc- tance uS/cm) (00095)	Temper- ature air (deg C) (00020)	Temper- ature water (deg C) (00010)	Aceto- chlor esa fltrd 0.7 um gf rec (ug/L) (61029)	Aceto- chlor oa fltrd 0.7 um gf rec (ug/L) (61030)	Aceto- chlor, water fltrd rec (ug/L) (49260)
OCT										
27...	0800	240	10.0	7.4	739	8.7	10.9	.06	<.05	<.05

Date	Alachlor oa fltrd 0.7 um gf rec (ug/L) (61031)	Alachlor esa wat flt gf 0.7u rec (ug/L) (50009)	Alachlor water, diss, rec (ug/L) (46342)	Ametryn water, diss, rec, (ug/L) (38401)	Amino- methyl- phos- phonic acid, wat flt (ug/L) (62649)	Atra- zine, water, diss, rec (ug/L) (39632)	Cyana- zine, water, diss, rec (ug/L) (04041)	Cyana- zine- amide water fltrd rec (ug/L) (61709)	Deethyl atra- zine, water, diss, rec (ug/L) (04040)	Deiso- propyl atrazin water, diss, rec (ug/L) (04038)
OCT										
27...	<.05	.17	<.05	<.05	<.1	<.02	<.02	<.02	.02	<.02

Date	Dimeth- enamid oa, water flt, rec (ug/L) (62482)	Dimeth- enamid, esa, wat flt (ug/L) (61951)	Di- methen- amid water fltrd rec (ug/L) (61588)	Flufe- nacet, esa, wat flt (ug/L) (61952)	Flufe- nacet oa, water flt, rec (ug/L) (62483)	Flufe- nacet, water, flt, rec (ug/L) (62481)	Glufo- sinate, water, fltrd, gf 0.7u rec (ug/L) (62721)	Glypho- sate, water, fltrd, gf 0.7u rec (ug/L) (62722)	Metola- chlor esa fltrd 0.7 um gf rec (ug/L) (61043)	Metola- chlor oa fltrd 0.7 um gf rec (ug/L) (61044)
OCT										
27...	<.05	<.05	<.05	<.05	<.05	<.05	<.1	<.1	.39	.12

Date	Meto- lachlor water dissolv (ug/L) (39415)	Metri- buzin sencor water dissolv (ug/L) (82630)	Pro- meton, water, diss, rec (ug/L) (04037)	Pro- metryn, water, diss, rec (ug/L) (04036)	Propa- chlor, water, diss, rec (ug/L) (04024)	Prop- azine water diss, rec (ug/L) (38535)	Si- mazine, water, diss, rec (ug/L) (04035)	Ter- butryn water, diss, rec (ug/L) (38888)
OCT								
27...	<.05	<.05	<.05	<.05	<.05	<.02	<.02	<.05

04185000. TIFFIN RIVER AT STRYKER, OHIO

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

[00061, USGS National Water Information System parameter code; mg/L, milligrams per liter; uS/cm, microsiemens per centimeter; deg C, degrees Celsius; ug/L, micrograms per liter; <, concentration or value reported is less than that indicated]

Date	Time	Dis- charge, inst. (cubic feet per second) (00061)	Oxygen, dis- solved (mg/L) (00300)	pH, water whole field (standard units) (00400)	Spe- cific conduc- tance (uS/cm) (00095)	Temper- ature air (deg C) (00020)	Temper- ature water (deg C) (00010)	Aceto- chlor esa fltrd 0.7 um gf rec (ug/L) (61029)	Aceto- chlor oa fltrd 0.7 um gf rec (ug/L) (61030)	Aceto- chlor, water fltrd rec (ug/L) (49260)
NOV										
06...	1200	56	7.4	7.7	785	4.6	4.3	.06	<.05	<.05

