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Water Resources Data
Ohio
Water Year 2001

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

Water-Data Report OH-01-2

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

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

CALENDAR FOR WATER YEAR 2001

2000

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2001

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

Water Resources Data
Ohio
Water Year 2001

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

By H.L. Shindel, J. P. Mangus, and L.E. Trimble

Water-Data Report OH-01-2

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

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

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District Chief, Water Resources Division
U.S. Geological Survey
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Columbus, OH 43229-1111

2002

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:

This report was prepared in cooperation with the State of Ohio and with other agencies under the general supervision of S.M. Hindall, District Chief, Ohio.

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13. ABSTRACT *(Maximum 200 words)*

Water-resources data for the 2001 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 130 gaging stations and 65 partial-record sites; water levels at 160 observation wells and 25 crest-stage gages; and water quality at 25 gaging stations, 31 observation wells, and 9 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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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

[Letters after station names designate type of data: (c) chemical, (l) water level]

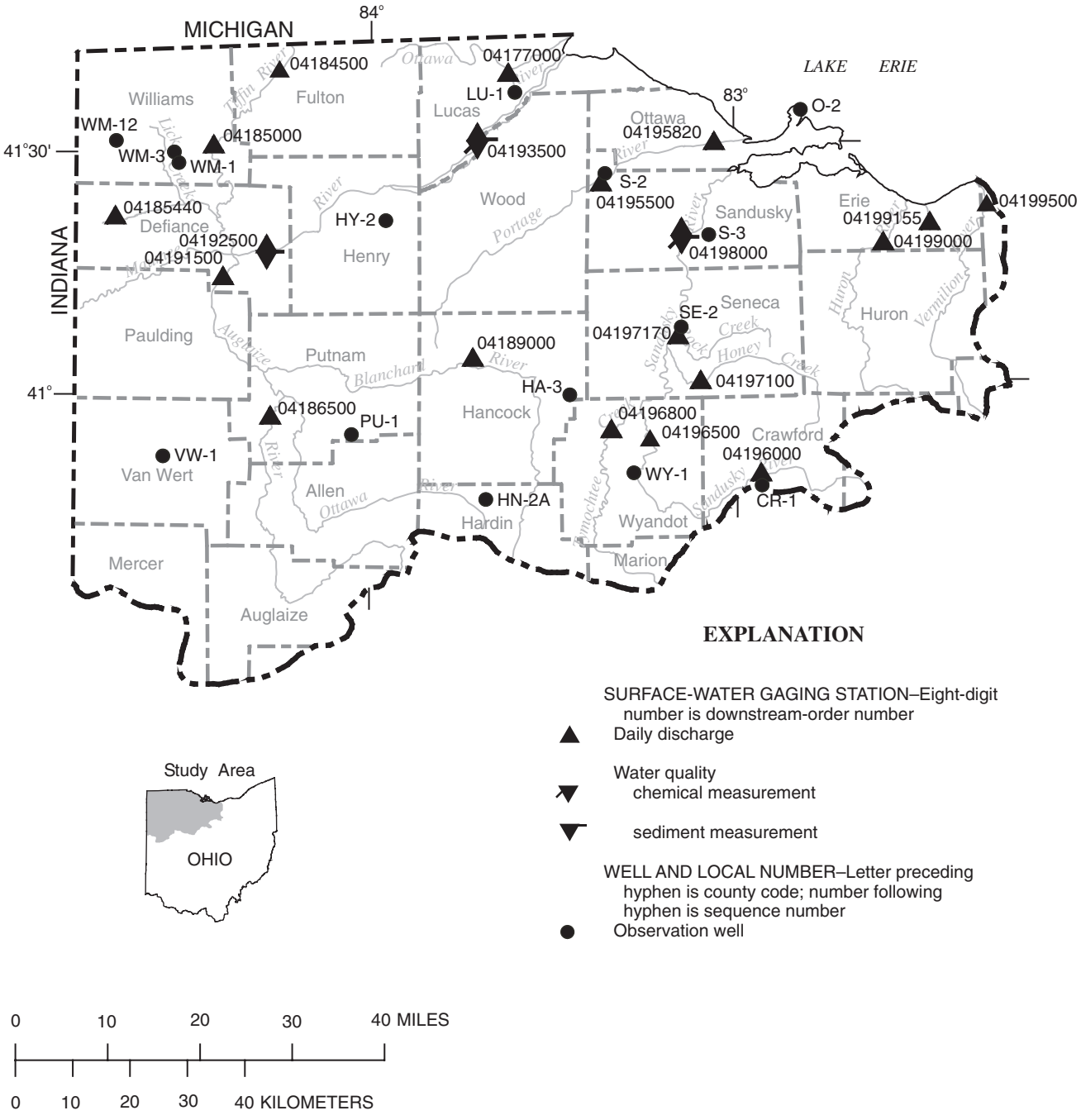


Figure 1a. Location of data-collection stations and wells.

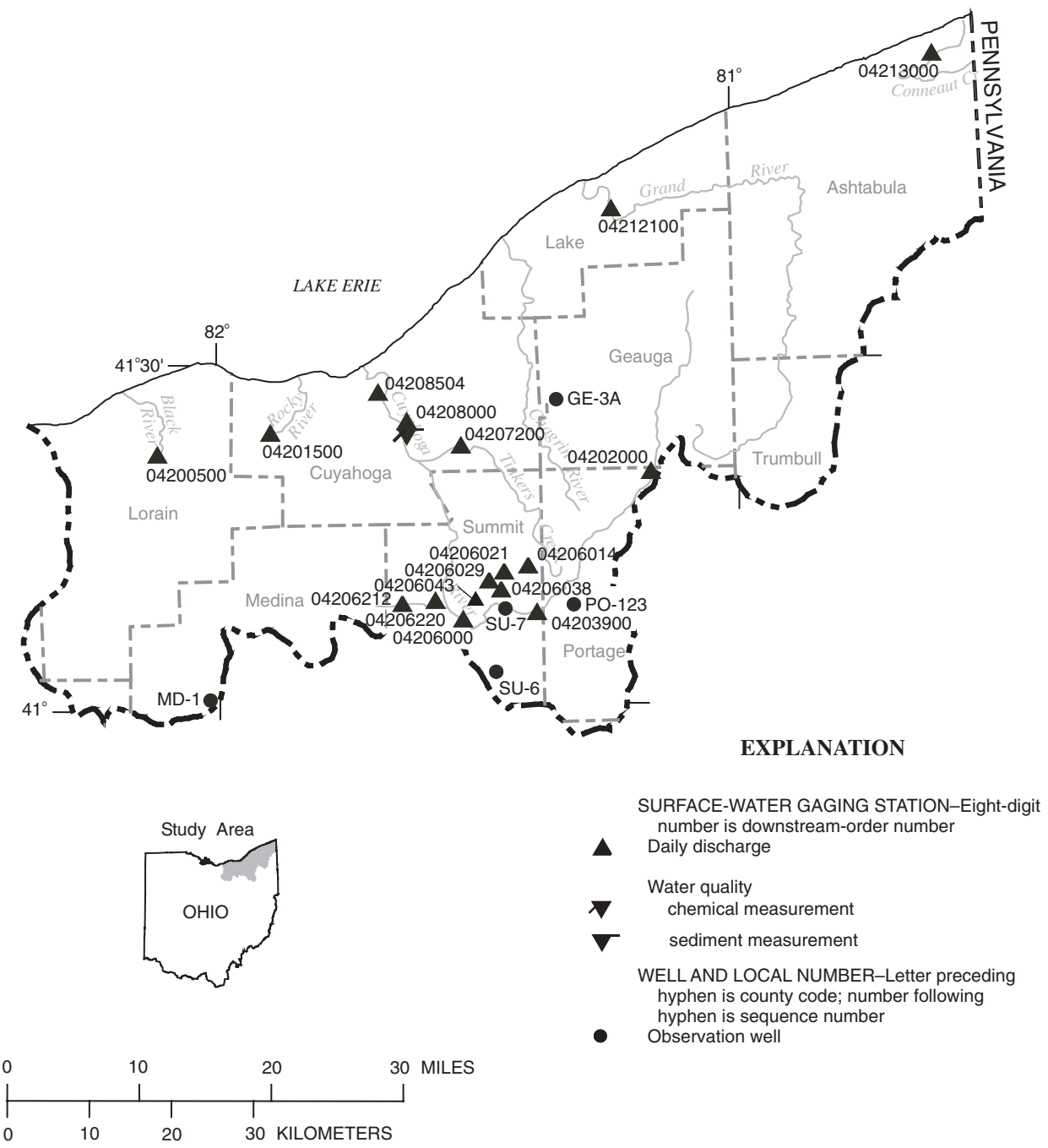


Figure 1b. Location of data-collection stations and wells.

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	1930-36
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	1928-35
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	1964-82
			1988-92
Broken Sword Creek at Nevada	04196200	83.8	1976-82
Tymochtee Creek near Marseilles	04196600	137	1970-74
Sandusky River near Mexico	04197000	774	1923-36
			1938-83
Honey Creek near New Washington	04197020	17	1976-90
Wolf Creek at Bettsville	04197300	66.2	1976-82
East Branch Wolf Creek near Bettsville	04197450	82.4	1976-82
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 Ruggles Beach	04199175		1987-94

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
Vermilion River near Fitchville	04199287	112	1978-89
			1991-93
West Branch Black River above Lake Street at Elyria	04200430	174	1980-85
Cuyahoga River near Kent	04202500	210	1934-35
Breakneck Creek near Kent	04203000	77.6	1927-35
Little Cuyahoga River at Mogadore	04204000	14.3	1946-79
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	1974-80
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	1973-80
Ohio Canal Feeder at Brecksville	04207000	a---	1923-24
Ohio Canal at Independence	04207500	a---	1922-23
			1927-36
			1941
			1949-81
Big Creek at Cleveland	04208502	35.3	1973-86
Euclid Creek near Euclid	04208690	22.6	1977-80
			1983-86
Grand River near North Bristol	04209500	85.4	1942-47
Chagrin River at Willoughby	04209000	246	1925-35
			1940-84
			1988-94
			1996
			1998-99
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	1942-75
Grand River near Madison	04212000	581	1923-35
			1938-74
Ashtabula River near Ashtabula	04212500	111	1924-36
			1939-48
			1950-80

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 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
				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	do, sc, t	1965-91
			pH	1972-91
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 Division 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 and 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-01-2." 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, Aurora, Canton, Cincinnati, Columbus (Water Division and Sewerage and Drainage

Division), Cuyahoga Falls, Elyria, Fremont, Warren, Westerville, Willoughby, and Youngstown
Counties of Clermont, Cuyahoga (Board of Health and Sanitary Engineering Division), Geauga, Knox, Lorain, Madison, Portage, Ross, and Summit
Cuyahoga River Community Planning Organization
Eastgate Development and Transportation Agency
Federal Emergency Management Agency, Region V
Miami Conservancy District
Northeast Ohio Regional Sewer District
Ohio Departments of Environmental Protection (Drinking & Ground-water Division), Natural Resources (Mineral Resources Management and Water Divisions), and Transportation
Ottawa River Coalition
Ottawa Soil and Water District
State of Ohio Adjutant General's Department
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, and Industrial Operations)
U.S. Environmental Protection Agency
West Virginia Division of Environmental Protection
West Virginia University

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.

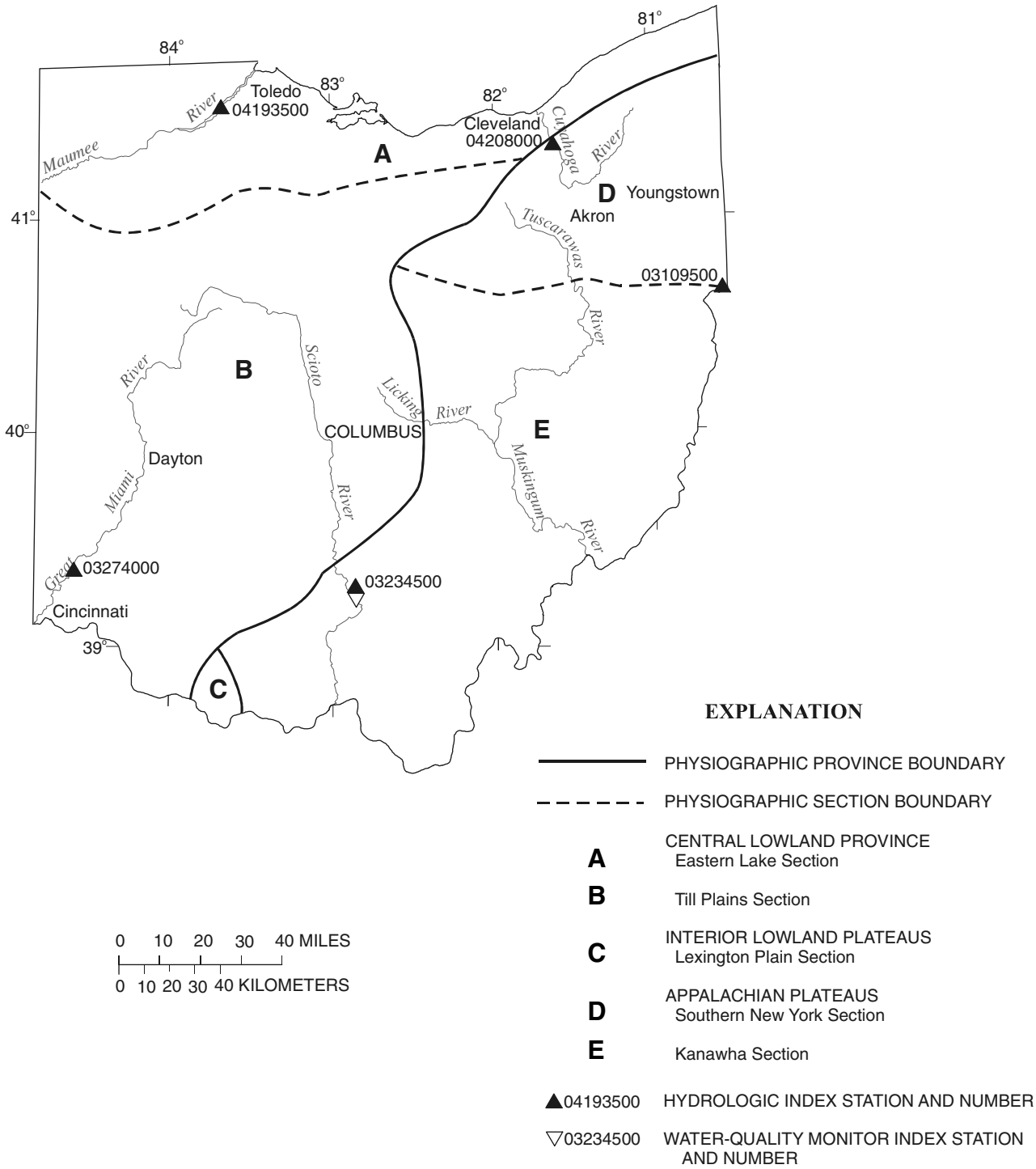


Figure 2. Physiographic divisions and location of hydrologic index stations.

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.

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 4 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 2001. Streamflow conditions during water year 2001 were as follows:

October. At the beginning of water year 2001, streamflow was in the normal* range statewide except for northwestern Ohio, where flows were excessive. Above-normal precipitation in October caused flows to rise into the excessive range throughout the State except for northeastern Ohio, where they remained normal.

November. Streamflows fell into the deficient range in northeast Ohio and into the normal range elsewhere in response to below-normal precipitation.

December. Streamflows were generally normal to above normal statewide, owing to above-normal precipitation.

January–February. Flows were in the normal range for most of the State through the period.

March–April. Flows became deficient throughout the State in response to below-normal precipitation at the beginning of the period but returned to the normal range at the end of the period.

May–June. Streamflows were generally above normal in the southwestern two-thirds of Ohio and normal to below normal elsewhere.

July-August. Streamflows were in the normal range statewide except for northeastern Ohio, where they remained deficient because of below-normal precipitation.

September. Above-normal precipitation kept streamflows in the normal range for the remainder of the water year except for southwestern Ohio, where flows became excessive.

A comparison of streamflows for 2001 with long-term median flows at four representative stations is shown in figure 3.

Water Quality

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. The National Stream Quality Accounting Network (NASQAN) and the Hydrologic Benchmark Network (BENCHMARK) are other long-term national water-quality programs; however, work in Ohio on NASQAN was discontinued in 1996, and work on BENCHMARK was discontinued in 1998 but resumed in 2001. 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

* For streamflow, "normal" is defined as being between the 25th and 75th percentiles as measured during the base period, water years 1961-90.

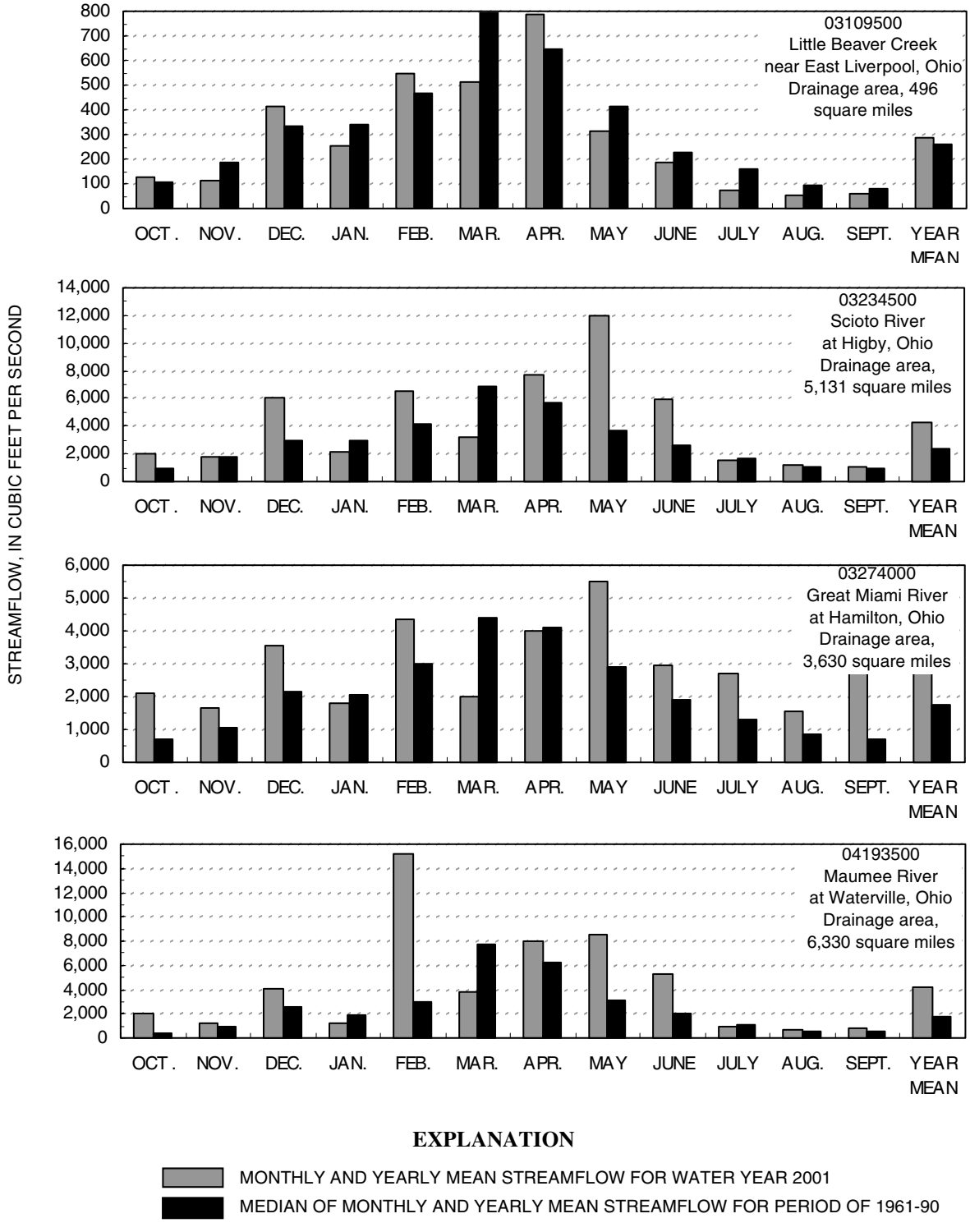


Figure 3. Streamflow during water year 2001 compared with median streamflow for period 1961-90 for four representative gaging stations.

sites as part of the Great Miami and Little Miami River Basins (MIAM) NAWQA study unit. During 2001, the LERI NAWQA was in its low-intensity data-collection phase; therefore, water-quality data were collected at only two fixed stations, one of which was the Maumee River at Waterville. During 2001, the MIAM NAWQA was also in its low-intensity data-collection phase and collected water-quality data at four fixed sites, one of which was the Mad River at St. Paris Pike near Eagle City, Ohio. Whereas water-quality sampling in the NASQAN program was done quarterly, sampling in the NAWQA program is done more frequently. For example, during 2001, monthly samples were collected at the Maumee River at Waterville and at the Mad River at St. Paris Pike. Samples at these sites were collected over a range of streamflows and were analyzed for major anions and cations, nutrients, pesticides, suspended sediment, selected physical properties, and *Escherchia coli*.

One of the samples collected during 2001 for nitrate plus nitrite concentrations at the Maumee River at Waterville and none of the samples collected at the Mad River at St. Paris Pike exceeded the U.S. Environmental Protection Agency maximum contaminant level (MCL) for finished drinking water (10 milligrams per liter, as N). The one sample that exceeded the MCL had a nitrate plus nitrite concentration of 11.7 milligrams per liter (mg/L) and was collected at high flow during the spring flush in May 2001. In Ohio, fertilizers are a major source of nitrate. Land use in the Maumee River Basin is mixed and consists of row-crop agriculture upstream and urban and industrial areas downstream. Nitrate plus nitrite concentrations in the Maumee River in 2001 ranged from 0.02 to 11.7 mg/L with a median concentration of 4.7 mg/L. At the Mad River site, located in a predominantly agricultural area, concentrations of nitrate plus nitrite were in a narrow range from 3.3 to 4.9 mg/L with a median concentration of 3.7 mg/L.

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 2001, median concentrations of total phosphorus were 0.13 mg/L for the Maumee River and 0.06 mg/L for the Mad River. All of the samples collected had concentrations below 1 mg/L; the highest concentrations detected were 0.58 and 0.32 mg/L in the Maumee and Mad Rivers, respectively.

The Maumee and Mad Rivers drain areas of heavy herbicide use. Not surprisingly, herbicides were often detected in water samples collected during 2001. For example, atrazine and metolachlor were detected in 100 percent of the water samples collected from the Maumee and Mad Rivers. In the Mad River, atrazine concentrations were low and ranged from 0.008 to 0.22 microgram per liter (µg/L) with a median of 0.019 µg/L. In contrast, in the Maumee River, atrazine concentrations ranged from 0.069 to 20.2 µg/L with a median of 0.221 µg/L. Simazine was detected in 100 percent and 50 percent of samples from the Maumee and Mad Rivers, respectively. Acetochlor was detected in 100 percent of the samples from the Maumee River and only 25 percent of the samples from the Mad River; however, only one sample collected from the Maumee River and no samples from the Mad River had concentrations that exceeded the U.S. Environmental Protection Agency's MCLs for atrazine (0.003 mg/L) and simazine (0.004 mg/L); MCLs are not developed for acetochlor. This sample was collected during the spring flush at high flow in May 2001.

Escherichia coli (*E. coli*) is a bacterial indicator for fecal contamination of water, and is the preferred and most useful indicator of the quality of freshwater recreational water for body contact. *Escherichia coli* concentrations in the Maumee River ranged from <3 to 970 colonies per 100 milliliters (col/100 mL) and for the Mad River ranged from 22 to 6,400 col/100 mL. The single-sample standard for primary-contact recreation (suitable for full-body contact such as swimming and canoeing) in Ohio is 298 col/100 mL. Sixty-four percent of the samples collected from the Maumee River and 80 percent from the Mad River met the primary-contact standard. Fecal contamination of waters can come from a variety of point and nonpoint sources include sewage-treatment plants; septic tanks; overflows from sanitary, combined, and storm sewers; feedlots; animal-production facilities; agricultural lands receiving manure applications; and pasture lands.

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. 4) 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. 4) that yields only small amounts of water to wells. Silurian-age limestone and dolomite and Devonian limestone comprise the carbonate aquifer system (fig. 4) 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 5. 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 6. 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 2001 were as follows:

October–November. At the beginning of water year 2001, ground-water levels were below normal* statewide with the exception of some carbonate aquifers in western Ohio, where levels were near to above normal. Ground-water levels generally rose throughout the period in western Ohio and fell in

* For ground-water "normal" is defined as being between the 25th and 75th percentiles of the range values recorded during the reference period.

normal to near normal statewide.

*January–March***.** Ground-water levels stabilized but generally remained below normal during the period as a result of below-normal precipitation.

*May–June***.** Ground-water levels rose in response to above-normal precipitation but remained below normal for most of the State.

*July–September***.** The remainder of the water year was characterized by seasonal ground-water declines. Levels were generally below normal in July and August.

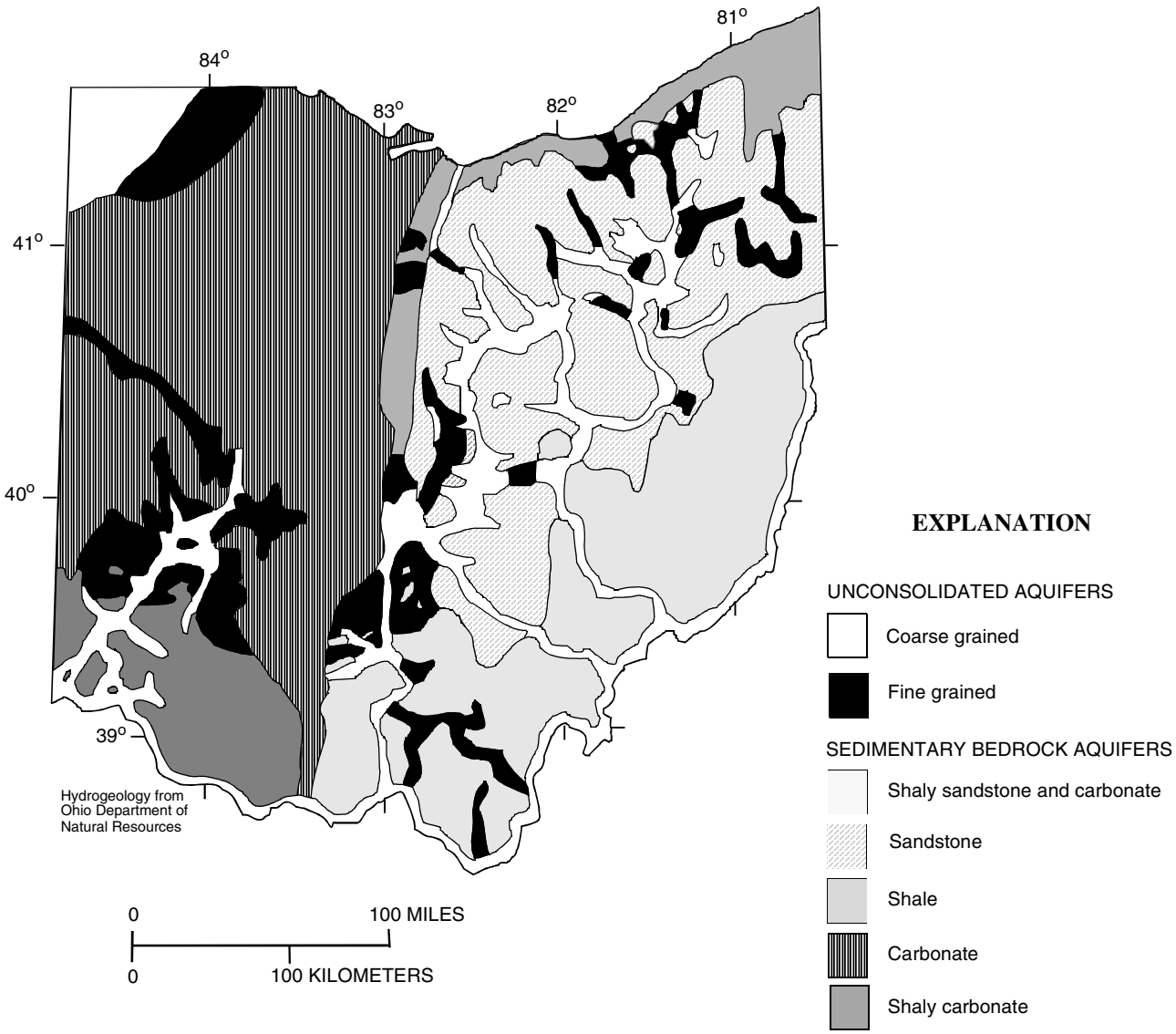


Figure 4. Geographic distribution of principal aquifers in Ohio.

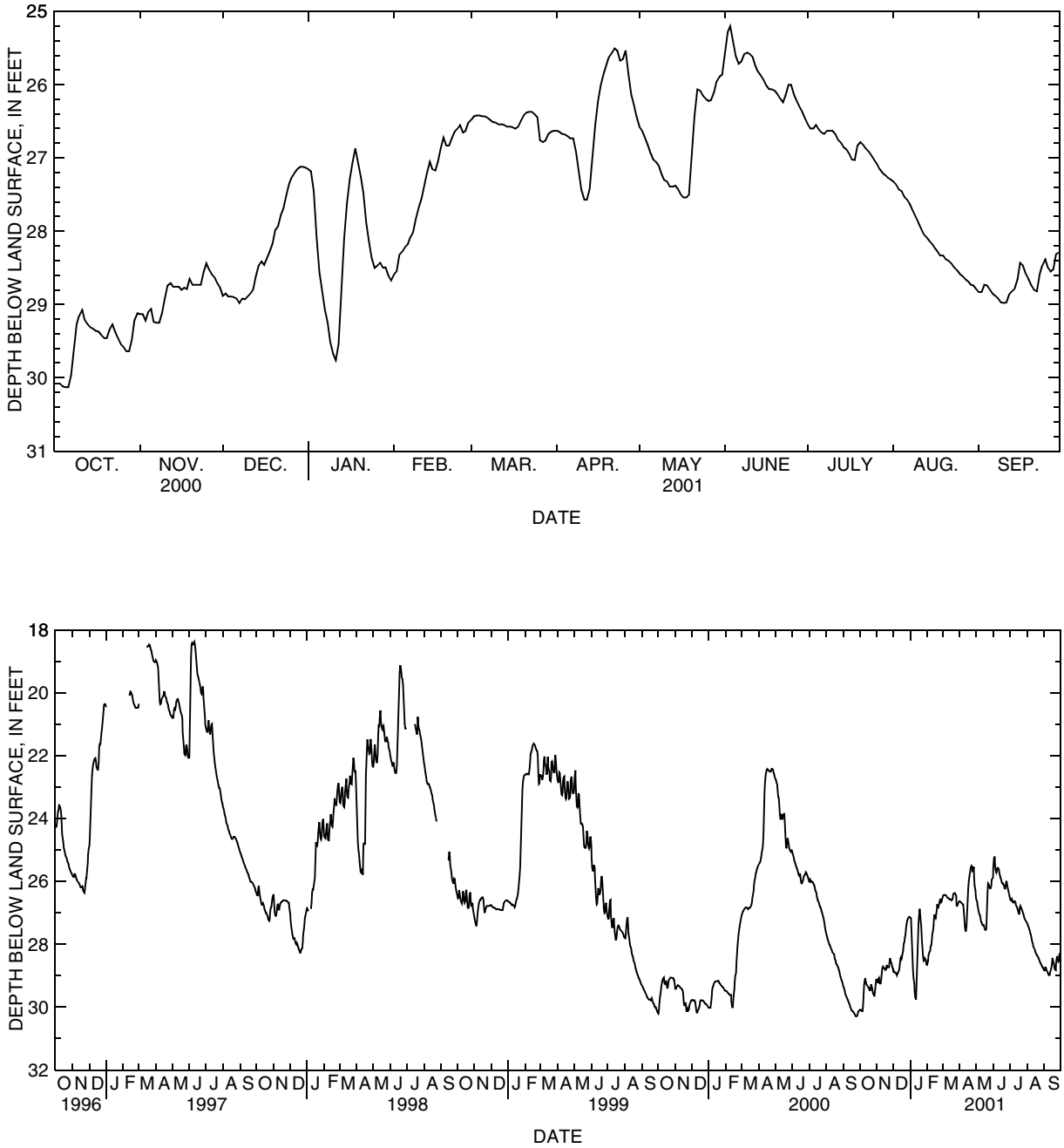


Figure 5. Sample of 1-year and 5-year hydrographs of well H-1 (391717084393300), completed in a unconfined unconsolidated aquifer.

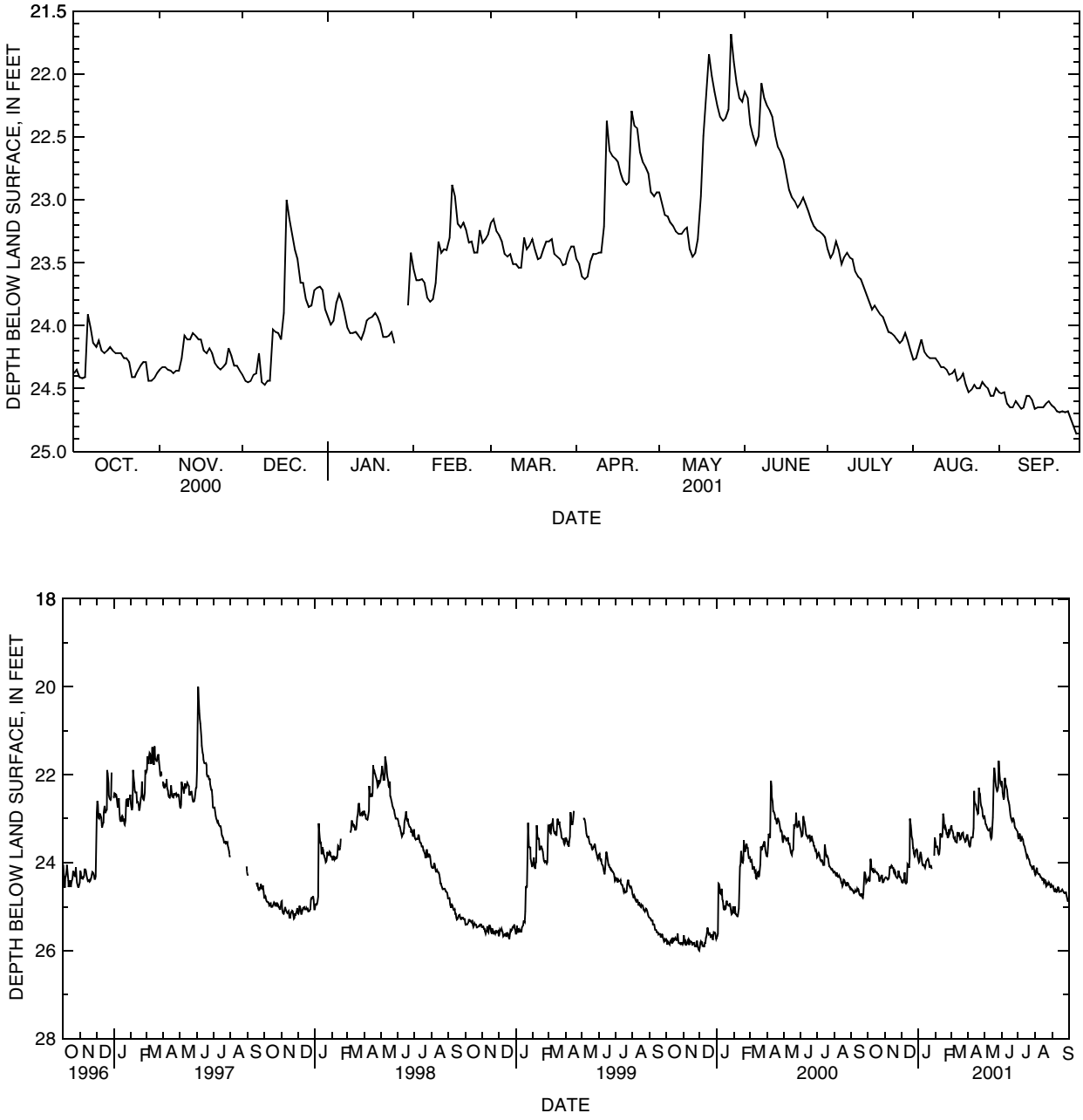


Figure 6. Sample of 1-year and 5-year hydrographs of well U-4 (401826083255200), completed in a confined carbonate-rock aquifer.

SPECIAL NETWORKS AND PROGRAM

Hydrologic Benchmark Network is a network of 50 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by human activities.

National Stream-Quality Accounting Network (NASQAN) monitors the water quality of large rivers within four of the Nation's largest river basins—the Mississippi, Columbia, Colorado, and Rio Grande. 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 Program (NAWQA), (3) to characterize processes unique to large-river systems, such as storage and remobilization of sediments and associated contaminants, and (4) to refine existing estimates of off-continent transport of water, sediment, and chemicals for assessing human effects on the world's oceans and for determining global cycles of carbon, nutrients, and other chemicals.

The National Atmospheric Deposition Program/National Trends Network (NADP/NTN) provides continuous measurement and assessment of the chemical climate of precipitation throughout the United States. As the lead Federal agency, the USGS works together with over 100 organizations to provide scientific investigators world-wide with a long-term, high-quality database of atmospheric deposition for research support in the areas of air quality, water quality, agricultural effects, forest productivity, materials effects, ecosystem studies, watershed studies and human health.

Data from the network, as well as information about individual sites, are available through the World Wide Web at *http://nadp.sws.uiuc.edc*.

The National Water-Quality Assessment (NAWQA) Program of the U.S. Geological Survey 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; provide an improved understanding of the primary natural and human factors affecting these observed conditions and trends; and provide information that supports development and evaluation of management, regulatory, and monitoring decisions by other agencies.

Assessment activities are being conducted in selected 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 are being 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 decision making by water-resources managers 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 is available through the World Wide Web at *http://water.usgs.gov/nawqa/nawqa_home.html*.

EXPLANATION OF THE RECORDS

The records in this report are for the 2001 water year that began October 1, 2000, and ended September 30, 2001. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, water-quality data for surface and ground water, and ground-water-level data. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station Identification Numbers

Each data station, whether onstream or at a well, is assigned a unique identification number. The number is generally assigned when a station is first established and is retained for that station indefinitely. The systems used by the USGS to assign identification numbers for surface-water stations and for ground-water well sites differ, but both are based on geographic locations. The "downstream order" system is used for regular surface-water stations and the "latitude-longitude" system is used for wells and, in Ohio, for surface-water stations where only infrequent measurements are made.

Downstream Order System

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

The station-identification number is assigned according to the above-mentioned downstream order. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete eight-digit number for each station such as 04041000, which appears just to the left of the station name, includes the two-digit part number "04" plus the six-digit downstream order number "041000." The part number designates the major river basin; for example, part "03" is the Ohio River Basin, and part "04" is the St. Lawrence River Basin.

Latitude-Longitude System

The identification numbers for wells and miscellaneous surface-water sites are assigned according to the grid system of latitude and longitude. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude, the next seven digits denote degrees, minutes, and seconds of longitude, and the last two digits (assigned sequentially) identify the wells or other sites within a 1-second grid. In the rare instance where the initial determination of latitude and longitude are found to be in error, the station will retain its initial identification number; however, its true latitude and longitude will be listed in the LOCATION paragraph of the station description. (See figure 7.)

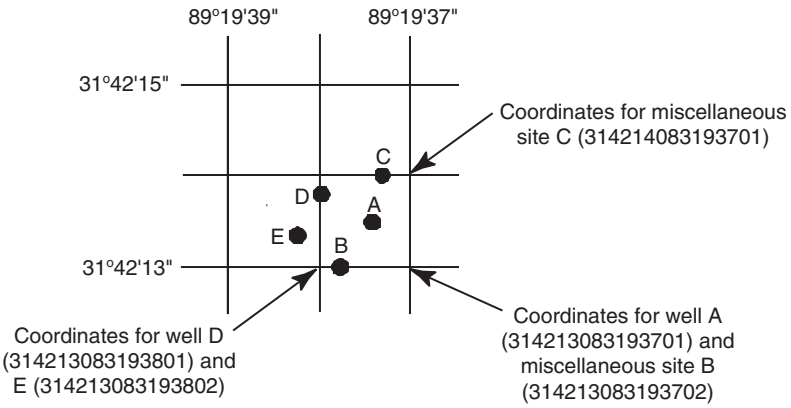


Figure 7. System for numbering wells and miscellaneous sites (latitude and longitude).

Records of Stage and Water Discharge

Records of stage and water discharge may be complete or partial. Complete records of discharge are those obtained using a continuous stage-recording device through which either instantaneous or mean discharge may be computed for any time, or any period of time, during the period of record. Complete records of lake or reservoir contents, similarly, are those for which stage or content may be computed or estimated with reasonable accuracy for any time or period of time. They may be obtained using a continuous stage-recording device but need not be. Because daily mean discharges and end-of-day contents commonly are published for such stations, they are referred to as "daily stations."

By contrast, partial records are obtained through discrete measurements often without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. The nature of a partial record is indicated by table titles such as CREST-STAGE PARTIAL RECORDS or LOW-FLOW PARTIAL RECORDS. Records of miscellaneous discharge measurements or of measurements from special studies, such as low-flow seepage studies, may be considered as partial records, but they are presented separately in this report. Location of all complete-record and crest-stage stations for which data are given in this volume are shown in figures 1a through 1d (located after "contents").

Data Collection and Computation

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

Continuous records of stage are obtained with digital recorders that store stage data on solid-state storage media at selected time intervals. Measurements of discharge are made with current meters using methods adapted by the USGS as a result of experience accumulated since 1880. These methods are described in standard textbooks, in Water-Supply Paper 2175, and in USGS Techniques of Water-Resources Investigations, Book 3, Chapter A6.

In computing discharge records, results of individual measurements are plotted against the corresponding

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

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

At some stream-gaging stations the stage-discharge relation is affected by the backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method, in which the slope or fall in a reach of the stream is a factor in computing discharge. The slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage; at these stations the rate of change in stage is used as a factor in computing discharge.

In computing records of lake or reservoir contents, it is necessary to have available from surveys or curves, tables defining the relation of stage and contents. The application of stage to the stage-contents curves or tables give the contents from which daily, monthly, or yearly changes are then determined. If the stage-contents relation changes because of deposition of sediment in a lake or reservoir, periodic resurveys may be necessary to redefine the relation. Even when this is done, the contents computed may become increasingly in error as time since the last survey increases. Discharges over lake or reservoir spillways are computed from stage-discharge relation much as other stream discharges are computed.

For some gaging stations there are periods when no gage-height record is obtained or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated from the recorded range in stage, previous or following record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise, daily contents may be estimated from operator's logs, previous or following record, inflow-outflow studies, and other information.

At some gaging stations, acoustic velocity meter (AVM) systems are used to compute discharge. The AVM system measures the stream’s velocity at one or more paths in the cross section. Coefficients are developed to relate this path velocity to the mean velocity in the cross section. Because the AVM sensors are fixed in position, the adjustment coefficients generally vary with stage. Cross-sectional area curves are developed to relate stage, recorded as noted above, to cross-section area. Discharge is computed by multiplying path velocity by the appropriate stage-related coefficient and area.

Data Presentation

The records published for each gaging station consist of two parts—the manuscript or station description and the data table for the current water year.

Station Manuscript. The manuscript provides, under various headings, descriptive information such as

station location, period of record, historical extremes outside the period of record, record accuracy, and other remarks pertinent to station operation and regulation. The following information, as appropriate, is provided with each continuous record of discharge or lake content. Comments to follow clarify information presented under the various headings of the station description.

LOCATION.—Information on locations is obtained from the most accurate maps available. The location of the gage with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name is given. River mileage, given for only a few stations, was 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 types of maps available vary from one drainage basin to another, the accuracy of the drainage areas likewise varies. Drainage areas are updated as better maps become available.

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

REVISED RECORDS.—Published records, because of new information, occasionally are found to be incorrect, and revisions are printed in later reports. Listed under this heading are all the reports in which revisions have been published for the station and the water years to which the revisions apply. If a revision did not include daily, monthly, or annual figures of discharge, that fact is noted after the year dates as follows: (M) means that only the instantaneous maximum discharge was revised, (m) that only the instantaneous minimum was revised, and (P) that only the peak discharges were revised. If the drainage area has been revised, the report in which the most recently revised figure was first published is given.

GAGE.—The type of gage in current use, the datum of the current gage referred to sea level (National Geodetic Vertical Datum of 1929) unless otherwise noted, and a condensed history of the types, locations, and datums of previous gages are given under this heading.

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

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

EXTREMES FOR PERIOD OF RECORD.—In some headings "Extremes for Period of Record" is presented as a paragraph separate from summary statistics. Extremes may include maximum and minimum stages and maximum and minimum discharges or contents. Unless otherwise qualified, the maximum discharge or content is the instantaneous maximum corresponding to the highest stage that occurred. The highest stage may have been obtained from a graphic or digital recorder, from a crest-stage gage, or by direct observation of a nonrecording gage. If the maximum stage did not occur on the same day as the maximum discharge or content, it is given separately. Similarly, the minimum is the instantaneous minimum discharge, unless otherwise qualified, and was determined and is reported in the same manner as the maximum.

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

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR.—Presented as a separate table. For stations meeting certain criteria, all peak discharges and stages occurring during the water year and greater than a selected base discharge are presented under this heading. All peaks greater than the base discharge are listed with the maximum for the year footnoted by an asterisk (*). Peak discharges are not published for canals, ditches, drains, or streams for which the peaks are subject to substantial regulation or at locations where the instantaneous peak discharge does not exceed the mean daily discharge by 10 percent. 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.

REVISIONS.—If errors in published water-quality records are discovered after publication, appropriate updates are made in the U.S. Geological Survey's distributed data system, NWIS, and subsequently to its web-based National data system, NWISWeb [*http://water.usgs.gov/nwis/nwis*]. Because the usual volume of updates makes it impractical to document individual changes in the State data-report series or elsewhere, potential users of U.S. Geological Survey water-quality data are encouraged to obtain all required data from NWIS or NWISWeb to ensure the most recent updates. Updates to NWISWeb are currently made on an annual basis.

Although rare, occasionally the records of a discontinued gaging station may need revision. Because, for these stations, there would be no current or, possibly, future station manuscript published to document the revision in a REVISED RECORDS entry, users of data for these stations who obtained the data from previously published data reports may wish to contact the District office to determine if the published records were ever revised after the station was discontinued. Of course, if the data were obtained by computer retrieval, the data would be current and there would be no need to check because any published retrieval of data is always accompanied by revisions of the corresponding data in computer storage.

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

Data Table of Daily Mean Values. The daily table for stream-gaging stations gives mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed TOTAL gives the sum of the daily figures. The line headed MEAN gives the average flow in cubic feet per second during the month. The lines headed MAX and MIN give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month is often expressed in cubic feet per square mile (line headed CFSM), or in inches (line headed IN.), or in acre-feet (line headed AC-FT). Figures for cubic feet per second per square mile and runoff in inches are omitted if there is extensive regulation or diversion or if the drainage area includes large noncontributing areas. In the yearly summary below the monthly summary, the figures shown are the appropriate discharges for the calendar and water years. At some stations monthly and (or) yearly observed discharges are adjusted for reservoir storage or diversion, or diversions or reservoir contents are given. These figures are identified by symbol and corresponding footnote.

Statistics of Monthly Mean Data. A tabular summary of the mean (line headed MEAN), maximum (line headed MAX), and minimum (line headed MIN) of monthly mean flows for each month for a designated period is provided below the mean values table. The water years of the first occurrence of the maximum and minimum monthly flows are provided immediately below those figures. 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. It will consist of all of the station record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript.

Summary Statistics. A table titled SUMMARY STATISTICS follows the statistics of monthly mean data tabulation. This table consists of four columns, with the first column containing the line headings of the statistics being reported. The table provides a statistical summary of yearly, daily, and instantaneous flows, not only for the

current water year but also for the previous calendar year and for a designated period, as appropriate. The designated period selected, WATER YEARS ____- ____, will consist of all of the station record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript. All of the calculations for the statistical characteristics designated ANNUAL (See line headings below), except for the ANNUAL SEVEN-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 the footnotes. When the maximum or minimum statistic occurred outside the designated period, that statistic is listed in the EXTREMES FOR PERIOD OF RECORD paragraph in the manuscript. Selected streamflow-duration-curve statistics and runoff data are also given. Runoff data may be omitted if there is extensive regulation or diversion of flow in the drainage basin.

The following summary statistics data, as appropriate, are provided with each continuous record of discharge. Comments to follow clarify information presented under the various line headings of the summary statistics table.

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

ANNUAL MEAN.—The arithmetic mean of the individual daily mean discharges for the year noted or for the designated period. At some stations the yearly mean discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes.

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 SEVEN-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.)

INSTANTANEOUS PEAK FLOW.—The maximum instantaneous stage occurring for the water year or for the designated period. Note that secondary instantaneous peak discharges above a selected base discharge are given in the table “Peak Discharges and Stages at Continuous-Record Surface Discharge Stations.”

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

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

ANNUAL RUNOFF.—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 second per square mile (CFSM) is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area for the area. Inches (INCHES) indicates the depth to which the drainage area would be covered if all 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 usually presented in two tables. The first is a table of annual maximum stage and discharge at crest-stage stations, and the second, when collected, is a table of 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 generally made in time of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Identifying Estimated Daily Discharge

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

Accuracy of the Records

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

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

Daily mean discharges in this report are given to the nearest hundredths of a cubic foot per second for values less than 1 ft^3/s; to the nearest tenth between 1.0 and 10 ft^3/s; to whole numbers between 10 and 1,000 ft^3/s; and to three significant figures for more than 1,000 ft^3/s. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharges listed for partial-record stations and miscellaneous sites.

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

Other Records Available

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

Records of Surface-Water Quality

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because interpretation of records of surface-water quality nearly always requires corresponding discharge data. Records of surface-water quality in this report may involve a variety of types of data and measurement frequency.

Classification of Records

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

A careful distinction needs to be made between "continuing records" as used in this report and "continuous recordings," which refers to a continuous series of discrete values collected at short intervals and stored electronically in a data logger or obtained via data collection platform. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recording; however, because of cost, most data are obtained only monthly or less frequently. Locations of stations for which records on the quality of surface water appear in this volume are shown in figures 1a and 1b.

Accuracy of the Records

For each record, one of four accuracy rating 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, as described by Wagner and others (2000). 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 a 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."

Onsite Measurement and Sample Collection

In obtaining water-quality data, a major concern is that the data obtained represent the in situ quality of the water. To ensure this, certain measurements, such as water temperature, pH, and dissolved oxygen, need to be made on site when the samples are taken. To ensure that measurements made in the laboratory also represent the in situ water, carefully prescribed procedures need to be followed in collecting the samples, in treating the sample to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in publications on "Techniques of Water-Resources Investigations," Book 1, Chap. D2; book 3, Chap. A1, A3, and A4; Book 9, Chap. A1-A9." Additional information on collecting, treating, and shipping samples can be found in USGS Water-Resources Investigations Report 98-4057 "Quality-Assurance/Quality-Control Manual for Collection and Analysis of Water-Quality Data in the Ohio District, U.S. Geological Survey."

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

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

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

Water Temperatures

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are frequently 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 daily 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.

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 have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharge for days of rapidly changing flow or concentration was computed by the subdivided-day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge values differ 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 loads of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

At other stations, suspended-sediment samples were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of 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 the quantities of suspended sediment, records of periodic measurements of the particle-size distribution of the suspended sediment and bed material are included for some stations.

Laboratory Measurements

Sediment samples, samples for microbiological analyses, and samples for specific conductance, pH, and dissolved oxygen are analyzed locally. All other samples are analyzed in the USGS laboratories in Arvada, Colo., or by a USGS-approved outside laboratory. Methods used in analyzing sediment samples and computing sediment records are given in the series “Techniques of Water-Resources Investigations” (TWRI), which are listed in this report, and in other documents listed on the World Wide Web page for USGS, Water Resources Division, Office of Water Quality (*http://water.usgs.gov/owq*).

Data Presentation

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

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

LOCATION.—See Data Presentation under “Records of Stage and Water Discharge”; same comments apply.

DRAINAGE AREA.—See Data Presentation under "Records of Stage and Water Discharge"; same comments apply.

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

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

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

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

REVISIONS.—If errors in published water-quality records are discovered after publication, appropriate updates are made in the USGS computerized data system, the National Water Information System (NWIS). Because the usual volume of updates makes it impractical to document individual changes in the State data-report series or elsewhere, potential users of USGS water-quality data are encouraged to obtain all required data from the appropriate computer file to ensure the most recent updates.

Remark Codes

The following remarks codes may appear with the water-quality data in this report.

E, 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 acceptable 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).
&	Biological organism estimated as dominant.
V	Analyte was detected in both the environmental sample and the associated blanks.
M	Presence verified but not quantified.

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. The chance of 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 <LRL for samples in which the analyte was either not detected or did not pass identification. Analytes that are detected at concentrations between the LT-MDL and 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.

Dissolved Trace-Element Concentrations

NOTE.—To confidently produce dissolved trace-element data with insignificant contamination, the USGS began using a new trace-element protocol at some stations in water year 1994 to collect trace-element data at the microgram per liter (µg/L) level (refer to USGS Open-File Report 94-539 "U.S. Geological Survey Protocol for the Collection and Processing of Surface-Water Samples for the Subsequent Determination of Inorganic Constituents in Filtered Water"). This protocol was used in the current water year at all stations. Therefore, the trace-element data for samples collected before and after implementation of new protocols are not directly comparable.

Change in National Trends Network Procedures

NOTE.—Sample handling procedures at all National Trends Network stations were changed substantially on January 11, 1994, in order to reduce contamination from the sample shipping container. The data for samples before and after that date are different and not directly comparable. A tabular summary of the differences based on a special intercomparison study, is available from the NADP/NTN Program Office, Illinois State Water Survey, 2204 Griffith Drive, Champaign, IL 61820-7495 (Telephone: 217-333-7873).

Records of Ground-Water Levels

Water-level data from a network of observation wells (in addition to project wells) are given in this report. The network well data are intended to provide a sampling and historical record of water-level changes in the Nation's most important aquifers. Locations of the observation wells in this network in Ohio are shown in figures 1a and 1b (located after "contents"). Water-level data for specific projects are reported under those projects.

Data Collection and Computation

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

Tables of water-level data are presented by counties arranged in alphabetical order. The prime identification number for a given well is a 15-digit number that is based on latitude and longitude. The secondary identification number is the local well number, which is provided for local needs. Water-level measurements in this report are given in feet with reference to land-surface datum. Land-surface datum is a datum plane that is approximately at land surface at each well. If known, the altitude of the land-surface datum above sea level is given in each well description. The height of the measuring point (MP) above or below land-surface datum is given in each well description.

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

Data Presentation

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

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

AQUIFER.—This entry describes the aquifer by age and composition.

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

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

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

PERIOD OF PUBLISHED RECORD.—This entry indicates the period for which there are published records for the well. It reports the month and year of the start of publication of water level records by the USGS or cooperating agency, and the words “to current year” if the records are to be continued to the following year. Periods for which water-level records are available, but not published by the USGS, may be noted.

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

A table of water levels follows the station description for each well. Water levels are reported in feet below (or above) land-surface datum. All periodic measurements of water levels for wells are listed. For wells equipped with recorders, daily water-level lows are published. The highest and lowest daily lows of the water year are shown on a line below the table. Because only daily lows are published for wells with recorders, the extreme instantaneous high may be a value that is not listed in the table. Missing records are indicated by dashes in place of the water level.

Records of Ground-Water Quality

Records of ground-water quality in this report differ from other types of records in that, for most sampling sites, they consist of only one set of measurements. The quality of ground water ordinarily changes slowly, so that frequent measuring of the same parameter is not necessary unless one is concerned with a particular problem such as monitoring for trends of a particular constituent.

Data Collection and Computation

The records of ground-water quality in this report were obtained mostly as part of special studies in specific areas. Consequently, a number of chemical analyses are presented for some counties, but none are presented for others. As a result, the records for this year, by themselves, do not provide a balanced view of ground-water quality statewide. Such a view can be attained only by considering records for this year in context with similar records obtained for these and other counties in earlier years.

Most methods for collecting and analyzing water samples are described in the TWRI manuals listed in this report and on the World Wide Web page for the Office of Water Quality (*http://water.usgs.gov/owq*). The data presented in this report represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. All samples were obtained by trained personnel. 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 the material comprising the casings.

Data Presentation

The records of ground-water quality are published intermixed with the ground-water-level data for network wells and with the specific project for project wells.

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. These data may be acessed at *http://water.usgs.gov*.

DEFINITION OF TERMS

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

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 to September 30). Most low-flow frequency analyses use a climatic year (April 1-March 31), which tends to prevent the low-flow period from being artificially split between adjacent years. The date shown in the summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day 10-year low-flow statistic.)

Aroclor is the registered trademark for a group of polychlorinated biphenyls that were manufactured by the Monsanto Company prior to 1976. Aroclors are assigned specific 4-digit reference numbers dependent upon molecular type and degree of

substitution of the biphenyl ring hydrogen atoms by chlorine atoms. The first two digits of a numbered aroclor represent the molecular type and the last two digits represent the weight percent of the hydrogen substituted chlorine.

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

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 taken. 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")

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

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 peaks per year will be published.

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 ft) that are retained in the bedload sampler. A sample collected with a pressure-differential bedload sampler may also contain a component of the suspended load.

Bedload discharge (tons per day) is 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" and "Sediment")

Bed material is the sediment mixture of which a streambed, 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 which 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")

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 on 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 $1/3\ \pi r^3 h$ cylinder $\pi r^3 h$.

pi is the ratio of the circumference to the diameter of a circle; pi = 3.14159…
From cell volume, total algal biomass expressed as biovolume ($\mu m^3/mL$) is thus determined by multiplying the number of cells of a given species by its average cell volume and then summing these volumes over all species.

Cfs-day (See "Cubic foot per second-day")

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 warm-blooded 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 waters and of the survival and transport of viruses in the environment.

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

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

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 downstream from a gaging station that physically influences 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-feet" sometimes is used synonymously with "cubic feet 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 "Daily mean suspended-sediment concentration," "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 means 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 sediments or other constituents suspended or dissolved in the water) that passes a cross section in a stream channel, caal, 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 chemical constituents, 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:

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

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")

Enterococcus bacteria are commonly found in the feces of humans and other warm-blooded 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 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 warm-blooded 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. Their concentrations are expressed as number of colonies per 100 mL of sample. (See also "Bacteria")

Estimated (E) value of a concentration is reported when an analyte is detected and all criteria for a positive result are met. If the concentration is less than the method detection limit (MDL), an 'E' code will be reported with the value. If the analyte is 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 semi-volatile and extractable by ethyl acetate from air-dried streambed sediments. 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 sediments.

Fecal coliform bacteria are present in the intestine or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory, they are defined as all organisms that produce blue colonies within 24 hours when incubated at 44.5 °C 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 intestine of warm-blooded 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 larger 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 is often 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. When used in connection with a discharge record, the term is applied only to those gaging stations where a continuous record of discharge is computed.

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.

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 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 is commonly 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 which 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 benchmark station is one that provides hydrologic data for a basin in which the hydrologic regimen will likely be governed solely by natural conditions. Data collected at a benchmark station may be used to separate effects of natural from human-induced changes in other basins that have

been developed and in which the physiography, climate, and geology are similar to those in the undeveloped benchmark basin.

Hydrologic index stations referred to in this report are four 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")

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 non-detection 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 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 based on the most current quality-control data and may, therefore, change. [Note: In several previous NWQL documents (Connor and others, 1998; NWQL Technical Memorandum 98.07, 1998), the LRL was called the non-detection 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.

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 are usually 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 mg/L 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 (Timme, 1995).

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.

Nepheloetric 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 U.S. This datum was established in 1991 by minimum-constraint adjustment of the Canadian**,** Mexican, and U.S. 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 sediments. May be reported as dissolved organic carbon (DOC), particulate organic carbon (POC), or total organic carbon (TOC).

Organic mass or volatile mass of the living substance is the difference between the dry mass and ash mass and represents the actual mass of the living matter. 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

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic matter is

removed, and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native water analysis.

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 to 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 determined by using a clinometer to estimate left and right bank shading. The values are added together and divided by 180 to determine percent shading relative to a horizontal surface.

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. While 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 are termed "acidic," and solutions with a pH greater than 7 are termed "basic." Solutions with a pH of 7 are neutral. The presence and concentration of many dissolved chemical constituents found in water are, in part, influenced by the hydrogen-ion activity of water. Biological processes including growth, distribution of organisms, and toxicity of the water to organisms are also influenced, 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 are commonly 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.

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

the plants.

Primary productivity (carbon method) is expressed as milligrams of carbon per area per unit time [mg C/(m^2/time)] for periphyton and macrophytes or per volume [mg C/(m^3/time)] for phytoplankton. 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 in unenriched waters. 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. 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 an element 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.

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 non-exceedance 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 non-exceedances of the $7Q_{10}$ occur less than 10 years after the previous non-exceedance, half occur less than 7 years after, and about one-eighth occur more than 20 years after the previous non-exceedance. 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")

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 used to denote

location along a river.

Runoff is the quantity of water that is discharged ("runs off") from a drainage basin in 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. See conversion of units page (inside back cover) for identification of the datum used in this report.

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 influenced by environmental and land-use factors. Some major factors are topography, soil characteristics, land cover, and depth and intensity of precipitation.

Seven-day 10-year low flow (7Q10) is the discharge below which the annual 7-day minimum flow falls in 1 year out of 10 on the long-run average. The recurrence interval of the 7Q10 is 10 years; the chance that the annual 7-day minimum flow will be less than the 7Q10 is 10 percent in any given year. (See also "Recurrence interval" and "Annual 7-day minimum")

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.

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/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 waters, to evaluate mixing of different waters, 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 percent covered by fine sediment:

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

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 ft) of the bed material such as that material which 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 operationally defined 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, based on 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 ft 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/day) 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, based on 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 hydrologic periods to provide improved spatial resolution for critical water-quality conditions. For the period and conditions sampled, they assess the spatial distribution of selected water-quality conditions in relation to causative factors, such as land use and contaminant sources.

Taxa richness is the total number of distinct species or groups and usually decreases with pollution. (See also "Percent Shading")

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

particular mayfly, *Hexagenia limbata,* is the following:

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

Temperature preferences:

Cold—preferred water temperature for the species is less than 20 °C or spawning temperature preference less than 16 °C and native distribution is considered to be predominantly north of 45° N. latitude.

Warm—preferred water temperatures for the species is greater than 20 °C or spawning temperature preference greater than 16 °C and native distribution is considered to be predominantly south of 45° N. latitude.

Cool—intermediate between cold and warm water temperature preferences.

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 warm-blooded 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 mL 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 "Sediment," "Suspended sediment," "Suspended-Sediment Concentration," "Bedload," and "Bedload discharge")

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")

Trophic group:

Filter feeder—diet composed of suspended plant and/or animal material.
Herbivore—diet composed predominantly of plant material.
Invertivore—diet composed predominantly of invertebrates.
Omnivore—diet composed of at least 25-percent plant and 25-percent animal material
Piscivore—diet composed predominantly of fish.

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 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. Consequently, the method of measurement and type of instrument used to derive turbidity records should be included in the "REMARKS" column of the Annual Data Report.

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.

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 (U.S. Environmental Protection Agency, 1996).

Water table is the level in the saturated zone at which

the pressure is equal to the atmospheric pressure.

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

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, 2001, is called the "2001 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 are often large enough to be seen with the unaided eye. Zooplankton are secondary consumers feeding upon bacteria, phytoplankton, and detritus. Because they are the grazers in the aquatic environment, the zooplankton are a vital part of the aquatic food web. The zooplankton community is dominated by small crustaceans and rotifers. (See also "Plankton")

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

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

The reports listed below are for sale by the U.S.G.S., Information Services, Box 25286, Federal Center, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be made in the form of a check or money order payable to the "U.S. Geological Survey." Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and mention the "U.S. Geological Survey Techniques of Water-Resources Investigations."

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.
3-A5. *Measurement of peak discharge at dams by indirect methods,* by Harry Hulsing: USGS–TWRI book 3. chap. A5. 1967. 29 p.
3-A6. *General procedure for gaging streams,* by R.W. Carter and Jacob Davidian: USGS–TWRI book 3, chap. A6. 1968. 13 p.
3-A7. *Stage measurement at gaging stations,* by T.J. Buchanan and W.P. Somers: USGS–TWRI book 3, chap. A7. 1968. 28 p.
3-A8. *Discharge measurements at gaging stations,* by T.J. Buchanan and W.P. Somers: USGS–TWRI book 3, chap. A8. 1969. 65 p.
3-A9. *Measurement of time of travel in streams by dye tracing,* by F.A. Kilpatrick and J.F. Wilson, Jr.: USGS–TWRI book 3, chap. A9. 1989. 27 p.
3-Al0. *Discharge ratings at gaging stations,* by E.J. Kennedy: USGS–TWRI book 3, chap. A10. 1984. 59 p.
3-A11. *Measurement of discharge by the moving-boat method,* by G.F. Smoot and C.E. Novak: USGS–TWRI book 3, chap. A11. 1969. 22 p.
3-A12. *Fluorometric procedures for dye tracing*, Revised, by J.F. Wilson, Jr., E.D. Cobb, and F.A. Kilpatrick: USGS–TWRI book 3, chap. A12. 1986. 34 p.
3-A13. *Computation of continuous records of streamflow*, by E.J. Kennedy: USGS–TWRI book 3, chap. A13. 1983. 53 p.
3-A14. *Use of flumes in measuring discharge,* by F.A. Kilpatrick and V.R. Schneider: USGS–TWRI book 3, chap. A14. 1983. 46 p.
3-A15. *Computation of water-surface profiles in open channels,* by Jacob Davidian: USGS–TWRI book 3, chap. A15. 1984. 48 p.

3-A16. *Measurement of discharge using tracers*, by F.A. Kilpatrick and E.D. Cobb: USGS–TWRI book 3, chap. A16. 1985. 52 p.
3-A17. *Acoustic velocity meter systems,* by Antonius Laenen: USGS–TWRI book 3, chap. A17. 1985. 38 p.
3-A18. *Determination of stream reaeration coefficients by use of tracers,* by F.A. Kilpatrick, R.E. Rathbun, Nobuhiro Yotsukura, G.W. Parker, and L.L. DeLong: USGS–TWRI book 3, chap. A18. 1989. 52 p.
3-A19. *Levels at streamflow gaging stations*, by E.J. Kennedy: USGS–TWRI book 3, chap. A19. 1990. 31 p.
3-A20. *Simulation of soluble waste transport and buildup in surface waters using tracers*, by F.A. Kilpatrick: USGS–TWRI book 3, chap. A20. 1993. 38 p.
3-A21. *Stream-gaging cableways,* by C. Russell Wagner: USGS–TWRI book 3, chap. A21. 1995. 56 p.

Section B. Ground-Water Techniques

3-B1. *Aquifer-test design, observation, and data analysis,* by R.W. Stallman: USGS–TWRI book 3, chap. B1. 1971. 26 p.
3-B2. *Introduction to ground-water hydraulics, a programed text for self-instruction*, by G.D. Bennett: USGS–TWRI book 3, chap. B2. 1976. 172 p.
3-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J.E. Reed: USGS–TWRI book 3, chap. B3. 1980. 106 p.
3-B4. *Regression modeling of ground-water flow,* by R.L. Cooley and R.L. Naff: USGS–TWRI book 3, chap. B4. 1990. 232 p.
3-B4. *Supplement 1. Regression modeling of ground-water flow --Modifications to the computer code for nonlinear regression solution of steady-state ground-water flow problems,* by R.L. Cooley: USGS–TWRI book 3, chap. B4. 1993. 8 p.
3-B5. *Definition of boundary and initial conditions in the analysis of saturated ground-water flow systems—An introduction*, by O.L. Franke, T.E. Reilly, and G.D. Bennett: USGS–TWRI book 3, chap. B5. 1987. 15 p.
3-B6. *The principle of superposition and its application in ground-water hydraulics,* by T.E. Reilly, O.L. Franke, and G.D. Bennett: USGS–TWRI book 3, chap. B6. 1987. 28 p.
3-B7. *Analytical solutions for one-, two-, and three-dimensional solute transport in ground-water systems with uniform flow,* by E.J. Wexler: USGS–TWRI book 3, chap. B7. 1992. 190 p.
3-B8. *System and boundary conceptualization in ground-water flow simulation,* by T.E. Reilly: USGS–TWRI book 3, chap. B8. 2001. 29 p.

Section C. Sedimentation and Erosion Techniques

3-C1. *Fluvial sediment concepts,* by H.P. Guy: USGS–TWRI book 3, chap. C1. 1970. 55 p.
3-C2. *Field methods for measurement of fluvial sediment*, by T.K. Edwards and G.D. Glysson: USGS–TWRI book 3, chap. C2. 1999. 89 p.
3-C3. *Computation of fluvial-sediment discharge,* by George Porterfield: USGS–TWRI book 3, chap. C3. 1972. 66 p.

Book 4. Hydrologic Analysis and Interpretation

Section A. Statistical Analysis

4-A1. *Some statistical tools in hydrology*, by H.C. Riggs: USGS–TWRI book 4, chap. A1. 1968. 39 p.
4-A2. *Frequency curves,* by H.C. Riggs: USGS–TWRI book 4, chap. A2. 1968. 15 p.

Section B. Surface Water

4-B1. *Low-flow investigations,* by H.C. Riggs: USGS–TWRI book 4, chap. B1. 1972. 18 p.
4-B2. *Storage analyses for water supply*, by H.C. Riggs and C.H. Hardison: USGS–TWRI book 4, chap. B2. 1973. 20 p.

4-B3. *Regional analyses of streamflow characteristics,* by H.C. Riggs: USGS–TWRI book 4, chap. B3.1973. 15 p.

Section D. Interrelated Phases of the Hydrologic Cycle

4-D1. *Computation of rate and volume of stream depletion by wells*, by C.T. Jenkins: USGS–TWRI book 4, chap. D1. 1970. 17 p.

Book 5. Laboratory Analysis

Section A. Water Analysis

5-A1. *Methods for determination of inorganic substances in water and fluvial sediments,* by M.J. Fishman and L.C. Friedman, editors: USGS–TWRI book 5, chap. A1. 1989. 545 p.
5-A2. *Determination of minor elements in water by emission spectroscopy,* by P.R. Barnett and E.C. Mallory, Jr.: USGS–TWRI book 5, chap. A2. 1971. 31 p.
5-A3. *Methods for the determination of organic substances in water and fluvial sediments*, edited by R.L. Wershaw, M.J. Fishman, R.R. Grabbe, and L.E. Lowe: USGS–TWRI book 5, chap. A3. 1987. 80 p.
5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples,* by L.J. Britton and P.E. Greeson, editors: USGS–TWRI book 5, chap. A4. 1989. 363 p.
5-A5. *Methods for determination of radioactive substances in water and fluvial sediments,* by L.L. Thatcher, V.J. Janzer, and K.W. Edwards: USGS–TWRI book 5, chap. A5. 1977. 95 p.
5-A6. *Quality assurance practices for the chemical and biological analyses of water and fluvial sediments,* by L.C. Friedman and D.E. Erdmann: USGS–TWRI book 5, chap. A6. 1982. 181 p.

Section C. Sediment Analysis

5-C1. *Laboratory theory and methods for sediment analysis*, by H.P. Guy: USGS–TWRI book 5, chap. C1. 1969. 58 p.

Book 6. Modeling Techniques

Section A. Ground Water

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.
6-A2. *Documentation of a computer program to simulate aquifer-system compaction using the modular finite-difference ground-water flow model,* by S.A. Leake and D.E. Prudic: USGS–TWRI book 6, chap. A2. 1991. 68 p.
6-A3. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 1: Model Description and User's Manual,* by L.J. Torak: USGS–TWRI book 6, chap. A3. 1993. 136 p.
6-A4. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 2: Derivation of finite-element equations and comparisons with analytical solutions,* by R.L. Cooley: USGS–TWRI book 6, chap. A4. 1992. 108 p.
6-A5. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 3: Design philosophy and programming details,* by L.J. Torak: USGS–TWRI book 6, chap. A5, 1993. 243 p.
6-A6. *A coupled surface-water and ground-water flow model (MODBRANCH) for simulation of stream-aquifer interaction*, by Eric D. Swain and Eliezer J. Wexler: USGS–TWRI book 6, chap. A5, 1996. 125 p.

Book 7. Automated Data Processing and Computations

Section C. Computer Programs

7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments,* by P.C. Trescott, G.F. Pinder, and S.P. Larson: USGS–TWRI book 7, chap. C1. 1976. 116 p.
7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L.F. Konikow and J.D. Bredehoeft: USGS–TWRI book 7, chap. C2. 1978. 90 p.
7-C3. *A model for simulation of flow in singular and interconnected channels,* by R.W. Schaffranek, R.A. Baltzer, and D.E. Goldberg: USGS–TWRI book 7, chap. C3. 1981. 110 p.

Book 8. Instrumentation

Section A. Instruments for Measurement of Water Level

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.
8-A2. *Installation and service manual for U.S. Geological Survey manometers*, by J.D. Craig: USGS–TWRI book 8, chap. A2. 1983. 57 p.

Section B. Instruments for Measurement of Discharge

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

Section A. National Field Manual for the Collection of Water-Quality Data

9-A1. *National Field Manual for the Collection of Water-Quality Data: Preparations for Water Sampling*, by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A1. 1998. 47 p.
9-A2. *National Field Manual for the Collection of Water-Quality Data: Selection of Equipment for Water Sampling*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A2. 1998. 94 p.
9-A3. *National Field Manual for the Collection of Water-Quality Data: Cleaning of Equipment for Water Sampling*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A3. 1998. 75 p.
9-A4. *National Field Manual for the Collection of Water-Quality Data: Collection of Water Samples*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A4. 1999. 156 p.
9-A5. *National Field Manual for the Collection of Water-Quality Data: Processing of Water Samples*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A5. 1999, 149 p.
9-A6. *National Field Manual for the Collection of Water-Quality Data: Field Measurements*, edited by F.D. Wilde and D.B. Radtke: USGS–TWRI book 9, chap. A6. 1998. Variously paginated.
9-A7. *National Field Manual for the Collection of Water-Quality Data: Biological Indicators*, edited by D.N. Myers and F.D. Wilde: USGS–TWRI book 9, chap. A7. 1997 and 1999. Variously paginated.
9-A8. *National Field Manual for the Collection of Water-Quality Data: Bottom-material samples*, by D.B. Radtke: USGS–TWRI book 9, chap. A8. 1998. 48 p.
9-A9. *National Field Manual for the Collection of Water-Quality Data: Safety in Field Activities*, by S.L. Lane and R.G. Fay: USGS–TWRI book 9, chap. A9. 1998. 60 p.

04177000 OTTAWA RIVER AT UNIVERSITY OF TOLEDO, TOLEDO, OHIO

LOCATION.—Latitude 41°39′29″, longitude 83°37′19″, in NE 1/4 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 to 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 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	17	21	e38	576	157	54	40	101	30	8.8	7.3
2	17	16	23	e36	478	131	50	39	133	23	7.8	8.1
3	29	17	22	e34	270	110	43	37	210	21	7.9	7.0
4	185	17	19	e32	e170	96	40	33	157	18	6.3	6.1
5	292	18	18	e30	e130	90	37	29	102	16	5.9	5.5
6	398	17	19	e29	e120	80	94	29	94	13	6.2	4.2
7	260	32	18	e28	e110	72	104	27	93	13	5.9	4.2
8	127	18	19	e26	e100	67	142	58	95	14	5.3	20
9	84	38	16	e25	684	63	102	32	77	13	4.9	71
10	55	95	16	e24	1950	57	87	30	59	11	6.9	84
11	43	34	65	e23	1990	60	79	38	50	9.1	6.3	21
12	e37	30	127	e22	e900	62	77	41	44	8.1	10	16
13	e33	34	156	e21	362	87	68	30	39	7.9	6.6	14
14	e29	28	e110	e20	301	110	62	25	36	7.2	6.4	21
15	e26	27	e70	e23	491	97	66	148	43	8.6	5.7	11
16	e24	26	e90	e31	384	94	75	514	59	8.7	5.7	9.6
17	e22	25	560	e47	237	102	78	796	35	7.1	6.2	9.7
18	e20	22	491	e90	147	94	70	406	31	6.9	21	9.5
19	e19	20	e230	e78	128	165	57	217	27	6.6	112	146
20	e18	18	e160	e66	124	196	81	137	69	7.3	22	75
21	18	16	e130	e56	99	152	127	136	36	32	16	70
22	19	15	e110	e50	73	120	236	487	121	25	74	56
23	18	14	e90	e45	77	98	180	311	182	11	84	54
24	36	14	e80	e40	83	86	140	140	114	17	42	77
25	26	19	e70	e36	368	74	98	116	70	33	40	50
26	24	27	e62	e33	684	61	77	121	42	28	26	36
27	26	24	e56	e30	301	54	65	327	33	14	17	28
28	21	19	e52	e28	206	53	56	608	123	8.9	11	21
29	19	22	e47	e26	---	51	46	261	70	9.0	8.5	18
30	19	27	e43	e70	---	51	42	134	42	30	7.6	16
31	18	---	e40	386	---	49	---	91	---	11	7.9	---
TOTAL	1980	746	3030	1523	11543	2839	2533	5438	2387	468.4	601.8	976.2
MEAN	63.9	24.9	97.7	49.1	412	91.6	84.4	175	79.6	15.1	19.4	32.5
MAX	398	95	560	386	1990	196	236	796	210	33	112	146
MIN	17	14	16	20	73	49	37	25	27	6.6	4.9	4.2
CFSM	.43	.17	.65	.33	2.75	.61	.56	1.17	.53	.10	.13	.22
IN.	.49	.19	.75	.38	2.86	.70	.63	1.35	.59	.12	.15	.24

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2001, BY WATER YEAR (WY)

MEAN	57.9	91.9	127	119	176	276	242	144	135	50.4	30.6	41.3
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	.85	3.04	6.14	4.92	30.4	43.8	20.4	21.4	7.36	8.46	.82	.13
(WY)	1947	1947	1947	1977	1978	2000	1946	1988	1988	1984	1946	1946

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1945 - 2001	
ANNUAL TOTAL	38801.8		34065.4			
ANNUAL MEAN	106		93.3		124	
HIGHEST ANNUAL MEAN					215	1993
LOWEST ANNUAL MEAN					65.5	1995
HIGHEST DAILY MEAN	1940	May 20	1990	Feb 11	3500	Mar 14 1982
LOWEST DAILY MEAN	4.5	Jan 1	4.2	Sep 6	.00	Aug 24 1945
ANNUAL SEVEN-DAY MINIMUM	4.5	Jan 25	5.9	Aug 4	.00	Aug 24 1945
MAXIMUM PEAK FLOW			2130	Feb 11a	3950	Mar 14 1982
MAXIMUM PEAK STAGE			11.68	Feb 11	14.54	Mar 14 1982
INSTANTANEOUS LOW FLOW			3.4	Sep 6	.00	Sep 19 1945
ANNUAL RUNOFF (CFSM)	.71		.62		.83	
ANNUAL RUNOFF (INCHES)	9.62		8.45		11.23	
10 PERCENT EXCEEDS	259		183		308	
50 PERCENT EXCEEDS	27		40		39	
90 PERCENT EXCEEDS	8.2		9.0		6.6	

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′34″, longitude 84°14′55″, in NE 1/4 of SE 1/4 sec. 5, T.9 S., R.1 E., Fulton County, Hydrologic Unit 04100006, on left bank at downstream side of bridge on Fulton County Highway 20, 1.5 mi east of Powers, 1.7 mi upstream from Iron Creek, 3.5 mi downstream from Siver Creek, and 5.2 mi east of Fayette.
DRAINAGE AREA.—206 mi^2.
PERIOD OF RECORD.—October 1940 to Spetember 1981, November 1, 2000 to September 30, 2001.
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 to Sept. 30, 1977, water-stage recorder at site 0.5 mi upstream at datum12.57 ft higher. Oct.1, 1977 to 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 collected at this site.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	e47	77	e94	e500	519	132	e140	237	80	18	17
2	---	46	76	e92	e350	409	129	e130	291	70	14	17
3	---	45	70	e90	e240	352	124	e120	449	59	15	18
4	---	47	e50	e88	e180	318	115	104	440	56	15	20
5	---	49	e45	e88	e150	295	108	97	352	53	13	23
6	---	48	e42	e86	e120	265	119	90	302	49	12	27
7	---	49	e300	e86	e110	245	200	88	371	42	11	29
8	---	49	e210	e84	e100	234	241	89	329	41	12	30
9	---	50	e150	e84	1470	221	232	82	263	41	15	35
10	---	53	e120	e84	3600	205	210	79	218	37	16	40
11	---	53	e90	e82	2490	196	248	70	188	34	14	36
12	---	54	e84	e82	2020	196	243	68	168	32	13	e35
13	---	55	e80	e80	1450	220	227	69	161	29	14	e31
14	---	63	e78	e80	1060	285	185	67	147	27	13	30
15	---	67	e74	e80	1140	265	173	176	120	25	11	31
16	---	64	e72	e100	887	238	434	1340	118	24	11	e32
17	---	58	e70	e140	651	223	481	1730	131	23	12	29
18	---	55	e260	e180	460	232	382	1280	110	22	13	e29
19	---	53	e220	e200	426	270	313	810	106	24	e15	e49
20	---	52	e200	e180	391	247	260	527	157	24	e18	e47
21	---	49	e180	e160	340	230	362	368	123	23	20	e44
22	---	50	e160	e150	288	213	530	293	333	26	22	e40
23	---	42	e150	e140	268	201	440	244	292	24	27	e44
24	---	44	e140	e135	245	181	e380	210	440	20	26	e52
25	---	45	e130	e130	1190	167	e300	324	242	20	23	e48
26	---	47	e120	e125	1370	159	e260	354	180	20	21	e45
27	---	65	e115	e120	1030	148	e200	462	139	21	20	e43
28	---	82	e110	e115	718	141	e160	593	117	19	19	e41
29	---	79	e105	e115	---	139	e140	486	98	18	19	39
30	---	77	e100	e110	---	136	e150	368	87	18	17	39
31	---	---	e96	e300	---	133	---	280	---	17	18	---
TOTAL	---	1637	3774	3680	23244	7283	7478	11138	6709	1018	507	1040
MEAN	---	54.6	122	119	830	235	249	359	224	32.8	16.4	34.7
MAX	---	82	300	300	3600	519	530	1730	449	80	27	52
MIN	---	42	42	80	100	133	108	67	87	17	11	17
MED	---	51	105	100	480	223	230	210	184	25	15	35
AC-FT	---	3250	7490	7300	46100	14450	14830	22090	13310	2020	1010	2060
CFSM	---	.26	.59	.58	4.03	1.14	1.21	1.74	1.09	.16	.08	.17
IN.	---	.30	.68	.66	4.20	1.32	1.35	2.01	1.21	.18	.09	.19

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2001, BY WATER YEAR (WY)

MEAN	42.8	86.1	163	184	293	390	336	224	130	89.6	40.4	42.4
MAX	154	350	722	761	830	863	1019	1071	540	507	222	431
(WY)	1955	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 2001 WATER YEAR		WATER YEARS 1941 - 2001	
ANNUAL MEAN			167	
HIGHEST ANNUAL MEAN			329	1950
LOWEST ANNUAL MEAN			34.8	1964
HIGHEST DAILY MEAN	3600	Feb 10	3740	Apr 5 1950
LOWEST DAILY MEAN	11	Aug 7	5.2	Aug 9 1964
ANNUAL SEVEN-DAY MINIMUM	12	Aug 12	6.2	Aug 4 1964
MAXIMUM PEAK FLOW	3860	Feb 10a	4250	Apr 29 1956
MAXIMUM PEAK STAGE	19.34	Feb 10	20.03	Feb 20 1981
INSTANTANEOUS LOW FLOW	11	Aug 7	5.0	Aug 9 1964
ANNUAL RUNOFF (AC-FT)			121200	
ANNUAL RUNOFF (CFSM)			.81	
ANNUAL RUNOFF (INCHES)			11.03	
10 PERCENT EXCEEDS	400		413	
50 PERCENT EXCEEDS	104		66	
90 PERCENT EXCEEDS	20		16	

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

04185000 TIFFIN RIVER AT STRYKER, OHIO

LOCATION.—Latitude 41°30′16″, longitude 84°25′47″, in SE 1/4 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 Sep. 30, 1928, nonrecording gage at site 3.5 mi downstream at different datum. Oct. 13, 1940 to Jan. 17, 1941, nonrecording gage and Jan. 18, 1941 to Sep. 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 12.5 mi upstream from gage for municipal supply of Archbold. Diversion averaged 2.92 ft^3/s; 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 March 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 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	74	98	157	e100	e800	1840	216	243	581	118	21	18
2	70	98	155	e98	e1200	1490	216	229	605	99	18	16
3	67	100	147	e96	e1400	1060	208	211	893	87	33	13
4	271	98	128	e94	1240	700	202	194	947	80	24	12
5	773	98	120	e92	851	537	193	179	954	75	19	12
6	1140	101	e110	e90	597	461	607	164	905	66	15	11
7	947	105	e100	e88	478	412	1070	153	912	58	13	11
8	548	109	e92	e86	463	379	781	154	900	54	12	13
9	319	106	e88	e86	1590	357	539	154	745	52	15	16
10	232	115	e84	e84	3080	332	434	146	486	49	21	34
11	189	123	e80	e84	3810	316	402	137	348	43	24	38
12	154	118	e120	e82	3910	306	443	140	288	38	17	29
13	e140	127	e200	e82	3110	336	445	134	244	35	16	23
14	e135	176	e180	e80	2570	409	399	123	217	31	15	20
15	e125	183	e160	e80	2390	440	342	302	192	29	15	19
16	e120	169	e190	e90	2190	410	368	919	172	27	13	17
17	e115	151	e400	e110	2000	381	583	1210	160	25	13	16
18	e110	134	e950	e150	1710	388	690	1650	154	25	14	16
19	100	121	e800	e250	1330	473	614	2140	153	24	15	29
20	98	114	e500	e230	916	517	508	2110	339	24	21	60
21	96	109	e320	e200	678	466	581	1840	322	25	23	49
22	95	89	e250	e180	530	407	738	1400	545	26	32	44
23	92	99	e190	e160	451	361	870	788	731	25	158	39
24	97	92	e170	e150	413	328	868	483	655	24	79	54
25	124	95	e150	e140	1080	298	721	576	605	28	45	51
26	136	101	e140	e130	1560	269	558	730	386	39	35	41
27	140	113	e130	e120	1990	243	433	1120	249	27	28	35
28	135	146	e120	e115	2060	232	351	1280	193	24	25	32
29	124	168	e120	e110	---	226	296	1300	172	22	22	31
30	111	163	e110	e150	---	223	263	1220	140	34	20	31
31	104	---	e105	e300	---	218	---	937	---	24	19	---
TOTAL	6981	3619	6566	3907	44397	14815	14939	22366	14193	1337	840	830
MEAN	225	121	212	126	1586	478	498	721	473	43.1	27.1	27.7
MAX	1140	183	950	300	3910	1840	1070	2140	954	118	158	60
MIN	67	89	80	80	413	218	193	123	140	22	12	11
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2001, BY WATER YEAR (WY)												
MEAN	109	224	365	394	554	785	658	391	268	152	74.9	69.5
MAX	887	1339	1785	1687	1586	2563	1990	2112	1422	761	799	460
(WY)	1987	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 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1922 - 2001	
ANNUAL TOTAL	120947		134790			
ANNUAL MEAN	330		369		336	
HIGHEST ANNUAL MEAN					671	1950
LOWEST ANNUAL MEAN					59.6	1964
HIGHEST DAILY MEAN	2700	Jun 28	3910	Feb 12	7640	Mar 15 1982
LOWEST DAILY MEAN	28	Jan 1	11	Sep 6	2.5	Jul 18 1988
ANNUAL SEVEN-DAY MINIMUM	32	Jan 31	13	Sep 2	3.6	Jul 7 1988
MAXIMUM PEAK FLOW			4110	Feb 12a	7800	Mar 15 1982
MAXIMUM PEAK STAGE			15.38	Feb 12	18.36	Mar 15 1982
INSTANTANEOUS LOW FLOW			11	Sep 6	2.5	Jul 18 1988
10 PERCENT EXCEEDS	1020		947		934	
50 PERCENT EXCEEDS	126		150		125	
90 PERCENT EXCEEDS	41		23		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 3.0 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 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.36	.28	.49	e.60	e15	e1.6	.60	.55	1.5	.34	.12	.06
2	.32	.27	.45	e.60	e7.0	e1.3	.53	.49	11	.38	.12	.06
3	.28	.27	.41	e.58	e3.5	e1.1	.51	.43	5.6	.49	.12	.05
4	.32	.27	.41	e.58	e2.7	e.94	.45	.39	2.2	.52	.09	.04
5	4.0	.27	.43	e.56	e2.2	e.86	.45	.36	24	.55	.07	.03
6	8.8	.27	.38	e.56	e1.9	.84	145	.34	84	.39	.06	.03
7	2.3	.36	.40	e.54	e1.7	.79	19	.33	15	.51	.05	.03
8	1.3	.33	.39	e.54	e4.0	.75	8.6	.34	6.5	.52	.04	.03
9	.89	.38	.34	e.52	e60	.67	8.1	.29	3.6	.45	.06	.07
10	.70	1.6	.35	e.52	e20	.62	5.5	.27	2.3	.43	.07	.34
11	.54	.82	2.1	e.52	e5.5	.73	11	.26	1.8	.39	.04	.12
12	.43	.62	e8.0	e.50	e4.0	.76	18	.24	1.5	.41	.01	.05
13	.41	3.9	e3.5	e.50	e3.8	1.3	4.5	.21	1.2	.34	.00	.03
14	.37	2.9	2.5	e.50	23	1.1	2.6	.23	.91	.27	.00	.04
15	.35	1.2	1.9	e.80	20	.90	2.7	9.5	1.8	.31	.01	.05
16	.33	.89	21	e5.0	7.5	.87	3.4	9.9	1.6	.32	.01	.05
17	.35	.71	31	e3.3	3.5	.96	2.0	3.4	.74	.36	.02	.05
18	.33	.59	13	e2.2	e1.8	3.4	1.5	57	.57	.53	.01	.05
19	.32	.55	6.8	e1.7	e1.5	5.2	1.2	12	.83	.48	.00	.18
20	.31	.52	4.4	e1.3	e1.3	2.9	2.2	5.5	5.6	.39	.03	.53
21	.30	.45	3.2	e1.1	e1.1	1.8	5.5	3.2	.93	.55	.01	.11
22	.27	.40	e2.0	e1.0	e1.0	1.3	3.6	2.3	1.2	.47	2.7	.06
23	.27	.38	e1.5	e.88	e1.0	1.0	2.5	1.7	3.6	7.8	9.5	.04
24	.32	.37	e1.1	e.80	3.1	.88	3.2	34	1.6	11	1.0	.04
25	.35	.39	e.92	e.76	59	.74	1.4	25	.68	16	.36	.06
26	.37	.50	e.84	e.68	9.9	.63	1.0	11	.56	5.5	.19	.07
27	.34	.88	e.78	e.64	6.1	.60	.84	34	.47	1.2	.12	.06
28	.31	.70	e.72	e.60	e2.0	.58	.66	7.4	.45	.63	.09	.05
29	.31	.61	e.70	e.70	---	.60	.59	3.3	.39	.37	.07	.04
30	.30	.54	e.66	e10	---	.56	.57	2.2	.37	.23	.07	.03
31	.30	---	e.62	e30	---	.56	---	1.6	---	.18	.08	---
TOTAL	26.45	22.22	111.29	69.08	273.1	36.84	257.70	227.73	182.50	52.31	15.12	2.45
MEAN	.85	.74	3.59	2.23	9.75	1.19	8.59	7.35	6.08	1.69	.49	.082
MAX	8.8	3.9	31	30	60	5.2	145	57	84	16	9.5	.53
MIN	.27	.27	.34	.50	1.0	.56	.45	.21	.37	.18	.00	.03
CFSM	.20	.18	.85	.53	2.31	.28	2.03	1.74	1.44	.40	.12	.02
IN.	.23	.20	.98	.61	2.40	.32	2.27	2.00	1.60	.46	.13	.02

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2001, BY WATER YEAR (WY)

MEAN	2.44	4.16	5.85	5.61	7.26	7.05	7.98	4.25	3.43	1.67	1.93	1.12
MAX	12.6	15.6	23.9	13.9	21.2	14.5	20.6	10.9	9.09	7.75	16.4	5.81
(WY)	1987	1993	1991	1993	1990	1998	1999	1990	1996	1986	1998	2000
MIN	.031	.037	.11	.44	.46	1.19	1.92	.26	.046	.011	.015	.003
(WY)	1995	2000	1990	2000	1995	2001	1987	1988	1988	1988	1989	1991

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1986 - 2001	
ANNUAL TOTAL	1323.42		1276.79			
ANNUAL MEAN	3.62		3.50		4.38	
HIGHEST ANNUAL MEAN					6.66	1998
LOWEST ANNUAL MEAN					1.96	1995
HIGHEST DAILY MEAN	123	May 28	145	Apr 6	322	Aug 25 1998
LOWEST DAILY MEAN	.03	Aug 16	.00	Aug 13	.00	Aug 3 1987
ANNUAL SEVEN-DAY MINIMUM	.06	Aug 16	.01	Aug 13	.00	Aug 3 1987
MAXIMUM PEAK FLOW			553	Apr 6a	1770	Aug 25 1998
MAXIMUM PEAK STAGE			5.17	Apr 6	7.59	Aug 25 1998
INSTANTANEOUS LOW FLOW			.00	Aug 13	.00	Jul 27 1991
ANNUAL RUNOFF (CFSM)	.85		.83		1.03	
ANNUAL RUNOFF (INCHES)	11.64		11.23		14.06	
10 PERCENT EXCEEDS	6.9		7.6		9.0	
50 PERCENT EXCEEDS	.56		.60		.63	
90 PERCENT EXCEEDS	.09		.06		.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 1/4 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 at a point 24.3 mi upstream from station into Lake Bresler. Storage in Lake Bresler is available for low-flow augmentation and water supply of city of Lima, in Ottawa River Basin. Net withdrawal totaled 3,856.75 millon gallons, equivalent to a mean withdrawal of 16.3 ft^3/s. No releases have been made for low-flow augmentation. 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. National Weather Service gage height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	30	44	e36	e700	187	82	87	305	8.2	10	5.7
2	30	27	48	e34	e400	164	75	92	271	31	6.3	4.1
3	24	26	45	e33	e250	151	62	75	215	29	5.8	3.4
4	20	26	e40	e31	e160	109	63	69	164	25	5.5	3.1
5	29	26	e33	e30	e120	92	57	59	164	15	11	3.3
6	153	26	e30	e28	e100	95	123	46	211	15	21	3.4
7	164	28	e33	e27	e88	83	219	33	345	35	26	3.2
8	124	30	e35	e26	e80	84	126	38	281	39	19	3.1
9	72	29	e37	e25	462	79	92	50	207	38	13	3.8
10	39	26	e43	e24	1850	75	97	52	162	45	10	5.1
11	32	23	52	e23	e1400	65	309	35	103	39	9.1	6.5
12	22	76	331	e22	e440	77	1990	23	96	32	7.1	85
13	14	91	e600	e22	e350	83	1700	19	99	28	6.5	56
14	8.5	61	e430	e21	e305	84	592	23	71	24	6.3	30
15	19	52	e260	e20	1720	94	412	199	70	23	6.5	15
16	31	54	e200	e40	1790	110	934	939	61	23	5.8	7.7
17	44	47	e700	e70	781	138	928	1940	59	21	14	5.7
18	37	45	e1500	e130	427	378	496	1700	51	20	14	5.3
19	24	37	e1000	e120	285	369	342	2180	46	20	16	33
20	24	27	e420	e100	204	281	352	2090	36	23	26	76
21	31	18	e200	e90	186	225	1150	712	26	29	21	70
22	31	41	e110	e85	157	187	928	411	30	28	27	59
23	22	44	e90	e77	136	163	478	279	33	33	43	47
24	20	43	e60	e66	121	138	359	216	51	65	39	41
25	12	46	e56	e50	136	92	272	362	42	77	27	31
26	17	44	e52	e42	327	78	211	1140	31	97	39	21
27	19	43	e49	e37	311	81	177	1900	24	44	30	17
28	20	45	e46	e33	236	88	157	2570	17	28	17	13
29	33	42	e43	e30	---	74	131	1520	11	15	9.4	15
30	32	42	e40	243	---	80	105	543	8.2	10	6.0	12
31	30	---	e38	1180	---	80	---	419	---	16	6.1	---
TOTAL	1210.5	1195	6665	2795	13522	4084	13019	19821	3290.2	975.2	503.4	684.4
MEAN	39.0	39.8	215	90.2	483	132	434	639	110	31.5	16.2	22.8
MAX	164	91	1500	1180	1850	378	1990	2570	345	97	43	85
MIN	8.5	18	30	20	80	65	57	19	8.2	8.2	5.5	3.1
CFSM	.12	.12	.65	.27	1.45	.40	1.31	1.93	.33	.09	.05	.07
IN.	.14	.13	.75	.31	1.52	.46	1.46	2.22	.37	.11	.06	.08

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 2001, BY WATER YEAR (WY)

MEAN	73.5	172	299	432	468	589	503	292	253	176	75.6	83.0
MAX	782	1286	1283	2184	1555	2112	1874	1237	1142	1652	477	1090
(WY)	1927	1973	1991	1950	1950	1978	1957	1943	1981	1992	1979	1926
MIN	5.44	8.53	10.9	8.23	23.6	78.3	51.3	28.7	13.6	20.4	8.10	2.89
(WY)	1989	2000	2000	1977	1964	2000	1971	1934	1988	1965	1991	1999

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1921 - 2001	
ANNUAL TOTAL	57112.0		67764.7			
ANNUAL MEAN	156		186		284	
HIGHEST ANNUAL MEAN					537	1973
LOWEST ANNUAL MEAN					65.3	1931
HIGHEST DAILY MEAN	2670	Apr 9	2570	May 28	12000	Jul 15 1992
LOWEST DAILY MEAN	2.0	Feb 8	3.1	Sep 4	.50	Oct 20 1994
ANNUAL SEVEN-DAY MINIMUM	2.1	Feb 3	3.3	Sep 3	1.1	Sep 19 1999
MAXIMUM PEAK FLOW			2730	May 28a	12800	Jul 15 1992
MAXIMUM PEAK STAGE			10.75	May 28	20.30	Jan 23 1959
INSTANTANEOUS LOW FLOW			3.0	Sep 4	.71	Oct 7 1991
ANNUAL RUNOFF (CFSM)	.47		.56		.86	
ANNUAL RUNOFF (INCHES)	6.40		7.59		11.62	
10 PERCENT EXCEEDS	402		419		682	
50 PERCENT EXCEEDS	47		46		73	
90 PERCENT EXCEEDS	9.4		13		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 fair except for periods of estimated record, which are poor. Water is diverted upstream from station into Findlay Reservoir. Storage in Findlay Reservoir used for water supply of city of Findlay and is available for low-flow augmentation. 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 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	42	50	e50	e400	167	93	109	225	40	19	16
2	30	41	47	e49	e300	147	85	105	253	39	19	16
3	26	41	44	e45	e210	128	69	96	212	42	21	15
4	26	39	40	e47	e160	108	60	87	167	63	19	17
5	e150	38	42	e50	e150	98	54	79	147	105	19	17
6	e400	38	34	e52	e130	86	911	72	254	44	20	18
7	451	52	43	e45	e120	70	e1200	64	592	34	26	19
8	198	41	e41	e39	e110	75	e800	76	325	33	19	25
9	116	54	e36	e36	e400	81	e500	58	222	34	96	36
10	82	129	e40	e34	e800	65	e370	52	177	39	41	148
11	65	320	e70	e33	e1000	63	e800	48	151	44	21	50
12	54	187	e350	e32	e700	75	e1700	56	128	40	75	42
13	47	112	e660	e31	301	204	e1500	46	128	40	34	50
14	41	75	e420	e30	421	389	e900	47	118	21	21	64
15	40	61	e280	e37	1920	256	e700	427	74	19	17	42
16	40	55	e200	e50	1580	230	e1150	1320	71	20	16	36
17	73	56	e300	e170	695	655	631	991	58	19	15	35
18	90	51	e1700	e100	334	620	336	510	55	19	15	47
19	141	47	e700	e80	244	404	257	575	50	19	21	125
20	91	42	e400	e70	208	286	655	453	64	19	16	69
21	68	39	e270	e60	167	234	2120	237	77	20	15	82
22	58	35	e170	e50	135	200	1500	180	61	21	25	63
23	53	38	e140	e47	127	171	640	139	54	25	71	58
24	59	34	e110	e44	113	145	386	122	51	31	31	119
25	55	37	e92	e42	144	122	258	151	47	47	26	57
26	53	42	e80	e40	230	103	200	367	43	36	28	54
27	51	50	e74	e38	229	90	176	1780	41	25	34	58
28	48	57	e68	e36	193	84	156	1750	39	29	36	52
29	50	64	e64	64	---	80	124	684	38	23	22	45
30	45	57	e60	416	---	81	112	409	36	37	16	42
31	43	---	e56	e800	---	87	---	281	---	23	17	---
TOTAL	2777	1974	6681	2717	11521	5604	18443	11371	3958	1050	871	1517
MEAN	89.6	65.8	216	87.6	411	181	615	367	132	33.9	28.1	50.6
MAX	451	320	1700	800	1920	655	2120	1780	592	105	96	148
MIN	26	34	34	30	110	63	54	46	36	19	15	15
CFSM	.26	.19	.62	.25	1.19	.52	1.78	1.06	.38	.10	.08	.15
IN.	.30	.21	.72	.29	1.24	.60	1.98	1.22	.43	.11	.09	.16

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 2001, BY WATER YEAR (WY)

MEAN	62.5	153	282	369	426	551	466	274	236	132	64.2	86.4
MAX	623	1435	1482	1800	1402	1814	1588	865	1612	1075	474	944
(WY)	1927	1973	1991	1930	1959	1978	1957	1969	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 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1924 - 2001	
ANNUAL TOTAL	88327		68484			
ANNUAL MEAN	241		188		258	
HIGHEST ANNUAL MEAN					571	1973
LOWEST ANNUAL MEAN					57.5	1931
HIGHEST DAILY MEAN	4030	Jun 19	2120	Apr 21	12000	Jun 14 1981
LOWEST DAILY MEAN	15	Sep 6	15	Aug 17	.40	Aug 27 1934
ANNUAL SEVEN-DAY MINIMUM	16	Sep 3	16	Aug 30	.56	Aug 25 1934
MAXIMUM PEAK FLOW			2290	Apr 21a	13000	Jun 14 1981
MAXIMUM PEAK STAGE			6.55	Apr 21	17.43	Jun 14 1981
INSTANTANEOUS LOW FLOW			13	Aug 18	.40	Aug 27 1934
ANNUAL RUNOFF (CFSM)	.70		.54		.75	
ANNUAL RUNOFF (INCHES)	9.50		7.36		10.13	
10 PERCENT EXCEEDS	558		452		619	
50 PERCENT EXCEEDS	86		64		59	
90 PERCENT EXCEEDS	26		23		9.6	

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 1/4 sec. 9, T.3 N. R.4 E., Defiance County, Hydrologic Unit 04100007, on right bank 125 ft downstream from City of Bryant 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 to Aug. 8, 1903, non-recording gage at site 1.8 mi downstream at different datum. Apr. 13, 1915, to 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 to Nov. 1984 at dam 125 ft upstream, at present datum.
REMARKS.—Records fair. 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 to Sep. 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 March 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 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	91	529	118	148	11200	2110	654	727	1630	169	239	179
2	80	1030	117	154	8630	1510	547	572	1520	155	16	150
3	81	547	118	730	5430	1580	50	598	1870	159	280	225
4	89	95	138	1480	3130	1550	44	506	1550	123	147	131
5	1190	95	150	539	2120	1470	44	280	1680	205	16	19
6	3430	96	128	73	1890	1050	1890	533	4400	126	95	117
7	3150	95	187	78	1830	668	5100	445	5710	203	14	9.5
8	2060	489	234	245	1460	665	4640	554	3370	162	13	8.4
9	1620	216	265	562	4920	662	3670	643	2960	172	153	135
10	943	93	601	513	18200	652	1890	567	1670	149	13	427
11	367	97	481	463	17500	641	2100	509	900	98	12	488
12	141	646	825	502	11600	647	6590	277	769	187	268	484
13	373	922	3740	188	6740	561	7250	341	748	101	12	421
14	219	409	3990	35	3990	443	4650	390	721	118	10	221
15	90	426	2940	163	9270	540	2320	1500	681	245	274	10
16	132	652	2420	531	11600	689	2850	4490	583	215	391	10
17	450	389	7850	896	8840	846	3830	6530	496	13	101	288
18	348	128	10700	1360	5280	1200	2820	6630	555	13	12	146
19	86	377	8320	1060	2870	1700	1620	7080	374	49	11	232
20	84	358	5250	1600	1950	3000	1690	6520	327	97	10	373
21	95	350	3320	1560	1590	2520	3560	3450	347	104	9.0	970
22	165	121	2870	893	1550	2000	5180	1570	233	17	312	595
23	399	114	1570	636	1470	1650	4810	1450	201	267	389	560
24	443	116	762	664	957	1580	2610	756	564	276	389	546
25	199	116	1620	718	1350	1480	1680	4490	507	388	322	960
26	86	114	1040	452	4240	973	1290	5530	322	388	319	578
27	85	116	462	74	3700	666	940	8000	279	377	315	590
28	84	321	130	256	2980	673	744	10700	148	516	212	606
29	80	381	137	629	---	681	678	7880	206	210	17	241
30	80	116	142	1180	---	688	796	4850	107	20	21	62
31	209	---	142	6980	---	675	---	1920	---	345	19	---
TOTAL	16949	9554	60767	25362	156287	35770	76537	90288	35428	5667	4411.0	9781.9
MEAN	547	318	1960	818	5582	1154	2551	2913	1181	183	142	326
MAX	3430	1030	10700	6980	18200	3000	7250	10700	5710	516	391	970
MIN	80	93	117	35	957	443	44	277	107	13	9.0	8.4

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1916 - 2001, BY WATER YEAR (WY)

MEAN	473	999	1809	2526	2999	4105	3459	1957	1493	833	351	423
MAX	3445	7856	8510	13350	10170	13090	11210	10490	6733	5762	2526	5571
(WY)	1955	1973	1967	1950	1976	1982	1957	1943	1947	1992	1998	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 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1916 - 2001	
ANNUAL TOTAL	597309.6		526801.9			
ANNUAL MEAN	1632		1443		1771	
HIGHEST ANNUAL MEAN					3337	1973
LOWEST ANNUAL MEAN					342	1931
HIGHEST DAILY MEAN	14900	Apr 21	18200	Feb 10	52300	Mar 14 1982
LOWEST DAILY MEAN	4.8	Jan 4	8.4	Sep 8	.50	Oct 13 1952
ANNUAL SEVEN-DAY MINIMUM	27	Jan 28	45	Aug 5	1.1	Oct 12 1952
MAXIMUM PEAK FLOW			19900	Feb 10	52500	Feb 16 1950
MAXIMUM PEAK STAGE			16.20	Feb 10	27.65	Feb 13 1959
INSTANTANEOUS LOW FLOW			7.2	Aug 21	.50	Oct 13 1952
10 PERCENT EXCEEDS	5110		4440		4930	
50 PERCENT EXCEEDS	586		509		439	
90 PERCENT EXCEEDS	85		81		39	

04192500 MAUMEE RIVER NEAR DEFIANCE, OHIO

LOCATION.—Latitude 41°17′31″, longitude 84°16′52″, in NW 1/4 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.

WATER-DISCHARGE RECORDS

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, to Sep. 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 collected at this site.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	942	e670	e780	e880	17500	e8310	e1580	2110	7040	1030	950	526
2	713	1270	e740	e830	16700	7020	1520	1770	6740	973	558	475
3	624	1120	e680	e780	11700	6400	1060	1740	8390	837	599	513
4	611	512	e640	e740	8060	5670	954	1590	6930	766	556	439
5	1800	500	e610	e700	6480	4860	937	1260	5480	763	336	255
6	5590	486	e580	e680	5680	3700	8770	1380	12000	748	279	240
7	7040	519	e540	e640	5000	2880	17200	1480	17100	736	289	274
8	6150	578	e500	e620	4630	2560	14700	1690	13100	722	238	161
9	4510	847	e520	e600	12900	2370	10400	1540	9310	592	301	221
10	2930	553	e580	e580	37300	2260	e6500	1310	6080	699	218	608
11	1940	888	e900	e560	38300	2060	6210	1350	4280	624	167	801
12	1330	2230	1710	e540	29100	1980	11200	1200	3330	567	294	1110
13	1270	2590	4870	e520	21600	1920	14100	1150	3000	443	328	879
14	1130	1980	5930	e500	16800	1820	10800	1300	2340	383	242	613
15	781	1940	4700	e520	22500	1890	6860	3290	2250	370	271	360
16	746	2210	4240	e650	25300	2090	6400	7980	2070	499	470	301
17	954	2000	9760	e820	20900	2260	8640	10100	1850	288	321	386
18	977	1360	14200	e1000	14000	2770	7300	11000	1870	228	186	520
19	654	1390	12200	e1400	9640	3540	5740	15500	1590	232	e184	527
20	601	1180	8670	e1700	e6900	5230	5060	15200	1430	343	166	723
21	581	1250	5970	e1900	e5400	e5300	7020	11100	2240	412	321	2270
22	627	788	e4000	e1700	e4500	4490	10100	8220	2030	341	536	1820
23	781	714	e2500	e1500	e3500	3740	10300	6850	2080	483	973	1310
24	875	679	e2000	e1300	e3000	3340	7370	5830	2750	847	3910	1130
25	723	664	e1700	e1150	6650	3090	5970	9670	2910	1990	2540	1490
26	583	654	e1500	e1020	13200	2550	4660	11900	2290	2070	1500	e1300
27	614	656	e1300	e940	13000	1920	3660	16900	1900	1880	1080	e1100
28	583	780	e1200	e840	10000	1780	3040	19300	1600	1800	1120	1000
29	564	1170	e1100	e800	---	1770	2450	16300	1470	1290	669	768
30	552	861	e1000	e1100	---	1710	2210	11000	1260	758	479	434
31	653	---	e950	e2000	---	1620	---	7190	---	718	357	---
TOTAL	48429	33039	96570	29510	390240	102900	202711	208200	136710	24432	20438	22554
MEAN	1562	1101	3115	952	13940	3319	6757	6716	4557	788	659	752
MAX	7040	2590	14200	2000	38300	8310	17200	19300	17100	2070	3910	2270
MIN	552	486	500	500	3000	1620	937	1150	1260	228	166	161

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 2001, BY WATER YEAR (WY)

MEAN	1304	2683	4479	5973	6963	9382	8523	5147	3728	2068	1045	1095
MAX	8314	16410	18040	30150	22460	33940	23210	27270	20370	10700	7598	11470
(WY)	1955	1973	1967	1950	1959	1982	1957	1943	1981	1992	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 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1925 - 2001	
ANNUAL TOTAL	1264530		1315733			
ANNUAL MEAN	3455		3605		4349	
HIGHEST ANNUAL MEAN					8286	1950
LOWEST ANNUAL MEAN					849	1931
HIGHEST DAILY MEAN	25100	Jun 16	38300	Feb 11	98800	Mar 15 1982
LOWEST DAILY MEAN	200	Feb 6	161	Sep 8	3.0	Sep 4 1925
ANNUAL SEVEN-DAY MINIMUM	207	Feb 2	255	Aug 6	27	Aug 31 1925
MAXIMUM PEAK FLOW			41000	Feb 11	104000	Mar 15 1982
MAXIMUM PEAK STAGE			7.77	Feb 11	15.87	Mar 15 1982
INSTANTANEOUS LOW FLOW			149	Aug 11	2.0	Sep 3 1925
10 PERCENT EXCEEDS	9490		10200		12400	
50 PERCENT EXCEEDS	1620		1400		1400	
90 PERCENT EXCEEDS	450		459		226	

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 to Dec. 31, 1901, Aug. 26, 1921, to July 31, 1930, nonrecording gage; Aug. 1, 1930, to Dec. 31, 1935, water-stage recorder; Mar. 14, 1939, to 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 March 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 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1250	668	919	e1350	e18000	9420	1860	2450	7830	1150	904	297
2	920	1030	926	e1300	e17000	7880	1700	2090	6960	971	882	497
3	678	1300	966	e1200	e12000	6840	1400	1900	9730	968	624	473
4	765	823	928	e1150	e9000	6300	1180	1820	8560	953	759	418
5	1450	500	1100	e1100	e7000	5680	1100	1370	6710	834	608	336
6	8450	438	610	e1050	e6000	4420	7840	1470	11000	841	438	198
7	9090	586	667	e980	e5200	3330	25600	1670	20700	878	434	232
8	7950	612	772	e950	e5000	2880	22200	2130	17200	909	351	193
9	6090	858	737	e920	e12000	2530	14400	2250	11500	755	271	192
10	4070	1190	868	e880	39800	2340	9400	1850	8010	832	351	544
11	2780	877	1230	e850	41300	2230	6690	1540	5840	749	213	714
12	1690	1520	4070	e810	31600	2000	10500	1460	3970	702	127	1090
13	1360	3090	5600	e790	23800	2500	14800	1230	3600	677	292	997
14	1360	2770	6880	e770	18400	2290	12900	1290	3090	540	283	749
15	1030	2230	6750	e740	23300	2010	8820	2990	2550	487	208	569
16	855	2420	5620	e800	26700	2280	6400	14700	2580	552	279	354
17	843	2310	11900	e900	22900	2600	8720	17500	2070	538	546	302
18	1090	1700	17500	e1100	16700	2690	8790	14900	1980	330	227	442
19	936	1340	e14000	e1400	11300	4040	6840	18500	1830	298	221	640
20	705	1610	e10000	e1700	8640	5650	4940	18500	1500	305	204	972
21	645	1280	e7800	e2000	6920	6340	7120	15000	1820	498	107	1490
22	582	970	e5200	e1700	5620	5600	10500	11500	2560	583	334	2650
23	715	780	e3800	e1500	4840	4640	11600	8070	2270	517	975	1620
24	900	787	e3000	e1300	3880	4010	9760	7270	2500	954	2620	1430
25	893	760	e2500	e1200	6820	3500	6810	8990	3010	1500	3810	1340
26	783	796	e2100	e1100	13800	3090	5650	13600	2520	2280	2000	1600
27	716	808	e1900	e1000	14900	2300	4310	20200	2040	1880	1260	1150
28	583	799	e1700	e920	11900	1980	3770	23900	1730	2020	1020	1040
29	644	1060	e1600	e990	---	1890	3140	19900	1400	1630	869	971
30	597	1090	e1500	e1700	---	1860	2590	14600	1420	1250	589	702
31	576	---	e1400	e4500	---	1850	---	9270	---	796	427	---
TOTAL	60996	37002	124543	38650	424320	116970	241330	263910	158480	28177	22233	24202
MEAN	1968	1233	4018	1247	15150	3773	8044	8513	5283	909	717	807
MAX	9090	3090	17500	4500	41300	9420	25600	23900	20700	2280	3810	2650
MIN	576	438	610	740	3880	1850	1100	1230	1400	298	107	192
MED	900	1000	1900	1100	12000	2880	6980	7270	2800	832	434	671
CFSM	.31	.19	.63	.20	2.39	.60	1.27	1.34	.83	.14	.11	.13
IN.	.36	.22	.73	.23	2.49	.69	1.42	1.55	.93	.17	.13	.14

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2001, BY WATER YEAR (WY)

MEAN	1414	2995	5300	6861	7943	10820	9726	6039	4377	2428	1212	1120
MAX	9041	19010	23830	34010	30000	38210	25890	29540	24030	11200	9665	10320
(WY)	1955	1993	1967	1950	1976	1982	1957	1943	1981	1992	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 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1930 - 2001	
ANNUAL TOTAL	1535887		1540813			
ANNUAL MEAN	4196		4221		5002	
HIGHEST ANNUAL MEAN					9370	1950
LOWEST ANNUAL MEAN					938	1931
HIGHEST DAILY MEAN	34300	Apr 22	41300	Feb 11	113000	Mar 14 1982
LOWEST DAILY MEAN	250	Feb 8	107	Aug 21	17	Jun 30 1988
ANNUAL SEVEN-DAY MINIMUM	261	Feb 3	249	Aug 9	47	Jun 27 1988
MAXIMUM PEAK FLOW			44800	Feb 11	121000	Mar 14 1982
MAXIMUM PEAK STAGE			11.23	Feb 11	17.18	Mar 14 1982
INSTANTANEOUS LOW FLOW			107	Aug 21	17	Jun 30 1988
ANNUAL RUNOFF (CFSM)	.66		.67		.79	
ANNUAL RUNOFF (INCHES)	9.03		9.06		10.74	
10 PERCENT EXCEEDS	11300		11900		13900	
50 PERCENT EXCEEDS	2000		1610		1650	
90 PERCENT EXCEEDS	527		510		262	

04193500 MAUMEE RIVER AT WATERVILLE, OHIO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—April 1950 to current year.
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 current year.
INSTRUMENTATION.—Refrigerated water-quality pumping sampler, operated by Heidelberg College Water Quality Laboratory, from October 1987 to September 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 mean, 300,000 tons, Feb. 24, 1990; minimum daily mean, 0.26 ton, Sep. 18, 1955.
EXTREMES FOR CURRENT YEAR.—
SEDIMENT CONCENTRATIONS: Maximum daily mean, 715 mg/L, Apr. 7; minimum daily mean, 1 mg/L, Jan. 15 and 16.
SEDIMENT LOADS: Maximum daily mean, 73,300 tons, Feb. 11; minimum daily mean, 2.3 tons, Jan.16.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00061), USGS National Water Information System parameter code; *, 10—stream cross-section sample collected by equal-width-increment (EWI) method, 50—point sample collected from refrigerated automatic sampler; mg/L, milligrams per liter; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; ---, no data.]

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES* (82398)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
MAY										
16...	1315	15100	10	7.7	608	23.0	18	37	2.3	9.9
16...	1500	15700	50	7.4	540	23.0	16	30	3.1	---

DATE	TIME	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
		MAY		
16...	1315	0.34	98.6	175
16...	1500	0.49	---	---

04193500 MAUMEE RIVER AT WATERVILLE, OHIO—Continued

WATER-QUALITY RECORDS

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[cfs, cubic feet per second; mg/L, milligrams per liter; ---, 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	1250	48	161	668	19	35	919	7	18
2	920	42	104	1030	30	94	926	11	27
3	678	30	56	1300	29	101	966	21	54
4	765	26	55	823	23	52	928	10	24
5	1450	37	153	500	17	23	1100	8	23
6	8450	72	1690	438	14	16	610	9	14
7	9090	90	2200	586	13	20	667	9	17
8	7950	82	1770	612	11	19	772	10	21
9	6090	87	1430	858	15	38	737	10	21
10	4070	80	878	1190	19	62	868	11	26
11	2780	69	516	877	13	32	1230	13	45
12	1690	61	278	1520	22	93	4070	23	266
13	1360	51	187	3090	25	203	5600	24	353
14	1360	48	178	2770	15	114	6880	19	355
15	1030	43	120	2230	12	70	6750	17	306
16	855	39	89	2420	13	86	5620	26	427
17	843	34	76	2310	13	82	11900	160	5400
18	1090	33	98	1700	11	52	17500	269	12800
19	936	29	73	1340	10	37	e14000	190	7200
20	705	26	50	1610	12	53	e10000	127	3480
21	645	24	42	1280	9	31	e7800	75	1590
22	582	23	37	970	7	19	e5200	50	711
23	715	20	39	780	8	17	e3800	32	332
24	900	20	48	787	8	17	e3000	27	218
25	893	20	48	760	9	18	e2500	24	159
26	783	15	32	796	16	34	e2100	20	115
27	716	13	25	808	6	14	e1900	17	89
28	583	15	24	799	6	13	e1700	16	74
29	644	15	26	1060	6	17	e1600	15	65
30	597	18	28	1090	7	20	e1500	14	57
31	576	20	31	---	---	---	e1400	13	50
TOTAL	60996	---	10542	37002	---	1482	124543	---	34337
		JANUARY			FEBRUARY			MARCH	
1	e1350	12	44	e18000	292	14100	9420	224	5720
2	e1300	11	39	e17000	255	11700	7880	166	3550
3	e1200	10	33	e12000	166	5450	6840	125	2310
4	e1150	9	29	e9000	114	2800	6300	90	1530
5	e1100	8	24	e7000	70	1330	5680	73	1110
6	e1050	7	20	e6000	43	702	4420	60	717
7	e980	5	14	e5200	31	435	3330	47	425
8	e950	5	12	e5000	26	354	2880	39	301
9	e920	4	11	e12000	102	3290	2530	34	234
10	e880	4	9.6	39800	604	66700	2340	31	195
11	e850	3	7.5	41300	653	73300	2230	28	167
12	e810	3	6.6	31600	373	32300	2000	26	142
13	e790	3	6.2	23800	237	15400	2500	48	325
14	e770	2	4.1	18400	159	7930	2290	46	287
15	e740	1	2.4	23300	157	9950	2010	39	211
16	e800	1	2.3	26700	180	12900	2280	53	346
17	e900	2	4.4	22900	162	10100	2600	81	572
18	e1100	3	10	16700	130	5900	2690	70	507
19	e1400	4	16	11300	98	3030	4040	59	638
20	e1700	11	51	8640	75	1760	5650	49	744
21	e2000	18	98	6920	61	1150	6340	45	769
22	e1700	14	66	5620	50	758	5600	38	573
23	e1500	11	44	4840	39	508	4640	46	573
24	e1300	9	32	3880	30	320	4010	42	454
25	e1200	8	27	6820	52	1160	3500	42	392
26	e1100	7	21	13800	170	6500	3090	44	366
27	e1000	5	15	14900	332	13300	2300	47	290
28	e920	5	12	11900	290	9390	1980	54	287
29	e990	5	13	---	---	---	1890	46	233
30	e1700	6	27	---	---	---	1860	39	196
31	e4500	64	775	---	---	---	1850	38	188
TOTAL	38650	---	1476.1	424320	---	312517	116970	---	24352

04193500 MAUMEE RIVER AT WATERVILLE, OHIO—Continued

WATER-QUALITY RECORDS

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001—Continued

[cfs, cubic feet per second; mg/L, milligrams per liter; ---, 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	1860	33	167	2450	39	256	7830	72	1530
2	1700	26	117	2090	39	222	6960	64	1200
3	1400	23	86	1900	40	202	9730	74	1960
4	1180	17	55	1820	34	165	8560	90	2080
5	1100	16	47	1370	19	72	6710	81	1480
6	7840	178	6910	1470	14	56	11000	223	7490
7	25600	715	49700	1670	15	67	20700	423	23700
8	22200	563	34400	2130	20	114	17200	275	13000
9	14400	349	13800	2250	17	101	11500	162	5120
10	9400	194	5050	1850	15	73	8010	94	2080
11	6690	132	2390	1540	14	57	5840	65	1030
12	10500	133	3820	1460	12	46	3970	52	561
13	14800	203	8160	1230	10	32	3600	44	429
14	12900	156	5510	1290	10	34	3090	37	309
15	8820	105	2530	2990	24	253	2550	31	211
16	6400	86	1490	14700	115	5010	2580	34	236
17	8720	82	1930	17500	207	9840	2070	40	224
18	8790	80	1900	14900	161	6530	1980	43	228
19	6840	66	1220	18500	270	13500	1830	38	189
20	4940	55	728	18500	307	15300	1500	27	109
21	7120	57	1090	15000	235	9570	1820	29	145
22	10500	63	1770	11500	163	5110	2560	41	285
23	11600	85	2660	8070	100	2200	2270	42	260
24	9760	90	2380	7270	76	1490	2500	46	309
25	6810	86	1590	8990	78	1930	3010	49	402
26	5650	74	1130	13600	115	4230	2520	42	286
27	4310	58	688	20200	301	17700	2040	40	218
28	3770	48	492	23900	485	31400	1730	39	183
29	3140	39	332	19900	369	20000	1400	36	137
30	2590	36	254	14600	240	9640	1420	32	123
31	---	---	---	9270	123	3170	---	---	---
TOTAL	241330	---	152396	263910	---	158370	158480	---	65514
		JULY			AUGUST			SEPTEMBER	
1	1150	28	87	904	23	57	297	26	21
2	971	27	70	882	24	58	497	23	30
3	968	24	62	624	20	34	473	21	27
4	953	24	63	759	19	39	418	17	20
5	834	28	63	608	16	27	336	15	14
6	841	27	61	438	15	18	198	12	6.6
7	878	29	69	434	16	18	232	12	7.7
8	909	31	75	351	15	14	193	14	7.0
9	755	28	57	271	13	9.8	192	15	8.3
10	832	29	67	351	14	13	544	21	31
11	749	26	54	213	12	7.2	714	22	42
12	702	22	42	127	11	3.9	1090	34	100
13	677	20	36	292	13	11	997	33	88
14	540	18	27	283	13	10	749	28	57
15	487	17	23	208	11	6.4	569	24	37
16	552	20	30	279	16	14	354	20	19
17	538	18	27	546	25	37	302	18	15
18	330	16	14	227	18	12	442	20	24
19	298	16	13	221	14	8.6	640	25	44
20	305	16	13	204	14	7.7	972	34	89
21	498	16	22	107	14	4.1	1490	43	184
22	583	18	28	334	22	23	2650	52	374
23	517	19	26	975	42	112	1620	42	182
24	954	37	101	2620	38	277	1430	36	138
25	1500	46	201	3810	38	390	1340	32	118
26	2280	51	318	2000	37	202	1600	35	150
27	1880	36	181	1260	32	109	1150	26	82
28	2020	33	182	1020	29	80	1040	25	71
29	1630	32	140	869	36	84	971	24	63
30	1250	25	85	589	29	46	702	22	41
31	796	21	44	427	30	34	---	---	---
TOTAL	28177	---	2281	22233	---	1766.7	24202	---	2090.6
YEAR	1540813		767124.4						

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, to Dec. 30, 1935, water-stage recorder, Oct. 17 to 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 March 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 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	38	49	e64	1350	374	104	136	299	34	16	14
2	29	35	44	e60	770	295	104	140	259	32	20	12
3	24	33	39	e58	e300	242	99	137	529	30	16	12
4	27	31	37	e56	e220	211	87	127	438	24	13	12
5	175	29	36	e54	e180	195	76	119	281	21	12	11
6	1150	28	38	e52	e160	165	1450	112	386	53	12	10
7	984	33	36	e50	e150	149	5380	110	1460	59	9.5	9.3
8	555	35	37	e48	e150	135	4150	110	995	39	8.7	9.3
9	287	52	35	e46	1540	117	1700	113	514	29	9.1	16
10	170	92	36	e44	4360	104	1160	100	318	26	12	40
11	119	106	48	e43	3490	97	789	81	226	18	19	111
12	88	103	939	e41	1150	102	1050	72	177	14	28	86
13	69	85	1190	e40	612	242	874	69	143	12	21	49
14	57	75	535	e39	683	620	506	68	116	11	50	36
15	48	67	326	e60	2750	469	347	122	100	11	32	27
16	44	59	452	e90	2150	341	352	2440	94	10	20	28
17	42	53	2870	e130	1050	308	412	3060	94	10	14	23
18	40	46	e1200	e240	531	359	317	1650	81	10	11	19
19	40	42	e400	e190	e300	795	243	1490	70	10	11	25
20	40	39	e230	e150	e230	866	235	930	62	9.7	11	105
21	36	34	e170	e120	e180	608	1340	503	57	18	12	196
22	33	31	e140	e100	e160	434	965	322	57	11	12	112
23	32	41	e130	e90	e140	327	1030	226	59	14	16	83
24	40	32	e120	e85	e130	259	674	173	68	13	34	61
25	111	31	e110	e80	413	204	411	153	83	18	59	69
26	80	32	e100	e75	1020	158	287	171	59	20	40	70
27	65	37	e90	e70	738	137	231	1180	45	50	32	60
28	58	45	e84	e66	511	125	193	1700	39	30	25	50
29	51	53	e80	e62	---	114	155	772	42	18	20	43
30	45	54	e75	e200	---	110	137	530	39	14	18	33
31	40	---	e68	e1500	---	106	---	439	---	12	15	---
TOTAL	4613	1471	9744	4003	25418	8768	24858	17355	7190	680.7	628.3	1431.6
MEAN	149	49.0	314	129	908	283	829	560	240	22.0	20.3	47.7
MAX	1150	106	2870	1500	4360	866	5380	3060	1460	59	59	196
MIN	24	28	35	39	130	97	76	68	39	9.7	8.7	9.3
CFSM	.35	.11	.73	.30	2.12	.66	1.94	1.31	.56	.05	.05	.11
IN.	.40	.13	.85	.35	2.21	.76	2.16	1.51	.62	.06	.05	.12

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2001, BY WATER YEAR (WY)

MEAN	83.5	193	346	457	526	749	647	407	294	150	82.3	85.6
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
(+)	7.4	6.9	6.3	6.7	6.8	6.9	7.4	7.6	8.3	9.5	9.2	9.2
MEAN≠	142	42.1	308	122	901	276	822	552	232	12.5	11.1	38.5
CFSM≠	.33	.10	.72	.28	2.11	.64	1.92	1.29	.54	.03	.03	.09
IN≠	.38	.11	.83	.33	2.19	.74	2.14	1.49	.60	.03	.03	.10

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1928 - 2001	
ANNUAL TOTAL	103990		106160.6			
ANNUAL MEAN	284		291		335	
HIGHEST ANNUAL MEAN					628	1973
LOWEST ANNUAL MEAN					81.4	1931
HIGHEST DAILY MEAN	5250	Jun 26	5380	Apr 7	11100	Aug 27 1998
LOWEST DAILY MEAN	10	Sep 7	8.7	Aug 8	.40	Aug 26 1931
ANNUAL SEVEN-DAY MINIMUM	12	Sep 3	10	Jul 14	.93	Oct 12 1934
MAXIMUM PEAK FLOW			6390	Apr 7a	11500	Feb 15 1950
MAXIMUM PEAK STAGE			10.85	Apr 7	14.51	Feb 15 1950
INSTANTANEOUS LOW FLOW			7.5	Aug 7	.40	Aug 16 1931
ANNUAL RUNOFF (CFSM)	.66		.68		.78	
ANNUAL RUNOFF (INCHES)	9.04		9.23		10.63	
10 PERCENT EXCEEDS	734		823		840	
50 PERCENT EXCEEDS	99		80		69	
90 PERCENT EXCEEDS	20		16		8.2	

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

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 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	49	65	e74	e1500	590	128	143	457	32	12	16
2	31	44	55	e72	e1000	473	126	146	401	26	18	14
3	26	42	48	e68	e500	381	121	147	700	26	30	12
4	33	40	e41	e66	e280	320	100	133	664	24	20	11
5	337	38	e37	e62	e220	288	85	114	439	20	16	12
6	1720	36	e35	e60	e200	238	1560	105	505	20	14	11
7	1410	41	e39	e56	e180	193	5780	100	1730	68	13	10
8	860	43	e37	e56	e170	178	4910	104	1330	42	11	10
9	489	74	e35	e54	2040	148	2130	114	770	32	9.3	17
10	292	201	e34	e52	5040	125	1560	114	498	25	11	86
11	192	192	e50	e50	4040	117	1140	87	354	21	15	113
12	139	172	1200	e48	1570	119	1340	72	269	16	42	166
13	104	140	1650	e47	930	359	1200	58	210	14	30	78
14	79	116	e1100	e46	1060	908	772	55	164	12	38	46
15	64	97	e880	e60	3270	731	545	132	134	14	45	31
16	57	83	e720	e84	2610	549	514	2520	120	12	29	25
17	53	71	3610	e140	1450	488	618	3340	116	10	22	23
18	48	60	e1400	e270	e700	538	484	1970	101	11	16	20
19	47	52	e500	e230	e400	1090	358	1830	76	12	14	24
20	46	48	e300	e190	e280	1280	318	1250	60	11	12	56
21	43	42	e210	e170	e230	947	1530	749	52	18	13	365
22	40	32	e170	e150	e200	696	1310	466	53	41	16	211
23	38	36	e160	e130	e170	535	1430	301	56	17	27	138
24	40	36	e140	e120	e160	425	1010	203	76	19	27	98
25	255	37	e130	e110	556	319	647	165	120	23	63	83
26	194	40	e110	e100	1360	232	440	184	82	36	56	82
27	127	45	e100	e90	1060	183	330	1260	46	38	36	71
28	93	56	e96	e80	777	161	253	2030	37	43	28	58
29	73	67	e90	e70	---	143	182	1080	35	24	22	48
30	63	72	e84	e120	---	134	148	742	38	19	19	34
31	54	---	e78	e2000	---	128	---	642	---	14	19	---
TOTAL	7084	2102	13204	4925	31953	13016	31069	20356	9693	740	743.3	1969
MEAN	229	70.1	426	159	1141	420	1036	657	323	23.9	24.0	65.6
MAX	1720	201	3610	2000	5040	1280	5780	3340	1730	68	63	365
MIN	26	32	34	46	160	117	85	55	35	10	9.3	10
CFSM	.46	.14	.86	.32	2.31	.85	2.10	1.33	.65	.05	.05	.13
IN.	.53	.16	.99	.37	2.41	.98	2.34	1.53	.73	.06	.06	.15

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2001, BY WATER YEAR (WY)

MEAN	96.4	45.0	185	418	764	555	1043	479	586	97.7	490	67.3
MAX	229	70.1	426	996	1141	869	1515	657	1169	217	1686	107
(WY)	2001	2001	2001	1999	2001	1999	1999	2001	2000	2000	1998	1998
MIN	27.4	20.1	37.4	99.8	499	378	578	131	266	23.9	21.1	13.1
(WY)	2000	2000	1999	2000	1999	2000	2000	1999	1999	2001	1999	1999

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1998 - 2001	
ANNUAL TOTAL	145014		136854.3			
ANNUAL MEAN	396		375		364	
HIGHEST ANNUAL MEAN					375	2001
LOWEST ANNUAL MEAN					347	2000
HIGHEST DAILY MEAN	5610	Jun 26	5780	Apr 7	9940	Aug 27 1998
LOWEST DAILY MEAN	10	Sep 8	9.3	Aug 9	8.3	Sep 18 1999
ANNUAL SEVEN-DAY MINIMUM	12	Sep 3	11	Sep 2	8.8	Sep 17 1999
MAXIMUM PEAK FLOW			6580	Apr 8a	10200	Aug 27 1998
MAXIMUM PEAK STAGE			10.58	Apr 8	13.92	Aug 27 1998
INSTANTANEOUS LOW FLOW			8.7	Aug 9	6.6	Sep 15 1999
ANNUAL RUNOFF (CFSM)	.80		.76		.74	
ANNUAL RUNOFF (INCHES)	10.92		10.31		10.02	
10 PERCENT EXCEEDS	1090		1160		1060	
50 PERCENT EXCEEDS	138		100		74	
90 PERCENT EXCEEDS	22		19		17	

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

04196000 SANDUSKY RIVER NEAR BUCYRUS, OHIO

LOCATION.—Latitude 40°48′13″, longitude 83°00′21″, in NE 1/4 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, 5.3 mi to 6.0 mi upstream from station, for municipal supply of Bucyrus. Water-quality and sediment data formerly collected at this site.
EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of March 23, 1913 reached a stage of 14.5 ft, from floodmarks. Flood of January 22, 1959, reached a stage of 11.9 ft, from floodmarks; discharge, 13,500 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.9	8.1	29	e4.7	e50	e32	29	33	33	15	3.6	3.2
2	6.5	7.6	14	e4.4	e30	e31	34	33	41	18	4.0	4.5
3	6.3	8.4	8.1	e4.2	e23	e30	35	29	52	16	16	4.7
4	7.1	7.5	8.5	e4.1	e20	e29	29	26	39	14	32	2.4
5	12	7.3	8.1	e4.3	e18	e28	25	24	31	20	19	e2.2
6	41	7.2	e8.6	e4.7	e17	e27	129	22	129	19	9.4	e2.0
7	50	8.2	8.9	e5.1	e16	e26	326	21	189	12	6.8	2.2
8	35	11	e8.5	e5.7	e20	e26	118	24	79	9.9	5.5	5.7
9	31	18	e7.8	e7.0	e80	e25	112	22	46	21	18	3.0
10	24	97	7.5	e5.8	e300	e25	126	20	34	15	8.9	16
11	18	67	37	e5.0	e60	e24	281	20	28	9.8	10	e3.0
12	14	30	221	e4.6	e40	e30	392	53	25	9.1	24	e3.3
13	12	20	67	e4.3	e30	61	132	42	22	7.5	12	e3.9
14	10	15	e20	e3.9	156	119	79	27	18	6.3	8.7	e3.4
15	8.7	13	e7.0	e8.0	e420	66	88	86	16	5.7	6.4	e2.8
16	7.5	10	146	e50	204	83	236	271	16	5.2	5.5	e3.5
17	7.7	8.9	742	e30	106	168	125	214	20	5.2	5.0	e4.0
18	7.0	7.7	180	e22	47	132	80	110	14	4.9	5.6	e5.0
19	6.8	6.9	74	e19	e40	89	63	143	12	5.0	14	e6.3
20	6.3	6.3	e20	e17	e37	69	193	90	12	5.0	8.4	e5.0
21	5.9	5.7	e14	e15	e35	59	505	59	19	8.5	7.8	e4.0
22	5.6	8.3	e11	e14	e34	52	361	52	89	9.2	6.1	e5.9
23	5.2	6.1	8.9	e13	e32	45	319	45	90	5.2	7.8	e7.4
24	5.5	5.1	8.5	e13	e31	40	131	43	36	4.8	6.3	e10
25	6.3	7.9	e7.6	e12	e50	35	82	39	23	7.1	5.5	e12
26	15	9.5	e7.0	e12	e45	32	62	67	18	5.3	20	e9.9
27	13	19	e6.6	e12	e37	30	52	90	15	4.2	17	e7.9
28	13	35	e6.1	e11	e34	29	43	72	13	4.1	10	e7.0
29	11	25	e5.7	e11	---	28	36	54	12	4.3	4.5	e6.4
30	9.5	22	e5.3	e30	---	27	34	40	23	4.5	4.5	e6.2
31	8.5	---	e4.9	e200	---	27	---	33	---	4.0	8.2	---
TOTAL	417.3	508.7	1708.6	556.8	2012	1524	4257	1904	1194	284.8	320.5	162.8
MEAN	13.5	17.0	55.1	18.0	71.9	49.2	142	61.4	39.8	9.19	10.3	5.43
MAX	50	97	742	200	420	168	505	271	189	21	32	16
MIN	5.2	5.1	4.9	3.9	16	24	25	20	12	4.0	3.6	2.0
CFSM	.15	.19	.62	.20	.81	.55	1.60	.69	.45	.10	.12	.06
IN.	.17	.21	.72	.23	.84	.64	1.78	.80	.50	.12	.13	.07

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 2001, BY WATER YEAR (WY)

MEAN	22.7	54.7	107	141	143	183	152	92.5	75.5	34.9	24.6	21.1
MAX	278	271	405	635	339	471	408	252	428	184	212	116
(WY)	1927	1973	1928	1950	1976	1978	1964	1969	1947	1966	1979	1926
MIN	1.28	1.34	1.39	3.93	2.29	32.9	9.64	4.44	1.93	.84	1.34	.38
(WY)	1935	1935	1935	1977	1934	1981	1935	1934	1934	1995	1995	1995

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1925 - 2001	
ANNUAL TOTAL	25897.5		14850.5			
ANNUAL MEAN	70.8		40.7		87.1	
HIGHEST ANNUAL MEAN					145	1973
LOWEST ANNUAL MEAN					20.4	1934
HIGHEST DAILY MEAN	1690	Apr 8	742	Dec 17	4600	Dec 14 1927
LOWEST DAILY MEAN	3.2	Feb 10	2.0	Sep 6	.34	Sep 30 1995
ANNUAL SEVEN-DAY MINIMUM	3.3	Feb 4	3.0	Sep 1	.36	Sep 24 1995
MAXIMUM PEAK FLOW			898	Dec 17a	5800	Dec 14 1927
MAXIMUM PEAK STAGE			4.83	Dec 17	9.83	Dec 14 1977
INSTANTANEOUS LOW FLOW			2.0	Sep 6	.60	Sep 28 1947
ANNUAL RUNOFF (CFSM)	.80		.46		.98	
ANNUAL RUNOFF (INCHES)	10.85		6.22		13.33	
10 PERCENT EXCEEDS	163		90		192	
50 PERCENT EXCEEDS	20		17		21	
90 PERCENT EXCEEDS	5.5		4.9		3.0	

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 2.0 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 1, 2000 to September 30, 2001. 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 September 14, 1924, nonrecording site and datum. Water-quality data collected at site 1969 to 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 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	34	80	e23	963	140	86	114	155	28	5.7	10
2	---	33	103	e22	472	126	90	112	145	38	5.2	14
3	---	33	84	e20	e250	127	85	105	136	25	7.5	11
4	---	32	e58	e21	e180	114	81	91	133	30	31	13
5	---	30	e54	e24	e140	102	71	81	109	29	31	9.6
6	---	29	e50	e26	e120	93	219	72	292	28	35	5.7
7	---	32	e62	e29	e110	89	825	67	505	27	19	4.0
8	---	31	e50	e32	e100	83	596	73	356	27	12	13
9	---	50	e47	e35	457	79	356	73	205	23	10	10
10	---	213	e45	e29	1890	72	376	67	142	22	8.2	66
11	---	366	e56	e25	1460	70	701	62	109	43	21	70
12	---	232	e580	e23	602	75	1430	103	89	25	19	31
13	---	145	951	e22	348	123	766	152	76	18	28	20
14	---	108	e290	e21	432	300	349	116	65	15	23	18
15	---	87	e170	e50	1900	306	273	272	57	12	14	12
16	---	74	e270	e160	1590	265	629	1180	54	10	11	12
17	---	62	2000	409	894	583	636	1150	47	9.1	9.0	10
18	---	54	e1600	245	487	594	333	738	47	7.3	6.2	14
19	---	46	e900	e160	294	420	222	747	41	7.2	13	18
20	---	43	e220	e110	233	298	533	583	37	11	17	18
21	---	39	e150	e94	180	240	1640	325	41	12	16	21
22	---	34	e100	e80	146	204	1280	255	51	10	12	21
23	---	38	e70	e70	135	173	1410	228	183	11	17	19
24	---	38	e55	e62	121	149	792	188	160	14	12	29
25	---	35	e46	e56	129	127	429	181	80	23	11	20
26	---	38	e38	e50	218	108	291	301	54	29	8.5	22
27	---	46	e34	e46	199	98	225	840	42	33	11	17
28	---	56	e30	e42	161	90	180	609	37	18	36	14
29	---	90	e28	e40	---	88	147	353	32	11	29	13
30	---	88	e26	e100	---	86	124	266	27	8.5	19	12
31	---	---	e25	e800	---	83	---	189	---	6.2	16	---
TOTAL	---	2236	8272	2926	14211	5505	15175	9693	3507	610.3	513.3	567.3
MEAN	---	74.5	267	94.4	508	178	506	313	117	19.7	16.6	18.9
MAX	---	366	2000	800	1900	594	1640	1180	505	43	36	70
MIN	---	29	25	20	100	70	71	62	27	6.2	5.2	4.0
MED	---	44	62	42	242	123	352	188	78	18	14	14
AC-FT	---	4440	16410	5800	28190	10920	30100	19230	6960	1210	1020	1130
CFSM	---	.25	.90	.32	1.70	.60	1.70	1.05	.39	.07	.06	.06
IN.	---	.28	1.03	.37	1.77	.69	1.89	1.21	.44	.08	.06	.07

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2001, BY WATER YEAR (WY)

MEAN	53.0	126	263	395	442	566	445	255	190	95.0	55.6	62.1
MAX	795	891	1107	1701	1069	1490	1399	761	1283	535	504	839
(WY)	1927	1973	1978	1930	1971	1963	1957	1969	1947	1966	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 2001 WATER YEAR		WATER YEARS 1922 - 2001	
ANNUAL MEAN			246	
HIGHEST ANNUAL MEAN			449	1973
LOWEST ANNUAL MEAN			70.0	1934
HIGHEST DAILY MEAN	2000	Dec 17	8400	Jan 22 1959
LOWEST DAILY MEAN	4.0	Sep 7	.60	Sep 13 1955
ANNUAL SEVEN-DAY MINIMUM	8.9	Jul 28	.71	Sep 8 1955
MAXIMUM PEAK FLOW	2400	Dec 18a	10000	Jan 22 1959
MAXIMUM PEAK STAGE	5.55	Dec 18	15.00	Jan 22 1959
INSTANTANEOUS LOW FLOW	3.5	Sep 7	.50	Oct 2 1963
ANNUAL RUNOFF (AC-FT)			178200	
ANNUAL RUNOFF (CFSM)			.83	
ANNUAL RUNOFF (INCHES)			11.22	
10 PERCENT EXCEEDS	556		615	
50 PERCENT EXCEEDS	70		61	
90 PERCENT EXCEEDS	12		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 1/4 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 fair except for periods of estimated record, which are poor. Beginning Mar. 9, 1972, water is diverted at a point 29.4 mi upstream from station into Killdeer Reservoir. Storage is available for low-flow augmentation. There were no low-flow augmentation releases during the year. During the year, withdrawals totaled 63 million gallons, equivalent to a mean annual withdrawal of .27 ft^3/s. Return flow through Abraham Marsh totaled 99 million gallons, equivalent to a mean annual release of 0.42 ft^3/s. Water-quality and sediment data formerly collected at this site.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	12	23	e19	e400	123	49	60	155	15	11	5.0
2	13	12	23	e19	e240	102	49	58	111	13	9.6	4.3
3	10	12	22	e18	e180	89	50	54	90	12	9.9	3.9
4	8.6	11	20	e17	e90	80	52	49	75	12	9.2	4.6
5	26	10	19	e17	e74	71	46	44	61	14	8.4	5.8
6	166	10	22	e17	e62	64	110	38	128	15	6.8	5.5
7	256	10	e17	e20	e56	57	640	35	221	13	13	4.6
8	164	9.7	e16	e26	e50	48	924	34	114	11	13	5.2
9	89	14	e15	e30	221	45	495	34	83	12	11	4.7
10	48	90	e15	e26	848	42	262	34	63	12	11	8.8
11	29	283	e18	e22	995	40	345	33	48	11	9.8	6.1
12	20	234	e240	e20	676	39	942	31	40	9.5	8.8	19
13	15	133	e540	e19	273	63	1530	42	36	7.8	6.8	27
14	13	86	e300	e19	252	194	993	42	32	8.3	5.1	21
15	12	65	e170	e27	827	226	334	141	30	8.3	4.1	15
16	11	52	e110	e50	1190	181	495	735	27	7.6	4.6	11
17	18	41	e450	e90	1120	414	649	1070	23	7.0	4.8	9.2
18	71	34	e900	e60	468	550	388	912	21	6.5	4.3	9.0
19	111	29	e640	e50	210	355	229	629	21	5.9	7.2	10
20	90	25	e280	e40	148	225	326	799	20	5.5	8.0	9.6
21	57	22	e170	e34	117	165	985	503	20	5.9	7.3	8.5
22	36	32	e86	e28	94	133	1400	229	20	6.4	6.8	9.3
23	24	19	e68	e25	82	111	1150	170	31	6.2	7.6	10
24	18	18	e50	e22	75	95	763	141	28	7.9	6.9	16
25	26	18	e40	e20	74	83	348	107	24	9.8	9.4	16
26	20	18	e32	e19	114	72	196	141	21	10	11	15
27	16	18	e30	e17	189	61	137	628	18	31	10	16
28	14	20	e27	e16	159	55	105	853	17	56	8.6	15
29	13	21	e24	e15	---	51	85	586	16	30	6.9	15
30	12	21	e22	e50	---	47	70	277	15	19	5.7	16
31	12	---	e20	e200	---	47	---	206	---	14	4.9	---
TOTAL	1435.6	1379.7	4409	1052	9284	3928	14147	8715	1609	402.6	251.5	326.1
MEAN	46.3	46.0	142	33.9	332	127	472	281	53.6	13.0	8.11	10.9
MAX	256	283	900	200	1190	550	1530	1070	221	56	13	27
MIN	8.6	9.7	15	15	50	39	46	31	15	5.5	4.1	3.9

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2001, BY WATER YEAR (WY)

MEAN	30.5	136	217	231	305	400	335	206	147	107	33.7	31.8
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	.084	.86	1.78	1.66	37.2	35.1	32.8	11.7	1.78	1.04	.48	.27
(WY)	1965	1992	1992	1977	1972	1983	1971	1988	1988	1965	1965	1964

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1964 - 2001	
ANNUAL TOTAL	44537.9		46939.5			
ANNUAL MEAN	122		129		182	
HIGHEST ANNUAL MEAN					330	1973
LOWEST ANNUAL MEAN					72.2	1988
HIGHEST DAILY MEAN	1870	Apr 10	1530	Apr 13	6280	Dec 31 1990
LOWEST DAILY MEAN	1.9	Sep 9	3.9	Sep 3	.00	Aug 10 1964
ANNUAL SEVEN-DAY MINIMUM	3.7	Sep 5	4.8	Sep 1	.00	Oct 23 1964
MAXIMUM PEAK FLOW			1760	Apr 13a	6700	Dec 31 1990
MAXIMUM PEAK STAGE			6.02	Apr 13	11.21	Mar 6 1963
INSTANTANEOUS LOW FLOW			3.8	Aug 15	.00	Aug 10 1964
10 PERCENT EXCEEDS	360		368		494	
50 PERCENT EXCEEDS	32		30		32	
90 PERCENT EXCEEDS	6.2		8.2		1.5	

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 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	16	27	e25	e300	59	40	33	32	9.3	.79	.64
2	29	15	29	e23	e160	55	38	30	29	17	.68	.57
3	25	14	27	e21	e85	52	37	29	27	43	1.5	.55
4	21	13	27	e20	e70	48	32	27	25	26	1.1	.50
5	56	12	e20	e18	e58	45	29	24	22	16	1.6	.44
6	321	16	e18	e17	e47	41	489	22	25	11	3.3	.41
7	238	15	e17	e16	e43	37	853	21	47	8.3	1.9	.61
8	124	13	e15	e15	e40	36	450	20	69	5.6	1.3	.79
9	78	14	e14	e14	e230	35	207	19	49	4.5	1.3	1.2
10	56	47	e13	e14	987	34	145	18	35	4.4	2.2	5.0
11	44	88	e20	e13	729	34	162	17	27	3.9	1.8	1.9
12	34	64	485	e12	299	36	244	16	22	3.1	2.7	1.1
13	30	44	e310	e11	165	110	194	16	19	2.6	1.7	3.7
14	27	35	e130	e11	250	168	109	19	16	1.9	1.2	3.7
15	24	29	e85	e20	852	119	95	30	13	1.4	1.1	2.1
16	22	25	e200	e100	728	136	250	73	11	1.1	1.2	1.3
17	22	22	e900	e140	383	292	225	151	10	.98	1.1	1.3
18	23	20	e700	e85	200	254	132	118	11	.96	1.0	1.4
19	21	18	e340	e63	125	189	93	89	9.4	1.4	1.3	1.8
20	20	16	e140	e52	100	133	135	91	8.2	1.4	.94	1.5
21	18	15	e92	e37	83	107	320	66	7.6	1.5	.73	1.9
22	16	16	e75	e27	70	90	286	49	9.0	1.9	.71	4.0
23	14	12	e64	e23	61	77	214	41	46	2.0	1.8	4.7
24	14	11	e53	e20	54	67	150	34	47	1.5	1.8	9.6
25	17	12	e48	e17	55	58	98	30	28	2.2	2.5	6.1
26	22	12	e44	e15	64	50	70	41	17	3.3	1.5	4.0
27	22	15	e39	e13	67	45	56	134	11	2.4	1.3	e3.0
28	21	22	e35	e12	63	41	48	168	8.9	2.4	1.1	e2.5
29	19	24	e32	e10	---	45	40	90	11	1.8	.77	2.2
30	16	26	e29	e50	---	38	36	54	11	1.5	.63	1.7
31	16	---	e26	e400	---	39	---	39	---	1.2	.64	---
TOTAL	1447	701	4054	1314	6368	2570	5277	1609	703.1	185.54	43.19	70.21
MEAN	46.7	23.4	131	42.4	227	82.9	176	51.9	23.4	5.99	1.39	2.34
MAX	321	88	900	400	987	292	853	168	69	43	3.3	9.6
MIN	14	11	13	10	40	34	29	16	7.6	.96	.63	.41
CFSM	.31	.16	.88	.28	1.53	.56	1.18	.35	.16	.04	.01	.02
IN.	.36	.18	1.01	.33	1.59	.64	1.32	.40	.18	.05	.01	.02

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 2001, BY WATER YEAR (WY)

MEAN	28.8	96.8	156	154	240	262	235	113	113	67.3	44.6	35.3
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	.71	2.51	1.99	1.31	54.2	40.4	44.4	8.69	1.05	.46	1.39	.84
(WY)	1989	1995	1977	1977	1999	1981	1976	1988	1988	1988	2001	1995

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1976 - 2001	
ANNUAL TOTAL	47332.0		24342.04			
ANNUAL MEAN	129		66.7		129	
HIGHEST ANNUAL MEAN					189	1993
LOWEST ANNUAL MEAN					48.1	1988
HIGHEST DAILY MEAN	2100	Aug 24	987	Feb 10	4000	Dec 30 1990
LOWEST DAILY MEAN	2.5	Aug 22	.41	Sep 6	.07	Sep 28 1988
ANNUAL SEVEN-DAY MINIMUM	3.2	Aug 16	.53	Sep 1	.09	Sep 24 1988
MAXIMUM PEAK FLOW			1040	Feb 10a	4440	Jun 13 1981
MAXIMUM PEAK STAGE			6.19	Dec 17b	11.00	Jun 13 1981
INSTANTANEOUS LOW FLOW			.41	Sep 6	.07	Sep 28 1988
ANNUAL RUNOFF (CFSM)	.87		.45		.86	
ANNUAL RUNOFF (INCHES)	11.82		6.08		11.74	
10 PERCENT EXCEEDS	335		163		337	
50 PERCENT EXCEEDS	40		24		30	
90 PERCENT EXCEEDS	12		1.4		2.0	

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 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2	3.9	2.6	e1.6	e30	9.4	8.2	e7.8	5.9	2.0	1.1	1.4
2	3.9	3.6	2.4	e1.6	e23	9.1	8.0	e7.4	5.7	1.9	1.1	1.1
3	3.5	3.5	2.1	e1.6	e11	8.8	7.5	e7.0	4.7	1.6	1.0	.68
4	3.8	3.4	2.0	e1.5	e9.0	8.4	7.0	e6.4	4.3	1.7	1.0	.56
5	38	3.1	1.9	e1.5	e8.0	8.1	6.7	e6.0	4.1	1.6	.90	.49
6	185	3.0	e1.7	e1.4	e7.4	7.8	434	e5.6	6.8	1.5	.89	.49
7	51	3.3	e1.6	e1.4	e6.8	7.3	364	e5.4	19	1.4	.84	.47
8	14	3.3	e1.6	e1.4	e8.0	7.3	60	e5.0	11	1.5	.95	1.4
9	7.8	4.1	e1.5	e1.4	166	7.0	37	e4.9	7.2	1.5	1.0	2.1
10	6.3	11	e1.4	e1.4	567	6.7	34	e4.7	5.4	1.5	1.0	2.6
11	6.1	16	e2.5	e1.3	81	6.9	49	e4.5	4.6	1.4	1.0	.42
12	5.3	8.4	e180	e1.3	e20	7.5	44	e4.3	4.1	1.3	1.2	.32
13	4.7	4.5	e35	e1.3	e16	30	24	e4.1	3.7	1.3	1.2	.42
14	4.9	3.2	e15	e1.3	77	49	16	e4.0	3.0	1.2	1.1	.37
15	5.5	2.7	e9.2	e7.0	292	20	18	13	2.8	1.2	.92	.32
16	5.4	2.4	e50	e55	76	38	69	18	3.0	1.1	.98	.34
17	6.3	2.1	e350	e20	40	108	29	14	2.6	1.1	1.3	.39
18	6.4	2.0	e70	e13	22	55	18	9.4	2.5	1.4	1.6	.56
19	6.4	1.9	e22	e11	15	41	14	9.4	2.3	1.1	1.6	1.1
20	5.6	1.8	e9.5	e8.0	13	23	50	7.5	2.2	1.1	1.1	1.1
21	5.5	1.7	e5.8	e6.6	11	17	88	6.2	2.4	2.1	1.0	1.2
22	5.1	1.7	e4.4	e5.8	10	14	37	6.4	2.5	1.9	1.5	.90
23	4.7	1.7	e3.3	e5.0	9.6	12	28	5.5	2.3	1.3	2.6	.95
24	5.8	1.6	e3.0	e4.7	9.2	11	18	5.0	2.1	1.2	1.4	2.0
25	6.1	1.8	e2.7	e4.3	10	9.9	14	4.7	2.0	3.6	1.4	1.2
26	6.9	2.1	e2.4	e3.8	12	9.0	12	12	1.8	2.1	1.4	1.3
27	6.0	2.3	e2.1	e3.4	11	8.5	11	54	1.8	1.4	1.4	1.4
28	5.1	3.1	e1.9	e3.2	10	8.0	10	26	1.7	1.2	1.4	1.2
29	4.5	2.9	e1.8	e3.0	---	7.9	e9.0	12	1.6	1.2	1.2	1.1
30	4.3	2.7	e1.8	e20	---	7.9	e8.4	7.8	1.6	1.2	1.2	1.1
31	3.8	---	e1.7	e100	---	7.8	---	6.2	---	1.2	1.2	---
TOTAL	431.9	108.8	792.9	293.8	1571.0	571.3	1532.8	294.2	124.7	46.8	37.48	28.98
MEAN	13.9	3.63	25.6	9.48	56.1	18.4	51.1	9.49	4.16	1.51	1.21	.97
MAX	185	16	350	100	567	108	434	54	19	3.6	2.6	2.6
MIN	3.5	1.6	1.4	1.3	6.8	6.7	6.7	4.0	1.6	1.1	.84	.32
CFSM	.40	.10	.74	.27	1.62	.53	1.48	.27	.12	.04	.03	.03
IN.	.46	.12	.85	.32	1.69	.61	1.65	.32	.13	.05	.04	.03

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2001, BY WATER YEAR (WY)

MEAN	9.50	27.4	35.1	38.4	59.2	47.8	53.3	27.0	23.1	13.9	11.6	12.2
MAX	50.3	145	172	98.5	122	138	92.7	87.6	90.8	82.0	88.8	99.5
(WY)	1991	1993	1991	1993	1990	1984	1994	1997	1997	1992	1998	1992
MIN	1.27	1.73	2.09	9.48	13.0	13.6	17.9	2.29	1.12	.55	1.21	.83
(WY)	2000	2000	1992	2001	1993	1989	1988	1988	1988	1988	2001	1995

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1984 - 2001	
ANNUAL TOTAL	9950.3		5834.66			
ANNUAL MEAN	27.2		16.0		29.7	
HIGHEST ANNUAL MEAN					48.2	1984
LOWEST ANNUAL MEAN					11.6	1988
HIGHEST DAILY MEAN	800	Sep 24	567	Feb 10	1590	Aug 26 1998
LOWEST DAILY MEAN	1.4	Jul 25	.32	Sep 12	.32	Jul 29 1988
ANNUAL SEVEN-DAY MINIMUM	1.6	Jul 21	.37	Sep 11	.37	Sep 11 2001
MAXIMUM PEAK FLOW			884	Apr 6	2640	Aug 26 1998
MAXIMUM PEAK STAGE			6.65	Apr 6	8.96	Aug 26 1998
INSTANTANEOUS LOW FLOW			.32	Sep 12	.32	Jul 29 1988
ANNUAL RUNOFF (CFSM)	.79		.46		.86	
ANNUAL RUNOFF (INCHES)	10.70		6.27		11.65	
10 PERCENT EXCEEDS	46		29		56	
50 PERCENT EXCEEDS	6.3		4.2		6.1	
90 PERCENT EXCEEDS	2.0		1.1		1.4	

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.

WATER-DISCHARGE RECORDS

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 626.3 ft above sea level. Nov. 18, 1898, to Mar. 10, 1901, nonrecording gage at site 4 mi downstream at different datum. Nov. 8, 1923, to 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 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	273	131	255	e140	e3600	612	310	396	689	118	67	48
2	220	132	242	e130	e2500	538	325	362	603	118	59	47
3	181	142	233	e120	e1400	480	314	333	533	111	56	43
4	156	144	e210	e110	e800	435	291	312	439	142	53	38
5	249	131	e190	e120	e600	403	272	281	390	126	53	35
6	1730	126	e160	e130	e500	368	2560	252	390	108	50	37
7	1660	134	e150	e140	e440	342	6580	230	1070	97	54	35
8	1170	152	e280	e150	e400	316	4010	225	1360	91	63	37
9	767	184	862	e170	e1000	298	2730	223	915	87	67	46
10	517	461	e400	e210	e6000	280	1740	218	614	82	58	92
11	373	815	e140	e180	e3000	270	1430	204	469	79	54	103
12	287	1150	e2000	e160	e2000	267	2510	198	383	73	62	130
13	238	919	e3700	e150	e1600	382	3500	193	331	69	65	117
14	199	642	e1700	e160	e1400	956	2860	235	297	73	55	102
15	174	465	e900	e200	e2800	1040	1900	392	276	65	53	88
16	158	370	e700	e500	e5000	1030	1810	1540	261	58	53	75
17	155	306	e4600	e2000	e4000	1900	2330	3710	239	50	55	61
18	158	266	e6600	e1800	2900	2450	1980	3070	222	61	48	51
19	174	227	e3000	e1600	1590	2370	1280	2230	205	52	46	52
20	247	206	e1500	e1400	1020	1630	1020	1890	186	44	49	59
21	247	181	e1000	e1200	773	1150	3660	1710	175	46	43	63
22	209	162	e740	e1000	629	889	4510	1220	174	63	43	78
23	175	144	e600	e900	541	728	4110	768	173	70	63	71
24	170	146	e470	e800	484	614	3470	622	215	56	76	85
25	225	142	e370	e700	471	525	2090	549	352	55	66	94
26	182	159	e300	e640	487	450	1210	534	251	101	58	86
27	178	177	e260	e600	613	397	832	1780	184	81	52	80
28	165	197	e230	e560	677	359	647	3070	171	76	49	71
29	151	213	e200	e520	---	330	527	2200	150	77	44	63
30	143	233	e180	e500	---	322	445	1420	127	96	41	56
31	135	---	e160	e3000	---	308	---	897	---	82	48	---
TOTAL	11066	8857	32332	19990	47225	22439	61253	31264	11844	2507	1703	2043
MEAN	357	295	1043	645	1687	724	2042	1009	395	80.9	54.9	68.1
MAX	1730	1150	6600	3000	6000	2450	6580	3710	1360	142	76	130
MIN	135	126	140	110	400	267	272	193	127	44	41	35
CFSM	.29	.24	.83	.52	1.35	.58	1.63	.81	.32	.06	.04	.05
IN.	.33	.26	.96	.59	1.40	.67	1.82	.93	.35	.07	.05	.06

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 2001, BY WATER YEAR (WY)

MEAN	221	569	1075	1554	1913	2288	1837	1061	819	453	233	253
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 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1924 - 2001	
ANNUAL TOTAL	331759		252523			
ANNUAL MEAN	906		692		1018	
HIGHEST ANNUAL MEAN					2167	1984
LOWEST ANNUAL MEAN					275	1934
HIGHEST DAILY MEAN	10800	Apr 9	6600	Dec 18	36000	Mar 15 1978
LOWEST DAILY MEAN	50	Sep 8	35	Sep 5	5.0	Oct 20 1963
ANNUAL SEVEN-DAY MINIMUM	67	Feb 3	39	Sep 3	6.3	Jul 9 1988
MAXIMUM PEAK FLOW			9000	Dec 17ae	36500	Mar 16 1978
MAXIMUM PEAK STAGE			7.21	Jan 31b	16.14	Feb 24 1979
INSTANTANEOUS LOW FLOW			33	Sep 5	4.4	Feb 29 1964
ANNUAL RUNOFF (CFSM)	.72		.55		.81	
ANNUAL RUNOFF (INCHES)	9.87		7.51		11.06	
10 PERCENT EXCEEDS	1980		1990		2710	
50 PERCENT EXCEEDS	410		251		273	
90 PERCENT EXCEEDS	111		56		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.

04198000 SANDUSKY RIVER NEAR FREMONT, OHIO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1951-56, 1978 to current year.
PERIOD OF DAILY RECORD.—
CHLORIDE: February 1988 to September 1994.
NITROGEN, NITRITE + NITRATE: February 1988 to September 1994.
NITROGEN, AMMONIA + ORGANIC: February 1988 to September 1994.
PHOSPHORUS: February 1988 to September 1994.
SUSPENDED SEDIMENT DISCHARGE: Water years 1951-56, 1978 to current year.
INSTRUMENTATION.—Refrigerated water-quality pumping sampler, operated by Heidelberg College Water Quality Laboratory, from February 1988 to September 1994.
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 half-hour intervals and the daily load was calculated by summing the loads for these half-hour intervals. This required interpolation between measured and estimated concentrations.
EXTREMES FOR PERIOD OF DAILY RECORD.—
SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,420 mg/L, June 9, 1981; minimum daily mean, 1 mg/L, on many days during 1951-56, 1980, 1981, 1988, and 1992.
SEDIMENT LOADS: Maximum daily, 124,000 tons, June 14, 1981; minimum daily, less than 0.05 ton, on several days during 1952, 1954, and 1989.
EXTREMES FOR CURRENT YEAR.—
SEDIMENT CONCENTRATIONS: Maximum daily mean, 511 mg/L, Apr. 7; minimum daily mean, 6 mg/L, Sept. 7.
SEDIMENT LOADS: Maximum daily, 9,310 tons, Apr. 7; minimum daily, 0.59 ton, Sept. 7.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00061), USGS National Water Information System parameter code; *, 10—stream cross-section sample collected by equal-width-increment (EWI) method; mg/L, milligrams per liter; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; ---, no data.]

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES* (82398)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
MAY								
17...	1300	3880	10	594	24.0	16.5	98.1	334

04198000 SANDUSKY RIVER NEAR FREMONT, OHIO—Continued

WATER-QUALITY RECORDS—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[cfs, cubic feet per second; mg/L, milligrams per liter; ---, 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	273	49	36	131	33	12	255	94	65
2	220	41	24	132	27	9.7	242	83	54
3	181	31	15	142	22	8.5	233	71	45
4	156	26	11	144	21	8.2	e210	60	34
5	249	27	20	131	21	7.5	e190	48	25
6	1730	73	356	126	22	7.4	e160	37	16
7	1660	71	318	134	22	8.1	e150	28	11
8	1170	56	178	152	23	9.5	e280	35	27
9	767	44	91	184	26	13	862	81	226
10	517	37	52	461	37	49	e400	44	49
11	373	33	34	815	56	130	e140	41	16
12	287	30	23	1150	69	216	e2000	137	737
13	238	29	18	919	31	79	e3700	225	2240
14	199	25	13	642	23	41	e1700	160	747
15	174	21	9.9	465	21	27	e900	79	194
16	158	21	8.8	370	21	21	e700	80	152
17	155	19	7.8	306	21	17	e4600	274	3390
18	158	18	7.7	266	20	15	e6600	447	7940
19	174	18	8.5	227	20	12	e3000	300	2470
20	247	27	18	206	19	11	e1500	121	499
21	247	22	14	181	18	9.0	e1000	73	197
22	209	15	8.7	162	17	7.7	e740	61	122
23	175	14	6.6	144	17	6.5	e600	52	84
24	170	15	7.1	146	16	6.2	e470	43	55
25	225	23	14	142	18	6.9	e370	34	34
26	182	14	7.1	159	31	14	e300	26	21
27	178	11	5.4	177	46	22	e260	24	17
28	165	9	4.2	197	61	33	e230	23	14
29	151	7	3.0	213	77	44	e200	22	12
30	143	18	7.0	233	92	58	e180	21	10
31	135	38	14	---	---	---	e160	19	8.4
TOTAL	11066	---	1340.8	8857	---	909.2	32332	---	19511.4
		JANUARY			FEBRUARY			MARCH	
1	e140	18	6.9	e3600	227	2200	612	37	60
2	e130	17	6.1	e2500	170	1150	538	65	94
3	e120	16	5.2	e1400	98	373	480	92	119
4	e110	15	4.6	e800	70	153	435	93	110
5	e120	17	5.7	e600	51	83	403	86	94
6	e130	20	7.0	e500	38	51	368	79	79
7	e140	22	8.5	e440	26	30	342	72	67
8	e150	25	10	e400	23	25	316	65	56
9	e170	27	13	e1000	163	439	298	58	47
10	e210	29	17	e6000	308	4950	280	51	39
11	e180	28	14	e3000	213	1740	270	44	32
12	e160	27	12	e2000	152	828	267	38	28
13	e150	26	11	e1600	120	518	382	50	53
14	e160	33	14	e1400	94	356	956	79	208
15	e200	42	22	e2800	148	1120	1040	81	227
16	e500	61	83	e5000	265	3560	1030	79	220
17	e2000	136	729	e4000	204	2210	1900	149	790
18	e1800	136	662	2900	135	1080	2450	130	856
19	e1600	122	528	1590	72	320	2370	125	796
20	e1400	108	409	1020	40	111	1630	95	425
21	e1200	94	305	773	30	63	1150	59	185
22	e1000	81	220	629	24	41	889	31	76
23	e900	75	182	541	18	27	728	25	50
24	e800	70	151	484	13	16	614	24	39
25	e700	65	123	471	9	12	525	22	31
26	e640	60	104	487	8	10	450	20	25
27	e600	55	89	613	17	28	397	20	21
28	e560	50	76	677	13	25	359	19	19
29	e520	45	63	---	---	---	330	19	17
30	e500	54	73	---	---	---	322	19	16
31	e3000	145	1170	---	---	---	308	18	15
TOTAL	19990	---	5124.0	47225	---	21519	22439	---	4894

04198000 SANDUSKY RIVER NEAR FREMONT, OHIO—Continued

WATER-QUALITY RECORDS—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001—Continued

[cfs, cubic feet per second; mg/L, milligrams per liter; ---, 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	310	18	15	396	105	112	689	131	244
2	325	17	15	362	98	96	603	112	183
3	314	17	14	333	81	73	533	94	136
4	291	16	13	312	60	51	439	78	92
5	272	15	11	281	41	32	390	138	145
6	2560	246	3050	252	48	32	390	162	170
7	6580	511	9310	230	53	33	1070	113	308
8	4010	315	3440	225	61	37	1360	83	305
9	2730	231	1720	223	58	35	915	76	190
10	1740	170	807	218	53	31	614	69	115
11	1430	119	460	204	45	25	469	58	74
12	2510	172	1270	198	51	27	383	46	48
13	3500	362	3420	193	66	34	331	44	39
14	2860	279	2170	235	74	47	297	45	36
15	1900	169	899	392	90	101	276	45	33
16	1810	168	878	1540	161	783	261	69	49
17	2330	225	1410	3710	341	3430	239	50	32
18	1980	185	997	3070	333	2780	222	54	32
19	1280	151	527	2230	231	1410	205	47	26
20	1020	112	309	1890	182	931	186	52	26
21	3660	242	2550	1710	162	750	175	66	31
22	4510	359	4370	1220	128	428	174	57	27
23	4110	334	3700	768	99	207	173	47	22
24	3470	294	2760	622	84	141	215	57	34
25	2090	271	1530	549	72	108	352	79	76
26	1210	223	736	534	70	101	251	53	37
27	832	157	355	1780	164	895	184	34	17
28	647	93	164	3070	230	1920	171	29	13
29	527	106	150	2200	204	1210	150	33	13
30	445	114	137	1420	161	629	127	38	13
31	---	---	---	897	129	312	---	---	---
TOTAL	61253	---	47187	31264	---	16801	11844	---	2566
		JULY			AUGUST			SEPTEMBER	
1	118	43	14	67	25	4.6	48	9	1.2
2	118	50	16	59	23	3.7	47	10	1.2
3	111	64	19	56	23	3.4	43	7	.78
4	142	67	26	53	22	3.1	38	7	.69
5	126	68	23	53	21	3.0	35	7	.65
6	108	63	18	50	23	3.1	37	7	.65
7	97	57	15	54	20	2.9	35	6	.59
8	91	51	13	63	20	3.4	37	7	.75
9	87	46	11	67	20	3.6	46	10	1.4
10	82	45	9.9	58	19	2.9	92	27	6.9
11	79	52	11	54	22	3.3	103	23	6.3
12	73	57	11	62	20	3.3	130	20	7.2
13	69	54	10	65	20	3.4	117	14	4.4
14	73	55	11	55	14	2.1	102	14	3.8
15	65	55	9.8	53	22	3.2	88	12	2.9
16	58	55	8.5	53	23	3.3	75	9	1.9
17	50	54	7.3	55	21	3.1	61	8	1.4
18	61	53	8.9	48	19	2.5	51	8	1.1
19	52	53	7.4	46	18	2.2	52	8	1.1
20	44	52	6.2	49	17	2.2	59	8	1.3
21	46	52	6.4	43	17	2.0	63	8	1.4
22	63	51	8.7	43	18	2.1	78	8	1.7
23	70	50	9.5	63	25	4.4	71	8	1.5
24	56	40	6.2	76	27	5.6	85	19	4.4
25	55	51	7.7	66	22	3.9	94	19	4.9
26	101	51	14	58	18	2.9	86	14	3.3
27	81	35	7.8	52	15	2.1	80	11	2.5
28	76	35	7.0	49	11	1.5	71	10	1.8
29	77	39	8.2	44	10	1.2	63	8	1.4
30	96	35	9.2	41	10	1.1	56	7	1.1
31	82	31	7.0	48	9	1.2	---	---	---
TOTAL	2507	---	347.7	1703	---	90.3	2043	---	70.21
YEAR	252523		120360.61						

04199000 HURON RIVER AT MILAN, OHIO

LOCATION.—Latitude 41°18′06″, longitude 82°36′25″, in SW 1/4 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 2.0 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, to 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 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	e46	73	e40	e720	e110	128	95	60	31	7.3	9.2
2	54	44	81	e37	e360	e110	130	90	63	118	6.6	8.1
3	43	47	77	e35	e190	e100	129	83	67	98	57	7.2
4	44	48	e82	e33	e130	e100	117	77	61	51	33	6.9
5	175	50	e76	e32	e110	e99	109	71	54	35	53	6.5
6	980	51	e95	e31	e100	e97	2670	65	64	28	26	6.2
7	429	53	e103	e36	e96	e97	2710	62	138	23	17	6.0
8	225	58	e78	e40	e120	e96	900	67	146	19	13	8.7
9	e198	62	e67	e33	e600	e96	456	64	91	17	22	8.0
10	e166	90	e73	e28	e3000	e97	346	61	68	17	29	22
11	e125	141	91	e24	e700	e110	322	54	56	21	16	13
12	e84	105	1240	e22	e390	e130	381	75	50	20	22	21
13	e67	87	e540	e20	e300	341	299	77	43	14	18	16
14	e60	78	e400	e40	e490	491	213	68	36	12	14	20
15	e55	69	e350	e60	2410	279	216	66	35	11	12	13
16	e52	57	e2000	e200	998	245	634	79	58	10	11	13
17	e57	53	3480	e540	e570	522	450	128	42	9.2	11	11
18	e54	50	971	e170	e320	451	292	134	35	13	9.5	9.4
19	e59	48	e305	e100	e250	438	227	103	29	10	16	18
20	e45	47	e240	e80	e230	310	222	108	34	9.1	11	24
21	41	44	e180	e52	e190	255	491	97	32	8.9	11	28
22	37	e46	e150	e40	e160	224	379	86	59	11	e14	37
23	33	e60	e120	e34	e150	200	304	78	168	8.9	e25	28
24	41	e43	e100	e30	e140	179	237	71	75	9.4	e13	33
25	42	e41	e85	e26	e130	161	181	67	44	52	17	30
26	48	e47	e74	e24	e120	145	149	80	32	37	16	e26
27	e52	58	e64	e22	e120	135	131	110	27	19	15	e23
28	e61	73	e56	e20	e110	130	116	142	22	13	12	e17
29	e56	83	e51	e18	---	130	100	98	53	11	14	15
30	e51	74	e47	e180	---	127	96	78	38	8.9	11	14
31	e49	---	e42	e900	---	125	---	66	---	8.0	9.8	---
TOTAL	3539	1853	11391	2947	13204	6130	13135	2600	1780	753.4	562.2	498.2
MEAN	114	61.8	367	95.1	472	198	438	83.9	59.3	24.3	18.1	16.6
MAX	980	141	3480	900	3000	522	2710	142	168	118	57	37
MIN	33	41	42	18	96	96	96	54	22	8.0	6.6	6.0
CFSM	.31	.17	.99	.26	1.27	.53	1.18	.23	.16	.07	.05	.04
IN.	.35	.19	1.14	.30	1.32	.61	1.32	.26	.18	.08	.06	.05

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2001, BY WATER YEAR (WY)

MEAN	56.0	166	344	465	541	680	574	311	240	179	102	75.9
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 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1951 - 2001	
ANNUAL TOTAL	128952		58392.8			
ANNUAL MEAN	352		160		310	
HIGHEST ANNUAL MEAN					530	1997
LOWEST ANNUAL MEAN					145	1953
HIGHEST DAILY MEAN	7080	Apr 8	3480	Dec 17	31400	Jul 5 1969
LOWEST DAILY MEAN	14	Jul 24	6.0	Sep 7	3.0	Sep 10 1955
ANNUAL SEVEN-DAY MINIMUM	26	Jul 22	7.1	Sep 3	3.4	Sep 16 1955
MAXIMUM PEAK FLOW			5850	Apr 6a	49600	Jul 5 1969
MAXIMUM PEAK STAGE			16.27	Apr 6	31.10	Jul 5 1969
INSTANTANEOUS LOW FLOW			6.0	Sep 7	2.2	Sep 10 1955
ANNUAL RUNOFF (CFSM)	.95		.43		.84	
ANNUAL RUNOFF (INCHES)	12.93		5.86		11.35	
10 PERCENT EXCEEDS	955		330		703	
50 PERCENT EXCEEDS	114		61		84	
90 PERCENT EXCEEDS	44		13		15	

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

04199155 OLD WOMAN'S 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.
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 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.46	.96	1.1	e1.6	29	e4.3	e3.1	3.9	2.0	1.7	.00	.00
2	.40	.90	1.1	e1.5	e12	e4.0	e3.0	3.9	2.7	1.3	.00	.00
3	.33	.98	.93	e1.4	e8.4	e3.7	e2.9	3.3	2.8	.88	3.4	.00
4	.51	.94	.84	e1.4	e7.0	e3.4	e2.8	3.0	2.2	.65	2.6	.00
5	4.4	.92	e.72	e1.3	e6.0	e3.2	2.8	2.7	1.6	.47	.85	.00
6	12	.85	e.70	e1.2	e5.3	e3.1	237	2.5	2.7	.28	.38	.00
7	5.8	1.2	e.68	e1.1	e5.0	e3.0	120	2.4	9.0	.10	.09	.00
8	3.6	1.1	e.63	e1.1	e8.0	e2.9	34	3.3	4.1	.02	.00	.00
9	4.8	1.3	e.60	e1.0	119	e2.8	18	2.9	2.6	.00	.04	.00
10	3.2	1.5	e.60	e1.0	291	e2.7	16	2.3	1.9	.00	.37	.00
11	1.9	1.3	4.6	e.97	e30	e2.7	18	1.8	1.5	.00	.17	.00
12	1.3	1.2	58	e.94	e20	e6.0	18	2.2	1.3	.00	.06	.00
13	1.1	1.2	e8.0	e.90	e16	53	11	2.1	1.2	.00	.03	.00
14	.98	1.1	e2.7	e1.6	79	24	8.1	1.6	.97	.00	.00	.00
15	1.1	.91	e2.0	20	200	7.5	15	2.1	.81	.00	.00	.07
16	1.2	.89	59	77	69	13	83	4.7	.81	.00	.00	.00
17	1.4	.93	170	29	30	45	31	7.3	.59	.00	.00	.00
18	1.4	.87	e20	16	e12	30	18	5.1	.41	.00	.00	.00
19	1.3	.81	e10	e9.0	e9.0	51	12	4.2	.34	.00	.00	.00
20	1.3	.81	e6.8	e6.0	e6.0	20	13	2.8	.39	.00	.00	.44
21	1.2	.79	e5.0	e4.3	e5.0	12	21	2.6	.91	.00	.00	.67
22	1.2	.73	e4.0	e3.8	e4.2	9.1	15	2.7	2.3	.00	.00	1.0
23	1.2	.67	e3.1	e3.4	e3.7	7.3	12	2.5	1.2	.00	.00	.32
24	1.4	.68	e2.8	e3.0	e3.2	5.9	9.0	2.1	.87	.00	.00	.69
25	1.5	.80	e2.7	e2.7	e5.8	4.8	6.7	2.0	.57	.43	.00	5.2
26	1.4	1.3	e2.5	e2.5	5.6	4.3	5.9	2.5	.37	.90	.00	2.6
27	1.4	1.4	e2.2	e2.3	5.0	4.0	5.4	3.2	.24	.19	.00	1.8
28	1.3	1.3	e2.0	e2.1	4.7	3.7	4.5	2.8	.20	.00	.00	1.2
29	1.2	1.3	e1.9	e2.0	---	e3.4	4.1	3.0	.08	.00	.00	.92
30	1.1	1.3	e1.8	68	---	e3.3	4.0	2.3	.08	.00	.00	.63
31	.99	---	e1.7	86	---	e3.2	---	1.6	---	.00	.00	---
TOTAL	62.37	30.94	378.70	354.11	998.9	346.3	754.3	91.4	46.74	6.92	7.99	15.54
MEAN	2.01	1.03	12.2	11.4	35.7	11.2	25.1	2.95	1.56	.22	.26	.52
MAX	12	1.5	170	86	291	53	237	7.3	9.0	1.7	3.4	5.2
MIN	.33	.67	.60	.90	3.2	2.7	2.8	1.6	.08	.00	.00	.00
CFSM	.09	.05	.55	.52	1.61	.51	1.14	.13	.07	.01	.01	.02
IN.	.10	.05	.64	.60	1.68	.58	1.27	.15	.08	.01	.01	.03

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2001, BY WATER YEAR (WY)

MEAN	3.74	11.8	21.7	31.9	33.5	31.7	41.1	17.7	16.6	5.96	6.01	5.62
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	.001	.31	.70	8.03	7.51	11.2	18.4	2.20	.17	.010	.000	.000
(WY)	1995	1992	1992	1988	1999	2001	1988	1988	1988	1991	1991	1991

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1988 - 2001	
ANNUAL TOTAL	6625.17		3094.21			
ANNUAL MEAN	18.1		8.48		18.8	
HIGHEST ANNUAL MEAN					34.1	1997
LOWEST ANNUAL MEAN					8.48	2001
HIGHEST DAILY MEAN	512	Apr 8	291	Feb 10	838	Jan 8 1998
LOWEST DAILY MEAN	.25	Sep 20	.00	Jul 9	.00	Jun 15 1988
ANNUAL SEVEN-DAY MINIMUM	.37	Aug 28	.00	Jul 9	.00	Jun 15 1988
MAXIMUM PEAK FLOW			650	Apr 6a	1940	Feb 27 1997
MAXIMUM PEAK STAGE			8.59	Apr 6	11.92	Jan 21 1999
INSTANTANEOUS LOW FLOW			.00	Jun 29	.00	Sep 9 1991
ANNUAL RUNOFF (CFSM)	.82		.38		.85	
ANNUAL RUNOFF (INCHES)	11.15		5.21		11.58	
10 PERCENT EXCEEDS	33		16		39	
50 PERCENT EXCEEDS	4.0		1.6		4.0	
90 PERCENT EXCEEDS	.71		.00		.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
DRAINAGE AREA.—262 mi^2.
PERIOD OF RECORD.—March 1950 to September 1981, November 1, 2000 to September 30, 2001
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 August 3, 1953, nonrecording gage at site 40 ft upstream at same datum.
REMARKS.—Records good except those for winter period and for discharges greater than 1,000 ft^3/s, which are fair. Water-quality data collected at this site.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	e17	76	e64	e900	e74	e55	55	40	44	3.3	2.7
2	---	16	95	e60	e760	e72	e58	51	67	52	3.1	2.7
3	---	17	e80	e56	e500	e70	60	48	187	35	6.6	2.7
4	---	16	e60	e52	e290	e66	59	42	186	48	118	2.6
5	---	17	e40	e50	e210	e64	50	38	108	28	34	2.3
6	---	19	e36	e66	e180	e62	938	33	82	16	16	1.9
7	---	21	e34	e50	e140	e60	2440	31	196	12	11	1.8
8	---	20	e32	e45	e120	e60	996	35	218	11	7.5	1.7
9	---	21	e31	e41	e800	e64	421	39	131	9.5	5.8	e2.0
10	---	55	e30	e37	1930	e72	287	36	89	9.0	7.4	e2.9
11	---	166	e30	e34	886	e100	248	31	75	8.4	5.3	2.2
12	---	121	e200	e32	341	e160	297	44	69	6.7	6.0	2.2
13	---	81	e400	e30	237	e500	305	63	61	5.2	7.0	2.1
14	---	57	e290	e28	290	e370	193	68	40	5.0	6.1	3.4
15	---	44	e1500	e27	1460	e270	156	52	24	4.4	4.5	3.3
16	---	37	e370	e200	854	e200	426	45	25	4.2	3.9	2.5
17	---	32	e1300	e400	273	419	459	102	26	3.6	3.9	2.5
18	---	29	e900	e280	e140	433	285	84	25	3.4	4.1	2.3
19	---	25	e400	e190	e120	343	212	61	27	3.4	4.7	2.1
20	---	23	e240	e130	e110	e270	174	61	28	3.1	4.1	2.7
21	---	24	e190	e88	e105	e220	294	51	25	2.9	3.7	3.3
22	---	27	e170	e64	e100	158	363	45	55	2.8	3.4	7.9
23	---	22	e150	e52	e95	129	274	44	200	2.8	3.8	5.5
24	---	23	e130	e40	e90	110	215	112	112	2.9	3.8	5.7
25	---	20	e120	e34	e86	93	151	84	58	2.8	3.9	43
26	---	20	e110	e30	e84	83	116	76	39	15	4.1	e27
27	---	24	e96	e27	e80	75	98	87	28	12	4.4	e16
28	---	32	e86	e24	e76	66	85	116	23	7.1	3.8	e10
29	---	49	e78	e22	---	60	72	93	20	4.9	3.7	6.9
30	---	50	e74	e20	---	56	63	75	16	4.2	3.1	5.6
31	---	---	e68	e1000	---	e55	---	47	---	3.9	2.8	---
TOTAL	---	1125	7416	3273	11257	4834	9850	1849	2280	373.2	302.8	179.5
MEAN	---	37.5	239	106	402	156	328	59.6	76.0	12.0	9.77	5.98
MAX	---	166	1500	1000	1930	500	2440	116	218	52	118	43
MIN	---	16	30	20	76	55	50	31	16	2.8	2.8	1.7
CFSM	---	.14	.91	.40	1.53	.60	1.25	.23	.29	.05	.04	.02
IN.	---	.16	1.05	.46	1.60	.69	1.40	.26	.32	.05	.04	.03

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 2001, BY WATER YEAR (WY)

MEAN	29.9	116	319	369	471	733	457	245	120	133	41.3	40.0
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	.41	1.60	1.41	17.3	10.8	96.3	68.3	32.7	11.1	2.56	1.54	.000
(WY)	1964	1964	1964	1964	1964	1953	1971	1976	1963	1963	1952	1953

SUMMARY STATISTICS	FOR 2001 WATER YEAR		WATER YEARS 1950 - 2001	
ANNUAL MEAN			259	
HIGHEST ANNUAL MEAN			864	1978
LOWEST ANNUAL MEAN			102	1953
HIGHEST DAILY MEAN	2440	Apr 7	22900	Dec 15 1977
LOWEST DAILY MEAN	1.7	Sep 8	.00	Aug 27 1953
ANNUAL SEVEN-DAY MINIMUM	2.1	Sep 6	.00	Aug 27 1953
MAXIMUM PEAK FLOW	3290	Apr 7a	40800	Jul 6 1969
MAXIMUM PEAK STAGE	10.80	Jan 31b	17.14	Jul 6 1969
INSTANTANEOUS LOW FLOW	1.5	Sep 8	.00	Aug 27 1953
ANNUAL RUNOFF (CFSM)			.99	
ANNUAL RUNOFF (INCHES)			13.43	
10 PERCENT EXCEEDS	290		580	
50 PERCENT EXCEEDS	50		54	
90 PERCENT EXCEEDS	3.4		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 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	27	145	e96	1430	106	108	66	123	60	9.0	10
2	19	25	156	e92	718	100	100	62	186	75	8.4	8.2
3	17	27	146	e90	393	94	93	62	347	36	31	6.9
4	31	24	99	e88	283	93	86	65	276	33	21	6.4
5	76	22	79	e90	242	90	80	62	177	27	26	5.3
6	158	22	57	e94	244	90	677	54	131	18	24	4.7
7	258	27	55	e98	254	86	3900	48	255	13	16	5.0
8	212	23	50	e100	318	83	1390	65	270	12	12	6.6
9	227	28	41	e100	1030	84	504	61	152	11	11	8.0
10	180	57	37	e96	2430	85	339	53	108	9.8	11	12
11	126	132	65	e90	1480	108	300	50	85	8.3	12	9.5
12	92	117	334	e86	518	184	296	104	67	9.9	24	8.4
13	63	89	468	e82	337	549	311	102	56	8.9	21	11
14	48	78	325	e80	392	1210	228	92	45	8.1	14	22
15	35	57	216	e90	1850	578	198	87	38	6.9	10	16
16	29	47	330	e160	1340	373	403	77	53	6.3	11	8.4
17	28	40	3190	e450	654	883	695	75	47	5.7	12	5.4
18	23	34	3200	e230	413	849	417	88	35	6.2	11	4.4
19	23	29	1040	e175	240	552	278	88	29	6.0	12	5.8
20	21	26	392	e125	212	372	232	81	41	6.4	11	15
21	23	25	e300	e100	183	278	349	129	56	9.4	16	21
22	22	23	e310	e85	152	225	454	866	723	11	12	20
23	21	20	e340	e80	135	182	333	1130	502	8.8	18	11
24	27	19	e430	e73	116	154	244	543	182	8.4	11	17
25	24	23	e360	e68	115	134	181	297	96	14	10	69
26	30	29	e240	e64	114	119	139	209	62	45	16	44
27	62	41	e170	e64	119	106	114	207	45	31	12	40
28	66	49	e140	e66	115	101	100	206	34	18	10	33
29	49	50	e120	e75	---	103	83	192	28	14	10	19
30	37	88	e110	e200	---	105	73	141	27	12	11	14
31	31	---	e105	1520	---	101	---	104	---	10	12	---
TOTAL	2080	1298	13050	4907	15827	8177	12705	5466	4276	549.1	445.4	467.0
MEAN	67.1	43.3	421	158	565	264	424	176	143	17.7	14.4	15.6
MAX	258	132	3200	1520	2430	1210	3900	1130	723	75	31	69
MIN	17	19	37	64	114	83	73	48	27	5.7	8.4	4.4
CFSM	.17	.11	1.06	.40	1.43	.67	1.07	.45	.36	.04	.04	.04
IN.	.20	.12	1.23	.46	1.49	.77	1.19	.51	.40	.05	.04	.04

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2001, BY WATER YEAR (WY)

MEAN	62.2	222	392	482	597	772	628	353	213	138	74.0	76.2
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 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1945 - 2001	
ANNUAL TOTAL	115809		69247.5			
ANNUAL MEAN	316		190		333	
HIGHEST ANNUAL MEAN					534	1973
LOWEST ANNUAL MEAN					130	1953
HIGHEST DAILY MEAN	6230	Apr 9	3900	Apr 7	24900	Jan 22 1959
LOWEST DAILY MEAN	13	Sep 3	4.4	Sep 18	.60	Oct 5 1944
ANNUAL SEVEN-DAY MINIMUM	15	Sep 3	6.1	Sep 3	1.4	Oct 1 1944
MAXIMUM PEAK FLOW			4420	Apr 7a	51700	Jul 6 1969
MAXIMUM PEAK STAGE			9.70	Apr 7	26.40	Jul 6 1969
INSTANTANEOUS LOW FLOW			2.2	Sep 19	.00	Oct 10 1956
ANNUAL RUNOFF (CFSM)	.80		.48		.84	
ANNUAL RUNOFF (INCHES)	10.88		6.51		11.41	
10 PERCENT EXCEEDS	702		397		805	
50 PERCENT EXCEEDS	108		78		74	
90 PERCENT EXCEEDS	24		11		10	

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 3.0 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 649.90 ft above sea level (Cuyahoga County benchmark). Prior to Sept. 30, 1935, nonrecording gage at same site and datum.
REMARKS.—Records good 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 March 1913 reached a stage of 20.9 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	42	466	e115	821	80	101	58	190	79	16	21
2	30	40	281	e110	418	79	97	81	322	87	15	16
3	29	45	177	e110	226	77	84	80	458	58	152	13
4	99	45	124	e105	194	76	71	54	235	38	58	14
5	267	43	99	e105	212	75	60	43	148	34	42	14
6	579	41	94	e105	258	81	1660	41	130	28	26	13
7	309	49	125	e110	254	83	2110	39	311	23	21	41
8	475	57	136	e110	269	92	558	90	208	26	18	58
9	830	59	126	e110	1250	101	299	111	123	24	17	33
10	341	162	130	e110	2010	98	235	72	86	25	23	19
11	164	203	148	e105	586	224	218	46	129	21	20	17
12	97	117	1110	e100	286	418	218	330	86	19	30	14
13	66	77	431	e98	226	1920	164	236	64	17	23	24
14	52	62	229	e240	509	1030	122	96	47	17	24	104
15	45	55	209	e700	1930	372	172	73	45	17	20	29
16	45	51	870	e500	646	369	774	89	140	17	16	28
17	57	40	5550	e300	405	854	515	82	56	17	16	20
18	58	37	1180	e200	231	469	310	62	42	17	17	16
19	56	37	460	e140	177	327	209	78	38	16	17	20
20	51	36	328	e120	168	238	239	78	116	26	23	53
21	46	42	e300	e110	149	190	467	454	218	30	58	43
22	45	56	e320	e95	124	161	310	3340	906	20	24	207
23	39	57	e400	e88	101	137	233	765	223	17	63	99
24	112	57	e340	e80	94	111	172	337	111	17	40	69
25	280	78	e260	e78	107	99	127	266	56	24	31	320
26	157	209	e210	e76	118	103	98	234	44	79	79	163
27	90	274	e170	e76	103	120	84	293	37	52	153	174
28	59	238	e155	e76	90	126	72	329	39	30	40	214
29	52	167	e140	e76	---	167	61	205	32	22	26	161
30	48	428	e130	e300	---	141	56	144	33	18	19	79
31	47	---	e120	2040	---	112	---	105	---	18	21	---
TOTAL	4659	2904	14818	6688	11962	8530	9896	8311	4673	933	1148	2096
MEAN	150	96.8	478	216	427	275	330	268	156	30.1	37.0	69.9
MAX	830	428	5550	2040	2010	1920	2110	3340	906	87	153	320
MIN	29	36	94	76	90	75	56	39	32	16	15	13
CFSM	.56	.36	1.79	.81	1.60	1.03	1.24	1.00	.58	.11	.14	.26
IN.	.65	.40	2.06	.93	1.67	1.19	1.38	1.16	.65	.13	.16	.29

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 2001, BY WATER YEAR (WY)

MEAN	95.2	220	345	413	470	585	508	296	178	114	77.2	103
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	.90	.94
(WY)	1934	1964	1964	1945	1934	1969	1946	1934	1933	1954	1933	1933

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1924 - 2001	
ANNUAL TOTAL	113390		76618			
ANNUAL MEAN	310		210		283	
HIGHEST ANNUAL MEAN					484	1997
LOWEST ANNUAL MEAN					79.5	1934
HIGHEST DAILY MEAN	6080	Apr 8	5550	Dec 17	14300	Jan 22 1959
LOWEST DAILY MEAN	23	Sep 3	13	Sep 3	.20	Sep 2 1932
ANNUAL SEVEN-DAY MINIMUM	25	Aug 29	16	Aug 31	.27	Aug 21 1933
MAXIMUM PEAK FLOW			6330	Dec 17a	21400	Jan 22 1959
MAXIMUM PEAK STAGE			5.66	Dec 17	18.60	Jun 29 1924
INSTANTANEOUS LOW FLOW			12	Sep 3	.20	Sep 2 1932
ANNUAL RUNOFF (CFSM)	1.16		.79		1.06	
ANNUAL RUNOFF (INCHES)	15.80		10.67		14.38	
10 PERCENT EXCEEDS	545		422		650	
50 PERCENT EXCEEDS	126		98		84	
90 PERCENT EXCEEDS	37		21		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 and Aug. 26, 1927, to Dec. 31, 1935, water-stage recorder, at site 2.8 mi downstream at different datum. Oct. 20, 1944, to 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 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	96	71	302	e145	375	122	218	91	89	131	72	43
2	92	70	263	e145	432	113	213	90	94	135	72	42
3	90	71	224	e140	419	110	194	88	104	129	80	36
4	91	78	186	e140	412	108	168	80	104	122	100	33
5	105	76	145	e135	360	107	145	73	93	129	98	35
6	132	73	112	e135	309	109	166	66	83	129	87	41
7	149	72	96	e135	268	96	310	61	80	124	81	42
8	182	73	93	e130	258	100	377	62	76	126	77	41
9	257	74	91	e130	350	106	401	69	68	128	75	41
10	309	86	91	193	563	107	383	69	62	124	73	41
11	324	104	90	162	860	112	337	66	69	120	75	50
12	303	105	170	163	987	128	283	93	102	95	76	60
13	253	98	228	166	777	240	233	124	95	72	75	64
14	206	93	262	167	635	387	177	118	77	63	73	71
15	167	89	313	175	605	495	147	99	64	60	72	73
16	141	84	333	213	574	515	193	87	57	59	63	69
17	127	82	604	234	543	489	247	79	55	58	57	67
18	118	75	718	242	471	430	271	75	52	57	55	75
19	112	67	862	234	393	364	262	76	49	56	56	80
20	107	65	785	217	336	307	226	77	48	56	59	85
21	104	63	675	e170	282	264	209	71	48	56	60	87
22	103	62	589	e160	207	233	205	83	52	55	60	92
23	100	67	514	e135	160	210	197	115	64	54	59	93
24	94	68	348	e120	132	190	200	118	71	54	59	90
25	91	71	286	e110	125	168	191	106	74	54	58	91
26	88	117	e230	e110	140	149	168	105	70	62	57	96
27	85	179	e180	e105	140	141	145	109	68	72	67	102
28	84	247	e170	e105	133	141	124	111	86	74	54	107
29	80	320	e160	e100	---	163	109	104	95	74	39	108
30	75	328	e155	e110	---	185	97	100	107	74	34	101
31	72	---	e150	297	---	208	---	95	---	73	34	---
TOTAL	4337	3128	9425	4923	11246	6597	6596	2760	2256	2675	2057	2056
MEAN	140	104	304	159	402	213	220	89.0	75.2	86.3	66.4	68.5
MAX	324	328	862	297	987	515	401	124	107	135	100	108
MIN	72	62	90	100	125	96	97	61	48	54	34	33
CFSM	.93	.69	2.01	1.05	2.66	1.41	1.46	.59	.50	.57	.44	.45
IN.	1.07	.77	2.32	1.21	2.77	1.63	1.62	.68	.56	.66	.51	.51

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2001, BY WATER YEAR (WY)

MEAN	110	197	273	273	351	437	350	199	133	98.2	94.4	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 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1961 - 2001	
ANNUAL TOTAL	71987		58056			
ANNUAL MEAN	197		159		218	
HIGHEST ANNUAL MEAN					318	1997
LOWEST ANNUAL MEAN					125	1999
HIGHEST DAILY MEAN	1130	Feb 26	987	Feb 12	3250	Feb 18 1976
LOWEST DAILY MEAN	48	Jul 9	33	Sep 4	12	Sep 19 1967
ANNUAL SEVEN-DAY MINIMUM	52	Feb 1	37	Aug 30	13	Sep 16 1967
MAXIMUM PEAK FLOW			1070	Feb 12	3320	Feb 18 1976
MAXIMUM PEAK STAGE			4.39	Feb 12	7.67	Feb 18 1976
INSTANTANEOUS LOW FLOW			32	Sep 4	12	Sep 19 1967
ANNUAL RUNOFF (CFSM)	1.30		1.05		1.44	
ANNUAL RUNOFF (INCHES)	17.73		14.30		19.61	
10 PERCENT EXCEEDS	424		330		507	
50 PERCENT EXCEEDS	128		105		126	
90 PERCENT EXCEEDS	68		59		44	

e Estimated.

04203900 CUYAHOGA RIVER AT CUYAHOGA FALLS, OHIO

LOCATION.—Latitude 41°08′13″, longitude 81°28′54″, Summit County, Hydrologic Unit 04110002, on right bank, concrete retaining wall adjacent to restaurant parking lot 40 ft east of River Parkway, 50 ft upstream from abandoned hydroeletric dam in Cuyahoga Falls, Ohio.
DRAINAGE AREA.—333 mi^2.
PERIOD OF RECORD.—July 26, 1999, to current year (station discontinued).
GAGE.—Reference point, no observations during year, entire record estimated. Altitude of gage is 995 ft, from topographic map.
REMARKS.—Records poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e96	e159	e369	e246	e738	e203	e218	e162	e238	e176	e72	e165
2	e124	e150	e324	e252	e822	e189	e291	e152	e262	e135	e65	e105
3	e129	e130	e274	e222	e784	e172	e376	e147	e259	e98	e135	e83
4	e91	e108	e239	e216	e698	e166	e359	e150	e215	e90	e119	e73
5	e105	e95	e201	e228	e691	e166	e321	e141	e204	e96	e74	e79
6	e132	e90	e175	e228	e633	e187	e557	e136	e201	e88	e59	e71
7	e149	e99	e147	e216	e549	e184	e452	e136	e211	e89	e56	e63
8	e182	e98	e129	e228	e546	e184	e424	e146	e172	e150	e61	e60
9	e257	e112	e121	e234	e595	e184	e656	e159	e151	e118	e159	e59
10	e357	e122	e121	e216	e926	e192	e732	e148	e152	e101	e222	e63
11	e352	e114	e162	e224	e1130	e205	e635	e148	e166	e105	e115	e60
12	e318	e115	e248	e221	e1160	e220	e534	e201	e102	e97	e119	e60
13	e296	e116	e295	e219	e1250	e368	e447	e197	e116	e93	e103	e68
14	e256	e116	e330	e219	e1330	e616	e381	e186	e110	e93	e83	e151
15	e167	e116	e528	e249	e1380	e729	e406	e176	e113	e86	e73	e77
16	e167	e110	e685	e266	e1260	e777	e519	e180	e115	e86	e72	e68
17	e163	e105	e1410	e322	e1110	e825	e539	e172	e101	e58	e68	e69
18	e141	e102	e1580	e351	e972	e834	e483	e165	e95	e80	e72	e76
19	e137	e102	e1210	e352	e850	e725	e447	e150	e92	e86	e111	e83
20	e133	e99	e1040	e332	e706	e592	e493	e142	e92	e71	e90	e153
21	e124	e98	e787	e302	e592	e512	e508	e173	e110	e59	e71	e157
22	e112	e97	e669	e282	e480	e452	e423	e242	e128	e54	e56	e193
23	e106	e94	e546	e271	e377	e410	e363	e289	e110	e57	e66	e103
24	e243	e90	e516	e255	e275	e372	e293	e257	e95	e45	e51	e108
25	e261	e115	e452	e227	e250	e339	e251	e238	e83	e110	e45	e141
26	e172	e144	e373	e209	e235	e283	e228	e235	e82	e171	e66	e104
27	e226	e218	e340	e194	e225	e241	e212	e285	e114	e97	e95	e114
28	e262	e235	e268	e187	e214	e229	e194	e255	e114	e72	e77	e172
29	e248	e346	e252	e200	---	e223	e186	e221	e103	e63	e68	e125
30	e207	e393	e252	e283	---	e235	e173	e192	e113	e65	e59	e98
31	e200	---	e252	e663	---	e250	---	e195	---	e63	e148	---
TOTAL	5913	4088	14295	8114	20778	11264	12101	5776	4219	2852	2730	3001
MEAN	191	136	461	262	742	363	403	186	141	92.0	88.1	100
MAX	357	393	1580	663	1380	834	732	289	262	176	222	193
MIN	91	90	121	187	214	166	173	136	82	45	45	59

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2001, BY WATER YEAR (WY)

MEAN	145	201	347	317	595	310	510	333	295	154	115	120
MAX	191	265	461	372	742	363	617	480	449	217	178	179
(WY)	2001	2000	2001	2000	2001	2001	2000	2000	2000	2000	2000	2000
MIN	99.1	136	233	262	454	256	403	186	141	92.0	77.9	80.5
(WY)	2000	2001	2000	2001	2000	2000	2001	2001	2001	2001	1999	1999

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1999 - 2001	
ANNUAL TOTAL	121376		95131			
ANNUAL MEAN	332		261		288	
HIGHEST ANNUAL MEAN					315	2000
LOWEST ANNUAL MEAN					261	2001
HIGHEST DAILY MEAN	1800	Apr 8	1580	Dec 18	1800	Apr 8 2000
LOWEST DAILY MEAN	72	Sep 8	45	Jul 24	24	Jul 27 1999
ANNUAL SEVEN-DAY MINIMUM	86	Sep 2	62	Sep 7	43	Aug 18 1999
10 PERCENT EXCEEDS	720		592		620	
50 PERCENT EXCEEDS	230		176		172	
90 PERCENT EXCEEDS	98		73		70	

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 good except for periods of estimated record, which are fair. Natural flow of stream affected by diversions, storage reservoirs, and power plants. At Lake Rockwell, 17.1 mi upstream from gage, an average of 64 ft^3/s was diverted 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. Water-quality data collected and published in project data, Microbial Water-Quality in Relation to Water-Contact Recreation, Cuyahoga Valley National Park, Ohio. Satellite telemeter at gage.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	157	206	e490	e290	849	276	323	205	249	211	64	182
2	161	195	457	e280	859	263	315	190	273	139	62	106
3	158	198	385	e270	824	250	497	183	277	100	161	83
4	149	189	320	e260	787	235	459	190	230	92	140	78
5	280	140	284	e255	735	229	320	174	213	100	80	86
6	435	106	244	e250	675	228	604	156	205	88	67	74
7	301	110	198	e250	618	232	459	157	232	92	61	67
8	253	115	173	e245	562	232	422	198	178	176	60	64
9	327	118	161	e240	644	219	708	186	151	124	284	61
10	386	169	143	e260	1120	214	782	169	157	106	255	65
11	378	141	153	269	1190	219	678	163	180	110	119	62
12	368	121	346	258	1190	230	587	273	147	97	136	59
13	344	120	322	260	1330	514	492	215	133	94	109	69
14	308	119	352	267	1370	751	397	187	126	92	90	173
15	262	117	362	307	1430	756	399	200	122	89	82	76
16	230	114	853	369	1380	785	592	207	144	88	76	69
17	211	112	2090	403	1220	884	570	194	111	77	78	72
18	192	115	1840	427	1060	873	528	185	102	89	75	75
19	175	116	1380	435	912	775	471	174	95	100	129	84
20	162	116	e1200	417	757	647	510	161	99	90	99	159
21	150	112	e900	370	657	558	518	212	130	62	92	161
22	133	109	e740	324	562	512	445	301	141	57	80	224
23	133	105	e640	300	473	464	420	295	117	82	91	98
24	283	98	e560	272	386	404	378	270	100	79	84	107
25	292	132	e500	259	327	344	337	265	91	135	78	168
26	188	221	e440	248	301	315	312	242	86	209	85	e103
27	291	239	e400	228	291	292	296	306	96	104	112	e120
28	313	276	e370	223	288	262	268	274	99	76	86	188
29	281	325	e340	211	---	249	251	232	90	68	82	129
30	274	e460	e325	387	---	257	226	215	111	71	66	95
31	261	---	e305	713	---	291	---	197	---	66	181	---
TOTAL	7836	4814	17273	9547	22797	12760	13564	6576	4485	3163	3264	3157
MEAN	253	160	557	308	814	412	452	212	150	102	105	105
MAX	435	460	2090	713	1430	884	782	306	277	211	284	224
MIN	133	98	143	211	288	214	226	156	86	57	60	59
CFSM	.63	.40	1.38	.76	2.02	1.02	1.12	.53	.37	.25	.26	.26
IN.	.72	.44	1.59	.88	2.10	1.17	1.25	.61	.41	.29	.30	.29

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2001, BY WATER YEAR (WY)

MEAN	218	324	470	570	662	861	736	468	314	229	182	207
MAX	1205	1307	1516	1807	1592	1416	1520	1253	1371	676	772	1150
(WY)	1927	1986	1928	1952	1976	1927	1940	1996	1989	1976	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 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1922 - 2001	
ANNUAL TOTAL	148006		109236			
ANNUAL MEAN	404		299		436	
HIGHEST ANNUAL MEAN					669	1927
LOWEST ANNUAL MEAN					181	1934
HIGHEST DAILY MEAN	2090	Dec 17	2090	Dec 17	6040	Jan 22 1959
LOWEST DAILY MEAN	98	Nov 24	57	Jul 22	24	Sep 24 1964
ANNUAL SEVEN-DAY MINIMUM	110	Nov 18	64	Sep 7	40	Oct 30 1944
MAXIMUM PEAK FLOW			2130	Dec 17	6500	Jan 21 1959
MAXIMUM PEAK STAGE			6.59	Dec 17	13.29	Sep 14 1979
INSTANTANEOUS LOW FLOW			50	Sep 13	26	Sep 2 1945
ANNUAL RUNOFF (CFSM)	1.00		.74		1.08	
ANNUAL RUNOFF (INCHES)	13.63		10.06		14.66	
10 PERCENT EXCEEDS	874		645		1020	
50 PERCENT EXCEEDS	279		221		265	
90 PERCENT EXCEEDS	124		83		78	

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 1, 2000, to September 30, 2001.
GAGE.—Water-stage recorder. Datum of gage is 1027 ft above sea level, from topographic map.
REMARKS.—Records fair except for discharges between 0.0 ft^3/s and 0.2 ft^3/s, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.01	1.6	.13	4.4	.26	.28	.14	.12	.01	.00	.01
2	.02	.01	1.0	.14	2.4	.26	.28	.14	.20	.00	.00	.00
3	.01	.01	.50	.09	1.4	.26	.26	.13	.20	.00	.10	.00
4	.02	.01	.27	.09	.89	.25	.22	.11	.06	.00	.00	.00
5	.32	.01	.23	.12	1.1	.28	.19	.11	.04	.00	.00	.00
6	.89	.01	.15	.14	1.4	.21	9.3	.11	.10	.00	.00	.00
7	.52	.01	.10	.16	1.2	.27	8.5	.09	.20	.00	.00	.00
8	.32	.01	.11	.19	2.1	.32	3.1	.09	.07	.01	.00	.00
9	1.1	.03	.12	.21	8.3	.29	1.4	.10	.02	.00	.00	.00
10	.82	.15	.11	.21	10	.31	.92	.06	.01	.00	.00	.00
11	.37	.13	.41	.20	2.9	.68	.81	.06	.03	.00	.00	.00
12	.22	.10	3.4	.21	1.4	1.8	.69	.23	.01	.00	.00	.00
13	.14	.08	1.8	.25	1.2	13	.39	.12	.01	.00	.00	.03
14	.09	.06	.63	.27	4.2	5.0	.27	.06	.01	.00	.00	.02
15	.06	.06	.47	.53	9.0	2.0	.88	.08	.01	.00	.00	.00
16	.06	.06	5.0	1.5	3.6	2.0	3.3	.11	.01	.00	.00	.00
17	.06	.05	26	1.9	2.1	3.0	2.3	.08	.01	.00	.00	.00
18	.06	.03	4.7	1.7	1.0	1.9	1.3	.06	.00	.00	.00	.00
19	.04	.02	1.6	1.3	.62	1.3	.76	.05	.01	.00	.02	.00
20	.03	.02	.97	.94	.68	.97	1.3	.04	.01	.00	.00	.01
21	.02	.02	.69	.58	.67	1.1	2.0	.10	.01	.00	.01	.07
22	.02	.02	.49	.38	.34	1.6	1.2	.39	.01	.00	.03	.02
23	.01	.01	.31	.29	.25	1.0	.85	.45	.01	.00	.06	.00
24	.05	.01	.24	.28	.22	.74	.57	.29	.01	.00	.00	.04
25	.07	.15	.19	.25	.45	.54	.39	.21	.00	.07	.00	.08
26	.06	.85	.14	.22	.61	.42	.31	.16	.00	.01	.03	.02
27	.05	1.0	.14	.22	.45	.39	.27	.25	.00	.00	.01	.05
28	.04	.83	.14	.22	.35	.39	.23	.22	.00	.00	.00	.09
29	.02	.61	.14	.22	---	.37	.18	.15	.00	.00	.00	.01
30	.02	1.1	.14	4.8	---	.34	.16	.07	.01	.00	.00	.00
31	.02	---	.14	12	---	.31	---	.04	---	.00	.14	---
TOTAL	5.55	5.47	51.93	29.74	63.23	41.56	42.61	4.30	1.18	0.10	0.40	0.45
MEAN	.18	.18	1.68	.96	2.26	1.34	1.42	.14	.039	.003	.013	.015
MAX	1.1	1.1	26	12	10	13	9.3	.45	.20	.07	.14	.09
MIN	.01	.01	.10	.09	.22	.21	.16	.04	.00	.00	.00	.00
CFSM	.12	.13	1.16	.66	1.56	.92	.98	.10	.03	.00	.01	.01
IN.	.14	.14	1.33	.76	1.62	1.07	1.09	.11	.03	.00	.01	.01

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2001, BY WATER YEAR (WY)

MEAN	.18	.18	1.68	.96	2.26	1.34	1.42	.14	.039	.003	.24	.045
MAX	.18	.18	1.68	.96	2.26	1.34	1.42	.14	.039	.003	.46	.075
(WY)	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2000	2000
MIN	.18	.18	1.68	.96	2.26	1.34	1.42	.14	.039	.003	.013	.015
(WY)	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001

SUMMARY STATISTICS	FOR 2001 WATER YEAR		WATER YEARS 2000 - 2001	
ANNUAL TOTAL	246.52			
ANNUAL MEAN	.68		.68	
HIGHEST ANNUAL MEAN			.68	2001
LOWEST ANNUAL MEAN			.68	2001
HIGHEST DAILY MEAN	26	Dec 17	26	Dec 17 2000
LOWEST DAILY MEAN	.00	Jun 18	.00	Jun 18 2001
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 9	.00	Jul 9 2001
MAXIMUM PEAK FLOW	38	Dec 17a	38	Dec 17 2000
MAXIMUM PEAK STAGE	11.74	Dec 17	11.74	Dec 17 2000
INSTANTANEOUS LOW FLOW	.00	Jul 13	.00	Jul 13 2001
ANNUAL RUNOFF (CFSM)	.47		.47	
ANNUAL RUNOFF (INCHES)	6.32		6.33	
10 PERCENT EXCEEDS	1.4		1.3	
50 PERCENT EXCEEDS	.11		.10	
90 PERCENT EXCEEDS	.00		.00	

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

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 Maedowbrook Lake outlet structure, 650 ft south of intersection of Judson Road ad 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 1, 2000, to September 30, 2001.
GAGE.—Water-stage recorder. Datum of gage is 1003 ft above sea level, from topographic map.
REMARKS.—Records fair except for discharges less than 4.0 ft^3/s, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	.68	7.4	2.4	12	2.2	2.8	2.0	3.9	1.3	.18	4.5
2	2.6	1.3	5.0	2.4	8.5	2.2	2.9	2.2	5.6	1.0	.18	.51
3	2.9	1.8	2.7	2.4	6.1	2.2	2.7	2.0	5.2	.80	6.4	.27
4	4.4	1.5	2.1	2.5	4.5	2.4	2.4	2.0	2.3	.85	2.2	.24
5	16	1.2	2.0	3.1	5.4	2.8	2.5	1.8	1.4	.85	.70	.21
6	19	1.4	1.7	3.2	6.1	3.2	35	1.5	3.4	.71	.33	.24
7	4.5	2.4	1.6	3.2	5.4	2.8	29	1.7	6.4	.65	.25	.36
8	3.1	2.5	1.8	2.8	8.1	2.8	10	4.7	2.2	1.1	.30	.48
9	8.3	3.7	1.5	2.4	24	2.8	5.8	2.8	1.3	.88	1.9	.54
10	4.1	7.2	1.4	2.3	34	2.9	5.4	1.9	1.2	.78	1.7	.61
11	2.1	1.2	5.1	2.4	10	4.9	4.9	1.9	2.1	.65	.62	.55
12	1.4	.48	17	2.4	6.0	7.1	3.9	7.7	1.6	.51	.49	.56
13	1.4	.97	6.3	2.5	5.6	51	2.8	2.3	1.3	.44	.41	1.4
14	1.3	1.7	4.2	2.8	20	17	2.4	1.2	1.5	.42	.19	3.2
15	1.3	1.6	3.0	10	32	7.2	8.2	2.7	1.9	.41	.17	.35
16	1.4	1.0	44	9.5	14	10	17	2.1	2.3	.44	.22	.17
17	2.2	.91	80	6.4	9.5	12	9.0	1.4	1.5	.51	.27	.17
18	1.6	.80	13	5.5	5.8	7.3	5.4	1.2	1.3	.53	.26	.36
19	1.4	.76	6.4	5.1	4.6	5.3	3.8	1.1	1.4	.58	1.3	.88
20	1.3	.94	4.5	4.0	4.5	4.3	7.8	.94	1.4	.61	.74	1.6
21	1.1	1.3	3.6	2.7	4.1	6.1	8.1	4.3	1.7	.54	.54	3.4
22	.98	1.3	3.0	2.4	3.0	6.9	5.1	11	1.3	.56	.98	5.8
23	.98	1.2	2.5	2.3	2.8	4.9	4.0	6.7	1.2	.59	6.0	.77
24	3.4	1.2	2.3	2.4	2.7	4.0	3.1	2.6	1.1	.59	.78	3.0
25	3.1	4.1	2.3	2.2	3.2	3.4	2.3	2.3	.95	6.0	.50	7.6
26	1.3	7.6	2.3	2.0	3.1	3.0	2.1	2.1	1.0	3.6	1.7	1.9
27	.96	4.5	2.3	2.4	2.6	2.8	2.1	5.9	1.1	.46	3.2	4.4
28	1.3	1.7	2.4	2.0	2.4	2.7	1.8	2.8	1.2	.19	.65	6.0
29	1.3	1.6	2.4	2.2	---	2.8	1.5	1.7	1.4	.19	.20	1.7
30	.96	8.4	2.4	24	---	2.8	1.8	1.3	1.8	.19	.14	.81
31	.60	---	2.4	27	---	2.7	---	1.2	---	.19	6.1	---
TOTAL	98.58	66.94	238.6	148.9	250.0	194.5	195.6	87.04	61.95	27.12	39.60	52.58
MEAN	3.18	2.23	7.70	4.80	8.93	6.27	6.52	2.81	2.07	.87	1.28	1.75
MAX	19	8.4	80	27	34	51	35	11	6.4	6.0	6.4	7.6
MIN	.60	.48	1.4	2.0	2.4	2.2	1.5	.94	.95	.19	.14	.17
CFSM	.54	.38	1.31	.82	1.52	1.07	1.11	.48	.35	.15	.22	.30
IN.	.62	.42	1.51	.94	1.58	1.23	1.24	.55	.39	.17	.25	.33

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2001, BY WATER YEAR (WY)

MEAN	3.18	2.23	7.70	4.80	8.93	6.27	6.52	2.81	2.07	.87	3.52	2.79
MAX	3.18	2.23	7.70	4.80	8.93	6.27	6.52	2.81	2.07	.87	5.76	3.83
(WY)	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2000	2000
MIN	3.18	2.23	7.70	4.80	8.93	6.27	6.52	2.81	2.07	.87	1.28	1.75
(WY)	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001

SUMMARY STATISTICS	FOR 2001 WATER YEAR		WATER YEARS 2000 - 2001	
ANNUAL TOTAL	1461.41			
ANNUAL MEAN	4.00		4.00	
HIGHEST ANNUAL MEAN			4.00	2001
LOWEST ANNUAL MEAN			4.00	2001
HIGHEST DAILY MEAN	80	Dec 17	80	Dec 17 2000
LOWEST DAILY MEAN	.14	Aug 30	.14	Aug 30 2001
ANNUAL SEVEN-DAY MINIMUM	.23	Jul 27	.23	Jul 27 2001
MAXIMUM PEAK FLOW	151	Dec 17a	151	Dec 17 2000
MAXIMUM PEAK STAGE	11.45	Dec 17	11.45	Dec 17 2000
INSTANTANEOUS LOW FLOW	.12	Jul 28	.12	Jul 28 2001
ANNUAL RUNOFF (CFSM)	.68		.68	
ANNUAL RUNOFF (INCHES)	9.26		9.27	
10 PERCENT EXCEEDS	7.6		8.1	
50 PERCENT EXCEEDS	2.3		2.3	
90 PERCENT EXCEEDS	.51		.56	

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

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 Wyogo 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 1, 2000, to September 30, 2001.
GAGE.—Water-stage recorder. Datum of gage is 966 ft above sea level, from topographic map.
REMARKS.—Records fair except for estimated discharges and discharges less than 1.4 ft^3/s or greater than 40 ft^3/s, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	3.1	22	3.7	57	6.1	6.0	4.6	5.5	2.5	e.69	11
2	2.8	2.9	15	3.7	34	5.8	6.2	4.5	8.4	2.0	e.53	6.7
3	2.8	2.8	10	3.6	19	5.6	5.9	4.3	10	1.8	e13	3.6
4	4.8	2.8	7.0	3.6	13	5.6	5.5	4.1	8.3	1.8	e5.0	2.4
5	19	2.5	5.6	3.8	12	5.7	5.2	3.9	6.4	1.7	1.7	1.8
6	34	2.4	4.7	4.1	13	6.6	33	3.3	6.3	1.6	1.3	1.5
7	20	2.6	4.3	4.2	14	6.5	82	3.0	10	1.5	.99	1.4
8	9.5	2.8	4.3	4.3	16	6.3	68	4.2	8.6	1.6	.80	1.5
9	15	3.2	4.0	4.3	39	6.6	39	5.7	6.0	1.6	1.0	1.4
10	14	5.9	3.8	4.2	75	6.7	23	4.7	4.8	1.6	4.4	1.4
11	8.9	7.3	4.6	4.0	63	8.8	19	4.0	4.6	1.3	3.4	1.3
12	6.3	5.1	30	4.0	34	15	16	8.4	4.5	1.1	2.5	1.2
13	5.0	4.5	25	4.2	20	63	13	9.2	4.1	1.0	2.0	1.4
14	4.2	4.2	14	4.5	27	86	10	6.1	3.5	.93	1.4	4.1
15	3.8	3.6	9.2	7.4	64	59	12	5.1	3.0	e.83	1.1	3.6
16	3.4	3.3	27	20	60	37	33	5.7	3.2	e.49	1.1	2.6
17	3.8	3.0	147	18	39	38	33	5.6	3.0	e.17	1.2	1.9
18	4.2	2.8	130	14	22	32	22	5.0	2.6	e.10	1.1	1.7
19	4.3	2.7	73	12	15	22	15	4.5	2.4	e.14	1.5	1.7
20	4.2	2.7	36	9.8	12	16	15	4.0	2.3	e.18	2.1	2.2
21	4.0	2.3	19	7.7	11	15	25	4.1	2.5	e.18	2.3	2.6
22	4.0	2.0	13	6.2	8.8	17	20	14	2.5	e.19	2.1	7.2
23	4.0	2.0	9.6	5.3	7.1	15	16	19	2.5	e.19	9.0	5.7
24	8.1	2.0	7.1	4.9	6.2	12	12	13	2.0	e.17	12	4.3
25	8.5	3.0	5.6	4.6	6.3	9.7	9.4	9.5	1.7	e7.4	9.0	10
26	3.9	12	4.8	4.2	7.2	8.4	7.7	9.1	1.6	e7.6	4.1	9.5
27	3.1	15	4.3	4.4	7.2	7.4	6.5	12	1.6	e1.3	6.3	8.9
28	3.2	13	4.2	4.1	6.8	7.0	5.6	14	2.0	e.53	4.8	11
29	2.9	9.1	4.0	4.0	---	6.7	5.0	9.8	2.1	e.66	3.1	9.7
30	2.9	16	4.0	25	---	6.7	4.6	6.8	2.7	e.71	2.0	6.2
31	3.1	---	3.9	64	---	6.3	---	5.2	---	e.71	2.6	---
TOTAL	220.5	146.6	656.0	271.8	708.6	549.5	573.6	216.4	128.7	43.58	104.11	129.5
MEAN	7.11	4.89	21.2	8.77	25.3	17.7	19.1	6.98	4.29	1.41	3.36	4.32
MAX	34	16	147	64	75	86	82	19	10	7.6	13	11
MIN	2.8	2.0	3.8	3.6	6.2	5.6	4.6	3.0	1.6	.10	.53	1.2
CFSM	.41	.28	1.23	.51	1.47	1.03	1.11	.41	.25	.08	.20	.25
IN.	.48	.32	1.42	.59	1.53	1.19	1.24	.47	.28	.09	.23	.28

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2001, BY WATER YEAR (WY)

MEAN	7.11	4.89	21.2	8.77	25.3	17.7	19.1	6.98	4.29	1.41	7.05	5.64
MAX	7.11	4.89	21.2	8.77	25.3	17.7	19.1	6.98	4.29	1.41	10.7	6.97
(WY)	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2000	2000
MIN	7.11	4.89	21.2	8.77	25.3	17.7	19.1	6.98	4.29	1.41	3.36	4.32
(WY)	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001

SUMMARY STATISTICS	FOR 2001 WATER YEAR		WATER YEARS 2000 - 2001	
ANNUAL TOTAL	3748.89			
ANNUAL MEAN	10.3		10.3	
HIGHEST ANNUAL MEAN			10.3	2001
LOWEST ANNUAL MEAN			10.3	2001
HIGHEST DAILY MEAN	147	Dec 17	147	Dec 17 2000
LOWEST DAILY MEAN	.10	Jul 18	.10	Jul 18 2001
ANNUAL SEVEN-DAY MINIMUM	.16	Jul 17	.16	Jul 17 2001
MAXIMUM PEAK FLOW	164	Dec 17a	164	Dec 17 2000
MAXIMUM PEAK STAGE	13.32	Dec 17	13.32	Dec 17 2000
INSTANTANEOUS LOW FLOW	.10	Jul 18	.10	Jul 18 2001
ANNUAL RUNOFF (CFSM)	.60		.60	
ANNUAL RUNOFF (INCHES)	8.11		8.11	
10 PERCENT EXCEEDS	22		22	
50 PERCENT EXCEEDS	4.9		4.8	
90 PERCENT EXCEEDS	1.5		1.6	

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 1, 2000, to September 30, 2001.
GAGE.—Water-stage recorder. Datum 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 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.95	.40	2.5	.36	2.8	1.0	.73	.43	2.3	1.4	.29	1.2
2	.90	.36	1.5	.34	1.6	1.1	.78	.40	1.9	.66	.25	.09
3	.98	.43	.99	.33	.93	1.1	.63	.92	1.4	.45	7.6	.05
4	1.5	.37	.80	.36	.87	1.0	.56	.40	.49	.49	1.1	.05
5	9.8	.32	.80	.43	1.5	1.2	.52	.38	.44	.48	.47	.02
6	11	.31	.64	.51	1.6	1.3	23	.35	2.5	.38	.32	.01
7	1.0	.41	.68	.46	1.4	1.3	11	.30	1.9	.34	.21	.01
8	.89	.37	.83	.48	4.9	1.2	2.7	1.7	.54	.76	.17	.02
9	3.4	.46	.71	.41	10	1.2	1.6	.69	.44	.24	.80	.13
10	.84	2.4	.62	.39	15	1.4	2.8	.51	.40	.24	.59	.14
11	.58	.51	4.5	.38	2.1	2.9	2.0	.40	.98	.33	.20	.01
12	.47	.23	7.7	.44	1.3	4.0	1.3	3.0	.41	.33	.41	.01
13	.49	.18	.91	.48	1.1	28	.82	.52	.35	.28	.19	.59
14	.58	.18	.83	.66	11	5.4	.66	.40	.30	.25	.13	2.3
15	.75	.15	.64	5.0	11	2.9	6.6	1.1	.41	.25	.09	.03
16	.92	.15	38	3.2	4.2	7.0	6.8	.73	.69	.23	.08	.01
17	1.3	.14	45	1.4	2.0	5.1	2.7	.46	.44	.19	.14	.01
18	1.2	.14	9.9	.96	1.1	3.2	1.5	.41	.41	.15	.11	.01
19	1.1	.13	2.0	.92	.82	2.3	1.1	.40	.40	.18	1.4	.05
20	1.0	.23	1.2	.62	1.0	1.9	4.8	.40	.68	.21	.36	.65
21	1.1	.18	.92	.46	.86	3.1	2.3	3.3	1.6	.10	.49	1.9
22	1.2	.14	.73	.41	.93	2.1	1.7	4.9	.77	.15	.21	2.9
23	1.3	.12	.75	.44	.96	1.3	1.2	1.3	.55	.71	3.4	.05
24	2.9	.14	.55	.45	.91	1.0	.95	.66	.48	.31	.22	2.1
25	1.5	2.6	.44	.41	1.2	.87	.71	.79	.41	7.8	.11	6.7
26	.57	2.5	.41	.38	1.1	.84	.58	.67	.34	2.0	1.1	.66
27	.39	1.6	.42	.49	1.0	.79	.61	3.0	.71	.35	2.6	3.2
28	.46	.48	.41	.38	1.0	.78	.49	.67	1.3	.29	.97	3.6
29	.42	.65	.40	.52	---	.73	.45	.43	.48	.31	.23	.35
30	.40	5.3	.40	21	---	.71	.43	.37	3.0	.48	.07	.07
31	.40	---	.39	9.3	---	.70	---	.32	---	.40	3.0	---
TOTAL	50.29	21.58	126.57	52.37	84.18	87.42	82.02	30.31	27.02	20.74	27.31	26.92
MEAN	1.62	.72	4.08	1.69	3.01	2.82	2.73	.98	.90	.67	.88	.90
MAX	11	5.3	45	21	15	28	23	4.9	3.0	7.8	7.6	6.7
MIN	.39	.12	.39	.33	.82	.70	.43	.30	.30	.10	.07	.01
CFSM	.52	.23	1.31	.54	.97	.91	.88	.31	.29	.22	.28	.29
IN.	.60	.26	1.51	.63	1.01	1.05	.98	.36	.32	.25	.33	.32

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2001, BY WATER YEAR (WY)

MEAN	1.62	.72	4.08	1.69	3.01	2.82	2.73	.98	.90	.67	2.04	1.56
MAX	1.62	.72	4.08	1.69	3.01	2.82	2.73	.98	.90	.67	3.19	2.23
(WY)	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2000	2000
MIN	1.62	.72	4.08	1.69	3.01	2.82	2.73	.98	.90	.67	.88	.90
(WY)	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001

SUMMARY STATISTICS	FOR 2001 WATER YEAR		WATER YEARS 2000 - 2001	
ANNUAL TOTAL	636.73			
ANNUAL MEAN	1.74		1.74	
HIGHEST ANNUAL MEAN			1.74	2001
LOWEST ANNUAL MEAN			1.74	2001
HIGHEST DAILY MEAN	45	Dec 17	45	Dec 17 2000
LOWEST DAILY MEAN	.01	Sep 6	.01	Sep 6 2001
ANNUAL SEVEN-DAY MINIMUM	.04	Sep 2	.04	Sep 2 2001
MAXIMUM PEAK FLOW	117	Dec 17a	117	Dec 17 2000
MAXIMUM PEAK STAGE	13.35	Dec 17	13.35	Dec 17 2000
INSTANTANEOUS LOW FLOW	.01	Sep 16	.01	Sep 16 2001
ANNUAL RUNOFF (CFSM)	.56		.56	
ANNUAL RUNOFF (INCHES)	7.62		7.62	
10 PERCENT EXCEEDS	3.2		3.4	
50 PERCENT EXCEEDS	.66		.82	
90 PERCENT EXCEEDS	.16		.19	

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 Rier in city of Cuyahoga Falls, 6.08 mi west of Summit/Portage county line.
DRAINAGE AREA.—25.6 mi^2.
PERIOD OF RECORD.—October 1, 2000, to September 30, 2001.
GAGE.—Water-stage recorder. Datum of gage is 942 ft above sea level, from topographic map.
REMARKS.—Records fair except for periods of estimated record and discharges less than 2.0 ft^3/s, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3	5.0	31	6.4	76	8.9	8.6	6.1	15	7.3	3.7	e16
2	3.3	4.6	22	11	50	8.3	8.9	6.0	18	3.6	2.8	e9.6
3	3.2	5.1	15	14	27	8.3	8.3	6.4	18	2.8	24	e5.5
4	5.2	4.9	11	15	19	7.7	7.8	5.3	13	2.6	7.7	e4.0
5	34	4.9	8.5	13	18	8.6	7.1	4.8	9.8	2.3	2.8	e3.4
6	53	4.2	6.9	12	19	10	65	4.0	13	2.0	2.0	e3.0
7	26	4.7	6.3	10	20	11	102	3.7	18	1.7	2.1	e2.8
8	15	4.9	6.5	7.4	27	10	85	11	12	4.2	e1.6	e3.0
9	21	6.3	6.0	7.0	67	10	53	8.0	9.0	2.4	e1.8	e2.8
10	18	14	5.6	6.7	103	11	34	6.1	7.5	1.8	e6.8	e2.8
11	12	11	11	6.6	81	16	26	5.0	8.8	1.9	e5.3	e2.6
12	8.7	8.6	43	6.9	51	26	21	20	6.8	1.7	e4.1	e2.4
13	6.9	6.7	33	7.2	29	99	16	12	5.7	1.4	e3.6	e2.7
14	5.3	6.2	21	8.1	48	101	12	7.6	4.8	1.3	e2.7	e6.4
15	3.9	5.9	14	18	89	74	25	8.5	4.0	1.3	e2.1	e5.6
16	3.4	5.5	71	31	80	57	53	8.1	9.1	.93	e2.2	e4.2
17	5.1	5.2	181	27	55	52	50	6.9	4.1	1.2	e2.3	e3.6
18	4.1	4.9	155	21	33	44	34	6.2	3.4	.67	e2.2	e3.3
19	5.3	4.6	94	18	21	31	21	5.5	3.2	1.4	e2.8	e3.3
20	3.4	4.5	51	15	17	22	29	4.5	4.1	1.0	e3.7	e3.9
21	4.0	4.8	e25	11	16	23	36	9.5	8.0	.90	e3.9	e4.4
22	3.9	4.5	e16	9.5	13	24	28	28	3.6	.85	e3.7	e10
23	3.2	4.5	14	7.8	11	20	21	28	3.1	.98	e13	e8.4
24	13	4.5	11	7.5	9.9	16	16	18	2.7	.82	e18	e6.7
25	11	13	8.9	7.0	9.9	13	12	16	2.6	33	e13	e14
26	6.1	22	7.4	6.6	11	12	10	16	2.5	13	e6.3	e15
27	6.2	22	7.0	7.2	11	11	8.8	26	2.3	2.2	e9.1	17
28	5.8	18	6.6	6.6	9.8	10	7.5	20	4.2	1.0	e7.3	21
29	5.2	15	6.5	6.8	---	9.5	6.6	14	3.0	1.1	e4.9	15
30	5.0	28	6.1	55	---	9.1	6.2	10	14	3.8	e3.7	8.6
31	4.8	---	6.0	87	---	9.0	---	7.7	---	4.1	e4.4	---
TOTAL	308.3	258.0	907.3	473.3	1021.6	772.4	818.8	338.9	233.3	105.25	173.6	211.0
MEAN	9.95	8.60	29.3	15.3	36.5	24.9	27.3	10.9	7.78	3.40	5.60	7.03
MAX	53	28	181	87	103	101	102	28	18	33	24	21
MIN	3.2	4.2	5.6	6.4	9.8	7.7	6.2	3.7	2.3	.67	1.6	2.4
CFSM	.39	.34	1.14	.60	1.43	.97	1.07	.43	.30	.13	.22	.27
IN.	.45	.37	1.32	.69	1.48	1.12	1.19	.49	.34	.15	.25	.31

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2001, BY WATER YEAR (WY)

MEAN	9.95	8.60	29.3	15.3	36.5	24.9	27.3	10.9	7.78	3.40	12.2	8.19
MAX	9.95	8.60	29.3	15.3	36.5	24.9	27.3	10.9	7.78	3.40	18.9	9.34
(WY)	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2000	2000
MIN	9.95	8.60	29.3	15.3	36.5	24.9	27.3	10.9	7.78	3.40	5.60	7.03
(WY)	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001

SUMMARY STATISTICS	FOR 2001 WATER YEAR		WATER YEARS 2000 - 2001	
ANNUAL TOTAL	5621.75			
ANNUAL MEAN	15.4		15.4	
HIGHEST ANNUAL MEAN			15.4	2001
LOWEST ANNUAL MEAN			15.4	2001
HIGHEST DAILY MEAN	181	Dec 17	181	Dec 17 2000
LOWEST DAILY MEAN	.67	Jul 18	.67	Jul 18 2001
ANNUAL SEVEN-DAY MINIMUM	.95	Jul 18	.95	Jul 18 2001
MAXIMUM PEAK FLOW	260	Jul 25a	260	Jul 25 2001
MAXIMUM PEAK STAGE	11.46	Jul 25	11.46	Jul 25 2001
INSTANTANEOUS LOW FLOW	.40	Jul 19	.40	Jul 19 2001
ANNUAL RUNOFF (CFSM)	.60		.60	
ANNUAL RUNOFF (INCHES)	8.17		8.17	
10 PERCENT EXCEEDS	33		34	
50 PERCENT EXCEEDS	8.1		7.7	
90 PERCENT EXCEEDS	2.7		2.8	

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 1, 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 discharges of less than 2.3 ft^3/s, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.50	.83	4.3	1.2	9.9	2.2	3.0	2.0	3.0	2.1	.21	1.6
2	.50	.92	2.7	1.1	5.8	2.3	2.9	1.8	3.2	1.5	.20	.27
3	.50	1.0	1.7	1.3	3.8	2.0	2.2	1.7	3.8	.86	2.1	.27
4	1.1	1.1	1.2	1.1	3.3	1.5	2.2	1.5	1.4	.50	.94	.32
5	8.1	1.0	1.1	1.5	4.1	1.6	2.2	1.3	1.1	.43	.39	.21
6	6.9	1.0	1.0	1.6	4.1	1.7	49	1.1	4.4	.51	.30	.24
7	2.1	1.3	1.0	1.5	3.5	2.1	18	1.1	5.7	.33	.30	.20
8	3.0	1.3	1.1	1.5	11	2.0	7.8	4.1	1.9	.55	.30	.20
9	8.3	1.6	1.0	1.5	35	2.0	6.2	1.8	1.2	.45	.65	.23
10	2.6	3.9	.97	1.1	33	2.3	6.3	1.1	1.4	.30	.94	.19
11	1.4	1.9	4.3	1.2	7.8	5.8	6.5	1.1	1.6	.24	.57	.18
12	1.1	1.2	20	1.5	5.1	11	5.5	7.6	1.2	.21	.62	.20
13	.99	1.1	3.8	1.8	4.6	52	3.8	1.9	1.1	.20	.67	.29
14	.80	1.0	3.0	1.9	28	12	3.0	1.2	.98	.20	.42	1.8
15	.88	1.0	2.1	7.2	24	6.5	11	1.7	.87	.20	.32	.24
16	.99	.98	57	7.2	11	20	16	1.7	.93	.20	.30	.14
17	1.2	1.0	70	3.9	6.6	14	9.4	1.3	.70	.20	.20	.07
18	1.2	.88	11	3.1	4.1	8.4	5.8	1.8	.58	.19	.20	.08
19	1.0	.93	6.2	2.9	3.6	6.3	4.3	2.0	.58	.10	.31	.11
20	1.1	.86	4.1	2.0	3.8	5.3	9.0	1.0	.56	.19	.55	.28
21	1.4	.77	3.2	1.6	3.2	5.4	7.4	8.9	.62	.20	.88	2.2
22	1.4	.76	3.3	1.4	2.5	5.0	5.5	11	1.1	.20	.36	2.9
23	1.4	.68	2.9	1.5	2.6	3.7	4.1	3.4	.91	.18	7.0	.30
24	4.4	.77	2.0	1.3	2.3	3.3	3.4	1.9	.66	.10	.83	.92
25	3.2	2.0	1.3	1.2	3.4	3.2	2.9	1.8	.55	1.0	.43	3.3
26	1.2	5.0	1.3	1.3	2.8	3.2	2.8	1.5	.50	1.2	.69	1.1
27	1.0	4.8	1.4	1.4	2.6	3.1	2.6	8.7	.53	.25	1.6	3.3
28	.83	2.3	1.4	1.5	2.3	3.3	2.3	3.2	.62	.12	.85	6.7
29	.80	1.9	1.1	1.3	---	3.6	2.0	1.6	.53	.10	.28	1.7
30	.80	6.9	1.1	31	---	3.3	2.0	1.0	.69	.51	.14	.71
31	.80	---	1.3	24	---	3.0	---	.80	---	.42	1.8	---
TOTAL	61.49	50.68	217.87	113.6	233.8	201.1	209.1	82.60	42.91	13.74	25.35	30.25
MEAN	1.98	1.69	7.03	3.66	8.35	6.49	6.97	2.66	1.43	.44	.82	1.01
MAX	8.3	6.9	70	31	35	52	49	11	5.7	2.1	7.0	6.7
MIN	.50	.68	.97	1.1	2.3	1.5	2.0	.80	.50	.10	.14	.07
CFSM	.36	.30	1.26	.66	1.50	1.16	1.25	.48	.26	.08	.15	.18
IN.	.41	.34	1.45	.76	1.56	1.34	1.39	.55	.29	.09	.17	.20

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2001, BY WATER YEAR (WY)

MEAN	3.05	6.23	6.76	10.2	8.45	10.4	11.6	5.97	4.45	3.32	2.20	2.59
MAX	7.75	15.3	18.3	17.4	12.6	22.3	17.5	12.3	11.7	16.9	6.94	7.21
(WY)	1997	1993	1997	1993	1996	1993	1998	1997	1997	1992	1992	1992
MIN	.66	1.14	1.97	3.66	4.16	4.52	6.97	1.98	1.01	.44	.27	1.01
(WY)	1995	1995	1992	2001	1993	2000	2001	1999	1999	2001	1993	2001

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1992 - 2001	
ANNUAL TOTAL	2041.59		1282.49			
ANNUAL MEAN	5.58		3.51		6.25	
HIGHEST ANNUAL MEAN					8.97	1993
LOWEST ANNUAL MEAN					3.51	2001
HIGHEST DAILY MEAN	118	May 28	70	Dec 17	190	Jan 28 1994
LOWEST DAILY MEAN	.41	Aug 28	.07	Sep 17	.07	Jul 3 1992
ANNUAL SEVEN-DAY MINIMUM	.49	Aug 24	.17	Jul 18	.10	Aug 7 1993
MAXIMUM PEAK FLOW			216	Dec 17a	885	Jul 30 1992
MAXIMUM PEAK STAGE			11.65	Dec 17	12.93	Jul 30 1992
INSTANTANEOUS LOW FLOW			.03	Sep 24	.01	Jul 27 1997
ANNUAL RUNOFF (CFSM)	1.00		.63		1.12	
ANNUAL RUNOFF (INCHES)	13.61		8.55		15.23	
10 PERCENT EXCEEDS	10		7.1		13	
50 PERCENT EXCEEDS	2.3		1.5		2.6	
90 PERCENT EXCEEDS	.72		.27		.51	

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 truss 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 1, 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. (Formerly named Yellow Creek at Bath Road near Botzum, Ohio).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	7.8	27	e8.8	53	17	16	12	23	13	3.3	9.4
2	4.3	6.6	18	e8.6	34	17	15	12	26	11	2.8	4.9
3	4.1	6.9	e14	e8.8	e22	17	13	11	33	8.5	13	4.0
4	6.3	6.4	e12	e8.7	e20	15	13	11	20	7.8	7.9	3.0
5	34	6.3	e11	e8.3	23	16	12	10	16	7.6	4.3	2.6
6	44	7.1	e9.4	e8.2	25	19	190	9.4	21	10	3.2	2.6
7	16	7.3	e8.1	e8.0	22	19	103	9.2	36	7.0	2.9	2.5
8	12	7.7	e7.6	e8.0	39	18	42	22	19	20	2.5	2.6
9	32	8.3	e7.1	e7.9	127	17	30	17	14	9.0	23	2.7
10	16	15	e6.5	e7.6	164	18	27	11	13	7.2	16	2.9
11	15	12	e14	e7.5	51	30	29	9.5	17	6.4	5.7	2.5
12	8.1	8.8	86	e7.4	35	44	28	37	14	5.9	5.6	2.3
13	6.6	7.9	e34	e7.6	29	221	19	17	11	5.5	5.5	2.8
14	5.9	7.3	e24	e8.9	91	75	16	11	10	5.2	4.2	10
15	5.9	8.7	e18	33	127	40	42	11	11	5.2	3.1	4.7
16	6.5	8.5	202	41	62	75	77	13	16	4.9	2.9	3.7
17	7.7	7.3	413	24	43	78	48	12	9.2	4.9	3.4	3.0
18	7.8	7.0	71	19	e30	46	30	11	8.7	4.8	3.0	3.2
19	7.1	7.0	e47	16	e26	36	24	14	8.3	5.3	4.5	3.2
20	6.9	6.9	e38	e15	24	28	37	11	8.4	11	4.6	4.4
21	10	6.7	e31	e13	21	31	38	26	8.6	6.3	4.4	7.0
22	11	e6.7	e25	e11	e20	30	29	88	10	5.6	3.4	19
23	6.2	e6.5	e20	e10	e19	23	25	37	9.4	4.9	18	6.2
24	11	e6.4	e17	e9.3	e18	19	24	23	8.3	4.6	7.1	6.8
25	22	e13	e15	e8.9	23	e18	20	22	7.7	31	4.4	13
26	11	28	e13	e7.6	21	19	17	19	7.1	16	5.0	8.6
27	8.4	25	e12	e7.0	18	18	16	57	7.3	6.0	8.9	14
28	7.1	17	e11	e6.9	17	17	14	34	11	4.1	4.7	23
29	6.4	14	e10	e9.0	---	17	14	21	15	3.6	3.7	13
30	9.6	28	e9.6	e120	---	16	13	15	16	3.7	3.2	6.9
31	6.6	---	e9.0	120	---	16	---	14	---	3.5	5.7	---
TOTAL	360.0	312.1	1240.3	585.0	1204	1070	1021	627.1	435.0	249.5	189.9	194.5
MEAN	11.6	10.4	40.0	18.9	43.0	34.5	34.0	20.2	14.5	8.05	6.13	6.48
MAX	44	28	413	120	164	221	190	88	36	31	23	23
MIN	4.1	6.3	6.5	6.9	17	15	12	9.2	7.1	3.5	2.5	2.3
CFSM	.38	.34	1.30	.61	1.40	1.12	1.11	.66	.47	.26	.20	.21
IN.	.44	.38	1.50	.71	1.46	1.30	1.24	.76	.53	.30	.23	.24

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2001, BY WATER YEAR (WY)

MEAN	15.9	32.2	35.6	54.5	43.9	51.0	59.6	36.1	28.2	18.5	14.5	15.4
MAX	40.3	76.2	94.0	98.2	66.8	108	95.4	65.5	70.5	74.8	41.1	48.3
(WY)	1997	1993	1997	1993	1997	1993	1994	2000	1997	1992	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 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1992 - 2001	
ANNUAL TOTAL	11084.0		7488.4			
ANNUAL MEAN	30.3		20.5		33.7	
HIGHEST ANNUAL MEAN					50.2	1997
LOWEST ANNUAL MEAN					20.5	2001
HIGHEST DAILY MEAN	492	Apr 8	413	Dec 17	765	Jan 28 1994
LOWEST DAILY MEAN	3.1	Sep 7	2.3	Sep 12	2.3	Sep 12 2001
ANNUAL SEVEN-DAY MINIMUM	3.5	Sep 2	2.6	Sep 6	2.6	Sep 6 2001
MAXIMUM PEAK FLOW			806	Dec 17a	1470	Jul 31 1992
MAXIMUM PEAK STAGE			13.84	Dec 17	15.60	Jul 31 1992
INSTANTANEOUS LOW FLOW			2.1	Sep 11	2.1	Sep 11 2001
ANNUAL RUNOFF (CFSM)	.99		.67		1.10	
ANNUAL RUNOFF (INCHES)	13.43		9.07		14.92	
10 PERCENT EXCEEDS	54		37		67	
50 PERCENT EXCEEDS	15		12		18	
90 PERCENT EXCEEDS	5.9		4.4		6.0	

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 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	37	224	e55	324	54	71	53	69	82	22	75
2	34	37	154	e53	165	53	77	48	87	45	22	39
3	33	54	106	e50	109	52	68	41	110	32	359	27
4	70	40	88	e52	92	48	61	41	64	36	94	26
5	184	85	79	e54	114	51	56	38	47	57	41	25
6	268	88	71	e56	120	56	411	36	49	28	31	24
7	177	86	67	e58	112	60	1460	35	65	24	28	27
8	327	76	69	60	137	61	832	83	49	105	30	30
9	462	78	57	55	392	65	373	74	38	40	33	24
10	190	197	47	53	552	69	216	67	33	30	33	26
11	122	108	153	49	256	133	141	37	65	27	28	25
12	91	76	506	56	124	178	106	166	43	27	29	22
13	57	65	190	64	103	740	86	78	36	23	30	58
14	48	62	105	68	335	468	69	47	35	22	25	94
15	43	58	87	209	463	187	161	53	32	20	24	40
16	45	54	843	205	256	236	272	52	51	23	23	26
17	49	42	1350	138	148	215	200	46	35	24	31	24
18	44	41	e280	106	102	160	147	57	31	24	23	24
19	42	38	e190	95	85	123	105	63	35	89	34	28
20	40	37	e150	76	82	98	136	42	40	34	51	46
21	36	40	e130	56	80	89	145	86	53	25	64	66
22	34	41	e110	e52	69	101	118	194	66	21	36	94
23	34	41	e98	e50	65	87	99	127	37	49	42	48
24	104	40	e90	e47	59	73	78	80	31	38	44	69
25	59	127	e82	e44	67	67	65	84	30	30	29	228
26	49	305	e76	e42	74	78	59	104	29	47	116	72
27	48	275	e72	e40	64	85	54	147	41	30	94	126
28	47	162	e68	43	59	135	48	98	45	23	67	165
29	38	133	e64	47	---	131	43	57	36	20	36	87
30	37	249	e60	422	---	102	42	48	52	22	28	46
31	37	---	e58	521	---	80	---	39	---	23	175	---
TOTAL	2882	2772	5724	2976	4608	4135	5799	2221	1434	1120	1722	1711
MEAN	93.0	92.4	185	96.0	165	133	193	71.6	47.8	36.1	55.5	57.0
MAX	462	305	1350	521	552	740	1460	194	110	105	359	228
MIN	33	37	47	40	59	48	42	35	29	20	22	22
CFSM	1.11	1.10	2.20	1.14	1.96	1.59	2.30	.85	.57	.43	.66	.68
IN.	1.28	1.23	2.54	1.32	2.04	1.83	2.57	.98	.64	.50	.76	.76

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2001, BY WATER YEAR (WY)

MEAN	70.9	137	171	152	195	236	194	122	88.7	78.1	64.5	72.9
MAX	261	402	506	396	463	457	323	339	257	329	255	289
(WY)	1991	1986	1991	1993	1976	1963	1998	1989	1975	1969	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 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1963 - 2001	
ANNUAL TOTAL	49427		37104			
ANNUAL MEAN	135		102		133	
HIGHEST ANNUAL MEAN					185	1975
LOWEST ANNUAL MEAN					81.7	1964
HIGHEST DAILY MEAN	1440	Apr 8	1460	Apr 7	2920	Dec 30 1990
LOWEST DAILY MEAN	24	Sep 7	20	Jul 15	5.8	Aug 10 1964
ANNUAL SEVEN-DAY MINIMUM	26	Sep 3	23	Jul 27	6.5	Oct 4 1963
MAXIMUM PEAK FLOW			3670	Apr 7a	7220	Jul 20 1969
MAXIMUM PEAK STAGE			7.78	Apr 7	10.10	Jul 20 1969
INSTANTANEOUS LOW FLOW			16	Jul 15	5.2	Aug 19 1963
ANNUAL RUNOFF (CFSM)	1.61		1.21		1.58	
ANNUAL RUNOFF (INCHES)	21.92		16.45		21.46	
10 PERCENT EXCEEDS	299		195		317	
50 PERCENT EXCEEDS	71		59		62	
90 PERCENT EXCEEDS	33		28		21	

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.