Date	Alachlor oa fltrd 0.7 um gf rec (ug/L) (61031)	Alachlor esa wat flt gf 0.7u rec (ug/L) (50009)	Alachlor water, diss, rec (ug/L) (46342)	Ametryn water, diss, rec, (ug/L) (38401)	Amino- methyl- phos- phonic acid, wat flt (ug/L) (62649)	Atra- zine, water, diss, rec (ug/L) (39632)	Cyana- zine, water, diss, rec (ug/L) (04041)	Cyana- zine- amide water fltrd rec (ug/L) (61709)	Deethyl atra- zine, water, diss, rec (ug/L) (04040)	Deiso- propyl atrazin water, diss, rec (ug/L) (04038)
NOV										
06...	<.05	.23	<.05	<.05	<.1	<.02	<.02	<.02	<.02	.02

Date	Dimeth- enamid Oa, Water Flt, Rec (Ug/l) (62482)	Dimeth- enamid, Esa, Wat Flt (Ug/l) (61951)	Di- methen- amid Water Fltrd Rec (Ug/l) (61588)	Flufe- nacet, Esa, Wat Flt (Ug/l) (61952)	Flufe- nacet Oa, Water Flt, Rec (Ug/l) (62483)	Flufe- nacet, Water, Flt, Rec (Ug/l) (62481)	Glufo- sinate, Water, Fltrd, Gf 0.7u Rec (Ug/l) (62721)	Glypho- sate, Water, Fltrd, Gf 0.7u Rec (Ug/l) (62722)	Metola- chlor Esa Fltrd 0.7 Um Gf Rec (Ug/l) (61043)	Metola- chlor Oa Fltrd 0.7 Um Gf Rec (Ug/l) (61044)
NOV										
06...	<.05	<.05	<.05	<.05	<.05	<.05	<.1	<.1	.24	.08

Date	Meto- lachlor water dissolv (ug/L) (39415)	Metri- buzin sencor water dissolv (ug/L) (82630)	Pro- meton, water, diss, rec (ug/L) (04037)	Pro- metryn, water, diss, rec (ug/L) (04036)	Propa- chlor, water, diss, rec (ug/L) (04024)	Prop- azine water diss, rec (ug/L) (38535)	Si- mazine, water, diss, rec (ug/L) (04035)	Ter- butryn water, diss, rec (ug/L) (38888)
NOV								
06...	<.05	<.05	<.05	<.05	<.05	<.02	<.02	<.05

04186500. AUGLAIZE RIVER NEAR FORT JENNINGS, OHIO

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

[00061, USGS National Water Information System parameter code; mg/L, milligrams per liter; uS/cm, microsiemens per centimeter; deg C, degrees Celsius; ug/L, micrograms per liter; <, concentration or value reported is less than that indicated]

Date	Time	Dis-charge, inst. (cubic feet per second) (00061)	Oxygen, dis-solved (mg/L) (00300)	pH, water whole (field standard units) (00400)	Spe-cific conduc-tance (uS/cm) (00095)	Temper-ature air (deg C) (00020)	Temper-ature water (deg C) (00010)	Aceto-chlor esa fltrd 0.7 um gf rec (ug/L) (61029)	Aceto-chlor oa fltrd 0.7 um gf rec (ug/L) (61030)	Aceto-chlor, water fltrd rec (ug/L) (49260)
OCT										
30...	1300	39	9.0	7.7	1900	9.5	7.4	.08	.08	<.05

Date	Alachlor oa fltrd 0.7 um gf rec (ug/L) (61031)	Alachlor esa wat flt gf 0.7u rec (ug/L) (50009)	Alachlor water, diss, rec (ug/L) (46342)	Ametryn water, diss, rec, (ug/L) (38401)	Amino-methyl-phos-phonic acid, wat flt (ug/L) (62649)	Atra-zine, water, diss, rec (ug/L) (39632)	Cyana-zine, water, diss, rec (ug/L) (04041)	Cyana-zine-amide water fltrd rec (ug/L) (61709)	Deethyl atra-zine, water, diss, rec (ug/L) (04040)	Deiso-propyl atrazin water, diss, rec (ug/L) (04038)
OCT										
30...	.05	.13	<.05	<.05	.3	.11	<.02	<.02	<.02	<.02