WATER-DISCHARGE RECORDS

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 to July 21, 1906, nonrecording gage at bridge 240 ft upstream at present datum. Sept. 28, 1921 to May 30, 1923, nonrecording gage at bridge 240 ft upstream at datum 2.42 ft higher. Sept. to Oct. 8, 1927, nonrecording gage, and Oct. 9, 1927; to Dec. 31, 1935; and Mar. 5, 1940, to June 19, 1969, water-stage recorder at site 100 ft upstream at present datum.
REMARKS.—Records good 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 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	353	376	1110	e570	1740	594	575	394	451	469	210	572
2	368	348	881	e560	1370	584	577	385	570	380	208	337
3	357	369	692	e540	1150	566	648	353	726	301	788	270
4	429	353	593	e540	1080	544	689	352	501	283	453	249
5	806	357	535	e580	1100	550	549	345	445	322	288	240
6	1410	333	486	606	1100	558	2060	322	412	284	231	239
7	882	324	434	614	1030	582	3950	307	558	272	225	232
8	960	325	417	615	994	579	1920	409	434	433	227	242
9	1690	323	387	600	1930	561	1570	441	374	332	226	220
10	904	532	360	582	3000	559	1380	370	346	295	682	219
11	735	449	414	593	1900	741	1130	323	420	287	352	221
12	677	349	1940	605	1550	859	974	709	380	280	287	210
13	570	320	950	619	1600	2860	784	491	342	262	326	220
14	520	313	802	624	2150	2010	624	373	326	262	277	449
15	507	308	759	982	3060	1350	669	378	318	254	251	293
16	445	303	1890	1210	2100	1490	1750	423	376	252	243	233
17	462	287	6890	965	1640	1810	1340	386	327	249	258	222
18	440	283	3410	884	1360	1400	960	381	296	240	239	224
19	376	281	2130	870	1180	1170	792	416	292	303	240	236
20	362	280	1700	788	1060	943	878	343	310	305	352	319
21	342	279	e1600	694	997	834	1080	425	389	232	345	295
22	324	277	e1350	666	860	847	827	1210	393	215	274	559
23	310	275	e1100	626	788	764	742	779	343	213	337	348
24	441	273	e940	601	689	669	644	536	299	277	306	328
25	685	306	e840	581	667	591	564	524	285	229	268	901
26	404	935	e780	561	661	583	520	516	274	463	351	e660
27	406	795	e720	561	630	583	492	737	268	293	503	e880
28	489	650	e680	539	625	592	461	637	312	229	326	e600
29	439	600	e640	539	---	628	431	461	289	211	275	469
30	427	1050	e620	1690	---	567	404	420	316	212	248	328
31	418	---	e600	2440	---	541	---	387	---	219	496	---
TOTAL	17938	12253	36650	23445	38011	27509	29984	14533	11372	8858	10092	10815
MEAN	579	408	1182	756	1358	887	999	469	379	286	326	360
MAX	1690	1050	6890	2440	3060	2860	3950	1210	726	469	788	901
MIN	310	273	360	539	625	541	404	307	268	211	208	210

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2001, BY WATER YEAR (WY)

MEAN	381	645	938	1123	1302	1635	1452	934	629	455	364	373
MAX	1747	2713	2889	3585	3217	3008	3175	2396	2450	1543	1363	1866
(WY)	1955	1986	1978	1952	1959	1963	1957	1984	1989	1992	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 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1922 - 2001	
ANNUAL TOTAL	313920		241460			
ANNUAL MEAN	858		662		853	
HIGHEST ANNUAL MEAN					1393	1975
LOWEST ANNUAL MEAN					278	1934
HIGHEST DAILY MEAN	6890	Dec 17	6890	Dec 17	16700	Jan 22 1959
LOWEST DAILY MEAN	250	Feb 7	208	Aug 2	21	Aug 28 1933
ANNUAL SEVEN-DAY MINIMUM	271	Feb 1	223	Sep 7	37	Aug 26 1933
MAXIMUM PEAK FLOW			7910	Dec 17	24800	Jan 22 1959
MAXIMUM PEAK STAGE			16.02	Dec 17	22.41	Jan 22 1959
INSTANTANEOUS LOW FLOW			189	Jul 29	21	Aug 28 1933
10 PERCENT EXCEEDS	1760		1340		2000	
50 PERCENT EXCEEDS	550		491		484	
90 PERCENT EXCEEDS	314		253		132	

e Estimated.

04208000 CUYAHOGA RIVER AT INDEPENDENCE, OHIO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—October 1948 to September 1949, October 1950 to current year.
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: Water years 1950-74, December 1976 to September 1984, October 1987 to current year.
INSTRUMENTATION.—Alcohol-actuated thermograph October 1956 to June 1965, water-quality monitor from July 1965 to September 1991, and a refrigerated water-quality pumping sampler, operated by Heidelberg College Water Quality Laboratory, from October 1987 to September 1994.
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 half-hour intervals and the daily load was calculated by summing the loads for these half-hour intervals. This required interpolation between measured and estimated concentrations.
EXTREMES FOR PERIOD OF DAILY RECORD.—
SEDIMENT CONCENTRATIONS: Maximum daily mean, 3,400 mg/L, Dec. 31, 1992; minimum daily mean, 1 mg/L, Feb. 12 and 13, 1989.
SEDIMENT LOADS: Maximum daily, 82,900 tons, Dec. 31, 1992; minimum daily, 1.2 tons, Feb. 13, 1989.
EXTREMES FOR CURRENT YEAR.—
SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,310 mg/L, Dec. 17; minimum daily mean, 2 mg/L, Nov. 20.
SEDIMENT LOADS: Maximum daily, 25,400 tons, Dec. 17; minimum daily, 1.8 tons, Nov. 20.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00061), USGS National Water Information System parameter code; *, 10—stream cross-section sample collected by equal-width-increment (EWI) method, 50—point sample collected from refrigerated automatic sampler; mg/L, milligrams per liter; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; ---, no data; E, estimated concentration.]

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES* (82398)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
SEP												
06...	1250	244	10	7.8	1020	23.5	19.5	160	.8	E5.5	.35	25
06...	1355	247	50	---	---	---	---	160	.7	E5.4	.34	---

04208000 CUYAHOGA RIVER AT INDEPENDENCE, OHIO—Continued

WATER-QUALITY RECORDS

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[cfs, cubic feet per second; mg/L, milligrams per liter; ---, 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	353	18	17	376	9	9.3	1110	45	136
2	368	21	21	348	8	7.9	881	25	60
3	357	24	23	369	11	11	692	14	27
4	429	44	53	353	8	8.1	593	13	20
5	806	122	355	357	7	6.9	535	11	15
6	1410	233	909	333	6	5.6	486	9	12
7	882	97	249	324	7	6.2	434	10	11
8	960	88	348	325	10	8.9	417	9	10
9	1690	189	1020	323	12	10	387	9	9.2
10	904	43	107	532	54	91	360	7	7.2
11	735	32	64	449	27	35	414	19	32
12	677	30	55	349	8	8.0	1940	236	1360
13	570	23	36	320	9	7.4	950	81	215
14	520	22	31	313	9	7.4	802	33	72
15	507	21	29	308	6	4.7	759	26	52
16	445	21	25	303	6	4.7	1890	302	3960
17	462	17	22	287	5	3.9	6890	1310	25400
18	440	15	18	283	4	3.1	3410	334	3200
19	376	11	12	281	4	2.9	2130	158	926
20	362	12	11	280	2	1.8	1700	115	528
21	342	11	10	279	3	2.4	e1600	86	371
22	324	8	7.3	277	6	4.8	e1350	55	203
23	310	7	6.2	275	6	4.8	e1100	38	113
24	441	33	44	273	6	4.4	e940	89	227
25	685	83	165	306	16	19	e840	82	185
26	404	28	31	935	86	230	e780	59	123
27	406	19	21	795	41	88	e720	39	76
28	489	18	24	650	20	35	e680	57	106
29	439	12	14	600	16	26	e640	37	64
30	427	13	15	1050	48	141	e620	33	56
31	418	11	13	---	---	---	e600	19	30
TOTAL	17938	---	3755.5	12253	---	799.2	36650	---	37606.4
		JANUARY			FEBRUARY			MARCH	
1	e570	12	19	1740	107	513	594	14	23
2	e560	14	21	1370	52	193	584	11	17
3	e540	23	33	1150	33	104	566	10	15
4	e540	15	22	1080	28	81	544	14	21
5	e580	14	21	1100	26	76	550	7	10
6	606	14	23	1100	27	80	558	5	7.3
7	614	15	25	1030	22	61	582	6	9.2
8	615	15	26	994	30	85	579	7	10
9	600	11	18	1930	281	1490	561	5	6.8
10	582	9	14	3000	672	5720	559	6	9.0
11	593	9	15	1900	221	1170	741	23	48
12	605	10	16	1550	89	371	859	35	88
13	619	10	17	1600	74	322	2860	361	3150
14	624	10	17	2150	180	1210	2010	193	1070
15	982	82	248	3060	291	2480	1350	72	270
16	1210	83	283	2100	160	914	1490	137	737
17	965	35	91	1640	70	314	1810	155	810
18	884	28	66	1360	57	211	1400	49	187
19	870	24	57	1180	50	158	1170	34	106
20	788	17	36	1060	36	102	943	36	92
21	694	13	23	997	27	73	834	28	62
22	666	11	19	860	22	51	847	21	47
23	626	13	22	788	20	43	764	15	31
24	601	11	18	689	22	42	669	14	26
25	581	7	11	667	21	37	591	11	17
26	561	7	11	661	14	26	583	8	12
27	561	10	14	630	17	28	583	10	16
28	539	11	16	625	17	29	592	21	36
29	539	12	17	---	---	---	628	26	46
30	1690	313	2150	---	---	---	567	11	17
31	2440	317	2210	---	---	---	541	11	16
TOTAL	23445	---	5579	38011	---	15984	27509	---	7012.3

04208000 CUYAHOGA RIVER AT INDEPENDENCE, OHIO—Continued

WATER-QUALITY RECORDS

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001—Continued

[cfs, cubic feet per second; mg/L, milligrams per liter; ---, 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	575	11	17	394	23	24	451	75	99
2	577	12	19	385	28	29	570	124	196
3	648	14	25	353	32	30	726	172	361
4	689	15	28	352	29	28	501	51	70
5	549	10	15	345	24	23	445	43	52
6	2060	344	2980	322	22	19	412	43	48
7	3950	1030	13500	307	22	18	558	92	142
8	1920	312	1640	409	61	77	434	36	42
9	1570	137	588	441	51	64	374	30	30
10	1380	157	583	370	27	27	346	27	26
11	1130	79	244	323	23	20	420	52	62
12	974	58	153	709	108	240	380	32	33
13	784	50	105	491	44	62	342	23	22
14	624	43	73	373	26	26	326	20	18
15	669	69	166	378	25	26	318	19	16
16	1750	248	1220	423	25	29	376	30	32
17	1340	107	418	386	24	26	327	32	29
18	960	38	99.9	381	28	29	296	30	24
19	792	24	51	416	48	53	292	36	29
20	878	38	105	343	39	36	310	41	34
21	1080	68	201	425	161	300	389	60	64
22	827	50	112	1210	1100	4190	393	57	61
23	742	34	70	779	169	389	343	40	37
24	644	29	50	536	71	104	299	28	22
25	564	25	38	524	59	84	285	32	25
26	520	23	33	516	60	83	274	26	20
27	492	22	29	737	122	252	268	23	17
28	461	23	29	637	86	152	312	24	20
29	431	21	25	461	53	66	289	22	17
30	404	25	27	420	56	64	316	28	24
31	---	---	---	387	46	49	---	---	---
TOTAL	29984	---	22643.9	14533	---	6619	11372	---	1672
		JULY			AUGUST			SEPTEMBER	
1	469	146	190	210	21	12	572	116	198
2	380	81	86	208	19	11	337	45	42
3	301	42	34	788	596	2080	270	29	21
4	283	38	29	453	142	194	249	22	15
5	322	35	30	288	39	31	240	21	13
6	284	31	24	231	29	18	239	22	14
7	272	23	17	225	33	20	232	19	12
8	433	110	136	227	26	16	242	16	11
9	332	41	38	226	24	14	220	19	11
10	295	31	25	682	503	1300	219	16	9.6
11	287	35	27	352	96	97	221	15	8.9
12	280	34	26	287	37	29	210	15	8.6
13	262	23	16	326	26	22	220	28	17
14	262	23	16	277	24	18	449	84	106
15	254	21	14	251	26	18	293	28	23
16	252	17	12	243	31	20	233	14	8.6
17	249	18	12	258	29	20	222	12	7.1
18	240	20	13	239	29	19	224	13	7.8
19	303	84	83	240	25	17	236	19	12
20	305	51	44	352	48	47	319	24	20
21	232	28	18	345	36	35	295	26	22
22	215	23	13	274	21	16	559	130	208
23	213	31	18	337	39	37	348	35	34
24	277	38	28	306	33	28	328	43	43
25	229	38	23	268	23	17	901	315	858
26	463	493	706	351	114	196	e660	80	141
27	293	155	133	503	153	264	e880	55	131
28	229	32	20	326	41	36	e600	91	148
29	211	40	23	275	31	23	469	55	73
30	212	30	17	248	24	16	328	24	22
31	219	23	14	496	133	383	---	---	---
TOTAL	8858	---	1885	10092	---	5054	10815	---	2245.6
YEAR	241460		110856.0						

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, 5.5 mi upstream from mouth at Cleveland, Ohio.
DRAINAGE AREA.—788 mi^2.
PERIOD OF RECORD.—October 1, 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.
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, 8,320 ft^3/s Dec. 12; minimum daily discharge, 319 ft^3/s Sep. 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e1000	710	1980	e840	2260	764	e800	620	e700	783	418	1070
2	e980	659	1580	e800	1740	746	e920	e600	e900	646	387	450
3	e940	767	1260	e780	1460	737	e1050	e580	e1200	486	1920	319
4	e1300	664	1140	e760	1390	694	e1200	e560	e840	476	859	340
5	e2700	668	1040	e800	1430	695	e980	e540	e720	571	531	366
6	e3400	632	952	e880	1480	736	e2600	e520	e660	476	389	341
7	e1900	697	817	e960	1380	774	e5000	e480	e940	427	396	551
8	e3000	630	797	e900	1310	752	e3800	e640	e700	969	430	404
9	e4000	670	710	e860	2440	742	e3000	e800	e600	544	e400	e370
10	e1900	1290	712	e820	3980	763	e2300	e620	e540	466	e1200	e350
11	e1500	905	1020	e800	2430	1210	e1800	e500	e680	447	e600	e340
12	e1350	668	3380	e840	1930	1180	e1400	e1200	e600	445	e440	e330
13	e1200	646	1570	e880	1990	3870	e1100	e860	e540	422	e560	491
14	e1100	639	1250	e940	2900	2600	e900	e560	e520	414	e420	906
15	e1000	606	1180	e1500	4100	1890	e940	e580	498	369	e390	520
16	e930	655	3020	e1700	2680	2240	e2800	e700	743	369	e370	423
17	e960	561	8320	e1400	2100	2480	e2300	e640	535	398	e420	387
18	e860	592	4800	e1200	1710	1960	e1800	e600	476	440	e360	331
19	e800	589	3090	e1300	1490	1710	e1300	e680	445	505	e370	e340
20	e760	631	2520	e1100	1350	1460	e1400	e540	555	e520	e580	e450
21	e730	552	2400	e1000	1260	e1200	e1200	e680	880	e440	e540	e400
22	e700	579	2140	e900	1090	e1300	1210	e2200	1320	e350	e420	710
23	e690	606	1660	e820	1000	e1100	1110	e1200	632	342	e580	463
24	e1050	593	1520	e760	875	e920	901	e940	510	506	408	661
25	e1450	826	1220	710	854	e820	877	e780	496	493	325	1910
26	729	2090	1120	670	862	e760	824	e900	468	765	598	789
27	717	1690	1040	702	833	e780	784	e1200	452	551	757	972
28	822	1310	998	644	803	e830	763	e1100	511	420	635	1120
29	788	1290	923	676	---	e880	718	e740	450	402	371	814
30	777	2200	e900	2480	---	e800	673	e680	507	338	364	e600
31	768	---	e870	3240	---	e700	---	e620	---	415	e900	---
TOTAL	40801	25615	55929	32662	49127	38093	46450	23860	19618	15195	17338	17518
MEAN	1316	854	1804	1054	1755	1229	1548	770	654	490	559	584
MAX	4000	2200	8320	3240	4100	3870	5000	2200	1320	969	1920	1910
MIN	690	552	710	644	803	694	673	480	445	338	325	319

e Estimated.

04212100 GRAND RIVER NEAR PAINESVILLE, OHIO

LOCATION.—Latitude 41°43′08″, longitude 81°13′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 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70	67	1340	e380	3990	308	1060	208	277	70	20	36
2	57	66	1210	e360	3140	260	789	189	233	67	16	50
3	48	67	938	e340	2210	229	620	178	308	67	43	50
4	41	65	635	e330	1860	213	514	168	465	130	47	38
5	60	60	417	e360	1660	206	441	157	472	120	61	31
6	74	58	289	e390	1360	193	734	144	340	94	50	27
7	139	61	195	e440	1200	205	1430	130	261	80	56	27
8	196	61	213	e470	1150	201	1780	126	212	194	73	25
9	707	61	223	e420	4810	199	1480	129	181	626	41	21
10	1550	124	226	e380	9130	202	1390	119	158	207	32	14
11	1840	162	253	e380	5880	274	1570	116	192	95	25	13
12	1500	151	2840	e410	3060	382	1160	436	264	63	19	11
13	997	131	2770	e440	1990	2570	884	428	326	47	17	9.6
14	610	125	1540	e500	1690	5490	616	351	255	39	13	12
15	319	134	1160	e640	3300	3640	459	280	181	34	11	12
16	188	114	1550	e900	2730	2250	699	212	148	29	9.8	8.7
17	134	140	7020	e800	1900	2170	1610	170	136	24	9.6	8.2
18	107	243	6470	e700	1440	2190	1670	157	121	22	9.2	8.7
19	90	262	3640	e600	1030	1930	1270	143	105	20	9.6	9.3
20	78	225	2610	e520	754	1970	945	125	96	20	14	10
21	71	192	e1800	e460	627	1450	862	122	92	18	19	11
22	67	137	e1200	e420	487	1220	1170	168	165	20	19	22
23	63	193	e920	e380	436	1150	1280	219	250	16	27	18
24	60	188	e720	e350	304	975	1050	244	194	31	26	17
25	61	229	e650	e340	318	805	756	379	150	37	24	94
26	59	1520	e600	e320	446	686	537	541	120	82	27	e160
27	61	3320	e540	e310	448	635	414	686	102	70	27	e190
28	97	2730	e490	e300	388	614	333	806	90	46	24	e73
29	89	1650	e450	e280	---	1010	278	827	82	39	30	55
30	78	1370	e420	e320	---	1520	236	565	76	32	31	46
31	70	---	e400	4770	---	1420	---	386	---	25	28	---
TOTAL	9581	13906	43729	18010	57738	36567	28037	8909	6052	2464	858.2	1107.5
MEAN	309	464	1411	581	2062	1180	935	287	202	79.5	27.7	36.9
MAX	1840	3320	7020	4770	9130	5490	1780	827	472	626	73	190
MIN	41	58	195	280	304	193	236	116	76	16	9.2	8.2
CFSM	.45	.68	2.06	.85	3.01	1.72	1.36	.42	.29	.12	.04	.05
IN.	.52	.76	2.37	.98	3.14	1.99	1.52	.48	.33	.13	.05	.06

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2001, BY WATER YEAR (WY)

MEAN	471	1160	1523	1427	1771	1906	1487	799	654	252	231	388
MAX	1880	4026	3816	3327	4044	3753	2598	3214	2851	1106	1106	1854
(WY)	1991	1986	1978	1993	1981	1993	1987	1989	1986	1987	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 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1975 - 2001	
ANNUAL TOTAL	292800		226958.7			
ANNUAL MEAN	800		622		1001	
HIGHEST ANNUAL MEAN					1406	1997
LOWEST ANNUAL MEAN					524	1999
HIGHEST DAILY MEAN	7510	May 19	9130	Feb 10	15300	Nov 6 1985
LOWEST DAILY MEAN	15	Sep 9	8.2	Sep 17	5.1	Aug 4 1991
ANNUAL SEVEN-DAY MINIMUM	19	Sep 4	9.7	Sep 15	5.3	Aug 2 1991
MAXIMUM PEAK FLOW			11000	Feb 10a	18700	Jun 11 1986
MAXIMUM PEAK STAGE			9.59	Feb 10	13.16	Dec 25 1979
INSTANTANEOUS LOW FLOW			7.3	Sep 16	5.1	Aug 4 1991
ANNUAL RUNOFF (CFSM)	1.17		.91		1.46	
ANNUAL RUNOFF (INCHES)	15.90		12.33		19.85	
10 PERCENT EXCEEDS	2040		1630		2720	
50 PERCENT EXCEEDS	272		219		396	
90 PERCENT EXCEEDS	51		24		37	

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 610.30 ft above sea level. Prior to Aug. 17, 1924, nonrecording gage at same site and 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 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e110	39	600	e110	1330	114	488	e78	80	22	4.4	14
2	e100	37	409	e105	697	92	321	75	88	20	4.3	14
3	e90	38	237	e100	399	86	250	68	152	20	14	23
4	e70	36	136	e95	298	84	196	64	242	20	14	18
5	e100	35	96	e110	266	86	168	59	233	19	33	13
6	e140	35	72	e120	238	88	174	55	129	17	25	9.4
7	e200	34	61	e130	244	80	360	53	94	17	17	7.9
8	e300	33	75	e140	226	78	356	55	100	18	19	6.9
9	e400	34	72	e130	1200	75	255	56	214	16	8.9	6.1
10	e500	58	60	e120	3410	75	e260	56	179	15	6.0	4.9
11	e400	116	72	e120	2140	80	e310	59	137	14	4.8	4.2
12	e280	171	975	e130	439	84	e280	125	104	13	4.6	3.6
13	e220	108	1200	e140	279	462	e220	284	84	13	4.5	3.6
14	e180	76	326	e140	324	1760	e170	185	57	11	3.7	4.6
15	e130	74	191	e210	1260	977	e150	125	45	10	3.2	3.8
16	e110	70	232	e270	834	479	e130	99	40	9.8	3.0	3.4
17	e94	143	2120	e230	379	548	e190	82	36	9.1	3.4	3.7
18	e84	297	2990	e200	239	526	e260	73	31	8.9	3.2	3.6
19	e74	277	683	e170	171	441	e240	69	30	8.6	4.6	3.3
20	e66	207	336	e140	163	496	e210	64	30	26	7.1	5.3
21	e60	177	243	e130	172	395	e190	62	31	16	9.1	4.5
22	e54	144	242	e120	164	381	e170	71	61	11	9.0	4.1
23	e50	849	e210	e110	112	371	e200	139	38	14	14	3.9
24	e45	1330	e190	e100	89	251	e240	248	43	14	17	5.0
25	45	1110	e170	e96	127	211	e190	175	34	8.0	11	12
26	50	1130	e160	e92	178	208	e150	771	30	8.0	21	20
27	58	2410	e145	e88	203	211	e130	524	27	6.8	28	37
28	54	1940	e140	e86	140	211	e115	226	24	5.9	29	41
29	49	824	e130	e84	---	303	e100	161	21	6.2	36	30
30	44	695	e120	e92	---	465	e90	135	21	7.5	23	60
31	41	---	e115	e1400	---	752	---	101	---	5.7	19	---
TOTAL	4198	12527	12808	5308	15721	10470	6563	4397	2435	410.5	403.8	373.8
MEAN	135	418	413	171	561	338	219	142	81.2	13.2	13.0	12.5
MAX	500	2410	2990	1400	3410	1760	488	771	242	26	36	60
MIN	41	33	60	84	89	75	90	53	21	5.7	3.0	3.3
CFSM	.77	2.39	2.36	.98	3.21	1.93	1.25	.81	.46	.08	.07	.07
IN.	.89	2.66	2.72	1.13	3.34	2.23	1.40	.93	.52	.09	.09	.08

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2001, BY WATER YEAR (WY)

MEAN	134	319	415	422	458	526	391	232	134	74.9	69.4	101
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 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1922 - 2001	
ANNUAL TOTAL	111317		75615.1			
ANNUAL MEAN	304		207		273	
HIGHEST ANNUAL MEAN					401	1986
LOWEST ANNUAL MEAN					140	1931
HIGHEST DAILY MEAN	5140	Aug 4	3410	Feb 10	11000	Jan 31 1968
LOWEST DAILY MEAN	12	Sep 7	3.0	Aug 16	.30	Jul 30 1933
ANNUAL SEVEN-DAY MINIMUM	13	Sep 4	3.7	Aug 12	.64	Aug 27 1933
MAXIMUM PEAK FLOW			4240	Feb 10a	17000	Jan 22 1959
MAXIMUM PEAK STAGE			8.68	Jan 31b	12.94	Mar 4 1934
INSTANTANEOUS LOW FLOW			2.9	Aug 15	.20	Jul 31 1933
ANNUAL RUNOFF (CFSM)	1.74		1.18		1.56	
ANNUAL RUNOFF (INCHES)	23.66		16.07		21.16	
10 PERCENT EXCEEDS	710		440		680	
50 PERCENT EXCEEDS	100		94		95	
90 PERCENT EXCEEDS	32		8.0		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.

PEAK DISCHARGE AND STAGE AT CONTINUOUS-RECORD SURFACE DISCHARGE STATIONS

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 OCTOBER 2000 TO SEPTEMBER 2001

[ft^3/s, cubic feet per second; ---, no data; e, estimated; b, ice jam]

DATE	TIME	DISCHARGE (FT3/S)	GAGE HEIGHT (FEET)	DATE	TIME	DISCHARGE (FT3/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)							
Feb. 11	0300	*2130	*11.68				
Maumee River Basin							
04184500 BEAN CREEK AT POWERS, OHIO (Base discharge: 1,200 ft3/s)							
Feb. 10	0545	*3860	*19.34	May 17	0100	1990	16.57
Feb. 25	2215	1600	14.99				
04185000 TIFFIN RIVER AT STRYKER, OHIO (Base discharge: 1,850 ft^3/s)							
Feb. 12	0230	*4110	*15.38	May 19	1900	2190	12.46
Feb. 27	2330	2110	12.16				
04185440 UNNAMED TRIBUTARY TO LOST CREEK NEAR FARMER, OHIO (Base discharge: 120 ft^3/s)							
Feb. 09	2000	227	3.99	May 18	1415	246	4.08
Feb. 25	0530	133	3.45	June 06	0615	233	4.02
Apr. 06	1200	*553	*5.17				
04186500 AUGLAIZE RIVER NEAR FORT JENNINGS, OHIO (Base discharge: 2,700 ft^3/s)							
May 28	1100	*2730	*10.75				
04189000 BLANCHARD RIVER NEAR FINDLAY, OHIO (Base discharge: 2,800 ft^3/s)							
Apr. 21	0600	*2290	*6.55	May 27	1830	2290	6.55
Portage River Basin							
04195500 PORTAGE RIVER AT WOODVILLE, OHIO (Base discharge: 3,500 ft^3/s)							
Feb. 10	2100	4830	9.61	May 17	0330	3600	8.43
Apr. 07	2200	*6390	*10.85				
04195820 PORTAGE RIVER AT ELMORE, OHIO (Base discharge: 3,800 ft^3/s)							
Dec. 17	1700	4190	8.30	Apr. 08	0030	*6580	*10.58
Feb. 10	1730	5500	9.55	May 17	0600	3810	7.90
Sandusky River Basin							
04196000 SANDUSKY RIVER NEAR BUCYRUS, OHIO (Base discharge: 1,200 ft^3/s)							
Dec. 17	0530	*898	*4.83				
04196500 SANDUSKY RIVER NEAR UPPER SANDUSKY, OHIO (Base discharge: 2,500 ft^3/s)							
Dec. 18	0030	*2400	*5.55				

PEAK DISCHARGE AND STAGE AT CONTINUOUS-RECORD SURFACE DISCHARGE STATIONS

PEAK DISCHARGES EQUAL TO OR GREATER THAN BASE DISCHARGES, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001—Continued

[ft^3/s, cubic feet per second; ---, no data; e, estimated; b, ice jam]

DATE	TIME	DISCHARGE (FT3/S)	GAGE HEIGHT (FEET)	DATE	TIME	DISCHARGE (FT3/S)	GAGE HEIGHT (FEET)
Sandusky River Basin—Continued							
04196800 TYMOCHTEE CREEK AT CRAWFORD, OHIO (Base discharge: 1,800 ft^3/s)							
Apr. 13	1600	*1760	*6.02				
04197100 HONEY CREEK AT MELMORE, OHIO (Base discharge: 1,500 ft^3/s)							
Dec. 17	1700	---	*6.19b	Feb. 10	1100	*1040	6.14
04198000 SANDUSKY RIVER NEAR FREMONT, OHIO (Base discharge: 10,000 ft^3/s)							
Dec. 17	---	*9000e	---	Jan. 31	1800	---	*7.21b
Huron River Basin							
04199000 HURON RIVER AT MILAN, OHIO (Base discharge: 4,700 ft^3/s)							
Apr. 06	2015	*5850	*16.27				
Old Woman's Creek Basin							
04199155 OLD WOMAN'S CREEK AT BERLIN ROAD NEAR HURON,OHIO (Base discharge: 400 ft^3/s)							
Feb 10	0415	624	8.47	Apr. 06	1630	*650	*8.59
Black River Basin							
04199500 VERMILION RIVER NEAR VERMILION, OHIO (Base discharge: 3,200 ft^3/s)							
Jan. 31	1815	---	*10.80b	Apr. 07	0045	*3290	5.77
04200500 BLACK RIVER AT ELYRIA, OHIO (Base discharge: 3,200 ft^3/s)							
Dec. 17	2330	4050	9.27	Apr. 07	1600	*4420	*9.70
Rocky River Basin							
04201500 ROCKY RIVER NEAR BEREA, OHIO (Base discharge: 4,000 ft^3/s)							
Dec. 17	1030	*6330	*5.66	May 22	0200	5540	5.33
Apr. 07	0100	4580	4.89				
Cuyahoga River Basin							
04206014 POWERS BROOK AT HUDSON, OHIO (Base discharge: 20 ft^3/s)							
Dec. 17	0320	*38	*11.74	Mar. 13	1205	20	11.26
04206021 POWERS BROOK AT STOW, OHIO (Base discharge: 70 ft^3/s)							
Dec. 17	0035	*151	*11.45	Mar. 13	1105	77	10.96
04206029 MUD BROOK AT STOW, OHIO (Base discharge: 90 ft^3/s)							
Dec. 17	1720	*164	*13.32	Mar. 14	0835	92	12.13
04206038 CRYSTAL CREEK AT STOW, OHIO (Base discharge: 60 ft^3/s)							
Dec. 17	0115	*117	*13.35	Feb. 10	0045	61	12.45
04206043 MUD BROOK AT CUYAHOGA FALLS, OHIO (Base discharge: 140 ft^3/s)							
Dec. 17	0040	196	11.28	July 25	1700	*260	*11.46

PEAK DISCHARGES EQUAL TO OR GREATER THAN BASE DISCHARGES, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001—Continued

[ft^3/s, cubic feet per second; ---, no data; e, estimated; b, ice jam]

DATE	TIME	DISCHARGE (FT3/S)	GAGE HEIGHT (FEET)	DATE	TIME	DISCHARGE (FT3/S)	GAGE HEIGHT (FEET)
Cuyahoga River Basin—Continued							
04206212 NORTH FORK AT BATH CENTER, OHIO (Base discharge: 230 ft^3/s)							
Dec. 17	0045	*216	*11.65				
04206220 YELLOW CREEK AT BOTZUM, OHIO (Base discharge: 650 ft^3/s)							
Dec. 17	0040	*806	*13.84				
04207200 TINKERS CREEK AT BEDFORD, OHIO (Base discharge: 1,500 ft^3/s)							
Dec. 16	2400	2950	7.26	Aug. 03	1300	1630	6.18
Apr. 07	0530	*3670	*7.78				
Grand River Basin							
04212100 GRAND RIVER NEAR PAINESVILLE, OHIO (Base discharge: 6,500 ft^3/s)							
Dec. 17	1100	7420	7.79	Feb. 10	0430	*11000	*9.59
Conneaut River Basin							
04213000 CONNEAUT CREEK AT CONNEAUT, OHIO (Base discharge: 2,900 ft^3/s)							
Dec. 18	0900	3890	6.66	Feb. 10	2130	*4240	6.95
Jan. 31	2130	---	*8.68b				

GROUND-WATER RECORDS
Crawford County

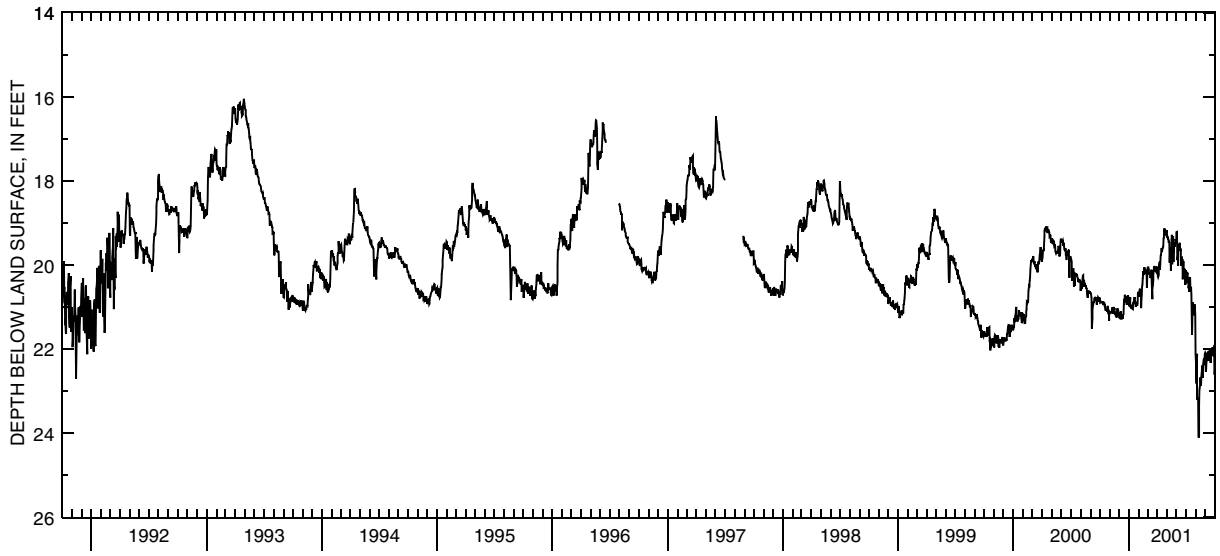
404838082563100. LOCAL NUMBER, CR-1

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 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.77	21.13	21.21	20.92	20.75	20.07	20.12	19.16	19.21	20.12	22.11	22.11
2	20.89	21.10	21.25	20.98	20.73	20.03	20.15	19.28	19.20	20.16	22.45	22.53
3	20.88	21.11	21.26	20.91	20.71	20.10	20.26	19.33	19.37	20.43	22.82	22.48
4	20.89	21.11	21.18	20.83	20.60	20.09	20.28	19.33	19.88	20.21	22.54	22.30
5	20.87	21.13	21.20	20.76	20.56	20.14	20.23	19.37	19.77	20.21	22.11	22.25
6	20.87	21.12	21.17	21.00	20.66	20.20	20.13	19.38	20.01	20.18	22.66	22.22
7	20.88	21.11	21.09	20.94	20.73	20.22	20.01	19.47	19.67	20.36	23.18	22.10
8	20.89	21.13	21.26	20.98	20.62	20.17	19.95	19.45	19.55	20.28	23.18	22.08
9	20.89	21.01	21.29	21.04	21.02	20.25	19.92	19.46	19.53	20.55	23.78	22.07
10	20.86	21.13	21.19	21.01	20.82	20.26	20.11	19.94	19.51	20.50	24.10	22.09
11	20.92	21.16	21.19	20.99	20.71	20.31	19.92	19.73	19.47	20.64	24.07	22.28
12	20.95	21.06	21.28	21.03	20.50	20.26	19.77	19.59	19.52	20.56	23.33	22.12
13	20.91	20.99	21.24	21.05	20.47	20.11	19.76	19.91	19.66	20.31	22.97	22.21
14	20.87	21.02	21.17	20.97	20.32	20.20	19.67	20.14	19.61	20.28	22.86	22.13
15	20.91	21.07	21.15	20.90	20.24	20.64	19.59	19.66	20.01	20.63	22.73	22.09
16	20.97	21.02	20.92	20.91	20.14	20.81	19.68	19.40	19.90	20.57	22.67	22.01
17	20.96	21.15	20.84	20.89	20.22	20.56	19.63	19.28	19.79	20.51	22.79	22.33
18	21.06	21.16	20.85	20.78	20.18	20.47	19.61	19.98	19.84	20.71	22.87	22.18
19	21.06	21.11	20.70	20.78	20.05	20.35	19.58	19.76	19.99	21.33	22.66	22.02
20	21.06	21.15	20.76	20.79	20.08	20.20	19.56	19.44	19.86	21.66	22.48	22.15
21	21.04	21.21	20.73	20.86	20.19	20.07	19.37	19.31	20.34	21.19	22.44	22.05
22	21.07	21.21	20.84	20.88	20.10	20.05	19.35	19.93	20.08	20.94	22.39	22.01
23	21.07	21.24	20.86	20.99	20.19	20.02	19.13	19.79	19.90	20.89	22.68	21.95
24	21.11	21.22	20.88	20.92	20.16	20.10	19.18	19.52	20.26	20.98	22.59	22.17
25	21.01	21.14	20.94	20.97	20.13	20.09	19.18	19.49	20.18	21.07	22.35	22.06
26	20.97	21.02	20.87	20.90	20.22	20.13	19.16	19.47	20.09	21.19	22.23	21.99
27	21.05	21.08	20.74	20.95	20.54	20.16	19.18	19.56	20.11	21.17	22.38	21.95
28	21.12	21.14	20.79	20.95	20.27	20.14	19.27	19.48	20.15	20.98	22.23	21.97
29	21.11	21.12	20.71	20.90	---	20.07	19.29	19.38	20.47	20.93	22.21	22.60
30	21.33	21.18	20.76	20.64	---	20.03	19.20	19.42	20.29	21.16	22.11	22.50
31	21.16	---	20.88	20.70	---	20.03	---	19.40	---	21.63	22.09	---
MAX	21.33	21.24	21.29	21.05	21.02	20.81	20.28	20.14	20.47	21.66	24.10	22.60

CAL YR 2000 LOW 21.53
WTR YR 2001 LOW 24.10



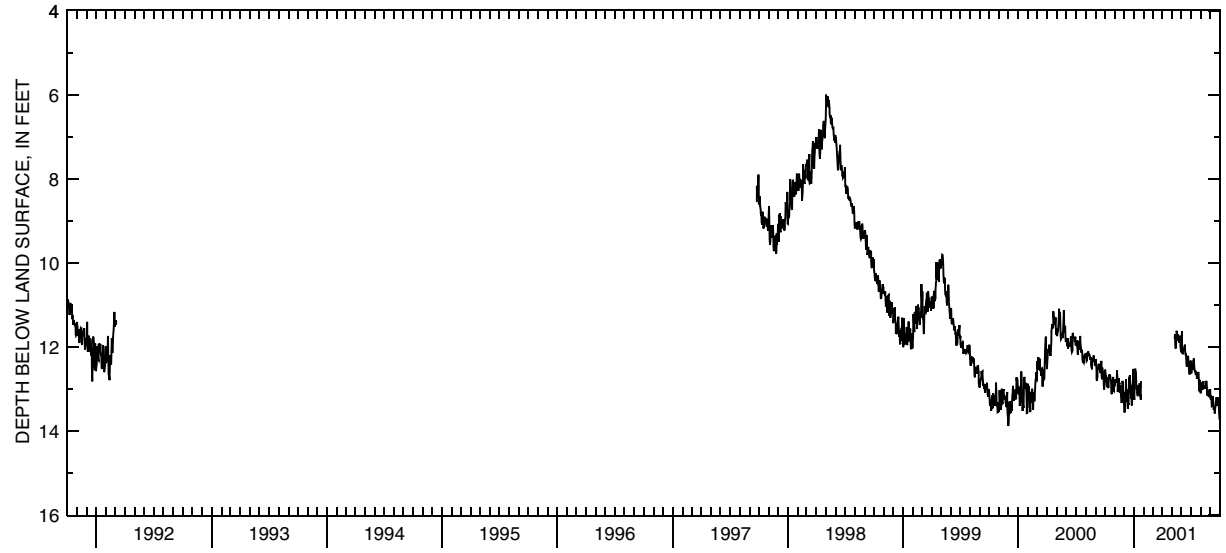
412518081221500. LOCAL NUMBER, GE-3A

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 1130 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 for Chagrin Falls municipal supply.
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 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.72	12.92	13.37	13.08	---	---	---	---	11.88	12.45	13.10	13.19
2	12.54	12.84	13.54	13.26	---	---	---	---	11.63	12.63	13.04	13.25
3	12.62	12.80	13.56	13.17	---	---	---	---	11.91	12.56	12.90	13.15
4	12.67	12.77	13.42	12.80	---	---	---	---	12.11	12.39	12.84	13.26
5	12.70	12.80	13.10	12.51	---	---	---	---	12.17	12.38	12.98	13.41
6	12.77	12.84	13.10	12.54	---	---	---	---	12.11	12.54	13.02	13.40
7	12.89	12.77	12.77	12.60	---	---	---	---	12.06	12.51	12.96	13.23
8	12.94	12.81	13.09	12.82	---	---	---	---	12.05	12.33	12.87	13.17
9	12.95	12.56	13.29	12.99	---	---	---	---	12.06	12.33	12.81	13.23
10	12.72	12.87	13.09	13.02	---	---	---	11.81	12.02	12.27	12.90	13.41
11	12.88	13.07	13.01	13.01	---	---	---	11.70	11.94	12.42	12.96	13.50
12	12.97	13.03	13.38	13.11	---	---	---	11.94	11.99	12.53	12.96	13.47
13	12.83	12.82	13.47	13.17	---	---	---	12.03	12.11	12.57	12.96	13.43
14	12.69	12.74	13.33	13.09	---	---	---	11.99	12.20	12.57	12.99	13.58
15	12.65	12.89	13.37	12.90	---	---	---	11.85	12.15	12.60	12.98	13.55
16	12.70	12.85	13.01	13.07	---	---	---	11.61	12.27	12.66	12.90	13.43
17	12.68	13.00	12.71	13.10	---	---	---	11.64	12.39	12.63	12.96	13.37
18	12.70	13.09	12.93	13.04	---	---	---	11.72	12.47	12.65	12.96	13.29
19	12.76	13.01	12.67	12.86	---	---	---	11.79	12.36	12.69	12.80	13.23
20	12.79	12.92	12.91	12.89	---	---	---	11.81	12.39	12.75	12.98	13.19
21	12.89	13.12	12.89	13.15	---	---	---	11.70	12.36	12.67	13.11	13.23
22	13.09	13.21	13.09	13.25	---	---	---	11.73	12.21	12.60	13.15	13.38
23	13.12	13.33	13.24	13.12	---	---	---	11.82	12.35	12.63	13.05	13.40
24	13.01	13.30	13.13	12.81	---	---	---	11.82	12.47	12.59	13.17	13.19
25	12.91	13.21	13.39	---	---	---	---	11.90	12.56	12.66	13.15	13.25
26	12.83	12.80	13.35	---	---	---	---	11.90	12.63	12.93	13.04	13.23
27	12.71	12.86	12.97	---	---	---	---	11.73	12.65	13.05	13.02	13.38
28	13.04	13.06	12.86	---	---	---	---	11.81	12.57	12.98	13.11	13.58
29	13.05	13.07	12.74	---	---	---	---	11.97	12.45	12.78	13.19	13.70
30	12.94	13.22	12.52	---	---	---	---	12.11	12.32	12.87	13.13	13.70
31	12.93	---	12.88	---	---	---	---	12.12	---	13.00	13.00	---
MAX	13.12	13.33	13.56	13.26	---	---	---	12.12	12.65	13.05	13.19	13.70

CAL YR 2000 LOW 13.57
WTR YR 2001 LOW 13.70



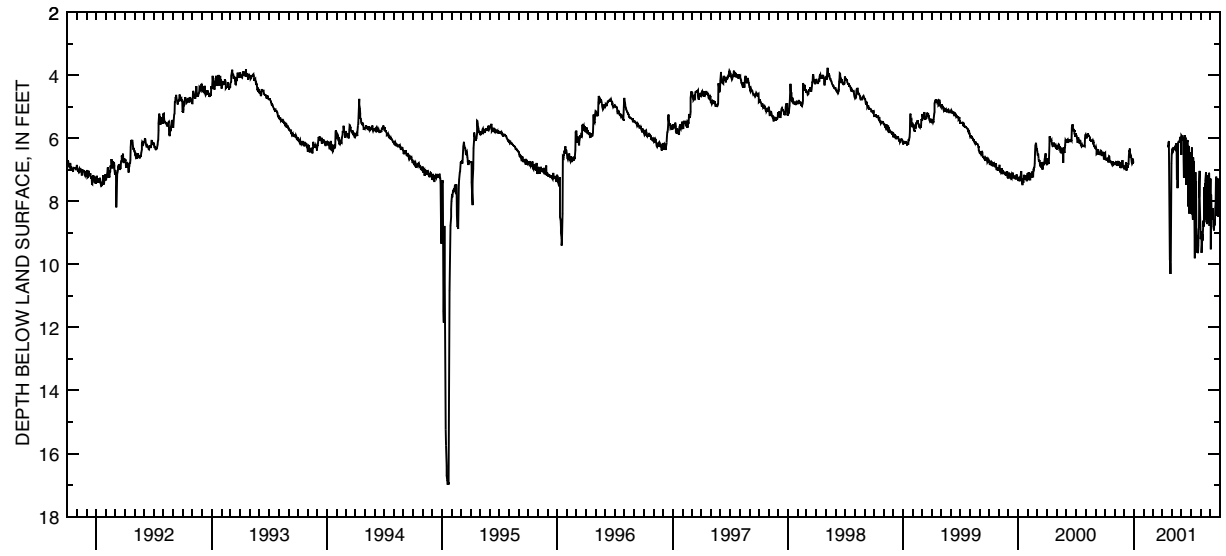
405940083275500. LOCAL NUMBER, HA-3

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 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.46	6.75	6.93	---	---	---	---	6.48	5.91	6.60	9.19	7.27
2	6.45	6.80	6.96	---	---	---	---	6.40	5.93	8.39	9.01	9.52
3	6.64	6.83	6.95	---	---	---	---	6.42	6.03	6.69	8.95	7.78
4	6.69	6.78	6.89	---	---	---	---	6.36	6.05	6.29	9.63	8.22
5	6.63	6.77	6.89	---	---	---	---	6.38	6.05	8.41	9.28	8.32
6	6.70	6.80	6.88	---	---	---	---	6.32	5.99	8.39	9.05	8.27
7	6.67	6.78	6.76	---	---	---	---	6.32	5.95	8.57	9.24	8.40
8	6.63	6.86	7.00	---	---	---	---	6.32	7.24	6.60	8.79	8.57
9	6.63	6.71	7.00	---	---	---	---	6.31	6.03	8.58	8.60	8.22
10	6.64	6.87	6.90	---	---	---	---	6.27	5.92	6.71	8.80	8.79
11	6.70	6.87	6.90	---	---	---	---	6.25	5.92	8.18	8.74	8.85
12	6.76	6.77	6.91	---	---	---	---	6.36	5.94	8.88	7.55	8.92
13	6.65	6.72	6.91	---	---	---	---	6.37	5.96	9.81	8.67	8.58
14	6.56	6.77	6.81	---	---	---	---	6.31	5.99	8.76	7.43	8.76
15	6.58	6.85	6.81	---	---	---	---	6.23	5.99	7.07	8.45	8.67
16	6.71	6.75	6.56	---	---	---	---	6.15	7.48	8.04	7.33	8.20
17	6.74	6.90	6.41	---	---	---	6.26	7.30	6.17	7.35	7.07	8.06
18	6.70	6.90	6.41	---	---	---	6.26	7.16	6.12	8.96	8.59	7.35
19	6.74	6.79	6.32	---	---	---	6.24	6.19	6.07	9.26	8.30	7.22
20	6.74	6.84	6.60	---	---	---	6.22	7.58	6.08	9.62	8.12	8.47
21	6.74	6.94	6.55	---	---	---	6.11	6.13	6.06	9.40	8.72	8.15
22	6.79	6.91	6.53	---	---	---	6.09	6.11	8.16	9.09	8.64	7.41
23	6.83	6.91	6.58	6.70	---	---	8.26	6.10	6.51	9.64	7.27	7.99
24	6.78	6.87	6.67	---	---	---	9.39	6.10	6.24	9.40	7.17	7.28
25	6.77	6.78	6.74	---	---	---	9.83	6.13	8.38	8.88	7.68	7.93
26	6.74	6.69	6.80	---	---	---	9.98	6.11	6.74	8.83	7.11	8.49
27	6.75	6.80	6.78	---	---	---	10.30	5.98	7.58	7.42	7.09	8.02
28	6.85	6.88	6.66	---	---	---	9.89	5.95	8.15	7.03	7.12	7.41
29	6.83	6.88	6.66	---	---	---	7.49	5.97	6.44	7.89	8.78	7.39
30	6.81	6.93	6.77	---	---	---	6.80	5.98	8.18	8.71	7.26	8.09
31	6.83	---	6.80	---	---	---	---	6.52	---	8.97	7.91	---
MAX	6.85	6.94	7.00	6.70	---	---	10.30	7.58	8.38	9.81	9.63	9.52

CAL YR 2000 LOW 7.46
WTR YR 2001 LOW 10.30



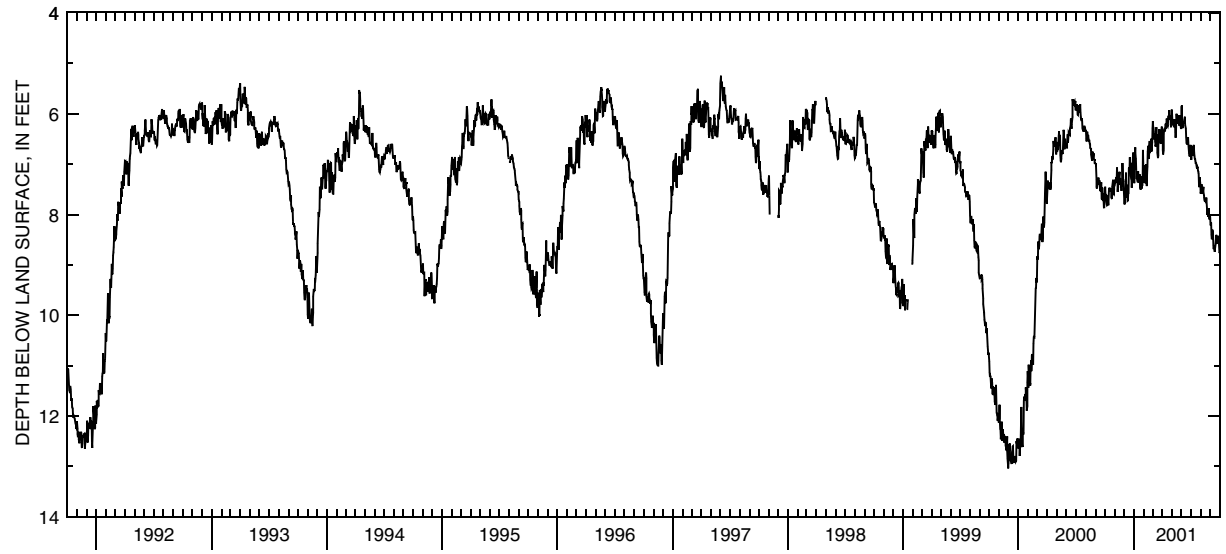
404648083412600. LOCAL NUMBER, HN-2A

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, 5.25 ft below land-surface datum, June 2, 1997.

DEPTH BELOW LAND SURFACE (WATER LEVEL), FEET, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.59	7.41	7.63	7.22	7.27	6.29	6.41	5.92	5.87	6.79	7.58	8.19
2	7.45	7.31	7.77	7.38	7.37	6.15	6.51	6.01	5.84	6.92	7.53	8.22
3	7.58	7.37	7.80	7.24	7.35	6.27	6.72	6.14	6.15	6.80	7.40	8.16
4	7.62	7.35	7.65	6.94	7.17	6.28	6.81	6.11	6.25	6.65	7.42	8.40
5	7.60	7.35	7.51	6.67	7.03	6.36	6.72	6.17	6.29	6.73	7.54	8.49
6	7.74	7.29	7.48	6.77	7.23	6.49	6.41	6.16	6.19	6.84	7.59	8.47
7	7.80	7.26	7.17	6.90	7.38	6.51	6.33	6.21	6.17	6.75	7.56	8.30
8	7.82	7.30	7.56	7.12	7.21	6.40	6.30	6.25	6.17	6.64	7.50	8.34
9	7.81	7.07	7.66	7.27	7.00	6.55	6.30	6.27	6.17	6.65	7.45	8.40
10	7.62	7.45	7.43	7.26	7.36	6.58	6.35	6.19	6.13	6.62	7.56	8.61
11	7.74	7.55	7.41	7.21	7.44	6.65	6.27	6.12	6.06	6.77	7.62	8.69
12	7.82	7.42	7.73	7.30	7.19	6.59	6.20	6.37	6.13	6.84	7.66	8.61
13	7.65	7.19	7.72	7.36	7.06	6.27	6.30	6.48	6.23	6.89	7.71	8.65
14	7.49	7.21	7.58	7.21	6.75	6.48	6.24	6.40	6.29	6.90	7.75	8.74
15	7.49	7.28	7.57	7.14	6.65	6.41	6.10	6.21	6.29	6.94	7.71	8.69
16	7.54	7.15	7.09	7.35	6.64	6.43	6.12	6.00	6.47	6.99	7.67	8.63
17	7.47	7.39	7.07	7.36	6.88	6.77	6.24	6.11	6.57	6.97	7.77	8.58
18	7.52	7.41	7.11	7.24	6.88	6.88	6.25	6.16	6.60	7.01	7.76	8.50
19	7.50	7.28	6.87	7.20	6.62	6.83	6.18	6.19	6.57	7.06	7.67	8.40
20	7.48	7.30	7.03	7.30	6.54	6.65	6.12	6.16	6.61	7.09	7.88	8.45
21	7.53	7.46	6.98	7.46	6.78	6.41	6.04	6.03	6.55	7.06	8.00	8.45
22	7.67	7.46	7.23	7.51	6.65	6.37	6.12	6.13	6.47	7.07	7.97	8.57
23	7.69	7.53	7.28	7.35	6.72	6.31	5.93	6.17	6.61	7.13	7.95	8.53
24	7.57	7.46	7.30	7.24	6.70	6.49	6.07	6.18	6.71	7.15	8.04	8.49
25	7.45	7.29	7.47	7.49	6.50	6.47	6.09	6.24	6.78	7.19	7.98	8.47
26	7.35	6.98	7.33	7.37	6.75	6.54	6.06	6.22	6.82	7.40	7.88	8.42
27	7.31	7.17	6.98	7.39	6.67	6.60	6.05	6.03	6.85	7.46	7.94	8.54
28	7.59	7.35	6.97	7.43	6.57	6.58	6.21	6.14	6.80	7.37	8.04	8.67
29	7.60	7.34	6.80	7.34	---	6.38	6.27	6.21	6.69	7.26	8.10	8.76
30	7.50	7.51	6.77	6.72	---	6.26	6.10	6.30	6.62	7.37	8.02	8.74
31	7.44	---	7.06	7.06	---	6.27	---	6.25	---	7.50	8.05	---
MAX	7.82	7.55	7.80	7.51	7.44	6.88	6.81	6.48	6.85	7.50	8.10	8.76

CAL YR 2000 LOW 12.79
WTR YR 2001 LOW 8.76



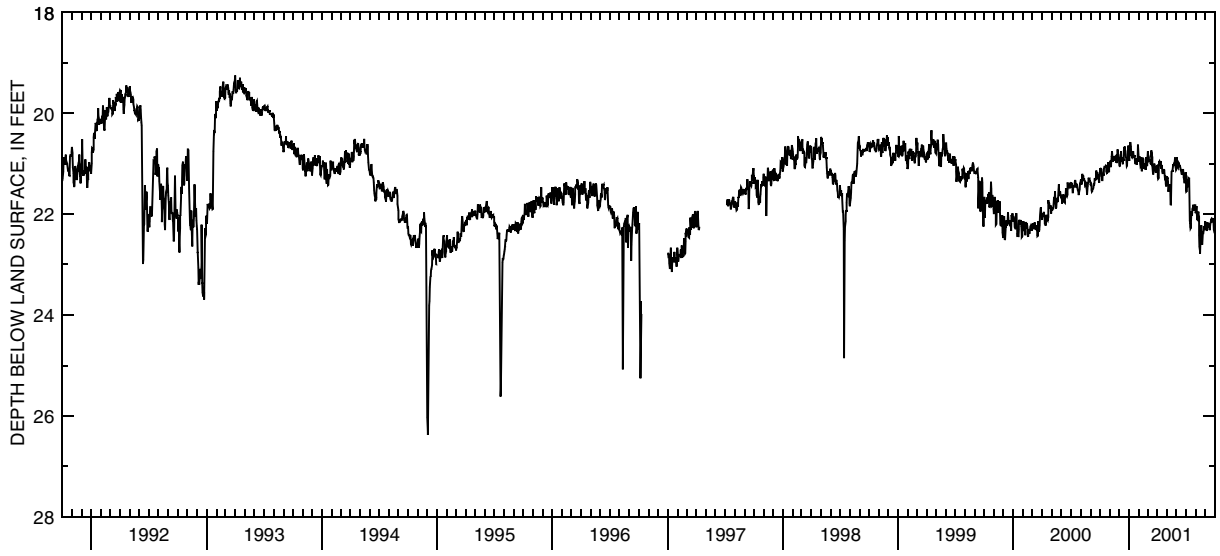
412123083574000. LOCAL NUMBER, HY-2

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 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.23	21.03	20.95	20.87	20.86	20.86	21.04	21.27	20.97	21.30	21.98	22.25
2	21.09	21.01	21.04	20.95	20.96	20.76	21.12	21.25	20.87	21.56	21.93	22.23
3	21.12	20.97	21.05	20.91	20.94	20.83	21.26	21.29	20.98	21.55	21.84	22.29
4	21.11	20.94	21.04	20.73	20.89	20.85	21.30	21.29	21.06	21.39	21.91	22.29
5	21.12	21.07	20.94	20.58	20.86	20.87	21.28	21.36	21.08	21.47	22.11	22.33
6	21.12	21.03	20.93	20.57	20.98	20.95	21.14	21.56	20.99	21.45	22.12	22.28
7	21.17	20.85	20.75	20.67	21.04	20.94	20.96	21.53	20.97	21.36	22.00	22.16
8	21.33	20.86	20.92	20.78	21.03	20.92	20.95	21.47	21.00	21.30	21.98	22.22
9	21.33	20.76	20.95	20.82	20.88	20.95	20.97	21.49	20.99	21.31	21.95	22.26
10	21.21	20.91	20.89	20.85	21.05	20.96	21.03	21.43	21.02	21.33	21.99	22.18
11	21.19	20.95	20.90	20.81	21.15	21.00	20.97	21.41	21.07	21.28	22.05	22.25
12	21.21	20.95	20.96	20.83	21.10	21.01	20.95	21.50	21.06	21.68	22.42	22.19
13	21.24	20.89	21.01	20.89	21.03	20.74	21.09	21.82	21.06	22.13	22.64	22.24
14	21.10	20.86	20.90	20.84	20.90	20.87	21.09	21.81	21.13	22.18	22.74	22.32
15	21.06	20.89	20.95	20.75	20.90	20.84	21.02	21.49	21.11	22.28	22.79	22.26
16	21.06	20.85	20.75	20.87	20.92	20.87	21.06	21.16	21.15	22.27	22.60	22.19
17	21.06	20.89	20.67	20.88	21.10	21.04	21.16	21.15	21.18	22.08	22.46	22.16
18	21.07	20.94	20.74	20.86	21.08	21.19	21.19	21.14	21.21	21.95	22.38	22.16
19	21.06	20.86	20.66	20.86	20.99	21.21	21.19	21.14	21.15	22.02	22.22	22.09
20	21.04	20.85	20.74	20.89	21.01	21.17	21.18	21.13	21.17	22.03	22.45	22.16
21	21.05	20.96	20.76	20.99	21.09	21.07	21.11	21.02	21.14	21.91	22.59	22.09
22	21.15	20.96	20.88	20.99	21.08	21.03	21.20	21.01	21.11	21.88	22.59	22.10
23	21.19	20.97	20.90	20.98	21.11	21.00	21.12	21.04	21.19	21.90	22.35	22.10
24	21.18	20.97	20.94	20.90	21.11	21.08	21.19	21.01	21.27	21.83	22.38	22.11
25	21.08	20.94	21.04	21.02	20.87	21.08	21.27	21.03	21.31	21.83	22.38	22.09
26	21.02	20.73	21.03	21.01	21.04	21.12	21.26	21.01	21.37	21.88	22.30	22.16
27	20.97	20.73	20.86	20.91	21.03	21.18	21.24	20.88	21.37	21.93	22.27	22.31
28	21.11	20.81	20.81	20.95	21.03	21.16	21.40	20.97	21.34	21.90	22.27	22.33
29	21.16	20.83	20.76	20.93	---	21.07	21.45	21.04	21.25	21.87	22.32	22.36
30	21.17	20.87	20.64	20.62	---	21.04	21.40	21.12	21.17	21.81	22.24	22.36
31	21.08	---	20.77	20.73	---	21.05	---	21.11	---	21.92	22.14	---
MAX	21.33	21.07	21.05	21.02	21.15	21.21	21.45	21.82	21.37	22.28	22.79	22.36

CAL YR 2000 LOW 22.45
WTR YR 2001 LOW 22.79



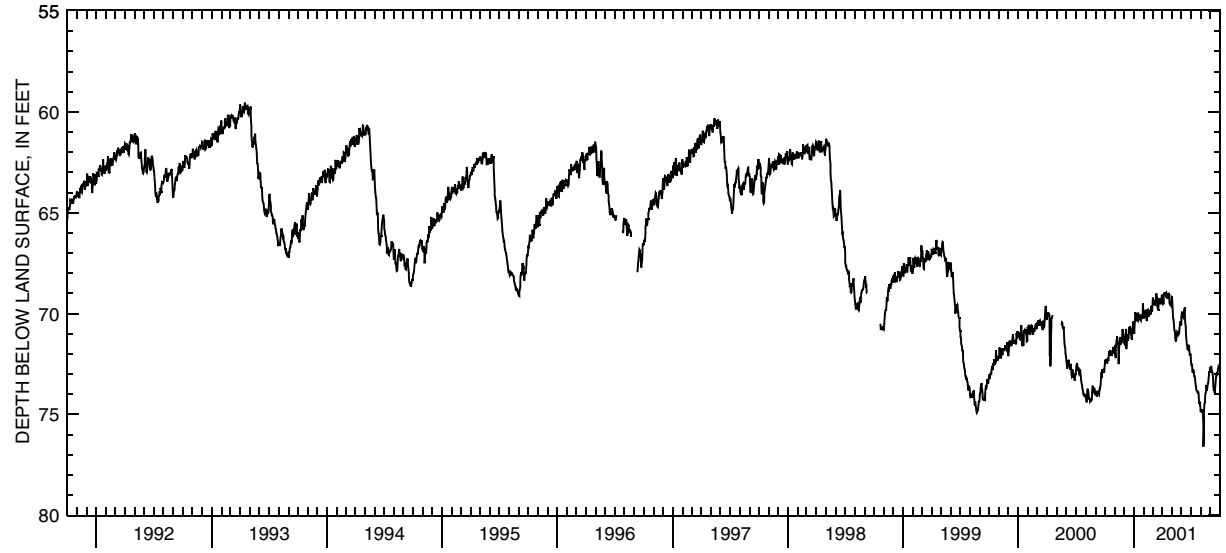
413704083362200. LOCAL NUMBER, LU-1

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 523.0 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 3.00 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 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72.50	71.70	71.35	70.85	70.06	69.52	69.12	69.18	70.15	72.33	74.90	72.76
2	72.29	71.56	71.50	71.00	70.22	69.22	69.18	69.20	69.91	72.52	74.84	72.71
3	72.35	71.96	71.53	70.87	70.22	69.37	69.47	69.53	70.04	72.51	74.76	72.60
4	72.32	72.22	71.36	70.34	70.11	69.34	69.55	69.87	70.15	72.52	74.75	72.69
5	72.28	71.81	71.16	69.94	69.97	69.36	69.51	70.19	70.19	72.71	74.84	72.86
6	72.36	71.55	71.13	69.95	70.00	69.53	69.12	70.26	70.08	72.93	74.85	72.94
7	72.41	71.32	70.76	70.03	70.16	69.52	69.07	70.38	70.02	72.83	74.81	72.90
8	72.45	71.36	71.76	70.27	70.08	69.36	68.95	70.62	69.95	72.75	75.14	73.08
9	72.45	71.11	71.59	70.38	69.81	69.51	69.02	70.82	69.90	72.82	75.82	73.20
10	72.20	71.38	71.16	70.28	70.20	69.52	69.09	70.87	69.82	72.88	76.61	73.61
11	72.27	71.50	71.04	70.24	70.37	69.55	69.01	70.90	69.69	73.12	75.46	73.80
12	72.36	71.44	71.27	70.30	70.20	69.54	68.99	71.22	70.04	73.12	74.78	73.80
13	72.15	72.05	71.34	70.36	70.08	69.01	69.15	71.34	70.43	73.12	74.49	73.79
14	71.95	72.51	71.20	70.21	69.84	69.26	69.13	71.39	70.69	73.30	74.40	73.93
15	71.87	71.86	71.25	69.96	69.80	69.23	69.00	71.28	70.86	73.45	74.23	73.83
16	71.93	71.42	70.79	70.20	69.83	69.26	69.04	71.13	71.15	73.58	73.98	73.59
17	71.89	71.40	70.68	70.21	70.11	69.63	69.25	71.02	71.33	73.66	73.90	73.42
18	71.90	71.44	70.80	70.15	70.12	69.81	69.24	70.93	71.54	73.81	73.84	73.21
19	71.90	71.27	70.65	70.11	69.93	69.81	69.20	70.95	71.58	73.84	73.55	73.04
20	71.85	71.17	70.79	70.12	69.83	69.68	69.09	70.99	71.77	73.86	73.70	72.97
21	71.93	71.35	70.75	70.31	70.07	69.45	69.06	70.88	71.78	73.89	73.81	72.97
22	72.08	71.39	71.01	70.35	70.00	69.34	69.21	71.03	71.61	73.92	73.68	73.00
23	72.08	71.44	71.08	70.21	70.00	69.25	69.02	71.03	71.59	73.92	73.46	72.92
24	71.95	71.38	71.11	70.05	70.00	69.39	69.51	70.95	71.60	73.91	73.50	72.77
25	71.91	71.24	71.29	70.27	69.63	69.39	69.54	70.81	71.62	73.99	73.40	72.74
26	71.81	70.79	71.23	70.20	69.91	69.45	69.51	70.75	71.85	74.33	73.08	72.64
27	71.66	70.84	70.85	70.11	69.89	69.54	69.40	70.43	72.05	74.48	73.09	72.67
28	71.94	71.01	70.77	70.17	69.85	69.53	69.59	70.43	72.05	74.40	72.89	72.77
29	71.94	71.03	70.61	70.11	---	69.30	69.62	70.49	71.98	74.37	72.94	72.83
30	71.85	71.18	70.41	69.50	---	69.15	69.47	70.60	72.04	74.58	72.78	72.78
31	71.78	---	70.69	69.83	---	69.07	---	70.53	---	74.82	72.66	---
MAX	72.50	72.51	71.76	71.00	70.37	69.81	69.62	71.39	72.05	74.82	76.61	73.93

CAL YR 2000 LOW 74.40
WTR YR 2001 LOW 76.61



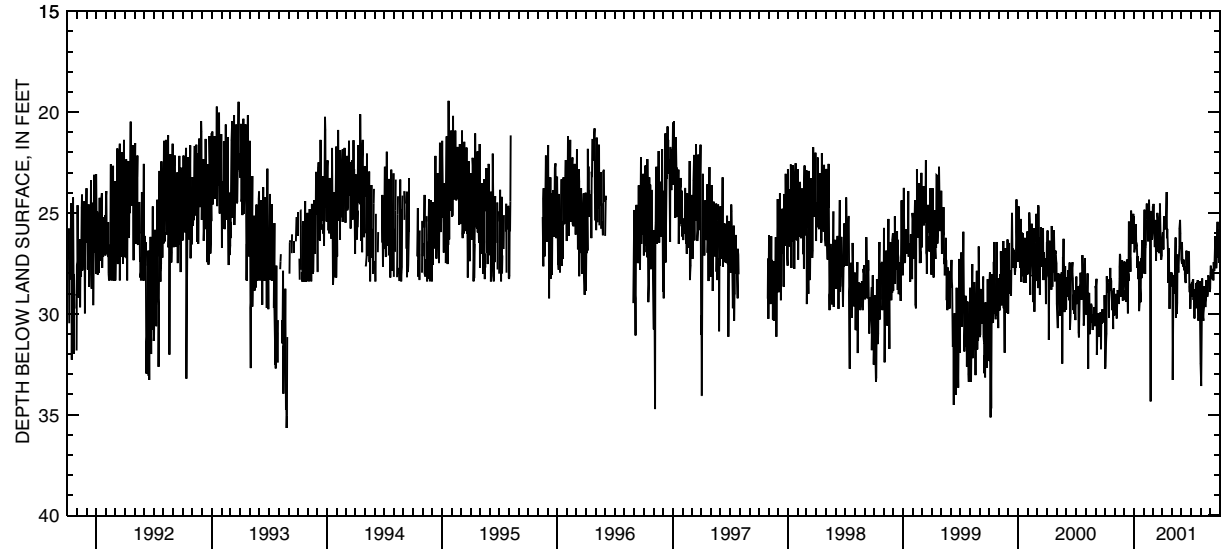
410142082005900. LOCAL NUMBER, MD-1

LOCATION.—Latitude 41°01′42″, longitude 82°00′59″, Hydrologic Unit 04110001, at waterworks plant at Lodi, Ohio. Owner: Lodi Water Department.
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 current year.
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 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29.69	29.96	28.63	25.17	26.73	25.96	26.26	28.52	27.30	28.85	32.48	27.98
2	32.74	30.02	27.42	26.38	26.79	24.69	25.98	28.02	27.52	28.74	33.60	27.62
3	32.60	29.87	27.70	26.96	25.43	25.33	26.14	28.19	26.46	28.49	31.52	28.15
4	31.89	29.03	28.11	26.76	24.85	24.56	26.82	33.30	27.23	28.45	30.21	28.27
5	31.32	30.06	29.34	26.77	25.75	25.97	26.75	32.24	27.65	29.17	28.26	27.80
6	31.01	29.66	28.83	25.95	28.04	25.55	25.90	28.91	27.43	28.40	30.00	28.24
7	28.14	30.17	29.40	25.57	26.74	26.01	25.18	29.02	27.67	28.36	30.20	28.29
8	28.83	30.24	27.45	26.66	26.57	26.70	25.84	28.11	27.32	28.29	30.23	27.97
9	28.50	29.65	27.81	26.47	25.32	25.89	25.67	28.47	27.73	29.32	30.35	27.79
10	28.97	28.86	27.32	26.68	24.93	26.08	25.80	29.00	27.85	28.92	30.02	28.36
11	28.91	28.84	29.07	27.10	24.55	25.35	25.63	28.15	27.68	29.58	29.64	27.45
12	28.83	29.09	29.23	27.73	25.25	27.39	25.36	27.48	28.06	30.24	28.65	27.72
13	29.50	29.08	29.99	27.17	25.76	26.40	25.35	26.23	28.41	29.67	29.28	27.89
14	30.21	29.48	28.00	27.43	25.38	26.43	24.87	30.21	28.48	28.78	28.94	27.31
15	28.29	29.49	28.39	28.30	26.42	26.93	23.98	28.91	28.34	29.63	29.47	26.63
16	28.42	28.27	25.43	27.42	25.97	25.61	26.26	28.29	27.26	29.03	29.67	26.16
17	28.58	27.69	25.55	28.51	25.29	25.00	25.80	30.02	26.88	28.50	29.30	26.60
18	27.74	27.04	27.37	29.89	24.36	25.40	26.35	29.47	27.20	28.60	28.91	26.83
19	28.88	27.13	27.26	29.37	25.12	26.52	26.86	27.16	28.04	29.74	28.34	27.75
20	28.26	27.78	27.21	28.40	25.99	26.72	28.49	27.07	27.76	28.45	28.80	27.49
21	28.39	29.16	27.92	28.83	25.52	26.32	27.96	27.34	27.52	29.38	29.01	26.37
22	28.81	28.56	25.83	29.44	33.52	27.01	26.76	27.96	27.40	28.34	29.17	25.85
23	29.32	27.91	24.90	28.47	34.36	26.18	27.50	27.72	26.91	30.11	29.02	25.45
24	29.84	28.11	25.14	27.25	25.39	26.54	29.76	27.06	26.95	30.36	28.46	26.83
25	29.82	27.36	25.84	28.24	24.91	24.55	28.58	26.68	27.08	30.31	28.10	26.93
26	29.33	28.15	26.38	27.36	26.09	25.51	28.19	25.78	28.67	30.15	28.20	27.21
27	30.77	29.36	25.62	26.69	26.34	26.90	28.66	25.36	28.94	29.60	28.48	26.80
28	28.93	28.96	26.55	26.35	26.26	27.13	28.14	26.02	28.54	28.45	28.69	27.48
29	28.74	28.56	25.65	28.03	---	27.32	28.02	26.56	29.77	28.38	28.93	25.84
30	29.25	27.86	25.05	27.59	---	27.11	27.94	26.54	29.29	29.88	28.86	25.44
31	30.10	---	25.32	26.58	---	26.20	---	26.89	---	32.44	28.74	---
MAX	32.74	30.24	29.99	29.89	34.36	27.39	29.76	33.30	29.77	32.44	33.60	28.36

CAL YR 2000 LOW 32.74
WTR YR 2001 LOW 34.36



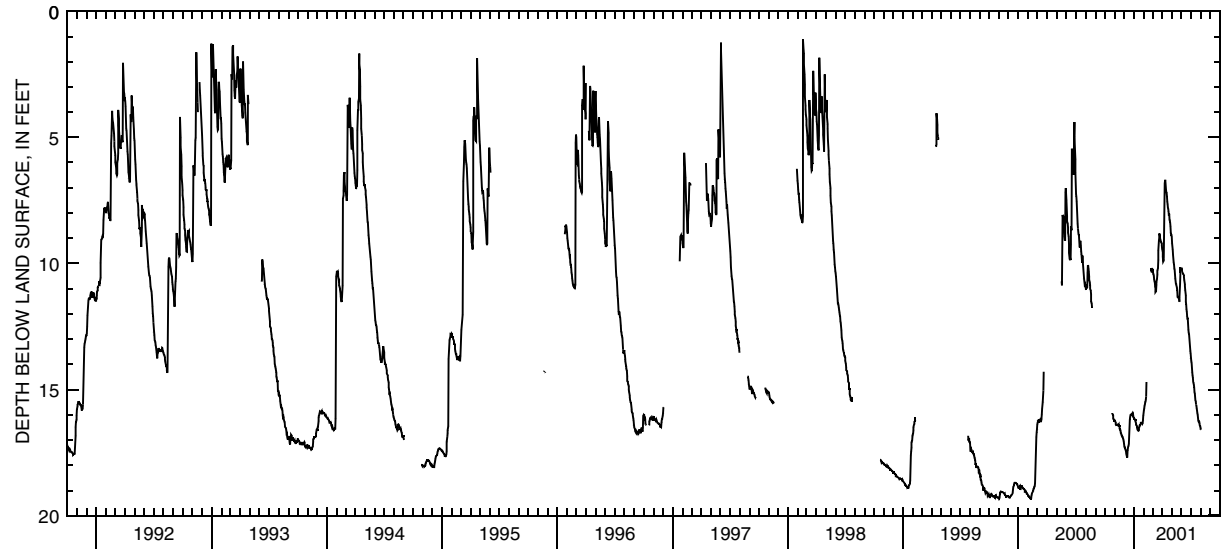
413434082494000. LOCAL NUMBER, O-2

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 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	16.22	17.16	16.15	15.94	10.23	9.42	8.94	10.17	13.74	16.56	---
2	---	16.25	17.26	16.18	15.82	10.25	9.54	9.19	10.25	13.87	16.59	---
3	---	16.26	17.31	16.17	15.75	10.41	9.74	9.32	10.27	13.94	---	---
4	---	16.32	17.31	16.20	15.64	10.42	9.91	9.45	10.36	14.12	---	---
5	---	16.40	17.39	16.20	15.59	10.49	9.87	9.66	10.39	14.31	---	---
6	---	16.41	17.41	16.24	15.51	10.63	9.78	9.81	10.41	14.43	---	---
7	---	16.41	17.44	16.31	15.48	10.70	9.31	9.95	10.42	14.53	---	---
8	---	16.43	17.55	16.38	15.40	10.74	8.12	10.03	10.47	14.72	---	---
9	---	16.40	17.59	16.42	15.28	10.90	6.82	10.19	10.53	14.74	---	---
10	---	16.39	17.66	16.44	14.70	10.94	6.71	10.25	10.65	14.80	---	---
11	---	16.40	17.70	16.50	---	11.12	6.71	10.39	10.81	14.91	---	---
12	---	16.41	17.42	16.56	---	11.08	6.88	10.58	10.89	15.09	---	---
13	---	16.38	17.33	16.60	---	10.86	7.07	10.70	11.04	15.15	---	---
14	---	16.40	17.24	16.62	---	10.74	7.18	10.80	11.26	15.31	---	---
15	---	16.44	17.22	16.63	---	10.60	7.19	10.84	11.51	15.45	---	---
16	---	16.44	17.15	16.62	---	10.45	7.34	10.89	11.61	15.48	---	---
17	---	16.53	16.87	16.57	---	10.28	7.54	10.94	11.81	15.59	---	---
18	---	16.58	16.47	16.50	---	10.18	7.64	11.07	11.91	15.64	---	---
19	---	16.58	16.20	16.43	---	9.86	7.78	11.26	12.09	15.75	---	---
20	---	16.63	16.09	16.40	---	9.48	7.83	11.33	12.18	15.83	---	---
21	---	16.73	16.04	16.41	---	9.08	7.93	11.34	12.19	15.93	---	---
22	---	16.75	16.00	16.39	---	8.98	8.11	11.29	12.39	15.99	---	---
23	---	16.79	16.00	16.33	10.31	8.81	8.02	11.37	12.62	16.13	---	---
24	15.94	16.84	15.99	16.32	10.28	8.89	8.27	11.43	12.75	16.24	---	---
25	15.96	16.87	16.00	16.32	10.18	8.91	8.30	11.52	12.80	16.28	---	---
26	15.99	16.87	16.00	16.29	10.31	9.04	8.37	11.35	12.99	16.27	---	---
27	16.04	16.90	15.96	16.33	10.30	9.13	8.53	10.81	13.14	16.28	---	---
28	16.16	16.95	16.00	16.35	10.34	9.13	8.77	10.38	13.29	16.35	---	---
29	16.18	16.98	15.97	16.32	---	9.15	8.86	10.20	13.46	16.42	---	---
30	16.17	17.05	16.06	16.23	---	9.22	8.86	10.21	13.57	16.46	---	---
31	16.22	---	16.10	16.04	---	9.28	---	10.21	---	16.52	---	---
MAX	16.22	17.05	17.70	16.63	15.94	11.12	9.91	11.52	13.57	16.52	16.59	---

CAL YR 2000 LOW 19.34
WTR YR 2001 LOW 17.70



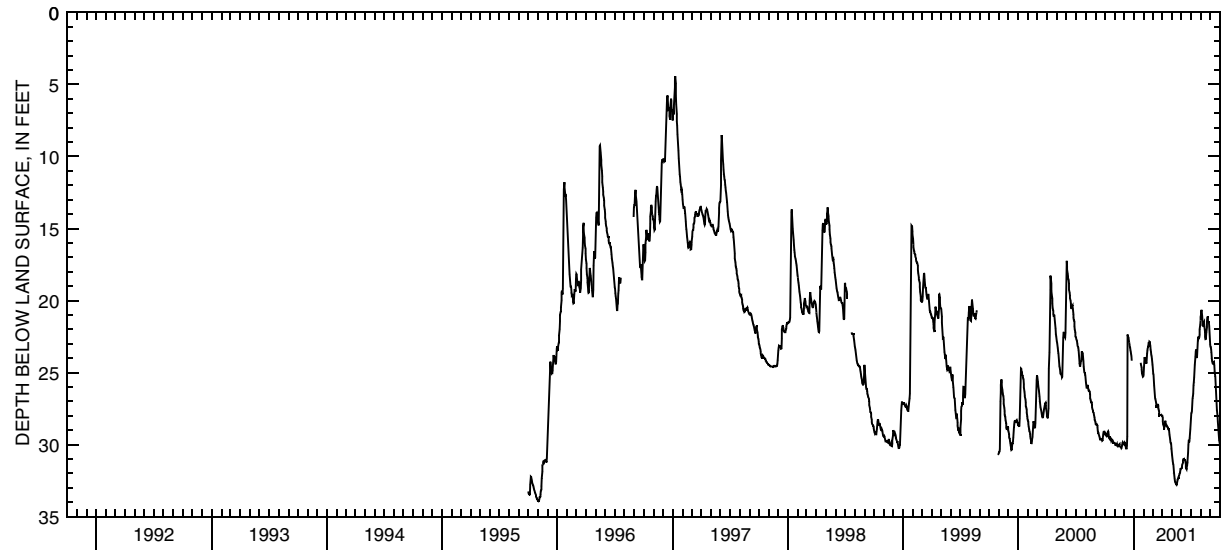
410931081192900. LOCAL NUMBER, PO-123

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 1042 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 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29.29	29.89	30.01	---	25.16	24.48	27.94	30.50	31.64	28.18	21.14	23.22
2	29.21	29.91	29.95	---	24.70	24.79	28.15	30.73	31.63	27.85	20.92	23.24
3	29.24	30.00	29.86	---	24.29	25.06	28.39	30.93	31.50	27.79	20.65	23.37
4	29.34	30.08	29.91	---	23.94	25.14	28.58	31.15	31.34	27.66	20.83	23.62
5	29.38	30.09	30.06	---	24.01	25.49	28.74	31.30	31.24	27.23	21.05	23.97
6	29.43	30.01	30.10	---	24.14	25.92	28.90	31.39	31.10	26.80	21.43	24.22
7	29.44	29.95	30.26	---	24.24	26.20	28.91	31.67	31.02	26.65	21.74	24.29
8	29.43	30.00	30.26	---	24.30	26.51	28.78	31.93	30.97	26.47	21.79	24.37
9	29.26	30.07	30.27	---	24.32	26.80	28.64	32.13	31.03	25.87	21.77	24.37
10	29.11	30.13	30.07	---	24.37	26.84	28.48	32.36	31.06	25.64	21.49	24.33
11	29.06	30.15	29.45	---	24.06	26.85	28.34	32.54	31.04	25.33	21.42	24.27
12	29.14	30.14	22.36	---	23.67	27.07	28.53	32.63	31.03	24.88	21.54	24.24
13	29.31	30.03	22.49	---	23.44	27.28	28.68	32.65	31.12	24.46	21.80	24.50
14	29.55	30.04	22.55	---	23.28	27.37	28.70	32.72	31.33	24.17	22.19	24.89
15	29.57	30.01	22.58	---	23.22	27.37	28.67	32.78	31.56	23.89	22.50	25.10
16	29.50	29.96	22.78	---	23.09	27.33	28.76	32.81	31.68	23.51	22.67	25.28
17	29.43	30.04	22.89	---	23.15	27.31	28.78	32.75	31.70	23.40	22.66	25.75
18	29.56	30.14	23.04	---	23.11	27.18	28.77	32.59	31.53	23.81	22.55	26.18
19	29.56	30.16	23.22	---	22.86	27.32	28.82	32.49	31.46	23.99	22.23	26.63
20	29.66	30.17	23.28	---	22.87	27.49	28.93	32.42	31.20	23.91	21.84	27.11
21	29.74	30.21	23.44	---	23.00	27.65	28.95	32.32	30.89	23.49	21.47	27.57
22	29.74	30.25	23.56	---	23.10	27.82	28.87	32.31	30.58	23.05	21.19	27.78
23	29.66	30.22	23.71	24.31	23.41	27.97	29.09	32.28	30.03	22.58	21.17	28.01
24	29.67	30.15	23.84	24.48	23.55	27.97	29.31	32.16	29.73	22.50	21.40	28.42
25	29.68	30.02	24.18	24.66	23.76	27.91	29.48	32.07	29.74	22.63	21.50	28.73
26	29.73	29.92	---	24.80	23.85	27.96	29.63	32.01	29.76	22.57	21.50	29.05
27	29.83	29.84	---	25.07	24.03	27.96	29.85	31.92	29.55	22.56	21.52	29.38
28	29.89	29.89	---	25.13	24.24	27.96	29.91	31.79	29.20	22.39	21.79	29.69
29	29.89	29.94	---	25.22	---	27.95	29.95	31.67	28.95	22.00	22.17	29.81
30	29.83	29.98	---	25.29	---	28.01	30.24	31.64	28.54	21.68	22.62	29.94
31	29.84	---	---	25.28	---	28.03	---	31.64	---	21.39	23.05	---
MAX	29.89	30.25	30.27	25.29	25.16	28.03	30.24	32.81	31.70	28.18	23.05	29.94

CAL YR 2000 LOW 30.27
WTR YR 2001 LOW 32.81



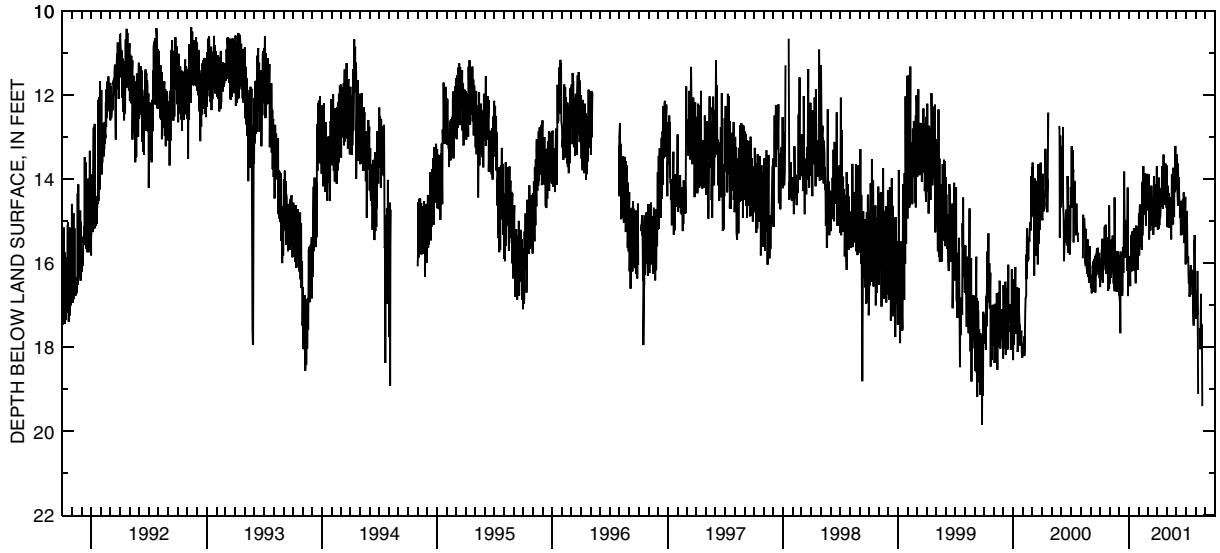
405505084032900. LOCAL NUMBER, PU-1

LOCATION.—Latitude 40°55′05″, longitude 84°03′29″, Hydrologic Unit 04100007, Center and Broadway Street, Columbus Grove, Ohio. Owner: Columbus Grove Water Department.
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 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.22	16.49	16.76	15.83	15.62	14.53	15.03	13.68	14.18	15.14	17.33	---
2	16.57	15.46	16.73	15.91	14.81	14.35	14.56	15.14	14.24	15.52	17.26	---
3	15.88	15.78	16.87	16.17	15.82	14.66	15.21	15.03	13.42	15.87	16.79	---
4	16.21	16.20	16.91	16.12	14.85	14.47	15.09	14.16	14.27	14.76	16.65	---
5	16.38	15.55	17.67	16.55	14.61	13.89	15.18	15.11	14.64	15.48	17.00	---
6	16.40	16.34	15.73	16.27	14.66	15.44	14.88	15.13	13.63	15.96	17.23	---
7	15.68	15.78	16.37	15.90	14.68	14.27	13.97	15.15	14.14	15.98	16.19	---
8	16.36	15.43	16.74	15.33	15.60	14.83	15.10	14.34	14.24	15.85	19.12	---
9	15.42	16.03	16.04	16.13	15.17	14.45	14.21	14.84	13.95	16.29	---	---
10	16.47	15.35	16.43	16.19	15.14	15.22	14.91	15.16	14.45	16.49	---	---
11	15.71	16.23	16.78	16.11	15.69	14.46	14.90	14.93	14.65	16.18	---	---
12	16.17	15.76	16.63	15.25	14.07	14.92	14.59	14.43	14.93	16.80	---	---
13	16.01	16.28	15.62	15.36	15.35	14.86	14.45	14.94	14.63	16.72	17.55	---
14	15.62	16.49	16.19	15.83	14.88	14.16	14.48	15.17	15.15	16.37	18.05	---
15	15.92	15.75	16.23	15.65	14.61	15.10	14.65	15.44	15.34	16.75	17.85	---
16	15.13	16.67	15.78	16.18	13.69	14.95	14.27	14.54	14.52	16.05	17.89	---
17	15.92	14.44	13.82	15.18	14.82	14.45	13.69	13.89	14.92	16.55	16.73	---
18	16.05	16.58	14.98	15.20	14.50	15.24	14.43	14.68	15.25	16.46	17.76	---
19	15.09	16.24	15.88	15.72	13.92	14.86	14.71	14.51	15.27	16.50	17.45	---
20	15.84	16.57	14.97	15.98	14.25	15.33	13.80	14.62	15.33	16.43	17.50	---
21	16.25	16.64	15.27	15.52	13.86	13.93	13.42	15.08	14.49	16.52	17.85	---
22	15.65	15.98	15.66	16.48	14.85	14.67	14.39	14.47	15.28	16.16	19.41	---
23	16.08	16.58	15.38	15.35	14.63	14.72	14.61	13.73	14.86	17.05	---	---
24	15.60	16.69	15.58	15.11	15.11	14.86	13.69	14.90	14.32	17.24	---	---
25	15.38	15.87	15.45	16.06	14.03	14.12	14.61	13.78	15.07	17.49	---	---
26	16.11	15.71	16.18	15.86	14.75	15.14	14.43	14.32	15.52	15.90	---	---
27	16.66	16.43	15.42	16.09	13.87	14.99	13.63	14.07	15.46	15.46	---	---
28	16.57	15.73	14.20	15.12	14.73	15.09	14.49	13.21	14.96	15.73	---	---
29	16.06	16.32	16.79	16.16	---	15.13	14.19	14.21	14.42	15.33	---	---
30	16.60	15.82	16.06	15.70	---	13.69	14.68	14.17	16.03	16.20	---	---
31	14.63	---	15.95	15.68	---	14.63	---	13.61	---	17.06	---	---
MAX	16.66	16.69	17.67	16.55	15.82	15.44	15.21	15.44	16.03	17.49	19.41	---

CAL YR 2000 LOW 18.25
WTR YR 2001 LOW 19.41



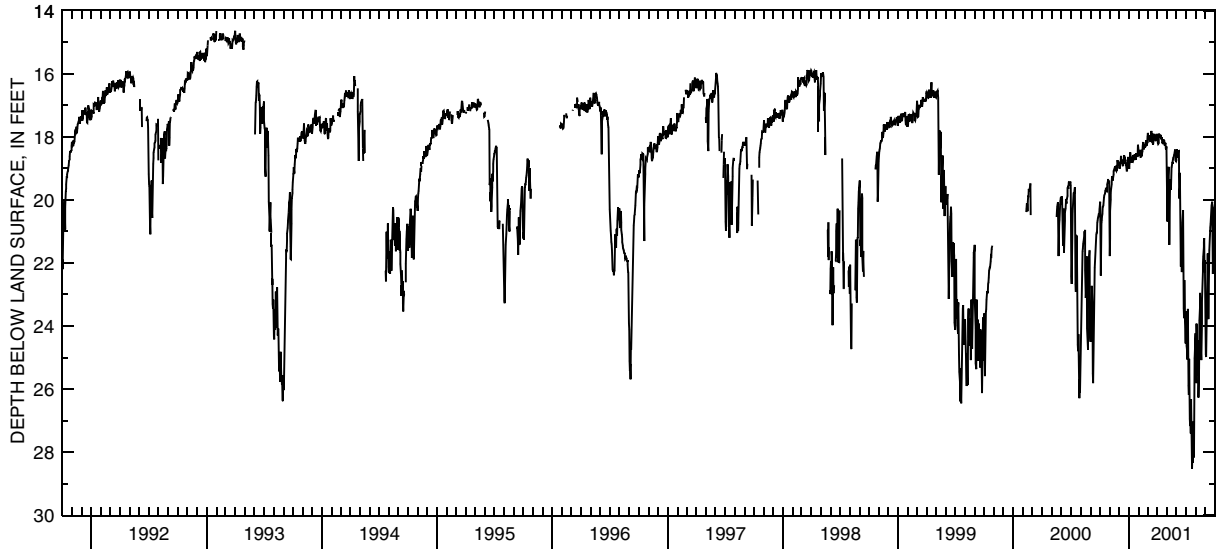
411914083045300. LOCAL NUMBER, S-3

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 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.16	21.78	18.89	18.95	18.47	17.99	17.96	19.36	18.55	23.54	25.46	24.18
2	20.05	21.23	18.99	19.01	18.54	17.87	18.02	20.26	18.39	23.65	25.82	24.89
3	21.77	20.36	18.99	18.93	18.52	17.97	18.18	20.68	18.51	24.63	24.67	24.98
4	22.40	20.00	18.94	18.70	18.45	17.98	18.22	19.70	18.63	24.73	23.92	23.60
5	21.48	19.79	18.83	18.49	18.41	17.98	18.18	19.25	18.63	25.06	25.13	22.89
6	20.73	19.66	18.79	18.53	18.50	18.09	17.99	19.04	18.51	24.09	25.56	22.40
7	20.63	19.49	18.60	18.68	18.63	18.08	17.89	18.95	18.45	23.46	24.46	22.12
8	20.50	19.44	18.79	18.79	18.63	18.02	17.95	20.39	18.44	24.68	25.14	21.70
9	20.44	19.25	18.82	18.80	18.41	18.04	17.96	21.43	18.46	25.90	26.04	22.78
10	20.22	19.31	18.75	18.80	18.49	18.06	18.02	20.62	19.95	26.19	26.27	23.78
11	20.21	19.38	18.74	18.77	18.61	18.12	17.96	19.75	19.60	25.04	25.34	22.90
12	20.16	19.33	18.89	18.72	18.51	18.13	17.93	19.43	19.14	25.79	24.66	22.09
13	20.05	19.19	18.93	18.74	18.45	17.81	18.08	19.34	20.06	26.95	23.82	21.59
14	19.92	19.09	18.81	18.68	18.27	17.98	18.03	19.68	21.81	27.17	23.37	21.36
15	19.83	19.06	18.86	18.57	18.20	17.93	18.00	19.36	22.12	26.84	22.95	21.13
16	19.81	19.00	18.61	18.70	18.17	17.88	18.08	18.96	20.94	27.41	23.77	20.87
17	19.79	19.00	18.58	18.68	18.39	18.11	18.19	18.91	21.91	26.32	24.81	20.74
18	19.72	19.02	18.68	18.64	18.37	18.25	18.20	18.83	22.29	26.99	24.84	20.57
19	19.69	18.96	18.67	18.55	18.28	18.19	18.16	18.83	21.24	28.05	25.08	20.37
20	19.65	18.95	18.73	18.58	18.22	18.13	18.11	18.79	20.71	28.53	23.93	20.16
21	19.62	19.03	18.72	18.72	18.32	18.01	18.07	18.69	20.52	28.06	23.21	20.12
22	19.71	19.04	18.88	18.71	18.31	17.95	18.21	18.65	20.33	28.34	22.81	20.06
23	19.73	19.07	18.89	18.66	18.29	17.90	18.10	18.65	22.03	27.10	22.28	21.61
24	19.61	19.04	18.98	18.51	18.28	17.99	18.21	18.57	23.44	27.04	22.01	22.35
25	19.50	18.97	19.07	18.61	18.11	18.01	18.28	18.57	23.75	27.97	21.79	21.40
26	19.42	18.73	19.07	18.60	18.27	18.08	18.22	18.52	22.54	28.17	21.50	20.75
27	19.34	18.78	18.86	18.54	18.23	18.14	18.19	18.40	22.95	26.76	21.34	20.39
28	19.45	18.85	18.82	18.60	18.16	18.08	18.37	18.62	23.82	25.73	21.21	20.26
29	19.45	18.86	18.73	18.59	---	18.00	18.38	18.75	24.03	25.02	22.29	20.19
30	19.39	18.84	18.63	18.24	---	17.91	18.30	18.78	24.55	24.52	21.92	20.13
31	20.57	---	18.82	18.34	---	17.90	---	18.74	---	24.23	22.87	---
MAX	22.40	21.78	19.07	19.01	18.63	18.25	18.38	21.43	24.55	28.53	26.27	24.98

CAL YR 2000 LOW 26.29
WTR YR 2001 LOW 28.53



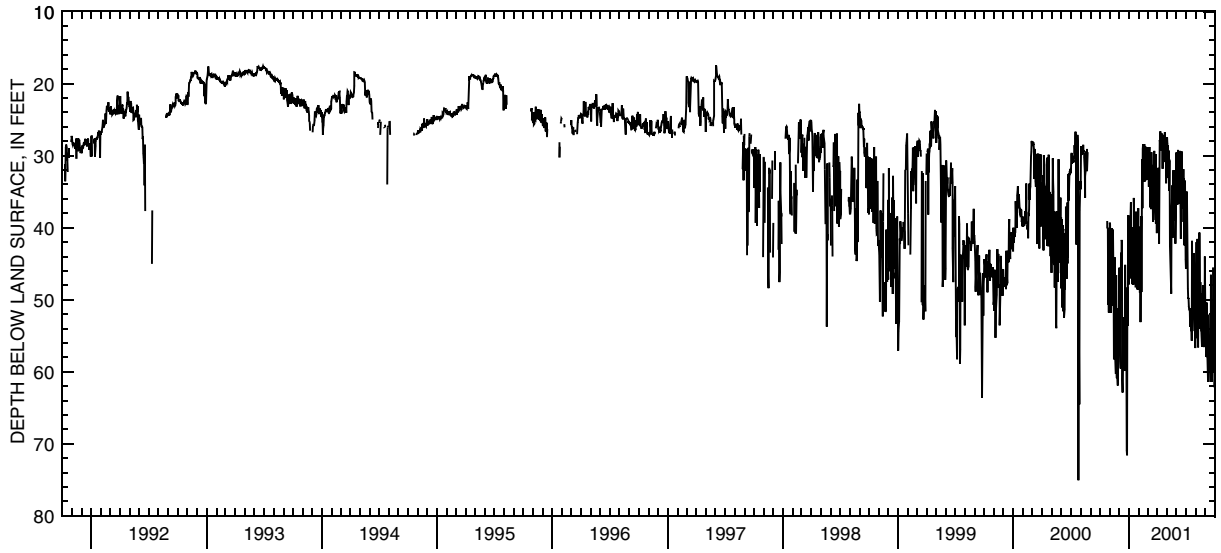
412703083213600. LOCAL NUMBER, S-2

LOCATION.—Latitude 41°27′03″, longitude 83°21′36″, Hydrologic Unit 04100010, at waterworks in Woodville, Ohio. Owner: Woodville Water Department.
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 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	39.27	45.55	47.90	47.07	29.65	33.45	32.77	29.58	45.74	54.64	54.98
2	---	39.56	45.69	39.93	39.90	28.79	40.47	27.48	35.35	36.00	53.02	54.80
3	---	42.35	55.16	47.08	47.87	33.38	35.41	28.32	30.51	35.21	42.00	57.08
4	---	51.80	56.06	39.33	39.97	29.30	31.69	31.39	36.86	34.98	52.92	57.95
5	---	43.63	58.55	46.73	49.04	34.32	40.18	28.60	31.74	38.75	55.34	50.42
6	---	51.76	59.54	40.02	42.23	29.87	33.51	33.11	29.23	41.11	41.56	57.57
7	---	43.27	43.49	36.50	53.11	28.81	42.22	29.31	35.52	48.45	54.75	57.96
8	---	42.63	50.05	47.03	42.97	33.21	30.23	34.90	30.67	49.90	56.65	59.65
9	---	40.05	41.69	40.10	38.42	30.75	27.83	30.55	36.71	49.73	48.00	61.38
10	---	50.81	41.89	41.86	48.96	37.20	28.10	30.80	29.51	50.89	53.62	52.09
11	---	40.87	61.20	39.95	36.86	31.34	26.65	42.53	31.78	51.35	54.06	56.20
12	---	40.28	62.91	47.83	30.57	37.41	28.21	44.47	29.34	51.47	48.72	56.76
13	---	49.35	58.93	40.28	37.29	31.92	27.64	46.04	35.10	51.58	40.66	57.25
14	---	47.65	52.44	47.91	29.09	29.52	28.70	47.81	41.58	53.77	53.18	57.12
15	---	58.28	57.87	40.70	28.44	36.39	29.28	49.16	36.13	53.25	52.77	57.26
16	---	57.56	58.30	47.89	31.98	31.27	26.97	37.51	30.80	51.21	47.58	58.70
17	---	44.10	57.45	35.87	28.68	31.78	28.48	36.54	39.20	54.34	52.91	61.44
18	---	57.11	59.42	38.14	32.70	39.24	31.82	34.13	29.43	52.91	54.20	46.53
19	---	57.88	59.87	40.34	28.41	33.03	29.29	36.67	37.19	55.71	54.31	58.03
20	---	59.21	45.15	47.64	33.63	38.94	27.15	41.41	37.15	41.83	56.54	61.43
21	---	60.33	48.20	40.57	29.33	31.20	30.23	37.65	34.27	54.37	49.17	59.96
22	---	46.59	58.16	48.26	33.50	29.33	28.74	32.00	36.82	48.94	54.04	58.68
23	---	59.26	56.84	41.16	28.76	36.22	30.77	37.50	31.88	52.15	48.84	55.47
24	39.10	60.87	58.23	37.78	32.87	30.78	28.82	32.01	37.11	47.16	48.00	60.12
25	40.02	51.65	70.96	47.82	29.24	37.47	26.77	39.07	33.11	49.81	53.90	45.57
26	40.08	60.79	71.60	39.37	29.64	32.39	30.91	38.75	42.45	43.52	56.30	55.85
27	50.71	61.93	48.33	48.45	33.39	39.44	30.00	32.82	38.61	45.17	56.58	56.49
28	42.64	52.64	53.63	40.79	29.57	29.80	29.11	33.20	33.49	47.89	48.85	57.67
29	51.78	51.17	47.49	48.64	---	32.30	33.85	42.23	41.15	52.28	54.21	62.13
30	43.50	55.01	38.26	40.71	---	40.77	29.03	33.41	44.44	56.73	44.00	61.09
31	51.12	---	39.98	37.30	---	39.93	---	30.23	---	50.92	51.79	---
MAX	51.78	61.93	71.60	48.64	53.11	40.77	42.22	49.16	44.44	56.73	56.65	62.13

CAL YR 2000 LOW 75.07
WTR YR 2001 LOW 71.60



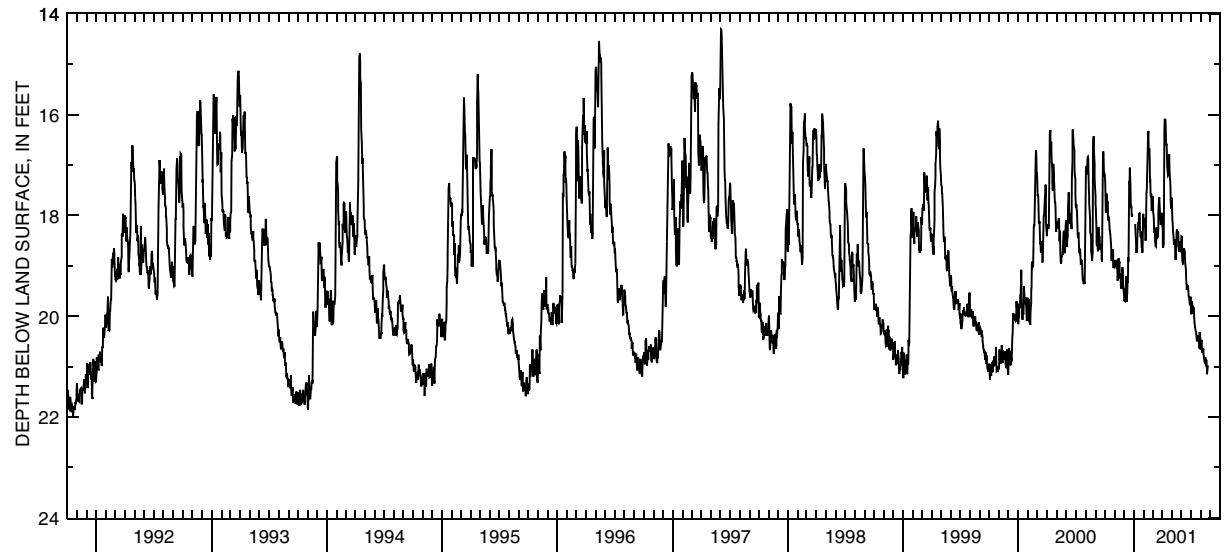
410802083093900. LOCAL NUMBER, SE-2

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 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.21	18.94	19.59	---	18.11	17.61	18.16	17.65	18.42	19.78	20.66	---
2	17.32	18.88	19.69	---	18.21	17.65	18.27	17.90	18.43	19.96	20.61	---
3	17.69	18.95	19.70	---	18.20	17.92	18.58	18.09	18.76	19.80	20.47	---
4	17.93	19.00	19.58	---	18.08	17.98	18.64	18.16	18.88	19.70	20.56	---
5	17.93	19.02	19.46	18.17	18.05	18.06	18.55	18.32	18.97	19.76	20.71	---
6	17.57	19.01	19.45	18.23	18.32	18.34	18.23	18.37	18.88	19.94	20.71	---
7	17.62	19.00	19.21	18.47	18.50	18.33	17.04	18.48	18.78	19.83	20.68	---
8	17.71	19.05	19.68	18.66	18.45	18.33	16.31	18.55	18.72	19.82	20.65	---
9	17.76	18.88	19.71	18.72	18.17	18.51	16.08	18.58	18.67	19.84	20.64	---
10	17.75	19.26	19.58	18.72	17.55	18.53	16.12	18.52	18.67	19.83	20.74	---
11	17.99	19.29	19.55	18.67	17.48	18.61	16.09	18.47	18.73	20.02	20.83	---
12	18.10	19.18	19.32	18.52	17.14	18.62	16.20	18.81	18.80	20.11	20.83	---
13	18.04	18.88	19.34	18.26	16.95	18.24	16.55	18.88	18.95	20.17	20.89	---
14	18.05	18.85	18.83	18.27	16.76	18.47	16.60	18.80	19.05	20.22	20.93	---
15	18.17	18.96	18.92	18.15	16.42	18.37	16.60	18.64	19.05	20.26	20.91	---
16	18.28	18.91	18.45	18.16	16.32	18.31	16.77	18.34	19.26	20.30	20.82	---
17	18.31	19.17	17.32	18.14	16.71	18.38	17.04	18.28	19.35	20.32	20.99	---
18	18.37	19.25	17.38	17.97	16.74	18.40	17.10	18.37	19.48	20.36	20.97	---
19	18.46	19.14	17.05	17.94	16.67	18.25	17.20	18.45	19.38	20.45	20.86	---
20	18.54	19.20	17.25	17.99	16.86	17.95	17.19	18.40	19.48	20.49	21.06	---
21	18.68	19.39	17.39	18.28	17.32	17.70	16.91	18.31	19.40	20.43	21.15	---
22	18.87	19.42	17.76	18.43	17.31	17.64	16.98	18.48	19.41	20.40	21.09	---
23	18.90	19.45	17.83	18.42	17.61	17.64	16.79	18.61	19.50	20.40	20.97	---
24	18.79	19.42	17.83	18.31	17.62	17.91	17.09	18.65	19.61	20.38	---	---
25	18.75	19.36	18.01	18.64	17.57	17.94	17.24	18.72	19.62	20.43	---	---
26	18.69	19.03	18.01	18.64	17.91	18.06	17.29	18.71	19.66	20.56	---	---
27	18.69	19.24	17.97	18.61	17.89	18.19	17.45	18.51	19.73	20.64	---	---
28	19.02	19.41	---	18.74	17.86	18.16	17.80	18.56	19.72	20.45	---	---
29	19.03	19.45	---	18.68	---	18.00	17.87	18.61	19.63	20.31	---	---
30	18.97	19.50	---	18.14	---	17.95	17.73	18.71	19.61	20.43	---	---
31	18.94	---	---	17.97	---	17.95	---	18.73	---	20.57	---	---
MAX	19.03	19.50	19.71	18.74	18.50	18.62	18.64	18.88	19.73	20.64	21.15	---

CAL YR 2000 LOW 20.17
WTR YR 2001 LOW 21.15



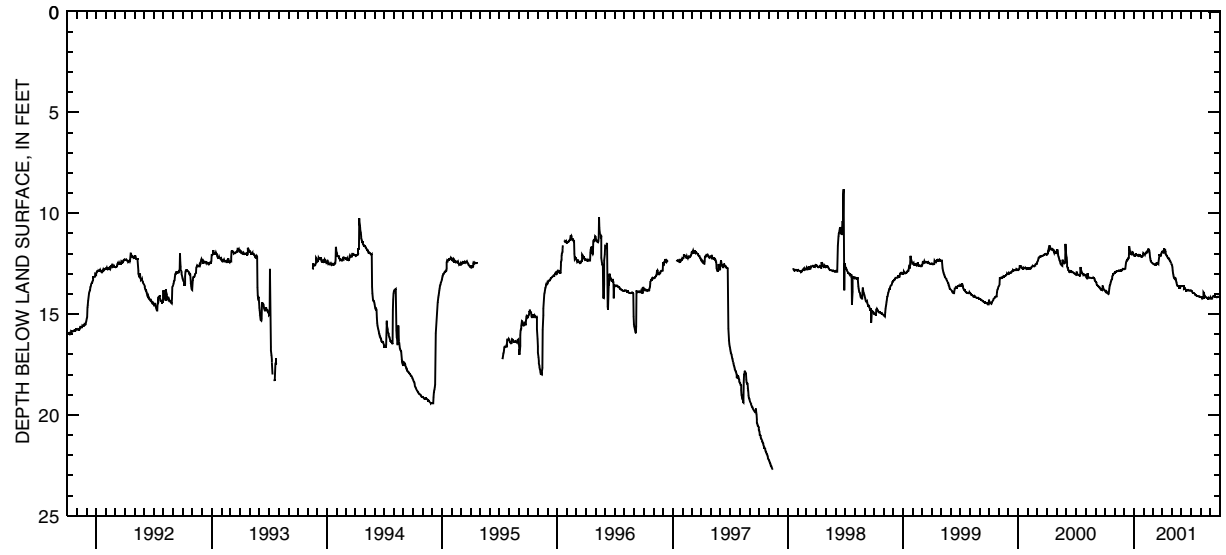
410330081282000. LOCAL NUMBER, SU-6

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 1000 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 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.84	12.96	12.77	12.12	11.99	12.49	11.93	12.56	13.63	13.83	14.17	14.18
2	13.85	12.95	12.78	12.12	12.02	12.50	11.94	12.60	13.62	13.85	14.17	14.21
3	13.87	12.93	12.79	12.08	12.04	12.52	11.93	12.67	13.63	13.86	14.17	14.22
4	13.92	12.92	12.77	12.06	12.04	12.52	11.94	12.85	13.63	13.87	14.18	14.24
5	13.93	12.91	12.74	12.05	12.07	12.53	11.93	12.97	13.63	13.93	14.20	14.25
6	13.90	12.90	12.61	12.07	12.02	12.55	11.90	13.05	13.63	13.95	14.22	14.25
7	13.94	12.90	12.47	12.06	12.03	12.56	11.73	13.15	13.63	13.95	14.23	14.16
8	13.96	12.90	12.40	12.07	12.00	12.55	11.80	13.21	13.63	13.95	14.22	14.13
9	13.96	12.88	12.39	12.08	11.94	12.57	11.85	13.24	13.75	13.95	14.22	14.11
10	13.98	12.88	12.34	12.08	11.92	12.58	11.90	13.26	13.73	13.96	13.92	14.11
11	14.01	12.89	12.33	12.08	11.95	12.58	11.89	13.22	13.71	13.97	13.98	14.12
12	14.03	12.88	12.30	12.10	11.95	12.58	11.97	13.21	13.72	13.99	14.00	14.12
13	14.01	12.85	12.30	12.11	11.92	12.48	12.05	13.24	13.76	14.01	14.07	14.13
14	13.88	12.85	12.25	12.09	11.89	12.49	12.10	13.30	13.81	14.05	14.12	14.10
15	13.73	12.87	12.25	12.07	11.82	12.49	12.11	13.41	13.83	14.06	14.15	14.14
16	13.63	12.85	12.20	12.10	11.75	12.48	12.11	13.45	13.84	14.07	14.16	14.14
17	13.58	12.87	11.64	12.10	11.82	12.50	12.16	13.54	13.85	14.08	14.18	14.15
18	13.53	12.87	11.75	12.09	11.84	12.51	12.21	13.57	13.85	14.10	14.18	14.17
19	13.46	12.84	11.83	12.09	11.87	12.52	12.24	13.59	13.83	14.10	14.18	14.17
20	13.40	12.84	11.91	12.11	11.98	12.50	12.24	13.61	13.83	14.11	14.19	14.17
21	13.34	12.85	11.95	12.13	12.17	12.27	12.25	13.62	13.83	14.12	14.21	14.18
22	13.32	12.85	12.02	12.14	12.25	12.13	12.27	13.62	13.82	14.11	14.22	14.16
23	13.29	12.86	12.03	12.12	12.37	12.09	12.26	13.63	13.83	14.12	14.22	14.14
24	13.22	12.85	12.05	12.13	12.39	12.09	12.33	13.64	13.84	14.12	14.23	14.14
25	13.12	12.84	12.05	12.15	12.44	12.09	12.36	13.67	13.84	14.12	14.23	14.14
26	13.06	12.78	12.00	12.15	12.46	12.11	12.37	13.71	13.85	14.14	14.23	14.15
27	13.05	12.76	11.94	12.15	12.47	12.12	12.42	13.71	13.85	14.15	14.21	14.16
28	13.01	12.78	11.96	12.16	12.48	12.11	12.46	13.67	13.85	14.15	14.23	14.16
29	13.00	12.78	11.96	12.15	---	12.02	12.49	13.62	13.85	14.14	14.24	14.17
30	12.98	12.77	12.04	12.09	---	11.94	12.51	13.63	13.85	14.15	14.25	14.15
31	12.98	---	12.08	11.97	---	11.93	---	13.63	---	14.16	14.24	---
MAX	14.03	12.96	12.79	12.16	12.48	12.58	12.51	13.71	13.85	14.16	14.25	14.25

CAL YR 2000 LOW 14.03
WTR YR 2001 LOW 14.25



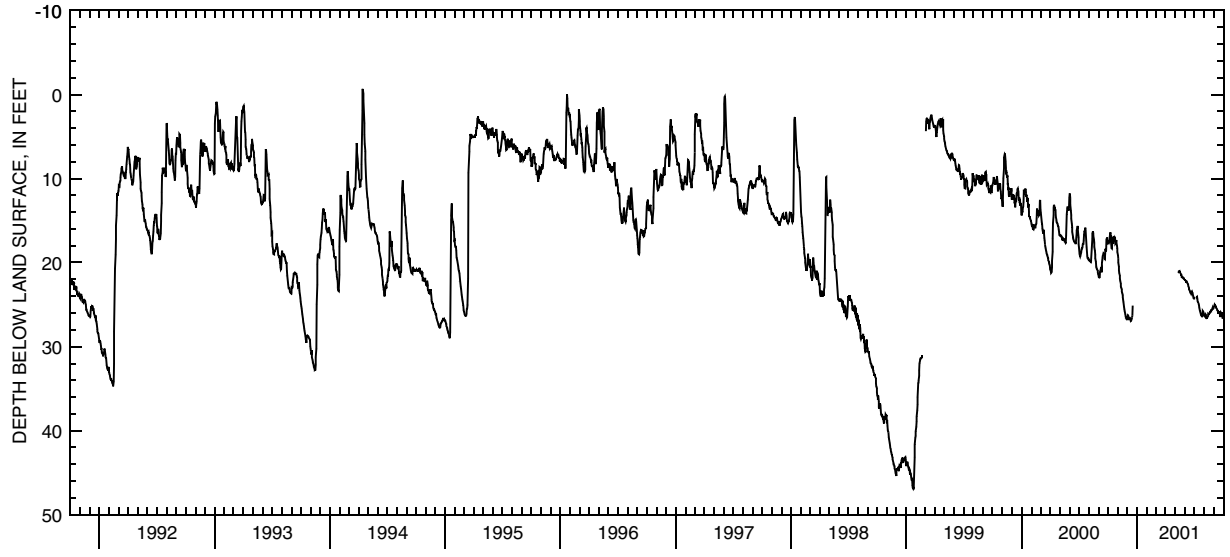
410846081271600. LOCAL NUMBER, SU-7

LOCATION.—Latitude 41°08′46″, longitude 81°27′16″, Hydrologic Unit 04110002, Monroe Falls Road, Cuyahoga Falls, Ohio. Owner: Cuyahoga Falls Water Department.
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 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.71	19.09	26.69	---	---	---	---	---	22.03	24.29	26.17	25.32
2	17.66	19.55	26.43	---	---	---	---	---	22.03	24.06	26.40	25.20
3	17.46	19.98	26.24	---	---	---	---	---	22.12	---	26.41	25.11
4	17.57	20.47	26.29	---	---	---	---	---	22.16	---	26.30	25.02
5	17.44	20.87	26.55	---	---	---	---	---	22.18	---	26.15	25.09
6	17.01	21.23	26.67	---	---	---	---	---	22.20	---	26.25	25.15
7	16.70	21.55	26.63	---	---	---	---	---	22.22	---	26.34	25.25
8	16.41	21.86	26.55	---	---	---	---	---	22.31	24.01	26.60	25.23
9	16.50	22.15	26.54	---	---	---	---	---	22.42	24.09	26.67	25.41
10	17.46	22.49	26.76	---	---	---	---	21.07	22.49	24.06	26.65	25.46
11	17.91	22.78	26.77	---	---	---	---	21.09	22.56	24.34	26.51	25.53
12	18.29	22.99	26.93	---	---	---	---	21.11	22.57	24.66	26.46	25.61
13	18.35	23.19	26.92	---	---	---	---	21.05	22.86	24.74	26.41	25.73
14	17.76	23.40	26.77	---	---	---	---	21.08	23.03	24.80	26.25	25.81
15	17.15	23.61	26.66	---	---	---	---	21.09	23.21	24.87	26.12	25.81
16	17.22	23.87	26.51	---	---	---	---	21.05	23.23	25.04	26.14	25.84
17	17.78	24.09	26.26	---	---	---	---	21.17	23.30	25.33	26.13	25.90
18	17.06	24.41	25.14	---	---	---	---	21.26	23.45	25.51	26.01	25.87
19	17.00	24.67	---	---	---	---	---	21.33	23.58	25.73	25.94	25.88
20	17.33	24.98	---	---	---	---	---	21.40	23.62	25.84	25.82	26.02
21	16.88	25.26	---	---	---	---	---	21.43	23.71	25.97	25.92	26.46
22	17.02	25.55	---	---	---	---	---	21.58	23.50	26.14	25.87	26.02
23	17.16	25.77	---	---	---	---	---	21.73	23.43	26.30	25.74	25.94
24	17.46	25.96	---	---	---	---	---	21.77	23.40	26.32	25.68	26.01
25	17.70	26.17	---	---	---	---	---	21.77	23.56	26.39	25.60	26.19
26	17.56	26.39	---	---	---	---	---	21.74	23.63	26.27	25.56	26.08
27	17.29	26.56	---	---	---	---	---	21.74	23.84	26.03	25.55	26.07
28	17.56	26.68	---	---	---	---	---	21.79	24.00	25.79	25.45	26.08
29	18.00	26.76	---	---	---	---	---	21.93	24.23	25.75	25.36	26.67
30	18.35	26.76	---	---	---	---	---	21.98	24.29	25.87	25.44	26.55
31	18.72	---	---	---	---	---	---	22.04	---	26.04	25.47	---
MAX	18.72	26.76	26.93	---	---	---	---	22.04	24.29	26.39	26.67	26.67

CAL YR 2000 LOW 26.93
WTR YR 2001 LOW 26.93



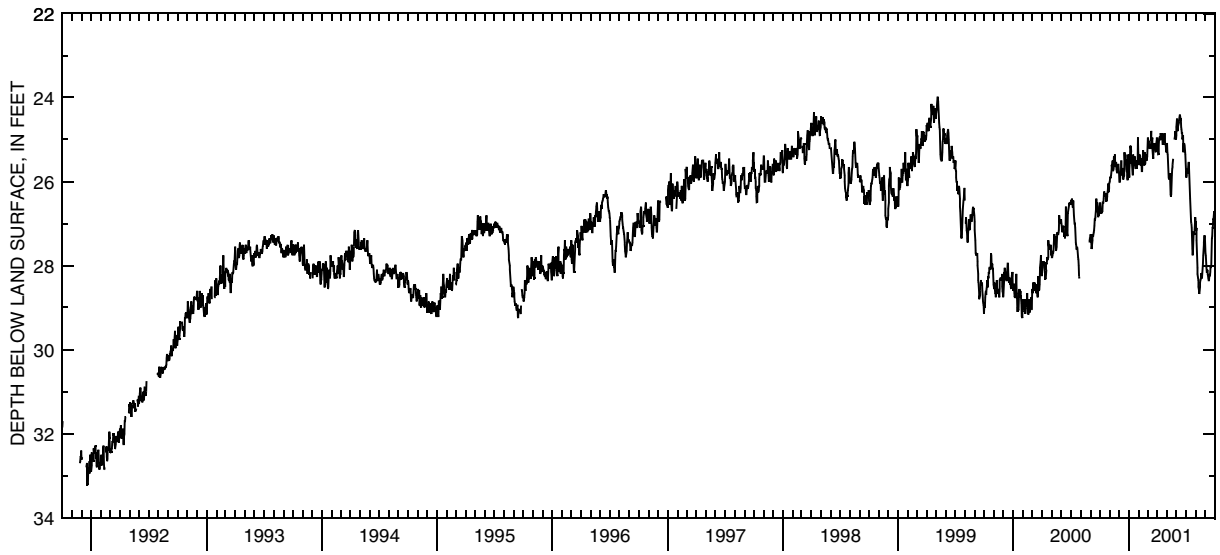
405215084335400. LOCAL NUMBER, VW-1

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 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26.55	26.00	25.80	25.70	25.45	25.15	25.00	25.10	24.70	25.70	27.15	27.70
2	26.50	25.90	26.00	25.90	25.60	24.95	25.10	25.10	24.50	25.90	27.15	27.75
3	26.60	25.90	26.00	25.75	25.55	25.00	25.20	25.30	24.70	25.85	27.10	27.90
4	26.75	25.90	26.00	25.45	25.40	25.05	25.35	25.35	24.75	25.75	27.40	28.05
5	26.75	25.90	25.85	25.15	25.35	25.05	25.35	25.55	24.80	25.70	27.75	28.15
6	26.70	25.85	25.80	25.20	25.40	25.20	25.15	25.75	24.70	25.80	28.05	28.15
7	26.75	25.70	25.75	25.15	25.60	25.20	25.00	25.90	24.65	25.80	28.20	28.10
8	26.70	25.60	25.50	25.30	25.60	25.10	24.95	25.90	24.60	25.65	28.30	28.20
9	26.70	25.65	25.80	25.55	25.45	25.15	24.95	25.95	24.55	25.55	28.35	28.25
10	26.50	25.50	25.85	25.55	25.55	25.20	25.00	25.85	24.50	25.55	28.50	28.30
11	26.50	25.50	25.70	25.50	25.75	25.20	25.00	25.80	24.40	25.75	28.60	28.35
12	26.50	25.75	25.70	25.60	25.75	25.20	24.85	26.05	24.40	25.95	28.65	28.35
13	26.40	25.70	25.80	25.85	25.50	24.80	24.95	26.30	24.45	26.15	28.65	28.25
14	26.25	25.55	25.95	25.50	25.50	25.00	25.00	26.35	24.55	26.40	28.50	28.20
15	26.25	25.40	25.90	25.35	25.25	25.00	24.95	26.30	24.50	26.55	28.40	28.25
16	26.30	25.50	25.85	25.50	25.30	24.95	24.85	26.10	24.70	26.75	28.35	28.15
17	26.30	25.50	25.85	25.60	25.50	25.20	24.90	25.85	24.75	26.95	28.30	28.00
18	26.30	25.35	25.30	25.60	25.60	25.40	25.10	25.70	24.85	27.00	28.20	28.05
19	26.35	25.60	25.45	25.40	25.60	25.45	25.10	25.65	24.85	27.10	28.20	28.00
20	26.30	25.65	25.45	25.50	25.30	25.35	25.05	25.60	25.00	27.35	28.30	27.75
21	26.30	25.55	25.35	25.60	25.60	25.20	24.90	25.45	24.95	27.60	28.30	27.35
22	26.45	25.55	25.50	25.70	25.55	25.10	25.05	---	24.90	27.75	28.20	27.30
23	26.45	25.70	25.50	25.70	25.45	25.10	25.05	---	25.30	27.65	27.95	27.10
24	26.35	25.75	25.70	25.50	25.50	25.10	24.85	---	25.10	27.40	27.95	27.10
25	26.30	25.80	25.75	25.70	25.35	25.20	25.05	---	25.10	27.20	27.75	26.90
26	26.20	25.75	25.75	25.70	25.50	25.25	25.10	25.00	25.10	27.20	27.50	26.90
27	26.05	25.65	25.95	25.60	25.45	25.30	25.10	24.90	25.15	27.25	27.45	26.80
28	26.20	25.60	25.95	25.60	25.40	25.25	25.15	24.80	25.25	27.25	27.30	26.70
29	26.25	25.60	25.75	25.55	---	25.10	25.30	24.90	25.35	27.15	27.30	26.80
30	26.15	25.70	25.35	24.95	---	25.00	25.25	25.00	25.55	26.85	27.30	26.85
31	26.05	---	25.60	25.30	---	24.95	---	24.90	---	26.95	27.50	---
MAX	26.75	26.00	26.00	25.90	25.75	25.45	25.35	26.35	25.55	27.75	28.65	28.35

CAL YR 2000 LOW 29.25
WTR YR 2001 LOW 28.65



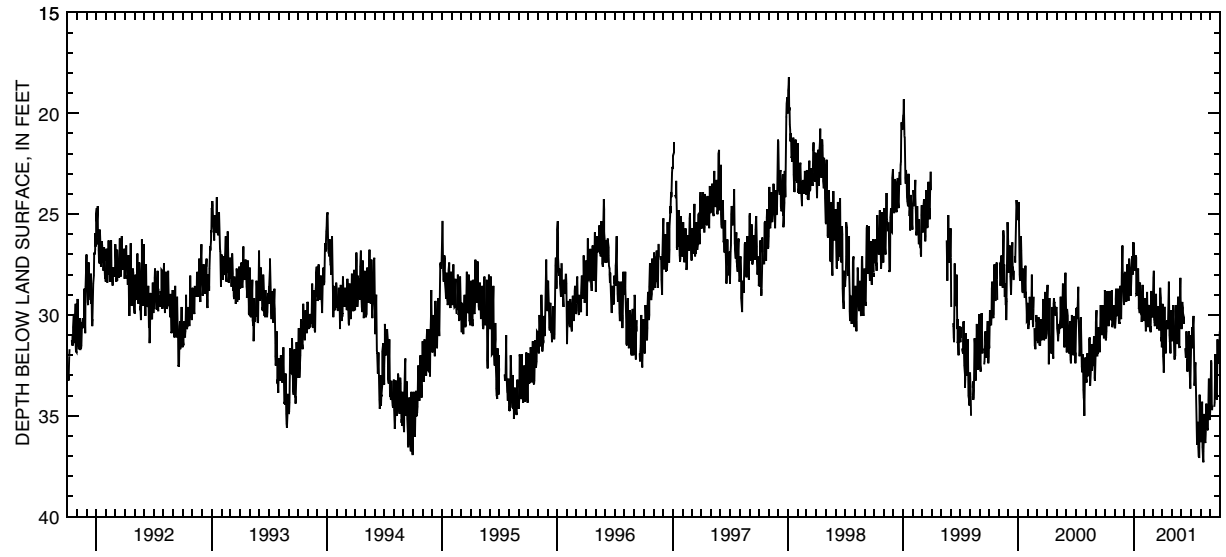
412821084313600. LOCAL NUMBER, WM-1

LOCATION.—Latitude 41°28′21″, longitude 84°31′36″, Hydrologic Unit 04100006, Bryan Water Treatment Plant, 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 3.30 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, 39.35 ft below land-surface datum, July 7, 1988; minimum daily low, 1.45 ft below land-surface datum, Jan. 27, 1952.

DEPTH BELOW LAND SURFACE (WATER LEVEL), FEET, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28.75	30.65	29.50	26.45	29.95	30.00	29.75	30.60	30.70	31.60	36.00	33.40
2	29.05	30.60	28.40	27.40	30.30	29.50	29.45	31.10	30.60	31.00	36.30	32.75
3	30.55	30.65	27.95	27.80	29.90	28.75	30.50	31.30	29.45	31.50	36.10	32.25
4	31.25	30.15	27.85	27.70	29.20	28.15	32.05	30.85	29.35	31.65	35.15	32.40
5	31.10	29.20	29.10	27.70	29.20	27.80	32.60	30.15	29.65	30.60	34.30	34.45
6	30.80	28.70	29.30	27.70	29.80	30.20	32.85	29.50	29.85	31.10	36.10	34.70
7	30.25	29.55	29.25	27.05	30.25	30.35	31.20	31.10	30.00	30.65	36.55	34.50
8	29.25	30.00	29.35	27.15	30.80	30.55	30.25	31.35	30.10	30.40	37.20	---
9	28.80	30.05	28.75	28.95	30.60	30.35	29.60	32.05	30.45	30.05	37.30	---
10	28.95	29.85	28.00	28.90	29.70	30.25	31.20	32.20	---	31.50	36.75	---
11	29.90	29.40	27.50	29.05	29.40	29.40	31.65	32.00	---	32.85	35.60	---
12	30.25	28.70	28.45	28.15	28.85	28.95	31.90	32.00	---	33.50	34.90	---
13	30.55	29.80	29.00	29.00	29.85	29.90	31.50	29.80	31.65	33.30	35.00	34.55
14	29.85	29.95	29.00	28.30	30.05	30.10	30.30	29.50	32.10	32.55	35.90	34.35
15	29.20	30.40	29.30	27.70	30.05	30.45	30.45	30.00	32.10	32.35	36.25	32.80
16	28.80	30.40	28.70	29.25	30.60	30.70	30.25	30.70	31.90	33.30	36.35	32.00
17	29.05	29.95	27.20	29.70	30.15	30.10	30.65	31.05	30.80	34.00	35.50	33.45
18	30.10	29.65	27.45	29.60	29.55	29.55	30.55	31.45	31.35	34.85	35.30	33.85
19	30.10	28.55	27.70	29.90	29.50	29.70	30.70	31.00	32.10	35.65	34.40	33.90
20	30.25	29.50	28.75	29.20	30.40	30.20	30.15	29.85	32.80	36.45	35.20	34.10
21	29.70	30.00	29.00	28.40	30.75	30.65	28.95	29.10	32.20	36.15	35.60	34.20
22	29.10	30.20	29.05	29.00	30.55	30.75	28.35	30.80	32.55	35.70	35.65	32.25
23	28.75	29.50	28.50	29.50	30.85	30.65	29.80	30.90	31.80	35.30	35.70	31.20
24	30.30	27.90	27.90	29.95	30.25	30.10	31.00	31.60	31.25	36.55	34.80	32.30
25	30.60	27.35	27.50	30.00	28.80	29.00	31.30	31.60	30.80	37.00	35.00	32.25
26	30.45	26.55	27.10	30.35	29.90	28.65	31.45	30.70	32.00	37.05	33.15	32.30
27	30.20	28.00	27.60	29.50	30.00	29.15	31.90	29.25	32.75	37.05	34.20	32.40
28	30.20	28.20	28.00	29.00	30.10	30.25	30.65	28.15	33.15	35.65	34.75	32.05
29	29.50	28.90	27.70	28.50	---	31.30	29.75	28.60	33.65	33.95	35.05	31.45
30	30.00	29.30	26.70	28.80	---	31.10	30.25	30.10	32.60	35.15	35.20	30.80
31	30.30	---	26.45	29.55	---	31.60	---	30.40	---	35.60	34.80	---
MAX	31.25	30.65	29.50	30.35	30.85	31.60	32.85	32.20	33.65	37.05	37.30	34.70

CAL YR 2000 LOW 35.00
WTR YR 2001 LOW 37.30



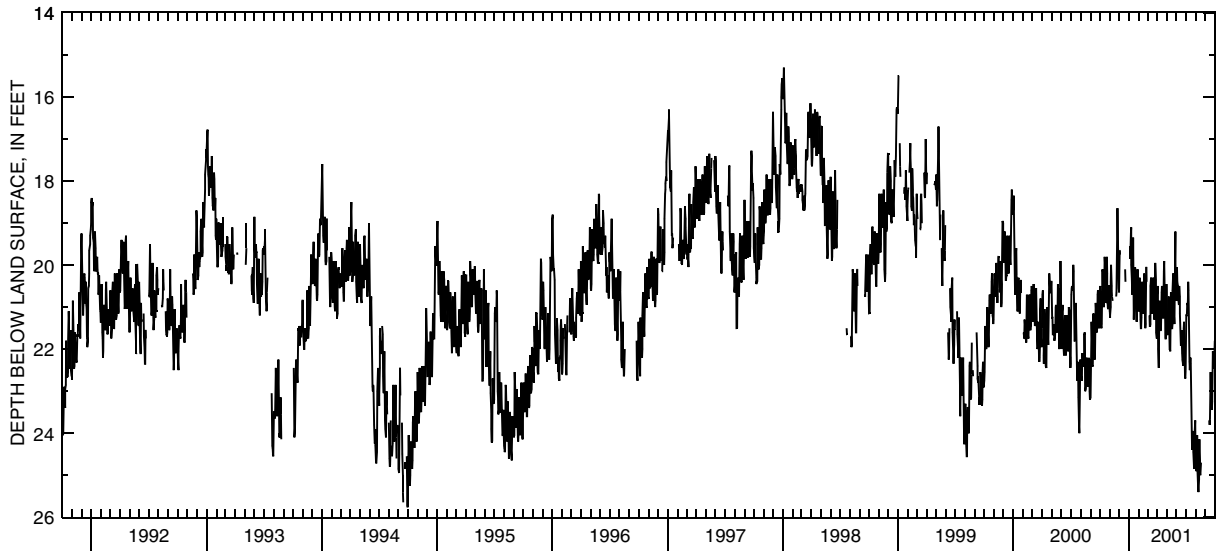
412930084320900. LOCAL NUMBER, WM-3

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, 27.35 ft below land-surface datum, June 30-July 1, 1988; minimum daily low, 15.15 ft below land-surface datum, Jan. 4, 1987.

DEPTH BELOW LAND SURFACE (WATER LEVEL), FEET, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.60	21.10	20.65	---	21.05	---	20.70	21.05	20.85	21.90	24.75	---
2	20.50	21.25	20.35	---	21.10	---	20.50	21.40	20.65	21.20	24.90	---
3	21.25	21.20	19.65	---	21.05	---	21.30	21.65	20.05	21.20	24.85	---
4	21.40	21.00	19.75	19.55	20.30	---	22.00	21.65	20.40	21.15	24.60	---
5	21.45	20.40	---	19.75	20.35	---	22.45	21.55	20.50	20.90	24.05	---
6	21.50	20.00	---	19.85	20.80	---	22.20	20.85	20.60	20.95	24.30	---
7	21.40	20.50	---	19.25	21.30	21.20	21.75	20.75	20.80	20.85	24.90	---
8	20.70	20.60	---	19.10	21.50	21.45	20.90	21.20	20.95	20.40	25.30	---
9	20.10	20.75	---	20.00	21.50	21.45	20.85	21.65	20.80	20.60	25.40	---
10	20.15	20.85	---	20.35	21.25	21.40	21.30	22.00	20.50	21.20	25.40	---
11	20.60	---	---	20.70	20.60	20.50	21.55	22.00	20.75	21.80	25.10	---
12	20.70	---	---	20.65	20.40	20.30	21.55	22.05	21.15	22.30	24.45	---
13	21.00	---	---	20.50	20.60	20.70	21.50	21.25	21.50	22.50	24.15	23.70
14	20.95	---	---	19.80	20.75	20.85	21.05	20.65	21.90	22.30	24.70	23.80
15	20.40	---	---	19.35	21.15	21.00	20.65	20.90	21.90	22.20	24.95	23.65
16	19.80	---	---	20.85	21.10	21.15	20.50	21.20	21.90	22.35	25.00	23.05
17	19.95	---	---	21.30	20.85	21.05	20.95	21.50	21.55	22.65	24.70	22.55
18	20.35	---	---	21.00	20.20	20.50	21.10	21.50	21.75	23.20	---	23.00
19	20.65	---	---	21.00	20.25	20.30	21.25	21.40	22.10	23.90	---	23.20
20	20.90	---	20.10	20.90	20.95	20.90	21.25	20.60	22.25	24.40	---	23.35
21	20.85	---	20.40	20.05	21.20	21.15	20.90	20.20	22.30	24.25	---	23.45
22	20.25	20.75	---	20.15	21.50	21.25	20.15	20.85	22.40	24.05	---	23.25
23	19.80	20.65	---	20.70	21.40	21.30	19.90	21.20	22.20	23.95	---	22.60
24	20.20	19.75	---	21.10	21.00	21.15	20.70	21.25	21.50	24.45	---	22.05
25	20.80	19.20	---	21.35	20.05	20.40	21.15	21.40	21.35	24.60	---	22.25
26	21.00	18.65	---	21.30	20.40	19.95	21.40	21.20	21.90	24.80	---	22.40
27	21.05	19.10	---	21.10	---	20.35	21.75	20.00	22.30	24.85	---	22.45
28	21.05	19.60	---	20.40	---	21.15	21.75	19.20	22.65	24.50	---	22.45
29	20.50	20.10	---	20.10	---	21.60	21.05	19.90	22.70	24.00	---	22.10
30	20.50	20.55	---	20.45	---	21.75	20.45	20.45	22.50	23.70	---	21.80
31	20.95	---	---	20.80	---	21.70	---	20.85	---	24.35	---	---
MAX	21.50	21.25	20.65	21.35	21.50	21.75	22.45	22.05	22.70	24.85	25.40	23.80

CAL YR 2000 LOW 24.00
WTR YR 2001 LOW 25.40



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.—Periodic measurement with chalked tape by ODNR personnel.
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 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.

WATER LEVEL,
IN FEET BELOW LAND-SURFACE DATUM
INSTANTANEOUS OBSERVATION,
WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL
May 9	8.84
July 20	9.67
July 23	9.67
July 27	9.75
July 30	9.74
Aug. 3	9.83
Aug. 6	10.00
Aug. 10	10.04
Aug. 13	10.13
Aug. 17	10.17
Aug. 20	10.23
Aug. 24	10.02
Aug. 31	10.08
Sept. 4	10.13
Sept. 7	9.92
Sept. 17	10.28
Sept. 28	10.28

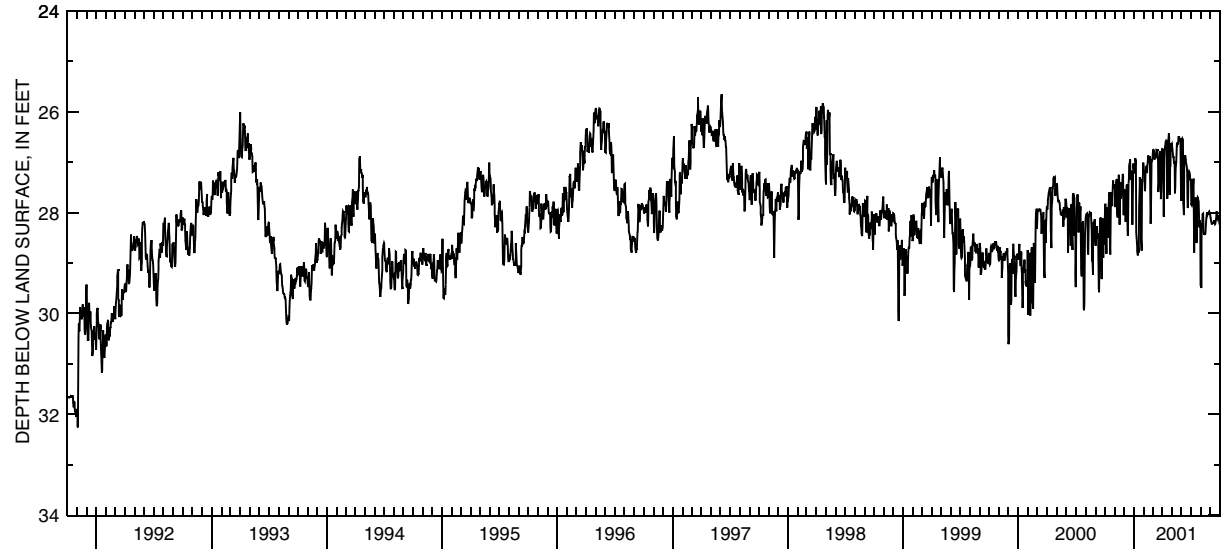
405009083172600. LOCAL NUMBER, WY-1

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 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28.08	27.45	27.89	27.14	27.08	26.91	26.73	26.63	27.74	27.33	29.43	28.09
2	27.84	27.89	27.58	27.22	27.16	26.80	26.74	26.67	26.77	27.84	29.49	28.12
3	27.84	27.83	27.55	27.22	27.21	26.75	26.75	26.73	26.55	27.85	29.47	28.17
4	28.41	27.67	27.53	27.10	27.21	26.75	26.85	26.79	26.53	27.81	28.49	28.19
5	28.55	27.47	28.11	27.02	27.57	26.76	27.99	26.87	26.56	27.74	28.20	28.22
6	28.82	27.41	28.18	26.92	27.50	26.79	28.08	26.90	27.08	27.58	28.09	28.22
7	28.22	27.35	28.09	26.98	27.17	26.94	27.27	26.90	27.81	27.55	28.03	28.21
8	27.90	27.33	27.64	27.91	27.19	26.91	26.88	27.03	28.05	27.42	28.02	28.21
9	28.06	27.95	27.45	28.39	27.07	26.85	26.76	27.01	27.65	27.32	28.20	28.21
10	28.49	28.09	27.44	28.59	27.10	26.87	26.68	26.99	27.01	28.34	28.35	28.19
11	28.47	27.80	27.69	28.67	27.20	26.86	26.66	27.62	26.99	28.79	28.42	28.18
12	27.95	27.57	28.34	28.76	27.20	26.88	26.58	27.49	26.98	28.50	28.43	28.19
13	27.86	27.43	28.46	28.84	27.05	26.79	26.57	27.16	26.86	27.86	28.43	28.15
14	27.70	27.27	27.78	28.85	27.00	26.75	26.58	27.06	26.95	27.77	28.41	28.20
15	27.60	27.25	27.43	28.69	26.88	26.76	26.58	27.00	26.98	27.75	28.43	28.22
16	28.14	27.64	27.34	28.77	26.88	26.76	27.36	26.85	27.03	27.70	28.41	28.21
17	28.67	28.24	27.07	28.79	26.95	26.80	27.72	26.64	27.05	28.14	28.20	28.19
18	28.83	28.00	27.03	27.90	26.99	26.90	27.57	26.61	27.09	28.60	28.20	28.13
19	28.46	27.57	27.00	27.44	26.99	27.34	26.92	26.63	27.18	28.57	28.11	28.09
20	27.70	27.40	26.94	27.30	26.88	27.59	26.59	26.64	27.70	27.98	28.00	27.97
21	27.59	27.72	27.35	27.32	27.11	27.43	26.51	26.62	27.91	27.75	28.02	28.03
22	27.60	27.69	27.31	27.34	27.92	27.27	26.43	26.50	27.77	27.70	28.04	28.10
23	27.61	27.57	27.20	27.88	28.22	27.17	26.52	26.50	27.35	27.71	28.00	28.12
24	27.87	27.50	27.19	28.51	27.99	26.91	27.53	26.50	27.21	27.76	28.02	28.10
25	27.81	27.45	27.25	28.75	27.21	26.79	27.65	26.57	27.18	27.78	28.03	28.06
26	27.46	27.32	27.98	28.40	26.94	26.78	27.09	26.57	27.19	28.02	28.02	28.07
27	27.36	27.23	28.24	27.55	26.96	27.39	27.07	26.57	27.22	28.27	27.98	28.07
28	27.47	27.28	27.58	27.39	26.95	27.73	26.64	26.52	27.27	28.29	27.97	28.16
29	27.50	27.98	27.24	27.38	---	27.58	26.64	26.80	27.35	28.15	28.01	28.22
30	27.51	28.05	27.03	27.24	---	27.00	26.64	27.65	27.35	28.20	28.02	28.24
31	27.45	---	27.05	27.01	---	26.80	---	27.77	---	29.13	28.04	---
MAX	28.83	28.24	28.46	28.85	28.22	27.73	28.08	27.77	28.05	29.13	29.49	28.24

CAL YR 2000 LOW 30.04
WTR YR 2001 LOW 29.49



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 are good, except for periods of estimated daily discharges, which are fair, and Oct. 1-11, Oct. 16-Dec. 18, Jan. 11-17, Apr. 6-May 6, May 26-Aug. 13, and Aug. 18-Sept. 30, daily discharges 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 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e10	e12	e13	20	22	19	17	e22	e22	e23	e13	e16
2	e10	e12	e13	20	20	19	17	e21	e22	e23	e13	e16
3	e10	e12	e13	20	21	19	17	e21	e22	e23	e12	e15
4	e10	e12	e13	20	21	19	18	e21	e22	e22	e12	e14
5	e10	e12	e13	21	21	19	18	e21	e21	e22	e12	e14
6	e10	e12	e13	21	21	19	17	e21	e21	e21	e12	e14
7	e10	e12	e13	21	21	19	17	21	e21	e20	e12	e14
8	e10	e12	e13	21	21	19	e18	21	e21	e20	e13	e14
9	e10	e12	e13	21	21	19	e20	22	e21	e20	e15	e14
10	e10	e12	e13	21	21	19	e19	22	e21	e20	e18	e14
11	11	e11	e14	e21	21	19	e17	21	e21	e20	20	e14
12	11	e11	e14	e21	19	19	e17	22	e22	e20	e22	e14
13	12	e11	e15	e20	20	20	e17	23	e22	e20	e22	e15
14	12	e11	16	e20	19	21	17	22	e22	e20	22	e15
15	12	e11	e17	e20	19	20	18	21	e22	e20	23	e15
16	10	e10	e18	e20	20	18	e17	23	e22	e20	22	e15
17	e11	e10	e20	e20	21	19	e17	22	e22	e21	22	e16
18	e11	e10	31	21	20	19	e17	21	e22	e21	e22	e16
19	e11	e9.5	35	21	19	18	e17	21	e22	e20	e22	e16
20	e11	e9.5	26	20	19	18	e17	22	22	e20	e21	e16
21	e11	e9.0	20	20	19	18	e17	22	e22	e19	e21	e16
22	e11	e9.0	20	20	19	19	e16	22	e22	e18	e21	e16
23	11	e9.0	21	20	19	19	e17	e22	e21	e16	e21	e17
24	10	e9.2	21	20	19	19	e19	e22	e21	e15	e20	e17
25	e10	e9.3	21	20	19	19	21	22	e21	e14	e20	e18
26	11	e9.6	22	21	20	19	23	e22	e21	e14	e20	e18
27	e11	e11	21	21	20	19	23	e22	e21	e13	e20	e19
28	e12	e12	20	21	20	e18	e23	e22	21	e13	e20	e18
29	e12	e13	20	21	---	18	e22	e22	21	e13	e19	e18
30	e12	e13	20	21	---	18	e22	e22	22	e13	e18	e18
31	e12	---	20	23	---	18	---	e22	---	e13	e17	---
TOTAL	335	328.1	562	638	562	585	552	673	646	577	567	472
MEAN	10.8	10.9	18.1	20.6	20.1	18.9	18.4	21.7	21.5	18.6	18.3	15.7
MAX	12	13	35	23	22	21	23	23	22	23	23	19
MIN	10	9.0	13	20	19	18	16	21	21	13	12	14

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2001, BY WATER YEAR (WY)

MEAN	17.5	16.9	20.6	21.5	22.0	21.5	20.7	20.2	21.1	19.7	18.8	17.0
MAX	27.0	22.2	23.1	23.7	24.5	24.1	22.5	21.7	21.5	20.8	19.3	22.9
(WY)	1999	1999	1999	1999	1999	1999	2000	2001	2001	1999	2000	1998
MIN	10.8	10.9	18.1	20.3	20.1	18.9	18.4	18.0	20.6	18.6	18.3	12.7
(WY)	2001	2001	2001	2000	2001	2001	2001	2000	1999	2001	2001	2000

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1998 - 2001	
ANNUAL TOTAL	6582.1		6497.1			
ANNUAL MEAN	18.0		17.8		19.6	
HIGHEST ANNUAL MEAN					22.0	1999
LOWEST ANNUAL MEAN					17.8	2001
HIGHEST DAILY MEAN	35	Dec 19	35	Dec 19	73	Oct 16 1998
LOWEST DAILY MEAN	9.0	Nov 21	9.0	Nov 21	9.0	Nov 21 2000
ANNUAL SEVEN-DAY MINIMUM	9.2	Nov 19	9.2	Nov 19	9.2	Nov 19 2000
MAXIMUM PEAK FLOW			63	Apr 24	76	Oct 17 1998
INSTANTANEOUS LOW FLOW			9.0	Nov 21	9.0	Nov 21 2000
10 PERCENT EXCEEDS	23		22		23	
50 PERCENT EXCEEDS	20		19		21	
90 PERCENT EXCEEDS	11		11		14	

e Estimated.

PROJECT DATA
City of Akron Water Diversion

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 is 953.76 ft above mean sea level.
REMARKS.—Record is good, except for estimated daily discharges, flows greater than 175 ft^3/s, and a period of significant in-channel weed growth (June 1 to September 30), which are poor. Flow is completely regulated by operation of gate at Lock 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	8.2	9.8	16	5.8	8.5	9.5	e15	28	30	e13	17
2	24	10	4.4	9.1	7.7	8.9	9.8	e7.2	26	20	e13	14
3	22	8.2	2.9	8.0	15	8.9	13	e14	25	13	e9.6	15
4	12	2.9	1.9	10	18	11	17	e23	25	13	e10	15
5	12	4.6	2.2	9.2	17	11	11	e10	13	23	e2.0	14
6	35	5.1	3.7	12	17	10	76	e3.0	20	15	e1.8	15
7	16	15	4.0	11	16	17	25	e16	25	22	e1.8	14
8	11	14	4.1	9.7	20	17	5.2	22	17	28	e1.9	13
9	10	11	4.1	8.4	28	13	20	23	10	23	e73	13
10	10	13	4.2	7.0	22	13	25	22	18	18	e75	13
11	9.4	5.8	13	7.0	6.3	13	16	18	26	14	e14	13
12	9.0	1.9	24	7.9	17	13	20	27	19	7.5	e17	8.3
13	8.8	1.9	14	9.1	16	41	10	25	18	15	e16	9.3
14	9.7	2.0	5.6	19	14	21	3.9	7.5	19	18	e15	21
15	9.6	2.1	.70	21	21	14	17	22	19	17	e15	8.4
16	12	2.1	43	10	19	17	28	22	20	11	e15	9.4
17	10	3.2	81	9.8	19	16	20	18	19	8.9	e15	14
18	9.6	2.0	26	12	13	15	11	11	19	20	e15	15
19	12	2.6	.71	12	6.9	12	7.8	12	19	19	e18	17
20	9.7	2.8	1.2	12	16	10	35	13	19	9.8	e16	16
21	5.3	2.7	12	12	16	12	32	34	15	5.7	17	17
22	1.7	3.2	12	12	5.6	17	17	27	22	6.6	8.3	21
23	2.4	2.6	16	12	9.1	8.9	9.2	27	11	11	11	15
24	34	2.4	15	12	13	2.7	5.8	16	12	15	16	16
25	44	4.9	11	12	12	6.3	8.7	12	13	14	16	15
26	13	12	5.3	17	14	20	11	17	14	e14	16	14
27	13	13	1.8	19	15	14	20	31	24	e14	17	14
28	13	12	2.1	19	13	7.8	11	25	14	e14	18	19
29	10	6.3	7.4	19	---	7.7	11	18	19	e13	18	15
30	11	11	8.0	41	---	9.1	21	18	16	e13	14	14
31	4.3	---	13	14	---	7.5	---	17	---	e13	30	---
TOTAL	407.1	188.5	354.11	409.2	412.4	403.3	526.9	572.7	564	478.5	538.4	434.4
MEAN	13.1	6.28	11.4	13.2	14.7	13.0	17.6	18.5	18.8	15.4	17.4	14.5
MAX	44	15	81	41	28	41	76	34	28	30	75	21
MIN	1.7	1.9	.70	7.0	5.6	2.7	3.9	3.0	10	5.7	1.8	8.3

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2001, BY WATER YEAR (WY)

MEAN	16.8	11.1	13.0	16.6	15.4	15.0	18.8	20.3	19.4	20.2	21.5	18.7
MAX	20.1	15.2	15.1	18.9	15.7	17.3	20.5	27.0	26.2	28.9	25.9	22.8
(WY)	1999	2000	2000	1999	2000	1999	2000	2000	2000	2000	2000	1999
MIN	13.1	6.28	11.4	13.2	14.7	13.0	17.6	15.5	15.4	15.4	17.4	14.5
(WY)	2001	2001	2001	2001	2001	2001	2001	1999	1998	2001	2001	2001

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1998 - 2001	
ANNUAL TOTAL	6984.61		5289.51			
ANNUAL MEAN	19.1		14.5		17.6	
HIGHEST ANNUAL MEAN					20.5	2000
LOWEST ANNUAL MEAN					14.5	2001
HIGHEST DAILY MEAN	112	Jul 14	81	Dec 17	153	Aug 26 1999
LOWEST DAILY MEAN	.70	Dec 15	.70	Dec 15	.70	Dec 15 2000
ANNUAL SEVEN-DAY MINIMUM	2.2	Nov 12	2.2	Nov 12	2.2	Nov 12 2000
MAXIMUM PEAK FLOW			280	Aug 9	337	Aug 25 1998
MAXIMUM PEAK STAGE			2.97	Aug 9	3.44	Aug 25 1998
INSTANTANEOUS LOW FLOW			.70	Dec 15	.70	Dec 15 2000
10 PERCENT EXCEEDS	35		23		27	
50 PERCENT EXCEEDS	15		13		15	
90 PERCENT EXCEEDS	4.5		4.2		7.9	

e Estimated.

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 is 952.00 ft. above mean sea level.
REMARKS.—Records good, except for February 28 to March 12, which are poor. Flow is completely regulated by operation of gate at outlet structure.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	2.2	3.0	5.8	3.4	2.9	2.5	3.3	2.9	2.9	2.2	4.4
2	2.2	3.0	2.9	4.8	4.4	3.0	3.6	3.6	3.0	2.2	2.1	3.9
3	1.3	3.3	2.9	4.7	4.7	3.8	4.0	4.3	3.0	2.1	3.0	3.7
4	.44	2.3	2.8	4.4	3.9	3.9	3.1	3.6	2.5	2.6	3.0	3.5
5	2.1	1.7	2.9	4.5	3.6	4.1	2.6	3.1	2.2	2.8	2.5	3.3
6	3.4	3.0	2.9	4.6	3.4	4.3	5.7	3.7	2.8	2.8	2.8	3.2
7	2.4	4.0	3.1	4.6	3.3	4.3	1.6	4.0	2.8	2.9	3.5	3.2
8	2.0	3.0	3.1	4.4	3.3	3.9	1.9	4.0	2.4	3.5	3.9	3.2
9	2.0	2.8	3.1	4.3	2.9	3.9	3.6	3.6	2.6	2.8	5.0	3.2
10	1.8	2.9	3.2	4.5	3.8	4.0	2.8	3.0	3.1	2.6	5.9	3.3
11	2.7	2.3	3.6	4.5	3.7	4.0	2.8	2.7	3.3	2.5	3.7	3.4
12	2.9	2.7	2.7	4.6	3.9	4.0	2.1	4.2	2.8	2.6	3.8	3.4
13	2.8	3.3	1.6	4.3	3.3	4.5	2.1	3.1	2.7	3.1	3.3	4.0
14	3.1	3.2	1.3	4.0	3.7	2.8	2.6	3.0	2.8	3.1	3.1	4.7
15	3.0	3.3	1.8	2.8	4.7	3.3	4.4	3.6	3.1	2.9	3.1	4.1
16	3.3	3.4	5.3	2.9	4.3	4.3	3.6	2.9	3.9	2.8	3.2	4.5
17	3.9	3.1	4.4	3.7	3.7	4.3	3.0	2.7	3.6	3.0	3.3	4.6
18	3.9	3.5	.39	4.1	3.1	3.6	2.7	2.7	3.2	3.2	3.3	4.3
19	3.0	3.8	1.5	4.4	3.3	3.7	3.3	3.3	2.8	3.0	4.0	4.0
20	2.6	3.5	4.1	4.5	3.7	3.8	3.5	3.7	2.7	3.1	3.8	4.2
21	2.3	3.8	4.9	4.3	2.8	4.2	1.6	3.7	2.8	3.0	3.5	4.1
22	1.9	3.9	4.3	4.3	3.1	3.8	1.8	3.0	3.2	3.2	3.3	4.4
23	3.1	3.7	3.8	4.4	3.6	3.2	2.0	2.7	2.9	3.3	3.9	3.4
24	5.8	3.4	3.4	4.4	3.7	3.8	3.0	2.2	3.3	3.2	4.1	3.5
25	5.6	3.9	3.0	4.6	3.0	4.1	3.7	2.8	3.5	3.0	3.8	3.5
26	4.5	4.3	2.9	4.3	3.6	4.0	3.8	3.3	3.5	2.8	3.7	3.3
27	4.8	3.6	3.6	3.7	3.4	3.4	3.7	3.6	3.3	2.6	4.3	3.6
28	4.2	3.1	5.0	3.2	3.0	3.2	3.6	2.7	2.8	2.4	3.9	4.0
29	1.9	3.0	5.7	2.7	---	3.3	4.0	2.4	2.7	2.4	3.7	3.6
30	1.3	3.3	5.8	3.6	---	3.2	3.8	2.4	2.7	2.3	3.5	3.5
31	1.6	---	5.8	2.3	---	2.4	---	2.4	---	2.2	4.5	---
TOTAL	88.04	96.3	104.79	128.2	100.3	115.0	92.5	99.3	88.9	86.9	110.7	113.0
MEAN	2.84	3.21	3.38	4.14	3.58	3.71	3.08	3.20	2.96	2.80	3.57	3.77
MAX	5.8	4.3	5.8	5.8	4.7	4.5	5.7	4.3	3.9	3.5	5.9	4.7
MIN	.44	1.7	.39	2.3	2.8	2.4	1.6	2.2	2.2	2.1	2.1	3.2

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2001, BY WATER YEAR (WY)

MEAN	4.51	4.44	4.90	5.00	4.45	3.59	3.35	2.93	3.21	3.41	3.86	3.69
MAX	7.98	7.19	8.31	7.59	6.52	4.03	3.52	3.20	4.91	4.55	4.91	6.15
(WY)	1999	1999	1999	1999	1999	1999	1999	2001	1998	1998	1998	1998
MIN	2.72	2.93	3.00	3.26	3.29	3.03	3.08	2.64	1.92	2.80	2.92	1.66
(WY)	2000	2000	2000	2000	2000	2000	2001	2000	2000	2001	2000	2000

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1998 - 2001	
ANNUAL TOTAL	1051.63		1223.93			
ANNUAL MEAN	2.87		3.35		3.77	
HIGHEST ANNUAL MEAN					5.15	1999
LOWEST ANNUAL MEAN					2.81	2000
HIGHEST DAILY MEAN	7.7	Aug 6	5.9	Aug 10	13	Oct 8 1998
LOWEST DAILY MEAN	.07	Jul 2	.39	Dec 18	.07	Jul 2 2000
ANNUAL SEVEN-DAY MINIMUM	1.2	Sep 12	1.9	Oct 3	1.2	Sep 12 2000
MAXIMUM PEAK FLOW			12	Apr 6	34	Mar 17 1999
MAXIMUM PEAK STAGE			10.86	Aug 9	10.86	Aug 9 2001
INSTANTANEOUS LOW FLOW			.16	Dec 18	.01	Jul 2 2000
10 PERCENT EXCEEDS	4.0		4.4		6.8	
50 PERCENT EXCEEDS	2.9		3.3		3.5	
90 PERCENT EXCEEDS	1.5		2.3		2.1	

PROJECT DATA
Monitoring of Truetown Mine Outflow

The following tables list the results of chemical analysis of surface-water samples collected from Truetown mine drain (392652082062200), Sunday Creek above mine drain (392705082061400), and Sunday Creek below mine drain (392637082062100). Samples were collected monthly beginning in May 1999 to characterize water quality at these sites before reclamation projects to reduce acid-mine drainage are conducted.

392652082062200 MINE DRAIN AT TRUETOWN, OHIO

LOCATION.—Latitude 39°26′52″, longitude 82°06′22″, Athens County, Hydrologic Unit 05030204, left bank of impoundment pool mine drain outlet at Truetown, Ohio.
DRAINAGE AREA.—Not determined.
PERIOD OF RECORD.—June 1, 1999, to current year.
GAGE.—Water-stage recorder.
REMARKS.—Records fair except for period of estimated discharge, which are poor.
EXTREMES FOR PERIOD OF RECORD—Maximum instantaneous discharge, 3.4 ft^3/s June 2 and 3, 1999; minmum instantaneous discharge, 1.1 ft^3/s Oct. 24, 25, 27-31, 1999.
EXTREMES FOR CURRENT YEAR.—Maximum discharge, 2.8 ft^3/s, many days, gage height 4.29 ft, many days; minimum discharge, 1.3 ft^3/s, many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	1.7	1.6	1.4	e1.6	1.8	2.0	e2.3	2.8	2.6	1.9	2.2
2	1.9	1.7	1.5	1.3	e1.6	1.8	1.8	e2.3	2.8	2.4	2.0	2.2
3	1.8	1.7	1.5	1.4	e1.6	1.8	1.9	e2.3	2.6	2.5	2.1	2.3
4	1.8	1.7	1.6	1.4	e1.6	1.8	1.8	2.3	2.6	2.6	2.0	2.2
5	1.9	1.7	1.6	1.5	e1.7	1.7	1.9	2.3	2.6	2.6	2.0	2.2
6	1.8	1.7	1.6	1.4	e1.7	1.7	1.9	2.3	2.7	2.5	2.0	2.2
7	1.7	1.7	1.7	1.4	e1.7	1.7	2.0	2.2	2.7	2.5	2.0	2.2
8	1.7	1.7	1.6	1.4	e1.7	1.8	1.9	2.3	2.8	2.6	2.0	2.2
9	1.8	1.8	1.5	1.3	1.8	1.7	2.0	2.3	2.8	2.5	2.1	2.2
10	1.8	1.6	1.6	1.3	e1.6	1.7	1.9	2.4	2.8	2.6	2.1	2.2
11	1.7	1.6	1.7	1.3	e1.7	1.7	2.2	2.4	2.8	2.5	2.0	2.2
12	1.7	1.7	1.4	1.3	e1.8	1.8	2.2	2.3	2.8	2.4	2.0	2.2
13	1.6	1.8	1.5	1.3	e1.8	1.9	2.2	2.2	2.8	2.4	2.0	2.2
14	1.6	1.7	1.5	1.3	1.9	1.7	2.3	2.3	2.8	2.4	2.1	2.1
15	1.6	1.7	1.5	1.3	1.9	1.9	2.4	2.4	2.8	2.4	2.1	2.2
16	1.6	1.8	1.7	1.3	1.8	1.9	2.3	2.5	2.7	2.3	2.2	2.2
17	1.6	1.6	1.6	e1.3	1.7	1.7	2.3	2.4	2.7	2.4	2.1	2.1
18	1.6	1.6	1.6	e1.3	1.6	1.7	2.2	2.4	2.7	2.4	2.2	2.2
19	1.6	1.7	1.7	e1.3	1.7	1.7	e2.2	2.4	2.6	2.4	2.2	2.2
20	1.6	1.7	1.6	e1.4	1.7	1.8	e2.2	2.5	2.6	2.3	2.1	2.2
21	1.6	1.6	1.6	e1.4	1.7	1.9	e2.2	2.6	2.7	2.3	2.0	2.2
22	1.5	1.6	1.4	e1.4	1.8	1.8	e2.2	2.5	2.7	2.3	2.1	2.1
23	1.5	1.6	1.4	e1.4	1.7	1.9	e2.2	2.5	2.6	2.3	2.2	2.2
24	1.6	1.7	1.4	e1.4	1.8	1.8	e2.2	2.6	2.5	2.3	2.1	2.2
25	1.6	1.8	1.4	e1.4	1.8	1.8	e2.2	2.6	2.5	2.2	2.2	2.2
26	1.7	1.8	1.5	e1.5	1.6	1.8	e2.2	2.6	2.6	2.1	2.2	2.2
27	1.7	1.7	1.5	e1.5	1.7	1.8	e2.2	2.6	2.6	2.1	2.2	2.2
28	1.6	1.6	1.5	e1.5	1.8	1.8	e2.3	2.5	2.6	2.1	2.2	2.2
29	1.5	1.6	1.5	e1.5	---	1.9	e2.3	2.5	2.6	2.2	2.1	2.1
30	1.6	1.5	1.5	e1.5	---	2.0	e2.3	2.6	2.6	2.0	2.2	2.1
31	1.6	---	1.4	e1.6	---	2.0	---	2.6	---	2.0	2.2	---
MEAN	1.67	1.68	1.54	1.39	1.72	1.80	2.13	2.42	2.68	2.36	2.09	2.19
MAX	1.9	1.8	1.7	1.6	1.9	2.0	2.4	2.6	2.8	2.6	2.2	2.3
MIN	1.5	1.5	1.4	1.3	1.6	1.7	1.8	2.2	2.5	2.0	1.9	2.1

CAL YR 2000 MEAN 1.95 MAX 2.7 MIN 1.3
WTR YR 2001 MEAN 1.97 MAX 2.8 MIN 1.3

e Estimated.

PROJECT DATA
Monitoring of Truetown Mine Outflow

392652082062200 MINE DRAIN AT TRUETOWN, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00061), USGS National Water Information System parameter code; mg/L, milligrams per liter; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; µg/L, micrograms per liter; ---, no data]

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	ACIDITY TOTAL HEATED (MG/L AS CAC03) (70508)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
OCT											
12...	1200	1.7	0.2	4.7	3390	14	13.5	761	---	---	2150
NOV											
16...	1200	1.9	0.1	4.8	3580	12	13	795	---	---	2300
DEC											
07...	1220	1.7	0.3	4.8	3570	-2	13.5	793	---	---	2240
JAN											
17...	1300	1.3	0.1	4.7	3490	3.5	13.5	775	---	---	2230
FEB											
13...	1220	1.8	0.1	4.8	3520	11	13.5	786	---	---	2250
MAR											
27...	1240	1.8	0.1	4.9	3520	1.5	13.5	758	---	---	2250
APR											
19...	1045	2.2	0.1	4.8	3510	7.5	13.5	781	---	---	2290
MAY											
10...	1210	2.3	0.2	4.7	3510	24	13	769	---	---	2240
JUN											
18...	1200	2.7	0.2	4.7	3480	22	13.5	765	---	---	2230
JUL											
17...	1150	2.3	0.1	4.7	3500	23	13	768	---	---	2220
AUG											
01...	1145	1.9	0.1	4.7	3450	27	13.2	711	---	---	2300
SEP											
05...	1150	2.1	0.1	4.6	3440	22.5	13	769	---	---	2370

DATE	TIME	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL) (01105)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)
OCT							
12...	1200	6400	7420	373000	383000	7210	7350
NOV							
16...	1200	6070	7130	395000	428000	7550	8110
DEC							
07...	1220	6520	6780	409000	390000	7810	7850
JAN							
17...	1300	6580	6710	409000	405000	7720	7950
FEB							
13...	1220	6600	6920	406000	407000	7720	8180
MAR							
27...	1240	6440	6650	402000	389000	7460	7840
APR							
19...	1045	6020	6970	406000	400000	7830	7930
MAY							
10...	1210	6580	6640	498000	414000	7980	7660
JUN							
18...	1200	7250	7520	403000	405000	7760	7760
JUL							
17...	1150	7210	7730	415000	408000	7500	7650
AUG							
01...	1145	6750	7140	416000	405000	7640	7360
SEP							
05...	1150	6810	6450	415000	424000	7560	7340

392705082061400 SUNDAY CREEK ABOVE MINE DRAIN

LOCATION.—Latitude 39°27′05″, longitude 82°06′14″, Athens County, Hydrologic Unit 05030204, 0.4 mi upstream from mine drain outlet at Truetown, Ohio.
DRAINAGE AREA.—Not determined.
PERIOD OF RECORD.—Monthly water-quality samples and discharge measurement collected beginning May 1999.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00061), USGS National Water Information System parameter code; mg/L, milligrams per liter; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; M, presence verified but not quantfied; E, estimated value]

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	ALKA-ACIDITY TOTAL HEATED (MG/L AS CAC03) (70508)	BICAR-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
OCT											
12...	1100	8.5	8.8	7.2	892	13.5	9.5	---	60	74	312
NOV											
16...	1100	12	9.6	7.2	898	12	5	---	66	80	313
DEC											
07...	1115	12	12.6	7.3	885	-2	0.5	---	68	82	303
JAN											
17...	1120	31	11.6	7.3	508	3.5	2	---	58	71	149
FEB											
13...	1100	93	12.4	7.5	374	11	3.5	---	56	68	88.4
MAR											
27...	1120	192	12	7.6	280	1.5	4	---	52	63	60.5
APR											
19...	930	98	9.7	7.4	402	7.5	9.5	---	54	66	109
MAY											
10...	1110	38	7.8	7.4	658	24	17	---	54	66	227
JUN											
18...	1100	34	7	7.5	610	22	21.5	---	65	78	188
JUL											
17...	1050	12	7.3	7.2	960	23	21	---	46	56	369
AUG											
01...	1050	15	6.4	7.4	777	24.5	23	---	68	82	270
SEP											
05...	1055	7	---	7.2	926	21.5	20	---	57	70	341

DATE	TIME	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL) (01105)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)
OCT							
12...	1100	<15	29	100	1720	397	387
NOV							
16...	1100	<15	E20	500	1880	318	328
DEC							
07...	1115	<15	<28	1560	2510	428	410
JAN							
17...	1120	<15	118	400	1890	774	774
FEB							
13...	1100	<15	128	180	1070	396	406
MAR							
27...	1120	<15	165	80	1080	208	231
APR							
19...	930	<15	164	80	1280	374	383
MAY							
10...	1110	<15	102	30	1370	392	382
JUN							
18...	1100	<15	117	20	1430	403	407
JUL							
17...	1050	<15	67	M	1050	487	509
AUG							
01...	1050	<15	110	M	1090	350	356
SEP							
05...	1055	<15	62	<10	940	414	473

PROJECT DATA
Monitoring of Truetown Mine Outflow

392637082062100 SUNDAY CREEK BELOW MINE DRAIN

LOCATION.—Latitude 39°26′37″, longitude 82°06′21″, Athens County, Hydrologic Unit 05030204, 0.2 mi downstream from mine drain outlet at Truetown, Ohio.
DRAINAGE AREA.—Not determined.
PERIOD OF RECORD.—Monthly water-quality samples and discharge measurement collected beginning May 1999.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00061), USGS National Water Information System parameter code; mg/L, milligrams per liter; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated value]

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	ACIDITY TOTAL HEATED (MG/L AS CACO3) (70508)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
OCT											
12...	1030	11	8.5	6.7	1270	10.5	9	---	42	52	543
NOV											
16...	1025	13	9	6.8	1220	12	5.5	---	49	60	521
DEC											
07...	1030	14	12	6.8	1150	-1	1.5	---	52	64	95
JAN											
17...	1050	33	11.6	7	646	3.5	2	---	51	63	231
F											
13...	1010	95	12.2	7.2	446	11	3.5	---	52	63	120
MAR											
27...	1045	194	12	7.3	328	1.5	4	---	46	56	78.1
APR											
19...	900	100	9.6	7.1	481	6.5	9.5	---	48	58	147
MAY											
10...	1040	40	7.8	6.7	821	22	16.5	---	36	44	335
JUN											
18...	1030	37	7	6.6	793	22	21	---	37	45	316
JUL											
17...	1015	14	6.3	6.5	1350	21.5	20	---	24	29	691
AUG											
01...	1000	17	6.2	6.5	1080	29.5	21.5	---	33	41	475
SEP											
05...	1030	9.1	---	6.5	1360	21	18.5	---	24	30	623

DATE	TIME	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL) (01105)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)
OCT							
12...	1030	<15	939	48700	51800	1360	1330
NOV							
16...	1025	E9	827	44300	48600	1180	1210
DEC							
07...	1030	18	664	40300	39800	1210	1140
JAN							
17...	1050	<15	381	15300	17600	1050	1030
FEB							
13...	1010	<15	246	4580	7370	490	522
MAR							
27...	1045	<15	226	2610	4400	277	295
APR							
19...	900	<15	344	6360	9940	538	530
MAY							
10...	1040	E10	441	15300	22700	808	789
JUN							
18...	1030	E9	583	14700	26600	920	898
JUL							
17...	1015	<15	1180	54900	59500	1590	1660
AUG							
01...	1000	<15	962	32200	45000	1220	1230
SEP							
05...	1030	17	1010	50700	61700	1550	1600

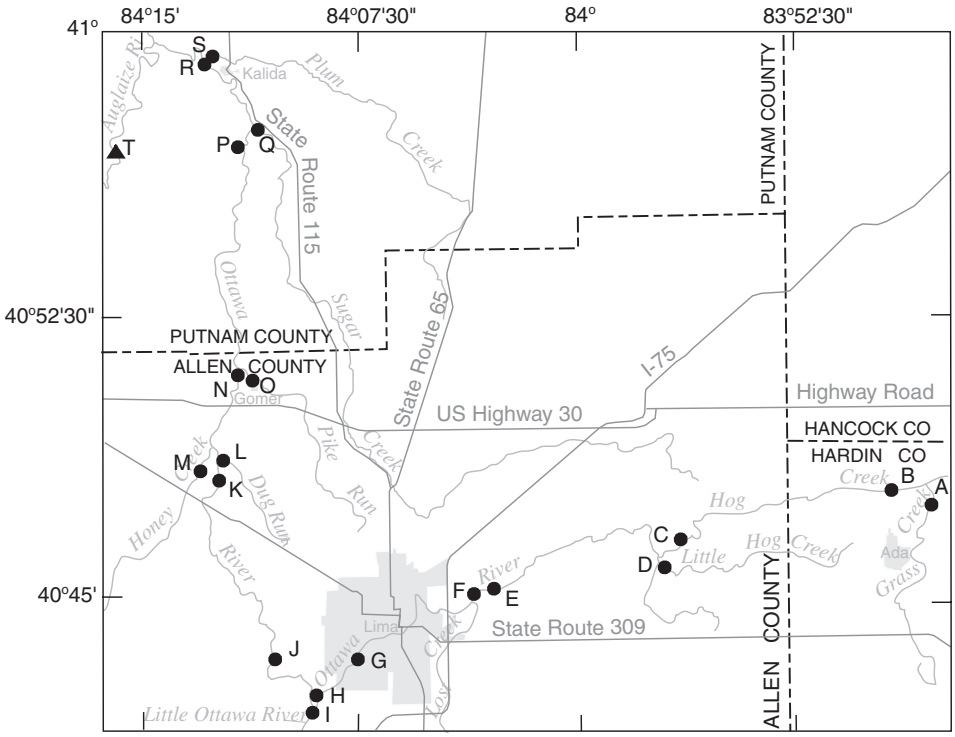
Determination of Flow and Selected Water-Quality Characteristics of the Ottawa River

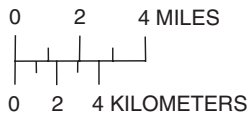
The following tables contain measurements of streamflow, dissolved oxygen concentrations, and concentrations of various chemical constituents for streamwater sites along the Ottawa River and its tributaries in Hardin, Allen, and Putnam Counties. The data were collected in cooperation with the Ottawa River Coalition during the following times: October 2000, May, August, and September 2001. Objectives of the study are to plot the correlation of the low streamflow at each site and an index station (Auglaize River at Ft. Jennings, Ohio) and to help determine the concentration of selected water-quality constituents during periods of potential stress on the aquatic communities at 19 sites.

EXPLANATION

▲ INDEX STATION
- T Auglaize River at Ft. Jennings

● SITE LOCATION
- A Grass Creek near Ada
- B Hog Creek near Ada
- C Hog Creek at Lafayette
- D Little Hog Creek at Lafayette
- E Ottawa River at Metzger Road at Lima
- F Lost Creek near Lima
- G Ottawa River at Lima
- H Ottawa River at Shawnee Road near Lima
- I Little Ottawa River near Lima
- J Ottawa River at State Route 117 near Lima
- K Ottawa River near Elida
- L Dug Run near Elida
- M Honey Run near Elida
- N Ottawa River at Gomer
- O Pike Run at Gomer
- P Ottawa River near Kalida
- Q Sugar Creek near Kalida
- R Ottawa River at Kalida
- S Plum Creek at Kalida





OTTAWA RIVER AND TRIBUTARIES PARTIAL-RECORD STATIONS

[mg/L, milligrams per liter; ft^3/s, cubic feet per second]

STATION NUMBER	STATION NAME	LOCATION	DATE	TIME	OXYGEN, DISSOLVED (MG/L)	DISCHARGE (FT^3/S)
		OTTAWA RIVER BASIN				
404728083475300	Grass Creek near Ada, Ohio	Latitude 40°47′28″, longitude 83°47′53″, Hardin County, Hydrologic Unit 04100007, at Airport Road bridge over Grass Creek 1.5 mi northeast of Ada, Ohio. (Ada 1:24000 quad)	10/23/00 05/15/01 08/13/01 09/18/01 09/18/01	0930 1010 0925 0815 1340	 6.6 6.6 	1.1 22 1.1 7.2
404746083492400	Hog Creek near Ada, Ohio	Latitude 40°47′46″, longitude 83°49′24″, Hardin County, Hydrologic Unit 04100007, at State Route 235 bridge over Hog Creek, 1.5 mi north of Ada, Ohio. (Ada 1:24000 quad)	10/23/00 05/15/01 08/13/01 09/18/01 09/18/01	1030 1320 0930 0840 1240	 7.4 5.8 	5.4 58 4.4 14
404616083564200	Hog Creek at Lafayette, Ohio	Latitude 40°46′16″, longitude 83°56′42″, Allen County, Hydrologic Unit 04100007, along North side of State Route 81 between Center Road and Swaney Road, 1 mi northeast of Lafayette, Ohio.(Beaverdam 1:24000 quad)	10/23/00 05/15/01 08/13/01 09/18/01 09/18/01	1200 1615 1035 0910 1125	 7.1 7.5 	5.7 35 7.23 3.9
404602083571700	Little Hog Creek at Lafayette, Ohio	Latitude 40°46′02″, longitude 83°57′17″, Allen County, Hydrologic Unit 04100007, at State Route 81 bridge over Little Hog Creek, 0.5 mi northwest of Lafayette, Ohio.(Beaverdam 1:24000 quad	10/23/00 05/15/01 08/13/01 09/18/01 09/18/01	1300 1810 1130 0935 1300	 7.8 6.6 	2.1 36 .35 7.6
404504084030300	Ottawa River at Metzger Road pump at Lima, Ohio	Latitude 40°45′04″, longitude 84°03′03″, Allen County, Hydrologic Unit 04100007, at the North end of Metzger Road, downstream of the pump station, 0.2 mi south of the Lima Reservoir, and 0.5 mi north of Metzger Reservoir, 2 miles east of Lima, Ohio.(Cairo 1:24000 quad)	10/23/00 05/16/01 08/13/01 09/18/01	1405 0830 1320 0955	 7.9 	no flow 69 9.7 no flow
404448084034000	Lost Creek near Lima, Ohio	Latitude 40°44′48″, longitude 84°03′40″, Allen County, Hydrologic Unit 04100007, north of High Street/Reservoir Road Bridge over Lost Creek, northeast of bait shop, 1 mi east of Lima, Ohio.(Lima 1:24000 quad)	10/23/00 05/16/01 08/13/01 09/18/01 09/18/01	1430 0930 1220 1015 1130	 8.3 7.3 	.69 129 .67 24
04187100	Ottawa River at Lima, Ohio	Latitude 40°43′29″, longitude 84°07′35″, Allen County, Hydrologic Unit 04100007, at discontinued gaging station at the Lima Wastewater Treatment Plant in Lima, Ohio.(Cridersville 1:24000 quad)	10/23/00 05/15/01 08/13/01 09/18/01 09/18/01	1550 1015 1530 1030 1110	 7.7 7.7 	12 135 2.94 44
404224084090500	Ottawa River at Shawnee Road near Lima, Ohio	Latitude 40°42′24″, longitude 84°09′05″, Allen County, Hydrologic Unit 04100007, at Shawnee Road bridge over Ottawa River near the intersection of Shawnee Road and Amanda Road, 1 mi south of Lima, Ohio.(Cridersville 1:24000 quad)	10/24/00 05/15/01 08/13/01 09/18/01 09/18/01	0830 1145 1530 0950 1250	 8.6 8.3 	35 221 30 93
404221084091500	Little Ottawa River near Lima, Ohio	Latitude 40°42′21″, longitude 84°09′15″, Allen County, Hydrologic Unit 04100007, 300 yards south of the intersection of the Little Ottawa River and Amanda Road, 1 mi southwest of Lima, Ohio. (Cridersville 1:24000 quad)	10/24/00 05/16/01 08/13/01 09/18/01 09/18/01	1030 0850 1715 0920 1440	 6.8 6.9 	.12 52 .21 2.5
404322084102600	Ottawa River at State Route 117 near Lima, Ohio	Latitude 40°43′22″, longitude 84°10′26″, Allen County, Hydrologic Unit 04100007, at State Route 117 bridge over Ottawa River, 1 mi south of Lima, Ohio. (Cridersville 1:24000 quad)	10/24/00 05/15/01 08/14/01 09/17/01 09/18/01	0850 1400 1430 1610 0855	 8.3 6.3	26. 294 28 28

OTTAWA RIVER AND TRIBUTARIES PARTIAL-RECORD STATIONS—Continued

[mg/L, milligrams per liter; ft^3/s, cubic feet per second]

STATION NUMBER	STATION NAME	LOCATION	DATE	TIME	OXYGEN, DISSOLVED (MG/L)	DISCHARGE (FT^3/S)
		OTTAWA RIVER BASIN—CONTINUED				
404808084121700	Ottawa River near Elida, Ohio	Latitude 40°48′08″, longitude 84°12′17″, Allen County, Hydrologic Unit 04100007, 300 ft North of the end of Troyer Road, 1 mi north of Elida, Ohio. (Elida 1:24000 quad)	10/23/00	1510		39
			05/15/01	1545	8.2	399
			08/14/01	1200		30
			09/17/01	1350		26
			09/18/01	0820	7.1	
404839084121400	Dug Run near Elida, Ohio	Latitude 40°48′39″, longitude 84°12′14″, Allen County, Hydrologic Unit 04100007, at Dutch Hollow Road bridge over Dug Run, 1.5 mi north of Elida, Ohio.(Elida 1:24000 quad)	10/23/00	1335		.91
			05/16/01	1400	6.2	32
			08/14/01	1045		.90
			09/17/01	1239		.79
			09/18/01	0718	6.1	
404826084130400	Honey Run near Elida, Ohio	Latitude 40°48′26″, longitude 84°13′04″, Allen County, Hydrologic Unit 04100007, at Billymack Road bridge over Honey Run, 1.5 mi northwest of Elida, Ohio.(Elida 1:24000 quad)	10/23/00	1634		1.2
			05/16/01	1115	6.8	66
			08/14/01	1310		.11
			09/17/01	1518		.18
			09/18/01	0755	5.7	
405051084114000	Ottawa River at Gomer, Ohio	Latitude 40°50′51″, longitude 84°11′40″, Allen County, Hydrologic Unit 04100007, at Lincoln Highway bridge over the Ottawa River, 0.5 mi west of Gomer, Ohio.(Elida 1:24000 quad)	10/23/00	1212		52
			05/16/01	0830	7.4	571
			08/14/01	0830		33
			09/17/01	0905		27
			09/18/01	1010	7.9	
405048084111000	Pike Run at Gomer, Ohio	Latitude 40°50′48″, longitude 84°11′10″, Allen County, Hydrologic Unit 04100007,at Gomer Road bridge over Pike Run, on the northside of Gomer, Ohio.(Elida 1:24000 quad)	10/23/00	1046		1.6
			05/15/01	1400	7.5	59
			08/14/01	1205		1.1
			09/17/01	1036		1.6
			09/18/01	0955	6.9	
405700084113600	Ottawa River near Kalida, Ohio	Latitude 40°57′00″, longitude 84°11′36″, Putnam County, Hydrologic Unit 04100007, 0.2 mi north of County Road 43 on east side of County Road 17 across from old brick house, 2 mi south of Kalida, Ohio.(Kalida 1:24000 quad)	10/23/00	1120		54
			05/16/01	1030	7.5	754
			08/14/01	1010		33
			09/17/01	1510		289
			09/18/01	0825	7.5	
04187995	Sugar Creek near Kalida, Ohio	Latitude 40°57′16″, longitude 84°10′45″, Putnam County, Hydrologic Unit 04100007,County Road 66 bridge over Sugar Creek, 2.5 mi southeast of Kalida, Ohio.(Kalida 1:24000 quad)	10/23/00	0950		2.0
			05/15/01	1200	7.6	173
			08/14/01	0920		no flow
			09/17/01	1730		.46
			09/18/01	0755	6.2	
405901084124600	Ottawa River at Kalida, Ohio	Latitude 40°59′01″, longitude 84°12′46″, Putnam County, Hydrologic Unit 04100007, at end of drive into St. Michaels Cemetery accessed by State Route 114, 0.2 mi northwest of Kalida, Ohio.(Kalida 1:24000 quad)	10/23/00	1425		52.6
			05/16/01	1230	7.9	980
			08/14/01	1630		31.1
			09/17/01	1240		31.3
			09/18/01	0915	7.4	
405913084123300	Plum Creek at Kalida, Ohio	Latitude 40°59′13″, longitude 84°12′33″, Putnam County, Hydrologic Unit 04100007, at State Route 114 bridge over Plum Creek, 0.2 mi northwest of Kalida, Ohio.(Kalida 1:24000 quad)	10/23/00	1310		1.2
			05/15/01	0945	8.2	38
			08/14/01	0805		.27
			09/17/01	1140		.48
			09/18/01	0900	5.8	

PROJECT DATA
Determination of Flow and Selected Water-Quality Characteristics of the Ottawa River

WATER-QUALITY DATA

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

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

DATE	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
404728083475300 GRASS CREEK NEAR ADA, OHIO													
MAY 15...	22	736	6.6	67	7.4	584	14.5	14.0	121	---	.585	1.6	9.53
404746083492400 HOG CREEK NEAR ADA, OHIO													
MAY 15...	58	734	7.4	83	7.4	609	19.5	15.0	144	---	.378	1.7	11.2
404616083564200 HOG CREEK AT LAFAYETTE, OHIO													
MAY 15...	35	733	7.1	88	7.8	752	24.0	17.5	185	---	.089	.94	4.00
404602083571700 LITTLE HOG CREEK AT LAFAYETTE, OHIO													
MAY 15...	36	733	7.8	102	7.8	625	26.5	17.0	155	---	.312	1.7	9.10
404504084030300 OTTAWA RIVER AT METZGER ROAD PUMP AT LIMA, OHIO													
MAY 16...	69	736	7.9	88	7.9	679	18.5	16.5	166	---	.318	1.8	7.07
404448084034000 LOST CREEK NEAR LIMA, OHIO													
MAY 16...	129	735	8.3	96	7.8	493	20.5	16.0	95	---	.543	3.3	7.40
04187100 OTTAWA RIVER AT LIMA, OHIO													
MAY 15...	135	745	7.7	77	7.6	660	14.5	16.0	202	---	.414	1.2	.68
404224084090500 OTTAWA RIVER AT SHAWNEE ROAD NEAR LIMA, OHIO													
MAY 15...	221	745	8.6	91	7.6	777	16.5	17.0	176	---	.278	1.4	2.48
404221084091500 LITTLE OTTAWA RIVER NEAR LIMA, OHIO													
MAY 16...	52	733	6.8	76	7.6	548	18.5	16.5	98	---	.419	2.6	8.37
404322084102600 OTTAWA RIVER AT STATE ROUTE 117 NEAR LIMA, OHIO													
MAY 15...	294	740	8.3	95	7.6	728	20.0	17.0	204	---	.331	1.8	2.92
404808084121700 OTTAWA RIVER NEAR ELIDA, OHIO													
MAY 15...	399	743	8.2	95	7.6	784	21.5	18.0	248	---	.400	2.2	6.79
404839084121400 DUG RUN NEAR ELIDA, OHIO													
MAY 16...	32	733	6.2	74	7.4	582	22.0	17.0	93	---	.829	2.7	17.3
404826084130400 HONEY RUN NEAR ELIDA, OHIO													
MAY 16...	66	734	6.8	76	7.2	634	19.0	15.0	79	---	1.55	3.5	32.4
405051084114000 OTTAWA RIVER AT GOMER, OHIO													
MAY 16...	571	745	7.4	80	7.4	722	17.5	16.0	117	---	.702	2.6	16.2
405048084111000 PIKE RUN AT GOMER, OHIO													
MAY 15...	59	740	7.5	97	7.6	503	26.5	15.5	82	---	.633	2.5	17.9
405700084113600 OTTAWA RIVER NEAR KALIDA, OHIO													
MAY 16...	754	745	7.5	83	7.5	647	19.0	16.0	101	---	.702	2.7	18.4

WATER-QUALITY DATA—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001—Continued

[(00061), USGS National Water Information System parameter code; mm of Hg, millimeters of mercury; mg/L, milligrams per liter; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated value]

DATE	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
04187995 SUGAR CREEK NEAR KALIDA, OHIO													
MAY 15...	173	742	7.6	93	7.5	585	24.0	14.5	125	---	.258	2.4	16.5
405901084124600 OTTAWA RIVER (ST. MICHAELS CEMETERY) AT KALIDA, OHIO													
MAY 16...	980	745	7.9	88	7.5	645	19.5	16.0	107	---	.634	2.6	18.2
405913084123300 PLUM CREEK AT KALIDA, OHIO													
MAY 15...	38	743	8.2	88	7.7	600	18.0	15.0	117	---	.467	2.1	10.6

DATE	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)
404728083475300 GRASS CREEK NEAR ADA, OHIO													
MAY 15...	.314	.428	<.002	2.22	.039	<.005	2.42	<.010	<.002	<.041	<.020	<.005	.023
404746083492400 HOG CREEK NEAR ADA, OHIO													
MAY 15...	.215	.333	<.002	2.56	.019	<.005	2.38	<.010	<.002	<.041	<.020	<.005	E.015
404616083564200 HOG CREEK AT LAFAYETTE, OHIO													
MAY 15...	.161	.301	<.002	.816	.007	<.005	1.85	<.010	<.002	<.041	<.020	<.005	E.006
404602083571700 LITTLE HOG CREEK AT LAFAYETTE, OHIO													
MAY 15...	.216	.179	<.002	6.16	.007	<.005	12.2	<.010	<.002	E.005	<.020	<.010	<.018
404504084030300 OTTAWA RIVER AT METZGER ROAD PUMP AT LIMA, OHIO													
MAY 16...	.118	.272	<.002	4.65	.014	<.005	9.64	<.010	<.002	E.009	<.020	<.005	<.018
404448084034000 LOST CREEK NR LIMA, OHIO													
MAY 16...	.083	.566	<.002	5.98	.023	<.005	E28.2	<.010	<.002	E.023	<.020	.025	E.013
04187100 OTTAWA RIVER AT LIMA, OHIO													
MAY 15...	.067	.196	<.002	.173	.014	<.005	.370	<.010	<.002	E.021	<.020	<.005	<.018
404224084090500 OTTAWA RIVER AT SHAWNEE ROAD NEAR LIMA, OHIO													
MAY 15...	.186	.367	<.002	.195	.015	<.005	.446	<.010	<.002	E.020	<.020	<.005	<.018
40422108409150 LITTLE OTTAWA RIVER NEAR LIMA, OHIO													
MAY 16...	.143	.597	<.002	7.62	.006	<.005	E29.5	<.010	<.002	E.020	<.020	<.010	E.008
404322084102600 OTTAWA RIVER AT STATE ROUTE 117 NEAR LIMA, OHIO													
MAY 15...	.117	.475	<.002	E.283	.015	<.005	1.57	<.010	<.002	E.057	<.020	<.005	<.018

WATER-QUALITY DATA—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001—Continued

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

DATE	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)
404808084121700 OTTAWA RIVER NEAR ELIDA, OHIO													
MAY 15...	.157	.453	<.002	1.98	.011	<.005	8.93	<.010	<.002	E.015	<.020	<.005	<.018
404839084121400 DUG RUN NEAR ELIDA, OHIO													
MAY 16...	.044	.333	<.002	.752	.016	<.005	15.2	<.010	<.002	E.012	<.020	<.010	<.018
404826084130400 HONEY RUN NEAR ELIDA, OHIO													
MAY 16...	.144	.517	<.002	15.8	.147	<.005	E44.8	<.010	<.002	<.041	<.020	E.005	<.018
405051084114000 OTTAWA RIVER AT GOMER, OHIO													
MAY 16...	.150	.467	<.002	E3.43	.026	<.005	E34.2	<.010	<.002	E.037	<.020	.016	E.010
405048084111000 PIKE RUN AT GOMER, OHIO													
MAY 15...	.122	.423	<.002	2.16	<.010	<.005	9.28	<.010	<.002	E.020	<.020	<.010	<.018
405700084113600 OTTAWA RIVER NEAR KALIDA, OHIO													
MAY 16...	.111	.494	<.002	3.94	.179	<.005	16.2	<.010	<.002	E.011	<.020	.009	E.007
04187995 SUGAR CREEK NEAR KALIDA, OHIO													
MAY 15...	.051	.422	<.002	4.66	.035	<.005	12.3	<.010	<.002	<.041	<.020	E.004	<.018
405901084124600 OTTAWA RIVER (ST. MICHAELS CEMETERY) AT KALIDA, OHIO													
MAY 16...	.145	.483	<.002	3.98	.152	<.005	14.7	<.010	<.002	E.009	<.020	.011	E.012
40591308412330 PLUM CREEK AT KALIDA, OHIO													
MAY 15...	.111	.455	<.002	.853	.013	<.005	4.65	<.010	<.002	<.041	<.020	<.005	<.018

DATE	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DIAZ-INON D10 SRG WAT FLT 0.7 U GF, REC PERCENT (91063)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC PERCENT (91065)	LINDANE DIS-SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)
404728083475300 GRASS CREEK NEAR ADA, OHIO													
MAY 15...	<.003	E.149	129	.060	<.005	<.021	<.002	<.009	<.005	<.003	95	<.004	<.035
404746083492400 HOG CREEK NEAR ADA, OHIO													
MAY 15...	<.003	E.144	104	.022	<.005	<.021	<.002	<.009	<.005	<.003	87	<.004	<.035
404616083564200 HOG CREEK AT LAFAYETTE, OHIO													
MAY 15...	<.003	E.098	124	E.003	<.005	<.021	<.002	<.009	<.005	<.003	103	<.004	<.035
404602083571700 LITTLE HOG CREEK AT LAFAYETTE, OHIO													
MAY 15...	<.003	E.562	103	<.005	<.005	<.021	<.002	<.009	<.005	<.003	86	<.004	<.035

WATER-QUALITY DATA—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001—Continued

[(82682), USGS National Water Information System parameter code; µg/L, micrograms per liter; <, concentration or value reported is less than that indicated; E, estimated value]

DATE	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DIAZ-INON D10 SRG WAT FLT 0.7 U GF, REC PERCENT (91063)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC PERCENT (91065)	LINDANE DIS-SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)
404504084030300 OTTAWA RIVER AT METZGER ROAD PUMP AT LIMA, OHIO													
MAY 16...	<.003	E.285	109	.008	<.005	<.021	<.002	<.009	<.005	<.003	90	<.004	<.035
404448084034000 LOST CREEK NEAR LIMA, OHIO													
MAY 16...	<.003	E1.6	103	.031	<.005	<.021	<.002	<.009	<.005	<.003	85	<.004	<.035
04187100 OTTAWA RIVER AT LIMA, OHIO													
MAY 15...	<.003	E.126	109	.055	<.005	<.021	<.002	<.009	<.005	<.003	89	<.004	<.035
404224084090500 OTTAWA RIVER AT SHAWNEE ROAD NEAR LIMA, OHIO													
MAY 15...	<.003	E.100	117	.045	<.005	<.021	<.002	<.009	<.005	<.003	98	<.004	<.035
404221084091500 LITTLE OTTAWA RIVER NEAR LIMA, OHIO													
MAY 16...	<.003	E1.5	107	.025	<.005	<.021	<.002	<.009	<.005	<.003	91	<.004	<.035
404322084102600 OTTAWA RIVER AT STATE ROUTE 117 NEAR LIMA, OHIO													
MAY 15...	<.003	E.155	117	E.035	<.005	<.021	<.005	<.009	<.005	<.003	77	<.004	<.035
404808084121700 OTTAWA RIVER NEAR ELIDA, OHIO													
MAY 15...	<.003	E.428	106	.038	<.005	<.021	<.002	<.009	<.005	<.003	90	<.004	<.035
404839084121400 DUG RUN NEAR ELIDA, OHIO													
MAY 16...	<.003	E.515	104	.019	<.005	<.021	<.002	<.009	<.005	<.003	91	<.004	<.035
404826084130400 HONEY RUN NEAR ELIDA, OHIO													
MAY 16...	.006	E1.5	115	.009	<.005	<.021	<.002	<.009	<.005	<.003	92	<.004	<.035
405051084114000 OTTAWA RIVER AT GOMER, OHIO													
MAY 16...	E.002	E.658	122	E.029	<.005	<.021	<.002	<.009	<.005	<.003	82	<.004	<.035
405048084111000 PIKE RUN AT GOMER, OHIO													
MAY 15...	<.003	E.153	107	.040	<.005	<.021	<.002	<.009	<.005	<.003	93	<.004	<.035
405700084113600 OTTAWA RIVER NEAR KALIDA, OHIO													
MAY 16...	<.003	E.715	111	.022	<.005	<.021	<.002	<.009	<.005	<.003	91	<.004	<.035
04187995 SUGAR CREEK NEAR KALIDA OHIO													
MAY 15...	<.003	E.386	118	.026	<.005	<.021	<.002	<.009	<.005	<.003	95	<.004	<.035
405901084124600 OTTAWA RIVER (ST. MICHAELS CEMETERY) AT KALIDA, OHIO													
MAY 16...	<.003	E.689	104	.025	<.005	<.021	<.002	<.009	<.005	<.003	84	<.004	<.035
405913084123300 PLUM CREEK AT KALIDA, OHIO													
MAY 15...	<.003	E.254	101	<.005	<.005	<.021	<.002	<.009	<.005	<.003	83	<.004	<.035

WATER-QUALITY DATA—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(39532), USGS National Water Information System parameter code; µg/L, micrograms per liter; <, concentration or value reported is less than that indicated; E, estimated value]

DATE	MALATHION, DISSOLVED (UG/L) (39532)	METHYL AZINPHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARATHION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METOLACHLOR WATER DISSOLV (UG/L) (39415)	METRIBUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOLINATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROPAMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARATHION, DISSOLVED (UG/L) (39542)	PEBULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDIMETHALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PERMETHRINCIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)
404728083475300 GRASS CREEK NEAR ADA, OHIO													
MAY 15...	<.027	<.050	<.006	.058	.012	<.002	<.007	<.003	<.007	<.002	E.009	<.006	<.011
404746083492400 HOG CREEK NEAR ADA, OHIO													
MAY 15...	<.027	<.050	<.006	.092	.041	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011
404616083564200 HOG CREEK AT LAFAYETTE, OHIO													
MAY 15...	<.027	<.050	<.006	.092	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011
404602083571700 LITTLE HOG CREEK AT LAFAYETTE, OHIO													
MAY 15...	E.004	<.050	<.006	1.48	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011
404504084030300 OTTAWA RIVER AT METZGER ROAD PUMP AT LIMA, OHIO													
MAY 16...	<.027	<.050	<.006	.551	<.020	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011
404448084034000 LOST CREEK NEAR LIMA, OHIO													
MAY 16...	<.027	<.050	<.006	16.8	.042	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011
04187100 OTTAWA RIVER AT LIMA, OHIO													
MAY 15...	<.027	<.050	<.006	.099	<.006	<.002	<.007	<.003	<.007	<.002	.127	<.006	<.011
404224084090500 OTTAWA RIVER AT SHAWNEE ROAD NRAR LIMA, OHIO													
MAY 15...	<.027	<.050	<.006	.128	<.006	<.002	<.007	<.003	<.007	<.002	.037	<.006	<.011
404221084091500 LITTLE OTTAWA RIVER NEAR LIMA, OHIO													
MAY 16...	<.027	<.050	<.006	13.9	.024	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011
404322084102600 OTTAWA RIVER AT STATE ROUTE 117 NEAR LIMA, OHIO													
MAY 15...	<.013	<.050	<.006	.887	<.006	<.002	<.007	<.003	<.007	<.002	.054	<.006	<.011
404808084121700 OTTAWA RIVER NEAR ELIDA, OHIO													
MAY 15...	<.027	<.050	<.006	2.64	.272	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011
404839084121400 DUG RUN NEAR ELIDA, OHIO													
MAY 16...	E.012	<.050	<.006	9.83	1.83	<.002	<.007	<.003	<.007	<.002	<.030	<.006	<.011
404826084130400 HONEY RUN NEAR ELIDA, OHIO													
MAY 16...	<.027	<.050	<.006	10.4	.674	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011
405051084114000 OTTAWA RIVER AT GOMER, OHIO													
MAY 16...	<.027	<.050	<.006	7.26	.582	<.002	<.007	<.003	<.007	<.002	.040	<.006	<.011
405048084111000 PIKE RUN AT GOMER, OHIO													
MAY 15...	<.027	<.050	<.006	4.42	.706	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011
05700084113600 OTTAWA RIVER NEAR KALIDA, OHIO													
MAY 16...	<.027	<.050	<.006	4.83	1.30	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011

WATER-QUALITY DATA—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2000—Continued

[(39532), USGS National Water Information System parameter code; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated value]

DATE	MALA-THION, DIS-SOLVED (UG/L) (39532)	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA-THION, DIS-SOLVED (UG/L) (39542)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)
						04187995 SUGAR CREEK NEAR KALIDA, OHIO							
MAY 15...	<.027	<.050	<.006	6.05	2.23	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011
						405901084124600 OTTAWA RIVER (ST. MICHAELS CEMETERY) AT KALIDA, OHIO							
MAY 16...	<.027	<.050	<.006	4.26	1.12	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011
						405913084123300 PLUM CREEK AT KALIDA, OHIO							
MAY 15...	<.027	<.050	<.006	.280	.014	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011

DATE	PRO-METON, WATER, DISS, REC (UG/L) (04037)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA-CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	TER-BUTHYL-AZINE, WATER, DISS, REC (UG/L) (04022)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
						404728083475300 GRASS CREEK NEAR ADA, OHIO							
MAY 15...	.019	<.004	<.010	<.011	<.023	.257	<.016	<.034	<.017	---	<.005	<.002	<.009
						404746083492400 HOG CREEK NEAR ADA, OHIO							
MAY 15...	E.010	<.004	<.010	<.011	<.023	.366	<.016	<.034	<.017	---	<.005	<.002	<.009
						404616083564200 HOG CREEK AT LAFAYETTE, OHIO							
MAY 15...	E.012	<.004	<.010	<.011	<.023	.362	<.016	<.034	<.017	---	<.005	<.002	<.009
						404602083571700 LITTLE HOG CREEK AT LAFAYETTE, OHIO							
MAY 15...	.027	<.004	<.010	<.011	<.023	1.89	<.016	<.034	<.017	---	<.005	<.002	<.009
						404504084030300 OTTAWA RIVER AT METZGER ROAD PUMP AT LIMA, OHIO							
MAY 16...	.022	<.004	<.010	<.011	<.023	1.65	<.016	<.034	<.017	---	<.005	<.002	<.009
						404448084034000 LOST CREEK NEAR LIMA, OHIO							
MAY 16...	.040	<.004	<.010	<.011	<.023	1.41	<.016	<.034	<.017	---	<.005	<.002	E.006
						04187100 OTTAWA RIVER AT LIMA OHIO							
MAY 15...	.054	<.004	<.010	<.011	<.023	.035	<.016	<.034	<.017	---	<.005	<.002	<.009
						404224084090500 OTTAWA RIVER AT SHAWNEE ROAD NEAR LIMA, OHIO							
MAY 15...	.085	<.004	<.010	<.011	<.023	.044	<.016	<.034	<.017	---	<.005	<.002	<.009
						404221084091500 LITTLE OTTAWA RIVER NEAR LIMA, OHIO							
MAY 16...	.024	<.004	<.010	<.011	<.023	.768	<.016	<.034	<.017	---	<.005	<.002	<.009
						404322084102600 OTTAWA RIVER AT STATE ROUTE 117 NEAR LIMA, OHIO							
MAY 15...	.096	<.004	<.010	<.011	<.023	.547	.023	<.034	<.017	---	<.005	<.002	<.009

PROJECT DATA
Determination of Flow and Selected Water-Quality Characteristics of the Ottawa River

WATER-QUALITY DATA—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2000—Continued

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

DATE	PRO-METON, WATER, DISS, REC (UG/L) (04037)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA-CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	TER-BUTHYL-AZINE, WATER, DISS, REC (UG/L) (04022)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
404808084121700 OTTAWA RIVER NEAR ELIDA, OHIO													
MAY 15...	.041	<.004	<.010	<.011	<.023	1.58	<.016	<.034	<.017	---	<.005	<.002	<.009
404839084121400 DUG RUN NEAR ELIDA, OHIO													
MAY 16...	.300	<.004	<.010	<.011	<.023	2.65	<.016	<.034	<.017	---	<.005	<.002	<.009
404826084130400 HONEY RUN NEAR ELIDA, OHIO													
MAY 16...	<.015	<.004	<.010	<.011	<.023	13.3	<.016	<.034	<.017	E.026	<.005	<.002	<.009
405051084114000 OTTAWA RIVER AT GOMER, OHIO													
MAY 16...	.054	<.004	<.010	<.011	<.023	2.46	E.014	<.034	<.017	---	<.005	<.002	<.009
405048084111000 PIKE RUN AT GOMER , OHIO													
MAY 15...	.124	<.004	<.010	<.011	<.023	.907	<.016	<.034	<.017	---	<.005	<.002	<.009
05700084113600 OTTAWA RIVER NEAR KALIDA, OHIO													
MAY 16...	.058	<.004	<.010	<.011	<.023	2.55	<.016	<.034	<.017	---	<.005	<.002	<.009
04187995 SUGAR CREEK NEAR KALIDA, OHIO													
MAY 15...	.260	<.004	<.010	<.011	<.023	.130	.026	<.034	<.017	E.002	<.005	<.002	<.009
405901084124600 OTTAWA RIVER (ST. MICHAELS CEMETERY) AT KALIDA, OHIO													
MAY 16...	.068	<.004	<.010	<.011	<.023	2.18	<.016	<.034	<.017	---	<.005	<.002	<.009
405913084123300 PLUM CREEK AT KALIDA, OHIO													
MAY 15...	.022	<.004	<.010	<.011	<.023	.460	<.016	<.034	<.017	---	<.005	<.002	<.009

Geochemistry and Ground-Water Flow Beneath an Abandoned Coal Mine Reclaimed with FGD By-Products

The site selected for study is in Tuscarawas County, Ohio, and is also known as the Fleming abandoned mine site. FGD by-products are produced as a result of injection of dolostone slurry through the flue gases of coal-burning utilities that use high-sulfur coals as fuel. Beneficial uses of the by-products are being developed, and their environmental effects are being assessed.

The following tables list ground-water levels and chemical analyses of interstitial-, ground-, and surface-water samples collected from an abandoned mine site that has been reclaimed in part by application of a coal-combustion by-product, also known as flue-gas desulfurization (FGD) by-product. Water levels in wells were measured periodically. Interstitial waters were sampled by use of soil-suction lysimeters. The lysimeters produced only small amounts of water; thus, chemical analyses for interstitial water are incomplete.

WELL, SOIL-SUCTION LYSIMETER, AND SURFACE-WATER SITE DESCRIPTIONS

(The following site description applies to all soil-suction lysimeters, wells, and surface-water sites used for this study.)

LOCATION.—Hydrologic Unit 05040001, approximately 1.5 mi northwest of the city of Dover, Ohio; 0.5 mi west of Interstate 77.
AQUIFER.—Sandstones and coals of Allegheny and Pottsville Groups, of middle and lower Pennsylvanian Age.
INSTRUMENTATION.—Periodic measurement of water level with steel or electric tape by USGS personnel.
DATUM.—Elevation of land-surface datum is given in feet above sea level, surveyed using Total Station with reference points established by global positioning system, accurate to 0.01 ft.
PERIOD OF RECORD.—Mar. 1995 to June 1998 for wells TU-100 through TU-114; Dec. 1995 to June 1998 for wells TU-115 through TU-119. Measurement of water levels and water-quality sampling resumed again in May 2000 and concluded in June 2001.
REMARKS.—These sites were used for chemical-quality sampling only as part of a cooperative study with the Ohio Department of Natural Resources, West Virginia University, and the Ohio Minelands Partnership.

WELL, SOIL-SUCTION LYSIMETER, AND SURFACE-WATER SITE DESCRIPTIONS—CONTINUED

[in, inches; ft, feet; bls, below land surface;

LOCAL NUMBER	SITE IDENTIFIER	LATITUDE	LONGITUDE	CASING DIAMETER (IN)	ALTITUDE OF LAND SURFACE DATUM (FT)	ALTITUDE OF MEASURE-MENT POINT (FT)	DEPTH (FT BLS)	SCREEN INTERVAL	
								TOP	BOTTOM
GROUND-WATER WELLS									
TU-100-W1S	403321081311901	40°33′21″	81°31′19″	6	1078.90	1081.48	68.00	1022.90	1012.90
TU-101-W1D	403321081311902	40°33′21″	81°31′19″	6	1079.05	1081.79	98.00	993.05	983.05
TU-102-W2	403319081312000	40°33′19″	81°31′20″	6	1079.99	1082.64	68.00	1023.99	1013.99
TU-103-W3S	403315081312301	40°33′15″	81°31′23″	6	1072.89	1075.38	70.00	1014.89	1004.89
TU-104-W3D	403315081312302	40°33′15″	81°31′23″	6	1072.93	1075.53	86.00	998.93	988.93
TU-105-W4S	403313081311901	40°33′13″	81°31′19″	6	1047.80	1050.49	46.00	1013.80	1003.80
TU-106-W4I	403313081311902	40°33′13″	81°31′19″	6	1047.32	1050.19	63.50	995.82	985.82
TU-107-W4D	403313081311903	40°33′13″	81°31′19″	6	1046.58	1049.19	100.00	958.58	948.58
TU-108-W5SP	403312081311401	40°33′12″	81°31′14″	6	1045.84	1048.53	16.00	1036.84	1031.84
TU-109-W5D	403312081311402	40°33′12″	81°31′14″	6	1045.90	1048.53	38.00	1019.90	1009.90
TU-110-W6S	403315081311001	40°33′15″	81°31′10″	6	1051.18	1053.81	43.00	1020.18	1010.18
TU-111-W6D	403315081311002	40°33′15″	81°31′10″	6	1051.62	1054.02	60.00	1003.62	993.62
TU-112-W7	403320081311000	40°33′20″	81°31′10″	6	1059.13	1061.75	53.00	1018.13	1008.13
TU-113-W8S	403323081311601	40°33′23″	81°31′16″	6	1076.57	1079.26	68.00	1020.57	1010.57
TU-114-W8D	403323081311602	40°33′23″	81°31′16″	6	1075.54	1078.26	92.00	995.54	985.54
TU-115-W9	403316081310600	40°33′16″	81°31′06″	2	1049.88	1051.38	49.00	1012.88	1002.88
TU-116-W10	403314081311500	40°33′14″	81°31′15″	2	1053.53	1055.33	57.00	1008.53	998.53
TU-117-W11	403316081311300	40°33′16″	81°31′13″	2	1055.69	1057.18	58.00	1009.69	999.69
TU-118-W12	403318081311200	40°33′18″	81°31′12″	2	1057.07	1059.14	57.60	1011.47	1001.47
TU-119-W13	403321081311400	40°33′21″	81°31′14″	2	1070.98	1072.71	70.00	1012.98	1002.98
SOIL-SUCTION LYSIMETERS									
TU-130-L1A-1.5	403316081311101	40°33′16″	81°31′11″	---	---	---	1.50	---	---
TU-131-L1A-2.5	403316081311102	40°33′16″	81°31′11″	---	---	---	2.50	---	---
TU-132-L1A-3.5	403316081311103	40°33′16″	81°31′11″	---	---	---	3.50	---	---
TU-133-L1B-1.5	403316081311104	40°33′16″	81°31′11″	---	---	---	1.50	---	---
TU-134-L1B-2.5	403316081311105	40°33′16″	81°31′11″	---	---	---	2.50	---	---
TU-135-L1B-3.5	403316081311106	40°33′16″	81°31′11″	---	---	---	3.50	---	---
TU-136-L2A-1.5	403313081311401	40°33′16″	81°31′11″	---	---	---	1.50	---	---
TU-137-L2A-2.5	403313081311402	40°33′16″	81°31′11″	---	---	---	2.50	---	---
TU-138-L2A-3.5	403313081311403	40°33′13″	81°31′14″	---	---	---	3.50	---	---
TU-139-L2B-1.5	403313081311404	40°33′13″	81°31′14″	---	---	---	1.50	---	---
TU-140-L2B-2.5	403313081311405	40°33′13″	81°31′14″	---	---	---	2.50	---	---
TU-141-L2B-3.5	403313081311406	40°33′13″	81°31′14″	---	---	---	3.50	---	---
TU-142-L3A-4.5A	403314081311801	40°33′14″	81°31′18″	---	---	---	4.50	---	---
TU-143-L3A-4.5B	403314081311802	40°33′14″	81°31′18″	---	---	---	4.50	---	---
TU-144-L3B-1.5	403314081311803	40°33′14″	81°31′18″	---	---	---	1.50	---	---
TU-146-L3B-3.5	403314081311805	40°33′14″	81°31′18″	---	---	---	3.50	---	---
TU-148-L3C-2.5	403314081311807	40°33′14″	81°31′18″	---	---	---	2.50	---	---
TU-149-L3C-3.5	403314081311808	40°33′14″	81°31′18″	---	---	---	3.50	---	---
TU-151-L4A-2.5	403315081312102	40°33′15″	81°31′21″	---	---	---	2.50	---	---
TU-152-L4A-3.5	403315081312103	40°33′15″	81°31′21″	---	---	---	3.50	---	---
TU-154-L4B-2.5	403315081312105	40°33′15″	81°31′21″	---	---	---	2.50	---	---
TU-156-L4C-1.5UP	403315081312107	40°33′15″	81°31′21″	---	---	---	1.50	---	---
TU-157-L4C-2.5UP	403315081312108	40°33′15″	81°31′21″	---	---	---	2.50	---	---
TU-158-L4C-3.5UP	403315081312109	40°33′15″	81°31′21″	---	---	---	3.50	---	---
TU-159-L5A-1.5	403316081310501	40°33′16″	81°31′05″	---	---	---	2.50	---	---
TU-160-L5A-2.5	403316081310502	40°33′16″	81°31′05″	---	---	---	2.50	---	---
TU-162-L5B-1.5	403316081310504	40°33′16″	81°31′05″	---	---	---	1.50	---	---
TU-163-L5B-2.5	403316081310505	40°33′16″	81°31′05″	---	---	---	2.50	---	---
TU-164-L5B-3.5	403316081310506	40°33′16″	81°31′05″	---	---	---	3.50	---	---
SURFACE-WATER SITES									
TU-124	403311081311600	40°33′11″	81°31′16″	---	---	---	---	---	---
TU-125	403304081305700	40°33′04″	81°30′57″	---	---	---	---	---	---

WATER LEVELS IN WELLS

LOCAL NUMBER	AQUIFER	DATE	WATER LEVEL (FEET BELOW LAND SURFACE)
TU-100-W1S	Allegheny	11/06/00	43.37
		02/09/01	43.55
		03/28/01	43.61
		05/30/01	42.88
		06/25/01	42.84
TU-101-W1D	Pottsville	11/06/00	43.20
		02/09/01	43.39
		03/28/01	43.48
		05/30/01	42.71
		06/25/01	42.70
TU-102-W2	Allegheny	11/06/00	44.74
		02/09/01	44.93
		03/28/01	44.98
		05/30/01	44.28
		06/25/01	44.29
TU-103-W3S	Allegheny	11/06/00	40.53
		02/09/01	40.70
		03/28/01	40.71
		05/30/01	40.19
		06/25/01	40.20
TU-104-W3D	Pottsville	11/06/00	40.30
		02/09/01	40.48
		03/28/01	40.49
		05/30/01	39.95
		06/25/01	40.05
TU-105-W4S	Allegheny	11/06/00	15.82
		02/09/01	16.04
		03/28/01	15.99
		05/30/01	15.45
		06/25/01	15.44
TU-106-W4I	Pottsville	11/06/00	38.34
		02/09/01	38.38
		03/28/01	38.36
		05/30/01	38.22
		06/25/01	38.20
TU-107-W4D	Pottsville	11/06/00	62.96
		02/09/01	62.71
		03/28/01	62.56
		05/30/01	62.39
		06/25/01	62.71
TU-108-W5SP	Allegheny	11/06/00	12.84
		02/09/01	9.98
		03/28/01	9.32
		05/30/01	9.42
		06/25/01	11.19
TU-109-W5D	Allegheny	11/06/00	13.94
		02/09/01	14.12
		03/28/01	14.07
		05/30/01	13.44
		06/25/01	13.50
TU-110-W6S	Allegheny	11/06/00	16.54
		02/09/01	16.76
		03/28/01	16.52
		05/30/01	15.75
		06/25/01	15.75

WATER LEVELS IN WELLS—CONTINUED

LOCAL NUMBER	AQUIFER	DATE	WATER LEVEL (FEET BELOW LAND SURFACE)
TU-111-W6D	Pottsville	11/06/00	17.09
		02/09/01	17.30
		03/28/01	17.02
		05/30/01	16.20
		06/25/01	16.15
TU-112-W7	Allegheny	11/06/00	25.06
		02/09/01	25.05
		03/28/01	24.91
		05/30/01	24.18
		06/25/01	24.17
TU-113-W8S	Allegheny	11/06/00	41.04
		02/09/01	41.19
		03/28/01	41.28
		05/30/01	40.52
		06/26/01	40.55
TU-114-W8D	Pottsville	11/06/00	39.97
		02/09/01	40.13
		03/28/01	40.21
		05/30/01	39.47
		06/25/01	39.40
TU-115-W9	Allegheny	11/06/00	16.19
		02/09/01	16.19
		03/28/01	15.95
		05/30/01	15.24
		06/25/01	15.20
TU-116-W10	Allegheny	11/06/00	20.72
		02/09/01	20.93
		03/28/01	20.90
		05/30/01	20.30
		06/25/01	20.30
TU-117-W11	Allegheny	11/06/00	20.82
		02/09/01	21.01
		03/28/01	20.92
		05/30/01	20.18
		06/25/01	20.12
TU-118-W12	Allegheny	11/06/00	22.39
		02/09/01	22.49
		03/28/01	22.43
		05/30/01	21.69
		06/25/01	21.66
TU-119-W13	Allegheny	11/06/00	36.14
		02/09/01	36.12
		03/28/01	36.20
		05/30/01	35.47
		06/25/01	35.43

WATER-QUALITY RECORDS

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[ft^3/S, cubic foot per second; µS/cm, microsiemens per centimeter; mV, millivolts; deg C, degrees Celsius; NTU, nephelometric turbidity units; mg/L, milligrams per liter; $CaCO_3$, calcium carbonate; ---, no data]

LOCAL NUMBER	DATE	TIME	DIS-CHARGE (FT^3/S) (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH, WATER, WHOLE, FIELD (STAND-ARD UNITS) (00040)	REDOX POT-ENT-IAL (MV) (00090)	AIR TEMPER-ATURE (DEG C) (00020)	WATER TEMPER-ATURE (DEG C) (00010)	TURBID-ITY (NTU) (00076)	HARD-NESS (MG/L AS CACO3) (00900)
				INTERSTITIAL WATER						
TU-132-L1A-3.5	06/27/01	0800	---	5600	5.9	---	---	---	---	---
TU-142-L3A-4.5A	06/27/01	0805	---	3280	6.8	---	---	---	---	---
TU-143-L3A-4.5B	06/27/01	0810	---	3930	6.0	---	---	---	---	3000
TU-146-L3B-3.5	06/27/01	0815	---	3180	6.4	---	---	---	---	2400
TU-152-L4A-3.5	06/27/01	0820	---	2350	6.8	---	---	---	---	---
TU-156-L4C-1.5UP	06/27/01	0825	---	3270	6.4	---	---	---	---	---
TU-157-L4C-2.5UP	06/27/01	0830	---	2750	7.0	---	---	---	---	---
TU-164-L5B-3.5	06/27/01	0835	---	1210	5.6	---	---	---	---	620
				GROUND WATER						
TU-100-W1S	06/26/01	1435	---	3410	5.6	190	28.0	12.5	---	1800
TU-102-W2	06/26/01	1545	---	3440	5.4	230	29.0	12.2	---	1800
TU-103-W3S	06/25/01	1210	---	2590	5.9	160	27.0	12.3	4	1400
TU-105-W4S	06/25/01	1350	---	2890	5.5	200	31.0	12.5	0	1800
TU-108-W5S	06/27/01	0830	---	2000	5.4	450	21.0	11.1	---	1200
TU-109-W5D	06/25/01	1530	---	2860	5.5	230	27.0	12.2	---	1600
TU-110-W6S	06/25/01	1645	---	4480	5.1	270	27.0	12.5	---	2200
TU-112-W7	06/25/01	1800	---	2580	5.8	200	24.0	12.8	10	1500
TU-113-W8S	06/26/01	1320	---	2180	5.5	210	28.0	12.5	---	1300
TU-115-W9	06/26/01	1100	---	2350	5.5	230	24.0	12.8	---	1700
TU-116-W10	06/26/01	0735	---	3200	5.3	250	17.0	13.0	1	1900
TU-117-W11	06/26/01	0845	---	3800	5.4	250	20.0	14.4	0	2200
TU-118-W12	06/26/01	0950	---	3440	5.8	210	28.0	13.0	---	1900
TU-119-W13	06/26/01	1200	---	3300	5.7	200	27.0	13.8	---	1400
				SURFACE WATER						
TU-124	06/27/01	0930	0.013	1670	3.5	590	27.0	21.5	---	790
TU-125	06/27/01	1100	0.004	560	6.4	330	28.0	18.2	---	220

WATER-QUALITY RECORDS—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001—Continued

[mg/L, milligrams per liter; HCO_3, bicarbonate; $CaCO_3$, calcium carbonate; SO_4, sulfate; SiO_2, silica; ---, no data; e, estimated value does not have the same precision as other results for the same constituent; <, concentration or value reported is less than that indicated]

LOCAL NUMBER	DATE	CALCIUM, DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BI-CARB-ONATE, FIELD (MG/L AS HCO3) (00453)	ALKA-LIN-ITY, WATER, WHOLE, FIELD (MG/L AS CACO3) (39086)	SUL-FATE, DIS-SOLVED (MG/L AS SO4) (00945)	CHLOR-IDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUOR IDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)
					INTERSTITIAL WATER						
TU-143-L3A-4.5B	06/27/01	490	420	12.8	10.1	---	---	2730	2.6	0.6	28.5
TU-146-L3B-3.5	06/27/01	560	240	3.8	13.6	---	---	1940	0.9	0.8	16.7
TU-164-L5B-3.5	06/27/01	120	79	20.4	19.0	---	---	600	1.7	0.2	32.0
					GROUND WATER						
TU-100-W1S	06/26/01	370	200	14.7	15.8	97	80	2200	1.7	0.1e	13.7
TU-102-W2	06/26/01	380	200	12.7	15.5	67	55	2310	3.0	1.4	13.5
TU-103-W3S	06/25/01	330	150	9.1	6.6	94	77	1450	1.5	0.3	12.8
TU-105-W4S	06/25/01	380	200	12.7	12.4	72	59	2220	2.2	0.3	13.3
TU-108-W5S	06/27/01	200	170	6.1	8.6	6	5	1180	1.9	1.0	13.7
TU-109-W5D	06/25/01	330	190	12.9	9.2	50	41	2010	2.2	0.4	13.9
TU-110-W6S	06/25/01	380	300	11.3	11.0	55	44	3460	5.2	3.0	9.9
TU-112-W7	06/25/01	330	160	12.7	9.2	74	61	1680	1.5	0.1e	12.8
TU-113-W8S	06/26/01	290	130	8.8	6.5	113	92	1350	2.2	<0.2	13.1
TU-115-W9	06/26/01	370	190	12.6	11.4	61	50	1930	2.1	0.8	12.6
TU-116-W10	06/26/01	390	220	3.7	11.5	56	46	2370	2.4	0.3	12.9
TU-117-W11	06/26/01	460	260	13.1	12.0	63	51	2770	4.2	0.8	16.3
TU-118-W12	06/26/01	430	200	15.2	11.1	80	65	2100	2.1	0.5	13.8
TU-119-W13	06/26/01	320	150	5.3	20.2	71	58	2190	1.6	<0.2	11.4
					SURFACE WATER						
TU-124	06/27/01	160	94	4.1	6.3	---	---	824	2.4	0.5	12.3
TU-125	06/27/01	44	27	8.7	2.8	5	4	218	6.1	0.5	16.7

WATER-QUALITY RECORDS—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001—Continued

[C, degrees Celsius; mg/L, milligrams per liter; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; e, estimated value does not have the same precision as other results for the same constituent]

LOCAL NUMBER	DATE	DIS-SOLVED SOLIDS, RESI-DUE AT 180C (MG/L) (70300)	NITRO-GEN, NITRITE, DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, AMMONIA, DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NITRITE PLUS NITRATE, DIS-SOLVED (MG/L AS N) (00631)	PHOS-PHORUS, ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00666)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ALUM-INUM, TOTAL (UG/L AS AL) (01105)	ARS-ENIC, DIS-SOLVED (UG/L AS AS) (01000)	BRO-MIDE, DIS-SOLVED (UG/L AS BR) (71870)
					INTERSTITIAL WATER					
TU-143-L3A-4.5B	06/27/01	---	---	---	---	---	52	<140	<2	0.01
TU-146-L3B-3.5	06/27/01	---	---	---	---	---	<15	<140	<2	<0.01
TU-164-L5B-3.5	06/27/01	---	---	---	---	---	72	82	<2	<0.01
					GROUND WATER					
TU-100-W1S	06/26/01	3150	0.004[e]	1.7	<0.05	0.01[e]	29	48	<2	0.24
TU-102-W2	06/26/01	3340	0.009	1.1	<0.05	0.026	750	1000	1.3[e]	0.93
TU-103-W3S	06/25/01	2090	0.004[e]	0.31	<0.05	0.012[e]	150	140	1.1[e]	0.06
TU-105-W4S	06/25/01	3160	0.004[e]	1.0	<0.05	0.01[e]	91[e]	140	1.5[e]	0.23
TU-108-W5S	06/27/01	1610	0.003[e]	0.08	0.44	<0.02	1300	2000	<2	0.02
TU-109-W5D	06/25/01	2860	---	---	---	---	1800	2500	<2	0.51
TU-110-W6S	06/25/01	4970	0.007	0.74	<0.05	0.035	4000	5200	1.7[e]	1.78
TU-112-W7	06/25/01	2400	<0.006	0.83	<0.05	0.009[e]	150	140	<2	0.22
TU-113-W8S	06/26/01	1990	0.006	0.38	<0.05	0.011[e]	45	490	<2	0.95
TU-115-W9	06/26/01	2750	0.006	1.3	<0.05	0.009[e]	110[e]	140	<2	0.20
TU-116-W10	06/26/01	3380	0.005[e]	1.0	<0.05	0.013[e]	330	300	<2	0.74
TU-117-W11	06/26/01	3910	0.006	1.1	<0.05	0.013[e]	320	320	<2	0.41
TU-118-W12	06/26/01	3010	0.004[e]	1.2	<0.05	<0.02	92	140	<2	0.32
TU-119-W13	06/26/01	2910	0.006	0.76	<0.05	0.013[e]	200	140	<2	0.24
					SURFACE WATER					
TU-124	06/27/01	---	<0.006	0.15	0.02[e]	<0.02	1400	1500	<2	0.01
TU-125	06/27/01	331	<0.006	<0.04	0.51	<0.02	140	1200	<2	0.01

WATER-QUALITY RECORDS—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001—Continued

[µg/L, micrograms per liter; <, concentration or value reported is less than that indicated; ---, no data; e, estimated value does not have the same precision as other results for the same constituent]

LOCAL NUMBER	DATE	BORON, DIS-SOLVED (UG/L AS B) (01020)	CAD-MIUM, DIS-SOLVED (UG/L AS CD) (01025)	CHROM-IUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	IRON, TOTAL (UG/L AS FE) (01045)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM, DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
					INTERSTITIAL WATER						
TU-143-L3A-4.5B	06/27/01	470	<8	9.1[e]	110	<5	11	918	<2	290	19800
TU-146-L3B-3.5	06/27/01	610	<8	<10	<13	<5	<10	<70	<2	75	40
TU-164-L5B-3.5	06/27/01	60	<8	<10	55	3[e]	9[e]	189	<1	200	7400
					GROUND WATER						
TU-100-W1S	06/26/01	630	<24	17	180	<10	256000	127000	<5	150	18100
TU-102-W2	06/26/01	330	<8	<100	140	<50	336000	335000	<2	270	25500
TU-103-W3S	06/25/01	110[e]	<80	<100	130	<50	66100	65200	<2	140	15900
TU-105-W4S	06/25/01	400	<80	<100	140	<50	267000	264000	<2	210	17100
TU-108-W5S	06/27/01	210	<8	8.6[e]	42	12	<10	<140	<1	82	17400
TU-109-W5D	06/25/01	250	<80	<100	290	<50	247000	241000	<2	350	20600
TU-110-W6S	06/25/01	310	<80	<100	650	<50	646000	680000	<2	290	66100
TU-112-W7	06/25/01	340	<80	<100	80[a]	<50	140000	138000	<2	290	9400
TU-113-W8S	06/26/01	220	<24	<30	60	<10	128000	393	<1	140	6870
TU-115-W9	06/26/01	460	<80	<100	190	<50	167000	268000	<2	220	16900
TU-116-W10	06/26/01	470	19[e]	<50	320	<20	307000	294000	<2	230	21900
TU-117-W11	06/26/01	340	<80	<100	210	<50	306000	304000	1.1[e]	270	30000
TU-118-W12	06/26/01	440	<40	<50	170	<20	172000	166000	<2	160	15200
TU-119-W13	06/26/01	270	<80	<100	130	25[e]	146000	297000	<2	170	8920
					SURFACE WATER						
TU-124	06/27/01	190	<8	<10	84	<5	2050	2270	<1	120	5970
TU-125	06/27/01	55	<8	<10	13	<3	10	1040	<1	50	1300

WATER-QUALITY RECORDS—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001—Continued

[mg/L, milligrams per liter; µg/L, micrograms per liter; ---, no data; e, estimated value does not have the same precision as other results for the same constituent; <, concentration or value reported is less than that indicated]

LOCAL NUMBER	DATE	MANGANESE, TOTAL (UG/L AS MN) (01055)	NICKEL, DISSOLVED (UG/L AS NI) (01065)	SELENIUM, DISSOLVED (UG/L AS SE) (01145)	SILVER, DISSOLVED (UG/L AS AG) (01075)	STRONTIUM, DISSOLVED (UG/L AS SR) (01080)	VANADIUM, DISSOLVED (UG/L AS V) (01085)	ZINC, DISSOLVED (UG/L AS ZN) (01090)	CARBON, ORGANIC, DISSOLVED (MG/L AS C) (00681)	34S/32S IN SUFATE, DISSOLVED (PER MIL) (49932)
					INTERSTITIAL WATER					
TU-132-L1A-3.5	06/27/01	---	---	---	---	---	---	---	---	-7.3
TU-142-L3A-4.5A	06/27/01	---	---	---	---	---	---	---	---	-13.6
TU-143-L3A-4.5B	06/27/01	20000	320	1.5e	<5	390	<8	160	---	-15.2
TU-146-L3B-3.5	06/27/01	56	<50	1.6e	<5	390	<8	<20	---	-13.0
TU-152-L4A-3.5	06/27/01	---	---	---	---	---	---	---	---	-10.0
TU-157-L4C-2.5UP	06/27/01	---	---	---	---	---	---	---	---	-10.9
TU-164-L5B-3.5	06/27/01	7330	460	<2	<5	280	<8	65	---	-12.8
					GROUND WATER					
TU-100-W1S	06/26/01	6940	520	2.1	<14	5700	16	350	0.55	-11.6
TU-102-W2	06/26/01	26900	470e	2.0e	<46	3000	<80	420	0.79	-10.8
TU-103-W3S	06/25/01	16500	530	2.0e	<46	1300	<80	200	0.82	-14.5
TU-105-W4S	06/25/01	17500	390e	3.2	<46	3100	<80	530	0.77	-10.0
TU-108-W5S	06/27/01	77	220	<2	3e	550	<8	340	3.9	-15.9
TU-109-W5D	06/25/01	21500	440e	2.6	<46	1700	<80	710	1.2	-10.9
TU-110-W6S	06/25/01	66500	1100	4.1	<46	1300	<80	2000	1.40	-10.5
TU-112-W7	06/25/01	9600	530	2.3e	<46	2900	<80	280	0.74	-8.9
TU-113-W8S	06/26/01	6940	160	1.4e	<14	1000	<24	88	0.87	-12.8
TU-115-W9	06/26/01	27800	510e	2.7	<46	3800	<80	680	0.53	-11.5
TU-116-W10	06/26/01	22000	640	3.1	<23	3200	<40	1000	1.1	-10.1
TU-117-W11	06/26/01	30800	610	3.0	<46	3000	<80	730	1.0	-12.2
TU-118-W12	06/26/01	15300	420	2.4	35	4400	<40	470	0.58	-11.8
TU-119-W13	06/26/01	12300	330e	2.6	<46	2200	<80	310	0.61	-5.1
					SURFACE WATER					
TU-124	06/27/01	6100	150	<2	<5	580	<8	180	0.68	-11.2
TU-125	06/27/01	1500	120	<2	<5	150	<8	150	2.0	-12.7

PROJECT DATA

Hydrologic Assessment at Tremont City Landfill Site

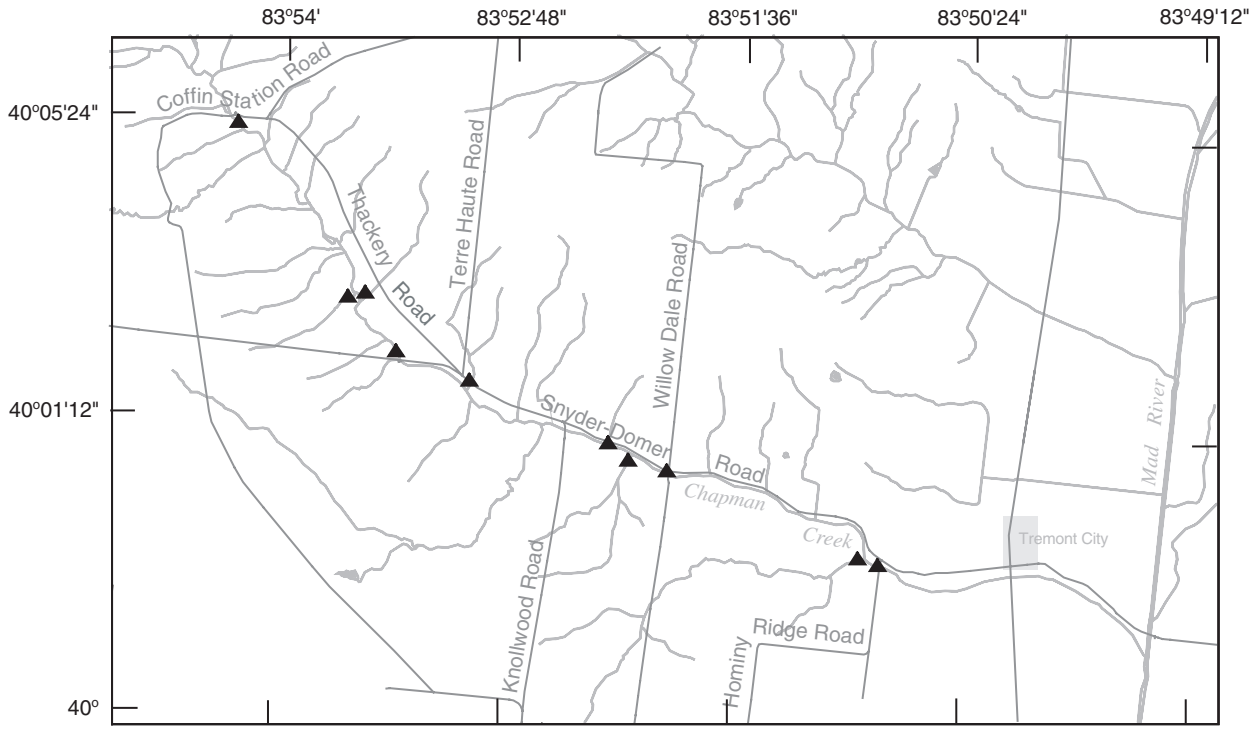
The USGS has had a long-standing relationship with the U.S. Environmental Protection Agency to provide hydrologic information at Ohio sites where remediation work is pending. The most recent investigation of this type was at the Tremont City landfill, in Clark County, where the USGS determined ground-water flow directions in the site area, as well as ground-water/surface-water interactions with Chapman Creek. Water-level data were collected from private wells in the Tremont City area from October 30 to November 3, 2000. Stream-discharge data were collected on October 25, 2000, along Chapman Creek from Coffin Station Road to Hominy Ridge Road.

EXPLANATION

▲ Streamflow measurment site

0 2,000 4,000 FEET

0 400 METERS



STREAMFLOW DATA FOR GAIN-LOSS STUDY ON CHAPMAN CREEK, WEST-CENTRAL OHIO, OCTOBER 25,2000

[trib., tributary; W, wading (current meter) streamflow measurement; V, volumetric streamflow measurement; F, fair (+/-8 percent); G, good (+/-5 percent); E, excellent (+/-2 percent); ft^3/s, cubic feet per second; ---, not applicable]

SITE NAME	METHOD	QUALITY RATING	STREAMFLOW (FT^3/S)	CHANGE IN MAIN-STEM FLOW (FT^3/S)
Chapman Creek at Coffin Station Road	W	F	0.89	---
Unnamed trib. at northwest intersection of Terre Haute, Thackery, and Snyder-Domer Roads	V	G	.008	---
Unnamed trib., right bank, between Coffin Station and Terre Haute Roads	V	F	.007	---
Chapman Creek at Snyder-Domer Road	W	F	1.55	0.65
Unnamed trib., left bank, upstream from Knollwood Road	V	G	.012	---
Unnamed trib., right bank, downstream from Knollwood Road	V	E	.004	---
Unnamed trib., left bank, upstream from Willow Dale Road	V	E	.005	---
Chapman Creek at Willow Dale Road	W	F	2.05	.48
Unnamed trib., left bank, upstream from Hominy Ridge Road	V	F	.007	---
Chapman Creek at Hominy Ridge Road	W	G-F	2.46	40

SYNOPTIC WATER-LEVEL SURVEY NEAR TREMONT CITY LANDFILL, OHIO

The following table contains ground-water-level data collected from domestic wells in Champaign and Clark counties in October and November 2000. These data were collected as part of a cooperative study with the U.S. Environmental Protection Agency (USEPA), to determine the directions of ground-water flow in the vicinity of Tremont City Landfill, Ohio.

[ft, feet; bls, below land surface; CH, Champaign County; CL, Clark County; ---, not available]

LOCAL WELL NUMBER	LATITUDE (DEGREES)	LONGITUDE (DEGREES)	DEPTH OF WELL (FEET)	ALTITUDE OF LAND SURFACE (FEET)	WATER-LEVEL DATE	WATER LEVEL (FT BLS)
CH-69	400305.04	0835259.16	215	1095	10/31/00	17.91
CH-115	400330.96	0835152.56	140	1140	10/31/00	81.37
CH-116	400407.68	0834953.40	46	1010	10/31/00	34.12
CH-117	400200.96	0835036.24	31	984	11/01/00	6.85
CH-119	400154.48	0835009.96	202	1051	11/01/00	103.47
CH-120	400251.00	0835215.96	68	1070	11/01/00	30.10
CH-121	400216.44	0835259.88	137	1150	11/01/00	86.50
CH-122	400205.64	0835258.08	128	1148	11/02/00	89.60
CH-123	400244.88	0835317.52	110	1039	11/02/00	46.94
CH-124	400308.64	0835506.96	31	1107	11/01/00	4.36
CH-125	400332.40	0835517.76	102	1135	11/01/00	9.82
CH-126	400214.64	0835348.12	76	1091	11/01/00	29.03
CH-127	400219.68	0835440.68	---	1125	11/01/00	16.23
CH-128	400317.28	0835111.88	---	1119	10/30/00	98.50
CH-129	400307.92	0835231.44	---	1122	11/01/00	60.13
CH-130	400408.40	0835011.04	---	1083	10/30/00	97.00
CH-131	400213.56	0835200.48	---	1104	10/31/00	95.10
CH-132	400151.24	0835152.20	---	1123	11/01/00	100.34
CH-133	400228.68	0835049.20	---	1071	11/01/00	76.81
CH-134	400408.40	0835006.36	170	1081	10/31/00	106.85
CH-135	400058.32	0835009.24	38	954	11/01/00	12.08
CH-136	400223.08	0835252.10	158	1142	11/01/00	78.00
CL-301	395941.64	0835119.08	182	1071	11/01/00	67.62
CL-302	395858.08	0835124.48	97	1002	11/01/00	23.71
CL-303	400007.20	0835158.68	156	1112	11/01/00	83.98
CL-304	395856.64	0835027.60	72	935	11/01/00	20.71
CL-305	395859.52	0835150.04	210	1059	11/01/00	51.09
CL-306	400042.48	0835146.80	120	1050	10/31/00	46.93
CL-307	395915.00	0835117.64	53	1074	10/31/00	30.96
CL-308	400124.96	0835332.64	90	1083	11/02/00	40.11
CL-309	400024.48	0835053.52	86	1021	10/31/00	53.06
CL-310	395924.72	0834955.56	40	930	10/31/00	16.68
CL-311	400045.72	0835201.56	117	1053	10/31/00	47.60
CL-312	400041.04	0835027.96	45	979	10/30/00	18.19
CL-313	400129.64	0835424.48	118	1162	10/31/00	78.70
CL-314	400142.60	0835426.64	86	1151	10/31/00	33.31
CL-315	400006.84	0835322.20	174	1142	10/31/00	69.55
CL-316	395951.36	0835606.00	72	1103	10/31/00	19.22
CL-317	400041.40	0835630.84	105	1118	10/31/00	4.56
CL-318	400104.44	0835228.56	113	1049	10/31/00	33.23

SYNOPTIC WATER-LEVEL SURVEY NEAR TREMONT CITY LANDFILL, OHIO—CONTINUED

[ft, feet; bls, below land surface; CH, Champaign County; CL, Clark County; ---, not available]

LOCAL WELL NUMBER	LATITUDE (DEGREES)	LONGITUDE (DEGREES)	DEPTH OF WELL (FEET)	ALTITUDE OF LAND SURFACE (FEET)	WATER-LEVEL DATE	WATER LEVEL (FT BLS)
CL-319	395831.44	0835544.40	27	1080	10/31/00	8.34
CL-320	395900.60	0835531.44	71	1090	10/30/00	10.13
CL-321	395832.88	0835557.00	59	1076	10/30/00	8.84
CL-322	395834.68	0835534.32	73	1081	10/30/00	8.85
CL-323	395926.63	0835247.85	240	1121	11/02/00	59.85
CL-324	400003.24	0835133.48	91	1089	10/30/00	55.38
CL-325	395947.76	0835127.72	120	1088	10/30/00	64.06
CL-326	395814.52	0835046.68	26	925	10/30/00	7.07
CL-327	395832.52	0835003.84	89	920	10/30/00	10.51
CL-328	395816.68	0834958.44	43	920	10/30/00	8.43
CL-329	395818.48	0834957.72	96	920	10/30/00	9.38
CL-330	400138.64	0835154.36	104	1113	10/31/00	89.50
CL-331	400135.04	0835154.00	165	1114	10/30/00	88.18
CL-332	400048.96	0835044.16	110	1031	10/31/00	76.87
CL-333	395947.76	0835347.40	122	1132	11/01/00	49.37
CL-335	395823.88	0835151.12	94	1091	10/30/00	85.09
CL-336	400132.16	0835502.28	172	1172	11/01/00	60.05
CL-337	395957.12	0835241.16	180	1130	10/31/00	76.78
CL-338	400117.04	0835254.48	70	1030	10/30/00	3.85
CL-339	400120.64	0835214.16	125	1081	10/30/00	52.57
CL-340	400058.32	0835227.48	140	1055	10/30/00	37.75
CL-341	395915.00	0835350.28	147	1121	11/01/00	41.42
CL-342	400034.20	0835258.44	124	1130	10/31/00	80.43
CL-343	400126.40	0835329.04	40	1054	11/01/00	10.51
CL-344	400132.52	0835348.48	---	1094	11/01/00	28.11
CL-345	400132.16	0835315.00	---	1070	11/01/00	37.08
CL-346	400115.60	0835003.48	---	957	11/01/00	14.78
CL-347	395920.04	0835015.00	---	935	11/01/00	14.42
CL-348	395842.96	0835028.68	---	930	11/01/00	12.25
CL-349	400022.52	0835113.32	---	1073	11/01/00	45.68
CL-350	400115.24	0835153.64	---	1059	11/01/00	38.00
CL-351	400132.52	0835257.72	120	1071	11/02/00	39.82
CL-352	400130.16	0835430.32	220	1165	10/30/00	78.40
CL-353	400121.72	0835424.01	109	1161	10/30/00	36.70
CL-354	400038.34	0835346.12	143	1141	10/30/00	64.71
CL-355	395843.98	0835239.43	172	1101	10/31/00	40.83
CL-357	395902.37	0835534.70	65	1092	10/30/00	13.06
CL-358	395824.38	0835311.47	41	1100	10/30/00	24.15
CL-359	400034.15	0835448.84	56	1144	10/30/00	14.10
CL-360	400131.52	0835300.09	---	1065	11/02/00	37.86

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 Drainage (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 is part of a Low Intensity or Trend National Network for water year 2001: 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). Streamwater-quality data for the Maumee River at Waterville, Ohio (04198500) for water year 2000 not published in last year's report are published in this section.