Date	Dimeth-enamid oa, water flt, rec (ug/L) (62482)	Dimeth-enamid, esa, wat flt (ug/L) (61951)	Di-methen-amid water fltrd rec (ug/L) (61588)	Flufe-nacet, esa, wat flt (ug/L) (61952)	Flufe-nacet oa, water flt, rec (ug/L) (62483)	Flufe-nacet, water, flt, rec (ug/L) (62481)	Glufo-sinate, water, fltrd, gf 0.7u rec (ug/L) (62721)	Glypho-sate, water, fltrd, gf 0.7u rec (ug/L) (62722)	Metola-chlor esa fltrd 0.7 um gf rec (ug/L) (61043)	Metola-chlor oa fltrd 0.7 um gf rec (ug/L) (61044)
OCT										
30...	<.05	<.05	<.05	<.05	<.05	<.05	<.1	<.1	.25	.23

Date	Meto-lachlor water dissolv (ug/L) (39415)	Metri-buzin sencor water dissolv (ug/L) (82630)	Pro-meton, water, diss, rec (ug/L) (04037)	Pro-metryn, water, diss, rec (ug/L) (04036)	Propa-chlor, water, diss, rec (ug/L) (04024)	Prop-azine water diss, rec (ug/L) (38535)	Si-mazine, water, diss, rec (ug/L) (04035)	Ter-butryn water, diss, rec (ug/L) (38888)
OCT								
30...	.11	<.05	<.05	<.05	<.05	<.02	<.02	<.05

INDEX

D

E

F

G

R

S

Y

Z

Conversion Factors

Multiply	By	To obtain
Length		
inch (in.)	2.54×10^{1}	millimeter (mm)
	2.54×10^{-2}	meter
foot (ft)	3.048×10^{-1}	meter (m)
mile (mi)	1.609×10^{0}	kilometer (km)
Area		
acre	4.047×10^{3}	square meter (m^2)
	4.047×10^{-1}	square hectometer (hm^2)
	4.047×10^{-3}	square kilometer (km^2)
square mile (mi^2)	2.590×10^{0}	square kilometer (km^2)
Volume		
gallon (gal)	3.785×10^{0}	liter (L)
	3.785×10^{-3}	cubic meter (m^3)
	3.785×10^{0}	cubic decimeter (dm^3)
million gallons (Mgal)	3.785×10^{3}	cubic meter (m^3)
	3.785×10^{-3}	cubic hectometer (hm^3)
cubic foot (ft^3)	2.832×10^{-2}	cubic meter (m^3)
	2.832×10^{1}	cubic decimeter (dm^3)
cubic-foot-per-second-per-day [(ft^3/s/d]	2.447×10^{3}	cubic meter (m^3)
	2.447×10^{-3}	cubic hectometer (hm^3)
acre-foot (acre-ft)	1.223×10^{3}	cubic meter (m^3)
	1.223×10^{-3}	cubic hectometer (hm^3)
	1.223×10^{-6}	cubic kilometer (km^3)
Flow rate		
cubic foot per second (ft^3/s)	2.832×10^{1}	liter (L/s)
	2.832×10^{-2}	cubic meter per second (m^3/s)
	2.832×10^{1}	cubic decimeter per second (dm^3/s)
gallon per minute (gal/min)	6.309×10^{-2}	liter per second (L/s)
	6.309×10^{-5}	cubic meter per second (m^3/s)
	6.309×10^{-2}	cubic decimeter per second (dm^3/s)
million gallons per day (Mgal/d)	4.381×10^{-2}	cubic meter per second
	4.381×10^{1}	cubic decimeter per second (dm^3/s)
Mass		
ton, short (2,000 lb)	9.072×10^{-1}	megagram (Mg) or metric ton

Temperature in degrees Celsius (°C) may be converted to degrees Fahrenheit (°F) as follows:

$$°F = (1.8 \times °C) + 32$$

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