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

04161820 CLINTON RIVER NEAR 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 2000 TO SEPTEMBER 2001

[(00061), USGS National Water Information System parameter code; mm of Hg, millimeters of mercury; mg/L, milligrams per liter; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

DATE	TIME	DIS-CHARGE, INST. (CUBIC FEET PER SECOND) (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	DIS-SOLVED OXYGEN (MG/L)) (00300)	DIS-SOLVED OXYGEN (PER-CENT SATUR-ATION) (00301)	PH WATER FIELD (STAND-ARD UNITS) (00400)	PH WATER LAB (STAND-ARD UNITS) (00403)	SPEC-IFIC CON-DUCT ANCE LAB (US/CM) (90095)	SPEC-IFIC CON-DUCT-ANCE FIELD (US/CM) (00095)	TEMPER-ATURE, AIR (DEG C) (00020)	TEMPER-ATURE, WATER (DEG C) (00010)	HARD-NESS, TOTAL (MG/L AS CACO3) (00900)
MAR												
21...	1330	395	750	13.7	108	8.3	---	---	816	---	5.3	---
APR												
18...	1045	226	753	11.3	95	8.4	8.1	892	880	---	7.3	274
MAY												
23...	1400	603	750	8.9	91	8.1	---	---	766	14.0	16.7	---
JUN												
20...	1530	226	748	8.1	94	8.2	8.0	806	804	---	22.4	246
JUL												
18...	1150	57	745	6.4	75	8.1	8.0	1020	1050	---	22.3	287
AUG												
29...	1000	55	750	8.0	88	8.1	8.1	949	944	---	19.9	280
SEP												
18...	1030	56	747	8.5	86	8.2	8.1	965	958	22.0	16.0	285

DATE	CALCIUM, DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY, WATER, DIS-SOLVED FIELD (MG/L AS CACO3) (39086)	BICAR-BONATE, WATER, DIS-SOLVED FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS-SOLVED FIELD (MG/L AS CO3) (00452)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE, DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG C DIS-SOLVED (MG/L) (70300)
MAR												
21...	---	---	---	---	203	247	<1	---	---	---	---	---
APR												
18...	74	21	3.2	67	205	239	5	131	0.2	3.5	33	493
MAY												
23...	---	---	---	---	189	231	<1	---	---	---	---	---
JUN												
20...	65	20	3.4	60	194	233	2	114	0.3	4.6	27	451
JUL												
18...	76	24	4.7	91	214	254	<1	151	0.7	4.8	41	572
AUG												
29...	74	23	4.8	80	205	245	2	144	0.5	6.5	43	529
SEP												
18...	75	24	5.0	79	206	246	2	149	0.4	6.0	44	558

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

WATER-QUALITY RECORDS—CONTINUED

04161820 CLINTON RIVER NEAR STERLING HEIGHTS, MICHIGAN—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00608), USGS National Water Information System parameter code; mg/L, milligrams per liter; col/100mL, colonies per 100 milliliters; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value; K, value is estimated from a non-ideal colony count.]

DATE	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC, DISSOLVED (MG/L AS N) (00623)	NITROGEN, AMMONIA + ORGANIC, TOTAL (MG/L AS N) (00625)	NITROGEN, NO2 + NO3, DISSOLVED (MG/L AS N) (00631)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	PHOSPHORUS, DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	PHOSPHORUS, TOTAL (MG/L AS P) (00665)	E. COLI, WATER TOTAL (COL/100 ML) (31633)	IRON, DISSOLVED (UG/L AS FE) (01046)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	2,6-DIETHYL ANILINE, WATER, FLTRD (UG/L) (82660)
MAR												
21...	0.05	0.4	0.54	0.9	0.02	0.01	<0.02	0.03	<10	---	---	<0.002
APR												
18...	0.05	0.5	0.60	1.4	0.01	0.01	<0.02	0.02	K22	60	40	<0.002
MAY												
23...	0.11	0.5	0.86	0.7	0.03	0.03	E0.01	0.12	1300	---	---	<0.002
JUN												
20...	---	---	---	---	---	---	---	---	270	30	12	<0.002
JUL												
18...	<0.04	0.5	0.64	8.5	0.08	0.04	<0.02	0.05	330	20	11	<0.002
AUG												
29...	<0.04	---	---	E2.5	E0.04	---	E0.04		300	30	21	<0.002
SEP												
18...	E0.03	0.6	0.53	3.3	0.03	0.06	0.02	0.08	K30	20	16	<0.002

DATE	ACETOCHLOR, WATER, FLTRD (UG/L) (49260)	ALACHLOR, WATER, FLTRD (UG/L) (46342)	ALPHA BHC, WATER, FLTRD (UG/L) (34253)	ATRAZINE, WATER, FLTRD (UG/L) (39632)	BENFLURALIN, WATER, FLTRD (UG/L) (82673)	BUTYLATE, WATER, FLTRD (UG/L) (04028)	CARBARYL, WATER, FLTRD (UG/L) (82680)	CARBOFURAN, WATER, FLTRD (UG/L) (82674)	CHLORPYRIFOS, WATER, FLTRD (UG/L) (38933)	CYANAZINE, WATER, FLTRD (UG/L) (04041)	DCPA, WATER, FLTRD (UG/L) (82682)	DEETHYL ATRAZINE, WATER, FLTRD (UG/L) (04040)
MAR												
21...	<0.004	<0.002	<0.005	0.015	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.005
APR												
18...	<0.004	<0.002	<0.005	0.022	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.005
MAY												
23...	0.012	0.009	<0.005	0.44	<0.010	<0.002	E0.017	<0.020	<0.005	<0.018	<0.003	E0.029
JUN												
20...	0.008	0.006	<0.005	0.14	<0.010	<0.002	E0.003	<0.020	E0.003	<0.018	<0.003	E0.009
JUL												
18...	<0.004	<0.002	<0.005	0.051	<0.010	<0.002	E0.002	<0.020	<0.005	<0.018	<0.003	E0.003
AUG												
29...	<0.004	<0.002	<0.005	0.046	<0.010	<0.002	E0.009	<0.020	<0.005	<0.018	<0.003	E0.008
SEP												
18...	<0.004	<0.002	<0.005	0.047	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.009

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

04161820 CLINTON RIVER NEAR STERLING HEIGHTS, MICHIGAN—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(39572), USGS National Water Information System parameter code; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

DATE	DI-AZINON, WATER, FLTRD (UG/L) (39572)	DI-ELRIN, WATER, FLTRD (UG/L) (39381)	DISUL-FOTON, WATER, FLTRD (UG/L) (82677)	EPTC, WATER, FLTRD (UG/L) (82668)	ETHAL-FLUR-ALIN, WATER, FLTRD (UG/L) (82663)	ETHO-PROP, WATER, FLTRD (UG/L) (82672)	FONOFOS, WATER, FLTRD (UG/L) (04095)	LINDANE, WATER, FLTRD (UG/L) (39341)	LIN-URON, WATER, FLTRD (UG/L) (82666)	MALA-THION, WATER, FLTRD (UG/L) (39532)	METHYL-AZIN-PHOS, WATER, FLTRD (UG/L) (82686)	METHYL PARA-THION, WATER, FLTRD (UG/L) (82667)
MAR												
21...	E0.004	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
APR												
18...	0.006	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
MAY												
23...	0.072	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
JUN												
20...	0.057	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
JUL												
18...	0.011	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
AUG												
29...	0.030	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
SEP												
18...	0.009	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006

DATE	METO-LACHLOR, WATER, FLTRD (UG/L) (39415)	METRI-BUZIN, WATER, FLTRD (UG/L) (82630)	MOL-INATE, WATER, FLTRD (UG/L) (82671)	NAPROP-AMIDE, WATER, FLTRD (UG/L) (82684)	P,P' DDE, WATER, FLTRD (UG/L) (34653)	PARA-THION, WATER, FLTRD (UG/L) (39542)	PEB-ULATE, WATER, FLTRD (UG/L) (82669)	PENDI-METH-ALIN, WATER, FLTRD (UG/L) (82683)	CIS-PER-METHRIN, WATER, FLTRD (UG/L) (82687)	PHORATE, WATER, FLTRD (UG/L) (82664)	PRO-METON, WATER, FLTRD (UG/L) (04037)	PRON-AMIDE, WATER, FLTRD (UG/L) (82676)
MAR												
21...	E0.001	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E.005	<0.004
APR												
18...	E0.002	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E.005	<0.004
MAY												
23...	0.219	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	E.006	<0.006	<0.011	E.010	<0.004
JUN												
20...	0.064	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.056	<0.004
JUL												
18...	0.019	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E.009	<0.004
AUG												
29...	0.015	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.017	<0.004
SEP												
18...	E0.011	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E.012	<0.004

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

WATER-QUALITY RECORDS—CONTINUED

04161820 CLINTON RIVER NEAR STERLING HEIGHTS, MICHIGAN—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(04024), USGS National Water Information System parameter code; mg/L, milligrams per liter; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

DATE	PROP-ACHLOR, WATER, FLTRD (UG/L) (04024)	PRO-PANIL, WATER, FLTRD (UG/L) (82679)	PRO-PARGITE, WATER, FLTRD (UG/L) (82685)	SI-MAZINE, WATER, FLTRD (UG/L) (04035)	TEBU-THI-URON, WATER, FLTRD (UG/L) (82670)	TER-BACIL, WATER, FLTRD (UG/L) (82665)	TER-BUFOS, WATER, FLTRD (UG/L) (82675)	THIO-BENCARB, WATER, FLTRD (UG/L) (82681)	TRIAL-LATE, WATER, FLTRD (UG/L) (82678)	TRI-FLUR-ALIN, WATER, FLTRD (UG/L) (82661)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
MAR											
21...	<0.010	<0.011	<0.023	<0.011	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	5
APR											
18...	<0.010	<0.011	<0.023	<0.011	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	13
MAY											
23...	<0.010	<0.011	<0.023	0.106	<0.016	<0.034	<0.017	<0.005	<0.002	E0.003	72
JUN											
20...	<0.010	<0.011	<0.023	0.024	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	35
JUL											
18...	<0.010	<0.011	<0.023	E.011	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	17
AUG											
29...	<0.010	<0.011	<0.023	0.012	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	10
SEP											
18...	<0.010	<0.011	<0.023	0.013	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	---

PROJECT DATA
Results from Selected Sites in the Lake Erie-Lake St. Clair Drainages (National Water-Quality Assessment Program)
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 2000 TO SEPTEMBER 2001

[(00061), USGS National Water Information System parameter code; mm of Hg, millimeters of mercury; mg/L, milligrams per liter; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

DATE	TIME	DIS-CHARGE, INST. (CUBIC FEET PER SECOND) (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	DIS-SOLVED OXYGEN (MG/L)) (00300)	DIS-SOLVED OXYGEN (PER-CENT SATUR-ATION) (00301)	PH WATER FIELD (STAND-ARD UNITS) (00400)	PH WATER LAB (STAND-ARD UNITS) (00403)	SPEC-IFIC CON-DUCT ANCE LAB (US/CM) (90095)	SPEC-IFIC CON-DUCT-ANCE FIELD (US/CM) (00095)	TEMPER-ATURE, AIR (DEG C) (00020)	TEMPER-ATURE, WATER (DEG C) (00010)	HARD-NESS, TOTAL (MG/L AS CACO3) (00900)
MAR												
21...	0900	173	750	11.5	90	8.2	---	---	479	---	5.1	---
APR												
18...	1645	169	752	12.6	115	8.4	8.1	496	470	---	10.6	226
MAY												
23...	0945	158	750	7.6	78	7.9	---	---	486	---	16.5	---
JUN												
20...	1030	104	748	7.0	82	7.8	7.9	485	485	20.5	23.3	225
JUL												
18...	0930	22	749	5.2	58	8.0	7.9	527	525	---	21.6	244
AUG												
29...	1330	37	750	8.0	91	7.8	7.9	510	506	---	21.4	239
SEP												
18...	1400	36	748	9.2	97	8.2	8.1	514	508	22.5	17.9	240

DATE	CALCIUM, DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY, WATER, DIS-SOLVED FIELD (MG/L AS CACO3) (39086)	BICAR-BONATE, WATER, DIS-SOLVED FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS-SOLVED FIELD (MG/L AS CO3) (00452)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE, DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG C DIS-SOLVED (MG/L) (70300)
MAR												
21...	---	---	---	---	188	231	<1	---	---	---	---	---
APR												
18...	62	17	1.6	10	196	230	4	22	E0.1	4.6	24	291
MAY												
23...	---	---	---	---	202	245	<1	---	---	---	---	---
JUN												
20...	59	19	1.3	11	199	240	<1	22	0.3	6.6	18	284
JUL												
18...	64	21	1.6	12	214	257	<1	23	0.2	8.7	24	304
AUG												
29...	62	20	1.8	11	198	237	<1	28	0.2	10.5	28	295
SEP												
18...	61	21	2.0	12	198	237	2	26	0.2	8.1	27	297

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

WATER-QUALITY RECORDS—CONTINUED

04175600 RIVER RAISIN NEAR MANCHESTER, MICHIGAN—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00608), USGS National Water Information System parameter code; mg/L, milligrams per liter; col/100mL, colonies per 100 milliliters; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value; K, value is estimated from a non-ideal colony count.]

DATE	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC, DISSOLVED (MG/L AS N) (00623)	NITROGEN, AMMONIA + ORGANIC, TOTAL (MG/L AS N) (00625)	NITROGEN, NO2 + NO3, DISSOLVED (MG/L AS N) (00631)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	PHOSPHORUS, DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	PHOSPHORUS, TOTAL (MG/L AS P) (00665)	E. COLI, WATER TOTAL (COL/100 ML) (31633)	IRON, DISSOLVED (UG/L AS FE) (01046)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	2,6-DIETHYL ANILINE, WATER, FLTRD (UG/L) (82660)
MAR												
21...	<0.04	0.4	0.46	0.45	E0.01	0.01	<0.018	<0.06	<2	---	---	<0.002
APR												
18...	<0.04	0.4	0.56	0.41	0.01	0.01	<0.018	0.02	k6	50	15	<0.002
MAY												
23...	E0.03	0.5	0.69	0.21	0.01	0.01	<0.020	0.03	K42	---	---	<0.002
JUN												
20...	<0.04	0.6	0.70	0.20	0.01	0.01	<0.020	0.03	44	60	20	<0.002
JUL												
18...	E0.02	0.4	0.45	0.48	0.02	0.01	<0.020	0.02	130	30	29	<0.002
AUG												
29...	<0.04	0.4	0.51	E0.28	E0.01	0.01	<0.020	0.02	120	50	39	<0.002
SEP												
18...	<0.04	0.3	0.38	0.43	E0.01	0.01	<0.020	0.01	K10	50	27	<0.002

DATE	ACETOCHLOR, WATER, FLTRD (UG/L) (49260)	ALACHLOR, WATER, FLTRD (UG/L) (46342)	ALPHA BHC, WATER, FLTRD (UG/L) (34253)	ATRAZINE, WATER, FLTRD (UG/L) (39632)	BENFLURALIN, WATER, FLTRD (UG/L) (82673)	BUTYLATE, WATER, FLTRD (UG/L) (04028)	CARBARYL, WATER, FLTRD (UG/L) (82680)	CARBOFURAN, WATER, FLTRD (UG/L) (82674)	CHLORPYRIFOS, WATER, FLTRD (UG/L) (38933)	CYANAZINE, WATER, FLTRD (UG/L) (04041)	DCPA, WATER, FLTRD (UG/L) (82682)	DEETHYL ATRAZINE, WATER, FLTRD (UG/L) (04040)
MAR												
21...	<0.004	<0.002	<0.005	0.038	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.008
APR												
18...	<0.004	<0.002	<0.005	0.034	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.009
MAY												
23...	0.037	<0.002	<0.005	E0.17	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.021
JUN												
20...	0.011	0.006	<0.005	0.068	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.021
JUL												
18...	<0.004	<0.002	<0.005	0.037	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.003
AUG												
29...	<0.004	<0.002	<0.005	0.022	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.005
SEP												
18...	<0.004	<0.002	<0.005	0.027	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.007

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

04175600 RIVER RAISIN NEAR MANCHESTER, MICHIGAN—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(39572), USGS National Water Information System parameter code; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

DATE	DI-AZINON, WATER, FLTRD (UG/L) (39572)	DI-ELRIN, WATER, FLTRD (UG/L) (39381)	DISUL-FOTON, WATER, FLTRD (UG/L) (82677)	EPTC, WATER, FLTRD (UG/L) (82668)	ETHAL-FLUR-ALIN, WATER, FLTRD (UG/L) (82663)	ETHO-PROP, WATER, FLTRD (UG/L) (82672)	FONOFOS, WATER, FLTRD (UG/L) (04095)	LINDANE, WATER, FLTRD (UG/L) (39341)	LIN-URON, WATER, FLTRD (UG/L) (82666)	MALA-THION, WATER, FLTRD (UG/L) (39532)	METHYL-AZIN-PHOS, WATER, FLTRD (UG/L) (82686)	METHYL PARA-THION, WATER, FLTRD (UG/L) (82667)
MAR												
21...	<0.005	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
APR												
18...	<0.005	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
MAY												
23...	<0.005	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
JUN												
20...	E0.004	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
JUL												
18...	E0.004	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
AUG												
29...	<0.005	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
SEP												
18...	<0.005	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006

DATE	METO-LACHLOR, WATER, FLTRD (UG/L) (39415)	METRI-BUZIN, WATER, FLTRD (UG/L) (82630)	MOL-INATE, WATER, FLTRD (UG/L) (82671)	NAPROP-AMIDE, WATER, FLTRD (UG/L) (82684)	P,P' DDE, WATER, FLTRD (UG/L) (34653)	PARA-THION, WATER, FLTRD (UG/L) (39542)	PEB-ULATE, WATER, FLTRD (UG/L) (82669)	PENDI-METH-ALIN, WATER, FLTRD (UG/L) (82683)	CIS-PER-METHRIN, WATER, FLTRD (UG/L) (82687)	PHORATE, WATER, FLTRD (UG/L) (82664)	PRO-METON, WATER, FLTRD (UG/L) (04037)	PRON-AMIDE, WATER, FLTRD (UG/L) (82676)
MAR												
21...	E0.002	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	<0.015	<0.004
APR												
18...	E0.003	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.001	<0.004
MAY												
23...	E0.009	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.002	<0.004
JUN												
20...	E0.008	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.005	<0.004
JUL												
18...	E0.004	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.004	<0.004
AUG												
29...	<0.013	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.005	<0.004
SEP												
18...	<0.013	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.004	<0.004

04175600 RIVER RAISIN NEAR MANCHESTER, MICHIGAN—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(04024), USGS National Water Information System parameter code; mg/L, milligrams per liter; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

DATE	PROP-ACHLOR, WATER, FLTRD (UG/L) (04024)	PRO-PANIL, WATER, FLTRD (UG/L) (82679)	PRO-PARGITE, WATER, FLTRD (UG/L) (82685)	SI-MAZINE, WATER, FLTRD (UG/L) (04035)	TEBU-THI-URON, WATER, FLTRD (UG/L) (82670)	TER-BACIL, WATER, FLTRD (UG/L) (82665)	TER-BUFOS, WATER, FLTRD (UG/L) (82675)	THIO-BENCARB, WATER, FLTRD (UG/L) (82681)	TRIAL-LATE, WATER, FLTRD (UG/L) (82678)	TRI-FLUR-ALIN, WATER, FLTRD (UG/L) (82661)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
MAR											
21...	<0.010	<0.011	<0.023	0.022	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	3
APR											
18...	<0.010	<0.011	<0.023	0.021	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	5
MAY											
23...	<0.010	<0.011	<0.023	0.018	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	17
JUN											
20...	<0.010	<0.011	<0.023	0.056	<0.006	<0.034	<0.017	<0.005	<0.002	<0.009	33
JUL											
18...	<0.010	<0.011	<0.023	0.067	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	13
AUG											
29...	<0.010	<0.011	<0.023	0.099	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	12
SEP											
18...	<0.010	<0.011	<0.023	0.077	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	---

PROJECT DATA
Results from Selected Sites in the Lake Erie-Lake St. Clair Drainages
(National Water-Quality Assessment Program)
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, Indana 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 2000 TO SEPTEMBER 2001

[(00061), USGS National Water Information System parameter code; mm of Hg, millimeters of mercury; mg/L, milligrams per liter; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

DATE	TIME	DIS-CHARGE, INST. (CUBIC FEET PER SECOND) (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	DIS-SOLVED OXYGEN (MG/L)) (00300)	DIS-SOLVED OXYGEN (PER-CENT SATUR-ATION) (00301)	PH WATER FIELD (STAND-ARD UNITS) (00400)	PH WATER LAB (STAND-ARD UNITS) (00403)	SPEC-IFIC CON-DUCT ANCE LAB (US/CM) (90095)	SPEC-IFIC CON-DUCT-ANCE FIELD (US/CM) (00095)	TEMPER-ATURE, AIR (DEG C) (00020)	TEMPER-ATURE, WATER (DEG C) (00010)	HARD-NESS, TOTAL (MG/L AS CACO3) (00900)
MAR												
20...	1330	783	750	11.7	92	8.0	7.9	606	581	---	5.3	249
APR												
17...	0945	980	747	10.0	86	8.2	7.6	558	528	---	8.0	254
MAY												
16...	1715	1170	745	8.0	80	7.7	7.6	457	449	---	16.3	187
JUN												
19...	1330	371	750	6.9	80	8.0	7.8	603	600	30.0	22.5	290
JUL												
17...	1230	105	749	5.5	64	8.0	7.8	702	708	---	21.9	325
AUG												
28...	1400	150	750	7.0	81	8.0	8.0	607	622	---	22.1	276
SEP												
17...	1500	92	750	9.0	92	8.2	8.1	621	627	21.0	16.2	280

DATE	CALCIUM, DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY, WATER, DIS-SOLVED FIELD (MG/L AS CACO3) (39086)	BICAR-BONATE, WATER, DIS-SOLVED FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS-SOLVED FIELD (MG/L AS CO3) (00452)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE, DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG C DIS-SOLVED (MG/L) (70300)
MAR												
20...	71	18	2.8	19	188	229	<1	40	0.2	4.4	47.7	344
APR												
17...	73	18	2.8	11	194	238	<1	25	0.2	3.9	40.9	336
MAY												
16...	53	13	4.8	9	124	151	<1	28	0.3	6.0	30.6	278
JUN												
19...	81	21	2.8	13	233	281	<1	---	0.3	7.4	38.8	361
JUL												
17...	90	24	2.6	22	261	313	<1	39	0.4	9.5	48.2	417
AUG												
28...	75	22	3.3	19	213	254	<1	39	0.3	8.7	48.5	361
SEP												
17...	75	22	3.0	19	223	266	<1	40	0.4	7.7	45.8	374

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

WATER-QUALITY RECORDS—CONTINUED

04178000 ST. JOSEPH RIVER NEAR NEWVILLE, INDIANA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00608), USGS National Water Information System parameter code; mg/L, milligrams per liter; col/100mL, colonies per 100 milliliters; µg/L, micrograms per liter; --, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value; K, value is estimated from a non-ideal colony count.]

DATE	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC, DISSOLVED (MG/L AS N) (00623)	NITROGEN, AMMONIA + ORGANIC, TOTAL (MG/L AS N) (00625)	NITROGEN, NO2 + NO3, DISSOLVED (MG/L AS N) (00631)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	PHOSPHORUS, DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	PHOSPHORUS, TOTAL (MG/L AS P) (00665)	E. COLI, WATER TOTAL (COL/100 ML) (31633)	IRON, DISSOLVED (UG/L AS FE) (01046)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	2,6-DIETHYL ANILINE, WATER, FLTRD (UG/L) (82660)
MAR												
20...	E0.02	0.6	0.71	2.0	0.01	0.02	E0.01	0.08	K3	30	24	<0.002
APR												
17...	<0.04	0.6	0.89	1.4	0.08	0.02	<0.02	0.10	280	40	14	<0.002
MAY												
16...	0.23	1.6	2.7	6.9	0.14	0.17	0.08	0.48	---	30	E3	---
JUN												
19...	E0.04	<0.1	0.94	1.0	0.04	0.05	E0.01	0.17	K140	M	19	<0.002
JUL												
17...	<0.04	0.3	0.66	0.5	0.01	0.05	0.04	0.11	100	<10	27	<0.002
AUG												
28...	<0.04	---	---	E1.3	E0.01	---	E0.05	---	K1400	<10	12	<0.002
SEP												
17...	<0.04	0.4	0.74	0.11	0.03	0.04	<0.02	0.14	K220	M	21	<0.002

DATE	ACETOCHLOR, WATER, FLTRD (UG/L) (49260)	ALACHLOR, WATER, FLTRD (UG/L) (46342)	ALPHA BHC, WATER, FLTRD (UG/L) (34253)	ATRAZINE, WATER, FLTRD (UG/L) (39632)	BENFLURALIN, WATER, FLTRD (UG/L) (82673)	BUTYLATE, WATER, FLTRD (UG/L) (04028)	CARBARYL, WATER, FLTRD (UG/L) (82680)	CARBOFURAN, WATER, FLTRD (UG/L) (82674)	CHLORPYRIFOS, WATER, FLTRD (UG/L) (38933)	CYANAZINE, WATER, FLTRD (UG/L) (04041)	DCPA, WATER, FLTRD (UG/L) (82682)	DEETHYL ATRAZINE, WATER, FLTRD (UG/L) (04040)
MAR												
20...	0.007	0.005	<0.005	0.064	<0.010	<0.002	<0.041	<0.020	<0.005	E0.006	<0.003	E0.022
APR												
17...	0.010	0.007	<0.005	0.093	<0.010	<0.002	<0.041	<0.020	<0.005	E0.008	<0.003	E0.027
MAY												
16...	---	---	---	---	---	---	---	---	---	---	---	---
JUN												
19...	0.097	0.009	<0.005	10	<0.010	<0.002	<0.041	<0.020	<0.005	E0.011	<0.003	E0.073
JUL												
17...	0.015	<0.002	<0.005	0.58	<0.010	<0.002	<0.041	<0.020	<0.005	E0.012	<0.003	E0.056
AUG												
28...	0.015	<0.002	<0.005	0.32	<0.010	<0.002	<0.041	<0.020	<0.005	E0.010	<0.003	E0.048
SEP												
17...	<0.010	<0.002	<0.005	0.064	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.032

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

04178000 ST. JOSEPH RIVER NEAR NEWVILLE, INDIANA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(39572), USGS National Water Information System parameter code; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

DATE	DI-AZINON, WATER, FLTRD (UG/L) (39572)	DI-ELRIN, WATER, FLTRD (UG/L) (39381)	DISUL-FOTON, WATER, FLTRD (UG/L) (82677)	EPTC, WATER, FLTRD (UG/L) (82668)	ETHAL-FLUR-ALIN, WATER, FLTRD (UG/L) (82663)	ETHO-PROP, WATER, FLTRD (UG/L) (82672)	FONOFOS, WATER, FLTRD (UG/L) (04095)	LINDANE, WATER, FLTRD (UG/L) (39341)	LIN-URON, WATER, FLTRD (UG/L) (82666)	MALA-THION, WATER, FLTRD (UG/L) (39532)	METHYL-AZIN-PHOS, WATER, FLTRD (UG/L) (82686)	METHYL PARA-THION, WATER, FLTRD (UG/L) (82667)
MAR												
20...	<0.005	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
APR												
17...	<0.005	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
MAY												
16...	---	---	---	---	---	---	---	---	---	---	---	---
JUN												
19...	E0.001	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
JUL												
17...	<0.005	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
AUG												
28...	<0.005	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
SEP												
17...	<0.005	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006

DATE	METO-LACHLOR, WATER, FLTRD (UG/L) (39415)	METRI-BUZIN, WATER, FLTRD (UG/L) (82630)	MOL-INATE, WATER, FLTRD (UG/L) (82671)	NAPROP-AMIDE, WATER, FLTRD (UG/L) (82684)	P,P' DDE, WATER, FLTRD (UG/L) (34653)	PARA-THION, WATER, FLTRD (UG/L) (39542)	PEB-ULATE, WATER, FLTRD (UG/L) (82669)	PENDI-METH-ALIN, WATER, FLTRD (UG/L) (82683)	CIS-PER-METHRIN, WATER, FLTRD (UG/L) (82687)	PHORATE, WATER, FLTRD (UG/L) (82664)	PRO-METON, WATER, FLTRD (UG/L) (04037)	PRON-AMIDE, WATER, FLTRD (UG/L) (82676)
MAR												
20...	0.021	0.020	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.003	<0.004
APR												
17...	0.022	0.014	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.001	<0.004
MAY												
16...	---	---	---	---	---	---	---	---	---	---	---	---
JUN												
19...	0.301	0.008	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.006	<0.004
JUL												
17...	0.083	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.010	<0.004
AUG												
28...	0.097	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.013	<0.004
SEP												
17...	0.042	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.011	<0.004

04178000 ST. JOSEPH RIVER NEAR NEWVILLE, INDIANA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(04024), USGS National Water Information System parameter code; mg/L, milligrams per liter; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

DATE	PROP-ACHLOR, WATER, FLTRD (UG/L) (04024)	PRO-PANIL, WATER, FLTRD (UG/L) (82679)	PRO-PARGITE, WATER, FLTRD (UG/L) (82685)	SI-MAZINE, WATER, FLTRD (UG/L) (04035)	TEBU-THI-URON, WATER, FLTRD (UG/L) (82670)	TER-BACIL, WATER, FLTRD (UG/L) (82665)	TER-BUFOS, WATER, FLTRD (UG/L) (82675)	THIO-BENCARB, WATER, FLTRD (UG/L) (82681)	TRIAL-LATE, WATER, FLTRD (UG/L) (82678)	TRI-FLUR-ALIN, WATER, FLTRD (UG/L) (82661)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
MAR											
20...	<0.010	<0.011	<0.023	0.025	E0.008	<0.034	<0.017	<0.005	<0.002	<0.009	25
APR											
17...	<0.010	<0.011	<0.023	0.043	E0.008	<0.034	<0.017	<0.005	<0.002	<0.009	39
MAY											
16...	---	---	---	---	---	---	---	---	---	---	260
JUN											
19...	<0.010	<0.011	<0.023	0.34	E0.008	<0.034	<0.017	<0.005	<0.002	<0.009	97
JUL											
17...	<0.010	<0.011	<0.023	0.083	E0.007	<0.034	<0.017	<0.005	<0.002	<0.009	60
AUG											
28...	<0.010	<0.011	<0.023	0.062	E0.065	<0.034	<0.017	<0.005	<0.002	<0.009	66
SEP											
17...	<0.010	<0.011	<0.023	0.043	E0.015	<0.034	<0.017	<0.005	<0.002	<0.009	---

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

04186500 AUGLAIZE RIVER AT 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 2000 TO SEPTEMBER 2001

[(00061), USGS National Water Information System parameter code; mm of Hg, millimeters of mercury; mg/L, milligrams per liter; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

DATE	TIME	DIS-CHARGE, INST. (CUBIC FEET PER SECOND) (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	DIS-SOLVED OXYGEN (MG/L)) (00300)	DIS-SOLVED OXYGEN (PER-CENT SATUR-ATION) (00301)	PH WATER FIELD (STAND-ARD UNITS) (00400)	PH WATER LAB (STAND-ARD UNITS) (00403)	SPEC-IFIC CON-DUCT ANCE LAB (US/CM) (90095)	SPEC-IFIC CON-DUCT-ANCE FIELD (US/CM) (00095)	TEMPER-ATURE, AIR (DEG C) (00020)	TEMPER-ATURE, WATER (DEG C) (00010)	HARD-NESS, TOTAL (MG/L AS CACO3) (00900)
MAR												
20...	1030	284	750	12.1	95	8.2	7.8	714	687	---	5.2	288
APR												
17...	1045	976	745	12.8	111	8.0	7.3	596	566	1.5	8.0	266
MAY												
16...	1515	1000	745	8.1	83	7.6	7.5	692	683	---	16.7	275
JUN												
19...	1115	45	750	8.3	100	8.3	8.0	850	839	28.5	24.6	348
JUL												
17...	1045	21	746	4.0	49	8.0	8.1	1120	1140	---	24.1	363
AUG												
28...	1130	16	750	6.0	71	7.9	7.9	1100	1130	---	24.0	328
SEP												
17...	1300	5.6	750	6.0	71	7.9	8.1	1050	1130	20.5	24.0	285

DATE	CALCIUM, DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY, WATER, DIS-SOLVED FIELD (MG/L AS CACO3) (39086)	BICAR-BONATE, WATER, DIS-SOLVED FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS-SOLVED FIELD (MG/L AS CO3) (00452)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE, DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG C DIS-SOLVED (MG/L) (70300)
MAR												
20...	75	25	2.8	23	172	210	<1	54	0.3	3.4	72	401
APR												
17...	70	22	3.5	13	144	175	<1	32	0.2	7.7	54	350
MAY												
16...	74	22	3.1	19	137	167	<1	43	0.3	7.7	59	414
JUN												
19...	85	33	4.0	36	216	256	3	65	0.5	2.6	102	505
JUL												
17...	79	40	6.2	85	216	257	<1	140	0.7	0.9	144	680
AUG												
28...	71	36	8.5	87	175	210	2	137	0.7	3.0	180	672
SEP												
17...	65	30	7.0	97	178	214	2	159	0.8	4.8	118	618

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

WATER-QUALITY RECORDS—CONTINUED

04186500 AUGLAIZE RIVER AT FT. JENNINGS, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00608), USGS National Water Information System parameter code; mg/L, milligrams per liter; col/100mL, colonies per 100 milliliter; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value; M, presence verified but not quantified; K, value is estimated from a non-ideal colony count.]

DATE	NITRO-GEN, AMMONIA, DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC, DIS-SOLVED (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC, TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2 + NO3, DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS, TOTAL (MG/L AS P) (00665)	E. COLI, WATER TOTAL (COL/ 100 ML) (31633)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	2,6-DI-ETHYL ANILINE, WATER, FLTRD (UG/L) (82660)
MAR												
20...	E0.04	0.6	0.66	8.1	0.03	0.03	E0.02	0.08	<10	10	8	<0.002
APR												
17...	<0.04	0.9	1.7	9.1	0.06	0.11	<0.02	---	---	30	5	<0.002
MAY												
16...	E0.02	1.4	2.0	22	0.12	0.12	<0.02	0.36	---	M	E3	<0.002
JUN												
19...	E0.02	<0.1	1.0	3.0	0.02	0.05	0.04	0.16	590	<10	<3	<0.002
JUL												
17...	---	---	---	---	---	---	---	---	100	<10	17	<0.002
AUG												
28...	<0.04	0.5	0.83	E0.28	E0.01	E0.16	E0.13	0.22	---	20	15	<0.002
SEP												
17...	<0.04	0.5	0.69	1.1	0.01	0.09	0.07	0.15	K40	<10	7	<0.002

DATE	ACETO-CHLOR, WATER, FLTRD (UG/L) (49260)	ALA-CHLOR, WATER, FLTRD (UG/L) (46342)	ALPHA BHC, WATER, FLTRD (UG/L) (34253)	ATRA-ZINE, WATER, FLTRD (UG/L) (39632)	BEN-FLUR-ALIN, WATER, FLTRD (UG/L) (82673)	BUTYL-ATE, WATER, FLTRD (UG/L) (04028)	CAR-BARYL, WATER, FLTRD (UG/L) (82680)	CARBO-FURAN, WATER, FLTRD (UG/L) (82674)	CHLOR-PYRIFOS, WATER, FLTRD (UG/L) (38933)	CYANA-ZINE, WATER, FLTRD (UG/L) (04041)	DCPA, WATER, FLTRD (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, FLTRD (UG/L) (04040)
MAR												
20...	0.016	0.005	<0.005	0.081	<0.010	<0.002	<0.041	<0.020	<0.005	E0.016	<0.003	E0.049
APR												
17...	0.053	0.015	<0.005	0.26	<0.010	<0.002	<0.041	<0.020	<0.005	E0.008	<0.003	E0.048
MAY												
16...	E3.1	E0.21	<0.005	10.4	<0.010	<0.002	<0.041	<0.020	0.012	0.15	<0.003	E0.61
JUN												
19...	0.100	<0.002	<0.005	E10.2	<0.010	<0.002	<0.041	<0.020	<0.005	E0.007	<0.003	E0.24
JUL												
17...	0.009	<0.002	<0.005	0.57	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.054
AUG												
28...	0.018	0.009	<0.005	0.23	<0.010	<0.002	<0.041	<0.020	<0.005	0.025	<0.003	E0.025
SEP												
17...	<0.007	0.006	<0.005	0.054	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.031

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

04186500 AUGLAIZE RIVER AT FT. JENNINGS, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(39572), USGS National Water Information System parameter code; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

DATE	DI-AZINON, WATER, FLTRD (UG/L) (39572)	DI-ELRIN, WATER, FLTRD (UG/L) (39381)	DISUL-FOTON, WATER, FLTRD (UG/L) (82677)	EPTC, WATER, FLTRD (UG/L) (82668)	ETHAL-FLUR-ALIN, WATER, FLTRD (UG/L) (82663)	ETHO-PROP, WATER, FLTRD (UG/L) (82672)	FONOFOS, WATER, FLTRD (UG/L) (04095)	LINDANE, WATER, FLTRD (UG/L) (39341)	LIN-URON, WATER, FLTRD (UG/L) (82666)	MALA-THION, WATER, FLTRD (UG/L) (39532)	METHYL-AZIN-PHOS, WATER, FLTRD (UG/L) (82686)	METHYL PARA-THION, WATER, FLTRD (UG/L) (82667)
MAR												
20...	<0.005	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
APR												
17...	<0.005	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
MAY												
16...	E0.002	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
JUN												
19...	E0.002	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
JUL												
17...	<0.005	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
AUG												
28...	E0.004	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
SEP												
17...	0.007	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006

DATE	METO-LACHLOR, WATER, FLTRD (UG/L) (39415)	METRI-BUZIN, WATER, FLTRD (UG/L) (82630)	MOL-INATE, WATER, FLTRD (UG/L) (82671)	NAPROP-AMIDE, WATER, FLTRD (UG/L) (82684)	P,P' DDE, WATER, FLTRD (UG/L) (34653)	PARA-THION, WATER, FLTRD (UG/L) (39542)	PEB-ULATE, WATER, FLTRD (UG/L) (82669)	PENDI-METH-ALIN, WATER, FLTRD (UG/L) (82683)	CIS-PER-METHRIN, WATER, FLTRD (UG/L) (82687)	PHORATE, WATER, FLTRD (UG/L) (82664)	PRO-METON, WATER, FLTRD (UG/L) (04037)	PRON-AMIDE, WATER, FLTRD (UG/L) (82676)
MAR												
20...	0.18	0.008	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.009	<0.004
APR												
17...	0.14	0.020	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.010	<0.004
MAY												
16...	30.9	0.880	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.28	<0.004
JUN												
19...	0.39	0.008	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.039	<0.004
JUL												
17...	0.08	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.12	<0.004
AUG											0	
28...	0.25	0.010	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.32	<0.004
SEP												
17...	0.070	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.14	<0.004

04186500 AUGLAIZE RIVER AT FT. JENNINGS, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(04024), USGS National Water Information System parameter code; mg/L, milligrams per liter; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

DATE	PROP-ACHLOR, WATER, FLTRD (UG/L) (04024)	PRO-PANIL, WATER, FLTRD (UG/L) (82679)	PRO-PARGITE, WATER, FLTRD (UG/L) (82685)	SI-MAZINE, WATER, FLTRD (UG/L) (04035)	TEBU-THI-URON, WATER, FLTRD (UG/L) (82670)	TER-BACIL, WATER, FLTRD (UG/L) (82665)	TER-BUFOS, WATER, FLTRD (UG/L) (82675)	THIO-BENCARB, WATER, FLTRD (UG/L) (82681)	TRIAL-LATE, WATER, FLTRD (UG/L) (82678)	TRI-FLUR-ALIN, WATER, FLTRD (UG/L) (82661)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
MAR											
20...	<0.010	<0.011	<0.023	0.022	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	19
APR											
17...	<0.010	<0.011	<0.023	0.022	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	105
MAY											
16...	<0.010	<0.011	<0.023	40.3	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	155
JUN											
19...	<0.010	<0.011	<0.023	0.15	<0.006	<0.034	<0.017	<0.005	<0.002	<0.009	54
JUL											
17...	<0.010	<0.011	<0.023	0.053	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	38
AUG											
28...	<0.010	<0.011	<0.023	0.045	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	36
SEP											
17...	<0.010	<0.011	<0.023	0.029	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	---

PROJECT DATA
Results from Selected Sites in the Lake Erie-Lake St. Clair Drainages
(National Water-Quality Assessment Program)
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 1999 TO SEPTEMBER 2000

[(00061), USGS National Water Information System parameter code; mm of Hg, millimeters of mercury; mg/L, milligrams per liter; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

DATE	TIME	DIS-CHARGE, INST. (CUBIC FEET PER SECOND) (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	DIS-SOLVED OXYGEN (MG/L)) (00300)	DIS-SOLVED OXYGEN (PER-CENT SATUR-ATION) (00301)	PH WATER FIELD (STAND-ARD UNITS) (00400)	PH WATER LAB (STAND-ARD UNITS) (00403)	SPEC-IFIC CON-DUCT ANCE LAB (US/CM) (90095)	SPEC-IFIC CON-DUCT-ANCE FIELD (US/CM) (00095)	TEMPER-ATURE, AIR (DEG C) (00020)	TEMPER-ATURE, WATER (DEG C) (00010)	HARD-NESS, TOTAL (MG/L AS CACO3) (00900)
OCT												
28...	1030	269	750	10.7	91	8.2	8.4	884	857	9.5	7.6	251
NOV												
29...	1045	567	758	13.9	110	8.5	8.3	827	803	3.5	5.0	242
DEC												
27...	1015	956	743	12.6	85	8.2	8.1	990	975	-3.5	0.0	325
JAN												
31...	1130	1260	743	12.3	86	8.1	8.1	925	904	3.0	0.0	298
FEB												
29...	1100	10200	750	9.7	81	8.1	7.6	507	554	12.2	7.0	198
MAR												
22...	1015	12800	755	10.0	83	7.9	8.1	757	702	---	7.0	276
APR												
24...	1030	15600	746	8.1	74	7.8	7.6	452	444	12.0	11.5	179
MAY												
09...	0945	1900	738	9.7	115	8.0	8.3	617	636	21.0	22.0	243
11...	1000	8160	748	9.3	100	8.0	7.4	606	586	14.0	17.8	236
JUN												
15...	1100	23300	740	6.1	74	7.4	7.7	502	520	20.5	22.8	214
28...	1030	15600	750	6.1	71	7.8	7.8	378	383	20.0	22.0	150
JUL												
24...	1045	718	753	---	---	8.9	8.7	450	451	18.5	25.0	179
AUG												
02...	0845	2380	746	9.8	121	8.6	8.4	512	530	23.2	25.0	187
SEP												
13...	1130	4380	750	9.5	108	8.1	8.0	568	572	18.0	21.3	208

04193500 MAUMEE RIVER AT WATERVILLE, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

[(00915), USGS National Water Information System parameter code; mg/L, milligrams per liter; deg C, degrees Celsius; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value; M, presence verified but not quantified.]

DATE	CALCIUM, DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY, WATER, DIS-SOLVED FIELD (MG/L AS CACO3) (39086)	BICAR-BONATE, WATER, DIS-SOLVED FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS-SOLVED FIELD (MG/L AS CO3) (00452)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE, DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG C DIS-SOLVED (MG/L) (70300)
OCT												
28...	57	27	7.7	70	144	176	<1	105	0.8	M	131	524
NOV												
29...	56	25	8.2	64	137	153	7	97	0.8	0.2	129	500
DEC												
27...	79	31	7.2	73	162	198	<1	101	0.9	1.7	158	614
JAN												
31...	76	26	6.6	60	138	168	<1	94	0.6	3.8	140	564
FEB												
29...	55	14	3.3	18	95	116	<1	45	0.2	6.5	55	331
MAR												
22...	76	21	3.6	36	133	162	<1	72	0.3	3.2	93	459
APR												
24...	51	13	3.4	10	99	121	<1	24	0.2	6.8	42	277
MAY												
09...	64	20	3.4	19	136	151	<1	41	0.3	1.6	79	382
11...	65	18	3.2	18	133	162	<1	38	0.2	2.7	67	387
JUN												
15...	60	16	4.0	12	74	90	<1	24	0.3	6.9	43	322
28...	43	10	4.2	7	100	122	<1	14	0.2	7.1	25	232
JUL												
24...	44	17	4.2	16	112	110	13	31	0.2	1.9	49	263
AUG												
02...	43	19	4.6	22	114	117	11	42	0.3	1.2	62	304
SEP												
13...	55	17	5.5	30	135	159	3	47	0.5	4.2	59	336

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

WATER-QUALITY RECORDS—CONTINUED

04193500 MAUMEE RIVER AT WATERVILLE, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

[(00608), USGS National Water Information System parameter code; mg/L, milligrams per liter; col/100mL, colonies per 100 milliliters; deg C, degrees Celsius; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value; M, presence verified but not quantified; K, value is estimated from a non-ideal colony count.]

DATE	NITRO-GEN, AMMONIA, DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC, DIS-SOLVED (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC, TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2 + NO3, DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS, TOTAL (MG/L AS P) (00665)	E. COLI, WATER TOTAL (COL/ 100 ML) (31633)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	2,6-DI-ETHYL ANILINE, WATER, FLTRD (UG/L) (82660)
OCT												
28...	<0.02	0.7	0.91	<0.05	<0.01	0.02	<.010	0.05	K20	<10	3	<0.003
NOV												
29...	<0.02	0.6	1.2	<0.05	<0.01	0.02	<.010	0.06	K6	M	E2	<0.003
DEC												
27...	0.04	0.6	0.82	2.3	0.02	0.02	.016	0.07	K2	10	E2	<0.003
JAN												
31...	0.23	0.8	1.2	6.9	0.05	0.07	.036	0.11	K2	M	E1	<0.003
FEB												
29...	0.16	0.9	1.7	9.5	0.05	0.09	.052	0.33	K900	30	4	<0.003
MAR												
22...	0.06	0.9	1.4	9.2	0.03	0.02	.012	0.22	K620	M	E1	<0.003
APR												
24...	0.11	1.0	2.2	8.7	0.06	0.08	.058	0.50	1100	30	E2	<0.003
MAY												
09...	<0.02	0.7	1.3	6.4	0.03	0.01	<.010	0.01	K60	M	<2	<0.003
11...	0.11	1.0	1.7	7.8	0.06	0.05	.023	0.03	K1100	M	E1	<0.003
JUN												
15...	0.05	0.8	2.0	10.0	0.12	0.11	.087	0.53	K1400	10	E1	<0.003
28...	<0.02	0.8	1.7	6.2	0.08	0.15	.117	0.48	---	30	E1	<0.003
JUL												
24...	<0.02	0.7	1.7	1.9	0.02	0.02	<.010	0.08	---	<10	<2	<0.003
AUG												
02...	<0.02	0.7	2.4	0.31	0.01	0.02	<.010	0.18	K31	10	<2	<0.003
SEP												
13...	0.13	0.7	1.2	1.2	0.04	0.09	.061	0.18	500	M	E2	<0.003

04193500 MAUMEE RIVER AT WATERVILLE, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

[(49260), USGS National Water Information System parameter code; µg/L, micrograms per liter; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

DATE	ACETO-CHLOR, WATER, FLTRD (UG/L) (49260)	ALA-CHLOR, WATER, FLTRD (UG/L) (46342)	ALPHA BHC, WATER, FLTRD (UG/L) (34253)	ATRA-ZINE, WATER, FLTRD (UG/L) (39632)	BEN-FLUR-ALIN, WATER, FLTRD (UG/L) (82673)	BUTYL-ATE, WATER, FLTRD (UG/L) (04028)	CAR-BARYL, WATER, FLTRD (UG/L) (82680)	CARBO-FURAN, WATER, FLTRD (UG/L) (82674)	CHLOR-PYRIFOS, WATER, FLTRD (UG/L) (38933)	CYANA-ZINE, WATER, FLTRD (UG/L) (04041)	DCPA, WATER, FLTRD (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, FLTRD (UG/L) (04040)
OCT												
28...	<0.002	<0.2	<0.002	0.27	<0.002	<0.002	<0.003	<0.003	<0.004	0.031	<0.002	E0.063
NOV												
29...	<0.002	<0.002	<0.002	0.28	<0.002	<0.002	<0.003	<0.003	<0.004	0.049	<0.002	E0.057
DEC												
27...	0.015	0.008	<0.002	0.17	<0.002	<0.002	<0.003	<0.003	<0.004	0.027	<0.002	E0.055
JAN												
31...	0.065	0.013	<0.002	0.16	<0.002	<0.002	<0.003	<0.003	<0.004	0.021	<0.002	E0.049
FEB												
29...	0.025	0.011	<0.002	0.11	<0.002	<0.002	<0.003	<0.003	<0.004	0.014	<0.002	E0.037
MAR												
22...	0.019	<0.010	<0.002	0.14	<0.002	<0.002	E0.004	<0.003	<0.004	0.018	<0.002	E0.066
APR												
24...	0.42	0.073	<0.002	1.2	<0.002	<0.002	E0.015	<0.003	<0.004	<0.040	<0.002	E0.11
MAY												
09...	0.16	0.059	<0.002	0.72	<0.002	<0.002	<0.003	<0.003	<0.004	0.025	<0.002	E0.058
11...	3.6	0.41	<0.002	8.2	<0.002	<0.002	<0.003	<0.003	<0.004	0.44	<0.002	E0.23
JUN												
15...	1.0	0.11	<0.002	7.3	<0.002	<0.002	E0.023	<0.003	0.010	0.19	<0.002	E0.60
28...	0.19	0.049	<0.002	2.5	<0.002	<0.002	E0.013	E0.037	E0.004	0.037	<0.002	E0.31
JUL												
24...	0.083	0.015	<0.002	1.4	<0.002	<0.002	<0.003	<0.003	<0.004	0.028	<0.002	E0.35
AUG												
02...	0.055	0.015	<0.002	1.0	<0.002	<0.002	<0.003	<0.003	<0.004	0.021	<0.002	E0.12
SEP												
13...	0.036	0.011	<0.002	0.94	<0.002	<0.002	E0.006	<0.003	<0.004	0.024	<0.002	E0.10

PROJECT DATA
Results from Selected Sites in the Lake Erie-Lake St. Clair Drainages
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WATER-QUALITY RECORDS—CONTINUED

04193500 MAUMEE RIVER AT WATERVILLE, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

[(39572), USGS National Water Information System parameter code; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

DATE	DI-AZINON, WATER, FLTRD (UG/L) (39572)	DI-ELRIN, WATER, FLTRD (UG/L) (39381)	DISUL-FOTON, WATER, FLTRD (UG/L) (82677)	EPTC, WATER, FLTRD (UG/L) (82668)	ETHAL-FLUR-ALIN, WATER, FLTRD (UG/L) (82663)	ETHO-PROP, WATER, FLTRD (UG/L) (82672)	FONOFOS, WATER, FLTRD (UG/L) (04095)	LINDANE, WATER, FLTRD (UG/L) (39341)	LIN-URON, WATER, FLTRD (UG/L) (82666)	MALA-THION, WATER, FLTRD (UG/L) (39532)	METHYL-AZIN-PHOS, WATER, FLTRD (UG/L) (82686)	METHYL PARA-THION, WATER, FLTRD (UG/L) (82667)
OCT												
28...	<0.002	<0.001	<0.017	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	<0.001	<0.006
NOV												
29...	<0.002	<0.001	<0.017	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	<0.001	<0.006
DEC												
27...	<0.010	<0.001	<0.017	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	<0.001	<0.006
JAN												
31...	0.006	<0.001	<0.017	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	<0.001	<0.006
FEB												
29...	<0.002	<0.001	<0.017	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	<0.010	<0.006
MAR												
22...	E0.003	<0.001	<0.017	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	<0.001	<0.006
APR												
24...	0.008	<0.001	<0.017	<0.002	<0.004	<0.003	<0.003	<0.004	<0.010	<0.005	<0.001	<0.006
MAY												
09...	<0.002	<0.001	<0.017	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	<0.001	<0.006
11...	0.008	<0.001	<0.017	<0.002	<0.004	<0.003	<0.003	<0.004	<0.030	<0.005	<0.001	<0.006
JUN												
15...	0.007	<0.001	<0.017	<0.002	<0.004	<0.003	<0.003	<0.004	0.026	<0.005	<0.001	<0.006
28...	0.025	<0.001	<0.017	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	<0.001	<0.006
JUL												
24...	<0.002	<0.001	<0.017	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	<0.001	<0.006
AUG												
02...	<0.002	<0.001	<0.017	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	<0.030	<0.006
SEP												
13...	0.007	<0.001	<0.017	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	<0.001	<0.006

04193500 MAUMEE RIVER AT WATERVILLE, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

[(39415), USGS National Water Information System parameter code; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

DATE	METO-LACHLOR, WATER, FLTRD (UG/L) (39415)	METRI-BUZIN, WATER, FLTRD (UG/L) (82630)	MOL-INATE, WATER, FLTRD (UG/L) (82671)	NAPROP-AMIDE, WATER, FLTRD (UG/L) (82684)	P,P' DDE, WATER, FLTRD (UG/L) (34653)	PARA-THION, WATER, FLTRD (UG/L) (39542)	PEB-ULATE, WATER, FLTRD (UG/L) (82669)	PENDI-METH-ALIN, WATER, FLTRD (UG/L) (82683)	CIS-PER-METHRIN, WATER, FLTRD (UG/L) (82687)	PHORATE, WATER, FLTRD (UG/L) (82664)	PRO-METON, WATER, FLTRD (UG/L) (04037)	PRON-AMIDE, WATER, FLTRD (UG/L) (82676)
OCT												
28...	0.079	<0.004	<0.004	<0.003	<0.006	<0.004	<0.004	<0.004	<0.005	<0.002	0.077	<0.003
NOV												
29...	0.049	<0.004	<0.004	<0.003	<0.006	<0.004	<0.004	<0.004	<0.005	<0.002	0.078	<0.003
DEC												
27...	0.081	0.021	<0.004	<0.003	<0.006	<0.004	<0.004	<0.004	<0.005	<0.002	0.047	<0.003
JAN												
31...	0.13	0.029	<0.004	<0.003	<0.006	<0.004	<0.004	<0.004	<0.005	<0.002	0.026	<0.003
FEB												
29...	0.13	0.048	<0.004	<0.003	<0.006	<0.004	<0.004	<0.004	<0.005	<0.002	E0.009	<0.003
MAR												
22...	0.09	0.018	<0.004	<0.003	<0.006	<0.004	<0.004	<0.004	<0.005	<0.002	E0.011	<0.003
APR												
24...	1.0	0.60	<0.004	<0.003	<0.006	<0.004	<0.004	<0.004	<0.005	<0.002	0.019	<0.003
MAY												
09...	0.36	0.15	<0.004	<0.003	<0.006	<0.004	<0.004	<0.004	<0.005	<0.002	0.038	<0.003
11...	2.9	0.26	<0.004	<0.003	<0.006	<0.004	<0.004	<0.004	<0.005	<0.002	0.047	<0.003
JUN												
15...	2.0	0.20	<0.004	<0.003	<0.006	<0.004	<0.004	<0.004	<0.005	<0.002	0.027	<0.003
28...	1.2	0.10	<0.004	<0.003	<0.006	<0.004	<0.004	<0.010	<0.005	<0.002	0.051	<0.003
JUL												
24...	0.53	0.014	<0.004	<0.003	<0.006	<0.004	<0.004	<0.004	<0.005	<0.002	0.033	<0.003
AUG												
02...	0.32	0.013	<0.004	<0.003	<0.006	<0.004	<0.004	<0.004	<0.005	<0.002	0.035	<0.003
SEP												
13...	0.23	0.012	<0.004	<0.003	<0.006	<0.004	<0.004	<0.004	<0.005	<0.002	0.073	<0.003

PROJECT DATA
Results from Selected Sites in the Lake Erie-Lake St. Clair Drainages
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WATER-QUALITY RECORDS—CONTINUED

04193500 MAUMEE RIVER AT WATERVILLE, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

[(04024), USGS National Water Information System parameter code; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

DATE	PROP-ACHLOR, WATER, FLTRD (UG/L) (04024)	PRO-PANIL, WATER, FLTRD (UG/L) (82679)	PRO-PARGITE, WATER, FLTRD (UG/L) (82685)	SI-MAZINE, WATER, FLTRD (UG/L) (04035)	TEBU-THI-URON, WATER, FLTRD (UG/L) (82670)	TER-BACIL, WATER, FLTRD (UG/L) (82665)	TER-BUFOS, WATER, FLTRD (UG/L) (82675)	THIO-BENCARB, WATER, FLTRD (UG/L) (82681)	TRIAL-LATE, WATER, FLTRD (UG/L) (82678)	TRI-FLUR-ALIN, WATER, FLTRD (UG/L) (82661)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
OCT											
28...	<0.007	<0.004	<0.013	0.085	0.026	<0.007	<0.013	<0.002	<0.001	<0.002	---
NOV											
29...	<0.007	<0.004	<0.013	0.067	0.022	<0.007	<0.013	<0.002	<0.001	<0.002	65
DEC											
27...	<0.007	<0.004	<0.013	0.038	0.054	<0.007	<0.013	<0.002	<0.001	<0.002	100
JAN											
31...	<0.007	<0.004	<0.013	0.026	0.023	<0.007	<0.013	<0.002	<0.001	<0.002	70
FEB											
29...	<0.007	<0.004	<0.013	0.016	0.017	<0.007	<0.013	<0.002	<0.001	<0.002	---
MAR											
22...	<0.007	<0.004	<0.013	0.028	0.013	<0.007	<0.013	<0.002	<0.001	<0.002	122
APR											
24...	<0.007	<0.004	<0.013	0.32	0.013	<0.007	<0.013	<0.002	<0.001	E0.003	303
MAY											
09...	<0.007	<0.004	<0.013	0.094	<0.010	<0.007	<0.013	<0.002	<0.001	<0.002	19
11...	<0.007	<0.004	<0.013	1.4	<0.010	<0.007	<0.013	<0.002	<0.001	<0.002	91
JUN											
15...	<0.007	<0.004	<0.013	1.0	0.012	<0.007	<0.013	<0.002	<0.001	<0.002	337
28...	<0.007	<0.004	<0.013	0.21	0.015	<0.007	<0.013	<0.002	<0.001	<0.002	227
JUL											
24...	<0.007	<0.004	<0.013	0.13	<0.010	<0.007	<0.013	<0.002	<0.001	<0.002	24
AUG											
02...	<0.007	<0.004	<0.013	0.10	<0.020	<0.007	<0.013	<0.002	<0.001	<0.002	25
SEP											
13...	<0.007	<0.004	<0.013	0.066	0.014	<0.007	<0.013	<0.002	<0.001	<0.002	56

04193500 MAUMEE RIVER AT WATERVILLE, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00061), USGS National Water Information System parameter code; mm of Hg, millimeters of mercury; mg/L, milligrams per liter; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

DATE	TIME	DIS-CHARGE, INST. (CUBIC FEET PER SECOND) (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	DIS-SOLVED OXYGEN (MG/L)) (00300)	DIS-SOLVED OXYGEN (PER-CENT SATUR-ATION) (00301)	PH WATER FIELD (STAND-ARD UNITS) (00400)	PH WATER LAB (STAND-ARD UNITS) (00403)	SPEC-IFIC CON-DUCT ANCE LAB (US/CM) (90095)	SPEC-IFIC CON-DUCT-ANCE FIELD (US/CM) (00095)	TEMPER-ATURE, AIR (DEG C) (00020)	TEMPER-ATURE, WATER (DEG C) (00010)	HARD-NESS, TOTAL (MG/L AS CACO3) (00900)
OCT												
30...	0930	633	750	10.0	92	8.9	8.3	616	629	9.0	11.7	267
NOV												
30...	1200	1040	742	12.0	94	8.9	8.4	726	713	6.5	3.6	280
DEC												
19...	1130	E14000	745	9.3	65	8.9	7.8	558	483	-9.5	-0.1	215
JAN												
31...	1015	8120	742	---	---	8.0	7.7	685	545	2.5	0.2	268
FEB												
27...	1115	15100	745	12.5	94	7.8	7.8	502	521	2.0	3.2	205
MAR												
22...	0900	5720	750	13.0	104	8.6	8.2	754	717	---	5.7	296
APR												
17...	1430	9950	745	14.4	132	8.1	7.5	563	548	2.5	10.4	236
MAY												
22...	1245	11400	748	8.3	89	7.7	---	---	518	16.0	18.8	---
JUN												
21...	0915	1680	748	8.8	107	8.3	7.9	591	594	---	25.0	262
JUL												
19...	0910	307	751	6.2	76	8.3	7.6	516	530	---	24.6	194
AUG												
30...	0900	577	750	8.0	94	8.5	7.8	679	693	---	23.3	221
SEP												
19...	0730	556	749	7.1	78	8.3	8.0	586	590	---	20.2	194

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WATER-QUALITY RECORDS—CONTINUED

04193500 MAUMEE RIVER AT WATERVILLE, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00915), USGS National Water Information System parameter code; mg/L, milligrams per liter; deg C, degrees Celsius; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

DATE	CALCIUM, DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY, WATER, DIS-SOLVED FIELD (MG/L AS CACO3) (39086)	BICAR-BONATE, WATER, DIS-SOLVED FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS-SOLVED FIELD (MG/L AS CO3) (00452)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE, DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG C DIS-SOLVED (MG/L) (70300)
OCT												
30...	75	20	5.7	22	---	---	<1	46	<0.2	5.2	67	365
NOV												
30...	77	21	6.0	30	181	221	<1	57	0.4	5.3	80	441
DEC												
19...	60	16	3.7	18	---	---	<1	45	0.2	6.2	50	337
JAN												
31...	74	20	3.9	32	164	201	<1	63	0.4	5.5	70	405
FEB												
27...	58	15	3.7	14	130	158	<1	32	0.3	5.8	49	308
MAR												
22...	80	24	3.1	29	186	210	8	58	0.3	2.7	86	434
APR												
17...	66	17	4.1	13	142	173	<1	32	0.2	7.3	50	348
MAY												
22...	---	---	---	---	122	148	<1	---	---	---	---	---
JUN												
21...	70	21	3.7	17	170	203	2	35	0.3	4.5	54	353
JUL												
19...	43	21	4.2	26	131	156	<1	45	0.4	2.5	59	310
AUG												
30...	52	22	5.9	50	134	134	4	79	0.6	0.8	90	402
SEP												
19...	48	18	5.3	40	129	154	<1	63	0.5	0.6	75	349

04193500 MAUMEE RIVER AT WATERVILLE, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00608), USGS National Water Information System parameter code; mg/L, milligrams per liter; col/100mL, colonies per 100 milliliters; deg C, degrees Celsius; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value; M, presence verified but not quantified.]

DATE	NITRO-GEN, AMMONIA, DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC, DIS-SOLVED (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC, TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2 + NO3, DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS, TOTAL (MG/L AS P) (00665)	E. COLI, WATER TOTAL (COL/ 100 ML) (31633)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	2,6-DI-ETHYL ANILINE, WATER, FLTRD (UG/L) (82660)
OCT												
30...	<0.04	0.85	1.6	3.2	0.02	0.02	<0.02	0.12	23	<10	<3	<0.002
NOV												
30...	<0.04	0.69	0.87	3.8	0.02	0.09	0.08	0.13	<3	20	E2	<0.002
DEC												
19...	0.13	0.80	1.8	8.2	0.02	0.11	0.09	0.39	K900	20	5	<0.002
JAN												
31...	0.31	0.93	1.4	4.8	0.03	0.11	0.10	0.23	K970	20	14	<0.002
FEB												
27...	0.21	0.98	2.3	5.0	0.02	0.14	0.13	0.58	500	30	5	<0.002
MAR												
22...	<0.04	0.51	1.1	4.6	0.02	0.01	<0.02	0.10	K17	M	5	<0.002
APR												
17...	<0.04	0.95	1.5	7.4	0.09	0.10	<0.02	0.25	97	20	5	<0.002
MAY												
22...	0.17	1.1	1.9	11.7	0.19	0.12	0.09	0.30	520	---	---	<0.002
JUN												
21...	E0.03	<0.10	0.96	4.8	0.06	0.02	<0.02	0.07	K16	<10	<3	<0.002
JUL												
19...	<0.04	0.65	1.3	E0.02	E0.01	0.02	<0.02	0.12	K67	10	4	<0.002
AUG												
30...	<0.04	---	---	E0.3	E0.04	---	<0.02	---	---	M	<3	<0.002
SEP												
19...	<0.04	0.67	1.2	0.13	0.01	0.02	<0.02	0.11	K210	M	E2	<0.002

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04193500 MAUMEE RIVER AT WATERVILLE, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(49260), USGS National Water Information System parameter code; µg/L, micrograms per liter; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

DATE	ACETO-CHLOR, WATER, FLTRD (UG/L) (49260)	ALA-CHLOR, WATER, FLTRD (UG/L) (46342)	ALPHA BHC, WATER, FLTRD (UG/L) (34253)	ATRA-ZINE, WATER, FLTRD (UG/L) (39632)	BEN-FLUR-ALIN, WATER, FLTRD (UG/L) (82673)	BUTYL-ATE, WATER, FLTRD (UG/L) (04028)	CAR-BARYL, WATER, FLTRD (UG/L) (82680)	CARBO-FURAN, WATER, FLTRD (UG/L) (82674)	CHLOR-PYRIFOS, WATER, FLTRD (UG/L) (38933)	CYANA-ZINE, WATER, FLTRD (UG/L) (04041)	DCPA, WATER, FLTRD (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, FLTRD (UG/L) (04040)
OCT												
30...	0.024	0.009	<0.005	0.21	<0.010	<0.002	<0.041	<0.020	<0.005	E0.011	<0.003	E0.13
NOV												
30...	0.020	0.009	<0.005	0.17	<0.010	<0.002	<0.041	<0.020	<0.005	E0.008	<0.003	E0.064
DEC												
19...	0.017	0.010	<0.005	0.11	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.068
JAN												
31...	0.015	0.007	<0.005	0.11	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.051
FEB												
27...	0.008	0.008	<0.005	0.07	<0.010	<0.002	<0.041	<0.020	<0.005	E0.004	<0.003	E0.028
MAR												
22...	0.014	0.009	<0.005	0.10	<0.010	<0.002	E0.006	<0.020	<0.005	<0.018	<0.003	E0.032
APR												
17...	0.067	0.012	<0.005	0.24	<0.010	<0.002	<0.041	<0.020	<0.005	E0.010	<0.003	E0.048
MAY												
22...	4.2	0.176	<0.005	E20	<0.010	<0.002	E0.004	<0.020	E0.003	0.169	<0.003	E1.1
JUN												
21...	0.21	0.019	<0.005	3.4	<0.010	<0.002	<0.041	<0.020	E0.004	0.018	<0.003	E0.21
JUL												
19...	0.028	<0.002	<0.005	E1.9	<0.010	<0.002	<0.041	<0.020	<0.005	<0.020	<0.003	E0.28
AUG												
30...	0.047	0.011	<0.005	0.41	<0.010	<0.002	<0.041	<0.020	<0.005	0.019	<0.003	E0.055
SEP												
19...	0.009	<0.002	<0.005	0.09	<0.010	<0.005	<0.041	<0.020	<0.005	0.035	<0.003	E0.045

04193500 MAUMEE RIVER AT WATERVILLE, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(39572), USGS National Water Information System parameter code; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

DATE	DI-AZINON, WATER, FLTRD (UG/L) (39572)	DI-ELRIN, WATER, FLTRD (UG/L) (39381)	DISUL-FOTON, WATER, FLTRD (UG/L) (82677)	EPTC, WATER, FLTRD (UG/L) (82668)	ETHAL-FLUR-ALIN, WATER, FLTRD (UG/L) (82663)	ETHO-PROP, WATER, FLTRD (UG/L) (82672)	FONOFOS, WATER, FLTRD (UG/L) (04095)	LINDANE, WATER, FLTRD (UG/L) (39341)	LIN-URON, WATER, FLTRD (UG/L) (82666)	MALA-THION, WATER, FLTRD (UG/L) (39532)	METHYL-AZIN-PHOS, WATER, FLTRD (UG/L) (82686)	METHYL PARA-THION, WATER, FLTRD (UG/L) (82667)
OCT												
30...	E0.003	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
NOV												
30...	E0.002	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
DEC												
19...	E0.004	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	E0.013	<0.050	<0.006
JAN												
31...	<0.005	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
FEB												
27...	<0.005	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
MAR												
22...	<0.005	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
APR												
17...	E0.003	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
MAY												
22...	0.028	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
JUN												
21...	E0.004	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	E0.001	<0.035	<0.027	<0.050	<0.006
JUL												
19...	E0.004	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
AUG												
30...	E0.004	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
SEP												
19...	0.011	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006

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

WATER-QUALITY RECORDS—CONTINUED

04193500 MAUMEE RIVER AT WATERVILLE, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(39415), USGS National Water Information System parameter code; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

DATE	METO-LACHLOR, WATER, FLTRD (UG/L) (39415)	METRI-BUZIN, WATER, FLTRD (UG/L) (82630)	MOL-INATE, WATER, FLTRD (UG/L) (82671)	NAPROP-AMIDE, WATER, FLTRD (UG/L) (82684)	P,P' DDE, WATER, FLTRD (UG/L) (34653)	PARA-THION, WATER, FLTRD (UG/L) (39542)	PEB-ULATE, WATER, FLTRD (UG/L) (82669)	PENDI-METH-ALIN, WATER, FLTRD (UG/L) (82683)	CIS-PER-METHRIN, WATER, FLTRD (UG/L) (82687)	PHORATE, WATER, FLTRD (UG/L) (82664)	PRO-METON, WATER, FLTRD (UG/L) (04037)	PRON-AMIDE, WATER, FLTRD (UG/L) (82676)
OCT												
30...	0.12	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.023	<0.004
NOV												
30...	0.090	0.21	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.015	<0.004
DEC												
19...	0.086	0.036	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.006	<0.004
JAN												
31...	0.063	0.029	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.005	<0.004
FEB												
27...	0.062	0.023	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.004	<0.004
MAR												
22...	0.074	0.011	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.007	<0.004
APR												
17...	0.22	0.12	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.009	<0.004
MAY												
22...	7.0	0.97	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.023	<0.004
JUN												
21...	1.0	0.036	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.024	<0.004
JUL												
19...	0.34	<0.010	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.043	<0.004
AUG												
30...	0.15	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.13	<0.004
SEP												
19...	0.10	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.12	<0.004

04193500 MAUMEE RIVER AT WATERVILLE, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(04024), USGS National Water Information System parameter code; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

DATE	PROP-ACHLOR, WATER, FLTRD (UG/L) (04024)	PRO-PANIL, WATER, FLTRD (UG/L) (82679)	PRO-PARGITE, WATER, FLTRD (UG/L) (82685)	SI-MAZINE, WATER, FLTRD (UG/L) (04035)	TEBU-THI-URON, WATER, FLTRD (UG/L) (82670)	TER-BACIL, WATER, FLTRD (UG/L) (82665)	TER-BUFOS, WATER, FLTRD (UG/L) (82675)	THIO-BENCARB, WATER, FLTRD (UG/L) (82681)	TRIAL-LATE, WATER, FLTRD (UG/L) (82678)	TRI-FLUR-ALIN, WATER, FLTRD (UG/L) (82661)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
OCT											
30...	<0.010	<0.011	<0.023	0.028	E0.013	<0.034	<0.017	<0.005	<0.002	<0.009	12
NOV											
30...	<0.010	<0.011	<0.023	0.054	E0.010	<0.034	<0.017	<0.005	<0.002	<0.009	---
DEC											
19...	<0.010	<0.011	<0.023	0.013	E0.014	<0.034	<0.017	<0.005	<0.002	<0.009	186
JAN											
31...	<0.010	<0.011	<0.023	0.029	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	59
FEB											
27...	<0.010	<0.011	<0.023	0.017	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	376
MAR											
22...	<0.010	<0.011	<0.023	0.019	E0.010	<0.034	<0.017	<0.005	<0.002	<0.009	31
APR											
17...	<0.010	<0.011	<0.023	0.051	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	75
MAY											
22...	<0.010	<0.011	<0.023	30.5	E0.011	<0.034	<0.017	<0.005	<0.002	<0.009	163
JUN											
21...	<0.010	<0.011	<0.023	0.50	E0.006	<0.034	<0.017	<0.005	<0.002	<0.009	27
JUL											
19...	<0.010	<0.011	<0.023	0.27	E0.018	<0.034	<0.017	<0.005	<0.002	<0.009	16
AUG											
30...	<0.010	<0.011	<0.023	0.11	E0.018	<0.034	<0.017	<0.005	<0.002	<0.009	24
SEP											
19...	<0.010	<0.011	<0.023	0.070	E0.017	<0.034	<0.017	<0.005	<0.002	<0.009	---

PROJECT DATA
Ground-Water Records for Former Air Force Plant 36

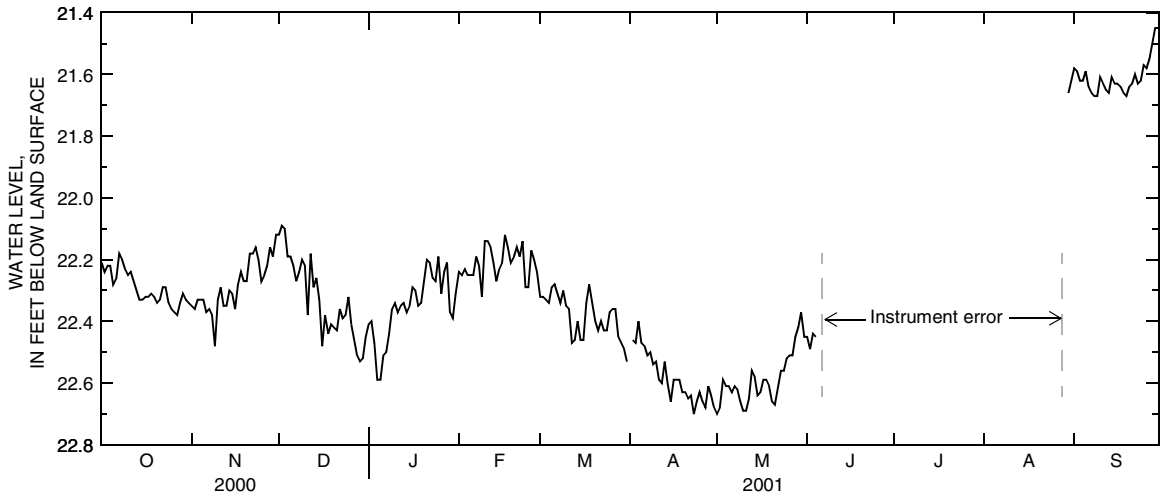
The following tables contain daily maximum ground-water levels and temperature from three monitoring wells on former Air Force Plant 36 in Evendale, Ohio. These data were collected as part of a cooperative study with U.S. Air Force Aeronautical Systems Center headquartered at Wright-Patterson Air Force Base. The purpose of the study is to provide technical support for ongoing remedial actions at the plant.

391411084264000. LOCAL NUMBER, AF-3S

LOCATION.—Latitude 39°14′11″, longitude 84°26′40″, Hamilton County, Hydrologic Unit 05090203.
AQUIFER.—Shallow part of glacial outwash. Geologic Unit 112OTSH.
WELL CHARACTERISTICS.—Drilled observation water well, depth 52.0 ft.
DATUM.—Altitude of land surface is 560.40 feet above National Geodetic Vertical Datum of 1929. Measuring point is top of inner casing, 1.94 ft above land-surface datum.
PERIOD OF RECORD.—Nov. 1997 to current year.
EXTREMES FOR PERIOD OF RECORD.—Maximum daily low, 23.54 ft below land-surface datum, Oct. 13, 1999; minimum daily low, 19.25 ft below land-surface datum, June 7 and 8, 1998.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

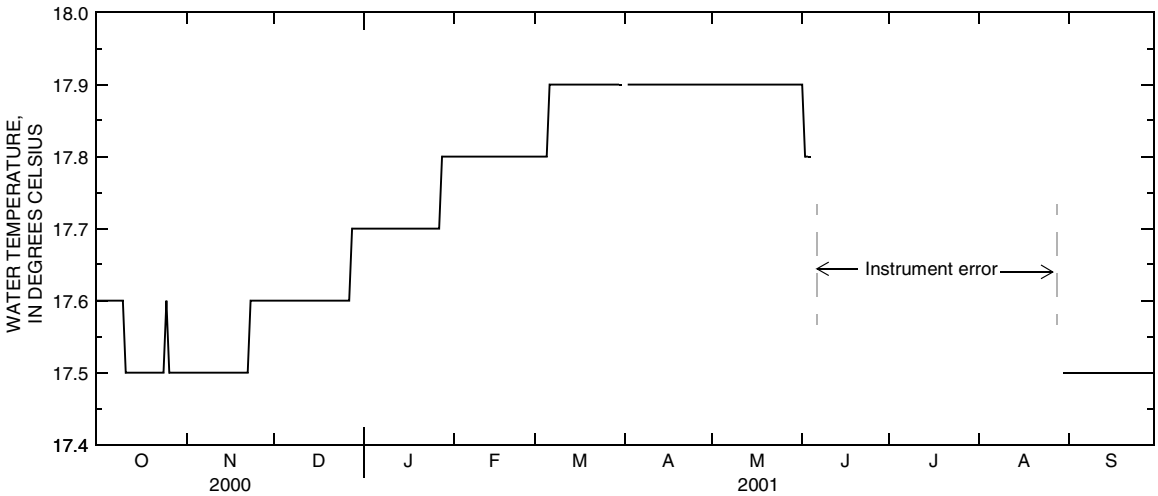
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.21	22.35	22.12	22.41	22.24	22.32	---	22.70	22.45	---	---	21.58
2	22.24	22.36	22.09	22.40	22.25	22.32	22.46	22.68	22.49	---	---	21.59
3	22.22	22.33	22.10	22.47	22.23	22.33	22.47	22.59	22.44	---	---	21.62
4	22.22	22.33	22.19	22.59	22.25	22.34	22.40	22.61	22.45	---	---	21.62
5	22.28	22.33	22.19	22.59	22.25	22.29	22.47	22.61	---	---	---	21.59
6	22.26	22.37	22.22	22.51	22.25	22.28	22.48	22.63	---	---	---	21.64
7	22.18	22.36	22.27	22.50	22.19	22.31	22.51	22.61	---	---	---	21.66
8	22.20	22.38	22.24	22.44	22.22	22.34	22.50	22.62	---	---	---	21.67
9	22.23	22.48	22.20	22.36	22.32	22.30	22.54	22.66	---	---	---	21.67
10	22.25	22.33	22.22	22.34	22.14	22.35	22.53	22.69	---	---	---	21.61
11	22.24	22.29	22.38	22.37	22.14	22.36	22.59	22.69	---	---	---	21.63
12	22.27	22.35	22.18	22.35	22.16	22.47	22.60	22.65	---	---	---	21.65
13	22.30	22.35	22.29	22.34	22.21	22.46	22.53	22.56	---	---	---	21.66
14	22.33	22.30	22.26	22.37	22.27	22.40	22.60	22.58	---	---	---	21.61
15	22.33	22.31	22.33	22.35	22.23	22.46	22.66	22.64	---	---	---	21.63
16	22.32	22.36	22.48	22.29	22.21	22.46	22.59	22.63	---	---	---	21.63
17	22.32	22.28	22.38	22.30	22.12	22.34	22.59	22.59	---	---	---	21.64
18	22.31	22.24	22.44	22.35	22.16	22.28	22.59	22.59	---	---	---	21.66
19	22.32	22.27	22.41	22.34	22.21	22.34	22.63	22.61	---	---	---	21.67
20	22.34	22.27	22.42	22.27	22.19	22.40	22.63	22.66	---	---	---	21.64
21	22.33	22.18	22.43	22.20	22.16	22.43	22.65	22.67	---	---	---	21.63
22	22.29	22.18	22.36	22.21	22.19	22.40	22.64	22.61	---	---	---	21.60
23	22.29	22.16	22.39	22.26	22.14	22.43	22.70	22.56	---	---	---	21.63
24	22.34	22.20	22.38	22.27	22.29	22.43	22.66	22.56	---	---	---	21.62
25	22.36	22.27	22.32	22.19	22.29	22.37	22.63	22.52	---	---	---	21.57
26	22.37	22.25	22.41	22.31	22.17	22.36	22.66	22.51	---	---	---	21.58
27	22.38	22.22	22.46	22.24	22.20	22.36	22.68	22.51	---	---	---	21.55
28	22.34	22.16	22.51	22.21	22.24	22.45	22.61	22.45	---	---	---	21.50
29	22.31	22.19	22.53	22.37	---	22.47	22.64	22.42	---	---	---	21.45
30	22.33	22.12	22.52	22.39	---	22.49	22.68	22.37	---	---	21.66	21.45
31	22.34	---	22.45	22.31	---	22.53	---	22.45	---	---	21.62	---
MAX	22.38	22.48	22.53	22.59	22.32	22.53	---	22.70	---	---	---	21.67



391411084264000. LOCAL NUMBER, AF-3S—CONTINUED

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.6	17.5	17.6	17.7	17.8	17.8	---	17.9	17.9	---	---	17.5
2	17.6	17.5	17.6	17.7	17.8	17.8	17.9	17.9	17.8	---	---	17.5
3	17.6	17.5	17.6	17.7	17.8	17.8	17.9	17.9	17.8	---	---	17.5
4	17.6	17.5	17.6	17.7	17.8	17.8	17.9	17.9	17.8	---	---	17.5
5	17.6	17.5	17.6	17.7	17.8	17.8	17.9	17.9	---	---	---	17.5
6	17.6	17.5	17.6	17.7	17.8	17.9	17.9	17.9	---	---	---	17.5
7	17.6	17.5	17.6	17.7	17.8	17.9	17.9	17.9	---	---	---	17.5
8	17.6	17.5	17.6	17.7	17.8	17.9	17.9	17.9	---	---	---	17.5
9	17.6	17.5	17.6	17.7	17.8	17.9	17.9	17.9	---	---	---	17.5
10	17.6	17.5	17.6	17.7	17.8	17.9	17.9	17.9	---	---	---	17.5
11	17.5	17.5	17.6	17.7	17.8	17.9	17.9	17.9	---	---	---	17.5
12	17.5	17.5	17.6	17.7	17.8	17.9	17.9	17.9	---	---	---	17.5
13	17.5	17.5	17.6	17.7	17.8	17.9	17.9	17.9	---	---	---	17.5
14	17.5	17.5	17.6	17.7	17.8	17.9	17.9	17.9	---	---	---	17.5
15	17.5	17.5	17.6	17.7	17.8	17.9	17.9	17.9	---	---	---	17.5
16	17.5	17.5	17.6	17.7	17.8	17.9	17.9	17.9	---	---	---	17.5
17	17.5	17.5	17.6	17.7	17.8	17.9	17.9	17.9	---	---	---	17.5
18	17.5	17.5	17.6	17.7	17.8	17.9	17.9	17.9	---	---	---	17.5
19	17.5	17.5	17.6	17.7	17.8	17.9	17.9	17.9	---	---	---	17.5
20	17.5	17.5	17.6	17.7	17.8	17.9	17.9	17.9	---	---	---	17.5
21	17.5	17.5	17.6	17.7	17.8	17.9	17.9	17.9	---	---	---	17.5
22	17.5	17.5	17.6	17.7	17.8	17.9	17.9	17.9	---	---	---	17.5
23	17.5	17.6	17.6	17.7	17.8	17.9	17.9	17.9	---	---	---	17.5
24	17.5	17.6	17.6	17.7	17.8	17.9	17.9	17.9	---	---	---	17.5
25	17.6	17.6	17.6	17.7	17.8	17.9	17.9	17.9	---	---	---	17.5
26	17.5	17.6	17.6	17.7	17.8	17.9	17.9	17.9	---	---	---	17.5
27	17.5	17.6	17.6	17.7	17.8	17.9	17.9	17.9	---	---	---	17.5
28	17.5	17.6	17.7	17.8	17.8	17.9	17.9	17.9	---	---	---	17.5
29	17.5	17.6	17.7	17.8	---	17.9	17.9	17.9	---	---	---	17.5
30	17.5	17.6	17.7	17.8	---	17.9	17.9	17.9	---	---	17.5	17.5
31	17.5	---	17.7	17.8	---	17.9	---	17.9	---	---	17.5	---
MAX	17.6	17.6	17.7	17.8	17.8	17.9	---	17.9	---	---	---	17.5



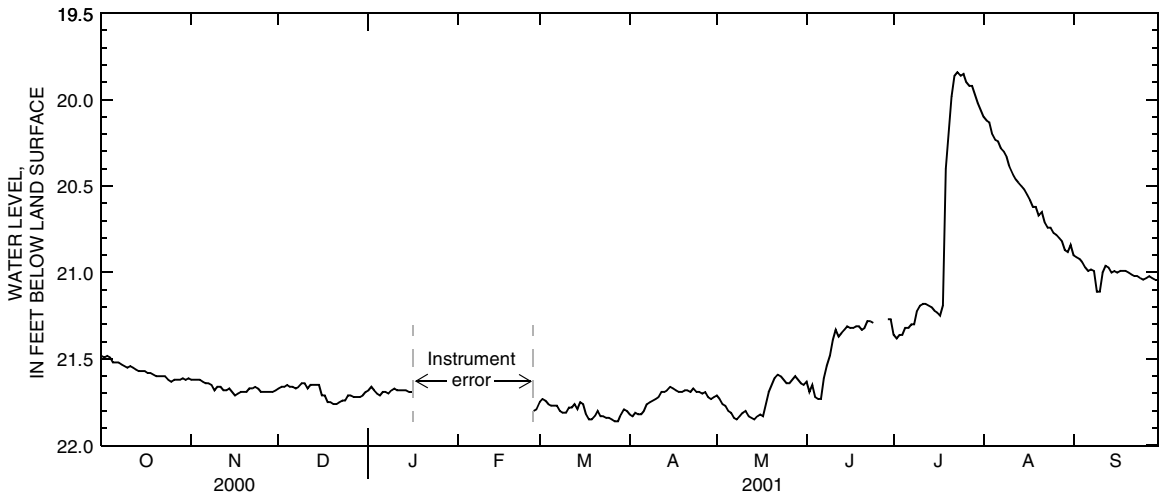
Ground-Water Records for Former Air Force Plant 36

391408084264101. LOCAL NUMBER, AF-5P

LOCATION.—Latitude 39°14′08″, longitude 84°26′41″, Hamilton County, Hydrologic Unit 05090203.
AQUIFER.—Perched part of glacial outwash. Geologic Unit 112OTSH.
WELL CHARACTERISTICS.—Drilled observation water well, depth 33.0 ft.
DATUM.—Altitude of land surface is 559.90 feet above National Geodetic Vertical Datum of 1929. Measuring point is top of inner casing, 1.34 ft above land-surface datum.
PERIOD OF RECORD.—Nov. 1997 to current year.
EXTREMES FOR PERIOD OF RECORD.—Maximum daily low, 22.36 ft.below land-surface datum, Oct. 10 and 13, 1999; minimum daily low, 19.49 ft below land-surface datum, June 6-8, 1998.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

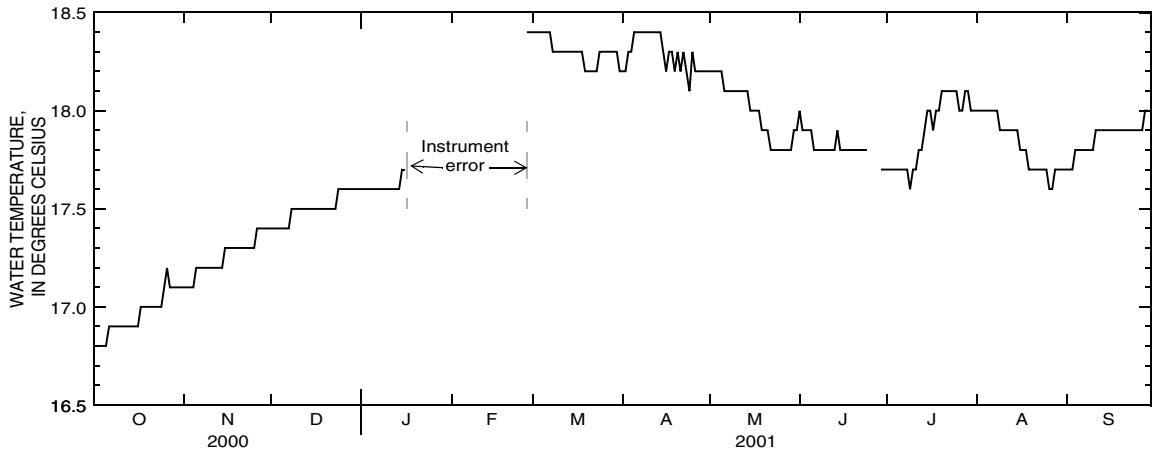
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.48	21.62	21.67	21.68	---	21.75	21.82	21.71	21.63	21.36	20.10	20.90
2	21.49	21.62	21.66	21.66	---	21.73	21.83	21.73	21.69	21.38	20.12	20.91
3	21.48	21.62	21.66	21.68	---	21.74	21.81	21.76	21.65	21.36	20.13	20.92
4	21.49	21.62	21.65	21.70	---	21.76	21.82	21.77	21.72	21.36	20.20	20.94
5	21.52	21.63	21.66	21.71	---	21.77	21.82	21.80	21.73	21.32	20.23	20.97
6	21.52	21.64	21.66	21.69	---	21.77	21.80	21.81	21.73	21.32	20.24	20.99
7	21.52	21.64	21.67	21.69	---	21.77	21.76	21.84	21.61	21.30	20.28	20.98
8	21.53	21.65	21.66	21.70	---	21.80	21.75	21.85	21.54	21.30	20.30	20.99
9	21.54	21.68	21.64	21.68	---	21.81	21.74	21.83	21.48	21.22	20.33	21.11
10	21.55	21.66	21.64	21.67	---	21.81	21.73	21.81	21.39	21.19	20.39	21.11
11	21.54	21.66	21.67	21.68	---	21.78	21.72	21.80	21.33	21.18	20.43	21.00
12	21.55	21.68	21.65	21.68	---	21.78	21.69	21.83	21.37	21.18	20.46	20.96
13	21.56	21.68	21.65	21.68	---	21.76	21.69	21.84	21.35	21.19	20.48	20.97
14	21.57	21.67	21.65	21.68	---	21.79	21.68	21.85	21.33	21.20	20.50	21.00
15	21.57	21.69	21.65	21.69	---	21.75	21.66	21.83	21.31	21.22	20.52	20.99
16	21.57	21.71	21.71	21.69	---	21.76	21.67	21.82	21.32	21.23	20.55	21.00
17	21.58	21.70	21.71	---	---	21.82	21.68	21.83	21.32	21.25	20.58	20.99
18	21.58	21.69	21.75	---	---	21.85	21.69	21.76	21.31	21.19	20.62	20.99
19	21.59	21.69	21.75	---	---	21.85	21.69	21.69	21.31	20.40	20.62	20.99
20	21.60	21.69	21.76	---	---	21.83	21.68	21.65	21.33	20.19	20.67	21.00
21	21.60	21.67	21.76	---	---	21.80	21.68	21.61	21.32	19.98	20.65	21.01
22	21.60	21.67	21.75	---	---	21.83	21.69	21.59	21.28	19.86	20.71	21.02
23	21.60	21.66	21.74	---	---	21.83	21.67	21.60	21.28	19.84	20.74	21.02
24	21.62	21.67	21.74	---	---	21.84	21.69	21.62	21.29	19.86	20.74	21.03
25	21.63	21.69	21.71	---	---	21.84	21.69	21.64	---	19.85	20.77	21.04
26	21.62	21.69	21.71	---	---	21.85	21.70	21.64	---	19.90	20.78	21.03
27	21.62	21.69	21.72	---	21.80	21.86	21.69	21.62	---	19.92	20.80	21.02
28	21.62	21.69	21.72	---	21.79	21.86	21.72	21.60	---	19.92	20.82	21.03
29	21.61	21.69	21.72	---	---	21.82	21.73	21.62	21.27	19.97	20.87	21.04
30	21.62	21.68	21.71	---	---	21.79	21.72	21.64	21.27	20.02	20.88	21.04
31	21.61	---	21.69	---	---	21.80	---	21.65	---	20.06	20.84	---
MAX	21.63	21.71	21.76	---	---	21.86	21.83	21.85	---	21.38	20.88	21.11



391408084264101. LOCAL NUMBER, AF-5P—CONTINUED

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.8	17.1	17.4	17.6	---	18.4	18.2	18.2	18.0	17.7	18.0	17.7
2	16.8	17.1	17.4	17.6	---	18.4	18.2	18.2	17.9	17.7	18.0	17.7
3	16.8	17.1	17.4	17.6	---	18.4	18.3	18.2	17.9	17.7	18.0	17.7
4	16.8	17.1	17.4	17.6	---	18.4	18.3	18.2	17.9	17.7	18.0	17.8
5	16.8	17.2	17.4	17.6	---	18.4	18.4	18.2	17.9	17.7	18.0	17.8
6	16.9	17.2	17.4	17.6	---	18.4	18.4	18.1	17.8	17.7	18.0	17.8
7	16.9	17.2	17.4	17.6	---	18.4	18.4	18.1	17.8	17.7	18.0	17.8
8	16.9	17.2	17.5	17.6	---	18.3	18.4	18.1	17.8	17.7	18.0	17.8
9	16.9	17.2	17.5	17.6	---	18.3	18.4	18.1	17.8	17.6	17.9	17.8
10	16.9	17.2	17.5	17.6	---	18.3	18.4	18.1	17.8	17.7	17.9	17.8
11	16.9	17.2	17.5	17.6	---	18.3	18.4	18.1	17.8	17.7	17.9	17.9
12	16.9	17.2	17.5	17.6	---	18.3	18.4	18.1	17.8	17.8	17.9	17.9
13	16.9	17.2	17.5	17.6	---	18.3	18.4	18.1	17.8	17.8	17.9	17.9
14	16.9	17.2	17.5	17.6	---	18.3	18.4	18.1	17.9	17.9	17.9	17.9
15	16.9	17.3	17.5	17.7	---	18.3	18.3	18.0	17.8	18.0	17.9	17.9
16	16.9	17.3	17.5	17.7	---	18.3	18.2	18.0	17.8	18.0	17.8	17.9
17	17.0	17.3	17.5	---	---	18.3	18.3	18.0	17.8	17.9	17.8	17.9
18	17.0	17.3	17.5	---	---	18.3	18.3	18.0	17.8	18.0	17.8	17.9
19	17.0	17.3	17.5	---	---	18.2	18.2	17.9	17.8	18.0	17.7	17.9
20	17.0	17.3	17.5	---	---	18.2	18.3	17.9	17.8	18.1	17.7	17.9
21	17.0	17.3	17.5	---	---	18.2	18.2	17.9	17.8	18.1	17.7	17.9
22	17.0	17.3	17.5	---	---	18.2	18.3	17.8	17.8	18.1	17.7	17.9
23	17.0	17.3	17.5	---	---	18.2	18.2	17.8	17.8	18.1	17.7	17.9
24	17.0	17.3	17.6	---	---	18.3	18.1	17.8	17.8	18.1	17.7	17.9
25	17.1	17.3	17.6	---	---	18.3	18.3	17.8	---	18.1	17.7	17.9
26	17.2	17.4	17.6	---	---	18.3	18.2	17.8	---	18.0	17.6	17.9
27	17.1	17.4	17.6	---	18.4	18.3	18.2	17.8	---	18.0	17.6	17.9
28	17.1	17.4	17.6	---	18.4	18.3	18.2	17.8	---	18.1	17.7	18.0
29	17.1	17.4	17.6	---	---	18.3	18.2	17.8	17.7	18.1	17.7	18.0
30	17.1	17.4	17.6	---	---	18.3	18.2	17.9	17.7	18.0	17.7	18.0
31	17.1	---	17.6	---	---	18.2	---	17.9	---	18.0	17.7	---
MAX	17.2	17.4	17.6	---	---	18.4	18.4	18.2	---	18.1	18.0	18.0

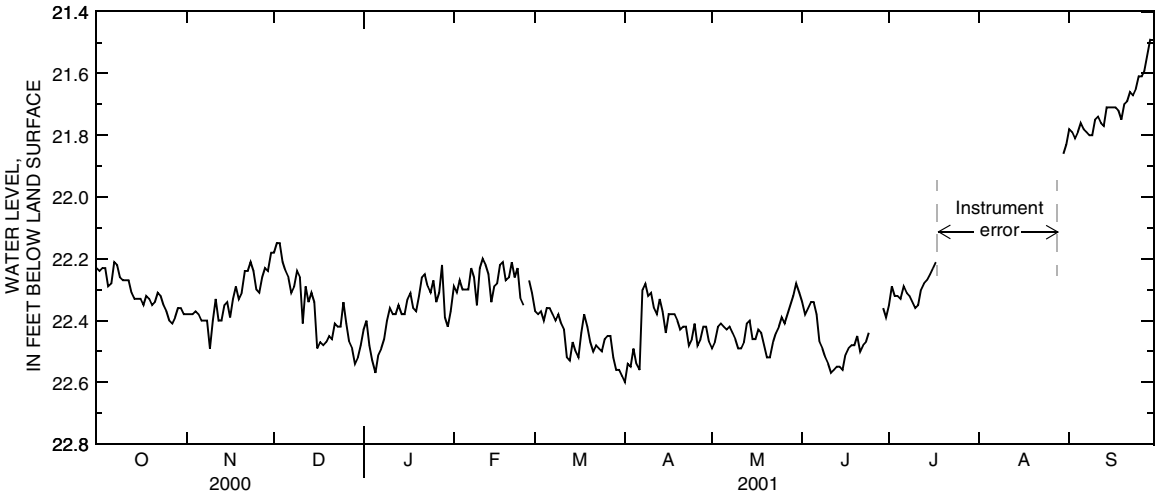


391408084264100. LOCAL NUMBER, AF-5S

LOCATION.—Latitude 39°14′08″, longitude 84°26′41″, Hamilton County, Hydrologic Unit 05090203.
AQUIFER.—Shallow part of glacial outwash. Geologic Unit 112OTSH.
WELL CHARACTERISTICS.—Drilled observation water well, depth 51.0 ft.
DATUM.—Altitude of land surface is 559.90 feet above National Geodetic Vertical Datum of 1929. Measuring point is top of inner casing, 2.09 ft above land-surface datum.
PERIOD OF RECORD.—Nov. 1997 to current year.
EXTREMES FOR PERIOD OF RECORD.—Maximum daily low, 23.50 ft below land-surface datum, Oct. 13, 1999; minimum daily low, 18.69 ft below land-surface datum, July 19, 1998.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

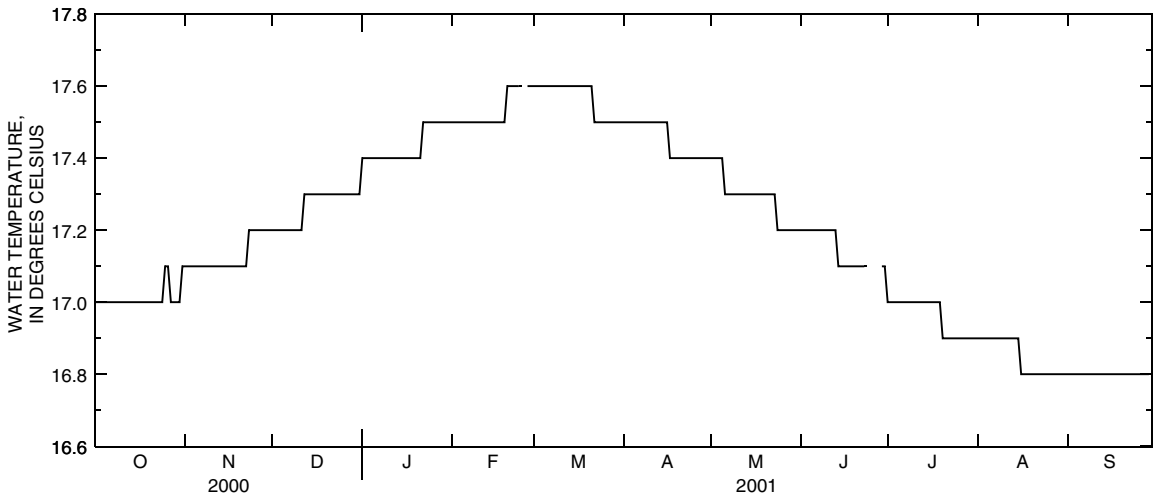
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.23	22.38	22.18	22.43	22.29	22.37	22.60	22.49	22.34	22.35	---	21.78
2	22.24	22.38	22.15	22.40	22.31	22.38	22.54	22.47	22.38	22.29	---	21.79
3	22.23	22.38	22.15	22.48	22.27	22.37	22.55	22.42	22.36	22.32	---	21.81
4	22.23	22.37	22.21	22.53	22.30	22.40	22.49	22.41	22.34	22.32	---	21.79
5	22.29	22.38	22.24	22.57	22.30	22.36	22.54	22.42	22.34	22.33	---	21.76
6	22.28	22.40	22.26	22.51	22.30	22.36	22.56	22.43	22.38	22.29	---	21.78
7	22.21	22.40	22.31	22.49	22.23	22.38	22.30	22.42	22.47	22.31	---	21.79
8	22.22	22.40	22.29	22.46	22.26	22.40	22.28	22.44	22.49	22.32	---	21.80
9	22.26	22.49	22.24	22.40	22.35	22.38	22.32	22.46	22.52	22.34	---	21.80
10	22.27	22.40	22.26	22.36	22.23	22.41	22.31	22.49	22.54	22.36	---	21.75
11	22.27	22.33	22.41	22.38	22.20	22.43	22.36	22.49	22.57	22.35	---	21.74
12	22.27	22.40	22.29	22.38	22.22	22.52	22.38	22.47	22.56	22.30	---	21.76
13	22.31	22.40	22.34	22.35	22.25	22.53	22.33	22.41	22.55	22.28	---	21.77
14	22.33	22.35	22.31	22.38	22.34	22.47	22.37	22.40	22.55	22.27	---	21.71
15	22.33	22.34	22.34	22.38	22.29	22.50	22.44	22.46	22.56	22.25	---	21.71
16	22.33	22.39	22.49	22.33	22.28	22.52	22.38	22.46	22.51	22.23	---	21.71
17	22.35	22.33	22.47	22.31	22.22	22.44	22.38	22.43	22.49	22.21	---	21.71
18	22.32	22.29	22.48	22.36	22.21	22.38	22.38	22.44	22.48	---	---	21.72
19	22.33	22.33	22.47	22.37	22.27	22.42	22.40	22.48	22.48	---	---	21.75
20	22.35	22.31	22.45	22.32	22.26	22.47	22.43	22.52	22.45	---	---	21.70
21	22.34	22.24	22.46	22.26	22.21	22.50	22.42	22.52	22.50	---	---	21.69
22	22.31	22.24	22.41	22.25	22.26	22.48	22.42	22.47	22.48	---	---	21.66
23	22.32	22.21	22.42	22.29	22.23	22.49	22.48	22.44	22.47	---	---	21.67
24	22.35	22.24	22.42	22.31	22.33	22.50	22.46	22.42	22.44	---	---	21.65
25	22.37	22.30	22.34	22.27	22.35	22.46	22.41	22.39	---	---	---	21.61
26	22.40	22.31	22.41	22.34	---	22.45	22.48	22.41	---	---	---	21.61
27	22.41	22.26	22.47	22.31	22.27	22.45	22.46	22.38	---	---	---	21.59
28	22.39	22.23	22.49	22.22	22.31	22.52	22.42	22.35	---	---	---	21.54
29	22.36	22.24	22.54	22.39	---	22.56	22.42	22.32	22.36	---	---	21.49
30	22.36	22.18	22.52	22.42	---	22.56	22.47	22.28	22.39	---	21.86	21.49
31	22.38	---	22.48	22.37	---	22.58	---	22.31	---	---	21.83	---
MAX	22.41	22.49	22.54	22.57	---	22.58	22.60	22.52	---	---	---	21.81



391408084264100. LOCAL NUMBER, AF-5S—CONTINUED

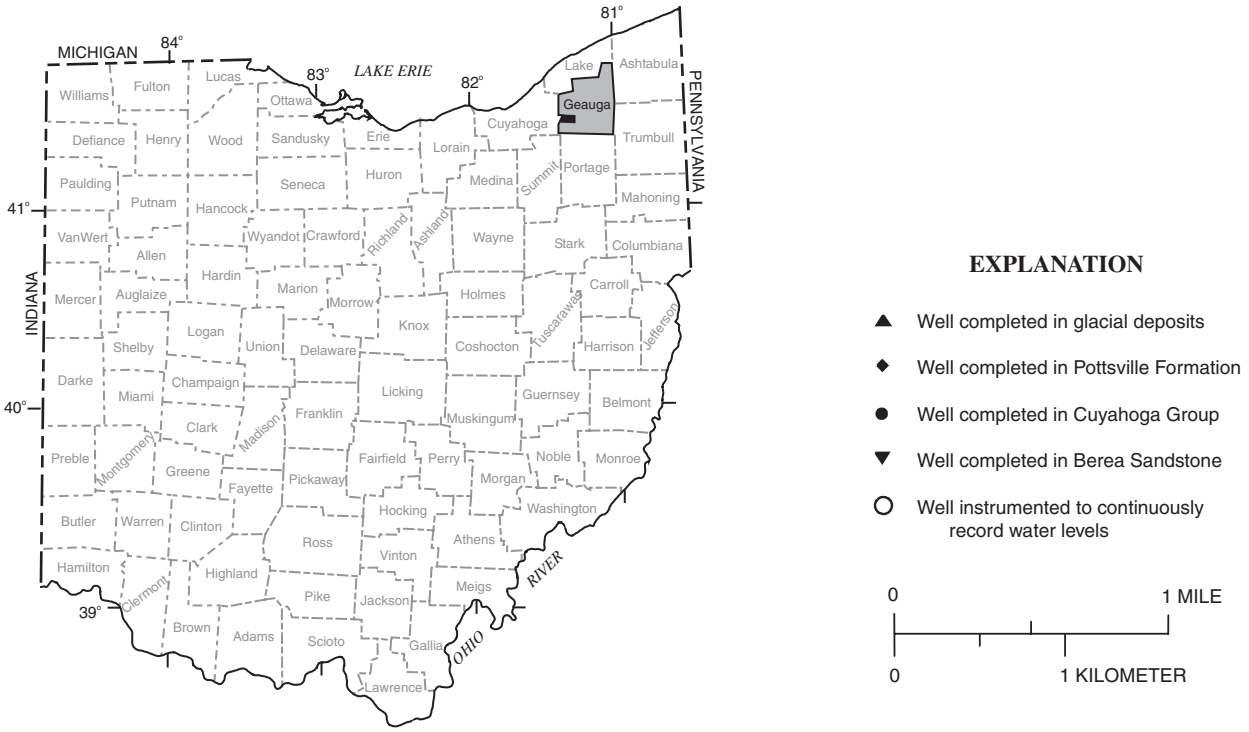
TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.0	17.1	17.2	17.4	17.5	17.6	17.5	17.4	17.2	17.0	16.9	16.8
2	17.0	17.1	17.2	17.4	17.5	17.6	17.5	17.4	17.2	17.0	16.9	16.8
3	17.0	17.1	17.2	17.4	17.5	17.6	17.5	17.4	17.2	17.0	16.9	16.8
4	17.0	17.1	17.2	17.4	17.5	17.6	17.5	17.4	17.2	17.0	16.9	16.8
5	17.0	17.1	17.2	17.4	17.5	17.6	17.5	17.4	17.2	17.0	16.9	16.8
6	17.0	17.1	17.2	17.4	17.5	17.6	17.5	17.3	17.2	17.0	16.9	16.8
7	17.0	17.1	17.2	17.4	17.5	17.6	17.5	17.3	17.2	17.0	16.9	16.8
8	17.0	17.1	17.2	17.4	17.5	17.6	17.5	17.3	17.2	17.0	16.9	16.8
9	17.0	17.1	17.2	17.4	17.5	17.6	17.5	17.3	17.2	17.0	16.9	16.8
10	17.0	17.1	17.2	17.4	17.5	17.6	17.5	17.3	17.2	17.0	16.9	16.8
11	17.0	17.1	17.2	17.4	17.5	17.6	17.5	17.3	17.2	17.0	16.9	16.8
12	17.0	17.1	17.3	17.4	17.5	17.6	17.5	17.3	17.2	17.0	16.9	16.8
13	17.0	17.1	17.3	17.4	17.5	17.6	17.5	17.3	17.2	17.0	16.9	16.8
14	17.0	17.1	17.3	17.4	17.5	17.6	17.5	17.3	17.1	17.0	16.9	16.8
15	17.0	17.1	17.3	17.4	17.5	17.6	17.5	17.3	17.1	17.0	16.9	16.8
16	17.0	17.1	17.3	17.4	17.5	17.6	17.5	17.3	17.1	17.0	16.8	16.8
17	17.0	17.1	17.3	17.4	17.5	17.6	17.4	17.3	17.1	17.0	16.8	16.8
18	17.0	17.1	17.3	17.4	17.5	17.6	17.4	17.3	17.1	17.0	16.8	16.8
19	17.0	17.1	17.3	17.4	17.5	17.6	17.4	17.3	17.1	17.0	16.8	16.8
20	17.0	17.1	17.3	17.4	17.6	17.6	17.4	17.3	17.1	16.9	16.8	16.8
21	17.0	17.1	17.3	17.4	17.6	17.6	17.4	17.3	17.1	16.9	16.8	16.8
22	17.0	17.1	17.3	17.5	17.6	17.5	17.4	17.3	17.1	16.9	16.8	16.8
23	17.0	17.2	17.3	17.5	17.6	17.5	17.4	17.3	17.1	16.9	16.8	16.8
24	17.0	17.2	17.3	17.5	17.6	17.5	17.4	17.2	17.1	16.9	16.8	16.8
25	17.1	17.2	17.3	17.5	17.6	17.5	17.4	17.2	---	16.9	16.8	16.8
26	17.1	17.2	17.3	17.5	---	17.5	17.4	17.2	---	16.9	16.8	16.8
27	17.0	17.2	17.3	17.5	17.6	17.5	17.4	17.2	---	16.9	16.8	16.8
28	17.0	17.2	17.3	17.5	17.6	17.5	17.4	17.2	---	16.9	16.8	16.8
29	17.0	17.2	17.3	17.5	---	17.5	17.4	17.2	17.1	16.9	16.8	16.8
30	17.0	17.2	17.3	17.5	---	17.5	17.4	17.2	17.1	16.9	16.8	16.8
31	17.1	---	17.3	17.5	---	17.5	---	17.2	---	16.9	16.8	---
MAX	17.1	17.2	17.3	17.5	---	17.6	17.5	17.4	---	17.0	16.9	16.8



Ground-Water Data for South Russell Village, Ohio

The following tables contain ground-water-level and ground-water-quality data collected as part of a cooperative study with the Village of South Russell, Ohio. Data-collection sites are shown below.

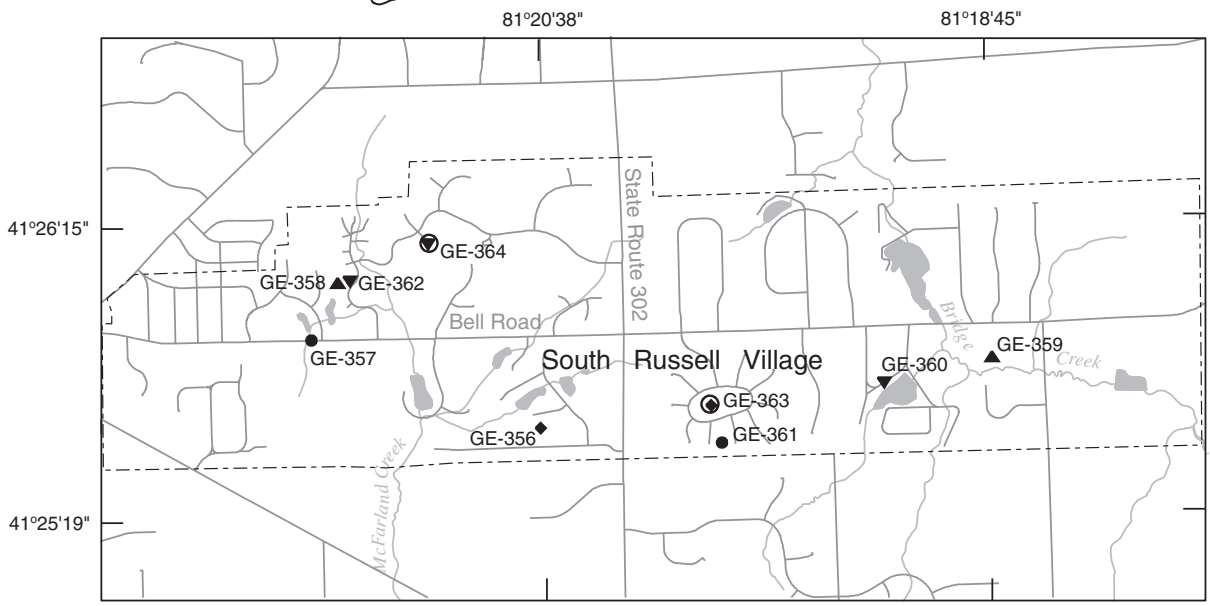


EXPLANATION

- ▲ 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

0 1 MILE

0 1 KILOMETER



PROJECT DATA
Ground-Water Data for South Russell Village, Ohio

LONG-TERM GROUND-WATER MONITORING NETWORK

Ground-water-level measurements from the 9 wells that compromise 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, 13.07 ft below land-surface datum, September 20, 2001.

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

DATE	WATER LEVEL
10/24/2000	13.53
01/05/2001	11.82
02/28/2001	11.60
05/01/2001	11.55
07/12/2001	12.66
09/20/2001	13.07

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 6.0 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, 12.74 ft below land-surface datum, May 8, 2001; lowest measured, 13.96 ft below land-surface datum, September 20, 2001.

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

DATE	WATER LEVEL
10/24/2000	13.55
01/05/2001	13.52
02/28/2001	13.68
05/08/2001	12.74
07/12/2001	13.20
09/20/2001	13.96

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 6.0 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, 174.29* ft below land-surface datum, July 12, 2001.

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

DATE	WATER LEVEL
02/28/2001	163.42
05/01/2001	170.10
07/12/2001	174.29*
09/20/2001	173.29*

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, 11.34 ft below land-surface datum, May 2, 2001; lowest measured, 12.15 ft below land-surface datum, September 20, 2001.

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

DATE	WATER LEVEL
10/24/2000	11.71
01/05/2001	11.55
02/28/2001	11.60
05/02/2001	11.34
07/12/2001	11.81
09/20/2001	12.15

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 6.0 in.; depth 290 ft.
INSTRUMENTATION.—Periodic measurement with steel or electric tape by USGS personnel.
DATUM.—levation 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, 151.58 ft below land-surface datum, August 29, 2000; lowest measured, 164.50* ft below land-surface datum, September 20, 2001.

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

DATE	WATER LEVEL
10/24/2000	154.65*
01/05/2001	155.37*
02/28/2001	155.98*
05/08/2001	153.62*
07/12/2001	154.46*
09/20/2001	164.50*

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 6.0 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, January 5, 2001; lowest measured, 68.60 ft below land-surface datum, September 20, 2001.

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

DATE	WATER LEVEL
10/24/2000	68.12
01/05/2001	67.55
02/28/2001	68.11
05/03/2001	68.13
07/12/2001	68.50
09/20/2001	68.60

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, February 28, 2001; lowest measured, 9.43 ft below land-surface datum, July 12, 2001.

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

DATE	WATER LEVEL
10/24/2000	8.05
01/05/2001	8.06
02/28/2001	7.68
05/08/2001	7.95
07/12/2001	9.43
09/20/2001	9.38

PROJECT DATA
Ground-Water Data for South Russell Village, Ohio

LONG-TERM GROUND-WATER MONITORING NETWORK—CONTINUED

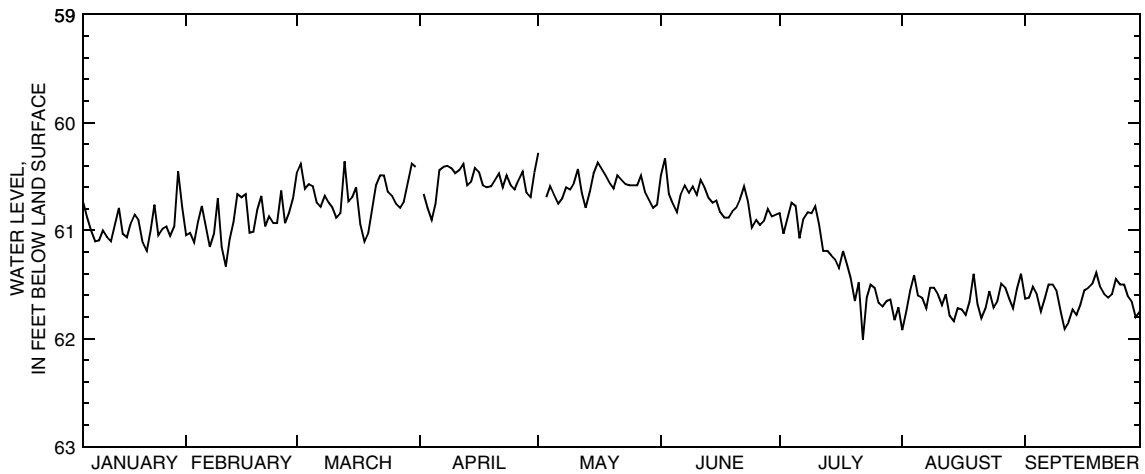
412541081194500. LOCAL NUMBER, GE-363

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, 62.01 ft below land-surface datum, July 22, 2001.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	61.04	60.46	---	60.28	60.49	60.84	61.92	61.63
2	---	---	---	---	61.02	60.38	60.66	---	60.33	61.03	61.74	61.62
3	---	---	---	---	61.11	60.61	60.79	60.69	60.66	60.88	61.55	61.52
4	---	---	---	---	60.92	60.57	60.90	60.59	60.75	60.74	61.41	61.59
5	---	---	---	---	60.77	60.59	60.75	60.67	60.83	60.77	61.60	61.75
6	---	---	---	60.74	60.96	60.74	60.44	60.75	60.66	61.07	61.62	61.63
7	---	---	---	60.88	61.15	60.78	60.41	60.70	60.58	60.89	61.72	61.50
8	---	---	---	61.00	61.03	60.68	60.40	60.60	60.65	60.83	61.53	61.50
9	---	---	---	61.10	60.70	60.74	60.42	60.62	60.59	60.84	61.53	61.56
10	---	---	---	61.09	61.15	60.79	60.47	60.56	60.67	60.77	61.59	61.75
11	---	---	---	61.00	61.33	60.88	60.44	60.43	60.53	60.94	61.69	61.91
12	---	---	---	61.06	61.08	60.84	60.38	60.65	60.60	61.19	61.59	61.85
13	---	---	---	61.10	60.92	60.36	60.58	60.79	60.70	61.19	61.79	61.73
14	---	---	---	60.94	60.66	60.73	60.55	60.64	60.74	61.23	61.84	61.78
15	---	---	---	60.79	60.69	60.69	60.42	60.47	60.72	61.27	61.72	61.69
16	---	---	---	61.03	60.66	60.60	60.46	60.37	60.83	61.35	61.73	61.55
17	---	---	---	61.06	61.02	60.94	60.58	60.43	60.88	61.19	61.78	61.53
18	---	---	---	60.93	61.01	61.10	60.60	60.49	60.88	61.31	61.66	61.49
19	---	---	---	60.85	60.81	61.02	60.59	60.56	60.82	61.44	61.40	61.39
20	---	---	---	60.90	60.68	60.81	60.53	60.61	60.79	61.65	61.68	61.52
21	---	---	---	61.11	60.96	60.58	60.47	60.49	60.71	61.48	61.81	61.59
22	---	---	---	61.19	60.87	60.49	60.60	60.53	60.59	62.01	61.72	61.62
23	---	---	---	61.00	60.93	60.49	60.49	60.57	60.73	61.62	61.56	61.59
24	---	---	---	60.76	60.93	60.64	60.58	60.58	60.97	61.50	61.71	61.45
25	---	---	---	61.04	60.63	60.68	60.62	60.58	60.90	61.53	61.65	61.50
26	---	---	---	60.98	60.93	60.75	60.53	60.58	60.95	61.67	61.49	61.50
27	---	---	---	60.96	60.84	60.79	60.45	60.49	60.91	61.70	61.53	61.61
28	---	---	---	61.05	60.70	60.73	60.65	60.65	60.80	61.65	61.63	61.66
29	---	---	---	60.96	---	60.56	60.69	60.72	60.87	61.64	61.72	61.80
30	---	---	---	60.45	---	60.38	60.46	60.79	60.85	61.83	61.54	61.75
31	---	---	---	60.79	---	60.41	---	60.76	---	61.71	61.40	---
MAX	---	---	---	61.19	61.33	61.10	60.90	60.79	60.97	62.01	61.92	61.91

WTR YR 2001 LOW 62.01



LONG-TERM GROUND-WATER MONITORING NETWORK—CONTINUED

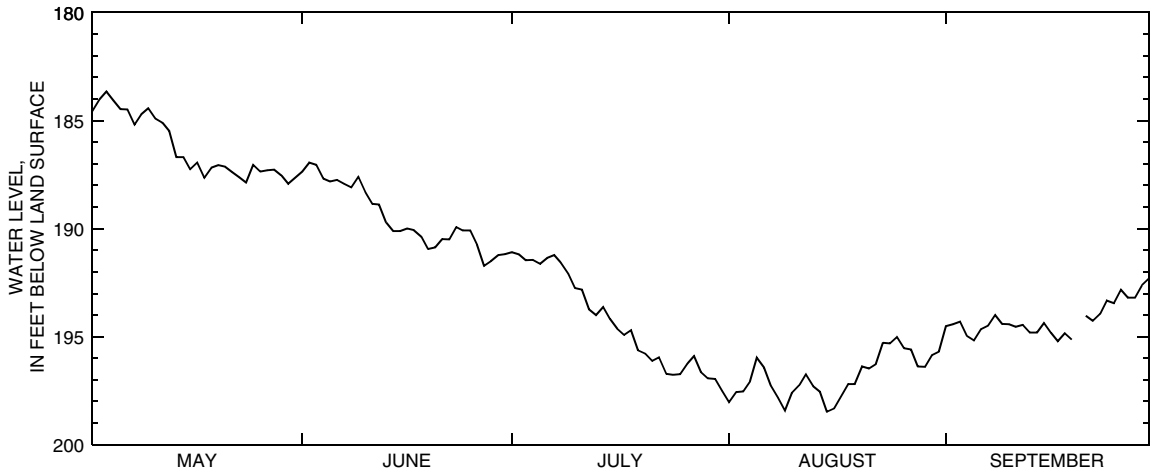
412611081210600. LOCAL NUMBER, GE-364

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, August 15, 2001.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	187.35	191.08	198.02	194.51
2	---	---	---	---	---	---	---	184.56	186.94	191.19	197.56	194.43
3	---	---	---	---	---	---	---	184.03	187.04	191.46	197.53	194.31
4	---	---	---	---	---	---	---	183.65	187.69	191.45	197.07	194.96
5	---	---	---	---	---	---	---	184.07	187.81	191.62	195.98	195.16
6	---	---	---	---	---	---	---	184.46	187.74	191.35	196.44	194.64
7	---	---	---	---	---	---	---	184.48	187.92	191.23	197.26	194.48
8	---	---	---	---	---	---	---	185.17	188.09	191.57	197.82	193.99
9	---	---	---	---	---	---	---	184.70	187.59	192.09	198.43	194.41
10	---	---	---	---	---	---	---	184.43	188.30	192.75	197.60	194.42
11	---	---	---	---	---	---	---	184.90	188.85	192.82	197.25	194.54
12	---	---	---	---	---	---	---	185.09	188.89	193.73	196.73	194.45
13	---	---	---	---	---	---	---	185.48	189.71	194.00	197.29	194.81
14	---	---	---	---	---	---	---	186.68	190.11	193.63	197.54	194.81
15	---	---	---	---	---	---	---	186.68	190.11	194.17	198.46	194.36
16	---	---	---	---	---	---	---	187.25	190.00	194.63	198.32	194.82
17	---	---	---	---	---	---	---	186.94	190.06	194.91	197.76	195.21
18	---	---	---	---	---	---	---	187.64	190.36	194.68	197.19	194.84
19	---	---	---	---	---	---	---	187.17	190.94	195.63	197.19	195.13
20	---	---	---	---	---	---	---	187.07	190.87	195.77	196.38	---
21	---	---	---	---	---	---	---	187.13	190.49	196.11	196.47	194.02
22	---	---	---	---	---	---	---	187.38	190.50	195.95	196.27	194.27
23	---	---	---	---	---	---	---	187.61	189.92	196.72	195.28	193.95
24	---	---	---	---	---	---	---	187.87	190.09	196.76	195.31	193.33
25	---	---	---	---	---	---	---	187.05	190.09	196.74	195.02	193.45
26	---	---	---	---	---	---	---	187.36	190.73	196.26	195.54	192.82
27	---	---	---	---	---	---	---	187.30	191.71	195.88	195.59	193.20
28	---	---	---	---	---	---	---	187.27	191.49	196.65	196.37	193.20
29	---	---	---	---	---	---	---	187.52	191.22	196.93	196.39	192.62
30	---	---	---	---	---	---	---	187.92	191.18	196.95	195.85	192.30
31	---	---	---	---	---	---	---	187.64	---	197.49	195.68	---
MAX	---	---	---	---	---	---	---	187.92	191.71	197.49	198.46	195.21

WTR YR 2001 LOW 198.46



PROJECT DATA
Ground-Water Data for South Russell Village, Ohio

WATER-QUALITY DATA

The table on the next page contains chemical analyses of 5 ground-water samples collected between May 1 and May 3, 2001, from aquifers in the glacial deposits, the Pottsville Formation, the Cuyahoga Group, and the Berea Sandstone. All samples were collected from domestic or monitoring wells. Objectives of the study were to assess obtain background water quality data. Descriptions of the 5 sample sites are specified below. Well construction data were obtained from drillers' logs or from measurements made by U.S. Geological Survey personnel, unless otherwise indicated. Open interval refers to the interval of the well that is not cased; this interval is constructed as open hole or open end, unless otherwise noted.

412536081203800. LOCAL NUMBER, GE-356

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00061), USGS National Water Information System parameter code; ft, feet; NGVD, National Gedetic Vertical Datum of 1929; mm of Hg, millimeters of mercury; mg/L, milligrams per liter; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; col/100 mL, colonies per 100 milliliters; µg/L, micrograms per liter; <, concentration or value reported is less than that indicated; E, estimated value]

DATE	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (00061)	DEPTH OF WELL, TOTAL (FEET) (72008)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00301)	PH WATER WHOLE LAB (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM) (90095)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00020)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
MAY 01...	11.55	80.00	1155	733	.1	6.4	6.8	436	414	12.8	47.0

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BROMIDE DIS-SOLVED (MG/L AS BR) (71870)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SULFIDE TOTAL (MG/L AS S) (00745)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)
MAY 01...	12.5	1.64	17.5	104	.06	35.4	<.2	9.9	49.8	.006	255

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00625)	E COLI, MI MF, WATER (COL/ 100 ML) (31633)	TOTAL COLI-FORM, MI MF, WATER (COL/ 100 ML) (90900)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	IRON, FERRIC PLUS FERROUS DIS-SOLVED (UG/L) (01048)	IRON FERROUS WATER FLTRD (UG/L) (01047)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
MAY 01...	E.004	<1	<1	62.6	1010	1500	1040	141	90.0	<.041	E.046

WATER-QUALITY DATA—CONTINUED

412604081212600. LOCAL NUMBER, GE-358

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00061), USGS National Water Information System parameter code; ft, feet; NGVD, National Gedetic Vertical Datum of 1929; mm of Hg, millimeters of mercury; mg/L, milligrams per liter; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; col/100 mL, colonies per 100 milliliters; µg/L, micrograms per liter; <, concentration or value reported is less than that indicated; E, estimated value]

DATE	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (00061)	DEPTH OF WELL, TOTAL (FEET) (72008)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00301)	PH WATER WHOLE LAB (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM) (90095)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00020)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
MAY											
01...	170.10	258.00	1105	733	.2	9.0	8.9	849	843	12.1	1.35

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BROMIDE DIS-SOLVED (MG/L AS BR) (71870)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SULFIDE TOTAL (MG/L AS S) (00745)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)
MAY											
01...	.365	.91	187	319	.42	73.3	.3	7.4	.11	.03	477

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00625)	E COLI, MI MF, WATER (COL/ 100 ML) (31633)	TOTAL COLI-FORM, MI MF, WATER (COL/ 100 ML) (90900)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	IRON, FERRIC PLUS FERROUS DIS-SOLVED (UG/L) (01048)	IRON FERROUS WATER FLTRD (UG/L) (01047)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
MAY											
01...	<.006	<1	<1	9.2	6.08	30	0	E2.7	27.8	.376	<.047

PROJECT DATA
Ground-Water Data for South Russell Village, Ohio

WATER-QUALITY DATA—CONTINUED

412548081184300. LOCAL NUMBER, GE-359

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00061), USGS National Water Information System parameter code; ft, feet; NGVD, National Gedetic Vertical Datum of 1929; mm of Hg, millimeters of mercury; mg/L, milligrams per liter; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; col/100 mL, colonies per 100 milliliters; µg/L, micrograms per liter; <, concentration or value reported is less than that indicated; E, estimated value]

DATE	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (00061)	DEPTH OF WELL, TOTAL (FEET) (72008)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00301)	PH WATER WHOLE LAB (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM) (90095)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00020)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
MAY 02...	11.34	90.00	1153	732	.1	7.2	7.6	550	525	11.6	79.4

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BROMIDE DIS-SOLVED (MG/L AS BR) (71870)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SULFIDE TOTAL (MG/L AS S) (00745)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)
MAY 02...	20.3	1.16	5.4	231	.06	5.8	.2	14.3	44.0	.1	335

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00625)	E COLI, MI MF, WATER (COL/ 100 ML) (31633)	TOTAL COLI-FORM, MI MF, WATER (COL/ 100 ML) (90900)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	IRON, FERRIC PLUS FERROUS DIS-SOLVED (UG/L) (01048)	IRON FERROUS WATER FLTRD (UG/L) (01047)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
MAY 02...	E.004	<1	E3	91.8	1470	1600	1570	98.0	133	E.021	<.047

Ground-Water Data for South Russell Village, Ohio

WATER-QUALITY DATA—CONTINUED

412533081195100. LOCAL NUMBER, GE-361

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[ft, feet; NGVD, National Gedetic Vertical Datum of 1929; mm of Hg, millimeters of mercury; mg/L, milligrams per liter; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; col/100 mL, colonies per 100 milliliters; µg/L, micrograms per liter; <, concentration or value reported is less than that indicated; E, estimated value]

DATE	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (00061)	DEPTH OF WELL, TOTAL (FEET) (72008)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00301)	PH WATER WHOLE LAB (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM) (90095)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00020)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
MAY											
03...	68.13	120.00	1240	735	.2	6.4	6.5	843	834	12.3	94.0

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BROMIDE DIS-SOLVED (MG/L AS BR) (71870)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SULFIDE TOTAL (MG/L AS S) (00745)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)
MAY											
03...	25.2	2.20	33.1	207	.10	67.1	.2	11.6	124	.007	524

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00625)	E COLI, MI MF, WATER (COL/ 100 ML) (31633)	TOTAL COLI-FORM, MI MF, WATER (COL/ 100 ML) (90900)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	IRON, FERRIC PLUS FERROUS DIS-SOLVED (UG/L) (01048)	IRON FERROUS WATER FLTRD (UG/L) (01047)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
MAY											
03...	E.003	<1	<1	31.1	11300	15000	11000	426	144	.054	<.047

PROJECT DATA
Ground-Water Data for South Russell Village, Ohio

WATER-QUALITY DATA—CONTINUED

412541081194500. LOCAL NUMBER, GE-363

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(01065), USGS National Water Information System parameter code; ft, feet; NGVD, National Gedetic Vertical Datum of 1929; mm of Hg, millimeters of mercury; mg/L, milligrams per liter; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; col/100 mL, colonies per 100 milliliters; µg/L, micrograms per liter; <, concentration or value reported is less than that indicated; E, estimated value]

DATE	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (00061)	DEPTH OF WELL, TOTAL (FEET) (72008)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00301)	PH WATER WHOLE LAB (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM) (90095)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00020)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
MAY 02...	60.27	93.70	1135	732	7.1	7.0	7.4	311	292	12.7	42.5

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BROMIDE DIS-SOLVED (MG/L AS BR) (71870)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SULFIDE TOTAL (MG/L AS S) (00745)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)
MAY 02...	10.9	.98	2.7	119	.02	3.9	E.1	8.8	22.9	.012	185

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00625)	E COLI, MI MF, WATER (COL/ 100 ML) (31633)	TOTAL COLI-FORM, MI MF, WATER (COL/ 100 ML) (90900)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	IRON, FERRIC PLUS FERROUS DIS-SOLVED (UG/L) (01048)	IRON FERROUS WATER FLTRD (UG/L) (01047)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
MAY 02...	E.003	<1	22	33.5	<10	20	10.0	<3.2	72.8	<.041	1.06

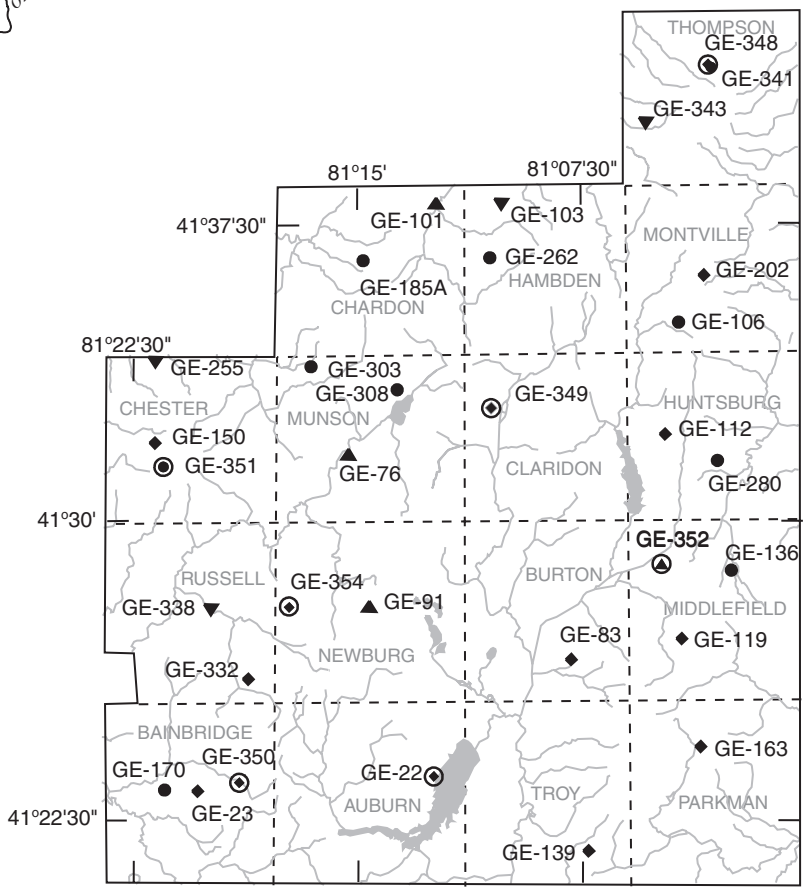
Ground-Water Data for Geauga County, Ohio

Ground-water-level data was collected as part of a USGS cooperative study with the Geauga County Planning Commission and the Board of County Commissioners. Measurements from 32 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



PROJECT DATA
Ground-Water Data for Geauga County, Ohio

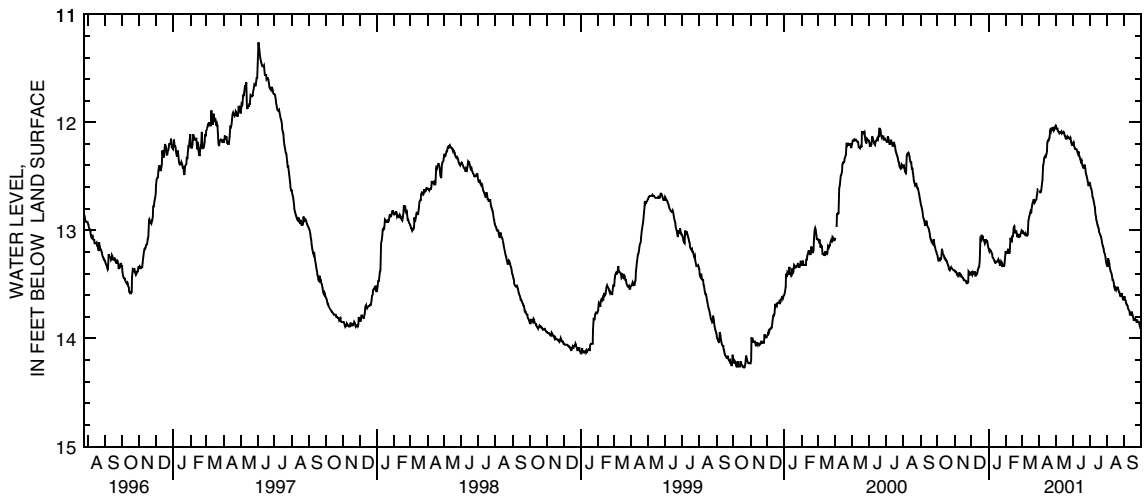
412331081123000. LOCAL NUMBER, GE-22

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 located in pit, 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 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.23	13.38	13.38	13.17	13.21	13.00	---	12.03	12.19	12.56	13.33	13.61
2	13.25	13.38	13.40	13.19	13.21	13.01	12.63	12.05	12.18	12.59	13.33	13.64
3	13.28	13.38	13.41	13.17	13.21	13.03	12.65	12.06	12.22	12.61	13.26	13.65
4	13.28	13.39	13.39	13.19	13.18	13.02	12.65	12.06	12.24	12.62	13.28	13.67
5	13.28	13.41	13.40	13.19	13.17	13.03	12.63	12.08	12.25	12.65	13.31	13.69
6	13.25	13.42	13.40	13.21	13.21	13.04	12.58	12.09	12.25	12.69	13.34	13.69
7	13.27	13.41	13.38	13.22	13.21	13.04	12.53	12.10	12.25	12.70	13.37	13.70
8	13.25	13.42	13.42	13.25	13.19	13.03	12.40	12.09	12.26	12.73	13.39	13.73
9	13.17	13.39	13.42	13.26	13.07	13.05	12.39	12.09	12.28	12.76	13.40	13.74
10	13.20	13.41	13.40	13.27	13.09	13.05	12.34	12.09	12.29	12.79	13.44	13.75
11	13.22	13.42	13.40	13.28	13.10	13.05	12.32	12.10	12.27	12.84	13.46	13.78
12	13.23	13.41	13.37	13.30	13.05	13.04	12.31	12.09	12.30	12.87	13.46	13.78
13	13.24	13.42	13.36	13.30	13.06	12.91	12.32	12.10	12.32	12.90	13.49	13.78
14	13.26	13.43	13.34	13.29	13.02	12.88	12.30	12.10	12.34	12.92	13.52	13.75
15	13.26	13.44	13.34	13.29	12.97	12.86	12.27	12.09	12.36	12.95	13.54	13.77
16	13.28	13.44	13.28	13.29	12.96	12.84	12.19	12.10	12.35	12.97	13.53	13.79
17	13.28	13.46	13.08	13.29	13.02	12.82	12.17	12.12	12.38	12.99	13.55	13.81
18	13.29	13.46	13.09	13.27	13.02	12.83	12.17	12.13	12.40	13.02	13.54	13.83
19	13.31	13.46	13.04	13.29	13.00	12.80	12.15	12.15	12.42	13.03	13.53	13.83
20	13.32	13.47	13.07	13.29	13.02	12.76	12.14	12.15	12.42	13.05	13.53	13.82
21	13.34	13.47	13.05	13.32	13.06	12.74	12.08	12.15	12.39	13.06	13.55	13.83
22	13.36	13.49	13.09	13.32	13.03	12.72	12.09	12.13	12.40	13.09	13.57	13.83
23	13.37	13.49	13.09	13.29	13.06	12.71	12.05	12.14	12.43	13.11	13.57	13.85
24	13.35	13.48	13.10	13.30	13.06	12.74	12.07	12.14	12.46	13.14	13.60	13.85
25	13.34	13.48	13.12	13.34	13.04	12.73	12.07	12.15	12.49	13.15	13.61	13.84
26	13.35	13.38	13.10	13.32	13.06	12.72	12.05	12.15	12.51	13.17	13.61	13.85
27	13.35	13.39	13.08	13.33	13.03	12.71	12.05	12.14	12.54	13.21	13.58	13.85
28	13.36	13.41	13.11	13.33	13.02	12.69	12.07	12.17	12.57	13.22	13.61	13.87
29	13.37	13.41	13.09	13.32	---	12.65	12.06	12.19	12.59	13.25	13.63	13.90
30	13.37	13.40	13.13	13.26	---	12.62	12.04	12.21	12.56	13.28	13.64	13.91
31	13.37	---	13.16	13.19	---	12.62	---	12.21	---	13.31	13.64	---
MEAN	13.29	13.43	13.24	13.27	13.08	12.86	12.27	12.12	12.36	12.94	13.49	13.78
MAX	13.37	13.49	13.42	13.34	13.21	13.05	12.65	12.21	12.59	13.31	13.64	13.91
MIN	13.17	13.38	13.04	13.17	12.96	12.62	12.04	12.03	12.18	12.56	13.26	13.61

CAL YR 2000 MEAN 12.85 HIGH 12.06 LOW 13.59
WTR YR 2001 MEAN 13.01 HIGH 12.03 LOW 13.91



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, 20.02 ft below land-surface datum, Sept. 18, 2001.

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

DATE	WATER LEVEL
10/23/00	19.83
01/03/01	19.89
02/28/01	18.49
05/02/01	18.80
07/10/01	18.65
09/18/01	20.02

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 6.0 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
10/24/00	24.60
01/04/01	24.97
05/09/01	24.85
07/11/01	25.29
09/19/01	25.27

412627081075400. LOCAL NUMBER, GE-83

LOCATION.—Latitude 41°26′27″, longitude 81°07′54″, Geauga County, 15776 Jug Street, Burton Township. Owner: privately owned.
AQUIFER.—Pottsville Formation (sandstone) of Pennsylvanian age.
WELL CHARACTERISTICS.—Domestic water-supply well; diameter 6.0 in., depth 70 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, 1.00 ft above land-surface datum.
PERIOD OF RECORD.—June 14, 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.—Highest water level measured, 27.59 ft below land-surface datum, Aug. 14, 1985; lowest measured, 36.99 ft below land-surface datum, Oct. 24, 2000.

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

DATE	WATER LEVEL
10/24/00	36.99
01/03/01	35.58
02/28/01	35.60
05/08/01	35.02
07/10/01	34.87
09/18/01	35.56

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, 46.79* ft below land-surface datum, Feb. 28, 2000.

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

DATE	WATER LEVEL
10/24/00	46.39*
01/03/01	46.29
02/28/01	46.26
05/08/01	46.04
07/10/01	45.74
09/18/01	45.85

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, 25.09 ft below land-surface datum, Oct. 20 and Dec. 15, 1998.

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

DATE	WATER LEVEL
10/24/00	24.63
01/05/01	23.45
05/09/01	23.34
07/11/01	24.49
09/19/01	25.00

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, 92.27 ft below land-surface datum, May 9, 2001.

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

DATE	WATER LEVEL
10/24/00	92.22
01/05/01	91.33
05/09/01	92.27
07/11/01	91.98*
09/19/01	91.99

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
07/10/01	35.90
09/19/01	36.08

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, 49.47 ft below land-surface datum, May 2, 2000.

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

DATE	WATER LEVEL
10/23/00	49.35
01/04/01	49.29
05/08/01	49.37
07/11/01	49.26
09/19/01	49.18

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, 15.31 ft below land-surface datum, Mar. 28, 1996.

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

DATE	WATER LEVEL
10/23/00	14.85
01/03/01	14.76
02/28/01	14.57
05/08/01	14.32
07/10/01	14.30
09/18/01	15.03

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
10/23/00	18.56*
01/03/01	16.21
05/08/01	15.43
07/10/01	16.45*
09/18/01	17.94

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
10/23/00	35.32
01/03/01	34.62
02/28/01	34.01
05/02/01	33.75*
07/10/01	35.66
09/18/01	38.09

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,
IN FEET BELOW LAND-SURFACE DATUM
INSTANTANEOUS OBSERVATION

DATE	WATER LEVEL
10/23/00	29.88
01/04/01	30.47
05/09/01	29.72
07/11/01	30.20
09/19/01	30.75

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, 17.02 ft below land-surface datum, Aug. 23, 1999.

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

DATE	WATER LEVEL
10/23/00	15.75
01/03/01	15.23
02/28/01	14.79
05/02/01	14.57
07/10/01	15.15
09/18/01	16.50

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, 50.00 ft below land-surface datum, Aug. 18, 1986.

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

DATE	WATER LEVEL
10/23/00	46.89
01/03/01	45.41
02/28/01	46.53
05/02/01	45.85
07/10/01	47.01
09/18/01	48.41

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
10/24/00	35.75
01/05/01	34.99
05/09/01	34.41
07/11/01	36.04*
09/19/01	35.92

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
10/23/00	30.55
01/04/01	30.29
05/09/01	30.15
07/11/01	30.25
09/19/01	30.61

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, 54.24 ft below land-surface datum, July 17, 2000.

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

DATE	WATER LEVEL
01/04/01	53.36
05/09/01	52.63
07/11/01	53.33
09/20/01	53.43

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, 41.71* ft below land-surface datum, Sept. 19, 2001.

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

DATE	WATER LEVEL
10/24/00	38.60
01/05/01	40.54
05/09/01	39.89*
07/11/01	37.97
09/19/01	41.71*

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
10/23/00	34.50
01/04/01	34.12
05/08/01	33.24
07/11/01	34.24
09/19/01	35.40*

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, 62.89 ft below land-surface datum, Oct. 27, 1999.

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

DATE	WATER LEVEL
10/24/00	62.49
01/04/01	62.83
05/09/01	62.42
07/11/01	62.69
09/19/01	62.76

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, 27.22 ft below land-surface datum, Sept. 19, 2001.

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

DATE	WATER LEVEL
10/24/00	25.12
01/04/01	25.60
05/09/01	25.05
07/11/01	25.29
09/19/01	27.22

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, 35.83 ft below land-surface datum, Sept. 18, 2001.

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

DATE	WATER LEVEL
10/24/00	35.66
01/03/01	35.46
02/28/01	35.47
05/08/01	35.29
07/11/01	35.48
09/18/01	35.83

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
10/24/00	59.19
01/03/01	62.12*
05/08/01	61.00
07/10/01	60.64
09/18/01	61.20

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
10/24/00	7.51
01/04/01	6.32
05/03/01	5.49
07/11/01	6.71
09/19/01	8.42

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
10/24/00	70.91
01/04/01	70.68
05/03/01	70.16
07/11/01	70.87
09/19/01	72.01

PROJECT DATA
Ground-Water Data for Geauga County, Ohio

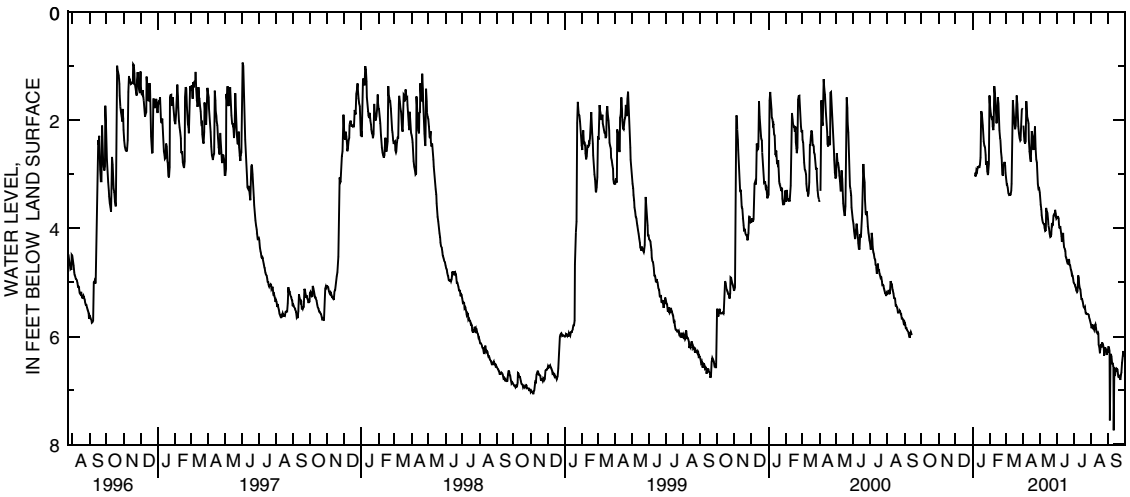
414125081031500. LOCAL NUMBER, GE-348

LOCATION.—Latitude 41°41′25″, longitude 81°03′15″, Geauga County, 66506 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 6.0 in., depth 53 ft.
INSTRUMENTATION.—Pressure transducer and CR10 data logger (records hourly) with SM192 storage module.
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.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	1.67	2.97	---	3.33	3.80	5.01	5.78	6.20
2	---	---	---	---	1.82	3.07	2.10	3.48	3.79	5.03	5.85	6.20
3	---	---	---	---	1.91	3.19	2.30	3.56	3.79	5.04	5.81	6.27
4	---	---	---	---	1.97	3.19	2.38	3.66	3.82	5.08	5.78	7.56
5	---	---	---	2.97	1.96	3.25	2.43	3.75	3.93	5.11	5.87	6.40
6	---	---	---	3.04	2.11	3.35	2.39	3.84	4.00	5.16	5.85	6.32
7	---	---	---	3.00	2.18	3.38	1.65	3.90	3.96	5.18	5.88	6.37
8	---	---	---	2.93	2.10	3.37	1.86	3.92	4.05	5.16	5.81	6.50
9	---	---	---	2.95	1.37	3.38	1.95	3.92	4.15	4.87	5.78	6.50
10	---	---	---	2.87	1.51	3.37	1.99	3.99	4.25	4.92	5.85	6.56
11	---	---	---	2.87	1.77	3.30	2.06	4.05	4.19	5.03	5.92	7.74
12	---	---	---	2.85	1.97	3.18	2.37	4.04	4.08	5.11	5.94	6.58
13	---	---	---	2.88	2.06	2.61	2.57	3.62	4.22	5.14	5.92	6.73
14	---	---	---	2.83	1.90	1.63	2.70	3.69	4.36	5.19	5.95	6.62
15	---	---	---	2.69	1.57	1.79	2.77	3.72	4.38	5.31	6.15	6.64
16	---	---	---	1.83	1.69	1.88	2.54	3.84	4.42	5.31	6.20	6.60
17	---	---	---	1.87	2.03	2.06	2.20	3.94	4.53	5.35	6.31	6.61
18	---	---	---	1.93	2.19	2.16	2.29	4.00	4.55	5.38	6.24	6.62
19	---	---	---	2.09	2.33	2.09	2.52	4.10	4.61	5.46	6.17	6.73
20	---	---	---	2.21	2.36	1.72	2.55	4.16	4.65	5.48	6.18	6.77
21	---	---	---	2.39	2.58	1.54	2.37	4.15	4.66	5.45	6.11	6.71
22	---	---	---	2.47	2.70	1.70	2.24	4.10	4.57	5.55	6.17	6.79
23	---	---	---	2.50	3.00	1.87	2.12	3.90	4.60	5.58	6.16	6.79
24	---	---	---	2.64	3.03	2.11	2.52	3.95	4.68	5.58	6.22	6.70
25	---	---	---	2.82	2.83	2.24	2.72	3.93	4.69	5.59	6.36	6.67
26	---	---	---	2.76	2.82	2.33	2.78	3.75	4.76	5.59	6.22	6.49
27	---	---	---	2.94	2.77	2.37	3.02	3.73	4.80	5.59	6.22	6.37
28	---	---	---	3.01	2.84	2.36	3.18	3.75	4.89	5.60	6.24	6.27
29	---	---	---	2.96	---	2.06	3.27	3.66	4.87	5.67	6.34	6.32
30	---	---	---	2.81	---	1.80	3.26	3.73	4.92	5.68	6.31	6.38
31	---	---	---	1.54	---	1.77	---	3.82	---	5.73	6.30	---
MEAN	---	---	---	2.62	2.18	2.49	2.45	3.84	4.37	5.32	6.06	6.60
MAX	---	---	---	3.04	3.03	3.38	3.27	4.16	4.92	5.73	6.36	7.74
MIN	---	---	---	1.54	1.37	1.54	1.65	3.33	3.79	4.87	5.78	6.20

CAL YR 2000 MEAN 3.57 HIGH 1.24 LOW 6.03
WTR YR 2001 MEAN 4.03 HIGH 1.37 LOW 7.74



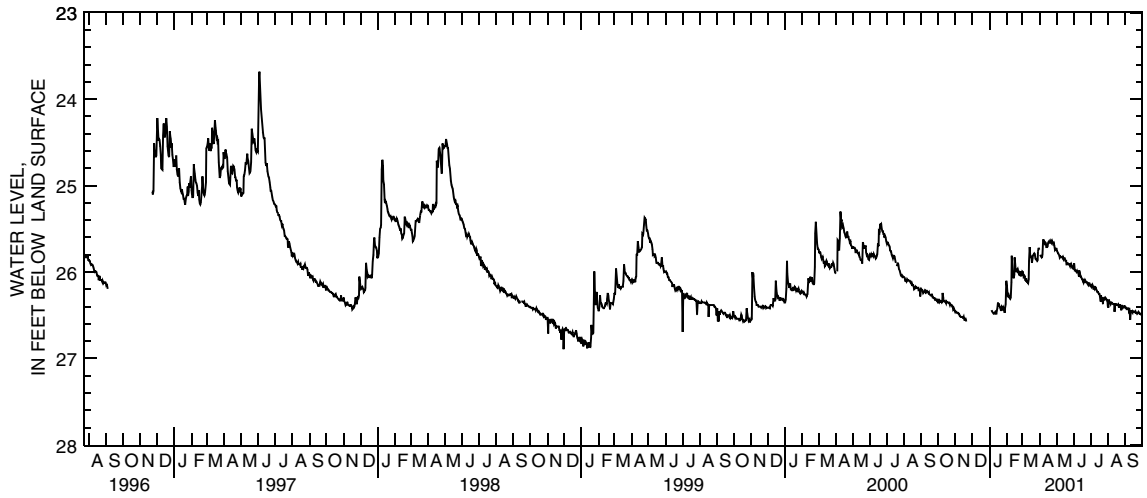
413247081103300. LOCAL NUMBER, GE-349

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 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26.36	26.45	---	---	26.16	25.99	---	25.73	25.91	26.16	26.39	26.41
2	26.32	26.46	---	---	26.26	26.00	25.80	25.75	25.90	26.17	26.41	26.41
3	26.34	26.47	---	---	26.28	26.05	25.82	25.77	25.98	26.15	26.32	26.41
4	26.33	26.47	---	---	26.28	26.04	25.83	25.78	25.98	26.14	26.34	26.43
5	26.34	26.47	---	26.44	26.27	26.05	25.82	25.80	25.99	26.16	26.35	26.43
6	26.34	26.48	---	26.46	26.30	26.09	25.79	25.81	25.98	26.19	26.37	26.43
7	26.35	26.48	---	26.47	26.31	26.10	25.63	25.83	26.00	26.19	26.35	26.41
8	26.34	26.50	---	26.48	26.29	26.07	25.63	25.82	25.99	26.16	26.35	26.45
9	26.24	26.51	---	26.48	26.12	26.11	25.65	25.83	26.01	26.19	26.36	26.44
10	26.29	26.52	---	26.47	25.81	26.12	25.67	25.83	26.05	26.18	26.37	26.55
11	26.33	26.52	---	26.46	25.98	26.13	25.66	25.83	25.98	26.20	26.37	26.45
12	26.34	26.52	---	26.48	26.02	26.08	25.68	25.82	26.01	26.22	26.37	26.45
13	26.34	26.52	---	26.48	26.07	25.87	25.71	25.85	26.05	26.23	26.46	26.46
14	26.34	26.53	---	26.45	26.03	25.71	25.71	25.86	26.05	26.23	26.38	26.47
15	26.36	26.53	---	26.42	25.83	25.82	25.70	25.84	26.07	26.24	26.37	26.45
16	26.34	26.52	---	26.35	25.91	25.82	25.65	25.84	26.08	26.25	26.37	26.46
17	26.35	26.55	---	26.37	25.97	25.84	25.64	25.87	26.10	26.25	26.38	26.46
18	26.35	26.55	---	26.37	26.00	25.89	25.66	25.87	26.12	26.29	26.38	26.46
19	26.35	26.54	---	26.40	25.97	25.84	25.66	25.91	26.10	26.34	26.37	26.45
20	26.35	26.57	---	26.41	25.96	25.81	25.66	25.91	26.11	26.27	26.38	26.47
21	26.36	---	---	26.44	26.01	25.79	25.64	25.90	26.09	26.32	26.41	26.47
22	26.38	---	---	26.44	25.98	25.78	25.66	25.90	26.10	26.29	26.38	26.48
23	26.37	---	---	26.40	26.03	25.79	25.64	25.91	26.12	26.37	26.38	26.47
24	26.38	---	---	26.41	26.03	25.84	25.66	25.91	26.12	26.31	26.39	26.46
25	26.38	---	---	26.44	25.99	25.85	25.67	25.93	26.12	26.30	26.44	26.47
26	26.40	---	---	26.41	26.04	25.86	25.66	25.91	26.14	26.32	26.38	26.47
27	26.40	---	---	26.43	26.04	25.87	25.69	25.90	26.15	26.32	26.39	26.48
28	26.43	---	---	26.47	26.02	25.86	25.74	25.93	26.13	26.30	26.41	26.48
29	26.42	---	---	26.42	---	25.76	25.73	25.95	26.13	26.31	26.40	26.49
30	26.44	---	---	26.37	---	25.72	25.73	25.96	26.16	26.32	26.39	26.49
31	26.46	---	---	26.10	---	25.74	---	25.95	---	26.34	26.39	---
MEAN	26.36	26.51	---	26.42	26.07	25.91	25.70	25.86	26.06	26.25	26.38	26.46
MAX	26.46	26.57	---	26.48	26.31	26.13	25.83	25.96	26.16	26.37	26.46	26.55
MIN	26.24	26.45	---	26.10	25.81	25.71	25.63	25.73	25.90	26.14	26.32	26.41

CAL YR 2000 MEAN 26.02 HIGH 25.30 LOW 26.57
WTR YR 2001 MEAN 26.17 HIGH 25.63 LOW 26.57



PROJECT DATA
Ground-Water Data for Geauga County, Ohio

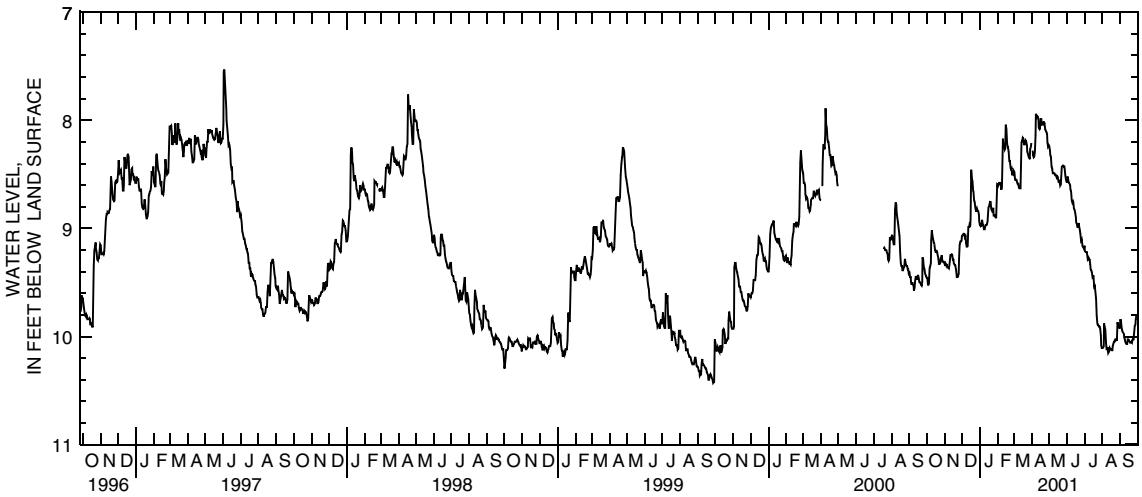
412322081190000. LOCAL NUMBER, GE-350

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 6.0 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, 7.53 ft below land-surface datum, June 3, 1997; lowest measured, 10.41 ft below land-surface datum, Sept. 27, 1999.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.46	9.33	9.07	8.97	8.61	8.47	---	8.24	8.57	9.16	10.11	9.84
2	9.46	9.32	9.06	8.98	8.58	8.48	8.28	8.28	8.52	9.21	10.10	9.86
3	9.52	9.35	9.05	8.97	8.60	8.55	8.32	8.32	8.55	9.22	10.09	9.90
4	9.52	9.33	9.05	8.95	8.58	8.55	8.34	8.34	8.58	9.22	9.88	9.94
5	9.51	9.36	9.07	8.92	8.58	8.55	8.33	8.43	8.59	9.22	9.91	9.96
6	9.37	9.36	9.08	8.96	8.59	8.57	8.29	8.45	8.60	9.26	9.94	9.97
7	9.35	9.36	9.07	8.98	8.64	8.59	8.14	8.49	8.64	9.28	10.06	9.98
8	9.32	9.37	9.14	9.01	8.62	8.59	7.94	8.49	8.66	9.27	10.12	10.01
9	9.11	9.34	9.17	9.01	8.46	8.61	7.97	8.49	8.74	9.29	10.12	10.03
10	9.02	9.28	9.17	8.99	8.17	8.63	7.96	8.49	8.76	9.29	10.10	10.06
11	9.07	9.25	9.16	8.97	8.24	8.63	7.97	8.51	8.75	9.34	10.15	10.07
12	9.10	9.25	8.99	8.97	8.24	8.63	7.99	8.51	8.76	9.38	10.14	10.07
13	9.13	9.24	8.99	8.96	8.27	8.38	8.07	8.51	8.82	9.39	10.13	10.07
14	9.15	9.25	8.96	8.94	8.26	8.21	8.08	8.53	8.83	9.41	10.11	10.03
15	9.20	9.30	8.97	8.90	8.04	8.19	8.07	8.52	8.86	9.45	10.12	10.03
16	9.22	9.28	8.92	8.80	8.08	8.16	7.99	8.54	8.90	9.44	10.12	10.04
17	9.22	9.33	8.46	8.79	8.21	8.17	7.99	8.57	8.95	9.44	10.13	10.05
18	9.21	9.34	8.54	8.77	8.25	8.22	8.04	8.58	8.96	9.54	10.13	10.06
19	9.23	9.34	8.56	8.75	8.25	8.23	8.04	8.55	8.99	9.53	10.09	10.06
20	9.26	9.37	8.65	8.77	8.29	8.21	8.04	8.60	8.99	9.59	10.07	10.05
21	9.29	9.39	8.66	8.83	8.38	8.19	8.01	8.59	8.95	9.65	10.05	10.06
22	9.33	9.45	8.74	8.84	8.38	8.20	8.03	8.48	8.98	9.81	10.05	10.03
23	9.33	9.45	8.76	8.83	8.44	8.23	8.03	8.43	9.01	9.88	10.03	10.03
24	9.32	9.44	8.81	8.81	8.45	8.29	8.08	8.42	9.05	9.90	10.03	10.03
25	9.27	9.42	8.84	8.88	8.44	8.31	8.10	8.42	9.11	9.90	10.03	9.96
26	9.26	9.28	8.84	8.88	8.51	8.33	8.11	8.43	9.10	9.91	10.04	9.90
27	9.25	9.15	8.82	8.88	8.49	8.35	8.13	8.43	9.12	9.91	9.87	9.89
28	9.31	9.12	8.84	8.90	8.50	8.36	8.20	8.45	9.17	9.93	9.90	9.84
29	9.31	9.12	8.84	8.90	---	8.27	8.24	8.51	9.18	9.99	9.91	9.81
30	9.31	9.11	8.87	8.83	---	8.25	8.23	8.55	9.19	10.08	9.92	9.83
31	9.32	---	8.93	8.60	---	8.21	---	8.57	---	10.11	9.92	---
MEAN	9.28	9.31	8.91	8.89	8.40	8.37	8.10	8.47	8.86	9.55	10.04	9.98
MAX	9.52	9.45	9.17	9.01	8.64	8.63	8.34	8.60	9.19	10.11	10.15	10.07
MIN	9.02	9.11	8.46	8.60	8.04	8.16	7.94	8.24	8.52	9.16	9.87	9.81

CAL YR 2000 MEAN 9.04 HIGH 7.89 LOW 9.58
WTR YR 2001 MEAN 9.02 HIGH 7.94 LOW 10.15



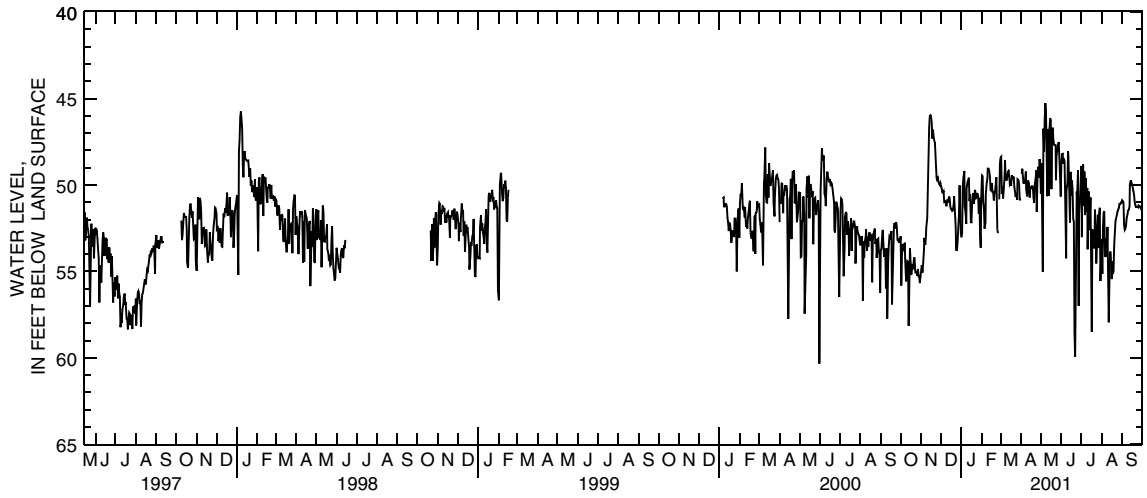
413119081213200. LOCAL NUMBER, GE-351

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.
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 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52.97	54.98	50.07	53.03	49.46	48.42	---	50.50	48.74	48.92	53.15	50.90
2	55.82	54.64	50.19	52.72	49.49	48.36	49.34	48.74	48.21	53.02	55.16	50.96
3	54.09	55.08	50.43	50.07	50.97	50.52	49.06	50.35	48.19	49.56	52.45	51.03
4	53.42	54.61	50.43	49.59	51.27	50.08	49.54	55.03	48.77	48.82	51.61	52.34
5	53.82	53.71	50.35	49.19	52.53	50.78	49.92	46.75	48.48	51.21	51.53	52.58
6	53.70	53.05	50.97	51.25	52.18	50.30	49.72	48.06	48.64	49.22	53.99	52.51
7	53.33	53.47	50.93	51.45	50.54	49.33	49.91	46.14	50.63	51.74	54.17	52.33
8	54.29	52.95	51.00	52.24	49.83	48.55	49.23	45.27	54.25	49.61	53.12	51.91
9	55.59	52.46	51.23	50.17	49.62	49.69	50.23	45.72	50.28	51.54	54.08	51.66
10	55.03	51.92	50.95	49.81	49.05	49.71	50.66	49.60	49.88	50.17	52.43	51.49
11	54.41	49.62	50.82	49.72	49.07	49.62	50.35	50.65	48.05	53.72	56.52	51.41
12	54.44	47.74	51.01	49.58	49.25	49.23	49.75	46.77	48.43	50.38	57.95	51.23
13	58.16	46.70	50.68	50.93	49.54	49.18	49.96	50.63	50.44	52.61	54.64	49.94
14	55.21	46.01	50.78	50.53	50.35	49.50	50.72	46.73	52.17	51.99	53.86	49.73
15	53.66	45.98	51.22	52.02	50.29	49.95	50.17	46.14	49.24	50.72	54.35	49.88
16	54.45	46.06	51.40	52.21	49.89	49.88	50.12	46.27	50.61	54.79	55.44	49.99
17	55.21	46.40	51.41	51.19	50.42	50.04	50.22	50.25	49.75	58.51	54.42	50.16
18	54.94	47.32	51.50	50.67	50.41	49.45	50.04	47.20	50.23	52.59	55.15	50.35
19	54.70	46.81	51.48	50.47	50.90	49.56	50.17	46.70	51.98	53.21	54.98	50.54
20	54.79	47.23	51.05	51.09	50.50	49.62	50.73	47.35	52.11	52.95	53.50	50.98
21	54.37	47.53	50.66	50.29	50.35	49.52	51.03	47.67	58.56	53.68	52.70	51.15
22	54.20	47.55	51.43	50.37	49.78	50.10	49.94	47.70	59.96	51.43	52.10	51.28
23	55.06	48.66	52.47	50.73	49.55	50.49	49.73	47.71	54.33	52.97	51.92	51.28
24	55.06	49.53	53.75	50.68	52.59	50.70	49.16	49.73	50.39	54.54	51.70	51.27
25	55.04	49.65	53.77	50.48	52.78	50.51	51.56	48.27	50.76	53.71	51.57	51.30
26	55.24	49.55	53.24	50.63	---	50.87	49.20	47.92	49.15	51.73	51.42	51.20
27	54.87	49.81	52.35	51.66	50.84	49.67	48.94	47.70	57.01	53.65	51.29	51.25
28	55.28	49.95	51.73	50.76	48.78	49.72	49.60	47.53	51.71	51.69	51.12	51.24
29	55.28	50.00	50.02	52.84	---	49.93	48.50	48.41	51.03	51.32	51.12	51.33
30	55.67	49.90	51.44	53.64	---	50.90	49.11	49.49	49.95	55.57	51.03	51.45
31	55.28	---	52.78	50.52	---	50.78	---	50.67	---	54.13	51.02	---
MEAN	54.75	49.96	51.34	50.98	50.38	49.84	49.88	48.31	51.06	52.25	53.21	51.16
MAX	58.16	55.08	53.77	53.64	52.78	50.90	51.56	55.03	59.96	58.51	57.95	52.58
MIN	52.97	45.98	50.02	49.19	48.78	48.36	48.50	45.27	48.05	48.82	51.02	49.73

CAL YR 2000 MEAN 52.02 HIGH 45.98 LOW 60.33
WTR YR 2001 MEAN 51.11 HIGH 45.27 LOW 59.96



PROJECT DATA
Ground-Water Data for Geauga County, Ohio

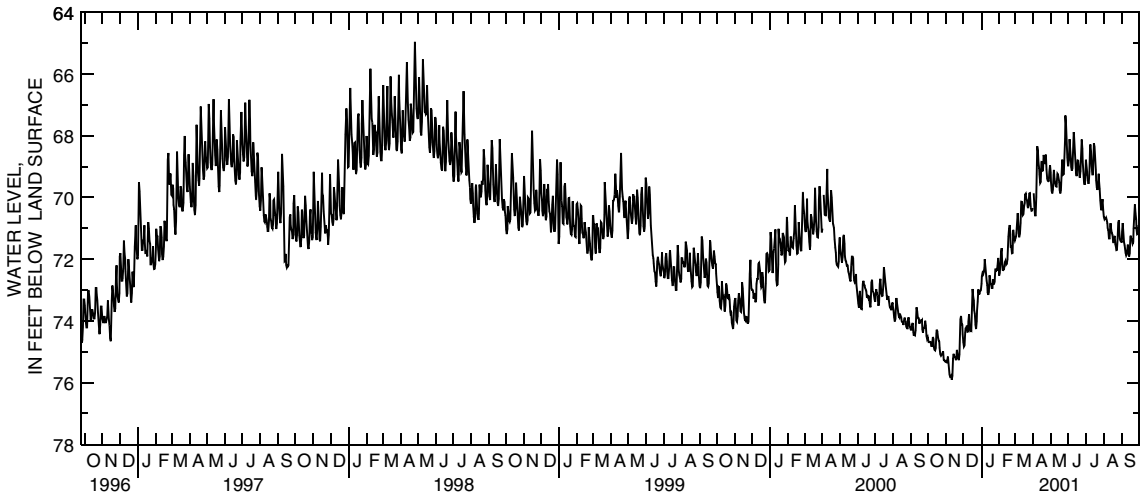
412851081045200. LOCAL NUMBER, GE-352

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 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	74.59	75.33	74.68	72.79	72.53	71.32	---	69.18	68.96	68.77	70.62	71.44
2	74.69	75.34	74.82	72.55	72.43	71.25	69.87	69.51	68.80	68.97	70.69	71.11
3	74.69	75.27	74.78	72.45	72.17	71.14	70.28	69.78	68.11	69.19	70.67	70.83
4	74.67	75.15	74.36	72.49	71.75	70.82	70.58	69.86	68.42	69.27	70.68	71.15
5	74.69	75.29	74.25	72.42	71.64	70.50	70.58	69.74	68.74	69.53	70.64	71.44
6	74.74	75.53	74.25	72.27	71.98	70.88	69.99	69.27	69.00	69.53	70.72	71.55
7	74.83	75.73	74.14	72.00	72.34	71.27	69.16	69.10	69.13	69.17	70.83	71.63
8	74.73	75.81	74.34	72.26	72.35	71.27	68.34	69.38	69.06	68.37	70.98	71.79
9	74.52	75.80	74.33	72.48	72.33	71.17	68.47	69.54	68.54	68.28	71.07	71.88
10	74.59	75.78	74.01	72.70	72.19	70.83	68.88	69.64	67.88	68.50	71.33	71.82
11	74.83	75.90	73.79	72.84	72.10	70.13	69.06	69.65	68.01	68.98	71.33	71.62
12	74.93	75.78	74.22	73.07	72.05	70.14	69.26	69.53	68.40	69.25	70.93	71.52
13	74.95	75.22	74.32	73.15	72.17	70.17	69.52	69.23	68.86	69.25	70.83	71.75
14	74.87	75.06	74.30	73.06	72.13	70.56	69.48	69.26	69.19	68.86	71.03	71.90
15	74.39	75.15	74.31	72.52	72.00	70.53	68.85	69.39	69.30	68.23	71.15	71.80
16	74.28	75.15	73.82	72.64	71.77	70.28	68.86	69.51	69.19	68.36	71.21	71.28
17	74.35	75.18	72.96	72.79	71.27	70.18	69.13	69.75	68.79	68.74	71.42	71.23
18	74.52	75.27	73.21	72.80	71.00	69.89	69.12	69.87	68.81	69.11	71.47	71.35
19	74.62	75.10	73.34	72.93	70.89	69.87	68.62	69.76	69.04	69.44	71.30	71.37
20	74.68	74.94	73.65	72.93	71.19	70.05	68.73	69.20	69.28	69.67	71.24	71.49
21	74.86	75.08	73.76	72.65	71.60	70.09	68.91	68.78	69.35	69.75	71.51	71.44
22	75.07	75.22	74.11	72.80	71.60	70.28	68.82	69.08	69.14	69.57	71.61	71.00
23	75.12	75.27	74.26	72.80	71.80	70.34	68.61	69.26	68.72	69.23	71.70	70.63
24	75.09	75.08	74.01	72.73	71.79	70.25	69.11	69.24	68.12	69.46	71.69	70.23
25	75.06	74.63	73.66	72.33	71.05	69.87	69.39	68.74	68.42	69.72	71.34	70.51
26	75.04	73.94	73.38	72.33	71.16	69.85	69.46	68.09	68.82	70.10	70.82	70.71
27	74.98	73.84	72.97	72.37	71.32	70.21	69.47	67.35	69.17	70.35	70.74	71.01
28	75.26	74.08	73.12	72.35	71.39	70.33	69.46	67.64	69.49	70.41	71.07	71.19
29	75.29	74.13	73.11	72.21	---	70.42	69.15	68.21	69.59	70.19	71.33	71.17
30	75.29	74.43	73.04	71.96	---	70.41	68.95	68.71	69.45	70.05	71.41	70.89
31	75.32	---	72.99	72.25	---	70.34	---	68.96	---	70.39	71.44	---
MEAN	74.82	75.12	73.88	72.58	71.79	70.47	69.25	69.17	68.86	69.31	71.12	71.29
MAX	75.32	75.90	74.82	73.15	72.53	71.32	70.58	69.87	69.59	70.41	71.70	71.90
MIN	74.28	73.84	72.96	71.96	70.89	69.85	68.34	67.35	67.88	68.23	70.62	70.23

CAL YR 2000 MEAN 72.92 HIGH 69.07 LOW 75.90
WTR YR 2001 MEAN 71.48 HIGH 67.35 LOW 75.90



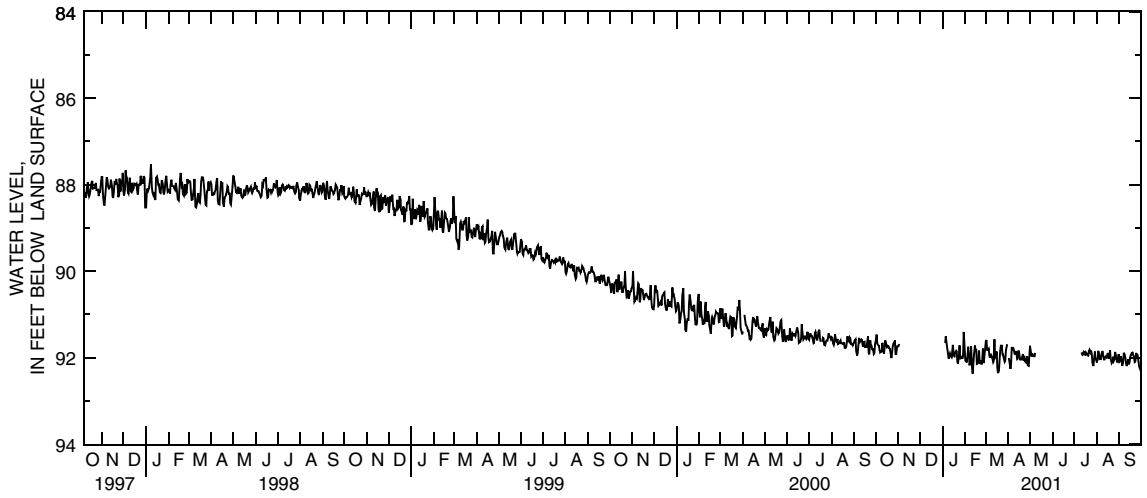
412748081172000. LOCAL NUMBER, GE-354

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 6.0 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, 92.37 ft below land-surface datum, Feb. 11, 2001.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	91.57	91.74	---	---	92.07	91.63	---	91.73	---	---	92.11	92.10
2	91.47	91.68	---	---	92.07	91.59	92.01	91.84	---	---	92.01	92.08
3	91.68	---	---	---	92.11	91.82	92.15	91.97	---	---	91.85	91.97
4	91.72	---	---	91.66	91.95	91.82	92.26	91.90	---	---	91.91	92.10
5	91.73	---	---	91.50	91.75	91.79	92.14	91.96	---	---	92.04	92.19
6	91.82	---	---	91.65	91.99	91.94	91.76	91.97	---	---	92.04	92.11
7	91.88	---	---	91.76	92.18	92.00	91.81	91.97	---	---	91.95	91.89
8	91.86	---	---	91.91	92.09	91.91	91.79	91.89	---	---	91.87	91.94
9	91.86	---	---	92.02	91.74	91.98	91.85	---	---	---	91.87	92.01
10	91.66	---	---	91.97	92.24	92.00	91.91	---	---	---	92.01	92.13
11	91.84	---	---	91.90	92.37	92.10	91.91	---	---	91.88	92.06	92.19
12	91.90	---	---	91.97	92.15	92.09	91.85	---	---	91.94	91.99	92.10
13	91.74	---	---	91.99	91.94	91.58	92.04	---	---	91.93	91.97	92.04
14	91.60	---	---	91.87	91.72	91.99	92.03	---	---	91.87	92.00	92.16
15	91.66	---	---	91.70	91.84	91.96	91.84	---	---	91.89	91.96	92.10
16	91.75	---	---	91.96	91.80	91.86	91.88	---	---	91.95	91.89	91.96
17	91.73	---	---	91.97	92.14	92.23	92.05	---	---	91.88	92.01	91.94
18	91.74	---	---	91.88	92.13	92.36	92.05	---	---	91.90	92.01	91.89
19	91.78	---	---	91.84	91.94	92.30	92.05	---	---	91.95	91.83	91.88
20	91.79	---	---	91.86	91.84	92.06	92.00	---	---	91.96	92.03	91.96
21	91.87	---	---	92.09	92.15	91.83	91.93	---	---	91.87	92.12	91.98
22	92.01	---	---	92.14	92.06	91.73	92.07	---	---	91.82	92.09	92.10
23	91.96	---	---	91.94	92.14	91.73	91.96	---	---	91.88	91.98	92.09
24	91.76	---	---	91.72	92.14	91.93	92.09	---	---	91.84	92.08	91.89
25	91.68	---	---	92.04	91.79	91.93	92.11	---	---	91.91	92.03	91.97
26	91.63	---	---	91.98	92.13	92.01	92.04	---	---	92.12	91.87	91.96
27	91.60	---	---	91.98	92.01	92.09	91.97	---	---	92.19	91.94	92.09
28	91.92	---	---	92.02	91.86	92.05	92.18	---	---	92.04	92.04	92.20
29	91.92	---	---	91.95	---	91.82	92.19	---	---	91.86	92.11	92.25
30	91.74	---	---	91.41	---	91.71	91.95	---	---	91.97	92.00	92.18
31	91.74	---	---	91.82	---	91.72	---	---	---	92.06	91.92	---
MEAN	91.76	91.71	---	91.88	92.01	91.92	92.00	91.90	---	91.94	91.99	92.05
MAX	92.01	91.74	---	92.14	92.37	92.36	92.26	91.97	---	92.19	92.12	92.25
MIN	91.47	91.68	---	91.41	91.72	91.58	91.76	91.73	---	91.82	91.83	91.88

CAL YR 2000 MEAN 91.40 HIGH 90.39 LOW 92.01
WTR YR 2001 MEAN 91.94 HIGH 91.41 LOW 92.37



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 2001 water year. The second table lists the discontinued streamflow-gaging stations for which a discharge measurement was performed in 2001 that were used for index stations for this project. The discontinued stations are not shown.

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)
		BEAVER RIVER BASIN				
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, 0.75 northeast of park entrance at State Route 224, 0.75 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	08/10/01	6.62
		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	08/09/01	0.42
		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	08/09/01	2.25
		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	---	---
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	---	---
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	2000-01	10/23/00 08/09/01	6.80 2.94
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	2000-01	10/23/00 08/09/01	1.84 0.19

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				
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	---	---
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	---	---
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	---	---
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	---	---
		HOCKING RIVER BASIN				
03158165	Monday Creek near Greendale, Ohio	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	10/23/00	6.90
		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	10/24/00	1.99
		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	10/24/00	1.56
		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	2000-01	10/23/00	4.25

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)
		LITTLE SCIOTO RIVER BASIN—CONTINUED				
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	2000-01	10/23/00	7.24
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	2000-01	10/23/00	10.2
		SCIOTO RIVER BASIN				
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	---	---
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	---	---
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	---	---
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	---	---
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	2000-01	09/20/00	1.38
		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	---	---
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	---	---

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				
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 2000-01	09/21/00	15.8
		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	---	---
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	---	---
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	---	---
		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	---	---
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	08/09/01	7.80
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	---	---
		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	---	---

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)
		MAUMEE RIVER BASIN—CONTINUED				
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	10/24/00	8.10
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	10/23/00	8.07
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	10/23/00	4.03
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 2000-01	10/23/00 08/14/01 09/17/01	1.96 0 0.46
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	1999-01	10/23/00 08/14/01 09/17/01	1.24 0.27 0.48
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 1999-01	10/23/00 08/08/01	3.67 2.78
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	---	---
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	---	---
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	10/24/00	5.28

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)
		MAUMEE RIVER BASIN—CONTINUED				
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	10/24/00	20.2
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	2000-01	10/23/00 08/09/01	1.09 0.42
		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 1999-01	10/23/00 08/09/01	1.92 0
		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 1997-01	08/09/01	0.01
		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 1997-01	10/23/00 08/09/01	13.7 4.41
		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	1997-01	10/23/00 08/09/01	2.40 0.19
		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	2000-01	10/23/00 08/09/01	1.55 0.26
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 1998-01	10/23/00 08/09/01	5.85 0.92

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)
		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	08/09/01	0
		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	08/09/01	6.10
		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	10/25/00 08/09/01	9.42 0.32

DISCONTINUED STREAMFLOW-GAGING STATIONS

[mi^2, square miles; wy, water year; ft^3/s, cubic foot per second; ---, no data]

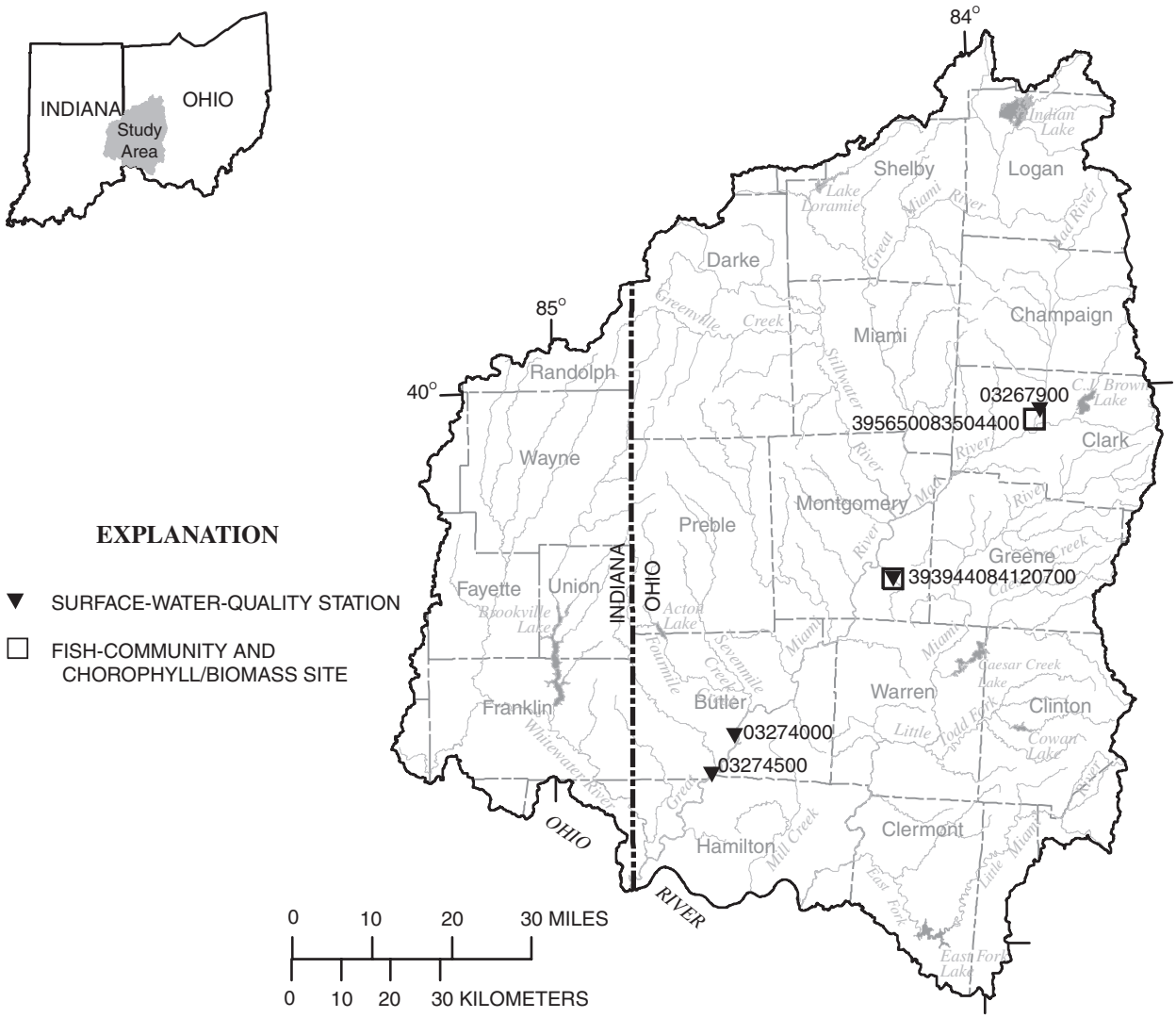
STATION NUMBER	STATION NAME	LOCATION	DRAINAGE AREA (MI^2)	PERIOD OF RECORD (WATER YEAR)	MEASUREMENTS	
					DATE	DISCHARGE (FT3/S)
		MUSKINGUM RIVER BASIN				
03123000	Sugar Creek above Beach City Dam at Beach City, Ohio	Latitude 40°39′24″, longitude 81°34′37″, in NE 1/4 sec. 35, T. 11 N., R. 10 W., Stark 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	---	---
		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				
03267000	Mad River near Urbana, Ohio	Latitude 40°06′27″, longitude 83°47′57″, on west line of sec. 35, T.5 E., R. 11 N., Champaign County, Hydrologic Unit 05080001, on left bank at downstream side of bridge on U.S. Highway 36, 1.8 mi upstream from Dugan Run, 1.8 mi downstream from Muddy Creek, 2.5 mi west of Urbana, and at mile 39.7.	162	1926-31 1940-98	---	---
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	8/9/01	12.7
		CHAGRIN RIVER BASIN				
04209000	Chagrin River at Willoughby, Ohio	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, 1.0 mi southeast of Willoughby, and 5.0 mi upstream from mouth.	246	1925-35 1940-84 1988-94 1996-98	---	---

Results from Selected Sites in the Great Miami and Little Miami River Basin (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 Great Miami 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. The period of high-intensity data collection for the Great Miami and Little Miami River Basins project was in water years 1999-2001.

Data for four stream sites in Ohio are being reported in this publication as part of the NAWQA study: Mad River at St. Paris Pike near Springfield, Ohio (03267900), Great Miami River at Hamilton, Ohio (03274000), Great Miami River at Venice, Ohio (03274500), Holes Creek at Huffman Park near Kettering, Ohio (393944084120700).

These data also can be obtained electronically at: http://oh.water.usgs.gov/miam.html.



PROJECT DATA
Results from Selected Sites in the Great Miami and Little Miami River Basin (National Water-Quality Assessment Program)
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.—Twelve discharge measurements were made at this site. This station is maintained by the Miami Conservancy District. Discharge data for this site are located in the surface-water section of this report.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

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

DATE	TIME	DIS-CHARGE, INST. (CUBIC FEET PER SECOND) (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	DIS-SOLVED OXYGEN (MG/L)) (00300)	DIS-SOLVED OXYGEN (PER-CENT SATUR-ATION) (00301)	PH WATER FIELD (STAND-ARD UNITS) (00400)	PH WATER LAB (STAND-ARD UNITS) (00403)	SPEC-IFIC CON-DUCT ANCE LAB (US/CM) (90095)	SPEC-IFIC CON-DUCT-ANCE FIELD (US/CM) (00095)	TEMPER-ATURE, AIR (DEG C) (00020)	TEMPER-ATURE, WATER (DEG C) (00010)	HARD-NESS, TOTAL (MG/L AS CACO3) (00900)
OCT												
18...	1030	197	745	10.3	98	8.0	7.9	741	746	16	12.0	366
NOV												
28...	1300	176	738	15.8	136	8.6	8.2	743	715	7	8.0	392
DEC												
12...	1320	576	751	13.6	102	7.4	8.2	596	573	-4	3.0	272
JAN												
24...	1000	178	740	---	---	8.0	8.0	763	756	-1	4.0	379
FEB												
22...	1100	253	740	12.5	97	8.0	8.1	745	720	-5	3.5	392
MAR												
21...	0930	237	739	11.5	100	8.2	8.2	742	719	9	8.0	365
APR												
25...	1035	300	741	10.9	100	8.2	8.2	738	710	18	10.0	380
MAY												
15...	1000	346	736	9.0	90	8.0	8.0	683	656	14	13.5	343
JUN												
12...	1100	294	732	9.5	101	8.2	8.2	716	728	29	16.5	376
JUL												
25...	1100	215	739	9.5	107	7.8	8.2	719	730	27	19.5	370
AUG												
14...	1230	189	738	9.5	103	8.1	8.2	713	717	19	17.5	358
SEP												
19...	1200	189	732	---	---	8.0	8.2	721	718	19	16.0	360

PROJECT DATA
Results from Selected Sites in the Great Miami and Little Miami River Basin (National Water-Quality Assessment Program)

WATER-QUALITY RECORDS—CONTINUED

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00915), USGS National Water Information System parameter code; mg/L, milligrams per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

DATE	CALCIUM, DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY, WATER, DIS-SOLVED FIELD (MG/L AS CACO3) (39086)	BICAR-BONATE, WATER, DIS-SOLVED FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS-SOLVED FIELD (MG/L AS CO3) (00452)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE, DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG C DIS-SOLVED (MG/L) (70300)
OCT												
18...	92	33	2.2	8.6	287	345	<1	20	0.3	8.4	69	449
NOV												
28...	98	36	2.2	9.5	293	333	10	22	0.3	8.1	68	454
DEC												
12...	68	25	4.9	9.0	205	246	<1	26	0.2	6.7	46	350
JAN												
24...	94	35	2.1	11	292	351	<1	23	0.3	6.0	68	434
FEB												
22...	99	35	1.8	9.4	289	350	<1	22	0.3	6.5	67	449
MAR												
21...	89	34	2.0	10	278	334	<1	23	0.3	3.5	63	417
APR												
25...	95	35	1.9	9.1	285	347	<1	23	0.2	5.4	65	443
MAY												
15...	85	32	2.2	9.7	253	305	<1	22	0.3	6.3	57	393
JUN												
12...	93	35	2.1	8.8	285	336	3	20	0.3	7.3	65	422
JUL												
25...	91	35	2.3	11	276	331	3	24	0.3	8.2	62	454
AUG												
14...	87	34	2.0	10	275	329	3	24	0.3	7.3	63	391
SEP												
19...	88	33	2.3	10	270	325	2	25	0.2	8.4	64	416

PROJECT DATA
Results from Selected Sites in the Great Miami and Little Miami River Basin (National Water-Quality Assessment Program)
WATER-QUALITY RECORDS—CONTINUED

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00608), USGS National Water Information System parameter code; mg/L, milligrams per liter; col/100mL, colonies per 100 milliliters; deg C, degrees Celsius; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value; M, presence verified but not quantified; K, value estimated from non-ideal colony count .]

DATE	NITRO-GEN, AMMONIA, DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC, DIS-SOLVED (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC, TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2 + NO3, DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS, TOTAL (MG/L AS P) (00665)	E. COLI, WATER TOTAL (COL/ 100 ML) (31633)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	2,6-DI-ETHYL ANILINE, WATER, FLTRD (UG/L) (82660)
OCT												
18...	<0.04	0.2	0.2	3.7	0.01	0.07	0.06	0.09	---	10	9	<0.002
NOV												
28...	<0.04	0.2	0.2	3.7	0.01	0.06	0.06	0.07	52	<10	7	<0.002
DEC												
12...	0.05	0.8	1.3	4.9	0.05	0.10	E0.01	0.32	6400	10	8	<0.002
JAN												
24...	<0.04	0.2	0.2	3.8	0.01	0.01	E0.02	0.02	280	10	18	<0.002
FEB												
22...	<0.04	0.1	0.2	4.1	0.01	0.02	E0.01	0.03	K22	M	22	<0.002
MAR												
21...	<0.04	0.2	0.2	4.1	0.03	0.02	E0.02	0.03	K30	110	11	<0.002
APR												
25...	<0.04	0.2	0.3	3.8	0.04	0.02	<0.02	0.03	K84	10	15	<0.002
MAY												
15...	E0.03	0.3	0.8	3.3	0.02	0.05	0.05	0.15	850	10	7	<0.002
JUN												
12...	<0.04	0.1	0.2	4.0	0.01	0.04	0.03	0.05	190	M	8	<0.002
JUL												
25...	<0.04	0.2	0.3	4.1	0.01	0.06	0.05	0.07	---	M	7	<0.002
AUG												
14...	<0.04	0.2	0.2	3.8	0.01	0.03	0.03	0.05	130	M	13	<0.002
SEP												
19...	<0.04	0.1	0.2	3.7	0.01	0.06	0.04	0.06	280	10	9	<0.002

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(49260), USGS National Water Information System parameter code; deg C, degrees Celsius; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

DATE	ACETO-CHLOR, WATER, FLTRD (UG/L) (49260)	ALA-CHLOR, WATER, FLTRD (UG/L) (46342)	ALPHA BHC, WATER, FLTRD (UG/L) (34253)	ATRA-ZINE, WATER, FLTRD (UG/L) (39632)	BEN-FLUR-ALIN, WATER, FLTRD (UG/L) (82673)	BUTYL-ATE, WATER, FLTRD (UG/L) (04028)	CAR-BARYL, WATER, FLTRD (UG/L) (82680)	CARBO-FURAN, WATER, FLTRD (UG/L) (82674)	CHLOR-PYRIFOS, WATER, FLTRD (UG/L) (38933)	CYANA-ZINE, WATER, FLTRD (UG/L) (04041)	DCPA, WATER, FLTRD (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, FLTRD (UG/L) (04040)
OCT												
18...	<0.004	<0.002	<0.005	0.014	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.008
NOV												
28...	<0.004	<0.002	<0.005	0.008	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.009
DEC												
12...	<0.004	<0.002	<0.005	0.074	<0.010	<0.002	<0.041	<0.020	<0.005	E0.016	<0.003	E0.075
JAN												
24...	<0.004	<0.002	<0.005	0.008	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.007
FEB												
22...	<0.004	<0.002	<0.005	0.012	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.009
MAR												
21...	<0.004	<0.002	<0.005	0.016	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.012
APR												
25...	0.007	<0.002	<0.005	0.10	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.017
MAY												
15...	0.032	<0.002	<0.005	0.22	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.034
JUN												
12...	0.006	<0.002	<0.005	0.16	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.027
JUL												
25...	<0.004	<0.002	<0.005	0.045	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.012
AUG												
14...	<0.004	<0.002	<0.005	E0.02	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.006
SEP												
19...	<0.004	<0.002	<0.005	0.018	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.006

PROJECT DATA
Results from Selected Sites in the Great Miami and Little Miami River Basin (National Water-Quality Assessment Program)
WATER-QUALITY RECORDS—CONTINUED

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(39572), USGS National Water Information System parameter code; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

DATE	DI-AZINON, WATER, FLTRD (UG/L) (39572)	DI-ELRIN, WATER, FLTRD (UG/L) (39381)	DISUL-FOTON, WATER, FLTRD (UG/L) (82677)	EPTC, WATER, FLTRD (UG/L) (82668)	ETHAL-FLUR-ALIN, WATER, FLTRD (UG/L) (82663)	ETHO-PROP, WATER, FLTRD (UG/L) (82672)	FONOFOS, WATER, FLTRD (UG/L) (04095)	LINDANE, WATER, FLTRD (UG/L) (39341)	LIN-URON, WATER, FLTRD (UG/L) (82666)	MALA-THION, WATER, FLTRD (UG/L) (39532)	METHYL-AZIN-PHOS, WATER, FLTRD (UG/L) (82686)	METHYL PARA-THION, WATER, FLTRD (UG/L) (82667)
OCT												
18...	<0.005	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
NOV												
28...	<0.005	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
DEC												
12...	<0.005	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
JAN												
24...	<0.005	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
FEB												
22...	<0.005	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
MAR												
21...	<0.005	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	0.005	<0.035	<0.027	<0.050	<0.006
APR												
25...	<0.005	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
MAY												
15...	E0.003	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
JUN												
12...	<0.005	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
JUL												
25...	<0.005	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
AUG												
14...	<0.005	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
SEP												
19...	<0.005	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(39415), USGS National Water Information System parameter code; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

DATE	METO-LACHLOR, WATER, FLTRD (UG/L) (39415)	METRI-BUZIN, WATER, FLTRD (UG/L) (82630)	MOL-INATE, WATER, FLTRD (UG/L) (82671)	NAPROP-AMIDE, WATER, FLTRD (UG/L) (82684)	P,P' DDE, WATER, FLTRD (UG/L) (34653)	PARA-THION, WATER, FLTRD (UG/L) (39542)	PEB-ULATE, WATER, FLTRD (UG/L) (82669)	PENDI-METH-ALIN, WATER, FLTRD (UG/L) (82683)	CIS-PER-METHRIN, WATER, FLTRD (UG/L) (82687)	PHORATE, WATER, FLTRD (UG/L) (82664)	PRO-METON, WATER, FLTRD (UG/L) (04037)	PRON-AMIDE, WATER, FLTRD (UG/L) (82676)
OCT												
18...	E0.008	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.002	<0.004
NOV												
28...	E0.002	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	<0.015	<0.004
DEC												
12...	0.096	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.002	<0.004
JAN												
24...	E0.002	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	<0.015	<0.004
FEB												
22...	E0.003	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	<0.015	<0.004
MAR												
21...	E0.007	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	<0.015	<0.004
APR												
25...	0.029	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	<0.015	<0.004
MAY												
15...	0.12	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.003	<0.004
JUN												
12...	0.043	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	<0.015	<0.004
JUL												
25...	0.014	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	<0.015	<0.004
AUG												
14...	E0.005	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	<0.015	<0.004
SEP												
19...	E0.008	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.010	<0.004

PROJECT DATA
Results from Selected Sites in the Great Miami and Little Miami River Basin (National Water-Quality Assessment Program)
WATER-QUALITY RECORDS—CONTINUED

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(04024), USGS National Water Information System parameter code; mg/L, milligrams per liter; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

DATE	PROP-ACHLOR, WATER, FLTRD (UG/L) (04024)	PRO-PANIL, WATER, FLTRD (UG/L) (82679)	PRO-PARGITE, WATER, FLTRD (UG/L) (82685)	SI-MAZINE, WATER, FLTRD (UG/L) (04035)	TEBU-THI-URON, WATER, FLTRD (UG/L) (82670)	TER-BACIL, WATER, FLTRD (UG/L) (82665)	TER-BUFOS, WATER, FLTRD (UG/L) (82675)	THIO-BENCARB, WATER, FLTRD (UG/L) (82681)	TRIAL-LATE, WATER, FLTRD (UG/L) (82678)	TRI-FLUR-ALIN, WATER, FLTRD (UG/L) (82661)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
OCT											
18...	<0.010	<0.011	<0.023	<0.011	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	16
NOV											
28...	<0.010	<0.011	<0.023	<0.011	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	148
EC											
12...	<0.010	<0.011	<0.023	E0.007	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	89
JAN											
24...	<0.010	<0.011	<0.023	<0.011	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	7
FEB											
22...	<0.010	<0.011	<0.023	<0.011	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	4
MAR											
21...	<0.010	<0.011	<0.023	<0.011	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	135
APR											
25...	<0.010	<0.011	<0.023	0.039	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	23
MAY											
15...	<0.010	<0.011	<0.023	0.062	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	60
JUN											
12...	<0.010	<0.011	<0.023	0.018	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	39
JUL											
25...	<0.010	<0.011	<0.023	E0.005	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	63
AUG											
14...	<0.010	<0.011	<0.023	<0.011	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	15
SEP											
19...	<0.010	<0.011	<0.023	E0.003	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	9

PROJECT DATA
Results from Selected Sites in the Great Miami and Little Miami River Basin (National Water-Quality Assessment Program)

WATER-QUALITY RECORDS—CONTINUED

03274000 GREAT MIAMI RIVER AT HAMILTON, OHIO

LOCATION.—Latitude 39°23′28″, longitude 84°34′20″, in NE 1/4 sec. 6, T.1 N., R.3 E., Butler County, Hydrologic Unit 05080002, on right bank 1,000 ft downstream from Columbia Bridge at Hamilton, 3 mi downstream from Four Mile Creek, 4.3 mi upstream from Pleasant Run, and at mile 34.8.
DRAINAGE AREA.—3,630 mi^2.
REMARKS.— Discharge data are furnished by Miami Conservancy District. Discharge data for this site are located in the surface-water section in volume 1 of this report.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00061), USGS National Water Information System parameter code; mm of Hg, millimeters of mercury; mg/L, milligrams per liter; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

DATE	TIME	DIS-CHARGE, INST. (CUBIC FEET PER SECOND) (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	DIS-SOLVED OXYGEN (MG/L)) (00300)	DIS-SOLVED OXYGEN (PER-CENT SATUR-ATION) (00301)	PH WATER FIELD (STAND-ARD UNITS) (00400)	PH WATER LAB (STAND-ARD UNITS) (00403)	SPEC-IFIC CON-DUCT ANCE LAB (US/CM) (90095)	SPEC-IFIC CON-DUCT-ANCE FIELD (US/CM) (00095)	TEMPER-ATURE, AIR (DEG C) (00020)	TEMPER-ATURE, WATER (DEG C) (00010)	HARD-NESS, TOTAL (MG/L AS CACO3) (00900)
JAN												
25...	1130	1340	758	13.2	100	8.3	8.1	903	865	-3	4.0	342
FEB												
21...	1100	3040	758	12.5	100	8.1	8.0	751	744	0	5.5	329
MAR												
20...	1130	2650	749	12.8	110	8.6	8.3	819	782	15	8.5	334
MAY												
17...	1150	6560	738	8.5	99	8.2	7.9	791	771	28	21.5	316
JUN												
13...	0900	6520	743	8.0	98	8.3	7.9	682	665	29	24.0	275
JUL												
26...	1130	1840	750	7.9	104	8.0	8.5	741	758	---	28.5	294
AUG												
15...	1100	1280	746	9.0	115	8.7	8.2	770	764	24	26.5	280
SEP												
18...	1100	1430	745	---	---	8.3	8.3	773	771	20	20.0	322

DATE	CALCIUM, DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY, WATER, DIS-SOLVED FIELD (MG/L AS CACO3) (39086)	BICAR-BONATE, WATER, DIS-SOLVED FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS-SOLVED FIELD (MG/L AS CO3) (00452)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE, DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG C DIS-SOLVED (MG/L) (70300)
JAN												
25...	85	32	4.0	48	243	293	<1	85	0.4	3.7	67	524
FEB												
21...	83	30	3.1	30	231	278	<1	61	0.3	5.9	57	450
MAR												
20...	81	32	3.1	35	246	272	12	69	0.4	1.1	61	463
MAY												
17...	76	31	3.6	37	234	285	<1	63	0.4	3.4	58	437
JUN												
13...	65	27	3.2	27	200	235	3	51	0.3	3.7	53	400
JUL												
26...	69	30	4.0	42	221	256	7	67	0.4	3.8	64	458
AUG												
15...	67	28	4.1	44	213	244	7	75	0.4	3.4	59	446
SEP												
18...	78	31	4.1	40	237	284	2	67	0.4	7.8	57	420

PROJECT DATA
Results from Selected Sites in the Great Miami and Little Miami River Basin (National Water-Quality Assessment Program)
WATER-QUALITY RECORDS—CONTINUED

03274000 GREAT MIAMI RIVER AT HAMILTON, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00608), USGS National Water Information System parameter code; mg/L, milligrams per liter; col/100mL, colonies per 100 milliliters; deg C, degrees Celsius; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

DATE	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC, DISSOLVED (MG/L AS N) (00623)	NITROGEN, AMMONIA + ORGANIC, TOTAL (MG/L AS N) (00625)	NITROGEN, NO2 + NO3, DISSOLVED (MG/L AS N) (00631)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	PHOSPHORUS, DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	PHOSPHORUS, TOTAL (MG/L AS P) (00665)	E. COLI, WATER TOTAL (COL/100 ML) (31633)	IRON, DISSOLVED (UG/L AS FE) (01046)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	2,6-DIETHYL ANILINE, WATER, FLTRD (UG/L) (82660)
JAN												
25...	<0.04	0.4	0.5	4.6	0.03	0.18	0.16	0.17	120	53	11	<0.002
FEB												
21...	E0.04	0.4	0.6	6.2	0.03	0.12	0.11	0.17	260	39	10	<0.002
MAR												
20...	<0.04	0.4	0.5	4.1	0.03	0.09	0.07	0.10	70	27	10	<0.002
MAY												
17...	<0.04	0.5	1.3	2.7	0.03	0.18	<0.02	0.43	1300	E7	<3	<0.002
JUN												
13...	<0.04	0.3	1.8	3.7	0.02	0.07	0.06	0.45	8000	<10	<3	<0.002
JUL												
26...	<0.04	0.3	1.1	2.2	0.02	0.08	0.06	0.23	---	<10	E2	<0.002
AUG												
15...	E0.02	0.4	1.0	1.6	0.02	0.13	0.10	0.27	390	<10	<3	<0.002
SEP												
18...	<0.04	0.5	0.8	3.1	0.02	0.19	0.16	0.26	2400	<10	<3	<0.002

DATE	ACETOCHLOR, WATER, FLTRD (UG/L) (49260)	ALACHLOR, WATER, FLTRD (UG/L) (46342)	ALPHA BHC, WATER, FLTRD (UG/L) (34253)	ATRAZINE, WATER, FLTRD (UG/L) (39632)	BENFLURALIN, WATER, FLTRD (UG/L) (82673)	BUTYLATE, WATER, FLTRD (UG/L) (04028)	CARBARYL, WATER, FLTRD (UG/L) (82680)	CARBOFURAN, WATER, FLTRD (UG/L) (82674)	CHLORPYRIFOS, WATER, FLTRD (UG/L) (38933)	CYANAZINE, WATER, FLTRD (UG/L) (04041)	DCPA, WATER, FLTRD (UG/L) (82682)	DEETHYL ATRAZINE, WATER, FLTRD (UG/L) (04040)
JAN												
25...	<0.004	<0.002	<0.005	0.08	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.044
FEB												
21...	<0.006	E0.004	<0.005	0.092	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.052
MAR												
20...	E0.004	<0.002	<0.005	0.068	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.038
MAY												
17...	0.061	0.006	<0.005	0.69	<0.010	<0.002	E0.006	<0.020	<0.005	E0.005	<0.003	E0.064
JUN												
13...	0.060	<0.002	<0.005	0.93	<0.010	<0.002	E0.008	<0.020	<0.005	<0.018	<0.003	E0.18
JUL												
26...	0.011	<0.002	<0.005	0.32	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.049
AUG												
15...	<0.004	<0.002	<0.005	0.23	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.043
SEP												
18...	<0.010	<0.002	<0.005	0.25	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.068

03274000 GREAT MIAMI RIVER AT HAMILTON, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(39572), USGS National Water Information System parameter code; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

DATE	DI-AZINON, WATER, FLTRD (UG/L) (39572)	DI-ELRIN, WATER, FLTRD (UG/L) (39381)	DISUL-FOTON, WATER, FLTRD (UG/L) (82677)	EPTC, WATER, FLTRD (UG/L) (82668)	ETHAL-FLUR-ALIN, WATER, FLTRD (UG/L) (82663)	ETHO-PROP, WATER, FLTRD (UG/L) (82672)	FONOFOS, WATER, FLTRD (UG/L) (04095)	LINDANE, WATER, FLTRD (UG/L) (39341)	LIN-URON, WATER, FLTRD (UG/L) (82666)	MALA-THION, WATER, FLTRD (UG/L) (39532)	METHYL-AZIN-PHOS, WATER, FLTRD (UG/L) (82686)	METHYL PARA-THION, WATER, FLTRD (UG/L) (82667)
JAN												
25...	0.007	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
FEB												
21...	<0.005	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
MAR												
20...	<0.005	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
MAY												
17...	0.012	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
JUN												
13...	0.033	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
JUL												
26...	0.013	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
AUG												
15...	0.02	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
SEP												
18...	0.005	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006

DATE	METO-LACHLOR, WATER, FLTRD (UG/L) (39415)	METRI-BUZIN, WATER, FLTRD (UG/L) (82630)	MOL-INATE, WATER, FLTRD (UG/L) (82671)	NAPROP-AMIDE, WATER, FLTRD (UG/L) (82684)	P,P' DDE, WATER, FLTRD (UG/L) (34653)	PARA-THION, WATER, FLTRD (UG/L) (39542)	PEB-ULATE, WATER, FLTRD (UG/L) (82669)	PENDI-METH-ALIN, WATER, FLTRD (UG/L) (82683)	CIS-PER-METHRIN, WATER, FLTRD (UG/L) (82687)	PHORATE, WATER, FLTRD (UG/L) (82664)	PRO-METON, WATER, FLTRD (UG/L) (04037)	PRON-AMIDE, WATER, FLTRD (UG/L) (82676)
JAN												
25...	0.021	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.007	<0.004
FEB												
21...	0.041	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.005	<0.004
MAR												
20...	0.04	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.006	<0.004
MAY												
17...	0.19	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.059	<0.004
JUN												
13...	0.23	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.11	<0.004
JUL												
26...	0.067	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.05	<0.004
AUG												
15...	0.049	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.20	<0.004
SEP												
18...	0.06	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.018	<0.004

PROJECT DATA
Results from Selected Sites in the Great Miami and Little Miami River Basin (National Water-Quality Assessment Program)
WATER-QUALITY RECORDS—CONTINUED

03274000 GREAT MIAMI RIVER AT HAMILTON, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(04024), USGS National Water Information System parameter code; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

DATE	PROP-ACHLOR, WATER, FLTRD (UG/L) (04024)	PRO-PANIL, WATER, FLTRD (UG/L) (82679)	PRO-PARGITE, WATER, FLTRD (UG/L) (82685)	SI-MAZINE, WATER, FLTRD (UG/L) (04035)	TEBU-THI-URON, WATER, FLTRD (UG/L) (82670)	TER-BACIL, WATER, FLTRD (UG/L) (82665)	TER-BUFOS, WATER, FLTRD (UG/L) (82675)	THIO-BENCARB, WATER, FLTRD (UG/L) (82681)	TRIAL-LATE, WATER, FLTRD (UG/L) (82678)	TRI-FLUR-ALIN, WATER, FLTRD (UG/L) (82661)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
JAN											
25...	<0.010	<0.011	<0.023	E0.009	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	4
FEB											
21...	<0.010	<0.011	<0.023	0.011	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	18
MAR											
20...	<0.010	<0.011	<0.023	0.018	E0.004	<0.034	<0.017	<0.005	<0.002	<0.009	122
MAY											
17...	<0.010	<0.011	<0.023	0.052	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	139
JUN											
13...	<0.010	<0.011	<0.023	0.14	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	210
JUL											
26...	<0.010	<0.011	<0.023	0.05	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	58
AUG											
15...	<0.010	<0.011	<0.023	0.093	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	48
SEP											
18...	<0.010	<0.011	<0.023	0.03	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	24

PROJECT DATA
Results from Selected Sites in the Great Miami and Little Miami River Basin (National Water-Quality Assessment Program)

WATER-QUALITY RECORDS—CONTINUED

03274500 GREAT MIAMI RIVER AT VENICE, OHIO

LOCATION.—Latitude 39°18′15″, longitude 84°38′35″, Butler County, Hydrologic Unit 05080002, at mile 25.6.
DRAINAGE AREA.—3,789 mi^2.
REMARKS.—Instantaneous discharge values are from nearest upstream gaging station (Great Miami River at Hamilton, 03274000).

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00061), USGS National Water Information System parameter code; mm of Hg, millimeters of mercury; mg/L, milligrams per liter; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; col/100mL, colonies per 100 milliliters; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value; K, value estimated from non-ideal colony count.]

DATE	TIME	DIS-CHARGE, INST. (CUBIC FEET PER SECOND) (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	DIS-SOLVED OXYGEN (MG/L)) (00300)	DIS-SOLVED OXYGEN (PER-CENT SATUR-ATION) (00301)	PH WATER FIELD (STAND-ARD UNITS) (00400)	PH WATER LAB (STAND-ARD UNITS) (00403)	SPEC-IFIC CON-DUCT ANCE LAB (US/CM) (90095)	SPEC-IFIC CON-DUCT-ANCE FIELD (US/CM) (00095)	TEMPER-ATURE, AIR (DEG C) (00020)	TEMPER-ATURE, WATER (DEG C) (00010)	HARD-NESS, TOTAL (MG/L AS CACO3) (00900)
OCT												
6...	1130	11800	752	9.0	118	7.6	7.7	409	397	15.0	17.5	171
NOV												
16...	1200	1930	742	8.7	81	8.4	8.0	795	784	11.0	11.0	311
DEC												
20...	1230	5510	753	13.4	93	7.9	7.9	673	646	-4.0	0.0	257
APR												
11...	1400	22400	733	8.8	99	7.8	7.5	633	625	30.0	19.0	232
12...	1430	18300	745	9.2	100	7.9	7.7	504	485	--	18.0	195

DATE	CALCIUM, DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY, WATER, DIS-SOLVED FIELD (MG/L AS CACO3) (39086)	BICAR-BONATE, WATER, DIS-SOLVED FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS-SOLVED FIELD (MG/L AS CO3) (00452)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE, DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG C DIS-SOLVED (MG/L) (70300)
OCT												
6...	42	16	5.4	15	130	158	<1	28	0.2	5.8	27	234
NOV												
16...	77	29	4.3	33	225	271	<1	61	0.4	6.4	59	458
DEC												
20...	65	23	4.3	26	191	230	<1	56	0.3	6.4	44	393
APR												
11...	57	22	3.9	33	167	204	<1	57	0.3	3.6	46	379
12...	49	18	5.5	15	163	199	<1	33	0.2	6.1	31	300

DATE	NITRO-GEN, AMMONIA, DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC, DIS-SOLVED (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC, TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2 + NO3, DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS, TOTAL (MG/L AS P) (00665)	E. COLI, WATER TOTAL (COL/ 100 ML) (31633)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	2,6-DI-ETHYL ANILINE, WATER, FLTRD (UG/L) (82660)
OCT												
6...	E0.02	0.6	1.8	2.5	0.02	0.18	0.15	0.70	K17000	39	<3	<0.002
NOV												
16...	<0.04	0.4	0.5	4.7	0.02	0.20	0.15	0.21	550	12	6	<0.002
DEC												
20...	0.10	1.3	1.0	6.7	0.03	0.18	0.15	0.26	650	11	5	<0.002
APR												
11...	<0.04	0.7	3.8	2.3	0.06	0.14	0.07	1.7	--	14	21	<0.002
12...	<0.04	1.0	2.1	5.7	0.10	0.17	0.09	0.65	--	21	<3	<0.002

PROJECT DATA
Results from Selected Sites in the Great Miami and Little Miami River Basin (National Water-Quality Assessment Program)
WATER-QUALITY RECORDS—CONTINUED

03274500 GREAT MIAMI RIVER AT VENICE, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(49260), USGS National Water Information System parameter code; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

DATE	ACETO-CHLOR, WATER, FLTRD (UG/L) (49260)	ALA-CHLOR, WATER, FLTRD (UG/L) (46342)	ALPHA BHC, WATER, FLTRD (UG/L) (34253)	ATRA-ZINE, WATER, FLTRD (UG/L) (39632)	BEN-FLUR-ALIN, WATER, FLTRD (UG/L) (82673)	BUTYL-ATE, WATER, FLTRD (UG/L) (04028)	CAR-BARYL, WATER, FLTRD (UG/L) (82680)	CARBO-FURAN, WATER, FLTRD (UG/L) (82674)	CHLOR-PYRIFOS, WATER, FLTRD (UG/L) (38933)	CYANA-ZINE, WATER, FLTRD (UG/L) (04041)	DCPA, WATER, FLTRD (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, FLTRD (UG/L) (04040)
OCT												
6...	0.016	<0.002	<0.005	0.20	<0.010	<0.002	E0.008	<0.020	<0.005	<0.018	<0.003	E0.13
NOV												
16...	0.011	<0.002	<0.005	0.16	<0.010	<0.002	<0.041	<0.020	<0.005	E0.009	<0.003	E0.095
DEC												
20...	0.014	0.005	<0.005	0.14	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.086
APR												
11...	0.021	0.005	<0.005	0.65	<0.010	<0.002	E0.011	<0.020	<0.005	E0.006	<0.003	E0.036
12...	0.11	0.012	<0.005	1.7	<0.010	<0.002	<0.041	<0.020	<0.005	E0.015	<0.003	E0.086

DATE	DI-AZINON, WATER, FLTRD (UG/L) (39572)	DI-ELRIN, WATER, FLTRD (UG/L) (39381)	DISUL-FOTON, WATER, FLTRD (UG/L) (82677)	EPTC, WATER, FLTRD (UG/L) (82668)	ETHAL-FLUR-ALIN, WATER, FLTRD (UG/L) (82663)	ETHO-PROP, WATER, FLTRD (UG/L) (82672)	FONOFOS, WATER, FLTRD (UG/L) (04095)	LINDANE, WATER, FLTRD (UG/L) (39341)	LIN-URON, WATER, FLTRD (UG/L) (82666)	MALA-THION, WATER, FLTRD (UG/L) (39532)	METHYL-AZIN-PHOS, WATER, FLTRD (UG/L) (82686)	METHYL PARA-THION, WATER, FLTRD (UG/L) (82667)
OCT												
6...	0.035	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	0.029	<0.050	<0.006
NOV												
16...	0.014	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
DEC												
20...	E0.004	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
APR												
11...	0.049	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
12...	0.025	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006

DATE	METO-LACHLOR, WATER, FLTRD (UG/L) (39415)	METRI-BUZIN, WATER, FLTRD (UG/L) (82630)	MOL-INATE, WATER, FLTRD (UG/L) (82671)	NAPROP-AMIDE, WATER, FLTRD (UG/L) (82684)	P,P' DDE, WATER, FLTRD (UG/L) (34653)	PARA-THION, WATER, FLTRD (UG/L) (39542)	PEB-ULATE, WATER, FLTRD (UG/L) (82669)	PENDI-METH-ALIN, WATER, FLTRD (UG/L) (82683)	CIS-PER-METHRIN, WATER, FLTRD (UG/L) (82687)	PHORATE, WATER, FLTRD (UG/L) (82664)	PRO-METON, WATER, FLTRD (UG/L) (04037)	PRON-AMIDE, WATER, FLTRD (UG/L) (82676)
OCT												
6...	0.076	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.040	<0.004
NOV												
16...	0.051	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.010	<0.004
DEC												
20...	0.075	0.016	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.007	<0.004
APR												
11...	0.39	0.12	<0.002	<0.007	<0.003	<0.007	<0.002	<0.020	<0.006	<0.011	0.023	<0.004
12...	0.76	0.65	<0.002	<0.007	<0.003	<0.007	<0.002	<0.020	<0.006	<0.011	E0.014	<0.004

03274500 GREAT MIAMI RIVER AT VENICE, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(04024), USGS National Water Information System parameter code; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

DATE	PROP-ACHLOR, WATER, FLTRD (UG/L) (04024)	PRO-PANIL, WATER, FLTRD (UG/L) (82679)	PRO-PARGITE, WATER, FLTRD (UG/L) (82685)	SI-MAZINE, WATER, FLTRD (UG/L) (04035)	TEBU-THI-URON, WATER, FLTRD (UG/L) (82670)	TER-BACIL, WATER, FLTRD (UG/L) (82665)	TER-BUFOS, WATER, FLTRD (UG/L) (82675)	THIO-BENCARB, WATER, FLTRD (UG/L) (82681)	TRIAL-LATE, WATER, FLTRD (UG/L) (82678)	TRI-FLUR-ALIN, WATER, FLTRD (UG/L) (82661)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
OCT											
6...	<0.010	<0.011	<0.023	0.016	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	363
NOV											
16...	<0.010	<0.011	<0.023	0.025	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	131
DEC											
20...	<0.010	<0.011	<0.023	0.021	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	34
APR											
11...	<0.010	<0.011	<0.023	0.085	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	1110
12...	<0.010	<0.011	<0.023	0.32	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	396

PROJECT DATA
Results from Selected Sites in the Great Miami and Little Miami River Basin (National Water-Quality Assessment Program)
WATER-QUALITY RECORDS—CONTINUED

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.-- 20.0 mi^2.
REMARKS.—Twelve discharge measurements were made at this site. Streamflow computed from these measurements is reported below. Continuous stage data are collected at Holes Creek at Mad River Road (03271300), a station 0.6 miles upstream of the sampling site that is maintained by the Miami Conservancy District.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

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

DATE	TIME	DIS-CHARGE, INST. (CUBIC FEET PER SECOND) (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	DIS-SOLVED OXYGEN (MG/L)) (00300)	DIS-SOLVED OXYGEN (PER-CENT SATUR-ATION) (00301)	PH WATER FIELD (STAND-ARD UNITS) (00400)	PH WATER LAB (STAND-ARD UNITS) (00403)	SPEC-IFIC CON-DUCT ANCE LAB (US/CM) (90095)	SPEC-IFIC CON-DUCT-ANCE FIELD (US/CM) (00095)	TEMPER-ATURE, AIR (DEG C) (00020)	TEMPER-ATURE, WATER (DEG C) (00010)	HARD-NESS, TOTAL (MG/L AS CACO3) (00900)
OCT												
05...	1110	470	741	9.1	97	7.7	7.6	300	277	20	18.0	97
NOV												
15...	1030	4.5	745	12.7	103	8.2	8.1	687	661	3	5.0	253
DEC												
12...	1020	49	753	11.7	85	8.0	7.7	608	586	-3	2.0	184
JAN												
26...	1100	5.2	744	13.3	93	8.2	8.1	1590	1510	-2	0.0	377
FEB												
22...	1430	7.4	742	13.3	99	8.1	8.2	1420	1380	0	2.0	362
MAR												
21...	1300	10	740	12.2	112	8.5	8.2	1150	1120	15	10.0	331
APR												
24...	1130	8.0	745	10.4	109	8.4	8.2	957	976	18	16.0	316
MAY												
17...	1600	50	734	8.8	99	8.2	7.5	742	724	22	20.0	214
JUN												
13...	1130	39	738	7.2	87	8.0	7.8	525	535	32	24.0	150
JUL												
25...	1315	3.4	739	10.1	132	8.1	8.2	625	633	---	27.5	215
AUG												
15...	1400	1.8	740	8.1	101	8.3	8.2	722	722	27	25.0	247
SEP												
20...	1200	24	---	---	---	8.1	8.1	467	941	21.0	22.4	152

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00915), USGS National Water Information System parameter code;; mg/L, milligrams per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

DATE	CALCIUM, DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY, WATER, DIS-SOLVED FIELD (MG/L AS CACO3) (39086)	BICAR-BONATE, WATER, DIS-SOLVED FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS-SOLVED FIELD (MG/L AS CO3) (00452)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE, DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG C DIS-SOLVED (MG/L) (70300)
OCT												
05...	27	7.4	2.7	15	71	86	<1	24	E0.11	2.9	17	156
NOV												
15...	65	22	3.5	36	186	224	<1	69	0.26	5.8	38	384
DEC												
12...	48	16	3.6	41	142	171	<1	78	0.19	3.8	35	336
JAN												
26...	94	35	3.9	155	255	307	<1	302	0.23	3.6	60	820
FEB												
22...	91	33	3.1	141	236	265	10	272	0.20	2.5	58	774
MAR												
21...	81	31	3.1	100	225	256	7	189	0.23	0.6	54	582
APR												
24...	79	29	2.9	82	226	260	6	149	0.19	1.9	47	562
MAY												
17...	55	19	3.1	62	78	95	<1	114	0.22	4.6	30	396
JUN												
13...	38	13	2.7	36	121	144	1	69	E0.13	3.4	25	306
JUL												
25...	51	21	2.9	40	161	189	3	76	0.33	6.6	37	365
AUG												
15...	60	23	2.5	50	186	222	2	93	0.28	5.8	34	397
SEP												
20...	40	13	2.7	30	113	136	<1	54	0.18	4.9	23	253

PROJECT DATA
Results from Selected Sites in the Great Miami and Little Miami River Basin (National Water-Quality Assessment Program)
WATER-QUALITY RECORDS—CONTINUED

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00608), USGS National Water Information System parameter code; mg/L, milligrams per liter; col/100mL, colonies per 100 milliliters; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value; K, value is estimated from non-ideal colony count.]

DATE	NITRO-GEN, AMMONIA, DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC, DIS-SOLVED (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC, TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2 + NO3, DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS, TOTAL (MG/L AS P) (00665)	E. COLI, WATER TOTAL (COL/ 100 ML) (31633)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	2,6-DI-ETHYL ANILINE, WATER, FLTRD (UG/L) (82660)
OCT												
05...	0.08	0.4	1.6	0.58	0.02	0.04	0.03	0.40	K14000	21	3.5	<0.002
NOV												
15...	<0.04	0.3	0.3	0.57	E0.01	0.01	E0.01	0.02	100	17	7.3	---
DEC												
12...	<0.04	0.6	0.8	0.68	0.02	0.04	<0.02	0.10	2000	13	22	<0.002
JAN												
26...	<0.04	0.3	0.2	1.1	0.01	0.007	<0.02	0.01	22	15	17	<0.002
FEB												
22...	<0.04	0.2	0.4	0.95	0.01	0.007	<0.02	0.02	K12	12	25	<0.002
MAR												
21...	<0.04	0.3	0.3	0.81	0.01	0.008	<0.02	0.03	<3	16	24	<0.002
APR												
24...	<0.04	0.4	0.6	0.61	0.01	0.006	<0.02	0.04	390	15	12	<0.002
MAY												
17...	<0.04	0.4	0.7	0.48	0.03	0.02	<0.02	0.09	1800	11	10	<0.002
JUN												
13...	<0.04	0.3	1.0	0.66	0.03	0.02	<0.02	0.16	K16000	E6.3	E2.2	<0.002
JUL												
25...	<0.04	0.2	0.3	0.74	E0.01	0.02	E0.01	0.04	---	<10	8.5	<0.002
AUG												
15...	<0.04	0.2	0.4	0.82	E0.01	0.01	<0.02	0.04	270	<10	8.9	<0.002
S EP												
20...	<0.04	0.3	0.5	0.51	0.01	0.02	<0.02	0.08	2400	11	E2.6	<0.002

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(49260), USGS National Water Information System parameter code; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

DATE	ACETO-CHLOR, WATER, FLTRD (UG/L) (49260)	ALA-CHLOR, WATER, FLTRD (UG/L) (46342)	ALPHA BHC, WATER, FLTRD (UG/L) (34253)	ATRA-ZINE, WATER, FLTRD (UG/L) (39632)	BEN-FLUR-ALIN, WATER, FLTRD (UG/L) (82673)	BUTYL-ATE, WATER, FLTRD (UG/L) (04028)	CAR-BARYL, WATER, FLTRD (UG/L) (82680)	CARBO-FURAN, WATER, FLTRD (UG/L) (82674)	CHLOR-PYRIFOS, WATER, FLTRD (UG/L) (38933)	CYANA-ZINE, WATER, FLTRD (UG/L) (04041)	DCPA, WATER, FLTRD (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, FLTRD (UG/L) (04040)
OCT												
05...	<0.004	<0.002	<0.005	E0.01	<0.002	E0.009	<0.020	0.006	<0.018	<0.018	<0.003	E0.006
NOV												
15...	---	---	---	---	---	---	---	---	---	---	---	---
DEC												
12...	<0.004	<0.002	<0.005	0.01	<0.002	<0.041	<0.020	<0.005	<0.018	<0.018	<0.003	E0.009
JAN												
26...	<0.004	<0.002	<0.005	0.01	<0.002	<0.041	<0.020	<0.005	<0.018	<0.018	<0.003	E0.010
FEB												
22...	<0.004	<0.002	<0.005	0.01	<0.002	<0.041	<0.020	<0.005	<0.018	<0.018	<0.003	E0.008
MAR												
21...	<0.004	<0.002	<0.005	0.01	<0.002	<0.041	<0.020	<0.005	<0.018	<0.018	<0.003	E0.007
APR												
24...	0.008	<0.002	<0.005	0.12	<0.002	<0.041	<0.020	<0.005	<0.018	<0.018	<0.003	E0.015
MAY												
17...	0.078	0.011	<0.005	0.42	<0.002	E0.019	<0.020	E0.004	<0.018	<0.018	<0.003	E0.11
JUN												
13...	0.071	<0.002	<0.005	0.96	<0.002	E0.018	<0.020	E0.004	<0.018	<0.018	<0.003	E0.13
JUL												
25...	<0.004	<0.002	<0.005	1.1	<0.002	<0.041	<0.020	E0.005	<0.018	<0.018	<0.003	E0.007
AUG												
15...	<0.004	<0.002	<0.005	0.03	<0.002	<0.041	<0.020	<0.005	<0.018	<0.018	<0.003	E0.006
SEP												
20...	<0.004	<0.002	<0.005	0.016	<0.002	E0.031	<0.020	<0.005	<0.018	<0.018	<0.003	<0.006

PROJECT DATA
Results from Selected Sites in the Great Miami and Little Miami River Basin (National Water-Quality Assessment Program)
WATER-QUALITY RECORDS—CONTINUED

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(39572), USGS National Water Information System parameter code; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

DATE	DI-AZINON, WATER, FLTRD (UG/L) (39572)	DI-ELRIN, WATER, FLTRD (UG/L) (39381)	DISUL-FOTON, WATER, FLTRD (UG/L) (82677)	EPTC, WATER, FLTRD (UG/L) (82668)	ETHAL-FLUR-ALIN, WATER, FLTRD (UG/L) (82663)	ETHO-PROP, WATER, FLTRD (UG/L) (82672)	FONOFOS, WATER, FLTRD (UG/L) (04095)	LINDANE, WATER, FLTRD (UG/L) (39341)	LIN-URON, WATER, FLTRD (UG/L) (82666)	MALA-THION, WATER, FLTRD (UG/L) (39532)	METHYL-AZIN-PHOS, WATER, FLTRD (UG/L) (82686)	METHYL PARA-THION, WATER, FLTRD (UG/L) (82667)
OCT												
05...	0.110	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	0.12	<0.050	<0.006
NOV												
15...	---	---	---	---	---	---	---	---	---	---	---	---
DEC												
12...	0.024	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	E0.011	<0.050	<0.006
JAN												
26...	0.006	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
FEB												
22...	0.006	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
MAR												
21...	0.005	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
APR												
24...	0.041	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
MAY												
17...	0.14	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	E0.006	<0.050	<0.006
JUN												
13...	0.15	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
JUL												
25...	0.098	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
AUG												
15...	0.026	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006
SEP												
20...	0.14	<0.005	<0.021	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	E0.009	<0.050	<0.006

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(39415), USGS National Water Information System parameter code; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

DATE	METO-LACHLOR, WATER, FLTRD (UG/L) (39415)	METRI-BUZIN, WATER, FLTRD (UG/L) (82630)	MOL-INATE, WATER, FLTRD (UG/L) (82671)	NAPROP-AMIDE, WATER, FLTRD (UG/L) (82684)	P,P' DDE, WATER, FLTRD (UG/L) (34653)	PARA-THION, WATER, FLTRD (UG/L) (39542)	PEB-ULATE, WATER, FLTRD (UG/L) (82669)	PENDI-METH-ALIN, WATER, FLTRD (UG/L) (82683)	CIS-PER-METHRIN, WATER, FLTRD (UG/L) (82687)	PHORATE, WATER, FLTRD (UG/L) (82664)	PRO-METON, WATER, FLTRD (UG/L) (04037)	PRON-AMIDE, WATER, FLTRD (UG/L) (82676)
OCT												
05...	E0.002	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.01	<0.006	<0.011	0.036	<0.004
NOV												
15...	---	---	---	---	---	---	---	---	---	---	---	---
DEC												
12...	E0.004	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.01	<0.006	<0.011	E0.012	<0.004
JAN												
26...	E0.004	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.01	<0.006	<0.011	E0.013	<0.004
FEB												
22...	E0.001	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.01	<0.006	<0.011	E0.007	<0.004
MAR												
21...	E0.004	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	0.022	<0.006	<0.011	E0.008	<0.004
APR												
24...	0.016	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	E0.022	<0.006	<0.011	0.049	<0.004
MAY												
17...	0.051	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	E0.008	<0.006	<0.011	0.044	<0.004
JUN												
13...	0.13	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	0.013	<0.006	<0.011	0.055	<0.004
JUL												
25...	E0.009	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.01	<0.006	<0.011	0.066	<0.004
AUG												
15...	E0.002	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.01	<0.006	<0.011	0.13	<0.004
SEP												
20...	E0.005	<0.006	<0.002	<0.007	<0.003	<0.007	<0.002	<0.01	<0.006	<0.011	0.053	<0.004

PROJECT DATA
Results from Selected Sites in the Great Miami and Little Miami River Basin (National Water-Quality Assessment Program)
WATER-QUALITY RECORDS—CONTINUED

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(04024), USGS National Water Information System parameter code; mg/L, milligrams per liter; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

DATE	PROP-ACHLOR, WATER, FLTRD (UG/L) (04024)	PRO-PANIL, WATER, FLTRD (UG/L) (82679)	PRO-PARGITE, WATER, FLTRD (UG/L) (82685)	SI-MAZINE, WATER, FLTRD (UG/L) (04035)	TEBU-THI-URON, WATER, FLTRD (UG/L) (82670)	TER-BACIL, WATER, FLTRD (UG/L) (82665)	TER-BUFOS, WATER, FLTRD (UG/L) (82675)	THIO-BENCARB, WATER, FLTRD (UG/L) (82681)	TRIAL-LATE, WATER, FLTRD (UG/L) (82678)	TRI-FLUR-ALIN, WATER, FLTRD (UG/L) (82661)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
OCT											
05...	<0.010	<0.011	<0.023	E0.006	<0.016	<0.034	<0.017	<0.005	<0.002	E0.001	331
NOV											
15...	---	---	---	---	---	---	---	---	---	---	6
DEC											
12...	<0.010	<0.011	<0.023	E0.007	<0.016	<0.034	<0.017	<0.005	<0.002	E0.001	66
JAN											
26...	<0.010	<0.011	<0.023	E0.005	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	18
FEB											
22...	<0.010	<0.011	<0.023	E0.005	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	5
M AR											
21...	<0.010	<0.011	<0.023	E0.006	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	92
APR											
24...	<0.010	<0.011	<0.023	E0.009	<0.016	<0.034	<0.017	<0.005	<0.002	E0.001	29
MAY											
17...	<0.010	<0.011	<0.023	0.035	<0.016	<0.034	<0.017	<0.005	<0.002	E0.004	30
JUN											
13...	<0.010	<0.011	<0.023	0.18	<0.016	<0.034	<0.017	<0.005	<0.002	E0.003	101
JUL											
25...	<0.010	<0.011	<0.023	0.039	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	63
AUG											
15...	<0.010	<0.011	<0.023	0.044	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	15
SEP											
20...	<0.010	<0.011	<0.023	0.012	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009	31

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

FISH-COMMUNITY RESULTS FROM FIXED SITES

Fish-community surveys were conducted at two sites in the Great and Little Miami River Basins as part of the National Water-Quality Assessment Program (NAWQA). The sites were sampled as part of a multiyear assessment to estimate year-to-year variability. Fish were collected by electrofishing with a barge electroshocker and pulsed-DC current in a mapped reach at each site. Two electrofishing passes were done at each reach in a single day. Fish were identified, measured, weighed, and checked for external anomalies such as parasites, lesions, and skeletal anomalies. Fish were identified in the field and representative specimens were preserved, identified, and vouchered by Dr. Terry Keiser, Ohio Northern University. More details regarding collection methods can be found in Meador and others (1993). Taxonomy is based on Robins and others (1991).

CALENDAR YEAR 2001

[(00095), USGS National Water Information System parameter code; mi^2, square mile; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; mg/L, milligrams per liter.]

STATION NUMBER	STATION NAME	DATE	DRAINAGE AREA (MI^2)	REACH LENGTH (METERS)	SPECIFIC CONDUCTANCE, FIELD (US/CM) (00095)	PH, WHOLE WATER FIELD (STANDARD UNITS) (00400)	WATER TEMPERATURE, (DEG C) (00010)	OXYGEN, DISSOLVED (MG/L) (00300)
393944084120700	Holes Creek at Kettering, Ohio	08/28/01	20.0	200	499	8.2	23.8	7.7
395650083504400	Mad River near Highway 41 near Springfield, Ohio	08/29/01	318.6	350	724	8.0	19.5	16.2

FAMILY	SCIENTIFIC NAME	COMMON NAME	HOLES CREEK AT HUFFMAN PARK AT KETTERING, OHIO		MAD RIVER NEAR HIGHWAY 41 NEAR SPRINGFIELD, OHIO	
			ABUNDANCE	BATCH WEIGHT (GRAM)	ABUNDANCE	BATCH WEIGHT (GRAM)
Petromyzontidae	*Lampetra appendix*	American brook lamprey	---	---	3	42.5
Cyprinidae	*Campostoma anomalum*	central stoneroller	577	2752	280	6781.5
	Clinostomus elongatus	redside dace	---	---	38	223.7
	Cyprinella spiloptera	spotfin shiner	1	7	---	---
	Cyprinus carpio	common carp	2	2050	11	5218
	Exoglossum laurae	tonguetied minnow	---	---	1	17
	Luxilus chrysocephalus	striped shiner	51	367.7	3	27
	Notropis buccatus	silverjaw minnow	1	3.1	1	3
	Notropis photogenis	silver shiner	---	---	1	5
	Notropis stramineus	sand shiner	16	29.5	---	---
	Pimephales notatus	bluntnose minnow	53	140	7	32
	Pimephales promelas	fathead minnow	---	---	3	13
	Rhinichthys atratulus	blacknose dace	6	13.2	97	414.2
	Semotilus atromaculatus	creek chub	68	573	396	9027
Catostomidae	*Catostomus commersoni*	white sucker	14	527	567	25237
	Hypentelium nigricans	northern hog sucker	19	958	43	10322.6
	Moxostoma erythrurum	golden redhorse	1	194	---	---
Ictaluridae	*Ameiurus natalis*	yellow bullhead	2	7	1	222
Esocidae	*Esox americanus vermiculatus*	grass pickerel	---	---	1	64
Salmonidae	*Salmo trutta*	brown trout	---	---	3	548
Gasterosteidae	*Culaea inconstans*	brook stickleback	---	---	1	1
Cottidae	*Cottus bairdi*	mottled sculpin	---	---	9	61.4
Centrarchidae	*Ambloplites rupestris*	rock bass	---	---	1	64
	Lepomis cyanellus	green sunfish	2	73	4	68
	Lepomis macrochirus	bluegill	22	391.5	10	58
	Micropterus dolomieu	smallmouth bass	1	227	---	---
	Micropterus punctulatus	spotted bass	7	19	1	4
	Micropterus salmoides	largemouth bass	1	57	5	45
Percidae	*Etheostoma blennioides*	greenside darter	---	---	6	16.3
	Etheostoma caeruleum	rainbow darter	---	---	2	4.3
	Etheostoma flabellare	fantail darter	50	94.8	---	---
NUMBER OF SPECIES			19	---	26	---
HYBRID SPECIES			1	---	---	---
TOTAL NUMBER OF FISH			894	---	1487	---

PROJECT DATA
Results from Selected Sites in the Great Miami and Little Miami River Basin (National Water-Quality Assessment Program)
CHLOROPHYLL AND BIOMASS MEASUREMENTS FROM FIXED SITES

Field measurements of water quality and samples of algal chlorophyll *a* and pheophytin *a* were taken from the stream bottom (periphyton) in riffles representing the richest-targeted habitats (RTH) and depositional-targeted habitats (DTH) as defined in the NAWQA algal protocols (Porter, S.D., Cuffney, T.F., Gurtz, M.E. and Meador, M.R., 1993, Methods for collecting algal samples as part of the National Water-Quality Assessment Program: U.S. Geological Survey Open-file Report 93-409, 39 pp.).

WATER-QUALITY DATA

[(70957), USGS National Water Information System parameter code; mg/m^2, milligrams per square meter; g/m^2, grams per square meter; RTH, richest-targeted habitat for periphyton; DTH, depositional-targeted habitat for periphyton]

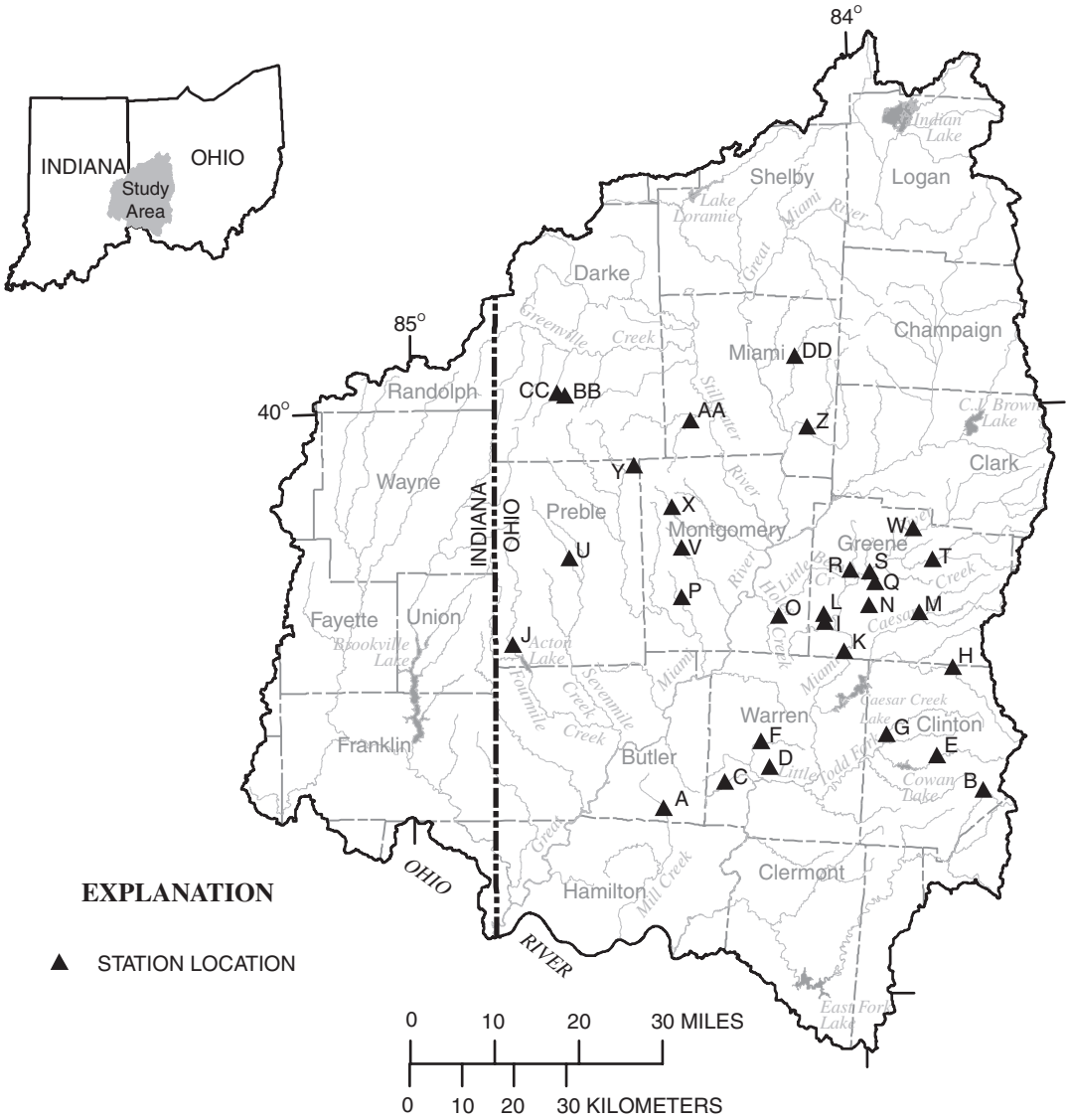
STATION NUMBER	STATION NAME	DATE	SAMPLE TYPE	SAMPLE NUMBER	PERIPHYTON, CHLOROPHYLL *a* (MG/M^2) (70957)	PERIPHYTON, PHEOPHYTON *a* (MG/M^2) (62359)	PERIPHYTON, BIOMASS, ASH WEIGHT (G/M^2) (00572)	PERIPHYTON, BIOMASS, DRY WEIGHT (G/M^2) (00573)	PERIPHYTON, ASH-FREE DRY WEIGHT (G/M^2)
395650083504400	Mad River near Highway 41 near Springfield, Ohio	07/02/01	RTH	1	476	219	1300	1390	95.9
		07/02/01	RTH	2	489	192	1320	1450	122
		07/02/01	DTH	1	47.9	68.8	2130	2270	143
		07/02/01	DTH	2	98.9	117	3390	3580	188
393944084120700	Holes Creek at Huffman Park near Kettering, Ohio	07/30/01	RTH	1	137	86.3	1650	1710	59.1
		07/03/01	RTH	2	164	127	1570	1630	51.2
		07/03/01	DTH	1	35.4	37.2	1670	1730	58.3
		07/03/01	DTH	2	27.9	20.1	2580	2660	83.7

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

RESULTS FROM THE URBAN-GRADIENT STUDY

Water-quality samples were collected at 30 sites in the Great and Little Miami River Basins as part of the National Water-Quality Assessment Program (NAWQA). The sites were sampled as part of an Urban-Gradient Study designed to assess patterns of biological response and identify physical and chemical factors that control water quality locally and regionally along a gradient of urban land use. Watersheds associated with the streams sampled represent a range of land-use settings from row-crop agriculture to highly urbanized residential and commercial areas.

All samples were collected during low-flow conditions in July 2001. Water samples were collected and processed for analysis of selected physical, biological, and chemical characteristics including major ions, nutrients, and selected pesticides. Stream discharge was also measured during sampling. Multiparameter data sondes were deployed at each site prior to sample collection to assess diurnal variations in temperature, pH, specific conductance, dissolved oxygen concentrations, and at selected sites, qualitative chlorophyll concentrations in the water column. Field measurements of of algal chlorophyll *a*, pheophyton *a*, and biomass were taken from the stream bottom in riffles (periphyton) representing the richest targeted habitats and from the water column (phytoplankton) using the NAWQA algal protocols (Porter and others, 1993). Ash-free and dry weights were analyzed for all periphyton samples. For an estimate of phytoplankton biomass refer to the water-quaity section where data from split samples are reported. To obtain the amount of particulate organic carbon in the water samples (plankton and bacteria) collected, subtract the dissolved organic carbon (DOC) from the total organic carbon (TOC). NAWQA guidelines for collection and processing of water-quality samples are described in Shelton (1994). Guidelines for collection and processing of algae samples are given by Porter and others (1993).



PROJECT DATA

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

RESULTS FROM THE URBAN-GRADIENT STUDY—CONTINUED

[mi^2, square mile.]

STATION NUMBER	MAP INDEX	STATION NAME	LATITUDE	LONGITUDE	DRAINAGE AREA (mi^2)
391852084253100	A	East Fork Mill Creek at Allen Road	39°18′52″	84°25′31″	8.4
392027083430100	B	East Fork Little Miami River at Thornburg Road	39°20′27″	83°43′01″	5.8
392219084172100	C	Muddy Creek at State Route 741	39°22′19″	84°17′21″	10.0
392306084121300	D	Dry Run at Dry Run Road near Lebanon	39°23′06″	84°12′13″	5.5
392400083494000	E	Cowan Creek at Ireland Road	39°24′00″	83°49′40″	32.4
392553084133100	F	Turtle Creek at Glossar Road	39°25′53″	84°13′31″	22.3
392614083564000	G	Todd Fork at US 22 and US 3 near Sligo	39°26′14″	84°56′40″	56.6
393317083474000	H	Anderson Fork at Port William Road	39°33′17″	84°47′40″	42.6
393450084020300	I	Unnamed tributary at US 42 near Mount Holly	39°34′50″	84°02′03″	4.5
393619084461200	J	Fourmile Creek at Camden College Road	39°36′19″	84°46′12″	50.1
393748084042300	K	Sugar Creek at Waynesville Road	39°37′48″	84°04′23″	19.0
393814084043500	L	Little Sugar Creek at Little Sugar Creek Road	39°38′14″	84°04′35″	2.8
393848083521200	M	Caesar Creek at Gultice Road	39°38′48″	84°52′12″	64.8
393903083582900	N	Glady Run at Hedges Road	39°39′03″	84°58′29″	6.5
393903084110500	O	Holes Creek at McEwen Road	39°39′03″	84°11′05″	14.8
394111084234200	P	Little Twin Creek at Farmersville-W. Carrollton Pike	39°41′11″	84°23′42″	12.5
394212083575200	Q	Shawnee Creek at Hawkins Road	39°42′12″	84°57′52″	11.4
394252084010900	R	Beaver Creek at Dayton-Xenia Road	39°42′52″	84°01′09″	20.8
394253083583300	S	Ludlow Creek at Hilltop Road	39°42′53″	84°58′33″	7.0
394414083501800	T	Massies Creek at Tarbox-Cemetary Road	39°44′14″	84°50′18″	55.6
394510084384100	U	Sevenmile Creek at Eaton Waterworks Park	39°45′10″	84°38′41″	25.2
394549084234400	V	Bear Creek at Clayton Road	39°45′49″	84°23′44″	6.1
394727083523000	W	Yellow Springs Creek at E. Hyde Road	39°47′27″	84°52′30″	10.9
394953084244100	X	Wolf Creek at Westbrook Road	39°49′53″	84°24′41″	7.8
395452084293400	Y	Swamp Creek at Verona Road	39°54′52″	84°29′34″	13.3
395810084063600	Z	Honey Creek at Rudy Road	39°58′10″	84°06′36″	72.9
395912084214000	AA	Brush Creek at Elleman Road	39°59′12″	84°21′40″	22.9
400130084392900	BB	Prairie Outlet at Weavers-Ft. Jefferson Road	40°01′30″	84°39′29″	3.6
400134084400300	CC	Mud Creek near Ft. Jefferson	40°01′34″	84°40′03″	6.7
400439084080000	DD	Lost Creek at Troy-Urbana Road	40°04′39″	84°08′00″	30.4

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

RESULTS FROM THE URBAN-GRADIENT STUDY—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00061), USGS National Water Information System parameter code; mm of Hg, millimeters of mercury; mg/L, milligrams per liter; µS/cm, microsiemens per centimeter; deg C, degrees Celsius.]

STATION NUMBER	DATE	TIME	DIS-CHARGE, INST. (CUBIC FEET PER SECOND) (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	DIS-SOLVED OXYGEN (MG/L)) (00300)	DIS-SOLVED OXYGEN (PER-CENT SATUR-ATION) (00301)	PH WATER FIELD (STAND-ARD UNITS) (00400)	PH WATER LAB (STAND-ARD UNITS) (00403)	SPEC-IFIC CON-DUCT ANCE LAB (US/CM) (90095)	SPEC-IFIC CON-DUCT-ANCE FIELD (US/CM) (00095)	TEMPER-ATURE, AIR (DEG C) (00020)
391852084253100	07/30/01	1400	2.4	745	9.0	110	7.7	8.1	895	902	35.0
392027083430100	07/26/01	1400	4.8	734	7.3	87.4	7.8	7.9	423	425	27.0
392219084172100	07/30/01	1010	2.6	744	5.0	60.2	7.8	8.0	522	523	25.0
392306084121300	07/23/01	0940	1.5	742	7.8	90.2	7.9	8.1	790	791	29.0
392400083494000	07/24/01	1430	1.1	732	7.6	98.0	8.0	8.1	603	602	35.0
392553084133100	07/31/01	0850	9.2	748	7.0	83.0	8.1	8.2	616	621	25.0
392614083564000	07/24/01	0920	4.1	737	5.6	69.2	7.8	8.0	677	686	30.0
393317083474000	07/31/01	1150	1.4	739	7.0	88.9	8.0	8.1	528	534	33.0
393450084020300	07/26/01	0900	1.0	741	7.5	86.1	8.1	8.2	653	658	23.0
393619084461200	07/16/01	1530	13	739	9.1	111	8.2	8.2	647	654	28.0
393748084042300	07/09/01	0940	3.0	736	7.6	87.0	7.8	7.9	731	726	29.0
393814084043500	07/10/01	1330	2.1	735	10.6	134	8.2	8.0	800	849	32.0
393848083521200	07/25/01	1340	2.1	733	7.9	101	7.9	8.2	704	666	32.0
393903083582900	07/25/01	1000	4.7	735	7.2	83.9	7.8	8.0	926	932	33.0
393903084110500	07/10/01	0840	1.4	735	5.8	71.4	7.9	8.0	653	653	26.0
394111084234200	07/17/01	0900	0.30	741	4.4	51.3	7.9	8.1	962	970	25.0
394212083575200	07/11/01	0820	2.9	735	5.3	65.3	7.9	7.9	650	653	19.0
394252084010900	07/09/01	1330	14	736	8.4	100	7.9	7.9	703	697	32.0
394253083583300	07/13/01	0830	3.4	741	8.3	87.5	8.1	8.1	728	754	19.0
394414083501800	07/13/01	1300	14	737	9.2	107	8.5	8.4	760	740	26.0
394510084384100	07/16/01	1030	5.7	735	7.9	87.3	8.1	8.2	736	724	27.5
394549084234400	07/20/01	0830	0.41	737	5.4	62.0	7.8	8.0	682	680	25.0
394727083523000	07/11/01	1430	5.6	735	8.3	94.6	8.1	8.0	767	776	24.0
394953084244100	07/17/01	1240	1.1	734	5.8	68.2	8.0	7.6	693	685	32.0
395452084293400	07/19/01	1420	1.5	735	4.3	51.0	7.6	7.8	723	719	32.0
395810084063600	07/12/01	0930	26	740	7.9	86.4	8.1	8.2	741	746	20.0
395912084214000	07/19/01	1000	3.0	738	7.5	85.0	8.0	8.1	678	675	25.0
400130084392900	07/18/01	1230	2.0	734	6.5	76.8	7.8	7.8	626	628	28.0
400134084400300	07/18/01	1020	5.8	732	6.9	81.8	7.8	7.8	601	600	24.0
400439084080000	07/12/01	1430	5.8	736	9.4	108	8.2	8.2	685	709	27.0

PROJECT DATA

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

RESULTS FROM THE URBAN-GRADIENT STUDY—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00010), USGS National Water Information System parameter code; deg C, degrees Celsius; mg/L, milligrams per liter; <, concentration or value reported is less than that indicated.]

STATION NUMBER	TEMPERATURE, WATER (DEG C) (00010)	HARDNESS, TOTAL (MG/L AS CACO3) (00900)	CALCIUM, DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	ALKALINITY, WATER, DISSOLVED FIELD (MG/L AS CACO3) (39086)	BICARBONATE, WATER, DISSOLVED FIELD (MG/L AS HCO3) (00453)	CARBONATE WATER DISSOLVED FIELD (MG/L AS CO3) (00452)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)
391852084253100	23.9	371	108	25	3.2	45	282	338	3	82	0.3
392027083430100	22.1	167	42	15	5.3	9.8	143	172	<1	21	0.2
392219084172100	22.8	205	58	14	3.0	27	153	185	<1	48	0.3
392306084121300	21.0	294	87	18	3.5	40	235	285	1	72	0.2
392400083494000	26.6	269	64	26	7.0	18	207	249	2	29	0.2
392553084133100	22.9	274	79	19	3.6	21	228	274	2	39	0.2
392614083564000	24.1	332	80	32	2.3	15	263	317	2	34	0.2
393317083474000	25.7	238	45	31	2.1	16	196	235	2	33	0.3
393450084020300	20.8	302	74	28	2.8	17	244	293	2	41	0.2
393619084461200	23.7	332	75	35	1.8	10	248	295	4	29	0.2
393748084042300	20.7	279	70	25	2.4	38	231	278	2	73	0.1
393814084043500	25.2	337	80	33	2.0	43	241	290	2	92	0.1
393848083521200	26.1	309	70	33	2.2	16	238	286	2	40	0.3
393903083582900	20.6	327	84	29	5.8	66	256	310	1	98	0.2
393903084110500	23.8	193	46	19	3.2	52	135	163	1	97	0.2
394111084234200	21.3	363	82	38	4.8	59	278	335	2	104	0.5
394212083575200	23.8	246	61	23	3.1	29	222	267	2	58	0.1
394252084010900	22.7	324	81	30	3.3	18	287	344	3	40	0.2
394253083583300	16.4	375	90	37	5.5	14	290	346	3	33	0.2
394414083501800	20.8	379	86	40	1.6	14	257	305	4	37	0.3
394510084384100	18.3	355	85	34	1.7	16	271	325	2	39	0.3
394549084234400	20.6	290	68	30	2.8	20	238	288	1	45	0.5
394727083523000	19.5	370	85	38	2.0	24	281	336	3	50	0.2
394953084244100	21.3	268	63	27	2.4	32	190	228	1	62	0.4
395452084293400	22.2	311	73	31	2.3	23	255	309	<1	47	0.4
395810084063600	18.1	358	86	35	2.4	20	278	331	3	43	0.3
395912084214000	19.9	302	68	32	2.3	16	231	278	2	40	0.2
400130084392900	21.8	284	63	31	2.5	15	234	283	1	36	0.2
400134084400300	21.6	271	57	31	2.6	13	183	222	<1	33	0.3
400439084080000	20.2	347	83	34	1.9	14	261	311	4	34	0.3

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

RESULTS FROM THE URBAN-GRADIENT STUDY—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00955), USGS National Water Information System parameter code; mg/L, milligrams per liter; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

STATION NUMBER	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE, DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN, AM-MONIA, DIS-SOLVED (MG/L) (00608)	NITRO-GEN, AM-MONIA + ORGANIC, DIS-SOLVED (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC, TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2 + NO3, DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, PARTI-CULATE, WHOLE WATER (MG/L AS N) (49570)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS, TOTAL (MG/L AS P) (00665)
391852084253100	9.5	65	<0.04	0.2	0.3	0.33	<0.006	0.04	0.09	0.07	0.11
392027083430100	7.2	26	E0.022	0.8	0.9	2.6	0.035	0.31	0.28	0.23	0.32
392219084172100	5.6	39	<0.04	0.3	0.4	0.31	E0.004	0.09	0.05	0.03	0.10
392306084121300	7.1	55	E0.024	0.2	0.3	0.17	<0.006	0.03	0.05	0.03	0.06
392400083494000	3.5	58	<0.04	0.3	0.4	0.97	0.011	0.10	0.02	<0.02	0.04
392553084133100	8.4	30	<0.04	0.3	0.4	0.60	E0.003	0.06	0.06	0.04	0.07
392614083564000	5.0	45	<0.04	0.2	0.3	0.92	0.011	0.07	0.02	E0.01	0.04
393317083474000	0.4	27	<0.04	0.6	1.0	0.18	0.017	0.43	0.04	<0.02	0.10
393450084020300	7.3	37	<0.04	0.2	0.3	1.9	0.006	0.14	0.008	<0.02	0.04
393619084461200	3.8	33	<0.04	0.3	0.3	8.1	0.023	0.04	0.01	<0.02	0.02
393748084042300	6.2	29	E0.039	0.2	0.3	0.47	0.007	0.05	0.03	E0.02	0.05
393814084043500	7.8	33	<0.04	0.1	0.2	0.73	<0.006	0.02	0.01	<0.02	0.02
393848083521200	5.1	36	<0.04	0.2	0.3	2.2	0.014	0.10	0.02	E0.01	0.04
393903083582900	10.7	60	<0.04	0.4	0.5	2.4	0.018	0.11	0.16	0.14	0.18
393903084110500	4.0	32	<0.04	0.4	0.5	0.32	E0.004	0.10	0.02	<0.02	0.04
394111084234200	4.7	55	0.042	0.5	0.5	3.7	0.085	0.06	0.22	0.22	0.23
394212083575200	7.3	26	<0.04	0.3	0.4	1.5	0.035	0.08	0.04	0.02	0.06
394252084010900	9.1	30	E0.03	0.3	0.5	1.1	0.026	0.08	0.02	<0.02	0.04
394253083583300	9.1	58	<0.04	0.2	0.2	3.0	0.012	0.06	0.02	<0.02	0.05
394414083501800	5.5	80	<0.04	0.3	0.3	4.1	0.027	0.03	0.07	0.06	0.08
394510084384100	8.9	43	<0.04	0.2	0.8	5.9	0.015	0.04	0.04	0.02	0.06
394549084234400	9.7	47	E0.031	0.4	0.6	1.1	0.011	0.07	0.05	0.04	0.08
394727083523000	9.5	41	<0.04	0.2	0.2	5.0	E0.004	<0.02	0.03	E0.02	0.03
394953084244100	4.1	40	<0.04	0.7	0.7	3.2	0.048	0.10	0.08	0.04	0.11
395452084293400	5.3	40	0.056	0.5	0.5	4.3	0.132	0.05	0.09	0.07	0.11
395810084063600	7.8	39	<0.04	0.3	0.3	4.8	0.014	0.03	0.11	0.08	0.12
395912084214000	6.0	35	<0.04	0.4	0.4	7.7	0.012	<0.02	0.06	0.05	0.07
400130084392900	9.3	41	E0.027	0.4	0.6	1.0	0.022	0.12	0.03	<0.02	0.06
400134084400300	6.0	73	E0.022	0.4	0.4	0.46	0.020	0.11	0.02	<0.02	0.05
400439084080000	7.2	39	<0.04	0.3	0.3	6.3	0.015	<0.02	0.04	E0.02	0.04

PROJECT DATA
Results from Selected Sites in the Great Miami and Little Miami River Basin (National Water-Quality Assessment Program)
RESULTS FROM THE URBAN-GRADIENT STUDY—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00694), USGS National Water Information System parameter code; mg/L, milligrams per liter; µg/L, micrograms per liter; <, concentration or value reported is less than that indicated; E, estimated concentration or value; K, value estimated from non-ideal colony county.]

STATION NUMBER	ORGANIC CARBON, PARTI-CULATE (MG/L AS C) (00694)	DIS-SOLVED ORGANIC CARBON (MG/L AS C) (00681)	E.COLI, WATER TOTAL (COL/ 100 ML) (31633)	SOLIDS, RESIDUE AT 180 DEG C DIS-SOLVED (MG/L) (70300)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	2,6-DI-ETHYL ANILINE, WATER, FLTRD (UG/L) (82660)	ACETO-CHLOR, WATER, FLTRD (UG/L) (49260)	ALA-CHLOR, WATER, FLTRD (UG/L) (46342)	ALPHA BHC, WATER, FLTRD (UG/L) (34253)	ATRA-ZINE, WATER, FLTRD (UG/L) (39632)
391852084253100	0.3	2.7	420	538	<10	40	<0.002	<0.004	<0.002	<0.005	0.011
392027083430100	2.2	10.5	K18000	248	33	29	<0.002	0.049	<0.002	<0.005	0.45
392219084172100	0.8	4.4	2500	313	<10	14	<0.002	<0.004	<0.002	<0.005	0.066
392306084121300	0.2	3.2	850	457	<10	10	<0.002	<0.004	<0.002	<0.005	0.18
392400083494000	0.8	3.3	260	333	<10	28	<0.002	0.016	<0.002	<0.005	0.40
392553084133100	0.6	4.0	1300	371	<10	26	<0.002	<0.004	<0.002	<0.005	0.17
392614083564000	0.8	2.4	280	385	<10	26	<0.002	0.015	<0.002	<0.005	0.48
393317083474000	3.0	5.5	240	299	E9.1	46	<0.002	<0.004	<0.002	<0.005	0.38
393450084020300	1.4	3.4	4100	374	<10	7	<0.002	0.012	<0.002	<0.005	0.24
393619084461200	0.3	3.1	150	369	<10	E2.2	<0.002	0.007	<0.002	<0.005	0.30
393748084042300	<0.4	5.5	380	417	E6.0	45	<0.002	0.025	<0.002	<0.005	0.37
393814084043500	<0.3	2.2	250	466	<10	6.6	<0.002	<0.004	<0.002	<0.005	0.059
393848083521200	0.7	2.6	310	398	<10	20	<0.002	0.025	0.008	<0.005	0.70
393903083582900	0.7	3.4	2500	555	19	29	<0.002	<0.004	<0.002	<0.005	0.058
393903084110500	1.0	4.8	370	377	<10	19	<0.002	0.007	<0.002	<0.005	0.33
394111084234200	0.5	4.2	730	564	<10	8.1	<0.002	<0.004	<0.002	<0.005	0.46
394212083575200	0.8	7.0	>2700	396	E8.0	18	<0.002	0.023	<0.002	<0.005	0.40
394252084010900	<0.9	3.4	330	416	<10	34	<0.002	<0.004	<0.002	<0.005	0.038
394253083583300	0.7	5.3	650	453	<10	16	<0.002	<0.004	<0.002	<0.005	0.10
394414083501800	0.3	2.8	930	468	<10	5.6	<0.002	0.017	<0.002	<0.005	0.29
394510084384100	0.4	2.4	690	450	44	4.4	<0.002	0.011	<0.002	<0.005	0.20
394549084234400	1.0	4.3	4800	395	14	8.9	<0.002	E0.003	0.008	<0.005	0.36
394727083523000	0.3	3.1	140	415	<10	3.4	<0.002	<0.004	<0.002	<0.005	0.30
394953084244100	1.0	9.7	K30000	413	20	22	<0.002	<0.004	<0.002	<0.005	0.24
395452084293400	0.4	10	K1900	414	<10	16	<0.002	0.40	0.010	<0.005	0.68
395810084063600	0.3	2.8	550	445	<10	12	<0.002	0.051	<0.002	<0.005	0.42
395912084214000	0.3	5.5	270	387	<10	<3	<0.002	0.010	0.183	<0.005	0.85
400130084392900	1.1	6.9	1300	353	23	25	<0.002	<0.004	<0.002	<0.005	0.19
400134084400300	1.6	5.0	350	352	25	63	<0.002	<0.004	<0.002	<0.005	0.095
400439084080000	0.2	4.7	320	413	<10	E2.2	<0.002	0.019	<0.002	<0.005	0.53

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

RESULTS FROM THE URBAN-GRADIENT STUDY—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(82673), USGS National Water Information System parameter code; µg/L, micrograms per liter; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

STATION NUMBER	BEN-FLUR-ALIN, WATER, FLTRD (UG/L) (82673)	BUTYL-ATE, WATER, FLTRD (UG/L) (04028)	CAR-BARYL, WATER, FLTRD (UG/L) (82680)	CARBO-FURAN, WATER, FLTRD (UG/L) (82674)	CHLOR-PYRIFOS, WATER, FLTRD (UG/L) (38933)	CYANA-ZINE, WATER, FLTRD (UG/L) (04041)	DCPA, WATER, FLTRD (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, FLTRD (UG/L) (04040)	DI-AZINON, WATER, FLTRD (UG/L) (39572)	DI-ELRIN, WATER, FLTRD (UG/L) (39381)	DISUL-FOTON, WATER, FLTRD (UG/L) (82677)
391852084253100	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.006	0.015	<0.005	<0.021
392027083430100	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.044	<0.005	<0.005	<0.021
392219084172100	<0.010	<0.002	<0.041	<0.020	0.006	<0.018	<0.003	E0.011	0.461	<0.005	<0.021
392306084121300	<0.010	<0.002	E0.011	<0.020	<0.005	<0.018	E0.002	E0.010	0.091	<0.005	<0.021
392400083494000	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.043	<0.005	<0.005	<0.021
392553084133100	<0.010	<0.002	E0.008	<0.020	<0.005	<0.018	<0.003	E0.032	0.038	<0.005	<0.021
392614083564000	<0.010	<0.002	<0.041	<0.020	<0.005	E0.006	<0.003	E0.057	0.010	<0.005	<0.021
393317083474000	<0.010	<0.002	E0.006	<0.020	<0.005	<0.018	<0.003	E0.056	<0.005	<0.005	<0.021
393450084020300	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.098	E0.003	<0.005	<0.021
393619084461200	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.048	<0.005	<0.005	<0.021
393748084042300	<0.010	<0.002	E0.003	<0.020	<0.005	E0.010	<0.003	E0.019	0.220	<0.005	<0.021
393814084043500	<0.010	<0.002	E0.006	<0.020	<0.005	<0.018	<0.003	E0.006	0.038	<0.005	<0.021
393848083521200	<0.010	<0.002	<0.041	<0.020	<0.005	E0.010	<0.003	E0.12	<0.005	<0.005	<0.021
393903083582900	<0.010	<0.002	E0.023	<0.020	E0.005	<0.018	<0.003	E0.016	0.085	<0.005	<0.021
393903084110500	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.042	0.088	<0.005	<0.021
394111084234200	<0.010	<0.002	<0.041	<0.020	0.005	E0.007	<0.003	E0.044	<0.005	<0.005	<0.021
394212083575200	<0.010	<0.002	E0.026	<0.020	<0.005	<0.018	<0.003	<0.020	0.012	<0.005	<0.021
394252084010900	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	E0.001	E0.006	0.062	<0.005	<0.021
394253083583300	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.019	<0.005	<0.005	<0.021
394414083501800	<0.010	<0.002	E0.001	<0.020	E0.001	<0.018	<0.003	E0.018	<0.005	<0.005	<0.021
394510084384100	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.024	<0.005	<0.005	<0.021
394549084234400	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.027	<0.005	<0.005	<0.021
394727083523000	<0.010	<0.002	<0.041	<0.020	0.005	<0.018	<0.003	E0.029	<0.005	<0.005	<0.021
394953084244100	<0.010	<0.002	E0.019	<0.020	<0.005	<0.018	<0.003	E0.044	0.260	<0.005	<0.021
395452084293400	<0.010	<0.002	E0.007	<0.020	<0.005	0.018	<0.003	E0.036	0.019	<0.005	<0.021
395810084063600	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.070	E0.003	<0.005	<0.021
395912084214000	<0.010	<0.002	<0.041	<0.020	<0.005	E0.014	<0.003	E0.15	<0.005	<0.005	<0.021
400130084392900	<0.010	<0.002	E0.024	<0.020	<0.005	<0.018	<0.003	E0.062	E0.004	<0.005	<0.021
400134084400300	<0.010	<0.002	<0.041	<0.020	<0.005	E0.007	<0.003	E0.030	<0.005	<0.005	<0.021
400439084080000	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	E0.084	<0.005	<0.005	<0.021

PROJECT DATA
Results from Selected Sites in the Great Miami and Little Miami River Basin (National Water-Quality Assessment Program)
RESULTS FROM THE URBAN-GRADIENT STUDY—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(82668), USGS National Water Information System parameter code; µg/L, micrograms per liter; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

STATION NUMBER	EPTC, WATER, FLTRD (UG/L) (82668)	ETHAL-FLUR-ALIN, WATER, FLTRD (UG/L) (82663)	ETHO-PROP, WATER, FLTRD (UG/L) (82672)	FONOFOS, WATER, FLTRD (UG/L) (04095)	LINDANE, WATER, FLTRD (UG/L) (39341)	LIN-URON, WATER, FLTRD (UG/L) (82666)	MALA-THION, WATER, FLTRD (UG/L) (39532)	METHYL-AZIN-PHOS, WATER, FLTRD (UG/L) (82686)	METHYL PARA-THION, WATER, FLTRD (UG/L) (82667)	METO-LACHLOR, WATER, FLTRD (UG/L) (39415)	METRI-BUZIN, WATER, FLTRD (UG/L) (82630)
391852084253100	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	E0.001	<0.006
392027083430100	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.35	<0.008
392219084172100	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	E0.011	<0.006
392306084121300	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.041	<0.006
392400083494000	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.083	<0.008
392553084133100	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	E0.012	<0.006
392614083564000	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.049	<0.006
393317083474000	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.13	<0.010
393450084020300	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.16	0.008
393619084461200	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.017	<0.006
393748084042300	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.241	0.020
393814084043500	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	E0.005	<0.006
393848083521200	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.066	<0.006
393903083582900	<0.002	<0.009	<0.005	<0.003	0.014	<0.035	<0.027	<0.050	<0.006	E0.009	<0.006
393903084110500	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.025	<0.006
394111084234200	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.17	0.009
394212083575200	<0.007	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.028	<0.006
394252084010900	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.015	<0.006
394253083583300	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.025	<0.006
394414083501800	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.086	E0.004
394510084384100	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.041	<0.006
394549084234400	0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.071	0.032
394727083523000	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.054	<0.006
394953084244100	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.094	<0.006
395452084293400	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.082	<0.006
395810084063600	<0.002	<0.009	<0.005	<0.003	E0.001	<0.035	<0.027	<0.050	<0.006	0.077	<0.006
395912084214000	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.29	<0.008
400130084392900	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	E0.013	<0.006
400134084400300	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	E0.020	<0.006	0.015	<0.006
400439084080000	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.17	<0.006

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

RESULTS FROM THE URBAN-GRADIENT STUDY—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(82671), USGS National Water Information System parameter code; µg/L, micrograms per liter; <, concentration or value reported is less than that indicated; E, estimated concentration or value.]

STATION NUMBER	MOLINATE, WATER, FLTRD (UG/L) (82671)	NAPROPAMIDE, WATER, FLTRD (UG/L) (82684)	P,P' DDE, WATER, FLTRD (UG/L) (34653)	PARATHION, WATER, FLTRD (UG/L) (39542)	PEBULATE, WATER, FLTRD (UG/L) (82669)	PENDIMETHALIN, WATER, FLTRD (UG/L) (82683)	CIS-PERMETHRIN, WATER, FLTRD (UG/L) (82687)	PHORATE, WATER, FLTRD (UG/L) (82664)	PROMETON, WATER, FLTRD (UG/L) (04037)	PRONAMIDE, WATER, FLTRD (UG/L) (82676)	PROPACHLOR, WATER, FLTRD (UG/L) (04024)
391852084253100	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.020	<0.004	<0.010
392027083430100	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.059	<0.004	<0.010
392219084172100	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.061	<0.004	<0.010
392306084121300	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.012	<0.004	<0.010
392400083494000	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.004	<0.004	<0.010
392553084133100	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.035	<0.004	<0.010
392614083564000	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.005	<0.004	<0.010
393317083474000	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.009	<0.004	<0.010
393450084020300	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.006	<0.004	<0.010
393619084461200	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.003	<0.004	<0.010
393748084042300	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.127	<0.004	<0.010
393814084043500	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.011	<0.004	<0.010
393848083521200	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.005	<0.004	<0.010
393903083582900	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.073	<0.004	<0.010
393903084110500	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.26	<0.004	<0.010
394111084234200	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.017	<0.004	<0.010
394212083575200	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.063	<0.004	<0.010
394252084010900	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.004	<0.004	<0.010
394253083583300	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.004	<0.004	<0.010
394414083501800	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.004	<0.004	<0.010
394510084384100	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.004	<0.004	<0.010
394549084234400	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.005	<0.004	<0.010
394727083523000	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.013	<0.004	<0.010
394953084244100	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.049	<0.004	<0.010
395452084293400	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.023	<0.004	<0.010
395810084063600	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.006	<0.004	<0.010
395912084214000	<0.002	0.010	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.010	<0.004	<0.010
400130084392900	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	E0.009	<0.004	<0.010
400134084400300	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.036	<0.004	<0.010
400439084080000	<0.002	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.016	<0.004	<0.010

PROJECT DATA
Results from Selected Sites in the Great Miami and Little Miami River Basin (National Water-Quality Assessment Program)
RESULTS FROM THE URBAN-GRADIENT STUDY—CONTINUED

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

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

STATION NUMBER	PRO-PANIL, WATER, FLTRD (UG/L) (82679)	PRO-PARGITE, WATER, FLTRD (UG/L) (82685)	SI-MAZINE, WATER, FLTRD (UG/L) (04035)	TEBU-THI-URON, WATER, FLTRD (UG/L) (82670)	TER-BACIL, WATER, FLTRD (UG/L) (82665)	TER-BUFOS, WATER, FLTRD (UG/L) (82675)	THIO-BENCARB, WATER, FLTRD (UG/L) (82681)	TRIAL-LATE, WATER, FLTRD (UG/L) (82678)	TRI-FLUR-ALIN, WATER, FLTRD (UG/L) (82661)
391852084253100	<0.011	<0.023	<0.011	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
392027083430100	<0.011	<0.023	0.283	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
392219084172100	<0.011	<0.023	<0.011	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
392306084121300	<0.011	<0.023	0.012	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
392400083494000	<0.011	<0.023	0.040	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
392553084133100	<0.011	<0.023	E0.009	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
392614083564000	<0.011	<0.023	0.48	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
393317083474000	<0.011	<0.023	0.049	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
393450084020300	<0.011	<0.023	0.062	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
393619084461200	<0.011	<0.023	E0.007	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
393748084042300	<0.011	<0.023	0.037	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
393814084043500	<0.011	<0.023	0.076	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
393848083521200	<0.011	<0.023	0.15	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
393903083582900	<0.011	<0.023	0.011	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
393903084110500	<0.011	<0.023	0.055	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
394111084234200	<0.011	<0.023	0.050	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
394212083575200	<0.011	<0.023	0.022	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
394252084010900	<0.011	<0.023	0.012	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
394253083583300	<0.011	<0.023	0.024	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
394414083501800	<0.011	<0.023	0.043	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
394510084384100	<0.011	<0.023	0.013	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
394549084234400	<0.011	<0.023	0.10	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
394727083523000	<0.011	<0.023	0.048	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
394953084244100	<0.011	<0.023	0.077	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
395452084293400	<0.011	<0.023	0.018	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
395810084063600	<0.011	<0.023	0.049	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
395912084214000	<0.011	<0.023	0.094	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
400130084392900	<0.011	<0.023	0.084	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
400134084400300	<0.011	<0.023	<0.011	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
400439084080000	<0.011	<0.023	0.25	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009

Reference cited:
—Porter, S.D., Cuffney, T.F., Gurtz, M.E., and Meador, M.R., 1993, Methods for collecting algal samples as part of the National Water-Quality Assessment Program: U.S. Geological Survey Open-file Report 93-409, 39 p.
—Shelton, L.R., 1994, Field guide for processing stream-water samples for the National Water-Quality Assessment Program: U.S. Geological Survey Open-File Report 94-455, 42 p.

Data were obtained by deploying multiparameter data sondes in the streams over the specified period. Data were recorded at 15-minute intervals.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[µg/L, micrograms per liter; ---, no data.]

STATION NUMBER	BEGIN		END		CHLOROPHYLL (UG/L)			
	DATE	TIME	DATE	TIME	MINIMUM	MAXIMUM	RANGE	MEDIAN
391852084253100	07/30/01	1430	08/01/01	1435	---	---	---	---
392027083430100	07/26/01	1500	07/30/01	1115	---	---	---	---
392219084172100	07/30/01	1320	08/01/01	1335	< 0.5	8.8	8.3	3.2
392306084121300	07/23/01	1030	07/26/01	0905	---	---	---	---
392400083494000	07/24/01	1330	07/26/01	1425	4.9	17.3	12.4	10.6
392553084133100	07/30/01	1300	08/01/01	1305	< 0.5	169.8	169.3	4.1
392614083564000	07/24/01	0950	07/26/01	1000	---	---	---	---
393317083474000	07/30/01	0940	08/01/01	1135	7.8	87.3	79.5	25.0
393450084020300	07/26/01	1130	07/30/01	1210	---	---	---	---
393619084461200	07/16/01	1315	07/18/01	1330	1.6	140.4	138.8	2.8
393748084042300	07/09/01	1015	07/11/01	1015	1.7	55.8	54.1	3.2
393814084043500	07/09/01	1100	07/11/01	1115	---	---	---	---
393848083521200	07/24/01	1100	07/26/01	1340	4.1	13.8	9.7	5.8
393903083582900	07/24/01	1200	07/26/01	1310	0.5	35.6	35.1	4.3
393903084110500	07/09/01	1145	07/11/01	1200	< 0.5	46.8	46.3	3.5
394111084234200	07/16/01	1100	07/18/01	1050	2.2	10.8	8.6	3.6
394212083575200	07/09/01	1245	07/11/01	1300	---	---	---	---
394252084010900	07/09/01	1330	07/11/01	1345	3.2	17.0	13.8	4.6
394253083583300	07/11/01	1515	07/13/01	1630	---	---	---	---
394414083501800	07/11/01	1630	07/13/01	1630	---	---	---	---
394510084384100	07/16/01	1215	07/18/01	1220	---	---	---	---
394549084234400	07/16/01	1015	07/18/01	1005	---	---	---	---
394727083523000	07/11/01	1715	07/13/01	1715	1.7	3.9	2.2	2.5
394953084244100	07/16/01	0945	07/18/01	0935	2.1	25.6	23.5	6.2
395452084293400	07/18/01	1615	07/20/01	1630	---	---	---	---
395810084063600	07/11/01	2000	07/13/01	2000	1.1	2.6	1.5	1.8
395912084214000	07/18/01	1715	07/20/01	1710	2.5	6.0	3.5	3.7
400130084392900	07/18/01	1800	07/20/01	1750	---	---	---	---
400134084400300	07/18/01	1820	07/20/01	1805	2.1	4.4	2.3	3.1
400439084080000	07/11/01	1915	07/13/01	1930	< 0.5	< 0.5	---	< 0.5

PROJECT DATA
Results from Selected Sites in the Great Miami and Little Miami River Basin (National Water-Quality Assessment Program)
RESULTS FROM THE URBAN-GRADIENT STUDY—CONTINUED

Data were obtained by deploying multiparameter data sondes in the streams over the specified period. Data were recorded at 15-minute intervals.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[mg/L, milligrams per liter; ---, no data; a, value based on data recorded from 1200, July 23 to 1200, July 24; b, value based on data recorded from 1330 July 17 to 1000 July 18.]

STATION NUMBER	OXYGEN, DISSOLVED (MG/L)				PH, WHOLE WATER STANDARD UNITS			
	MINIMUM	MAXIMUM	RANGE	MEDIAN	MINIMUM	MAXIMUM	RANGE	MEDIAN
391852084253100	6.6	9.5	2.9	7.3	7.9	8.0	0.1	7.9
392027083430100	6.6	9.5	2.9	7.4	7.8	8.4	0.7	8.0
392219084172100	5.8	7.0	1.2	6.0	7.9	8.2	0.3	8.0
392306084121300	7.9a	10.2a	2.3a	8.6a	7.6	8.6	1.0	8.1
392400083494000	6.7	9.9	3.2	7.5	7.8	8.1	0.4	7.9
392553084133100	6.6	8.9	2.3	7.7	8.0	8.1	0.1	8.1
392614083564000	---	---	---	---	7.9	8.1	0.3	8.0
393317083474000	4.8	10.5	5.8	7.3	7.6	8.2	0.7	7.9
393450084020300	8.2	9.5	1.3	8.8	8.0	8.4	0.4	8.2
393619084461200	9.9	13.7	3.8	10.5	7.6	8.3	0.8	8.2
393748084042300	5.8	8.1	2.4	6.6	7.6	8.0	0.4	7.8
393814084043500	7.2	10.6	3.4	7.9	7.9	8.4	0.6	8.0
393848083521200	8.3	11.5	3.2	9.2	7.7	8.0	0.4	7.9
393903083582900	7.9	10.2	2.2	9.1	7.6	8.1	0.5	7.9
393903084110500	6.7	9.3	2.5	7.4	7.9	8.2	0.3	8.0
394111084234200	4.7	11.8	7.1	6.9	7.7	8.3	0.6	8.0
394212083575200	7.1	10.3	3.2	8.3	7.9	8.3	0.5	8.2
394252084010900	6.2	10.2	4.0	7.5	7.7	8.0	0.3	7.8
394253083583300	8.2	9.1	0.9	8.6	7.9	8.1	0.2	8.0
394414083501800	7.0	9.8	2.8	7.6	8.2	8.5	0.3	8.3
394510084384100	7.8	15.1	8.1	10.1	7.6	8.3	0.7	8.2
394549084234400	6.6b	10.7b	4.1b	7.1b	7.6b	8.0b	0.4b	7.7b
394727083523000	8.5	9.8	1.4	9.0	8.1	8.3	0.1	8.2
394953084244100	5.8	9.5	3.7	7.1	7.5	8.1	0.6	7.8
395452084293400	4.2	12.4	8.2	6.8	7.6	8.3	0.7	7.8
395810084063600	7.4	10.1	2.6	8.1	8.1	8.3	0.2	8.2
395912084214000	9.3	13.5	4.2	9.8	7.8	8.2	0.4	7.9
400130084392900	---	---	---	---	7.7	7.8	0.1	7.7
400134084400300	6.7	8.4	1.7	7.3	7.7	8.1	0.3	7.8
400439084080000	10.6	12.7	2.1	11.3	8.1	8.4	0.3	8.2

Data were obtained by deploying multiparameter data sondes in the streams over the specified period. Data were recorded at 15-minute intervals.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[µS/cm, microsiemens per centimeter; deg C, degrees Celsius; ---, no data.]

STATION NUMBER	SPECIFIC CONDUCTANCE, (US/CM)				WATER TEMPERATURE, (DEG C)			
	MINIMUM	MAXIMUM	RANGE	MEDIAN	MINIMUM	MAXIMUM	RANGE	MEDIAN
391852084253100	890	919	29	913	22.6	26.5	4.0	24.1
392027083430100	426	703	277	620	19.2	24.1	4.9	21.3
392219084172100	545	669	124	614	25.5	28.9	3.3	26.9
392306084121300	155	823	668	562	20.5	25.2	4.7	23.2
392400083494000	601	620	19	613	26.0	29.3	3.3	27.3
392553084133100	528	674	146	636	23.0	26.0	3.0	24.3
392614083564000	546	696	150	685	23.3	27.8	4.5	25.1
393317083474000	519	559	40	541	23.3	29.4	6.1	26.2
393450084020300	584	668	84	652	18.2	24.7	6.5	20.4
393619084461200	123	686	563	655	22.7	27.3	4.6	24.0
393748084042300	689	760	71	731	22.7	27.8	5.1	25.0
393814084043500	---	---	---	---	20.2	27.5	7.3	22.9
393848083521200	600	704	104	689	23.1	26.9	3.7	24.9
393903083582900	104	1140	1040	849	20.4	28.1	7.7	21.9
393903084110500	645	719	74	671	23.7	28.4	4.7	25.5
394111084234200	501	952	451	939	20.3	24.9	4.7	22.4
394212083575200	---	---	---	---	19.9	26.0	6.2	22.1
394252084010900	562	756	194	735	19.2	26.7	7.5	22.7
394253083583300	650	672	22	668	16.5	20.6	4.1	18.2
394414083501800	1290	1330	40	1310	18.9	25.1	6.2	21.1
394510084384100	239	704	465	694	19.2	23.1	3.9	20.3
394549084234400	455	721	266	708	15.7	21.9	6.2	17.9
394727083523000	807	836	29	815	15.7	19.7	4.0	17.2
394953084244100	150	845	695	705	19.0	24.9	5.9	21.3
395452084293400	622	663	41	643	20.8	23.8	3.0	22.0
395810084063600	687	715	28	711	17.5	22.2	4.7	19.8
395912084214000	593	673	80	652	21.7	25.1	3.5	22.9
400130084392900	661	720	59	691	20.9	24.3	3.4	21.9
400134084400300	448	535	87	525	21.3	25.6	4.3	22.6
400439084080000	670	699	29	681	20.1	24.2	4.1	22.1

PROJECT DATA
Results from Selected Sites in the Great Miami and Little Miami River Basin (National Water-Quality Assessment Program)
RESULTS FROM URBAN-GRADIENT STUDY—CONTINUED

WATER-QUALITY DATA

[µg/L, micrograms per liter; (70953), USGS National Water Information System parameter code; mg/m^2, milligrams per square meter; g/m^2, grams per square meter; E, estimated value does not have the same precision as other results for the same constituents.]

STATION IDENTIFIER	DATE	SAMPLE NUMBER	PHYTO-PLANKTON CHLORO-PHYLL *a* (UG/L) (70953)	PHYTO-PLANKTON PHEO-PHYTON *a* (UG/L) (62360)	PERI-PHYTON, CHLORO-PHYLL *a* (MG/M^2) (70957)	PERI-PHYTON, PHEO-PHYTON *a* (MG/M^2) (62359)	PERI-PHYTON, BIO-MASS, ASH WEIGHT (G/M^2) (00572)	PERI-PHYTON, BIO-MASS, DRY WEIGHT (G/M^2) (00573)	PERI-PHYTON, ASH-FREE DRY WEIGHT (G/M^2)
391852084253100	07/30/01	1	0.6	0.5	86.4	27.0	494	509	14.4
391852084253100	07/30/01	2	0.8	0.6	89.9	30.0	505	520	14.4
392027083430100	07/26/01	1	6.6	5.4	143	58.3	539	568	29.6
392027083430100	07/26/01	2	6.3	5.7	142	56.2	537	567	29.7
392219084172100	07/30/01	1	1.7	1.4	37.2	23.7	609	619	10.1
392219084172100	07/30/01	2	1.3	1.2	59.3	29.3	600	610	9.7
392306084121300	07/23/01	1	1.0	0.6	25.6	9.7	504	517	13.8
392306084121300	07/23/01	2	0.9	0.4	23.1	7.5	493	507	13.8
392400083494000	07/24/01	1	5.8	4.1	80.8	48.8	1170	1230	58.0
392400083494000	07/24/01	2	5.9	4.0	90.3	63.0	528	555	26.8
392553084133100	07/31/01	1	0.9	0.5	56.1	26.7	419	428	9.1
392553084133100	07/31/01	2	1.1	0.7	45.0	18.7	427	435	8.1
392614083564000	07/24/01	1	2.2	2.2	128	55.9	535	568	32.6
392614083564000	07/24/01	2	2.6	2.5	115	45.5	521	547	26.6
393317083474000	07/31/01	1	45.0	32.6	57.7	37.3	614	634	19.9
393317083474000	07/31/01	2	41.0	16.3	56.9	35.1	622	643	20.9
393450084020300	07/26/01	1	1.7	1.7	71.6	42.0	484	501	17.1
393450084020300	07/26/01	2	1.6	1.6	70.7	28.0	483	501	17.3
393619084461200	07/16/01	1	0.7	0.8	54.5	26.6	761	783	21.6
393619084461200	07/16/01	2	0.4	1.0	43.6	36.7	754	777	23.0
393748084042300	07/9/01	1	1.2	2.1	114	31.4	657	688	30.2
393748084042300	07/9/01	2	1.0	1.8	103	47.9	665	700	34.5
393814084043500	07/10/01	1	0.9	1.6	53.1	53.4	597	617	19.9
393814084043500	07/10/01	2	1.0	1.4	56.0	35.6	572	591	18.8
393848083521200	07/25/01	1	3.5	2.2	59.2	29.2	669	696	26.8
393848083521200	07/25/01	2	4.2	2.6	56.3	31.2	647	672	24.8
393903083582900	07/25/01	1	0.8	0.6	63.8	27.2	633	654	20.8
393903083582900	07/25/01	2	0.6	0.5	50.1	22.3	623	641	17.8
393903084110500	07/10/01	1	1.7	3.1	E277	E110	505	525	20.5
393903084110500	07/10/01	2	2.1	2.8	77.4	40.3	489	506	17.3
394111084234200	07/17/01	1	0.8	2.8	82.6	42.4	34.1	35.6	1.5
394111084234200	07/17/01	2	1.0	2.9	91.1	37.1	33.9	35.3	1.4
394212083575200	07/11/01	1	0.9	2.1	80.9	37.3	364	379	15.2
394212083575200	07/11/01	2	1.2	1.6	68.2	35.4	379	395	15.2
394252084010900	07/9/01	1	2.4	1.6	2.8	1.9	475	486	10.7
394252084010900	07/9/01	2	2.7	1.6	1.9	2.3	492	505	13.5
394253083583300	07/13/01	1	0.5	1.3	31.3	6.3	698	716	18.2
394253083583300	07/13/01	2	0.4	1.2	27.3	11.0	709	728	18.7

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

RESULTS FROM URBAN-GRADIENT STUDY—CONTINUED

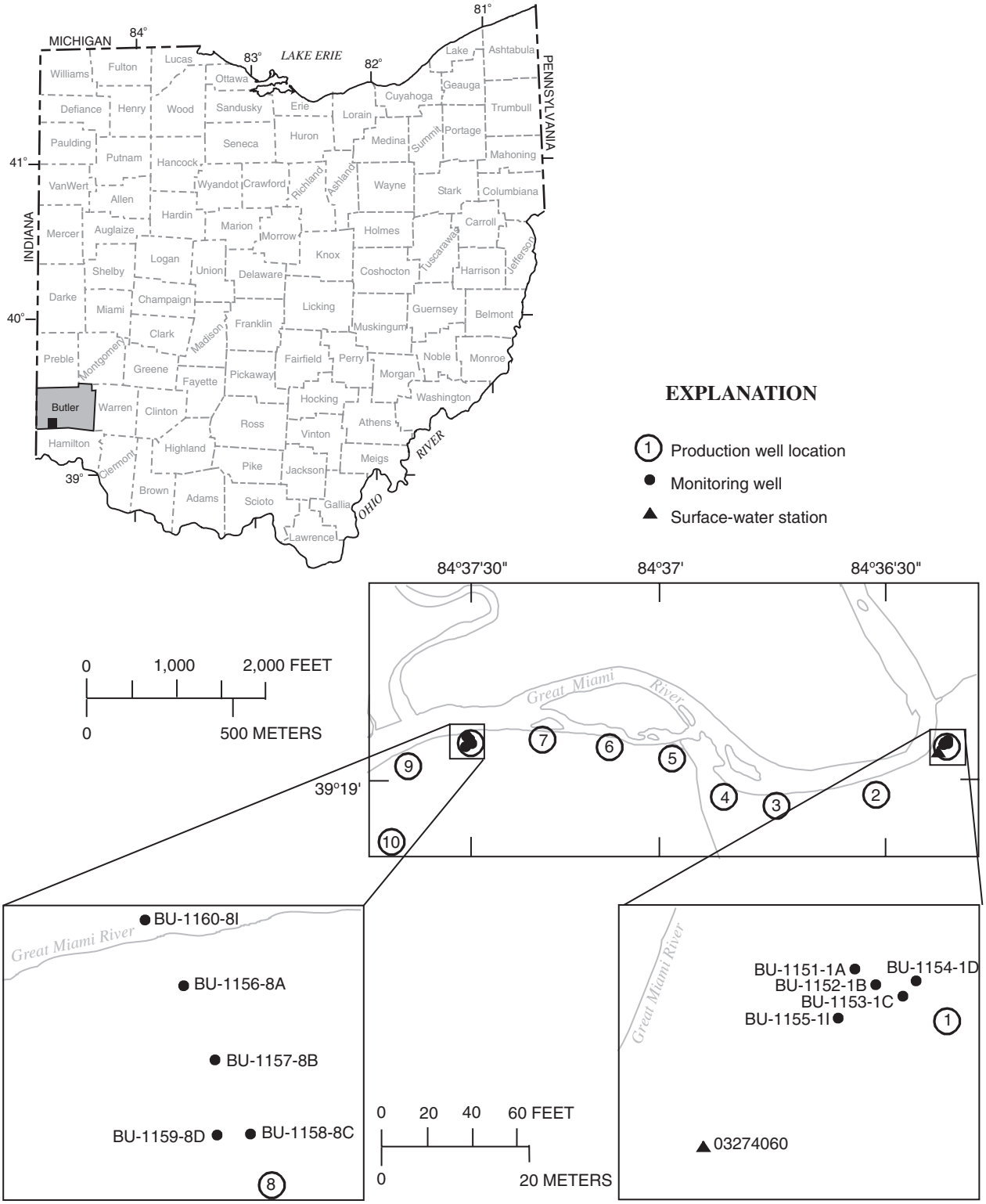
WATER-QUALITY DATA—Continued

[µg/L, micrograms per liter; (70953), USGS National Water Information System parameter code; mg/m^2, milligrams per square meter; g/m^2, grams per square meter; E, estimated value does not have the same precision as other results for the same constituents.]

STATION IDENTIFIER	DATE	SAMPLE NUMBER	PHYTO-PLANKTON CHLORO-PHYLL *a* (UG/L) (70953)	PHYTO-PLANKTON PHEO-PHYTON *a* (UG/L) (62360)	PERI-PHYTON, CHLORO-PHYLL *a* (MG/M^2) (70957)	PERI-PHYTON, PHEO-PHYTON *a* (MG/M^2) (62359)	PERI-PHYTON, BIO-MASS, ASH WEIGHT (G/M^2) (00572)	PERI-PHYTON, BIO-MASS, DRY WEIGHT (G/M^2) (00573)	PERI-PHYTON, ASH-FREE DRY WEIGHT (G/M^2)
394414083501800	07/13/01	1	1.5	1.0	72.4	28.8	725	751	26.3
394414083501800	07/13/01	2	1.6	1.3	69.2	61.2	742	767	25.4
394510084384100	07/16/01	1	0.5	1.4	90.9	24.0	25.2	26.1	0.9
394510084384100	07/16/01	2	0.5	1.9	99.6	29.0	25.8	26.6	0.8
394549084234400	07/20/01	1	0.8	1.7	54.9	22.1	74.9	78.4	3.5
394549084234400	07/20/01	2	0.8	1.6	50.8	22.4	74.4	77.9	3.5
394727083523000	07/11/01	1	1.0	1.1	29.5	20.7	642	663	20.4
394727083523000	07/11/01	2	1.0	0.9	39.4	39.5	639	660	20.7
394953084244100	07/17/01	1	0.5	1.4	79.0	69.7	547	569	22.7
394953084244100	07/17/01	2	0.5	1.3	70.2	38.2	530	551	21.3
395452084293400	07/19/01	1	2.5	2.1	104	40.0	55.3	57.9	2.6
395452084293400	07/19/01	2	2.5	2.2	112	57.4	59.7	62.7	3.0
395810084063600	07/12/01	1	0.8	1.6	54.1	44.9	108	114	6.2
395810084063600	07/12/01	2	0.6	2.1	66.9	49.0	123	131	8.0
395912084214000	07/19/01	1	0.8	2.2	64.5	26.2	52.0	53.7	1.7
395912084214000	07/19/01	2	0.8	2.1	70.8	35.0	55.0	57.1	2.1
400130084392900	07/18/01	1	6.4	E4.8	18.3	5.6	35.4	36.8	1.4
400130084392900	07/18/00	2	6.5	E4.3	38.4	12.3	34.2	35.6	1.4
400134084400300	07/18/01	1	1.4	2.6	33.5	17.1	78.3	84.3	6.0
400134084400300	07/18/00	2	1.3	2.1	57.3	29.4	77.5	83.0	5.5
400439084080000	07/12/01	1	0.5	1.0	93.9	64.3	75.3	79.8	4.5
400439084080000	07/12/01	2	0.5	1.0	92.2	62.2	77.8	82.5	4.7

PROJECT DATA
Water Data for Bolton Well Field

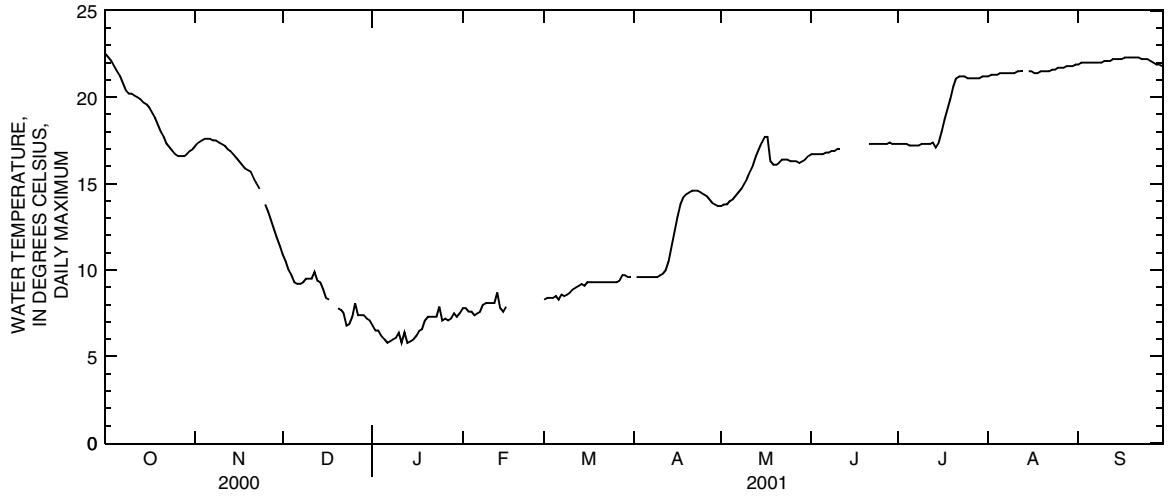
The tables on subsequent pages list maximum and minimum daily values of hourly data collected at wells and half-hour data collected at a surface-water station in southern Butler County, Ohio. The tables also include the results of chemical and biological analysis of ground-water and surface-water samples. These wells and station were established to assist in defining aquifer characteristics near the Cincinnati Water Works, Bolton Well Field, and the Great Miami River.

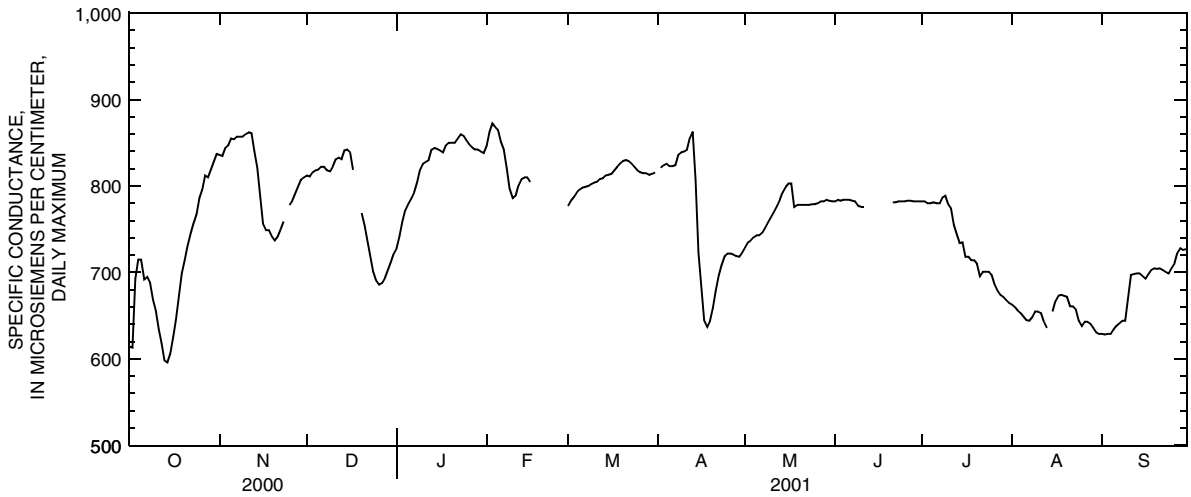


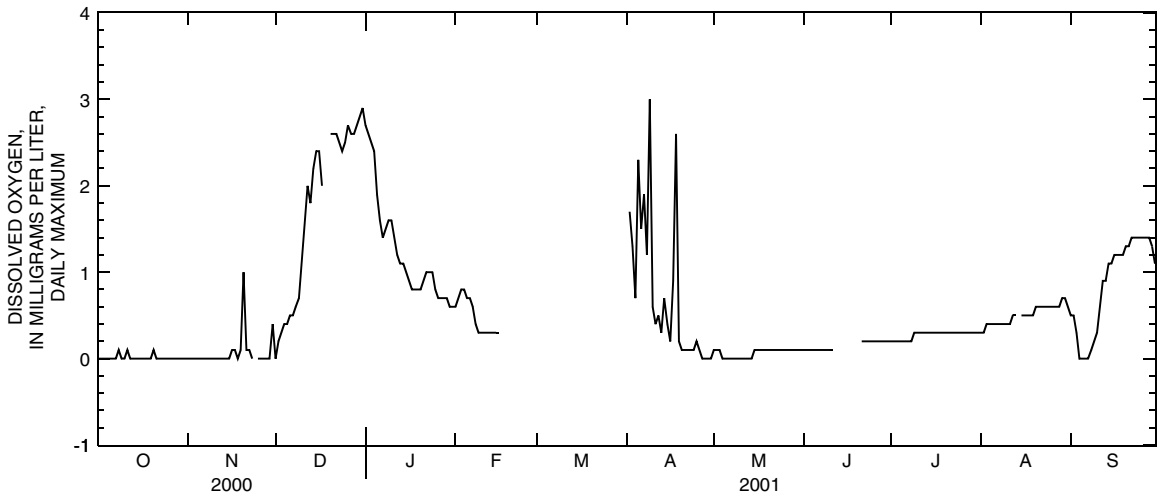
391904084362101. LOCAL NUMBER, BU-1151-1A

LOCATION.—Latitude 39°19′04″, longitude 84°36′21″, Butler County, Hydrologic Unit 05080002.
AQUIFER.—Glacial outwash, sand and gravel; 112OTSH.
WELL CHARACTERISTICS.—Observation well drilled by rotasonic techniques, diameter 4.0 in., depth 30 ft from land surface to bottom of screen.
INSTRUMENTATION.—YSI Model 6920 data sonde with turbidity probe set for 60-minute records. Sonde set at a depth of 27.6 ft below land surface.
DATUM.—Altitude of land surface is 546.87 ft above North American Vertical Datum of 1988 (NAVD of 88). Measuring point is top of inner casing, 2.18 ft above land-surface datum.
REMARK.—This station is part of a network of wells designed to help model flow characteristics from the Great Miami River through the aquifer. Data collection began on July 21, 1999. Negative turbidity and dissolved oxygen values are due to the resolution of the data sonde and the close proximity of the actual value to zero.
PERIOD OF RECORD.—
WATER TEMPERATURE: July 21, 1999 to current year.
SPECIFIC CONDUCTANCE: July 21, 1999 to current year.
DISSOLVED OXYGEN: July 21, 1999 to current year.
WATER LEVEL ELEVATION: July 21, 1999 to current year.
pH: July 21, 1999 to current year.
TURBIDITY: July 21, 1999 to current year.
EXTREMES FOR PERIOD OF RECORD.—
WATER TEMPERATURE: Maximum, 28.7°C, Aug. 10, 11 and 12, 1999; Minimum, 4.8°C, Feb. 23, 2000.
SPECIFIC CONDUCTANCE: Maximum, 1,170 microsiemens per centimeter, Sept. 28 and 29, 1999; Minimum, 524 microsiemens per centimeter, Apr. 11, 2000.
DISSOLVED OXYGEN: Maximum, 3.4 milligrams per liter, Feb. 16 and 17, 2000; Minimum, -0.2 milligrams per liter, Aug. 24 and 25, 2000.
WATER LEVEL ELEVATION: Maximum daily low, 525.27 ft above NAVD of 88, Jan. 1 and 2, 2000; Maximum daily high, 537.22 ft above NAVD of 88, Apr. 12, 2000.
pH: Maximum, 7.5, several days during period of record ; Minimum, 6.7, July 9, 14, 15 and Sept. 23-30, 2001.
TURBIDITY: Maximum, 4.0 NTU, July 31, 2000; Minimum, -1.0 NTU, several days during period of record.
EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURE: Maximum, 22.5°C, Oct. 1, 2000; Minimum, 5.4°C, Jan. 5 and 6, 2001.
SPECIFIC CONDUCTANCE: Maximum, 872 microsiemens per centimeter, Feb. 3, 2001; Minimum, 585 microsiemens per centimeter, Oct. 2, 2000.
DISSOLVED OXYGEN: Maximum, 3.0 milligrams per liter, Apr. 9, 2001; Minimum, 0.0 milligrams per liter, several days during period of record.
WATER LEVEL ELEVATION: Maximum daily low, 527.07 ft above NAVD of 88, Dec. 9, 2000; Maximum daily high, 536.87 ft above NAVD of 88, May 20, 2001.
pH: Maximum, 7.4, several days during period of record; Minimum, 6.7, July 9, 14, 15 and Sept. 23-30, 2001.
TURBIDITY: Maximum, 0.0 NTU, several days during period of record; Minimum, -1.0 NTU, Oct. 1-31 and Nov. 1-3, 2000.

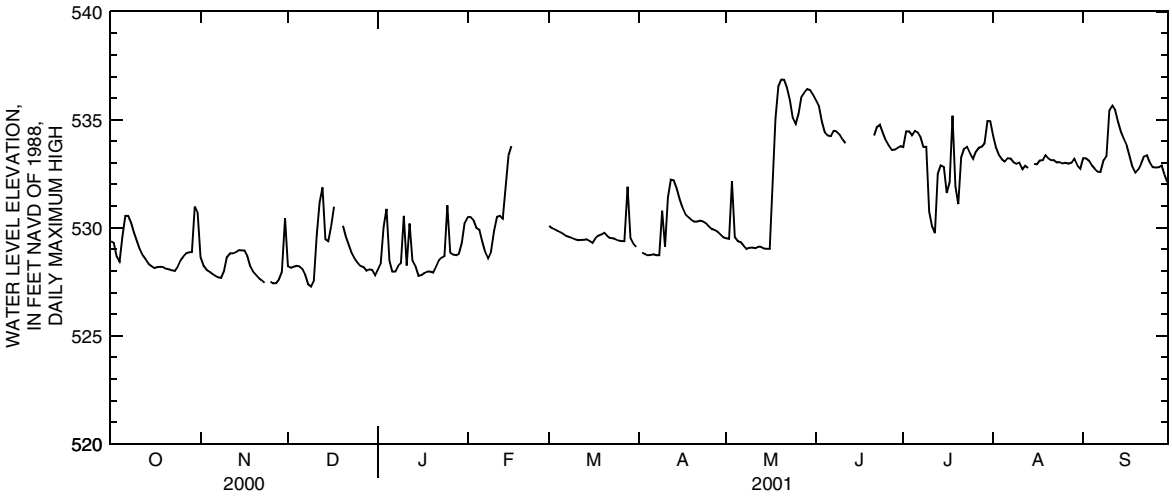
391904084362101. LOCAL NUMBER, BU-1151-1A—Continued

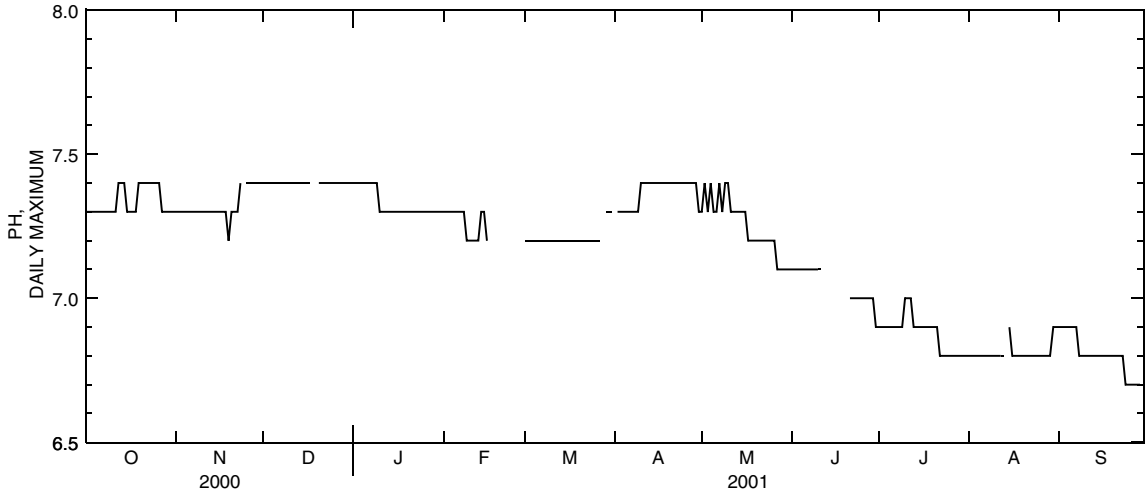


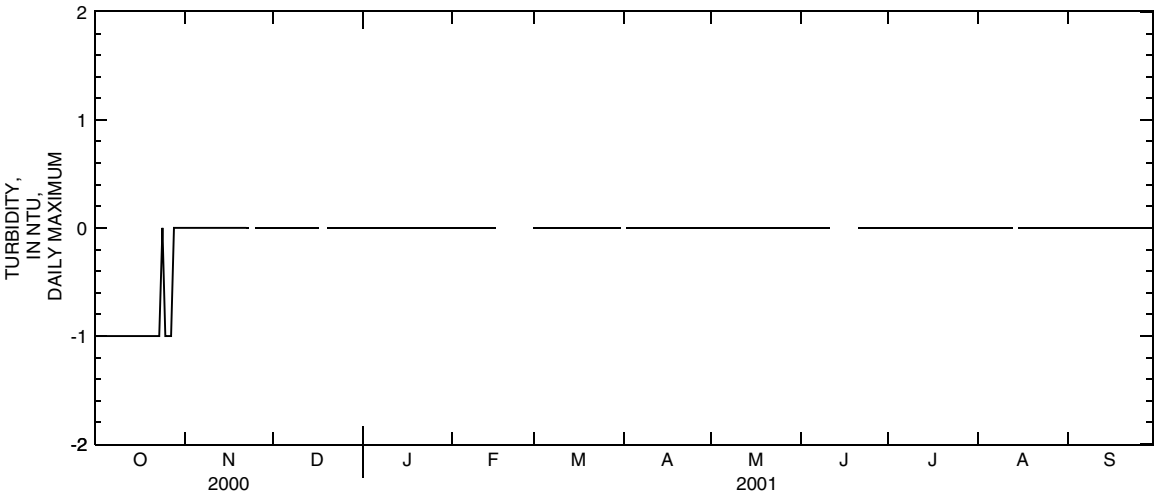




391904084362101. LOCAL NUMBER, BU-1151-1A—Continued







PROJECT DATA
Water Data for Bolton Well Field

391904084362101. LOCAL NUMBER, BU-1151-1A—Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	22.5	22.3	17.2	17.0	10.9	10.5	6.8	6.2	7.8	7.1	8.3	8.2
2	22.3	22.1	17.4	17.2	10.5	10.0	6.5	6.1	7.8	7.2	8.4	8.2
3	22.1	21.8	17.5	17.4	10.0	9.7	6.5	5.8	7.6	7.1	8.4	8.2
4	21.8	21.5	17.6	17.5	9.7	9.3	6.2	5.6	7.6	7.0	8.4	8.0
5	21.5	21.2	17.6	17.6	9.3	9.1	6.0	5.4	7.4	6.9	8.5	8.0
6	21.2	20.8	17.6	17.5	9.2	9.0	5.8	5.4	7.5	6.9	8.3	8.1
7	20.8	20.4	17.5	17.5	9.2	8.9	5.9	5.5	7.6	7.3	8.6	8.1
8	20.4	20.2	17.5	17.4	9.3	8.9	6.0	5.7	8.0	7.4	8.5	8.3
9	20.2	20.1	17.4	17.3	9.5	9.1	6.1	5.7	8.1	7.5	8.6	8.4
10	20.2	20.1	17.3	17.2	9.5	9.2	6.4	5.6	8.1	7.6	8.7	8.5
11	20.1	20.0	17.2	17.0	9.5	9.1	5.8	5.5	8.1	7.9	8.9	8.6
12	20.0	19.9	17.0	16.9	9.9	9.0	6.4	5.6	8.1	7.8	9.0	8.7
13	19.9	19.7	16.9	16.7	9.4	9.0	5.8	5.6	8.7	7.5	9.1	8.8
14	19.7	19.6	16.7	16.5	9.3	8.9	5.9	5.6	7.8	7.3	9.2	8.9
15	19.6	19.4	16.5	16.3	8.9	8.4	6.0	5.6	7.6	6.9	9.1	8.9
16	19.4	19.1	16.3	16.1	8.4	8.0	6.2	5.8	7.9	6.8	9.3	9.0
17	19.1	18.8	16.1	15.9	8.3	7.5	6.5	6.1	---	---	9.3	9.1
18	18.8	18.4	15.9	15.8	---	---	6.6	6.2	---	---	9.3	9.1
19	18.4	18.0	15.8	15.7	---	---	7.1	6.4	---	---	9.3	9.1
20	18.0	17.7	15.7	15.3	7.8	7.0	7.3	6.9	---	---	9.3	9.1
21	17.7	17.3	15.3	15.0	7.7	6.9	7.3	6.8	---	---	9.3	9.1
22	17.3	17.1	15.0	14.7	7.5	6.5	7.3	6.8	---	---	9.3	9.1
23	17.1	16.9	14.7	14.3	6.8	6.5	7.3	6.7	---	---	9.3	9.1
24	16.9	16.7	---	---	6.9	6.6	7.9	6.6	---	---	9.3	9.2
25	16.7	16.6	13.8	13.4	7.3	6.7	7.1	6.5	---	---	9.3	9.2
26	16.6	16.6	13.4	12.9	8.1	6.8	7.2	6.6	---	---	9.3	9.3
27	16.6	16.6	12.9	12.4	7.4	6.9	7.1	6.6	---	---	9.4	9.3
28	16.6	16.6	12.4	11.9	7.4	7.1	7.2	6.7	---	---	9.7	9.3
29	16.7	16.6	11.9	11.4	7.4	6.7	7.5	6.8	---	---	9.7	9.6
30	16.9	16.7	11.4	10.9	7.2	7.0	7.3	6.9	---	---	9.6	9.5
31	17.0	16.9	---	---	7.1	6.8	7.5	7.0	---	---	9.6	9.5
MONTH	22.5	16.6	17.6	10.9	10.9	6.5	7.9	5.4	8.7	6.8	9.7	8.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	13.7	13.6	16.7	16.6	17.3	17.3	21.2	21.2	21.9	21.9
2	9.6	9.5	13.8	13.7	16.7	16.7	17.3	17.2	21.3	21.2	22.0	21.9
3	9.6	9.5	13.8	13.1	16.7	16.6	17.3	17.2	21.3	21.2	22.0	21.9
4	9.6	9.6	14.0	13.8	16.7	16.6	17.3	17.2	21.3	21.3	22.0	22.0
5	9.6	9.6	14.1	14.0	16.7	16.7	17.2	17.2	21.4	21.3	22.0	22.0
6	9.6	9.6	14.3	14.1	16.8	16.7	17.2	17.2	21.4	21.3	22.0	22.0
7	9.6	9.6	14.5	14.3	16.8	16.8	17.2	17.2	21.4	21.3	22.0	22.0
8	9.6	9.6	14.7	14.5	16.9	16.8	17.2	17.2	21.4	21.3	22.0	22.0
9	9.6	9.6	15.0	14.7	16.9	16.9	17.3	17.1	21.4	21.3	22.0	22.0
10	9.7	9.6	15.3	15.0	17.0	16.9	17.3	17.3	21.4	21.3	22.1	22.0
11	9.8	9.7	15.7	15.3	17.0	17.0	17.3	17.2	21.5	21.4	22.1	22.0
12	10.0	9.8	16.1	15.7	---	---	17.3	17.2	21.5	21.4	22.1	22.1
13	10.5	10.0	16.6	16.1	---	---	17.4	16.8	21.5	21.4	22.2	22.1
14	11.3	10.5	17.0	16.6	---	---	17.1	16.9	---	---	22.2	22.2
15	12.2	11.3	17.4	17.0	---	---	17.4	17.1	21.5	21.4	22.2	22.2
16	13.1	12.2	17.7	17.4	---	---	18.0	17.4	21.5	21.4	22.2	22.2
17	13.8	13.1	17.7	16.3	---	---	18.7	18.0	21.4	21.4	22.3	22.2
18	14.2	13.8	16.3	16.1	---	---	19.3	18.7	21.4	21.4	22.3	22.3
19	14.4	14.2	16.1	16.0	---	---	19.9	19.2	21.5	21.4	22.3	22.3
20	14.5	14.4	16.1	16.0	---	---	20.6	19.9	21.5	21.4	22.3	22.3
21	14.6	14.5	16.2	16.1	17.3	17.3	21.1	20.6	21.5	21.5	22.3	22.3
22	14.6	14.5	16.4	16.2	17.3	17.3	21.2	21.1	21.5	21.5	22.3	22.2
23	14.6	14.5	16.4	16.4	17.3	17.3	21.2	21.1	21.6	21.5	22.2	22.2
24	14.5	14.4	16.4	16.3	17.3	17.3	21.2	21.1	21.6	21.5	22.2	22.2
25	14.4	14.3	16.3	16.2	17.3	17.3	21.1	21.1	21.7	21.6	22.2	22.1
26	14.3	14.1	16.3	16.2	17.3	17.3	21.1	21.0	21.7	21.6	22.1	22.0
27	14.1	13.9	16.3	16.2	17.3	17.3	21.1	21.0	21.7	21.7	22.0	21.9
28	13.9	13.8	16.2	16.2	17.4	17.3	21.1	21.0	21.8	21.7	21.9	21.9
29	13.8	13.7	16.3	16.2	17.3	17.3	21.1	21.0	21.8	21.7	21.9	21.8
30	13.7	13.6	16.4	16.3	17.3	17.3	21.2	21.1	21.8	21.8	21.8	21.6
31	---	---	16.6	16.4	---	---	21.2	21.1	21.9	21.8	---	---
MONTH	14.6	9.5	17.7	13.1	17.4	16.6	21.2	16.8	21.9	21.2	22.3	21.6
YEAR	22.5	5.4										

391904084362101. LOCAL NUMBER, BU-1151-1A—Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	614	587	836	830	812	810	728	720	846	837	777	771
2	613	585	835	828	811	809	742	728	862	845	783	776
3	693	613	844	834	816	811	759	742	872	859	787	782
4	715	693	847	843	818	815	772	758	868	858	792	785
5	715	681	855	845	819	816	780	769	865	850	796	791
6	692	681	854	848	822	818	786	779	851	836	798	794
7	695	661	857	848	822	818	793	784	842	819	799	795
8	688	669	857	851	818	815	804	792	821	796	800	797
9	669	656	857	852	817	814	819	803	797	782	802	799
10	656	635	860	856	823	815	826	819	786	782	804	801
11	635	606	862	859	831	823	828	825	789	781	805	802
12	618	598	861	840	833	827	830	822	801	789	808	804
13	598	593	840	821	831	828	842	829	808	799	809	806
14	596	592	821	785	841	830	844	841	810	804	812	807
15	606	595	786	756	842	837	843	839	810	803	813	811
16	625	606	756	739	839	817	841	836	805	798	814	811
17	646	625	749	739	819	806	839	835	---	---	818	813
18	672	646	749	741	---	---	847	838	---	---	822	817
19	699	672	742	736	---	---	850	845	---	---	826	821
20	714	699	737	690	769	755	850	843	---	---	829	825
21	731	714	742	733	755	737	850	843	---	---	830	827
22	744	731	750	742	737	718	855	846	---	---	829	825
23	756	744	759	750	718	701	860	852	---	---	826	821
24	767	754	---	---	701	691	858	841	---	---	822	817
25	786	767	778	769	691	683	853	837	---	---	818	815
26	796	786	783	778	686	680	848	841	---	---	816	815
27	812	790	791	783	688	685	845	838	---	---	815	813
28	810	795	799	791	694	688	842	838	---	---	815	810
29	819	802	807	798	703	692	842	836	---	---	813	810
30	828	816	810	805	712	701	840	837	---	---	814	811
31	837	825	---	---	722	709	838	835	---	---	816	812
MONTH	837	585	862	690	842	680	860	720	872	781	830	771

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	729	723	782	781	782	780	663	660	629	627
2	821	817	735	729	784	781	782	779	660	656	628	626
3	824	820	737	718	783	782	780	779	656	652	629	627
4	826	822	741	735	784	782	780	779	653	649	629	628
5	823	820	743	740	784	782	781	779	649	644	634	628
6	823	820	743	741	784	781	780	778	645	643	638	633
7	824	820	746	743	783	781	780	779	644	643	641	637
8	836	821	752	746	782	777	787	780	648	644	644	641
9	839	823	758	751	777	775	789	754	655	648	644	643
10	840	825	764	758	776	775	779	773	655	652	669	643
11	842	835	770	764	776	775	774	755	653	643	697	669
12	856	836	777	770	---	---	755	744	643	636	698	696
13	863	807	784	777	---	---	744	711	636	632	699	698
14	807	723	793	783	---	---	734	709	---	---	699	695
15	723	680	799	792	---	---	735	711	655	638	696	692
16	682	644	803	799	---	---	718	711	667	655	693	691
17	644	629	803	771	---	---	718	711	673	666	698	691
18	637	626	776	773	---	---	714	710	674	672	703	698
19	644	626	778	775	---	---	714	710	673	672	705	703
20	659	641	778	776	---	---	710	689	672	661	704	702
21	679	659	778	777	781	779	696	667	661	658	705	703
22	696	679	778	776	781	779	701	696	661	657	703	700
23	708	696	778	776	782	780	701	700	657	644	701	699
24	719	708	779	777	782	780	701	697	644	636	699	698
25	722	717	779	777	782	781	697	686	638	634	705	698
26	722	720	780	778	783	781	686	678	643	638	711	705
27	721	719	782	779	783	781	679	674	643	640	723	701
28	719	716	782	780	782	755	674	671	641	636	728	723
29	718	716	784	781	782	780	672	668	636	630	726	722
30	723	717	783	781	782	780	668	665	631	628	727	722
31	---	---	782	781	---	---	665	663	629	628	---	---
MONTH	863	626	803	718	784	755	789	663	674	628	728	626
YEAR	872	585										

PROJECT DATA
Water Data for Bolton Well Field

391904084362101. LOCAL NUMBER, BU-1151-1A—Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	.0	.0	.0	.0	.0	.0	2.7	2.6	.6	.5	---	---
2	.0	.0	.0	.0	.2	.0	2.6	2.5	.7	.6	---	---
3	.0	.0	.0	.0	.3	.2	2.5	2.3	.8	.7	---	---
4	.0	.0	.0	.0	.4	.3	2.4	1.9	.8	.7	---	---
5	.0	.0	.0	.0	.4	.4	1.9	1.6	.7	.7	---	---
6	.0	.0	.0	.0	.5	.4	1.6	1.3	.7	.6	---	---
7	.0	.0	.0	.0	.5	.5	1.4	1.3	.6	.4	---	---
8	.1	.0	.0	.0	.6	.5	1.5	1.4	.4	.3	---	---
9	.0	.0	.0	.0	.7	.6	1.6	1.5	.3	.3	---	---
10	.0	.0	.0	.0	1.1	.7	1.6	1.4	.3	.3	---	---
11	.1	.0	.0	.0	1.5	1.1	1.4	1.2	.3	.3	---	---
12	.0	.0	.0	.0	2.0	1.5	1.2	1.1	.3	.3	---	---
13	.0	.0	.0	.0	1.8	1.6	1.1	1.1	.3	.3	---	---
14	.0	.0	.0	.0	2.2	1.6	1.1	1.0	.3	.3	---	---
15	.0	.0	.0	.0	2.4	2.2	1.0	.9	.3	.3	---	---
16	.0	.0	.1	.0	2.4	2.0	.9	.8	.3	.3	---	---
17	.0	.0	.1	.0	2.0	1.8	.8	.8	---	---	---	---
18	.0	.0	.0	.0	---	---	.8	.8	---	---	---	---
19	.0	.0	.1	.0	---	---	.8	.8	---	---	---	---
20	.1	.0	1.0	.1	2.6	2.4	.8	.8	---	---	---	---
21	.0	.0	.1	.1	2.6	2.4	.9	.8	---	---	---	---
22	.0	.0	.1	.0	2.6	2.4	1.0	.9	---	---	---	---
23	.0	.0	.0	.0	2.5	2.4	1.0	.9	---	---	---	---
24	.0	.0	---	---	2.4	2.4	1.0	.8	---	---	---	---
25	.0	.0	.0	.0	2.5	2.4	.8	.7	---	---	---	---
26	.0	.0	.0	.0	2.7	2.4	.7	.7	---	---	---	---
27	.0	.0	.0	.0	2.6	2.5	.7	.7	---	---	---	---
28	.0	.0	.0	.0	2.6	2.6	.7	.6	---	---	---	---
29	.0	.0	.0	.0	2.7	2.6	.7	.6	---	---	---	---
30	.0	.0	.4	.0	2.8	2.6	.6	.6	---	---	---	---
31	.0	.0	---	---	2.9	2.6	.6	.5	---	---	1.9	.2
MONTH	.1	.0	1.0	.0	2.9	.0	2.7	.5	.8	.3	1.9	.2

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	.1	.0	.1	.1	.2	.2	.3	.3	.5	.5
2	1.7	.2	.1	.0	.1	.1	.2	.2	.3	.3	.5	.3
3	1.3	.1	.1	.0	.1	.1	.2	.2	.4	.3	.3	.0
4	.7	.2	.0	.0	.1	.1	.2	.2	.4	.4	.0	.0
5	2.3	.2	.0	.0	.1	.1	.2	.2	.4	.4	.0	.0
6	1.5	.2	.0	.0	.1	.1	.2	.2	.4	.4	.0	.0
7	1.9	.2	.0	.0	.1	.1	.2	.2	.4	.4	.0	.0
8	1.2	.2	.0	.0	.1	.1	.2	.2	.4	.4	.1	.0
9	3.0	.2	.0	.0	.1	.1	.3	.2	.4	.4	.2	.1
10	.6	.2	.0	.0	.1	.1	.3	.2	.4	.4	.3	.2
11	.4	.1	.0	.0	.1	.1	.3	.2	.4	.4	.6	.3
12	.5	.0	.0	.0	---	---	.3	.3	.5	.4	.9	.6
13	.3	.1	.0	.0	---	---	.3	.3	.5	.5	.9	.9
14	.7	.1	.0	.0	---	---	.3	.3	---	---	1.1	.9
15	.4	.1	.1	.0	---	---	.3	.3	.5	.5	1.1	1.1
16	.2	.1	.1	.1	---	---	.3	.3	.5	.5	1.2	1.1
17	.9	.2	.1	.1	---	---	.3	.3	.5	.5	1.2	1.1
18	2.6	.1	.1	.1	---	---	.3	.2	.5	.5	1.2	1.1
19	.2	.0	.1	.1	---	---	.3	.3	.5	.5	1.2	1.2
20	.1	.0	.1	.1	---	---	.3	.3	.6	.5	1.3	1.2
21	.1	.0	.1	.1	.2	.2	.3	.3	.6	.6	1.3	1.3
22	.1	.0	.1	.1	.2	.2	.3	.3	.6	.6	1.4	1.3
23	.1	.0	.1	.1	.2	.2	.3	.3	.6	.6	1.4	1.4
24	.1	.0	.1	.1	.2	.2	.3	.3	.6	.6	1.4	1.4
25	.2	.0	.1	.1	.2	.2	.3	.3	.6	.6	1.4	1.4
26	.1	.0	.1	.1	.2	.2	.3	.3	.6	.6	1.4	1.4
27	.0	.0	.1	.1	.2	.2	.3	.3	.6	.6	1.4	1.4
28	.0	.0	.1	.1	.2	.2	.3	.3	.6	.6	1.4	1.3
29	.0	.0	.1	.1	.2	.2	.3	.3	.7	.6	1.3	1.1
30	.0	.0	.1	.1	.2	.2	.3	.3	.7	.6	1.1	1.1
31	---	---	.1	.1	---	---	.3	.3	.6	.5	---	---
MONTH	3.0	.0	.1	.0	.2	.1	.3	.2	.7	.3	1.4	.0
YEAR	3.0	.0										

391904084362101. LOCAL NUMBER, BU-1151-1A—Continued

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	529.38	529.30	528.64	528.23	528.22	527.82	528.09	527.67	530.51	530.24	530.09	529.99
2	529.32	528.67	528.23	528.05	528.15	527.94	528.38	528.09	530.50	530.35	529.99	529.91
3	528.67	528.44	528.05	527.95	528.20	528.15	530.06	528.38	530.35	529.98	529.93	529.86
4	528.44	528.25	527.97	527.88	528.25	528.18	530.88	528.47	529.99	529.91	529.86	529.80
5	529.61	528.27	527.88	527.78	528.21	528.10	528.49	527.97	529.92	529.37	529.80	529.71
6	530.55	529.61	527.78	527.69	528.10	527.83	527.97	527.76	529.37	528.88	529.72	529.62
7	530.56	530.25	527.72	527.64	527.83	527.40	527.97	527.68	528.88	528.58	529.62	529.56
8	530.25	529.79	527.68	527.61	527.40	527.16	528.24	527.97	528.58	528.40	529.57	529.54
9	529.79	529.40	527.99	527.66	527.29	527.07	528.37	528.24	528.88	528.42	529.54	529.48
10	529.40	529.00	528.64	527.99	527.58	527.29	530.56	528.26	529.87	528.88	529.48	529.43
11	529.01	528.73	528.82	528.64	529.67	527.45	528.26	527.98	530.52	529.87	529.43	529.39
12	528.73	528.56	528.82	528.69	531.19	527.95	530.20	528.13	530.55	530.43	529.44	529.39
13	528.56	528.35	528.88	528.62	531.88	529.47	528.48	528.20	530.43	530.13	529.44	529.40
14	528.35	528.23	528.97	528.88	529.47	529.39	528.20	527.79	531.86	530.10	529.48	529.39
15	528.23	528.14	528.96	528.92	529.39	529.19	527.79	527.60	533.36	530.10	529.40	529.15
16	528.14	528.05	528.95	528.70	530.08	528.94	527.81	527.58	533.79	530.79	529.32	529.18
17	528.19	528.04	528.70	528.22	530.99	530.08	527.92	527.80	---	---	529.51	529.32
18	528.20	528.18	528.22	527.98	---	---	527.98	527.92	---	---	529.64	529.51
19	528.18	528.12	527.98	527.81	---	---	527.97	527.93	---	---	529.70	529.64
20	528.12	528.08	527.82	527.67	530.10	529.59	527.94	527.86	---	---	529.78	529.62
21	528.08	528.04	527.68	527.58	529.59	529.21	528.20	527.83	---	---	529.64	529.52
22	528.04	528.00	527.58	527.46	529.21	528.84	528.49	528.20	---	---	529.53	529.51
23	528.01	527.94	527.46	527.36	528.84	528.58	528.63	528.49	---	---	529.51	529.47
24	528.20	527.91	---	---	528.58	528.39	528.70	528.63	---	---	529.47	529.41
25	528.49	528.20	527.52	527.41	528.39	528.24	531.05	528.70	---	---	529.41	529.38
26	528.67	528.49	527.42	527.41	528.24	528.16	528.85	528.76	---	---	529.38	529.34
27	528.82	528.67	527.45	527.39	528.18	528.02	528.76	528.72	---	---	529.38	529.33
28	528.86	528.82	527.63	527.38	528.02	527.89	528.74	528.71	---	---	531.90	529.36
29	528.88	528.85	527.96	527.63	528.08	527.84	528.80	528.74	---	---	529.51	529.27
30	530.99	528.85	530.44	527.96	528.05	527.81	529.30	528.80	---	---	529.27	529.11
31	530.69	528.64	---	---	527.81	527.71	530.24	529.30	---	---	529.11	528.97
MONTH	530.99	527.91	530.44	527.36	531.88	527.07	531.05	527.58	533.79	528.40	531.90	528.97

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	529.51	529.44	535.89	535.62	533.74	533.60	534.26	533.71	533.22	532.74
2	528.87	528.79	529.49	529.23	535.62	534.91	534.46	533.73	533.71	533.37	533.23	533.11
3	528.79	528.67	532.16	529.24	534.91	534.43	534.46	534.25	533.37	533.17	533.11	532.89
4	528.74	528.67	529.56	529.38	534.43	534.13	534.29	534.21	533.17	533.07	532.89	532.74
5	528.75	528.72	529.38	529.33	534.28	534.03	534.50	534.28	533.07	532.96	532.74	532.60
6	528.78	528.71	529.33	529.17	534.25	534.05	534.43	534.20	533.23	532.96	532.60	532.49
7	528.73	528.71	529.17	529.01	534.50	534.25	534.20	533.73	533.21	532.98	532.59	532.40
8	528.73	528.71	529.02	529.00	534.47	534.31	533.73	533.59	533.05	532.86	533.15	532.59
9	530.79	528.72	529.08	529.00	534.31	534.09	533.75	530.76	532.97	532.73	533.33	533.15
10	529.12	528.84	529.09	529.03	534.09	533.91	530.76	530.08	533.03	532.72	535.46	533.33
11	531.41	529.12	529.06	529.03	533.91	533.77	530.08	529.75	532.72	532.58	535.67	535.46
12	532.22	531.41	529.13	529.06	---	---	529.75	529.48	532.88	532.58	535.46	534.91
13	532.20	531.84	529.11	529.04	---	---	532.51	529.40	532.78	532.74	534.91	534.45
14	531.84	531.32	529.04	529.02	---	---	532.89	530.32	---	---	534.45	534.11
15	531.32	530.92	529.03	529.01	---	---	532.82	529.96	532.96	532.71	534.11	533.81
16	530.92	530.61	529.03	528.80	---	---	531.62	529.62	532.94	532.65	533.81	533.32
17	530.61	530.50	532.61	528.81	---	---	532.12	529.39	533.11	532.94	533.32	532.82
18	530.50	530.38	535.07	532.61	---	---	535.19	531.94	533.14	533.11	532.82	532.55
19	530.38	530.29	536.55	535.07	---	---	531.94	531.10	533.37	533.14	532.55	532.47
20	530.29	530.24	536.87	536.55	---	---	531.10	530.64	533.23	532.82	532.70	532.48
21	530.29	530.23	536.85	536.48	534.27	533.95	533.27	530.60	533.14	532.85	532.97	532.62
22	530.33	530.29	536.48	535.91	534.67	534.27	533.67	533.27	533.14	532.69	533.31	532.97
23	530.30	530.20	535.91	535.09	534.78	534.41	533.75	533.42	533.03	532.70	533.37	533.03
24	530.21	530.07	535.09	534.62	534.41	534.07	533.42	533.19	533.05	532.89	533.03	532.77
25	530.07	529.95	534.80	534.51	534.07	533.82	533.19	533.03	532.99	532.92	532.80	532.75
26	529.95	529.90	535.28	534.80	533.82	533.61	533.54	533.01	533.01	532.80	532.79	532.62
27	529.90	529.83	536.08	535.28	533.61	533.45	533.72	533.54	532.97	532.75	532.80	532.01
28	529.83	529.69	536.28	536.08	533.63	532.59	533.75	533.72	533.01	532.66	532.89	532.46
29	529.69	529.55	536.42	536.20	533.71	533.53	533.91	533.75	533.21	532.88	532.46	532.12
30	529.56	529.51	536.38	536.14	533.78	533.59	534.94	533.91	532.88	532.60	532.12	531.93
31	---	---	536.14	535.89	---	---	534.94	534.26	532.74	532.52	---	---
MONTH	532.22	528.67	536.87	528.80	535.89	532.59	535.19	529.39	534.26	532.52	535.67	531.93
YEAR	536.87	527.07										

PROJECT DATA
Water Data for Bolton Well Field

391904084362101. LOCAL NUMBER, BU-1151-1A—Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.3	7.3	7.3	7.3	7.4	7.3	7.4	7.4	7.3	7.3	7.2	7.2
2	7.3	7.3	7.3	7.3	7.4	7.3	7.4	7.4	7.3	7.3	7.2	7.2
3	7.3	7.3	7.3	7.3	7.4	7.3	7.4	7.4	7.3	7.2	7.2	7.2
4	7.3	7.3	7.3	7.3	7.4	7.4	7.4	7.4	7.3	7.2	7.2	7.2
5	7.3	7.3	7.3	7.3	7.4	7.4	7.4	7.4	7.3	7.3	7.2	7.2
6	7.3	7.3	7.3	7.3	7.4	7.4	7.4	7.4	7.3	7.3	7.2	7.2
7	7.3	7.3	7.3	7.3	7.4	7.4	7.4	7.3	7.3	7.2	7.2	7.2
8	7.3	7.3	7.3	7.3	7.4	7.4	7.4	7.3	7.3	7.2	7.2	7.2
9	7.3	7.3	7.3	7.3	7.4	7.4	7.4	7.3	7.2	7.2	7.2	7.2
10	7.3	7.3	7.3	7.3	7.4	7.4	7.3	7.3	7.2	7.2	7.2	7.2
11	7.3	7.3	7.3	7.3	7.4	7.4	7.3	7.3	7.2	7.2	7.2	7.2
12	7.4	7.3	7.3	7.3	7.4	7.4	7.3	7.3	7.2	7.2	7.2	7.2
13	7.4	7.4	7.3	7.3	7.4	7.4	7.3	7.3	7.2	7.2	7.2	7.2
14	7.4	7.3	7.3	7.3	7.4	7.4	7.3	7.3	7.3	7.2	7.2	7.2
15	7.3	7.3	7.3	7.2	7.4	7.4	7.3	7.3	7.3	7.2	7.2	7.2
16	7.3	7.3	7.3	7.2	7.4	7.4	7.3	7.3	7.2	7.2	7.2	7.2
17	7.3	7.3	7.3	7.3	7.4	7.4	7.3	7.3	---	---	7.2	7.2
18	7.3	7.3	7.3	7.2	---	---	7.3	7.3	---	---	7.2	7.2
19	7.4	7.3	7.2	7.2	---	---	7.3	7.3	---	---	7.2	7.2
20	7.4	7.4	7.3	7.2	7.4	7.3	7.3	7.3	---	---	7.2	7.2
21	7.4	7.4	7.3	7.2	7.4	7.4	7.3	7.3	---	---	7.2	7.2
22	7.4	7.4	7.3	7.3	7.4	7.4	7.3	7.3	---	---	7.2	7.2
23	7.4	7.4	7.4	7.3	7.4	7.4	7.3	7.3	---	---	7.2	7.2
24	7.4	7.4	---	---	7.4	7.4	7.3	7.3	---	---	7.2	7.2
25	7.4	7.4	7.4	7.4	7.4	7.4	7.3	7.3	---	---	7.2	7.2
26	7.4	7.3	7.4	7.4	7.4	7.3	7.3	7.3	---	---	7.2	7.2
27	7.3	7.3	7.4	7.4	7.4	7.4	7.3	7.3	---	---	7.2	7.2
28	7.3	7.3	7.4	7.4	7.4	7.4	7.3	7.3	---	---	---	---
29	7.3	7.3	7.4	7.4	7.4	7.4	7.3	7.3	---	---	7.3	7.3
30	7.3	7.3	7.4	7.3	7.4	7.4	7.3	7.3	---	---	7.3	7.3
31	7.3	7.3	---	---	7.4	7.4	7.3	7.3	---	---	7.3	7.3
MONTH	7.4	7.3	7.4	7.2	7.4	7.3	7.4	7.3	7.3	7.2	7.3	7.2

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	7.3	7.3	7.1	7.1	6.9	6.9	6.8	6.8	6.9	6.9
2	7.3	7.3	7.4	7.3	7.1	7.1	6.9	6.9	6.8	6.8	6.9	6.9
3	7.3	7.3	7.3	7.3	7.1	7.1	6.9	6.9	6.8	6.8	6.9	6.9
4	7.3	7.3	7.4	7.3	7.1	7.1	6.9	6.9	6.8	6.8	6.9	6.9
5	7.3	7.3	7.3	7.3	7.1	7.1	6.9	6.9	6.8	6.8	6.9	6.9
6	7.3	7.3	7.3	7.3	7.1	7.1	6.9	6.9	6.8	6.8	6.9	6.9
7	7.3	7.3	7.4	7.3	7.1	7.1	6.9	6.9	6.8	6.8	6.9	6.8
8	7.3	7.3	7.3	7.3	7.1	7.1	6.9	6.9	6.8	6.8	6.8	6.8
9	7.3	7.3	7.4	7.3	7.1	7.1	6.9	6.7	6.8	6.8	6.8	6.8
10	7.4	7.3	7.4	7.3	7.1	7.1	7.0	6.9	6.8	6.8	6.8	6.8
11	7.4	7.4	7.3	7.3	7.1	7.1	7.0	6.9	6.8	6.8	6.8	6.8
12	7.4	7.3	7.3	7.3	---	---	7.0	6.9	6.8	6.8	6.8	6.8
13	7.4	7.3	7.3	7.3	---	---	6.9	6.9	6.8	6.8	6.8	6.8
14	7.4	7.4	7.3	7.3	---	---	6.9	6.7	---	---	6.8	6.8
15	7.4	7.4	7.3	7.3	---	---	6.9	6.7	6.9	6.8	6.8	6.8
16	7.4	7.4	7.3	7.2	---	---	6.9	6.8	6.8	6.8	6.8	6.8
17	7.4	7.4	7.2	7.2	---	---	6.9	6.9	6.8	6.8	6.8	6.8
18	7.4	7.4	7.2	7.2	---	---	6.9	6.8	6.8	6.8	6.8	6.8
19	7.4	7.4	7.2	7.2	---	---	6.9	6.9	6.8	6.8	6.8	6.8
20	7.4	7.4	7.2	7.2	---	---	6.9	6.9	6.8	6.8	6.8	6.8
21	7.4	7.4	7.2	7.2	7.0	7.0	6.9	6.8	6.8	6.8	6.8	6.8
22	7.4	7.4	7.2	7.2	7.0	7.0	6.8	6.8	6.8	6.8	6.8	6.8
23	7.4	7.4	7.2	7.2	7.0	7.0	6.8	6.8	6.8	6.8	6.8	6.7
24	7.4	7.4	7.2	7.2	7.0	7.0	6.8	6.8	6.8	6.8	6.7	6.7
25	7.4	7.4	7.2	7.1	7.0	7.0	6.8	6.8	6.8	6.8	6.7	6.7
26	7.4	7.4	7.2	7.1	7.0	7.0	6.8	6.8	6.8	6.8	6.7	6.7
27	7.4	7.4	7.1	7.1	7.0	7.0	6.8	6.8	6.8	6.8	6.7	6.7
28	7.4	7.4	7.1	7.1	7.0	6.8	6.8	6.8	6.8	6.8	6.7	6.7
29	7.4	7.3	7.1	7.1	7.0	6.9	6.8	6.8	6.8	6.8	6.7	6.7
30	7.3	7.3	7.1	7.1	6.9	6.9	6.8	6.8	6.9	6.8	6.7	6.7
31	---	---	7.1	7.1	---	---	6.8	6.8	6.9	6.9	---	---
MONTH	7.4	7.3	7.4	7.1	7.1	6.8	7.0	6.7	6.9	6.8	6.9	6.7
YEAR	7.4	6.7										

391904084362101. LOCAL NUMBER, BU-1151-1A—Continued

TURBIDITY (NTU), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	-1.0	-1.0	.0	-1.0	.0	.0	.0	.0	.0	.0	.0	.0
2	-1.0	-1.0	.0	-1.0	.0	.0	.0	.0	.0	.0	.0	.0
3	-1.0	-1.0	.0	-1.0	.0	.0	.0	.0	.0	.0	.0	.0
4	-1.0	-1.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
5	-1.0	-1.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6	-1.0	-1.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
7	-1.0	-1.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8	-1.0	-1.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
9	-1.0	-1.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10	-1.0	-1.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
11	-1.0	-1.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
12	-1.0	-1.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13	-1.0	-1.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
14	-1.0	-1.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
15	-1.0	-1.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
16	-1.0	-1.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
17	-1.0	-1.0	.0	.0	.0	.0	.0	.0	---	---	.0	.0
18	-1.0	-1.0	.0	.0	---	---	.0	.0	---	---	.0	.0
19	-1.0	-1.0	.0	.0	---	---	.0	.0	---	---	.0	.0
20	-1.0	-1.0	.0	.0	.0	.0	.0	.0	---	---	.0	.0
21	-1.0	-1.0	.0	.0	.0	.0	.0	.0	---	---	.0	.0
22	-1.0	-1.0	.0	.0	.0	.0	.0	.0	---	---	.0	.0
23	-1.0	-1.0	.0	.0	.0	.0	.0	.0	---	---	.0	.0
24	.0	-1.0	---	---	.0	.0	.0	.0	---	---	.0	.0
25	-1.0	-1.0	.0	.0	.0	.0	.0	.0	---	---	.0	.0
26	-1.0	-1.0	.0	.0	.0	.0	.0	.0	---	---	.0	.0
27	-1.0	-1.0	.0	.0	.0	.0	.0	.0	---	---	.0	.0
28	.0	-1.0	.0	.0	.0	.0	.0	.0	---	---	.0	.0
29	.0	-1.0	.0	.0	.0	.0	.0	.0	---	---	.0	.0
30	.0	-1.0	.0	.0	.0	.0	.0	.0	---	---	.0	.0
31	.0	-1.0	---	---	.0	.0	.0	.0	---	---	.0	.0
MONTH	.0	-1.0	.0	-1.0	.0	.0	.0	.0	.0	.0	.0	.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
4	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
5	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
9	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
11	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
12	.0	.0	.0	.0	---	---	.0	.0	.0	.0	.0	.0
13	.0	.0	.0	.0	---	---	.0	.0	.0	.0	.0	.0
14	.0	.0	.0	.0	---	---	.0	.0	---	---	.0	.0
15	.0	.0	.0	.0	---	---	.0	.0	.0	.0	.0	.0
16	.0	.0	.0	.0	---	---	.0	.0	.0	.0	.0	.0
17	.0	.0	.0	.0	---	---	.0	.0	.0	.0	.0	.0
18	.0	.0	.0	.0	---	---	.0	.0	.0	.0	.0	.0
19	.0	.0	.0	.0	---	---	.0	.0	.0	.0	.0	.0
20	.0	.0	.0	.0	---	---	.0	.0	.0	.0	.0	.0
21	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
22	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
23	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
24	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
25	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
26	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
27	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
28	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
29	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
30	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
31	---	---	.0	.0	---	---	.0	.0	.0	.0	---	---
MONTH	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
YEAR	.0	-1.0										

PROJECT DATA
Water Data for Bolton Well Field

391904084362101. LOCAL NUMBER, BU-1151-1A—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00025), USGS National Water Information System parameter code; mm of Hg, millimeters of mercury; mg/L, milligrams per liter; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; µg/L, micrograms per liter; <, concentration or value reported is less than that indicated; e, estimated concentration or value]

DATE	TIME	BAROMETRIC PRESSURE (MM OF HG) (00025)	DISSOLVED OXYGEN (MG/L) (00300)	DISSOLVED OXYGEN (PERCENT SATURATION) (00301)	PH WATER FIELD (STANDARD UNITS) (00400)	PH WATER LAB (STANDARD UNITS) (00403)	SPECIFIC CONDUCTANCE LAB (US/CM) (90095)	SPECIFIC CONDUCTANCE FIELD (US/CM) (00095)	TEMPERATURE, AIR (DEG C) (00020)	TEMPERATURE, WATER (DEG C) (00010)	HARDNESS, TOTAL (MG/L AS CACO3) (00900)	CALCIUM, DISSOLVED (MG/L AS CA) (00915)
APR												
12...	1000	---	---	---	7.4	7.8	851	837	---	---	321	80
14...	1030	---	0.3	---	7.4	7.8	808	786	---	10.7	294	73
18...	1015	---	---	---	---	7.8	698	---	---	---	264	67

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	ANC, WATER, UNFILTERED FIELD (MG/L AS CACO3) (00419)	ANC BICARBONATE, WATER, FIELD (MG/L AS HCO3) (00450)	ANC CARBONATE WATER FIELD (MG/L AS CO3) (00447)	BROMIDE, DISSOLVED (MG/L AS BR) (71870)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SULFATE, DISSOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)
APR												
12...	29	4.3	45	245	303	<1	0.09	79	0.3	5.6	69	504
14...	27	4.1	47	233	285	<1	0.09	72	0.4	5.6	64	476
18...	24	4.4	36	209	255	<1	0.04	54	0.4	5.6	49	395

DATE	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC, DISSOLVED (MG/L AS N) (00623)	NITROGEN, NO2 + NO3, DISSOLVED (MG/L AS N) (00631)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	PHOSPHORUS, DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	IRON, DISSOLVED (UG/L AS FE) (01046)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	2,6-DIETHYL ANILINE, WATER FLTRD (UG/L) (82660)	ACETOCHLOR, WATER, FLTRD (UG/L) (49260)	ALACHLOR, WATER, FLTRD (UG/L) (46342)	ALPHA BHC, WATER, FLTRD (UG/L) (34253)
APR												
12...	<0.04	0.14	1.9	0.049	0.17	0.16	<10	<3.2	<0.002	<0.004	<0.002	<0.005
14...	<0.04	0.19	0.95	0.17	0.17	0.16	<10	e2.1	<0.002	<0.004	<0.002	<0.005
18...	<0.04	0.24	3.0	0.20	0.20	0.19	<10	<3.2	<0.002	0.006	<0.002	<0.005

DATE	ATRAZINE, WATER, FLTRD (UG/L) (39632)	BENFLURALIN, WATER, FLTRD (UG/L) (82673)	BUTYLATE, WATER, FLTRD (UG/L) (04028)	CARBARYL, WATER, FLTRD (UG/L) (82680)	CARBOFURAN, WATER, FLTRD (UG/L) (82674)	CHLORPYRIFOS, WATER, FLTRD (UG/L) (38933)	CYANAZINE, WATER, FLTRD (UG/L) (04041)	DCPA, WATER, FLTRD (UG/L) (82682)	DEETHYL ATRAZINE, WATER, FLTRD (UG/L) (04040)	DIAZINON, WATER, FLTRD (UG/L) (39572)	DIELRIN, WATER, FLTRD (UG/L) (39381)	DISULFOTON, WATER, FLTRD (UG/L) (82677)
APR												
12...	e0.12	<0.010	<0.002	<0.041	<0.020	<0.005	e0.05	<0.003	e0.03	<0.005	<0.005	<0.021
14...	e0.13	<0.010	<0.002	<0.041	<0.020	0.006	<0.018	<0.003	e0.03	<0.005	<0.005	<0.021
18...	e0.18	<0.010	<0.002	<0.041	<0.020	<0.005	e0.009	<0.003	e0.05	<0.005	<0.005	<0.021

391904084362101. LOCAL NUMBER, BU-1151-1A—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001—Continued

[(82668), USGS National Water Information System parameter code; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; µg/L, micrograms per liter; col/100 mL, colonies per 100 milliliters; <, concentration or value reported is less than that indicated; e, estimated concentration or value; MF, membrane filtration; E, value is estimated from a non-ideal colony count]

DATE	EPTC, WATER, FLTRD (UG/L) (82668)	ETHAL-FLUR-ALIN, WATER, FLTRD (UG/L) (82663)	ETHO-PROP, WATER, FLTRD (UG/L) (82672)	FONOFOS, WATER, FLTRD (UG/L) (04095)	LINDANE, WATER, FLTRD (UG/L) (39341)	LIN-URON, WATER, FLTRD (UG/L) (82666)	MALA-THION, WATER, FLTRD (UG/L) (39532)	METHYL-AZIN-PHOS, WATER, FLTRD (UG/L) (82686)	METHYL PARA-THION, WATER, FLTRD (UG/L) (82667)	METO-LACHLOR, WATER, FLTRD (UG/L) (39415)	METRI-BUZIN, WATER, FLTRD (UG/L) (82630)	MOL-INATE, WATER, FLTRD (UG/L) (82671)
APR												
12...	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.046	<0.006	<0.002
14...	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.048	<0.10	<0.002
18...	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.064	0.041	<0.002

DATE	NAPROP-AMIDE, WATER, FLTRD (UG/L) (82684)	P,P' DDE, WATER, FLTRD (UG/L) (34653)	PARA-THION, WATER, FLTRD (UG/L) (39542)	PEB-ULATE, WATER, FLTRD (UG/L) (82669)	PENDI-METH-ALIN, WATER, FLTRD (UG/L) (82683)	CIS-PER-METHRIN, WATER, FLTRD (UG/L) (82687)	PHORATE, WATER, FLTRD (UG/L) (82664)	PRO-METON, WATER, FLTRD (UG/L) (04037)	PRON-AMIDE, WATER, FLTRD (UG/L) (82676)	PROPA-CHLOR, WATER, FLTRD (UG/L) (04024)	PRO-PANIL, WATER, FLTRD (UG/L) (82679)	PRO-PARGITE, WATER, FLTRD (UG/L) (82685)
APR												
12...	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.020	<0.004	<0.010	<0.011	<0.023
14...	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	0.020	<0.004	<0.010	<0.011	<0.023
18...	<0.007	<0.003	<0.007	<0.002	<0.023	<0.006	<0.011	0.025	<0.004	<0.010	<0.011	<0.023

DATE	SI-MAZINE, WATER, FLTRD (UG/L) (04035)	TEBU-THI-URON, WATER, FLTRD (UG/L) (82670)	TER-BACIL, WATER, FLTRD (UG/L) (82665)	TER-BUFOS, WATER, FLTRD (UG/L) (82675)	THIO-BENCARB, WATER, FLTRD (UG/L) (82681)	TRIAL-LATE, WATER, FLTRD (UG/L) (82678)	TRI-FLUR-ALIN, WATER, FLTRD (UG/L) (82661)
APR							
12...	0.015	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
14...	0.015	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
18...	0.022	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009

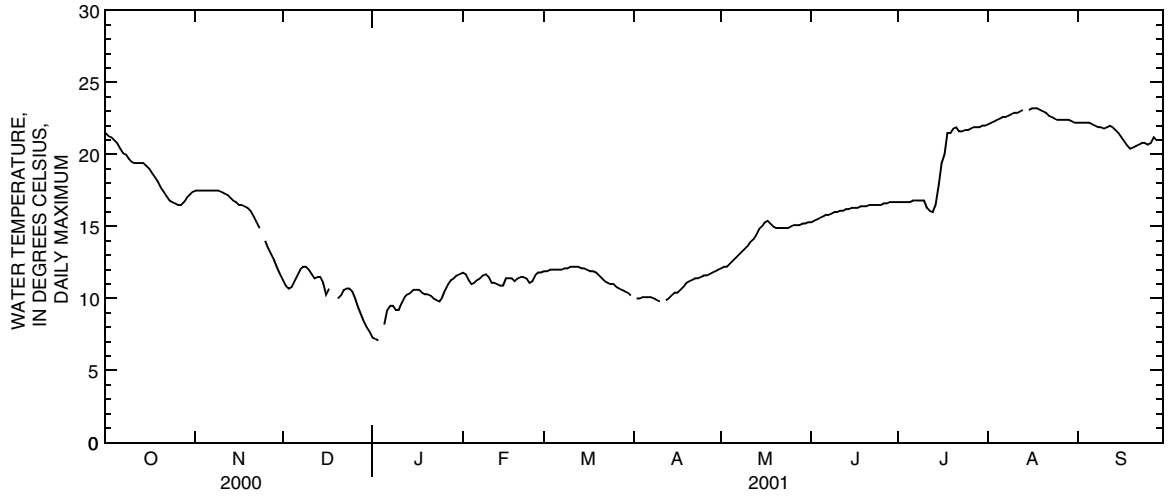
DATE	TIME	E COLI, MI MF, WATER (COL/ 100 ML) (90901)	TOTAL COLI-FORM, MI MF, WATER (COL/ 100 ML) (90900)
NOV			
15...	1040	<1	<1
DEC			
12...	0955	E3	E3
17...	1600	E4	E5
20...	1225	E10	E14
21...	1030	E6	E7
22...	1220	<1	<1
FEB			
13...	1050	<1	<1
26...	1225	<1	E3
APR			
12...	0905	<1	<1
14...	1015	<1	E5
16...	1025	<1	<1
18...	1003	<1	<1
19...	1110	<1	<1
23...	1100	<1	<1
25...	0855	<1	<1

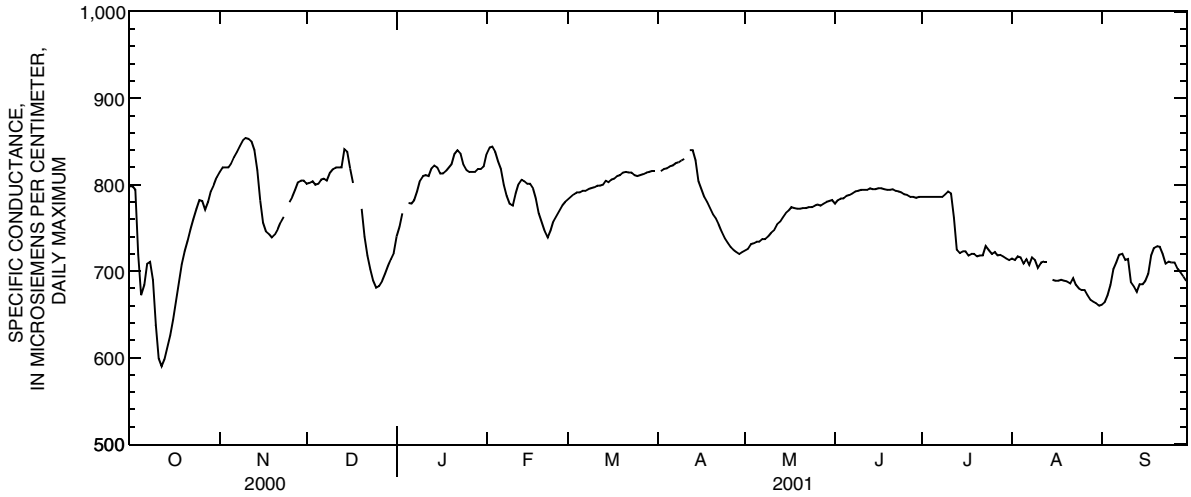
PROJECT DATA
Water Data for Bolton Well Field

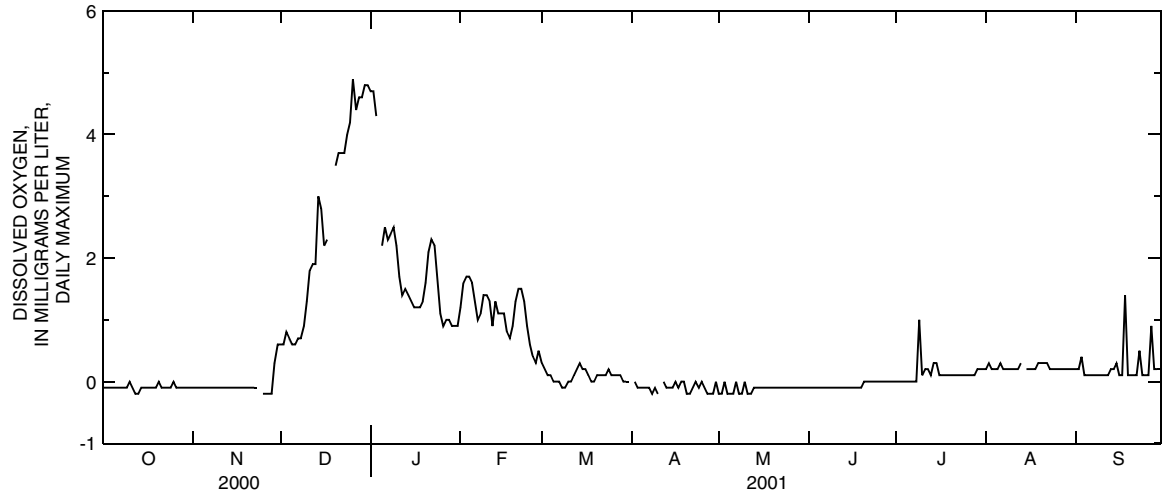
391904084362102. LOCAL NUMBER, BU-1151-1B

LOCATION.—Latitude 39°19′04″, longitude 84°36′21″, Butler County, Hydrologic Unit 05080002.
AQUIFER.—Glacial outwash, sand and gravel; 112OTSH.
WELL CHARACTERISTICS.—Observation well drilled by rotasonic techniques, diameter 4.0 in., depth 45 ft from land surface to bottom of screen.
INSTRUMENTATION.—YSI Model 6920 data sonde with turbidity probe set for 60-minute records. Sonde set at a depth of 42.7 ft below land surface.
DATUM.—Altitude of land surface is 547.58 ft above North American Vertical Datum of 1988 (NAVD of 88). Measuring point is top of inner casing, 1.97 ft above land-surface datum.
REMARK.— This station is part of a network of wells designed to help model flow characteristics from the Great Miami River through the aquifer. Data collection began on July 22, 1999. Negative dissolved oxygen values are due to the resolution of the data sonde. This is a non-vented sonde, water level data is not corrected for barometric pressure.
PERIOD OF RECORD.—
WATER TEMPERATURE: July 22, 1999 to current year.
SPECIFIC CONDUCTANCE: July 22, 1999 to current year.
DISSOLVED OXYGEN: July 22, 1999 to current year.
WATER LEVEL ELEVATION: July 22, 1999 to current year.
pH: July 22, 1999 to current year.
EXTREMES FOR PERIOD OF RECORD.—
WATER TEMPERATURE: Maximum, 29.8°C, Aug. 6 and 7, 1999; Minimum, 5.5°C, Jan. 6 and 7, 2000.
SPECIFIC CONDUCTANCE: Maximum, 1,160 microsiemens per centimeter, Oct. 4, 1999; Minimum, 583 microsiemens per centimeter, Apr. 24, 2000.
DISSOLVED OXYGEN: Maximum, 4.9 milligrams per liter, Dec. 26, 2000; Minimum -0.7 milligrams per liter, Aug. 4, 1999.
WATER LEVEL ELEVATION: Maximum daily low, 524.40 ft above NAVD of 88, Jan. 1 and 2, 2000; Maximum daily high, 537.84 ft above NAVD of 88, Apr. 12, 2000.
pH: Maximum, 7.8, Nov. 25, Dec. 20, 2000, and Jan. 3, 2001; Minimum, 6.2, Sept. 28-30, 2001.
EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURE: Maximum, 23.2°C, Aug. 16 and 17, 2001; Minimum, 7.0°C, Jan. 3, 2001.
SPECIFIC CONDUCTANCE: Maximum, 854 microsiemens per centimeter, Nov. 10, 2000; Minimum, 587 microsiemens per centimeter, Oct. 12, 2000.
DISSOLVED OXYGEN: Maximum, 4.9 milligrams per liter, Dec. 26, 2000; Minimum -0.3 milligrams per liter, Apr. 13-16, 18-20 and 25-28, 2001 .
WATER LEVEL ELEVATION: Maximum daily low, 526.15 ft above NAVD of 88, Dec. 11, 2000; Maximum daily high, 536.92 ft above NAVD of 88, May 20, 2001.
pH: Maximum, 7.8, Nov. 25, Dec. 20, 2000, and Jan. 3, 2001; Minimum, 6.2, Sept. 28-30, 2001.

391904084362102. LOCAL NUMBER, BU-1151-1B—Continued

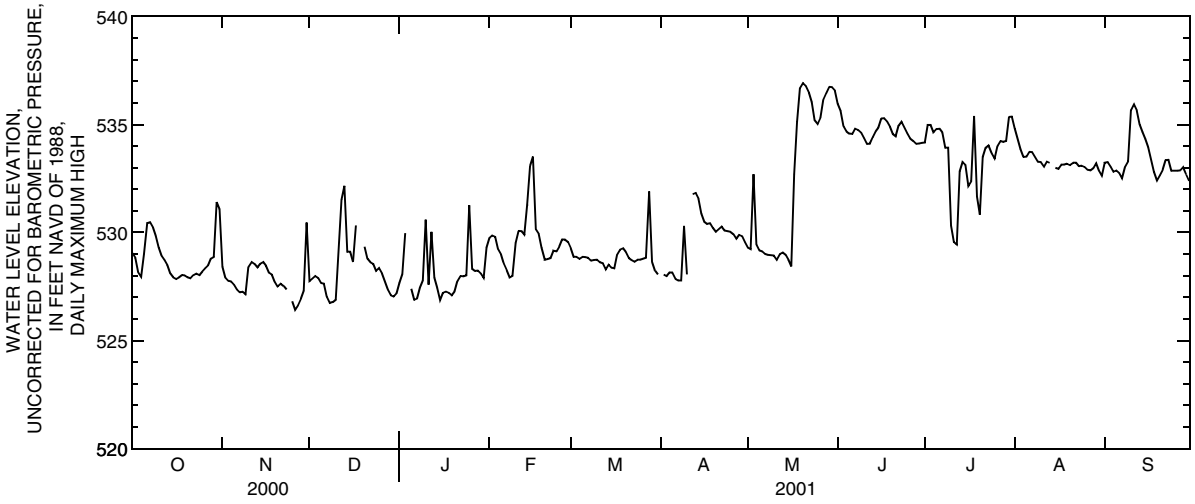


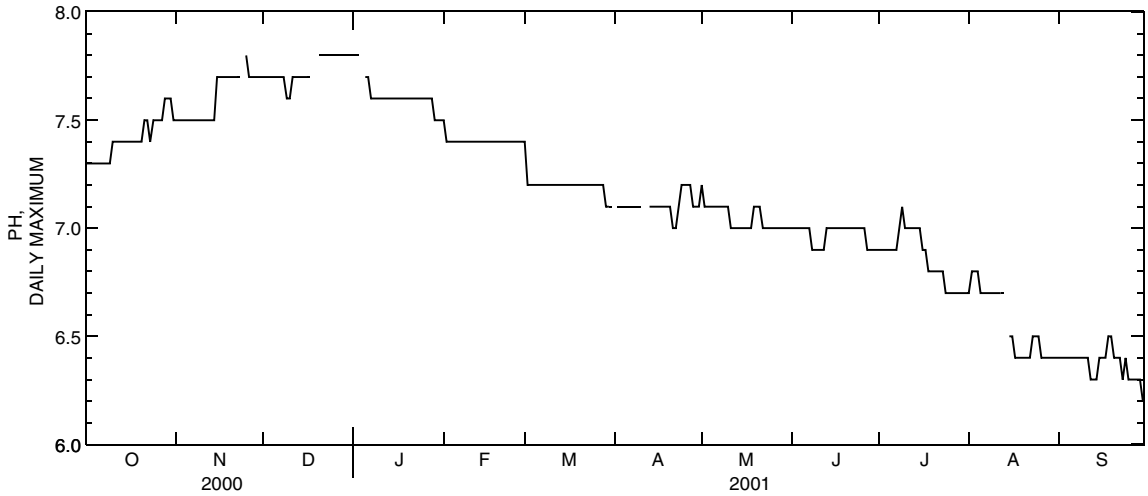




PROJECT DATA
Water Data for Bolton Well Field

391904084362102. LOCAL NUMBER, BU-1151-1B—Continued





391904084362102. LOCAL NUMBER, BU-1151-1B—Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	21.5	21.3	17.5	17.4	11.3	10.9	7.3	7.2	11.8	11.7	11.9	11.8
2	21.3	21.2	17.5	17.5	10.9	10.7	7.2	7.1	11.7	11.3	11.9	11.9
3	21.2	21.0	17.5	17.5	10.7	10.7	7.1	7.0	11.3	11.0	12.0	11.9
4	21.0	20.8	17.5	17.5	10.8	10.7	---	---	11.0	10.9	12.0	11.9
5	20.8	20.4	17.5	17.5	11.2	10.8	8.2	7.3	11.1	11.0	12.0	11.9
6	20.4	20.1	17.5	17.5	11.6	11.2	9.2	8.2	11.3	11.1	12.0	11.9
7	20.1	20.0	17.5	17.5	12.0	11.6	9.5	9.2	11.4	11.3	12.0	12.0
8	20.0	19.7	17.5	17.5	12.2	12.0	9.5	9.2	11.6	11.4	12.1	12.0
9	19.7	19.5	17.5	17.4	12.2	12.0	9.2	9.1	11.7	11.5	12.1	12.1
10	19.5	19.4	17.4	17.3	12.0	11.7	9.2	8.8	11.5	11.1	12.2	12.1
11	19.4	19.4	17.3	17.2	11.7	11.4	9.7	9.2	11.1	10.9	12.2	12.1
12	19.4	19.4	17.2	17.0	11.4	11.3	10.1	9.5	11.1	10.9	12.2	12.1
13	19.4	19.4	17.0	16.8	11.5	11.3	10.3	10.0	11.0	10.8	12.2	12.1
14	19.4	19.2	16.8	16.7	11.5	11.1	10.4	10.2	10.9	10.4	12.1	12.0
15	19.2	19.0	16.7	16.5	11.1	10.2	10.6	10.3	10.9	10.2	12.1	12.0
16	19.0	18.7	16.5	16.5	10.3	10.1	10.6	10.5	11.4	10.2	12.0	11.9
17	18.7	18.4	16.5	16.4	10.7	10.3	10.6	10.4	11.4	11.3	11.9	11.9
18	18.4	18.1	16.4	16.3	---	---	10.4	10.2	11.4	11.1	11.9	11.8
19	18.1	17.7	16.3	16.1	---	---	10.3	10.2	11.2	11.0	11.8	11.6
20	17.7	17.4	16.1	15.7	10.0	9.8	10.3	10.2	11.4	11.2	11.6	11.4
21	17.4	17.1	15.7	15.3	10.2	9.8	10.2	10.0	11.5	11.4	11.4	11.2
22	17.1	16.8	15.3	14.9	10.6	10.2	10.0	9.8	11.5	11.4	11.2	11.1
23	16.8	16.7	14.9	14.4	10.7	10.5	9.9	9.6	11.4	11.1	11.1	11.0
24	16.7	16.6	---	---	10.7	10.5	9.8	9.6	11.1	11.0	11.0	10.9
25	16.6	16.5	14.0	13.5	10.5	10.0	10.1	9.6	11.2	11.0	11.0	10.8
26	16.5	16.5	13.5	13.1	10.0	9.4	10.6	10.1	11.6	11.2	10.8	10.7
27	16.5	16.5	13.1	12.7	9.4	8.9	11.0	10.6	11.8	11.6	10.7	10.6
28	16.7	16.5	12.7	12.2	8.9	8.4	11.3	11.0	11.8	11.8	10.6	10.2
29	17.0	16.7	12.2	11.7	8.4	8.0	11.4	11.2	---	---	10.5	10.4
30	17.2	17.0	11.7	11.3	8.0	7.7	11.6	11.4	---	---	10.4	10.2
31	17.4	17.2	---	---	7.7	7.3	11.7	11.6	---	---	10.2	10.1
MONTH	21.5	16.5	17.5	11.3	12.2	7.3	11.7	7.0	11.8	10.2	12.2	10.1

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	12.1	12.0	15.3	15.3	16.7	16.7	22.1	22.0	22.2	22.2
2	10.0	10.0	12.2	12.1	15.4	15.3	16.7	16.7	22.2	22.1	22.2	22.2
3	10.0	10.0	12.2	12.1	15.5	15.4	16.7	16.7	22.3	22.2	22.2	22.2
4	10.1	10.0	12.4	12.2	15.6	15.5	16.7	16.7	22.4	22.3	22.2	22.2
5	10.1	10.0	12.6	12.4	15.7	15.6	16.7	16.7	22.5	22.4	22.2	22.1
6	10.1	10.1	12.8	12.6	15.8	15.7	16.8	16.7	22.6	22.5	22.1	22.0
7	10.1	10.0	13.0	12.8	15.8	15.8	16.8	16.8	22.6	22.6	22.0	21.9
8	10.0	9.9	13.2	13.0	15.9	15.8	16.8	16.8	22.7	22.6	21.9	21.9
9	9.9	9.8	13.4	13.2	16.0	15.9	16.8	16.8	22.8	22.7	21.9	21.8
10	9.8	9.8	13.6	13.4	16.0	16.0	16.8	16.3	22.9	22.8	21.8	21.7
11	---	---	13.9	13.6	16.1	16.0	16.3	16.0	22.9	22.9	21.9	21.7
12	9.9	9.8	14.1	13.9	16.1	16.1	16.1	15.6	23.0	22.9	22.0	21.9
13	10.0	9.8	14.4	14.1	16.2	16.1	16.0	15.6	23.1	23.0	21.9	21.7
14	10.2	10.0	14.8	14.4	16.2	16.2	16.5	15.9	---	---	21.7	21.5
15	10.4	10.2	15.0	14.8	16.3	16.2	17.9	16.4	23.1	23.1	21.5	21.2
16	10.4	10.4	15.3	15.0	16.3	16.3	19.4	17.9	23.2	23.1	21.2	20.9
17	10.6	10.4	15.4	15.2	16.3	16.3	20.0	19.4	23.2	23.1	20.9	20.6
18	10.8	10.6	15.2	15.0	16.4	16.3	21.5	19.9	23.2	23.1	20.6	20.4
19	11.1	10.8	15.0	14.9	16.4	16.4	21.5	21.2	23.1	23.0	20.4	20.4
20	11.2	11.1	14.9	14.9	16.4	16.4	21.8	21.4	23.0	22.8	20.5	20.4
21	11.3	11.2	14.9	14.9	16.5	16.4	21.9	21.6	22.9	22.7	20.6	20.5
22	11.4	11.3	14.9	14.9	16.5	16.5	21.6	21.6	22.7	22.6	20.7	20.6
23	11.4	11.4	14.9	14.9	16.5	16.5	21.6	21.6	22.6	22.5	20.8	20.7
24	11.5	11.4	14.9	14.9	16.5	16.5	21.7	21.6	22.5	22.4	20.8	20.7
25	11.6	11.5	15.0	14.9	16.5	16.5	21.7	21.7	22.4	22.4	20.7	20.7
26	11.6	11.6	15.1	15.0	16.6	16.5	21.8	21.7	22.4	22.4	20.8	20.7
27	11.7	11.6	15.1	15.1	16.6	16.6	21.9	21.8	22.4	22.4	21.2	20.8
28	11.8	11.7	15.1	15.1	16.7	16.6	21.9	21.9	22.4	22.4	21.0	20.9
29	11.9	11.8	15.2	15.1	16.7	16.7	21.9	21.9	22.4	22.3	21.0	21.0
30	12.0	11.9	15.2	15.2	16.7	16.7	22.0	21.9	22.3	22.2	21.0	20.9
31	---	---	15.3	15.2	---	---	22.0	22.0	22.2	22.2	---	---
MONTH	12.0	9.8	15.4	12.0	16.7	15.3	22.0	15.6	23.2	22.0	22.2	20.4
YEAR	23.2	7.0										

PROJECT DATA
Water Data for Bolton Well Field

391904084362102. LOCAL NUMBER, BU-1151-1B—Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	798	796	815	808	801	796	740	720	836	818	783	777
2	798	794	820	814	802	799	751	740	843	834	786	781
3	794	719	820	817	804	799	767	751	844	837	789	784
4	719	672	820	817	800	797	---	---	838	826	791	786
5	672	667	825	820	801	798	779	771	827	814	791	788
6	684	671	832	825	806	801	778	737	818	800	793	789
7	709	684	838	830	807	804	782	774	800	784	793	789
8	711	690	845	837	805	803	792	780	787	776	795	790
9	690	638	851	844	814	803	805	792	778	772	796	791
10	638	599	854	850	818	812	810	802	776	770	797	792
11	599	588	853	850	820	817	811	804	790	775	799	794
12	590	587	850	840	820	806	810	802	801	789	799	795
13	598	590	840	817	820	792	819	808	806	798	800	797
14	612	597	817	782	841	819	822	817	804	797	805	797
15	626	610	782	755	838	818	820	809	801	794	803	798
16	644	626	756	744	819	802	813	806	801	788	806	800
17	665	644	746	742	802	789	813	807	796	781	807	804
18	686	665	743	738	---	---	816	812	784	766	810	805
19	708	686	739	736	---	---	820	814	767	755	811	808
20	723	708	742	736	772	738	824	816	756	745	814	809
21	735	722	749	742	740	718	836	824	746	738	815	812
22	748	735	757	749	718	699	840	834	739	731	814	811
23	760	748	763	756	702	688	836	822	747	734	814	809
24	772	760	---	---	689	679	823	814	758	744	811	808
25	782	772	780	773	681	676	817	809	764	756	810	808
26	781	770	786	779	683	678	815	809	770	763	811	808
27	771	765	794	785	689	682	815	809	776	768	812	808
28	780	767	803	792	697	687	815	810	780	772	814	809
29	793	779	805	802	706	696	818	812	---	---	815	811
30	800	793	805	798	714	705	818	813	---	---	816	813
31	809	799	---	---	721	713	821	814	---	---	816	814
MONTH	809	587	854	736	841	676	840	720	844	731	816	777

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	724	719	778	776	786	784	715	707	661	657
2	816	814	726	723	782	776	786	783	713	701	664	657
3	818	815	731	723	784	780	786	784	717	698	672	662
4	819	815	732	728	784	782	786	784	716	699	684	667
5	821	817	734	730	787	783	786	784	709	701	702	682
6	822	819	734	732	788	785	786	784	714	700	710	696
7	825	821	737	732	790	787	786	784	707	698	719	707
8	826	823	737	734	792	788	786	784	716	697	720	708
9	828	824	740	736	793	788	789	774	713	697	713	706
10	830	826	744	740	794	791	792	783	704	694	714	685
11	---	---	747	743	794	792	790	762	710	699	687	679
12	840	831	754	747	794	792	762	725	711	695	682	675
13	840	826	757	751	796	792	725	715	711	696	676	662
14	828	804	762	756	795	793	721	714	---	---	685	660
15	804	789	767	761	795	792	723	714	690	687	685	677
16	795	786	770	766	796	794	723	715	689	686	689	684
17	786	779	774	769	796	794	718	713	689	684	697	689
18	780	773	773	770	795	792	720	716	690	684	718	697
19	773	764	772	770	794	792	720	713	689	685	727	718
20	766	760	772	770	794	792	717	714	688	683	729	723
21	761	754	773	770	795	792	718	710	686	681	728	720
22	754	746	773	770	793	791	718	714	692	681	720	708
23	746	738	774	771	792	790	729	714	684	678	709	704
24	738	731	774	771	791	788	724	712	680	674	711	706
25	733	728	776	772	789	786	720	713	678	671	710	708
26	728	724	777	774	788	784	722	712	678	668	710	703
27	725	719	776	773	786	783	718	710	672	662	703	672
28	722	717	778	773	786	778	719	710	667	661	699	688
29	720	718	780	777	785	784	717	710	665	660	694	687
30	722	719	781	778	786	783	715	703	663	656	689	686
31	---	---	782	777	---	---	713	707	660	650	---	---
MONTH	840	717	782	719	796	776	792	703	717	650	729	657
YEAR	854	587										

391904084362102. LOCAL NUMBER, BU-1151-1B—Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	-.1	-.1	-.1	-.1	.6	.5	4.7	4.5	1.2	.8	.3	.2
2	-.1	-.1	-.1	-.1	.6	.6	4.7	4.3	1.6	1.2	.2	.1
3	-.1	-.1	-.1	-.1	.8	.6	4.3	2.9	1.7	1.5	.1	.1
4	-.1	-.1	-.1	-.1	.7	.6	---	---	1.7	1.6	.1	.0
5	-.1	-.1	-.1	-.1	.6	.6	2.2	1.8	1.6	1.3	.0	.0
6	-.1	-.1	-.1	-.1	.6	.6	2.5	1.9	1.3	1.0	.0	.0
7	-.1	-.1	-.1	-.1	.7	.6	2.3	2.0	1.0	.8	.0	-.1
8	-.1	-.1	-.1	-.1	.7	.7	2.4	2.3	1.1	.9	-.1	-.1
9	-.1	-.1	-.1	-.1	.9	.7	2.5	2.2	1.4	1.1	-.1	-.1
10	.0	-.1	-.1	-.1	1.3	.9	2.2	1.7	1.4	1.3	.0	-.1
11	-.1	-.2	-.1	-.1	1.8	1.3	1.7	1.4	1.3	.9	.0	-.1
12	-.2	-.2	-.1	-.1	1.9	1.4	1.4	1.3	.9	.9	.1	.0
13	-.2	-.2	-.1	-.1	1.9	.9	1.5	1.3	1.3	.9	.2	.1
14	-.1	-.2	-.1	-.1	3.0	1.6	1.4	1.3	1.1	1.0	.3	.1
15	-.1	-.1	-.1	-.1	2.8	2.2	1.3	1.2	1.1	1.0	.2	.2
16	-.1	-.1	-.1	-.1	2.2	1.9	1.2	1.1	1.1	.7	.2	.0
17	-.1	-.1	-.1	-.1	2.3	1.8	1.2	1.1	.8	.7	.1	.0
18	-.1	-.1	-.1	-.1	---	---	1.2	1.1	.7	.6	.0	.0
19	-.1	-.1	-.1	-.1	---	---	1.3	1.2	.9	.6	.0	.0
20	.0	-.1	-.1	-.1	3.5	3.0	1.6	1.3	1.3	.9	.1	.0
21	-.1	-.1	-.1	-.1	3.7	3.3	2.1	1.6	1.5	1.3	.1	.0
22	-.1	-.2	-.1	-.1	3.7	3.4	2.3	2.1	1.5	1.3	.1	.1
23	-.1	-.2	-.1	-.1	3.7	3.5	2.2	1.5	1.3	.8	.1	.1
24	-.1	-.1	---	---	4.0	3.7	1.6	1.1	.9	.6	.2	.1
25	.0	-.1	-.2	-.2	4.2	4.0	1.1	.9	.6	.4	.1	.1
26	-.1	-.1	-.2	-.2	4.9	4.2	.9	.9	.4	.3	.1	.1
27	-.1	-.2	-.2	-.2	4.4	4.3	1.0	.9	.3	.3	.1	.0
28	-.1	-.1	-.2	-.2	4.6	4.4	1.0	.9	.5	.3	.1	.0
29	-.1	-.1	.3	-.2	4.6	4.6	.9	.9	---	---	.0	.0
30	-.1	-.1	.6	.1	4.8	4.6	.9	.8	---	---	.0	.0
31	-.1	-.1	---	---	4.8	4.6	.9	.8	---	---	.0	.0
MONTH	.0	-.2	.6	-.2	4.9	.5	4.7	.8	1.7	.3	.3	-.1

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	-.2	-.2	-.1	-.1	.0	.0	.2	.2	.2	.2
2	.0	-.1	-.2	-.2	-.1	-.1	.0	.0	.3	.2	.2	.1
3	-.1	-.1	.0	-.2	-.1	-.1	.0	.0	.2	.2	.4	.1
4	-.1	-.1	-.2	-.2	-.1	-.1	.0	.0	.2	.2	.1	.1
5	-.1	-.1	-.2	-.2	-.1	-.1	.0	.0	.2	.2	.1	.1
6	-.1	-.1	-.2	-.2	-.1	-.1	.0	.0	.3	.2	.1	.1
7	-.1	-.2	.0	-.2	-.1	-.1	.0	.0	.2	.2	.1	.1
8	-.2	-.2	-.2	-.2	-.1	-.1	.0	.0	.2	.2	.1	.1
9	-.1	-.2	-.2	-.2	-.1	-.1	1.0	.0	.2	.2	.1	.1
10	-.2	-.2	.0	-.2	-.1	-.1	.1	.0	.2	.2	.1	.1
11	---	---	-.2	-.2	-.1	-.1	.2	.0	.2	.2	.1	.1
12	.0	-.2	-.2	-.2	-.1	-.1	.2	.0	.2	.2	.1	.1
13	-.1	-.3	-.1	-.2	-.1	-.1	.1	.0	.3	.2	.2	.1
14	-.1	-.3	-.1	-.1	-.1	-.1	.3	.0	---	---	.2	.1
15	-.1	-.3	-.1	-.1	-.1	-.1	.3	.0	.2	.1	.3	.1
16	.0	-.3	-.1	-.1	-.1	-.1	.1	.0	.2	.1	.1	.1
17	-.1	-.2	-.1	-.2	-.1	-.1	.1	.0	.2	.2	.1	.1
18	.0	-.3	-.1	-.1	-.1	-.1	.1	.0	.2	.2	1.4	.1
19	.0	-.3	-.1	-.1	-.1	-.1	.1	.1	.3	.2	.1	.1
20	-.2	-.3	-.1	-.1	.0	-.1	.1	.1	.3	.2	.1	.1
21	-.2	-.2	-.1	-.1	.0	.0	.1	.1	.3	.3	.1	.1
22	-.1	-.2	-.1	-.1	.0	-.1	.1	.1	.3	.2	.1	.1
23	.0	-.2	-.1	-.1	.0	-.1	.1	.1	.2	.2	.5	.1
24	-.1	-.2	-.1	-.1	.0	.0	.1	.1	.2	.2	.1	.1
25	.0	-.3	-.1	-.1	.0	.0	.1	.1	.2	.2	.1	.1
26	-.1	-.3	-.1	-.1	.0	.0	.1	.1	.2	.2	.1	.1
27	-.2	-.3	-.1	-.1	.0	.0	.1	.1	.2	.2	.9	.1
28	-.2	-.3	-.1	-.1	.0	.0	.1	.1	.2	.2	.2	.2
29	-.2	-.2	-.1	-.1	.0	.0	.2	.1	.2	.2	.2	.2
30	.0	-.2	-.1	-.1	.0	.0	.2	.1	.2	.2	.2	.2
31	---	---	-.1	-.1	---	---	.2	.1	.2	.2	---	---
MONTH	.0	-.3	.0	-.2	.0	-.1	1.0	.0	.3	.1	1.4	.1
YEAR	4.9	-.3										

PROJECT DATA
Water Data for Bolton Well Field

391904084362102. LOCAL NUMBER, BU-1151-1B—Continued

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	529.05	528.79	528.41	527.91	527.74	527.28	527.67	527.11	529.74	529.31	529.28	528.88
2	528.84	528.11	527.91	527.69	527.87	527.50	528.08	527.67	529.87	529.62	528.88	528.74
3	528.14	527.95	527.77	527.67	527.98	527.86	529.97	527.67	529.81	529.23	528.87	528.71
4	527.95	527.77	527.73	527.53	527.90	527.61	---	---	529.23	529.00	528.78	528.57
5	529.01	527.77	527.58	527.36	527.66	527.47	527.39	526.77	529.00	528.55	528.88	528.78
6	530.43	529.01	527.36	527.07	527.64	527.02	526.89	526.59	528.55	528.17	528.85	528.76
7	530.48	530.24	527.24	527.05	527.02	526.40	526.95	526.57	528.25	527.93	528.84	528.70
8	530.24	529.84	527.26	526.99	526.74	526.40	527.45	526.95	527.93	527.56	528.70	528.57
9	529.84	529.30	527.15	526.63	526.78	526.58	527.78	527.45	528.00	527.43	528.73	528.66
10	529.30	528.90	528.42	527.15	526.89	526.63	530.59	527.59	529.53	528.00	528.74	528.49
11	528.92	528.72	528.63	528.42	529.03	526.15	527.59	527.22	530.07	529.53	528.62	528.42
12	528.72	528.49	528.54	528.16	531.53	527.00	530.04	527.32	530.05	529.88	528.58	528.05
13	528.49	528.11	528.39	528.02	532.17	528.61	527.91	527.43	529.89	529.35	528.30	528.00
14	528.11	527.92	528.57	528.39	529.11	528.62	527.43	526.87	531.31	528.97	528.52	528.30
15	527.92	527.80	528.63	528.46	529.11	528.38	526.87	526.77	533.08	529.11	528.37	527.94
16	527.86	527.73	528.46	528.15	528.64	527.77	527.22	526.82	533.51	530.12	528.34	527.86
17	527.92	527.69	528.15	528.05	530.33	528.64	527.27	527.18	530.14	529.94	528.99	528.34
18	528.04	527.92	528.06	527.70	---	---	527.21	526.99	529.94	529.29	529.21	528.98
19	528.01	527.88	527.72	527.29	---	---	527.09	526.93	529.29	528.62	529.27	529.09
20	527.92	527.76	527.49	527.26	529.34	528.79	527.27	527.08	528.75	528.51	529.09	528.83
21	527.88	527.77	527.63	527.46	528.79	528.54	527.76	527.27	528.77	528.58	528.83	528.56
22	528.03	527.88	527.52	527.27	528.62	528.51	527.98	527.76	528.81	528.62	528.73	528.63
23	528.11	527.95	527.36	527.18	528.54	527.99	527.97	527.83	529.16	528.81	528.66	528.55
24	528.03	527.88	---	---	528.22	527.97	528.02	527.80	529.13	528.62	528.74	528.49
25	528.20	528.03	526.81	526.31	528.36	528.12	531.25	528.02	529.35	528.53	528.74	528.68
26	528.34	528.20	526.43	526.30	528.12	527.70	528.33	527.69	529.67	529.35	528.79	528.71
27	528.48	528.32	526.63	526.43	527.70	527.33	528.22	527.75	529.67	529.54	528.84	528.75
28	528.80	528.48	526.93	526.63	527.35	527.09	528.24	528.11	529.57	529.28	531.89	528.63
29	528.87	528.73	527.30	526.93	527.09	526.87	528.11	527.39	---	---	528.63	528.23
30	531.41	528.76	530.46	527.30	527.04	526.88	527.90	527.36	---	---	528.23	528.05
31	531.08	528.41	---	---	527.18	526.98	529.31	527.90	---	---	528.05	527.74
MONTH	531.41	527.69	530.46	526.30	532.17	526.15	531.25	526.57	533.51	527.43	531.89	527.74

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	529.31	529.10	535.96	535.63	534.16	533.83	534.82	534.34	533.23	532.62
2	528.05	527.85	529.23	528.96	535.63	534.91	534.98	534.16	534.34	533.85	533.26	533.06
3	527.98	527.78	532.70	529.03	534.92	534.65	534.98	534.62	533.85	533.45	533.06	532.76
4	528.14	527.98	529.43	529.15	534.68	534.42	534.64	534.49	533.50	533.42	532.82	532.74
5	528.14	527.85	529.17	529.07	534.58	534.40	534.79	534.52	533.51	533.43	532.87	532.74
6	527.86	527.72	529.12	528.89	534.57	534.30	534.80	534.61	533.73	533.47	532.76	532.45
7	527.78	527.60	529.01	528.82	534.82	534.57	534.62	533.92	533.72	533.49	532.50	532.27
8	527.78	527.68	528.96	528.86	534.76	534.61	533.93	533.78	533.49	533.27	533.07	532.44
9	530.29	527.65	528.95	528.85	534.62	534.37	533.93	530.32	533.27	533.04	533.30	533.07
10	528.05	527.76	528.93	528.71	534.37	534.10	530.32	529.56	533.25	533.02	535.68	533.30
11	---	---	528.75	528.65	534.10	533.90	529.56	529.40	533.06	532.89	535.95	535.66
12	531.78	530.71	529.01	528.72	534.10	533.86	529.44	529.22	533.29	532.94	535.66	535.01
13	531.83	531.57	529.08	528.95	534.42	534.05	532.84	529.17	533.23	533.13	535.01	534.59
14	531.57	530.88	528.98	528.75	534.68	534.29	533.26	530.05	---	---	534.65	534.33
15	530.88	530.27	528.75	528.39	534.86	534.65	533.13	529.70	532.99	532.64	534.33	533.94
16	530.51	530.29	528.43	528.15	535.28	534.86	532.17	529.36	532.95	532.53	533.94	533.40
17	530.40	530.23	532.70	528.19	535.29	535.13	532.39	529.19	533.15	532.95	533.40	532.80
18	530.43	530.20	535.13	532.70	535.15	534.90	535.40	531.67	533.14	532.91	532.80	532.41
19	530.21	530.03	536.69	535.13	534.90	534.54	531.67	530.84	533.18	532.93	532.41	532.19
20	530.03	529.91	536.92	536.69	534.57	534.32	530.84	530.35	533.12	532.88	532.65	532.29
21	530.14	529.97	536.79	536.42	534.46	534.34	533.49	530.29	533.24	532.92	532.91	532.52
22	530.27	530.09	536.47	536.03	534.95	534.46	533.92	533.49	533.24	532.64	533.34	532.91
23	530.09	529.74	536.03	535.18	535.13	534.85	534.03	533.65	533.07	532.66	533.36	532.86
24	530.06	529.79	535.18	534.73	534.85	534.59	533.65	533.40	533.10	532.94	532.86	532.73
25	530.04	529.88	535.02	534.65	534.60	534.35	533.42	533.23	533.04	532.86	532.86	532.76
26	529.92	529.72	535.32	535.02	534.36	534.20	534.01	533.26	532.90	532.72	532.86	532.57
27	529.72	529.55	536.17	535.32	534.23	534.04	534.23	534.01	532.88	532.65	532.88	531.87
28	529.89	529.70	536.46	536.17	534.10	532.86	534.19	534.06	532.98	532.57	533.02	532.68
29	529.83	529.56	536.74	536.42	534.12	533.98	534.23	534.00	533.21	532.85	532.68	532.39
30	529.56	529.31	536.73	536.58	534.14	533.86	535.35	534.23	532.85	532.47	532.39	532.09
31	---	---	536.58	535.96	---	---	535.36	534.82	532.62	532.31	---	---
MONTH	531.83	527.60	536.92	528.15	535.96	532.86	535.40	529.17	534.82	532.31	535.95	531.87
YEAR	536.92	526.15										

391904084362102. LOCAL NUMBER, BU-1151-1B—Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.3	7.3	7.5	7.5	7.7	7.7	7.8	7.8	7.5	7.4	7.4	7.2
2	7.3	7.2	7.5	7.5	7.7	7.7	7.8	7.8	7.4	7.4	7.2	7.2
3	7.3	7.2	7.5	7.5	7.7	7.7	7.8	7.8	7.4	7.4	7.2	7.2
4	7.3	7.3	7.5	7.5	7.7	7.7	---	---	7.4	7.4	7.2	7.2
5	7.3	7.3	7.5	7.5	7.7	7.7	7.7	7.7	7.4	7.4	7.2	7.2
6	7.3	7.3	7.5	7.5	7.7	7.7	7.7	7.6	7.4	7.4	7.2	7.2
7	7.3	7.3	7.5	7.5	7.7	7.7	7.6	7.6	7.4	7.4	7.2	7.2
8	7.3	7.3	7.5	7.5	7.7	7.6	7.6	7.6	7.4	7.4	7.2	7.2
9	7.3	7.3	7.5	7.5	7.6	7.6	7.6	7.6	7.4	7.4	7.2	7.2
10	7.4	7.3	7.5	7.5	7.6	7.6	7.6	7.6	7.4	7.4	7.2	7.2
11	7.4	7.4	7.5	7.5	7.7	7.6	7.6	7.6	7.4	7.4	7.2	7.2
12	7.4	7.4	7.5	7.5	7.7	7.6	7.6	7.6	7.4	7.4	7.2	7.2
13	7.4	7.4	7.5	7.5	7.7	7.6	7.6	7.6	7.4	7.3	7.2	7.2
14	7.4	7.4	7.5	7.5	7.7	7.7	7.6	7.6	7.4	7.4	7.2	7.2
15	7.4	7.4	7.7	7.5	7.7	7.7	7.6	7.6	7.4	7.4	7.2	7.2
16	7.4	7.4	7.7	7.7	7.7	7.7	7.6	7.6	7.4	7.4	7.2	7.2
17	7.4	7.4	7.7	7.7	7.7	7.7	7.6	7.6	7.4	7.4	7.2	7.2
18	7.4	7.4	7.7	7.7	---	---	7.6	7.6	7.4	7.4	7.2	7.2
19	7.4	7.4	7.7	7.7	---	---	7.6	7.6	7.4	7.4	7.2	7.2
20	7.4	7.4	7.7	7.7	7.8	7.8	7.6	7.6	7.4	7.4	7.2	7.2
21	7.5	7.4	7.7	7.7	7.8	7.8	7.6	7.6	7.4	7.4	7.2	7.2
22	7.5	7.4	7.7	7.7	7.8	7.8	7.6	7.6	7.4	7.4	7.2	7.2
23	7.4	7.4	7.7	7.7	7.8	7.8	7.6	7.6	7.4	7.4	7.2	7.2
24	7.5	7.4	---	---	7.8	7.8	7.6	7.5	7.4	7.4	7.2	7.2
25	7.5	7.5	7.8	7.7	7.8	7.8	7.6	7.6	7.4	7.4	7.2	7.2
26	7.5	7.5	7.7	7.7	7.8	7.8	7.6	7.6	7.4	7.4	7.2	7.2
27	7.5	7.5	7.7	7.7	7.8	7.8	7.6	7.6	7.4	7.4	7.2	7.2
28	7.6	7.5	7.7	7.7	7.8	7.8	7.6	7.5	7.4	7.3	7.2	7.1
29	7.6	7.6	7.7	7.6	7.8	7.8	7.5	7.5	---	---	7.1	7.1
30	7.6	7.5	7.7	7.6	7.8	7.8	7.5	7.5	---	---	7.1	7.1
31	7.5	7.5	---	---	7.8	7.8	7.5	7.5	---	---	7.1	7.1
MONTH	7.6	7.2	7.8	7.5	7.8	7.6	7.8	7.5	7.5	7.3	7.4	7.1

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	7.2	7.1	7.0	7.0	6.9	6.9	6.7	6.7	6.4	6.4
2	7.1	7.1	7.1	7.1	7.0	7.0	6.9	6.9	6.8	6.7	6.4	6.4
3	7.1	7.1	7.1	7.1	7.0	7.0	6.9	6.9	6.8	6.7	6.4	6.4
4	7.1	7.1	7.1	7.1	7.0	7.0	6.9	6.9	6.8	6.7	6.4	6.4
5	7.1	7.1	7.1	7.1	7.0	6.9	6.9	6.9	6.7	6.7	6.4	6.4
6	7.1	7.1	7.1	7.0	7.0	6.9	6.9	6.9	6.7	6.7	6.4	6.4
7	7.1	7.1	7.1	6.9	7.0	6.9	6.9	6.9	6.7	6.7	6.4	6.4
8	7.1	7.1	7.1	7.1	6.9	6.9	7.0	6.9	6.7	6.7	6.4	6.4
9	7.1	7.1	7.1	7.0	6.9	6.9	7.1	7.0	6.7	6.7	6.4	6.4
10	7.1	7.1	7.1	7.0	6.9	6.9	7.0	7.0	6.7	6.7	6.4	6.4
11	---	---	7.0	7.0	6.9	6.9	7.0	7.0	6.7	6.7	6.4	6.3
12	---	---	7.0	7.0	6.9	6.9	7.0	7.0	6.7	6.6	6.3	6.3
13	7.1	7.0	7.0	7.0	7.0	6.9	7.0	7.0	6.7	6.6	6.3	6.3
14	7.1	7.0	7.0	7.0	7.0	7.0	7.0	7.0	---	---	6.3	6.3
15	7.1	7.0	7.0	7.0	7.0	7.0	7.0	6.9	6.5	6.5	6.4	6.3
16	7.1	7.0	7.0	7.0	7.0	7.0	6.9	6.9	6.5	6.4	6.4	6.4
17	7.1	7.1	7.0	7.0	7.0	7.0	6.9	6.8	6.4	6.4	6.4	6.4
18	7.1	7.0	7.0	7.0	7.0	7.0	6.8	6.8	6.4	6.4	6.5	6.4
19	7.1	7.0	7.1	7.0	7.0	7.0	6.8	6.8	6.4	6.4	6.5	6.4
20	7.1	7.0	7.1	7.0	7.0	7.0	6.8	6.8	6.4	6.4	6.4	6.4
21	7.0	7.0	7.1	7.0	7.0	7.0	6.8	6.8	6.4	6.4	6.4	6.4
22	7.0	7.0	7.0	7.0	7.0	7.0	6.8	6.8	6.4	6.4	6.4	6.3
23	7.1	6.9	7.0	7.0	7.0	7.0	6.8	6.7	6.5	6.4	6.3	6.3
24	7.2	7.1	7.0	7.0	7.0	7.0	6.7	6.7	6.5	6.4	6.4	6.3
25	7.2	7.1	7.0	7.0	7.0	7.0	6.7	6.7	6.5	6.4	6.3	6.3
26	7.2	7.1	7.0	7.0	7.0	6.9	6.7	6.7	6.4	6.4	6.3	6.3
27	7.2	7.1	7.0	7.0	6.9	6.9	6.7	6.7	6.4	6.4	6.3	6.3
28	7.1	7.1	7.0	7.0	6.9	6.9	6.7	6.7	6.4	6.4	6.3	6.2
29	7.1	7.1	7.0	7.0	6.9	6.9	6.7	6.7	6.4	6.4	6.3	6.2
30	7.1	7.0	7.0	7.0	6.9	6.9	6.7	6.7	6.4	6.4	6.2	6.2
31	---	---	7.0	7.0	---	---	6.7	6.7	6.4	6.4	---	---
MONTH	7.2	6.9	7.2	6.9	7.0	6.9	7.1	6.7	6.8	6.4	6.5	6.2
YEAR	7.8	6.2										

PROJECT DATA
Water Data for Bolton Well Field

391904084362102. LOCAL NUMBER, BU-1151-1B—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(90901), USGS National Water Information System parameter code; MF, membrane filtration; col/100mL, colonies per 100 milliliters; <, concentration or value reported is less than that indicated; E, value is estimated from a non-ideal colony count]

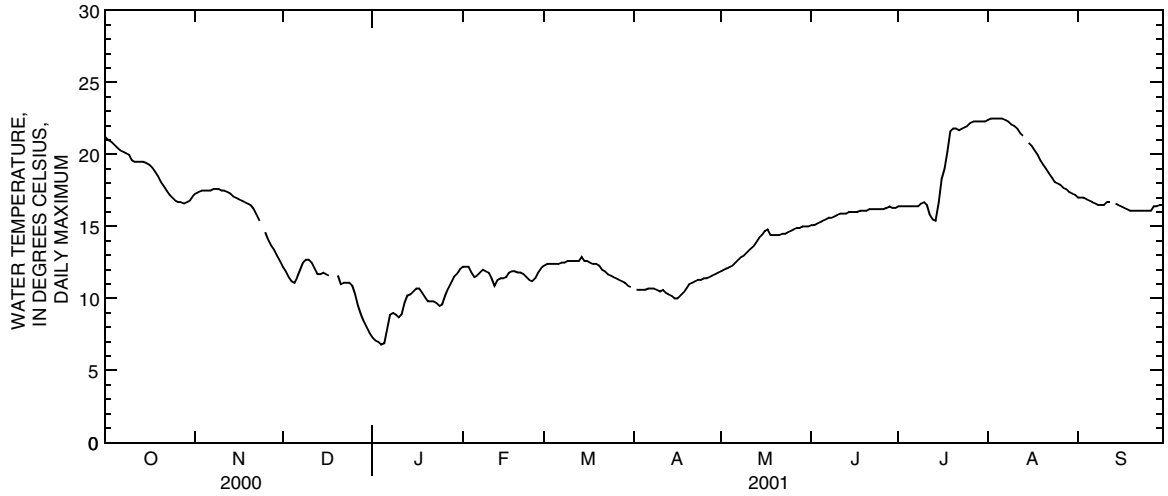
DATE	TIME	E COLI, MI MF, WATER (COL/ 100 ML) (90901)	TOTAL COLI-FORM, MI MF, WATER (COL/ 100 ML) (90900)
NOV			
15...	1024	<1	<1
DEC			
12...	1010	E1	E1
17...	1620	E5	E12
19...	1145	45	74
20...	1220	16	24
21...	1030	E9	E14
22...	1225	<1	E2
26...	1155	<1	E4
FEB			
13...	0945	<1	<1
APR			
12...	0925	<1	E1
14...	1030	<1	<1
16...	1035	<1	E2
18...	1005	<1	E2
19...	1230	<1	<1
23...	1105	<1	<1
25...	0930	<1	<1
30...	1105	<1	<1
MAY			
07...	0920	<1	<1
15...	1115	<1	E1

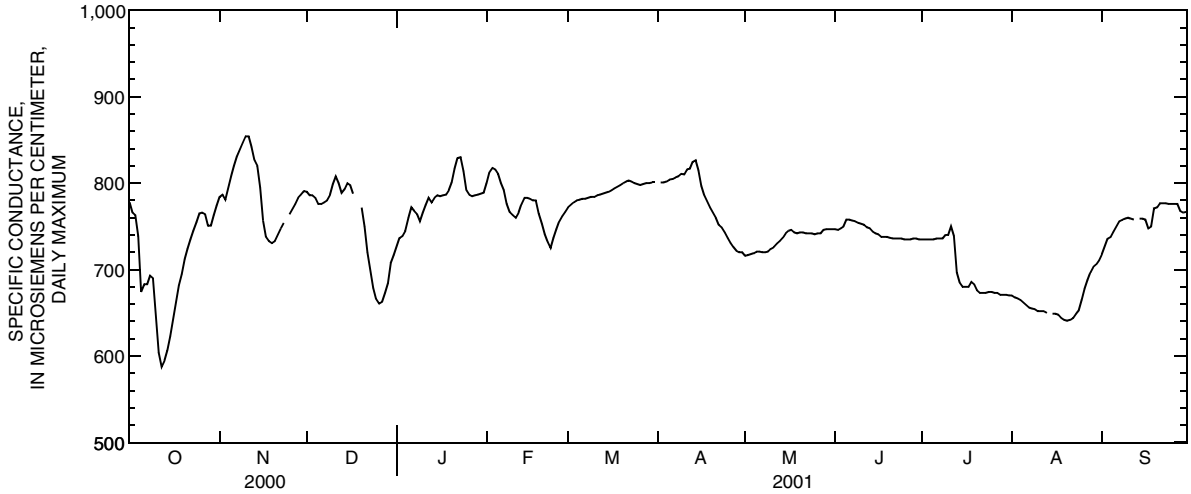
391904084362103. LOCAL NUMBER, BU-1153-1C

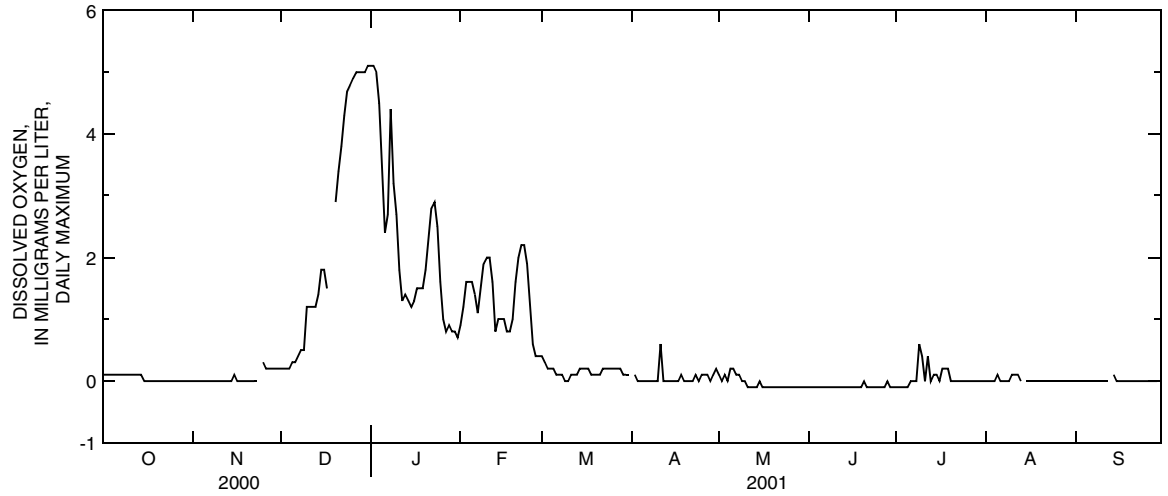
LOCATION.—Latitude 39°19′04″, longitude 84°36′21″, Butler County, Hydrologic Unit 05080002.
AQUIFER.—Glacial outwash, sand and gravel; 112OTSH.
WELL CHARACTERISTICS.—Observation well drilled by rotasonic techniques, diameter 4.0 in., depth 57 ft from land surface to bottom of screen.
INSTRUMENTATION.—YSI Model 6920 data sonde with turbidity probe set for 60-minute records. Sonde set at a depth of 54.6 ft below land surface.
DATUM.—Altitude of land surface is 547.60 ft above North American Vertical Datum of 1988 (NAVD of 88). Measuring point is top of inner casing, 2.07 ft above land-surface datum.
REMARK.—This station is part of a network of wells designed to help model flow characteristics from the Great Miami River through the aquifer. Data collection began on July 22, 1999. This is a non-vented sonde, water level data is not corrected for barometric pressure.
PERIOD OF RECORD.—
WATER TEMPERATURE: July 22, 1999 to current year.
SPECIFIC CONDUCTANCE: July 22, 1999 to current year.
DISSOLVED OXYGEN: July 22, 1999 to current year.
WATER LEVEL ELEVATION: July 22, 1999 to current year.
pH: July 22, 1999 to current year.
EXTREMES FOR PERIOD OF RECORD.—
WATER TEMPERATURE: Maximum, 30.1°C, Aug. 8 and 9, 1999; Minimum, 5.6°C, Jan. 10, 2000.
SPECIFIC CONDUCTANCE: Maximum, 1,160 microsiemens per centimeter, Oct. 4 and 5, 1999; Minimum, 584 microsiemens per centimeter, Apr. 25 and 26, 2000.
DISSOLVED OXYGEN: Maximum, 5.1 milligrams per liter, Dec. 31, 2000 and Jan. 1 and 2, 2001; Minimum -0.2 milligrams per liter, May 7, 2001.
WATER LEVEL ELEVATION: Maximum daily low, 523.01 ft above NAVD of 88, Jan. 1 and 2, 2000; Maximum daily high, 537.80 ft above NAVD of 88, Apr. 12, 2000.
pH: Maximum, 7.6, several days during period of record; Minimum, 7.0, several days during period of record.
EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURE: Maximum, 22.5°C, Aug. 2-6, 2001; Minimum, 6.7°C, Jan. 4 and 5, 2001.
SPECIFIC CONDUCTANCE: Maximum, 854 microsiemens per centimeter, Nov. 10, 2000; Minimum, 585 microsiemens per centimeter, Oct. 12, 2000.
DISSOLVED OXYGEN: Maximum, 5.1 milligrams per liter, Dec. 31, 2000 and Jan. 1 and 2, 2001; Minimum -0.2 milligrams per liter, May 7, 2001.
WATER LEVEL ELEVATION: Maximum daily low, 524.74 ft above NAVD of 88, Dec. 11, 2000; Maximum daily high, 536.87 ft above NAVD of 88, May 20, 2001.
pH: Maximum, 7.5, Nov. 25-30, Dec. 1-6, and 21-31, 2000; Minimum, 7.0, several days during period of record.

PROJECT DATA
Water Data for Bolton Well Field

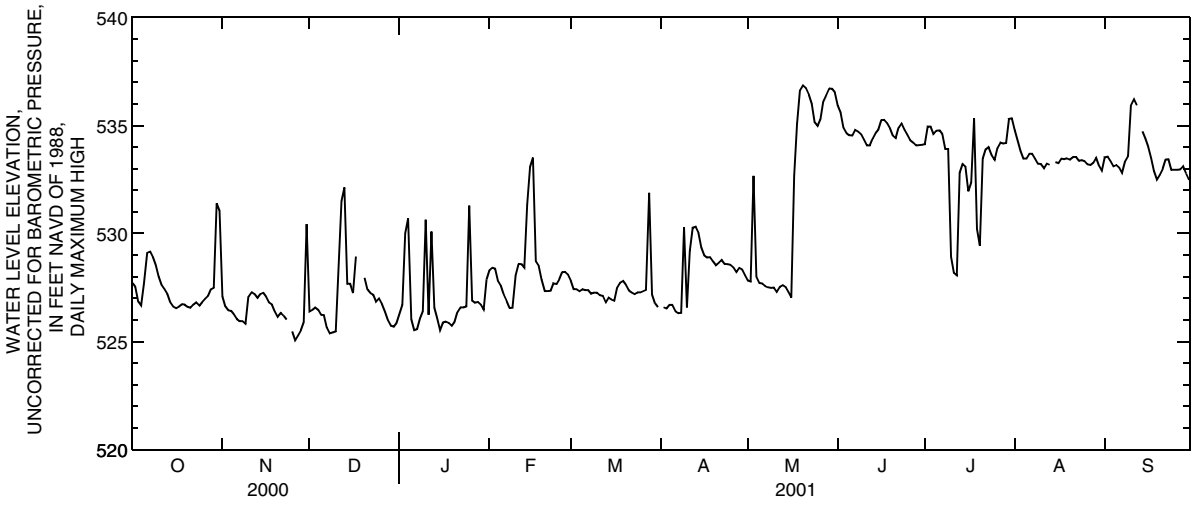
391904084362103. LOCAL NUMBER, BU-1153-1C—Continued

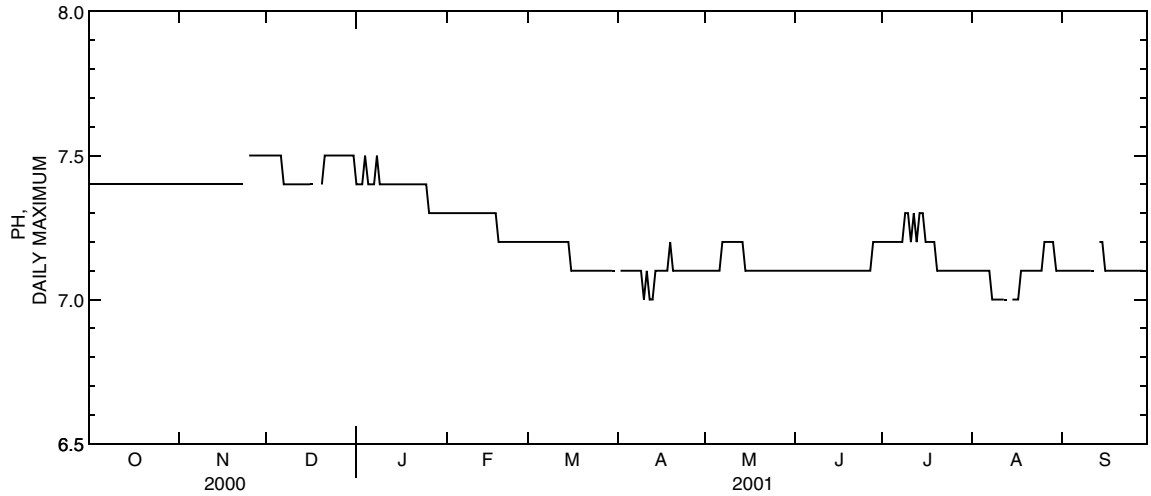






391904084362103. LOCAL NUMBER, BU-1153-1C—Continued





PROJECT DATA
Water Data for Bolton Well Field

391904084362103. LOCAL NUMBER, BU-1153-1C—Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	21.2	21.0	17.3	17.1	12.2	11.9	7.3	7.1	12.2	12.0	12.3	12.1
2	21.0	20.9	17.4	17.3	11.9	11.5	7.1	7.0	12.2	12.1	12.4	12.3
3	20.9	20.7	17.5	17.4	11.5	11.2	7.0	6.8	12.2	11.8	12.4	12.3
4	20.7	20.5	17.5	17.5	11.2	11.1	6.8	6.7	11.8	11.5	12.4	12.3
5	20.5	20.3	17.5	17.5	11.1	11.0	6.9	6.7	11.5	11.4	12.4	12.3
6	20.3	20.2	17.5	17.5	11.5	11.1	7.9	6.9	11.6	11.4	12.4	12.3
7	20.2	20.1	17.6	17.5	12.0	11.5	8.9	7.9	11.8	11.6	12.5	12.3
8	20.1	20.0	17.6	17.6	12.5	12.0	9.0	8.4	12.0	11.8	12.5	12.5
9	20.0	19.6	17.6	17.5	12.7	12.5	8.9	8.7	11.9	11.8	12.6	12.5
10	19.6	19.5	17.5	17.5	12.7	12.4	8.7	8.5	11.8	11.4	12.6	12.6
11	19.5	19.4	17.5	17.4	12.5	12.0	8.9	8.6	11.4	10.9	12.6	12.6
12	19.5	19.4	17.4	17.3	12.1	11.6	9.7	8.9	10.9	10.8	12.6	12.6
13	19.5	19.5	17.3	17.1	11.7	11.4	10.2	9.7	11.3	10.8	12.6	12.6
14	19.5	19.4	17.1	17.0	11.7	11.6	10.3	10.2	11.4	11.1	12.9	12.6
15	19.4	19.3	17.0	16.9	11.8	11.6	10.5	10.3	11.4	11.2	12.6	12.6
16	19.3	19.1	16.9	16.8	11.7	11.4	10.7	10.5	11.5	11.1	12.6	12.5
17	19.1	18.8	16.8	16.7	11.6	11.5	10.7	10.4	11.8	11.5	12.5	12.4
18	18.8	18.5	16.7	16.6	---	---	10.4	10.1	11.9	11.8	12.4	12.4
19	18.5	18.1	16.6	16.5	---	---	10.1	9.8	11.9	11.7	12.4	12.3
20	18.1	17.8	16.5	16.2	11.6	10.9	9.8	9.8	11.8	11.7	12.3	12.0
21	17.8	17.5	16.2	15.8	11.0	10.7	9.8	9.7	11.8	11.7	12.0	11.9
22	17.5	17.2	15.8	15.4	11.1	10.8	9.8	9.7	11.7	11.5	11.9	11.7
23	17.2	17.0	15.4	15.0	11.1	11.0	9.7	9.5	11.5	11.2	11.7	11.6
24	17.0	16.8	---	---	11.1	10.9	9.5	9.4	11.3	11.0	11.6	11.5
25	16.8	16.7	14.6	14.1	10.9	10.3	9.6	9.4	11.2	11.0	11.5	11.4
26	16.7	16.7	14.1	13.7	10.3	9.5	10.2	9.6	11.4	11.1	11.4	11.3
27	16.7	16.6	13.7	13.4	9.5	8.9	10.7	10.2	11.8	11.4	11.3	11.2
28	16.6	16.6	13.4	13.0	8.9	8.4	11.1	10.7	12.1	11.8	11.2	10.9
29	16.7	16.6	13.0	12.6	8.4	8.0	11.5	11.1	---	---	11.1	10.9
30	16.8	16.7	12.6	12.2	8.0	7.6	11.7	11.5	---	---	10.9	10.8
31	17.1	16.8	---	---	7.6	7.3	12.0	11.7	---	---	10.8	10.7
MONTH	21.2	16.6	17.6	12.2	12.7	7.3	12.0	6.7	12.2	10.8	12.9	10.7

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	11.9	11.8	15.1	15.0	16.4	16.3	22.4	22.3	17.0	17.0
2	10.6	10.6	12.0	11.9	15.1	15.1	16.4	16.3	22.5	22.4	17.0	17.0
3	10.6	10.6	12.1	11.9	15.2	15.1	16.4	16.3	22.5	22.5	17.0	16.9
4	10.6	10.6	12.2	12.0	15.3	15.2	16.4	16.4	22.5	22.5	16.9	16.8
5	10.6	10.6	12.3	12.2	15.4	15.3	16.4	16.4	22.5	22.5	16.8	16.7
6	10.7	10.6	12.5	12.3	15.5	15.4	16.4	16.4	22.5	22.4	16.7	16.6
7	10.7	10.6	12.7	12.5	15.6	15.5	16.4	16.4	22.4	22.3	16.6	16.5
8	10.7	10.6	12.9	12.7	15.6	15.6	16.4	16.4	22.3	22.1	16.5	16.5
9	10.6	10.3	13.0	12.9	15.7	15.6	16.6	16.4	22.1	22.0	16.5	16.5
10	10.5	10.4	13.2	13.0	15.8	15.7	16.7	16.5	22.0	21.8	16.5	16.4
11	10.6	10.4	13.4	13.2	15.9	15.8	16.5	15.8	21.8	21.5	16.7	16.5
12	10.4	10.3	13.6	13.4	15.9	15.9	15.8	15.5	21.5	21.3	16.7	16.7
13	10.3	10.2	13.9	13.6	15.9	15.9	15.5	15.2	21.3	21.1	---	---
14	10.2	10.0	14.2	13.9	16.0	15.9	15.4	15.2	---	---	16.6	16.5
15	10.0	10.0	14.4	14.2	16.0	16.0	16.7	15.3	20.8	20.6	16.5	16.4
16	10.0	10.0	14.7	14.4	16.0	16.0	18.3	16.7	20.6	20.3	16.4	16.3
17	10.2	10.0	14.8	14.4	16.0	16.0	19.0	18.3	20.3	20.0	16.3	16.2
18	10.4	10.2	14.4	14.4	16.1	16.0	20.2	18.5	20.0	19.6	16.2	16.1
19	10.7	10.4	14.4	14.4	16.1	16.1	21.6	20.2	19.6	19.3	16.1	16.1
20	11.0	10.7	14.4	14.4	16.1	16.1	21.8	21.6	19.3	19.0	16.1	16.1
21	11.1	11.0	14.4	14.4	16.2	16.1	21.8	21.7	19.0	18.7	16.1	16.1
22	11.2	11.1	14.5	14.4	16.2	16.2	21.7	21.7	18.7	18.4	16.1	16.1
23	11.3	11.2	14.5	14.5	16.2	16.2	21.8	21.7	18.4	18.1	16.1	16.1
24	11.3	11.3	14.6	14.5	16.2	16.2	21.9	21.8	18.1	18.0	16.1	16.1
25	11.4	11.3	14.7	14.6	16.2	16.2	22.0	21.9	18.0	17.8	16.1	16.1
26	11.4	11.4	14.8	14.7	16.2	16.2	22.2	22.0	17.9	17.7	16.1	16.1
27	11.5	11.4	14.9	14.8	16.3	16.2	22.3	22.2	17.7	17.6	16.4	16.1
28	11.6	11.5	14.9	14.9	16.4	16.3	22.3	22.3	17.6	17.4	16.4	16.4
29	11.7	11.6	15.0	14.9	16.3	16.3	22.3	22.3	17.4	17.3	16.5	16.4
30	11.8	11.7	15.0	15.0	16.3	16.3	22.3	22.3	17.3	17.2	16.5	16.4
31	---	---	15.0	15.0	---	---	22.3	22.3	17.2	17.0	---	---
MONTH	11.8	10.0	15.0	11.8	16.4	15.0	22.3	15.2	22.5	17.0	17.0	16.1
YEAR	22.5	6.7										

391904084362103. LOCAL NUMBER, BU-1153-1C—Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	778	766	784	774	790	785	727	717	800	789	772	767
2	766	762	787	781	786	781	737	727	813	800	775	771
3	763	739	781	776	786	782	739	723	818	812	778	774
4	739	674	794	778	783	776	745	735	816	811	780	777
5	674	661	808	794	776	775	760	745	811	800	781	779
6	683	663	820	808	776	774	772	756	800	792	782	780
7	683	676	831	820	778	775	768	761	792	776	782	781
8	693	682	839	831	780	778	764	701	776	766	783	781
9	690	649	847	839	787	780	756	747	767	762	784	782
10	649	604	854	847	799	752	766	755	763	760	784	783
11	604	586	854	842	808	793	775	763	760	756	786	784
12	588	585	842	827	800	782	783	774	766	757	787	785
13	595	588	827	820	789	780	778	776	776	766	788	786
14	607	595	820	795	793	784	783	777	783	776	789	786
15	623	607	795	757	800	793	786	783	783	780	790	788
16	642	623	757	738	798	785	785	780	782	778	792	790
17	662	642	738	733	788	772	786	780	780	776	794	791
18	682	662	733	731	---	---	787	785	780	765	796	793
19	695	680	731	728	---	---	792	787	765	753	798	795
20	712	693	733	728	772	749	801	792	753	741	800	797
21	724	712	741	732	750	720	817	801	741	732	802	800
22	735	724	748	741	720	697	829	817	732	722	803	802
23	745	735	754	748	699	679	830	814	725	721	802	800
24	755	745	---	---	679	666	814	791	737	725	800	798
25	765	755	764	759	666	659	792	786	747	737	799	797
26	766	764	770	762	661	657	787	783	756	747	798	796
27	764	751	776	770	663	658	785	783	762	755	799	796
28	751	741	783	775	673	663	786	784	767	762	800	797
29	751	741	787	782	684	673	787	786	---	---	800	799
30	763	750	791	787	708	683	788	786	---	---	801	800
31	774	763	---	---	717	708	789	787	---	---	801	800
MONTH	778	585	854	728	808	657	830	701	818	721	803	767

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	716	711	747	745	735	734	670	667	718	711
2	801	800	717	712	746	744	735	734	668	666	727	718
3	801	800	718	712	748	746	735	734	667	665	736	721
4	802	801	719	716	750	746	735	734	665	662	738	732
5	804	801	721	718	758	750	735	734	662	659	744	736
6	805	802	721	719	758	756	736	734	659	655	750	743
7	807	805	720	717	757	755	736	734	656	654	756	750
8	808	806	720	718	756	754	736	735	655	653	758	756
9	811	808	721	718	754	752	740	711	654	651	759	757
10	810	808	724	720	753	751	740	713	652	650	760	758
11	816	809	726	724	752	748	750	738	652	650	759	757
12	817	814	730	726	749	747	739	697	652	649	758	757
13	825	817	733	730	748	744	697	674	650	648	---	---
14	827	815	737	732	744	742	685	669	---	---	759	758
15	815	797	742	737	742	740	680	670	649	647	759	757
16	797	786	745	742	741	737	680	673	649	647	758	748
17	786	779	746	742	738	737	680	676	648	644	748	743
18	779	772	743	741	738	737	686	674	644	642	750	743
19	772	765	742	741	738	736	683	672	642	640	771	750
20	766	759	743	742	737	735	676	669	641	640	772	769
21	760	750	743	740	736	735	673	668	642	640	777	771
22	752	746	742	740	736	735	673	672	644	642	777	775
23	749	736	742	741	736	735	673	672	649	644	777	776
24	743	728	742	740	736	734	674	672	653	649	776	775
25	737	722	741	740	735	734	674	672	665	651	776	776
26	731	724	742	740	735	733	673	671	678	665	776	775
27	726	713	742	739	735	733	673	670	688	678	776	711
28	722	710	746	742	736	730	671	670	697	688	768	766
29	720	710	747	745	736	734	671	670	703	696	766	765
30	720	712	747	746	735	734	671	668	706	702	767	760
31	---	---	747	746	---	---	670	668	711	704	---	---
MONTH	827	710	747	711	758	730	750	668	711	640	777	711
YEAR	854	585										

PROJECT DATA
Water Data for Bolton Well Field

391904084362103. LOCAL NUMBER, BU-1153-1C—Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	.1	.1	.0	.0	.2	.2	5.1	5.1	.9	.6	.4	.3
2	.1	.1	.0	.0	.2	.2	5.1	5.0	1.2	.8	.3	.2
3	.1	.1	.0	.0	.2	.2	5.0	4.5	1.6	1.1	.2	.2
4	.1	.1	.0	.0	.2	.2	4.5	3.3	1.6	1.5	.2	.1
5	.1	.1	.0	.0	.3	.2	3.3	2.3	1.6	1.4	.2	.1
6	.1	.1	.0	.0	.3	.3	2.4	2.0	1.4	1.1	.1	.1
7	.1	.1	.0	.0	.4	.3	2.7	2.4	1.1	1.0	.1	.0
8	.1	.1	.0	.0	.5	.4	4.4	2.7	1.5	1.0	.1	.0
9	.1	.1	.0	.0	.5	.4	3.2	2.6	1.9	1.5	.0	.0
10	.1	.0	.0	.0	1.2	.5	2.7	1.8	2.0	1.9	.0	.0
11	.1	.0	.0	.0	1.2	1.1	1.8	1.3	2.0	1.5	.1	.0
12	.1	.0	.0	.0	1.2	1.1	1.3	1.2	1.6	.8	.1	.1
13	.1	.0	.0	.0	1.2	1.0	1.4	1.3	.8	.7	.1	.1
14	.1	.0	.0	.0	1.4	1.0	1.3	1.2	1.0	.7	.2	.1
15	.0	.0	.1	.0	1.8	1.4	1.2	1.1	1.0	.9	.2	.2
16	.0	.0	.0	.0	1.8	1.5	1.3	1.2	1.0	.8	.2	.2
17	.0	.0	.0	.0	1.5	1.3	1.5	1.3	.8	.7	.2	.1
18	.0	.0	.0	.0	---	---	1.5	1.5	.8	.7	.1	.1
19	.0	.0	.0	.0	---	---	1.5	1.5	1.0	.7	.1	.1
20	.0	.0	.0	.0	2.9	2.3	1.8	1.5	1.6	1.0	.1	.1
21	.0	.0	.0	.0	3.4	2.9	2.3	1.8	2.0	1.6	.1	.1
22	.0	.0	.0	.0	3.8	3.3	2.8	2.3	2.2	2.0	.2	.1
23	.0	.0	.0	.0	4.3	3.8	2.9	2.5	2.2	1.9	.2	.2
24	.0	.0	---	---	4.7	4.3	2.5	1.6	1.9	1.2	.2	.2
25	.0	.0	.3	.2	4.8	4.6	1.6	1.0	1.2	.6	.2	.2
26	.0	.0	.2	.2	4.9	4.8	1.0	.8	.6	.4	.2	.2
27	.0	.0	.2	.2	5.0	4.8	.8	.7	.4	.3	.2	.1
28	.0	.0	.2	.2	5.0	5.0	.9	.8	.4	.3	.2	.1
29	.0	.0	.2	.2	5.0	5.0	.8	.8	---	---	.1	.1
30	.0	.0	.2	.2	5.0	5.0	.8	.7	---	---	.1	.1
31	.0	.0	---	---	5.1	5.0	.7	.6	---	---	.1	.1
MONTH	.1	.0	.3	.0	5.1	.2	5.1	.6	2.2	.3	.4	.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	.1	-.1	-.1	-.1	-.1	-.1	.0	.0	.0	.0
2	.1	.0	.0	.0	-.1	-.1	-.1	-.1	.0	.0	.0	.0
3	.0	.0	.1	.0	-.1	-.1	-.1	-.1	.0	.0	.0	.0
4	.0	.0	.0	-.1	-.1	-.1	-.1	-.1	.0	.0	.0	.0
5	.0	.0	.2	-.1	-.1	-.1	-.1	-.1	.1	.0	.0	.0
6	.0	.0	.2	-.1	-.1	-.1	.0	-.1	.0	.0	.0	.0
7	.0	.0	.1	-.2	-.1	-.1	.0	-.1	.0	.0	.0	.0
8	.0	.0	.1	.0	-.1	-.1	.0	.0	.0	.0	.0	.0
9	.0	.0	.0	-.1	-.1	-.1	.6	.0	.0	.0	.0	.0
10	.0	.0	.0	-.1	-.1	-.1	.4	.0	.1	.0	.0	.0
11	.6	-.1	-.1	-.1	-.1	-.1	.0	.0	.1	.0	.0	.0
12	.0	-.1	-.1	-.1	-.1	-.1	.4	.0	.1	.0	.0	.0
13	.0	.0	-.1	-.1	-.1	-.1	.0	-.1	.0	.0	---	---
14	.0	-.1	-.1	-.1	-.1	-.1	.1	.0	---	---	.1	.0
15	.0	-.1	.0	-.1	-.1	-.1	.1	.0	.0	.0	.0	.0
16	.0	.0	-.1	-.1	-.1	-.1	.0	.0	.0	.0	.0	.0
17	.0	.0	-.1	-.1	-.1	-.1	.2	.0	.0	.0	.0	.0
18	.1	-.1	-.1	-.1	-.1	-.1	.2	.0	.0	.0	.0	.0
19	.0	-.1	-.1	-.1	-.1	-.1	.2	.0	.0	.0	.0	.0
20	.0	.0	-.1	-.1	.0	-.1	.0	.0	.0	.0	.0	.0
21	.0	.0	-.1	-.1	-.1	-.1	.0	.0	.0	.0	.0	.0
22	.0	.0	-.1	-.1	-.1	-.1	.0	.0	.0	.0	.0	.0
23	.1	-.1	-.1	-.1	-.1	-.1	.0	.0	.0	.0	.0	.0
24	.0	.0	-.1	-.1	-.1	-.1	.0	.0	.0	.0	.0	.0
25	.1	-.1	-.1	-.1	-.1	-.1	.0	.0	.0	.0	.0	.0
26	.1	.0	-.1	-.1	-.1	-.1	.0	.0	.0	.0	.0	.0
27	.1	.0	-.1	-.1	-.1	-.1	.0	.0	.0	.0	.0	.0
28	.0	.0	-.1	-.1	.0	-.1	.0	.0	.0	.0	.0	.0
29	.1	.0	-.1	-.1	-.1	-.1	.0	.0	.0	.0	.0	.0
30	.2	.0	-.1	-.1	-.1	-.1	.0	.0	.0	.0	.0	.0
31	---	---	-.1	-.1	---	---	.0	.0	.0	.0	---	---
MONTH	.6	-.1	.2	-.2	.0	-.1	.6	-.1	.1	.0	.1	.0
YEAR	5.1	-.2										

391904084362103. LOCAL NUMBER, BU-1153-1C—Continued

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	527.71	527.45	527.09	526.59	526.40	525.88	526.29	525.73	528.30	527.87	527.82	527.42
2	527.54	526.82	526.62	526.35	526.48	526.10	526.70	526.29	528.43	528.18	527.42	527.28
3	526.85	526.66	526.45	526.33	526.59	526.47	530.03	526.28	528.37	527.80	527.43	527.25
4	526.67	526.48	526.42	526.21	526.48	526.19	530.70	526.04	527.80	527.57	527.33	527.11
5	527.71	526.48	526.26	526.05	526.24	526.06	526.04	525.43	527.58	527.16	527.42	527.32
6	529.11	527.71	526.05	525.76	526.23	525.65	525.53	525.24	527.16	526.78	527.39	527.30
7	529.17	528.92	525.95	525.74	525.65	525.03	525.57	525.20	526.86	526.55	527.39	527.23
8	528.92	528.53	525.95	525.68	525.38	525.03	526.07	525.57	526.55	526.14	527.23	527.11
9	528.53	528.00	525.83	525.31	525.42	525.18	526.40	526.07	526.57	526.00	527.27	527.19
10	528.01	527.60	527.09	525.83	525.48	525.23	530.64	526.24	528.08	526.57	527.27	527.02
11	527.63	527.42	527.30	527.09	529.02	524.74	526.24	525.84	528.60	528.08	527.15	526.96
12	527.42	527.20	527.20	526.84	531.51	525.62	530.10	525.93	528.59	528.41	527.11	526.60
13	527.20	526.82	527.03	526.66	532.14	527.18	526.57	526.08	528.42	527.90	526.83	526.55
14	526.82	526.62	527.20	527.02	527.68	527.19	526.08	525.53	531.34	527.52	527.05	526.83
15	526.62	526.52	527.26	527.09	527.68	526.99	525.53	525.43	533.09	527.66	526.95	526.48
16	526.56	526.42	527.09	526.79	527.25	526.39	525.89	525.49	533.52	528.69	526.89	526.40
17	526.62	526.39	526.82	526.72	528.93	527.25	525.93	525.85	528.72	528.52	527.52	526.89
18	526.73	526.62	526.73	526.36	---	---	525.87	525.64	528.52	527.88	527.74	527.52
19	526.71	526.57	526.40	525.96	---	---	525.74	525.58	527.88	527.17	527.81	527.64
20	526.61	526.46	526.16	525.95	527.96	527.41	525.91	525.73	527.34	527.10	527.64	527.38
21	526.57	526.47	526.33	526.13	527.41	527.17	526.37	525.90	527.33	527.17	527.38	527.10
22	526.72	526.57	526.20	525.94	527.25	527.13	526.58	526.37	527.36	527.18	527.28	527.16
23	526.82	526.64	526.02	525.85	527.17	526.63	526.58	526.43	527.70	527.36	527.20	527.09
24	526.68	526.53	---	---	526.85	526.60	526.62	526.39	527.67	527.17	527.28	527.03
25	526.84	526.68	525.47	524.97	527.00	526.75	531.29	526.62	527.89	527.09	527.28	527.22
26	526.99	526.84	525.08	524.96	526.75	526.37	526.92	526.28	528.21	527.89	527.33	527.25
27	527.12	526.96	525.30	525.07	526.37	525.97	526.81	526.34	528.23	528.08	527.40	527.29
28	527.43	527.12	525.54	525.26	525.99	525.74	526.84	526.71	528.11	527.82	531.89	527.18
29	527.50	527.36	525.90	525.54	525.74	525.50	526.71	525.99	---	---	527.18	526.78
30	531.40	527.39	530.44	525.90	525.70	525.53	526.48	525.96	---	---	526.78	526.60
31	531.06	527.09	---	---	525.87	525.63	527.87	526.48	---	---	526.60	526.29
MONTH	531.40	526.39	530.44	524.96	532.14	524.74	531.29	525.20	533.52	526.00	531.89	526.29

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	527.83	527.61	535.93	535.60	534.14	533.81	534.79	534.32	533.53	532.92
2	526.60	526.40	527.78	527.48	535.60	534.89	534.95	534.14	534.32	533.83	533.56	533.36
3	526.53	526.32	532.67	527.56	534.89	534.63	534.95	534.59	533.83	533.43	533.36	533.07
4	526.70	526.53	527.99	527.70	534.66	534.40	534.61	534.46	533.48	533.40	533.12	533.04
5	526.70	526.40	527.72	527.64	534.55	534.38	534.76	534.49	533.48	533.41	533.17	533.04
6	526.41	526.27	527.69	527.47	534.54	534.27	534.77	534.59	533.70	533.45	533.06	532.76
7	526.32	526.14	527.58	527.36	534.80	534.54	534.60	533.90	533.69	533.47	532.80	532.57
8	526.33	526.22	527.52	527.40	534.74	534.59	533.91	533.76	533.47	533.24	533.37	532.74
9	530.29	526.20	527.49	527.39	534.60	534.35	533.91	528.94	533.24	533.01	533.60	533.37
10	526.58	526.32	527.50	527.25	534.35	534.08	528.94	528.18	533.22	532.99	535.96	533.60
11	529.21	526.58	527.31	527.20	534.08	533.88	528.18	528.02	533.03	532.86	536.23	535.95
12	530.27	529.21	527.55	527.28	534.08	533.84	528.06	527.83	533.25	532.91	535.95	535.30
13	530.31	530.04	527.63	527.50	534.40	534.03	532.82	527.79	533.19	533.09	---	---
14	530.04	529.35	527.53	527.30	534.66	534.27	533.23	528.64	---	---	534.74	534.41
15	529.35	528.75	527.30	526.94	534.83	534.63	533.10	528.29	533.31	532.96	534.41	534.03
16	529.00	528.78	527.04	526.74	535.25	534.83	531.96	527.95	533.27	532.85	534.03	533.50
17	528.89	528.72	532.67	526.78	535.26	535.10	532.36	527.85	533.47	533.27	533.50	532.90
18	528.92	528.69	535.09	532.67	535.12	534.88	535.34	530.23	533.45	533.22	532.90	532.51
19	528.71	528.53	536.64	535.09	534.88	534.51	530.23	529.44	533.49	533.24	532.51	532.29
20	528.54	528.41	536.87	536.64	534.54	534.30	529.44	528.95	533.42	533.18	532.74	532.39
21	528.64	528.47	536.75	536.38	534.43	534.32	533.47	528.89	533.55	533.24	533.00	532.62
22	528.77	528.60	536.43	536.00	534.92	534.43	533.90	533.47	533.55	532.95	533.42	533.00
23	528.60	528.25	536.00	535.15	535.10	534.82	534.00	533.63	533.37	532.97	533.45	532.96
24	528.58	528.31	535.15	534.70	534.82	534.57	533.63	533.38	533.40	533.25	532.96	532.83
25	528.55	528.39	534.99	534.62	534.58	534.33	533.41	533.21	533.35	533.17	532.95	532.86
26	528.44	528.23	535.29	534.99	534.34	534.18	533.98	533.24	533.21	533.03	532.95	532.66
27	528.23	528.07	536.14	535.29	534.21	534.02	534.21	533.98	533.18	532.96	532.97	531.59
28	528.42	528.23	536.43	536.14	534.08	532.24	534.17	534.03	533.28	532.88	533.11	532.77
29	528.35	528.08	536.71	536.39	534.10	533.96	534.20	533.97	533.51	533.15	532.77	532.48
30	528.08	527.83	536.70	536.54	534.12	533.84	535.32	534.20	533.15	532.78	532.48	532.18
31	---	---	536.54	535.93	---	---	535.33	534.79	532.92	532.61	---	---
MONTH	530.31	526.14	536.87	526.74	535.93	532.24	535.34	527.79	534.79	532.61	536.23	531.59
YEAR	536.87	524.74										

PROJECT DATA
Water Data for Bolton Well Field

391904084362103. LOCAL NUMBER, BU-1153-1C—Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.4	7.4	7.4	7.4	7.5	7.5	7.4	7.4	7.3	7.3	7.2	7.2
2	7.4	7.4	7.4	7.4	7.5	7.5	7.4	7.4	7.3	7.3	7.2	7.2
3	7.4	7.4	7.4	7.4	7.5	7.5	7.4	7.4	7.3	7.3	7.2	7.2
4	7.4	7.4	7.4	7.4	7.5	7.5	7.5	7.4	7.3	7.3	7.2	7.2
5	7.4	7.4	7.4	7.4	7.5	7.5	7.4	7.4	7.3	7.3	7.2	7.2
6	7.4	7.4	7.4	7.4	7.5	7.4	7.4	7.4	7.3	7.3	7.2	7.2
7	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.3	7.3	7.2	7.2
8	7.4	7.4	7.4	7.4	7.4	7.4	7.5	7.4	7.3	7.3	7.2	7.2
9	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.3	7.3	7.2	7.2
10	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.3	7.3	7.2	7.2
11	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.3	7.3	7.2	7.2
12	7.4	7.4	7.4	7.4	7.4	7.3	7.4	7.4	7.3	7.3	7.2	7.2
13	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.3	7.2	7.2	7.1
14	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.3	7.3	7.2	7.1
15	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.3	7.3	7.2	7.1
16	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.3	7.3	7.1	7.1
17	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.3	7.3	7.1	7.1
18	7.4	7.4	7.4	7.4	---	---	7.4	7.4	7.3	7.2	7.1	7.1
19	7.4	7.4	7.4	7.4	---	---	7.4	7.4	7.2	7.2	7.1	7.1
20	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.2	7.2	7.1	7.1
21	7.4	7.4	7.4	7.4	7.5	7.4	7.4	7.4	7.2	7.2	7.1	7.1
22	7.4	7.4	7.4	7.4	7.5	7.4	7.4	7.4	7.2	7.2	7.1	7.1
23	7.4	7.4	7.4	7.4	7.5	7.5	7.4	7.4	7.2	7.2	7.1	7.1
24	7.4	7.4	---	---	7.5	7.5	7.4	7.4	7.2	7.2	7.1	7.1
25	7.4	7.4	7.5	7.5	7.5	7.5	7.4	7.3	7.2	7.2	7.1	7.1
26	7.4	7.4	7.5	7.5	7.5	7.5	7.3	7.3	7.2	7.2	7.1	7.1
27	7.4	7.4	7.5	7.5	7.5	7.5	7.3	7.3	7.2	7.2	7.1	7.1
28	7.4	7.4	7.5	7.5	7.5	7.5	7.3	7.3	7.2	7.2	7.1	7.1
29	7.4	7.4	7.5	7.5	7.5	7.5	7.3	7.3	---	---	7.1	7.1
30	7.4	7.4	7.5	7.5	7.5	7.5	7.3	7.3	---	---	7.1	7.1
31	7.4	7.4	---	---	7.5	7.4	7.3	7.3	---	---	7.1	7.1
MONTH	7.4	7.4	7.5	7.4	7.5	7.3	7.5	7.3	7.3	7.2	7.2	7.1

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	7.1	7.1	7.1	7.1	7.2	7.2	7.1	7.1	7.1	7.1
2	7.1	7.1	7.1	7.1	7.1	7.1	7.2	7.2	7.1	7.1	7.1	7.1
3	7.1	7.1	7.1	7.1	7.1	7.1	7.2	7.2	7.1	7.1	7.1	7.1
4	7.1	7.1	7.1	7.1	7.1	7.1	7.2	7.2	7.1	7.0	7.1	7.1
5	7.1	7.1	7.1	7.1	7.1	7.1	7.2	7.2	7.1	7.1	7.1	7.1
6	7.1	7.1	7.1	7.1	7.1	7.1	7.2	7.2	7.1	7.1	7.1	7.1
7	7.1	7.1	7.2	7.0	7.1	7.1	7.2	7.2	7.1	7.0	7.1	7.1
8	7.1	7.1	7.2	7.2	7.1	7.1	7.2	7.2	7.0	7.0	7.1	7.1
9	7.1	7.0	7.2	7.2	7.1	7.1	7.3	7.2	7.0	7.0	7.1	7.1
10	7.0	7.0	7.2	7.2	7.1	7.1	7.3	7.2	7.0	7.0	7.1	7.1
11	7.1	7.0	7.2	7.2	7.1	7.1	7.2	7.2	7.0	7.0	7.1	7.1
12	7.0	7.0	7.2	7.2	7.1	7.1	7.3	7.2	7.0	7.0	7.1	7.1
13	7.0	7.0	7.2	7.2	7.1	7.1	7.2	7.2	7.0	7.0	---	---
14	7.1	7.0	7.2	7.1	7.1	7.1	7.3	7.2	---	---	7.2	7.2
15	7.1	7.1	7.1	7.1	7.1	7.1	7.3	7.2	7.0	7.0	7.2	7.1
16	7.1	7.1	7.1	7.1	7.1	7.1	7.2	7.2	7.0	7.0	7.1	7.1
17	7.1	7.1	7.1	7.1	7.1	7.1	7.2	7.2	7.0	7.0	7.1	7.1
18	7.1	7.1	7.1	7.1	7.1	7.1	7.2	7.2	7.1	7.0	7.1	7.1
19	7.2	7.1	7.1	7.1	7.1	7.1	7.2	7.1	7.1	7.1	7.1	7.1
20	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
21	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
22	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
23	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
24	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
25	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
26	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.2	7.1	7.1	7.1
27	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.2	7.2	7.1	7.1
28	7.1	7.1	7.1	7.1	7.2	7.1	7.1	7.1	7.2	7.2	7.1	7.1
29	7.1	7.1	7.1	7.1	7.2	7.2	7.1	7.1	7.2	7.1	7.1	7.1
30	7.1	7.1	7.1	7.1	7.2	7.2	7.1	7.1	7.1	7.1	7.1	7.1
31	---	---	7.1	7.1	---	---	7.1	7.1	7.1	7.1	---	---
MONTH	7.2	7.0	7.2	7.0	7.2	7.1	7.3	7.1	7.2	7.0	7.2	7.1
YEAR	7.5	7.0										

391904084362103. LOCAL NUMBER, BU-1153-1C—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(90901), USGS National Water Information System parameter code; MF, membrane filtration; col/100mL, colonies per 100 milliliters; <, concentration or value reported is less than that indicated; E, value is estimated from a non-ideal colony count]

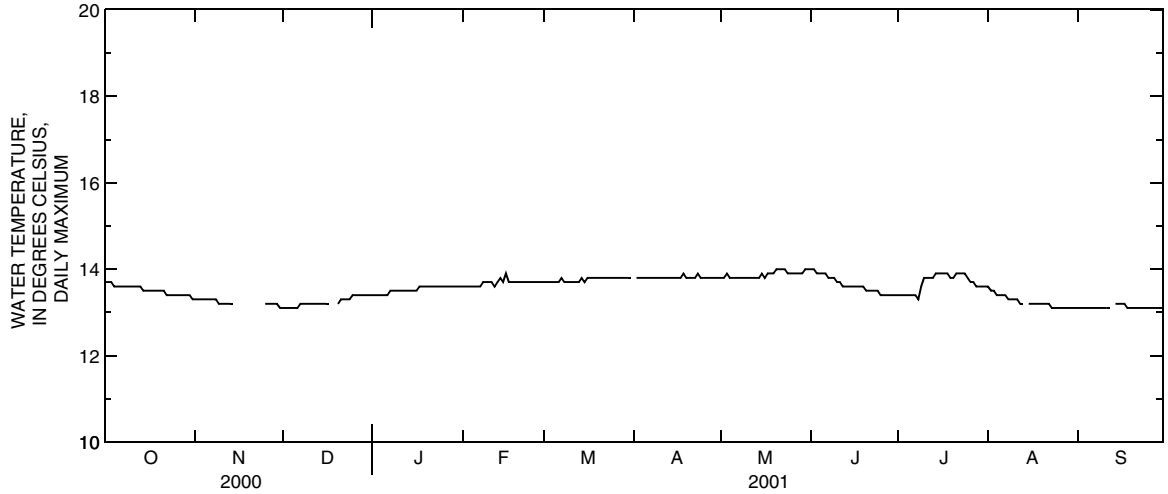
DATE	TIME	E COLI, MI MF, WATER (COL/ 100 ML) (90901)	TOTAL COLI-FORM, MI MF, WATER (COL/ 100 ML) (90900)
NOV			
15...	0915	<1	<1
DEC			
12...	1125	<1	<1
20...	1215	E1	E1
21...	1125	<1	E1
22...	1230	<1	<1
26...	1040	<1	<1
FEB			
13...	0930	<1	<1
APR			
12...	0925	<1	<1
16...	1045	<1	<1
18...	1005	<1	<1
19...	1105	<1	<1
23...	1130	<1	<1
25...	0910	<1	<1
30...	1115	<1	<1
MAY			
07...	0910	<1	<1
15...	1145	<1	<1

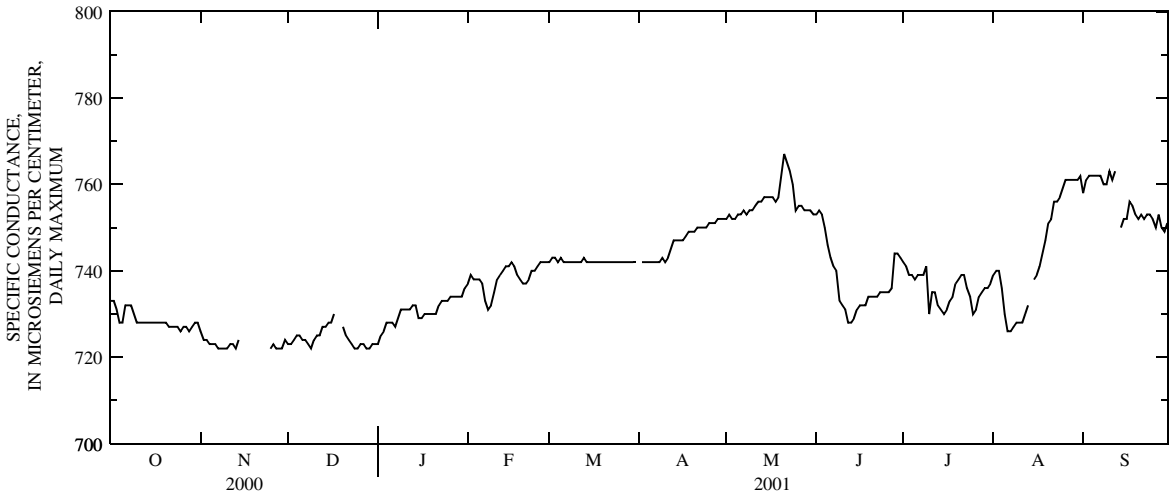
PROJECT DATA
Water Data for Bolton Well Field

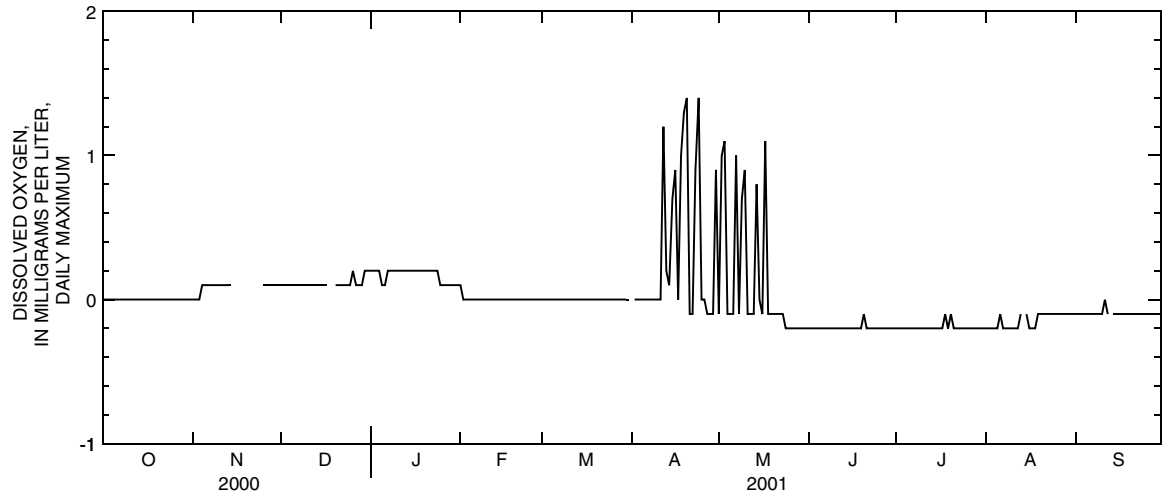
391904084362104. LOCAL NUMBER, BU-1154-1D

LOCATION.—Latitude 39°19′04″, longitude 84°36′21″, Butler County, Hydrologic Unit 05080002.
AQUIFER.—Glacial outwash, sand and gravel; 112OTSH.
WELL CHARACTERISTICS.—Observation well drilled by rotasonic techniques, diameter 4.0 in., depth 87 ft from land surface to bottom of screen.
INSTRUMENTATION.—YSI Model 6920 data sonde with turbidity probe set for 60-minute records. Sonde set at a depth of 85.0 ft below land surface.
DATUM.—Altitude of land surface is 547.70 ft above North American Vertical Datum of 1988 (NAVD of 88). Measuring point is top of inner casing, 2.38 ft above land-surface datum.
REMARK.—This station is part of a network of wells designed to help model flow characteristics from the Great Miami River through the aquifer. Data collection began on July 27, 1999. Negative dissolved oxygen values are due to the resolution of the data sonde. This is a non-vented sonde, water level data is not corrected for barometric pressure.
PERIOD OF RECORD.—
WATER TEMPERATURE: July 27, 1999 to current year.
SPECIFIC CONDUCTANCE: July 27, 1999 to current year.
DISSOLVED OXYGEN: July 27, 1999 to current year.
WATER LEVEL ELEVATION: July 27, 1999 to current year.
pH: July 27, 1999 to current year.
EXTREMES FOR PERIOD OF RECORD.—
WATER TEMPERATURE: Maximum, 14.6°C, July 14, 2000; Minimum, 9.9°C, Feb. 1, 2000.
SPECIFIC CONDUCTANCE: Maximum, 785 microsiemens per centimeter, Dec. 20, 1999; Minimum, 712 microsiemens per centimeter, Aug. 20, 2000.
DISSOLVED OXYGEN: Maximum, 1.4 milligrams per liter, Apr. 20 and 24, 2001; Minimum -0.2 milligrams per liter, Aug. 19, several days during period of record.
WATER LEVEL ELEVATION: Maximum daily low, 505.18 ft above NAVD of 88, Feb. 1, 2000; Maximum daily high, 537.82 ft above NAVD of 88, Apr. 12, 2000.
pH: Maximum, 7.3, Aug. 12 to 18, 1999 and Jan. 7-18, 2000; Minimum, 6.8, Feb. 21, 2000.
EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURE: Maximum, 14.0°C, May 21-23, 30-31 and June 1-2, 2001; Minimum, 13.0°C, Nov. 30, 2000.
SPECIFIC CONDUCTANCE: Maximum, 767 microsiemens per centimeter, May 21, 2001; Minimum, 720 microsiemens per centimeter, Nov. 28-29 and Dec. 24-26, 2000.
DISSOLVED OXYGEN: Maximum, 1.4 milligrams per liter, Apr. 20 and 24, 2001; Minimum -0.2 milligrams per liter, several days during period of record.
WATER LEVEL ELEVATION: Maximum daily low, 523.34 ft above NAVD of 88, Dec. 11, 2000; Maximum daily high, 536.85 ft above NAVD of 88, May 20, 2001.
pH: Maximum, 7.2, several days during period of record; Minimum, 6.9, Mar. 8-20 and 28, 2001.

391904084362104. LOCAL NUMBER, BU-1154-1D—Continued

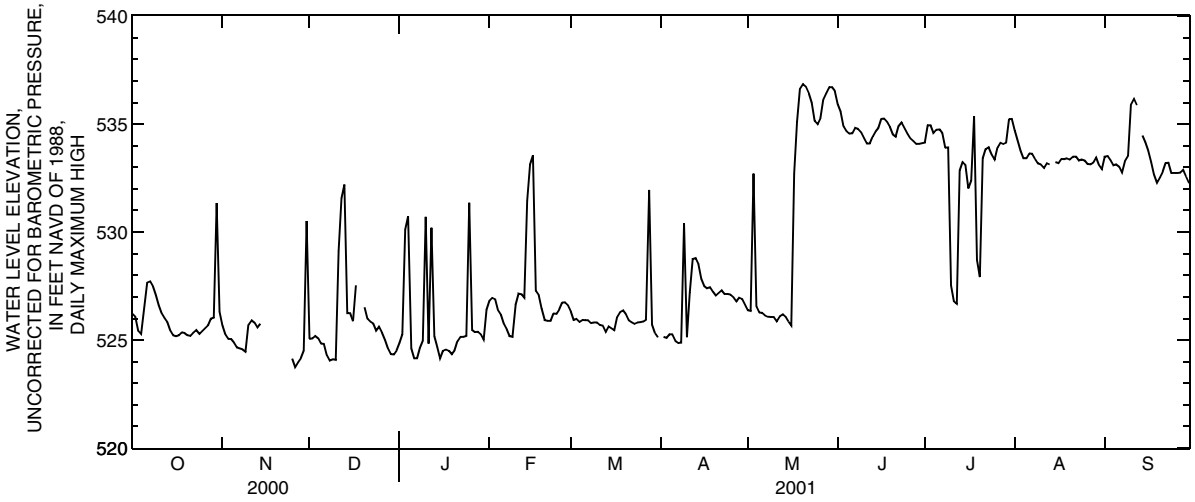


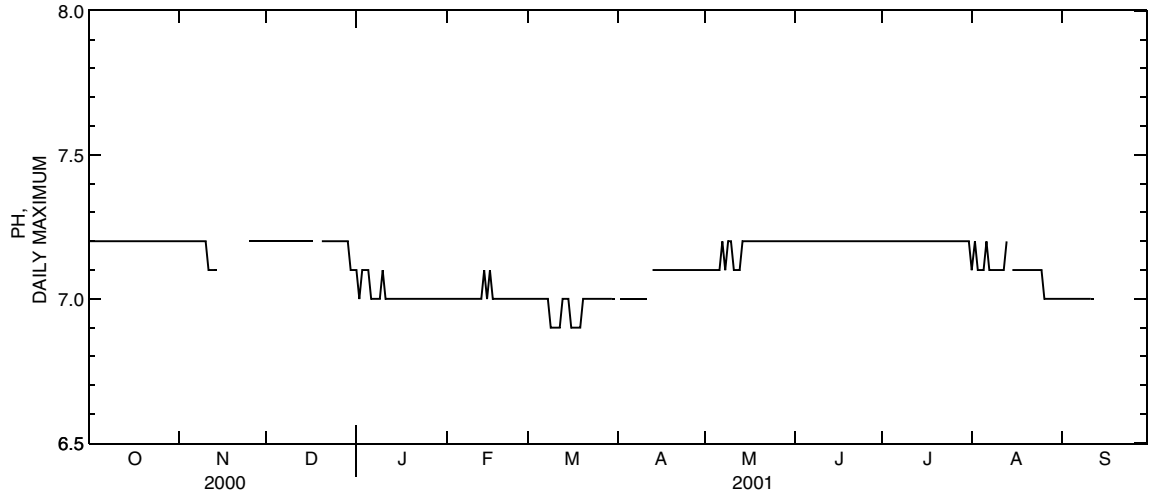




PROJECT DATA
Water Data for Bolton Well Field

391904084362104. LOCAL NUMBER, BU-1154-1D—Continued





391904084362104. LOCAL NUMBER, BU-1154-1D—Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	13.7	13.7	13.3	13.3	13.1	13.1	13.4	13.4	13.6	13.6	13.7	13.7
2	13.7	13.7	13.3	13.3	13.1	13.1	13.4	13.4	13.6	13.6	13.7	13.7
3	13.7	13.6	13.3	13.3	13.1	13.1	13.4	13.4	13.6	13.6	13.7	13.7
4	13.6	13.6	13.3	13.3	13.1	13.1	13.4	13.4	13.6	13.6	13.7	13.7
5	13.6	13.6	13.3	13.3	13.1	13.1	13.4	13.4	13.6	13.6	13.7	13.7
6	13.6	13.6	13.3	13.3	13.1	13.1	13.4	13.4	13.6	13.6	13.7	13.7
7	13.6	13.6	13.3	13.3	13.2	13.1	13.5	13.4	13.6	13.6	13.8	13.7
8	13.6	13.6	13.3	13.2	13.2	13.2	13.5	13.5	13.7	13.6	13.7	13.7
9	13.6	13.6	13.2	13.2	13.2	13.2	13.5	13.5	13.7	13.7	13.7	13.7
10	13.6	13.6	13.2	13.2	13.2	13.2	13.5	13.5	13.7	13.7	13.7	13.7
11	13.6	13.6	13.2	13.2	13.2	13.2	13.5	13.5	13.7	13.6	13.7	13.7
12	13.6	13.6	13.2	13.2	13.2	13.2	13.5	13.5	13.6	13.6	13.7	13.7
13	13.6	13.5	13.2	13.2	13.2	13.2	13.5	13.5	13.7	13.6	13.7	13.7
14	13.5	13.5	13.2	13.2	13.2	13.2	13.5	13.5	13.8	13.6	13.8	13.7
15	13.5	13.5	---	---	13.2	13.2	13.5	13.5	13.7	13.7	13.7	13.7
16	13.5	13.5	---	---	13.2	13.2	13.5	13.5	13.9	13.6	13.8	13.7
17	13.5	13.5	---	---	13.2	13.2	13.6	13.5	13.7	13.7	13.8	13.8
18	13.5	13.5	---	---	---	---	13.6	13.6	13.7	13.7	13.8	13.8
19	13.5	13.5	---	---	---	---	13.6	13.6	13.7	13.7	13.8	13.8
20	13.5	13.5	---	---	13.2	13.2	13.6	13.6	13.7	13.7	13.8	13.8
21	13.5	13.4	---	---	13.3	13.2	13.6	13.6	13.7	13.7	13.8	13.8
22	13.4	13.4	---	---	13.3	13.3	13.6	13.6	13.7	13.7	13.8	13.8
23	13.4	13.4	---	---	13.3	13.3	13.6	13.6	13.7	13.7	13.8	13.8
24	13.4	13.4	---	---	13.3	13.3	13.6	13.6	13.7	13.7	13.8	13.8
25	13.4	13.4	13.2	13.2	13.4	13.3	13.6	13.6	13.7	13.7	13.8	13.8
26	13.4	13.4	13.2	13.2	13.4	13.3	13.6	13.6	13.7	13.7	13.8	13.8
27	13.4	13.4	13.2	13.2	13.4	13.4	13.6	13.6	13.7	13.7	13.8	13.8
28	13.4	13.4	13.2	13.2	13.4	13.4	13.6	13.6	13.7	13.7	13.8	13.8
29	13.4	13.4	13.2	13.1	13.4	13.4	13.6	13.6	---	---	13.8	13.8
30	13.4	13.3	13.1	13.0	13.4	13.4	13.6	13.6	---	---	13.8	13.8
31	13.3	13.2	---	---	13.4	13.4	13.6	13.6	---	---	13.8	13.8
MONTH	13.7	13.2	13.3	13.0	13.4	13.1	13.6	13.4	13.9	13.6	13.8	13.7

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	13.8	13.8	14.0	14.0	13.4	13.4	13.6	13.5	13.1	13.1
2	13.8	13.8	13.8	13.8	14.0	13.9	13.4	13.4	13.5	13.5	13.1	13.1
3	13.8	13.8	13.9	13.8	13.9	13.9	13.4	13.4	13.5	13.4	13.1	13.1
4	13.8	13.8	13.8	13.8	13.9	13.9	13.4	13.4	13.4	13.4	13.1	13.1
5	13.8	13.8	13.8	13.8	13.9	13.9	13.4	13.4	13.4	13.4	13.1	13.1
6	13.8	13.8	13.8	13.8	13.9	13.8	13.4	13.4	13.4	13.4	13.1	13.1
7	13.8	13.8	13.8	13.8	13.8	13.8	13.4	13.3	13.4	13.3	13.1	13.1
8	13.8	13.8	13.8	13.8	13.8	13.8	13.3	13.3	13.3	13.3	13.1	13.1
9	13.8	13.8	13.8	13.8	13.8	13.7	13.6	13.3	13.3	13.3	13.1	13.1
10	13.8	13.8	13.8	13.8	13.7	13.7	13.8	13.6	13.3	13.3	13.1	13.1
11	13.8	13.8	13.8	13.8	13.7	13.6	13.8	13.8	13.3	13.2	13.1	13.1
12	13.8	13.8	13.8	13.8	13.6	13.6	13.8	13.8	13.2	13.2	13.1	13.1
13	13.8	13.8	13.8	13.8	13.6	13.6	13.8	13.8	13.2	13.2	---	---
14	13.8	13.7	13.8	13.8	13.6	13.6	13.9	13.8	---	---	13.2	13.2
15	13.8	13.7	13.9	13.8	13.6	13.6	13.9	13.8	13.2	13.2	13.2	13.2
16	13.8	13.8	13.8	13.8	13.6	13.6	13.9	13.8	13.2	13.2	13.2	13.2
17	13.8	13.8	13.9	13.8	13.6	13.6	13.9	13.8	13.2	13.2	13.2	13.1
18	13.9	13.8	13.9	13.9	13.6	13.6	13.9	13.8	13.2	13.2	13.1	13.1
19	13.8	13.8	13.9	13.9	13.6	13.5	13.8	13.8	13.2	13.2	13.1	13.1
20	13.8	13.8	14.0	13.9	13.5	13.5	13.8	13.8	13.2	13.2	13.1	13.1
21	13.8	13.8	14.0	14.0	13.5	13.5	13.9	13.8	13.2	13.2	13.1	13.1
22	13.8	13.8	14.0	14.0	13.5	13.5	13.9	13.9	13.2	13.1	13.1	13.1
23	13.9	13.8	14.0	13.9	13.5	13.5	13.9	13.9	13.1	13.1	13.1	13.1
24	13.8	13.8	13.9	13.9	13.5	13.4	13.9	13.8	13.1	13.1	13.1	13.1
25	13.8	13.8	13.9	13.9	13.4	13.4	13.8	13.7	13.1	13.1	13.1	13.1
26	13.8	13.8	13.9	13.9	13.4	13.4	13.7	13.7	13.1	13.1	13.1	13.1
27	13.8	13.8	13.9	13.9	13.4	13.4	13.7	13.6	13.1	13.1	13.1	13.1
28	13.8	13.8	13.9	13.9	13.4	13.4	13.6	13.6	13.1	13.1	13.1	13.1
29	13.8	13.8	13.9	13.9	13.4	13.4	13.6	13.6	13.1	13.1	13.1	13.1
30	13.8	13.8	14.0	13.9	13.4	13.4	13.6	13.6	13.1	13.1	13.1	13.1
31	---	---	14.0	14.0	---	---	13.6	13.6	13.1	13.1	---	---
MONTH	13.9	13.7	14.0	13.8	14.0	13.4	13.9	13.3	13.6	13.1	13.2	13.1
YEAR	14.0	13.0										

PROJECT DATA
Water Data for Bolton Well Field

391904084362104. LOCAL NUMBER, BU-1154-1D—Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	733	732	726	724	723	721	723	721	737	736	742	741
2	733	730	724	722	723	721	725	723	739	737	743	741
3	731	728	724	722	724	722	726	724	738	737	743	741
4	728	728	723	722	725	723	728	724	738	737	742	741
5	728	727	723	721	725	723	728	724	738	736	743	741
6	732	727	723	721	724	723	728	726	737	733	742	741
7	732	731	722	721	724	722	727	726	733	730	742	738
8	732	730	722	721	723	721	729	727	731	727	742	741
9	730	728	722	721	722	721	731	729	732	729	742	741
10	728	726	722	721	724	721	731	729	735	730	742	741
11	728	727	723	721	725	722	731	729	738	735	742	741
12	728	726	723	722	725	722	731	728	739	737	742	741
13	728	727	722	721	727	724	732	730	740	738	743	741
14	728	727	724	722	727	726	732	729	741	738	742	740
15	728	727	---	---	728	726	729	728	741	739	742	740
16	728	727	---	---	728	727	729	728	742	740	742	741
17	728	727	---	---	730	727	730	728	741	739	742	741
18	728	727	---	---	---	---	730	728	739	738	742	741
19	728	726	---	---	---	---	730	728	738	735	742	740
20	728	726	---	---	727	725	730	728	737	736	742	740
21	727	726	---	---	725	723	730	728	737	735	742	740
22	727	726	---	---	724	722	732	729	738	736	742	740
23	727	726	---	---	723	721	733	731	740	738	742	740
24	727	725	---	---	722	720	733	729	740	738	742	740
25	726	725	722	721	722	720	733	732	741	740	742	740
26	727	726	723	721	723	720	734	732	742	740	742	740
27	727	725	722	721	723	722	734	733	742	741	742	740
28	726	725	722	720	722	721	734	733	742	741	742	740
29	727	725	722	720	722	721	734	733	---	---	742	740
30	728	726	724	722	723	722	734	733	---	---	742	740
31	728	725	---	---	723	722	736	734	---	---	742	741
MONTH	733	725	726	720	730	720	736	721	742	727	743	738

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	752	751	753	752	742	741	739	736	758	756
2	742	741	753	751	754	752	741	737	740	739	761	757
3	742	741	752	751	753	749	739	738	740	736	762	759
4	742	741	752	751	750	746	739	738	736	730	762	761
5	742	741	753	751	746	742	738	737	730	725	762	761
6	742	741	753	752	743	741	739	737	726	724	762	760
7	742	741	754	752	741	740	739	737	726	724	762	760
8	742	741	753	752	740	733	739	735	727	725	760	758
9	743	741	754	752	733	730	741	726	728	726	760	758
10	742	741	754	753	732	728	730	725	728	725	763	753
11	743	742	755	754	731	726	735	730	728	725	761	753
12	745	742	756	754	728	725	735	732	730	725	763	760
13	747	745	756	755	728	726	732	728	732	729	---	---
14	747	745	757	755	729	727	731	727	---	---	750	747
15	747	746	757	755	731	729	730	727	738	734	752	749
16	747	746	757	755	732	730	731	728	739	737	752	746
17	748	746	757	755	732	731	733	730	741	739	756	746
18	749	746	756	754	732	731	734	728	744	740	755	752
19	749	748	757	756	734	732	737	734	747	744	753	751
20	749	748	762	756	734	733	738	736	751	746	752	751
21	750	748	767	762	734	733	739	737	752	750	753	751
22	750	748	765	761	734	733	739	736	756	752	752	751
23	750	749	763	759	735	734	736	734	756	754	753	752
24	750	749	760	754	735	734	734	730	757	755	753	751
25	751	750	754	753	735	734	730	724	759	756	752	749
26	751	750	755	754	735	734	731	725	761	759	750	749
27	751	750	755	752	736	733	734	730	761	759	753	746
28	752	750	754	752	744	733	735	733	761	759	750	749
29	752	751	754	753	744	741	736	734	761	759	749	747
30	752	751	754	752	743	741	736	734	761	760	751	748
31	---	---	753	752	---	---	737	735	762	758	---	---
MONTH	752	741	767	751	754	725	742	724	762	724	763	746
YEAR	767	720										

391904084362104. LOCAL NUMBER, BU-1154-1D—Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	.0	.0	.0	.0	.1	.1	.2	.2	.1	.0	.0	.0
2	.0	.0	.0	.0	.1	.1	.2	.2	.0	.0	.0	.0
3	.0	.0	.0	.0	.1	.1	.2	.1	.0	.0	.0	.0
4	.0	.0	.1	.0	.1	.1	.2	.1	.0	.0	.0	.0
5	.0	.0	.1	.1	.1	.1	.1	.1	.0	.0	.0	.0
6	.0	.0	.1	.1	.1	.1	.1	.1	.0	.0	.0	.0
7	.0	.0	.1	.1	.1	.1	.2	.1	.0	.0	.0	.0
8	.0	.0	.1	.1	.1	.1	.2	.2	.0	.0	.0	.0
9	.0	.0	.1	.1	.1	.1	.2	.2	.0	.0	.0	.0
10	.0	.0	.1	.1	.1	.1	.2	.2	.0	.0	.0	.0
11	.0	.0	.1	.1	.1	.1	.2	.2	.0	.0	.0	.0
12	.0	.0	.1	.1	.1	.1	.2	.2	.0	.0	.0	.0
13	.0	.0	.1	.1	.1	.1	.2	.2	.0	.0	.0	.0
14	.0	.0	.1	.1	.1	.1	.2	.2	.0	.0	.0	.0
15	.0	.0	---	---	.1	.1	.2	.2	.0	.0	.0	.0
16	.0	.0	---	---	.1	.1	.2	.2	.0	.0	.0	.0
17	.0	.0	---	---	.1	.1	.2	.2	.0	.0	.0	.0
18	.0	.0	---	---	---	---	.2	.2	.0	.0	.0	.0
19	.0	.0	---	---	---	---	.2	.2	.0	.0	.0	.0
20	.0	.0	---	---	.1	.1	.2	.2	.0	.0	.0	.0
21	.0	.0	---	---	.1	.1	.2	.2	.0	.0	.0	.0
22	.0	.0	---	---	.1	.1	.2	.2	.0	.0	.0	.0
23	.0	.0	---	---	.1	.1	.2	.1	.0	.0	.0	.0
24	.0	.0	---	---	.1	.1	.2	.1	.0	.0	.0	.0
25	.0	.0	.1	.1	.1	.1	.1	.1	.0	.0	.0	.0
26	.0	.0	.1	.1	.2	.1	.1	.1	.0	.0	.0	.0
27	.0	.0	.1	.1	.1	.1	.1	.1	.0	.0	.0	.0
28	.0	.0	.1	.1	.1	.1	.1	.1	.0	.0	.0	.0
29	.0	.0	.1	.1	.1	.1	.1	.1	---	---	.0	.0
30	.0	.0	.1	.1	.2	.1	.1	.1	---	---	.0	.0
31	.0	.0	---	---	.2	.1	.1	.0	---	---	.0	.0
MONTH	.0	.0	.1	.0	.2	.1	.2	.0	.1	.0	.0	.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	-.1	-.1	-.2	-.2	-.2	-.2	-.2	-.2	-.1	-.1
2	.0	.0	1.0	-.1	-.2	-.2	-.2	-.2	-.2	-.2	-.1	-.1
3	.0	.0	1.1	-.1	-.2	-.2	-.2	-.2	-.2	-.2	-.1	-.1
4	.0	.0	-.1	-.1	-.2	-.2	-.2	-.2	-.2	-.2	-.1	-.1
5	.0	.0	-.1	-.1	-.2	-.2	-.2	-.2	-.2	-.2	-.1	-.1
6	.0	.0	-.1	-.1	-.2	-.2	-.2	-.2	-.1	-.2	-.1	-.1
7	.0	.0	1.0	-.1	-.2	-.2	-.2	-.2	-.2	-.2	-.1	-.1
8	.0	.0	-.1	-.1	-.2	-.2	-.2	-.2	-.2	-.2	-.1	-.1
9	.0	.0	.7	-.1	-.2	-.2	-.2	-.2	-.2	-.2	-.1	-.1
10	.0	.0	.9	-.1	-.2	-.2	-.2	-.2	-.2	-.2	-.1	-.1
11	.0	.0	-.1	-.1	-.2	-.2	-.2	-.2	-.2	-.2	.0	-.1
12	1.2	.0	-.1	-.1	-.2	-.2	-.2	-.2	-.2	-.2	-.1	-.1
13	.2	.1	-.1	-.1	-.2	-.2	-.2	-.2	-.1	-.2	---	---
14	.1	.0	.8	-.1	-.2	-.2	-.2	-.2	---	---	-.1	-.1
15	.7	.0	.0	-.1	-.2	-.2	-.2	-.2	-.1	-.2	-.1	-.1
16	.9	.0	-.1	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.1	-.1
17	.0	-.1	1.1	-.1	-.2	-.2	-.2	-.2	-.2	-.2	-.1	-.1
18	1.0	-.1	-.1	-.1	-.2	-.2	-.1	-.2	-.2	-.2	-.1	-.1
19	1.3	.0	-.1	-.1	-.2	-.2	-.2	-.2	-.1	-.2	-.1	-.1
20	1.4	-.1	-.1	-.1	-.1	-.2	-.1	-.2	-.1	-.1	-.1	-.1
21	-.1	-.1	-.1	-.1	-.2	-.2	-.2	-.2	-.1	-.1	-.1	-.1
22	-.1	-.1	-.1	-.2	-.2	-.2	-.2	-.2	-.1	-.1	-.1	-.1
23	.9	-.1	-.1	-.2	-.2	-.2	-.2	-.2	-.1	-.1	-.1	-.1
24	1.4	-.1	-.2	-.2	-.2	-.2	-.2	-.2	-.1	-.1	-.1	-.1
25	.0	-.1	-.2	-.2	-.2	-.2	-.2	-.2	-.1	-.1	-.1	-.1
26	.0	-.1	-.2	-.2	-.2	-.2	-.2	-.2	-.1	-.1	-.1	-.1
27	-.1	-.1	-.2	-.2	-.2	-.2	-.2	-.2	-.1	-.1	-.1	-.1
28	-.1	-.1	-.2	-.2	-.2	-.2	-.2	-.2	-.1	-.1	-.1	-.1
29	-.1	-.1	-.2	-.2	-.2	-.2	-.2	-.2	-.1	-.1	-.1	-.1
30	.9	-.1	-.2	-.2	-.2	-.2	-.2	-.2	-.1	-.1	-.1	-.1
31	---	---	-.2	-.2	---	---	-.2	-.2	-.1	-.1	---	---
MONTH	1.4	-.1	1.1	-.2	-.1	-.2	-.1	-.2	-.1	-.2	.0	-.1
YEAR	1.4	-.2										

PROJECT DATA
Water Data for Bolton Well Field

391904084362104. LOCAL NUMBER, BU-1154-1D—Continued

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	526.22	525.97	525.69	525.20	525.06	524.51	524.86	524.32	526.83	526.41	526.34	525.94
2	526.09	525.39	525.26	524.95	525.08	524.72	525.26	524.86	526.96	526.71	525.94	525.81
3	525.43	525.25	525.06	524.93	525.20	525.06	530.13	524.83	526.90	526.35	525.97	525.78
4	525.29	525.08	525.04	524.83	525.09	524.79	530.73	524.62	526.37	526.13	525.85	525.64
5	526.34	525.08	524.88	524.67	524.84	524.66	524.62	524.06	526.17	525.76	525.94	525.85
6	527.67	526.34	524.67	524.38	524.83	524.30	524.16	523.88	525.76	525.40	525.92	525.82
7	527.73	527.49	524.61	524.36	524.30	523.69	524.16	523.81	525.50	525.18	525.92	525.77
8	527.49	527.09	524.58	524.31	524.05	523.69	524.64	524.16	525.18	524.74	525.79	525.66
9	527.09	526.57	524.46	523.94	524.11	523.81	524.98	524.64	525.15	524.59	525.82	525.74
10	526.61	526.20	525.71	524.46	524.09	523.85	530.71	524.84	526.65	525.15	525.82	525.57
11	526.25	526.02	525.92	525.71	529.13	523.34	524.84	524.43	527.15	526.65	525.70	525.50
12	526.03	525.81	525.81	525.46	531.57	524.24	530.20	524.52	527.12	526.92	525.66	525.15
13	525.83	525.43	525.59	525.25	532.20	525.74	525.17	524.69	526.96	526.44	525.39	525.10
14	525.45	525.23	525.75	525.59	526.24	525.75	524.69	524.15	531.45	526.05	525.64	525.39
15	525.23	525.13	---	---	526.25	525.60	524.15	524.05	533.13	526.18	525.55	525.04
16	525.18	525.05	---	---	525.88	525.02	524.51	524.08	533.56	527.25	525.47	524.96
17	525.23	525.00	---	---	527.54	525.88	524.57	524.46	527.28	527.09	526.08	525.47
18	525.35	525.23	---	---	---	---	524.51	524.27	527.09	526.47	526.30	526.07
19	525.33	525.19	---	---	---	---	524.36	524.21	526.47	525.73	526.38	526.19
20	525.23	525.06	---	---	526.53	526.00	524.53	524.36	525.92	525.69	526.20	525.92
21	525.19	525.08	---	---	526.00	525.78	524.96	524.49	525.89	525.77	525.92	525.62
22	525.34	525.19	---	---	525.86	525.73	525.15	524.96	525.89	525.72	525.83	525.68
23	525.46	525.26	---	---	525.77	525.23	525.15	524.99	526.23	525.89	525.75	525.62
24	525.29	525.12	---	---	525.45	525.20	525.20	524.96	526.21	525.69	525.82	525.57
25	525.41	525.25	524.14	523.64	525.62	525.36	531.35	525.20	526.42	525.64	525.83	525.75
26	525.56	525.41	523.76	523.63	525.36	524.99	525.48	524.84	526.73	526.42	525.87	525.79
27	525.68	525.51	523.98	523.73	525.00	524.59	525.38	524.90	526.76	526.59	525.96	525.83
28	525.99	525.68	524.17	523.91	524.61	524.36	525.39	525.26	526.62	526.34	531.96	525.72
29	526.04	525.91	524.52	524.17	524.36	524.09	525.26	524.54	---	---	525.72	525.32
30	531.34	525.94	530.51	524.52	524.33	524.16	525.02	524.51	---	---	525.33	525.13
31	526.32	525.69	---	---	524.53	524.26	526.41	525.02	---	---	525.13	524.85
MONTH	531.34	525.00	530.51	523.63	532.20	523.34	531.35	523.81	533.56	524.59	531.96	524.85

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	526.38	526.16	535.92	535.58	534.14	533.81	534.71	534.25	533.49	532.91
2	525.15	524.96	526.36	526.05	535.58	534.90	534.94	534.14	534.25	533.77	533.52	533.33
3	525.10	524.88	532.71	526.14	534.90	534.65	534.94	534.57	533.77	533.38	533.33	533.03
4	525.26	525.10	526.56	526.23	534.68	534.42	534.59	534.45	533.42	533.34	533.09	533.01
5	525.27	524.95	526.28	526.20	534.56	534.41	534.74	534.47	533.42	533.35	533.14	533.01
6	524.96	524.82	526.26	526.03	534.57	534.29	534.75	534.55	533.64	533.40	533.03	532.73
7	524.87	524.70	526.14	525.92	534.82	534.57	534.57	533.89	533.62	533.39	532.76	532.54
8	524.88	524.78	526.08	525.95	534.77	534.62	533.90	533.76	533.39	533.17	533.33	532.72
9	530.41	524.75	526.07	525.95	534.62	534.36	533.92	527.53	533.17	532.96	533.56	533.33
10	525.14	524.86	526.07	525.80	534.36	534.10	527.53	526.80	533.14	532.93	535.92	533.56
11	527.22	525.14	525.88	525.78	534.10	533.90	526.80	526.64	532.97	532.80	536.17	535.88
12	528.75	527.22	526.11	525.86	534.10	533.86	526.68	526.45	533.20	532.85	535.88	535.23
13	528.79	528.51	526.20	526.06	534.42	534.05	532.85	526.40	533.14	533.04	---	---
14	528.51	527.83	526.09	525.86	534.67	534.29	533.24	527.17	---	---	534.47	534.15
15	527.83	527.24	525.86	525.50	534.83	534.62	533.11	526.83	533.24	532.90	534.15	533.78
16	527.50	527.28	525.67	525.35	535.24	534.83	532.03	526.48	533.20	532.79	533.78	533.25
17	527.40	527.23	532.71	525.41	535.25	535.09	532.38	526.46	533.39	533.20	533.25	532.67
18	527.44	527.21	535.12	532.71	535.11	534.86	535.38	528.72	533.38	533.16	532.67	532.29
19	527.24	527.06	536.64	535.12	534.87	534.51	528.72	527.92	533.41	533.18	532.29	532.07
20	527.06	526.93	536.85	536.64	534.53	534.31	527.92	527.44	533.36	533.14	532.53	532.18
21	527.17	526.99	536.73	536.36	534.42	534.31	533.42	527.38	533.49	533.19	532.79	532.41
22	527.30	527.13	536.41	535.98	534.92	534.42	533.84	533.42	533.49	532.90	533.19	532.79
23	527.13	526.78	535.98	535.16	535.08	534.82	533.94	533.58	533.32	532.93	533.21	532.73
24	527.13	526.86	535.16	534.72	534.82	534.57	533.58	533.33	533.35	533.20	532.73	532.60
25	527.10	526.93	535.00	534.64	534.58	534.34	533.35	533.16	533.31	533.13	532.74	532.65
26	526.99	526.78	535.29	535.00	534.35	534.20	533.92	533.19	533.16	532.99	532.74	532.45
27	526.80	526.62	536.16	535.29	534.22	534.03	534.14	533.92	533.14	532.92	532.75	530.96
28	526.98	526.80	536.44	536.16	534.08	531.58	534.09	533.95	533.23	532.84	532.88	532.55
29	526.92	526.63	536.71	536.40	534.09	533.96	534.14	533.90	533.47	533.10	532.55	532.27
30	526.64	526.38	536.70	536.53	534.11	533.83	535.23	534.14	533.10	532.74	532.27	531.97
31	---	---	536.53	535.92	---	---	535.24	534.71	532.91	532.58	---	---
MONTH	530.41	524.70	536.85	525.35	535.92	531.58	535.38	526.40	534.71	532.58	536.17	530.96
YEAR	536.85	523.34										

391904084362104. LOCAL NUMBER, BU-1154-1D—Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.2	7.2	7.2	7.2	7.2	7.2	7.1	7.0	7.0	7.0	7.0	7.0
2	7.2	7.2	7.2	7.2	7.2	7.2	7.0	7.0	7.0	7.0	7.0	7.0
3	7.2	7.2	7.2	7.2	7.2	7.2	7.1	7.0	7.0	7.0	7.0	7.0
4	7.2	7.2	7.2	7.2	7.2	7.2	7.1	7.0	7.0	7.0	7.0	7.0
5	7.2	7.2	7.2	7.2	7.2	7.2	7.1	7.0	7.0	7.0	7.0	7.0
6	7.2	7.2	7.2	7.2	7.2	7.2	7.0	7.0	7.0	7.0	7.0	7.0
7	7.2	7.2	7.2	7.2	7.2	7.2	7.0	7.0	7.0	7.0	7.0	7.0
8	7.2	7.2	7.2	7.1	7.2	7.2	7.0	7.0	7.0	7.0	7.0	6.9
9	7.2	7.2	7.2	7.1	7.2	7.2	7.0	7.0	7.0	7.0	6.9	6.9
10	7.2	7.2	7.2	7.1	7.2	7.2	7.1	7.0	7.0	7.0	6.9	6.9
11	7.2	7.2	7.1	7.1	7.2	7.2	7.0	7.0	7.0	7.0	6.9	6.9
12	7.2	7.2	7.1	7.1	7.2	7.2	7.0	7.0	7.0	7.0	6.9	6.9
13	7.2	7.2	7.1	7.1	7.2	7.2	7.0	7.0	7.0	7.0	7.0	6.9
14	7.2	7.2	7.1	7.1	7.2	7.2	7.0	7.0	7.1	7.0	7.0	6.9
15	7.2	7.2	---	---	7.2	7.2	7.0	7.0	7.0	7.0	7.0	6.9
16	7.2	7.2	---	---	7.2	7.1	7.0	7.0	7.1	7.0	6.9	6.9
17	7.2	7.2	---	---	7.2	7.1	7.0	7.0	7.0	7.0	6.9	6.9
18	7.2	7.2	---	---	---	---	7.0	7.0	7.0	7.0	6.9	6.9
19	7.2	7.2	---	---	---	---	7.0	7.0	7.0	7.0	6.9	6.9
20	7.2	7.2	---	---	7.2	7.2	7.0	7.0	7.0	7.0	7.0	6.9
21	7.2	7.2	---	---	7.2	7.2	7.0	7.0	7.0	7.0	7.0	7.0
22	7.2	7.2	---	---	7.2	7.2	7.0	7.0	7.0	7.0	7.0	7.0
23	7.2	7.2	---	---	7.2	7.2	7.0	7.0	7.0	7.0	7.0	7.0
24	7.2	7.2	---	---	7.2	7.2	7.0	7.0	7.0	7.0	7.0	7.0
25	7.2	7.2	7.2	7.2	7.2	7.2	7.0	7.0	7.0	7.0	7.0	7.0
26	7.2	7.2	7.2	7.2	7.2	7.2	7.0	7.0	7.0	7.0	7.0	7.0
27	7.2	7.2	7.2	7.2	7.2	7.2	7.0	7.0	7.0	7.0	7.0	7.0
28	7.2	7.2	7.2	7.2	7.2	7.2	7.0	7.0	7.0	7.0	7.0	6.9
29	7.2	7.2	7.2	7.2	7.2	7.1	7.0	7.0	---	---	7.0	7.0
30	7.2	7.2	7.2	7.2	7.1	7.1	7.0	7.0	---	---	7.0	7.0
31	7.2	7.2	---	---	7.1	7.1	7.0	7.0	---	---	7.0	7.0
MONTH	7.2	7.2	7.2	7.1	7.2	7.1	7.1	7.0	7.1	7.0	7.0	6.9

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	7.1	7.1	7.2	7.2	7.2	7.2	7.1	7.1	7.0	7.0
2	7.0	7.0	7.1	7.1	7.2	7.2	7.2	7.2	7.2	7.1	7.0	7.0
3	7.0	7.0	7.1	7.1	7.2	7.2	7.2	7.2	7.1	7.1	7.0	7.0
4	7.0	7.0	7.1	7.1	7.2	7.2	7.2	7.2	7.1	7.1	7.0	7.0
5	7.0	7.0	7.1	7.1	7.2	7.2	7.2	7.2	7.1	7.1	7.0	7.0
6	7.0	7.0	7.1	7.1	7.2	7.2	7.2	7.2	7.2	7.1	7.0	7.0
7	7.0	7.0	7.2	7.1	7.2	7.2	7.2	7.2	7.1	7.1	7.0	7.0
8	7.0	7.0	7.1	7.1	7.2	7.2	7.2	7.2	7.1	7.1	7.0	7.0
9	7.0	7.0	7.2	7.1	7.2	7.2	7.2	7.1	7.1	7.1	7.0	7.0
10	7.0	7.0	7.2	7.1	7.2	7.2	7.2	7.2	7.1	7.1	7.0	7.0
11	7.0	7.0	7.1	7.1	7.2	7.2	7.2	7.2	7.1	7.1	7.0	7.0
12	---	---	7.1	7.1	7.2	7.2	7.2	7.2	7.1	7.1	7.0	7.0
13	7.1	7.0	7.1	7.1	7.2	7.2	7.2	7.2	7.2	7.1	---	---
14	7.1	7.0	7.2	7.1	7.2	7.2	7.2	7.2	---	---	---	---
15	7.1	7.1	7.2	7.0	7.2	7.2	7.2	7.2	7.1	7.1	---	---
16	7.1	7.1	7.2	7.1	7.2	7.2	7.2	7.2	7.1	7.1	---	---
17	7.1	7.1	7.2	7.2	7.2	7.2	7.2	7.2	7.1	7.1	---	---
18	7.1	7.1	7.2	7.2	7.2	7.2	7.2	7.2	7.1	7.1	---	---
19	7.1	7.1	7.2	7.2	7.2	7.2	7.2	7.2	7.1	7.1	---	---
20	7.1	7.1	7.2	7.2	7.2	7.2	7.2	7.2	7.1	7.1	---	---
21	7.1	7.1	7.2	7.2	7.2	7.2	7.2	7.2	7.1	7.1	---	---
22	7.1	7.1	7.2	7.2	7.2	7.2	7.2	7.2	7.1	7.1	---	---
23	7.1	7.1	7.2	7.2	7.2	7.2	7.2	7.2	7.1	7.1	---	---
24	7.1	7.1	7.2	7.2	7.2	7.2	7.2	7.2	7.1	7.1	---	---
25	7.1	7.0	7.2	7.2	7.2	7.2	7.2	7.2	7.1	7.0	---	---
26	7.1	7.1	7.2	7.2	7.2	7.2	7.2	7.2	7.0	7.0	---	---
27	7.1	7.1	7.2	7.2	7.2	7.2	7.2	7.2	7.0	7.0	---	---
28	7.1	7.1	7.2	7.2	7.2	7.2	7.2	7.2	7.0	7.0	---	---
29	7.1	7.1	7.2	7.2	7.2	7.2	7.2	7.1	7.0	7.0	---	---
30	7.1	7.1	7.2	7.2	7.2	7.2	7.2	7.1	7.0	7.0	---	---
31	---	---	7.2	7.2	---	---	7.2	7.1	7.0	7.0	---	---
MONTH	7.1	7.0	7.2	7.0	7.2	7.2	7.2	7.1	7.2	7.0	7.0	7.0
YEAR	7.2	6.9										

PROJECT DATA
Water Data for Bolton Well Field

391904084362104. LOCAL NUMBER, BU-1154-1D—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(90901), USGS National Water Information System parameter code; MF, membrane filtration; col/100mL, colonies per 100 milliliters; <, concentration or value reported is less than that indicated]

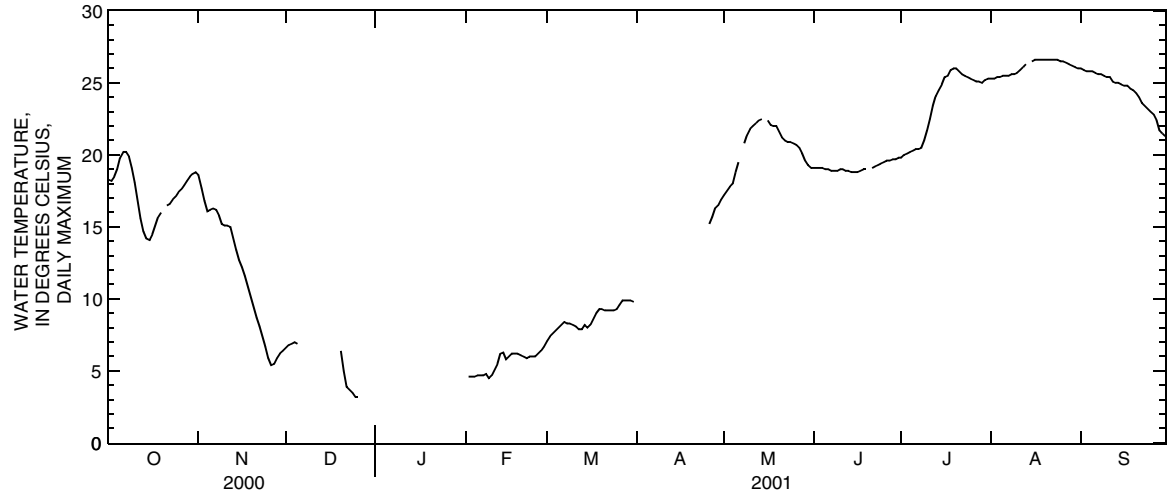
DATE	TIME	E COLI, MI MF, WATER (COL/ 100 ML) (90901)	TOTAL COLI-FORM, MI MF, WATER (COL/ 100 ML) (90900)
NOV			
15...	0900	<1	<1
DEC			
12...	1120	<1	<1
21...	1146	<1	<1
22...	1320	<1	<1
26...	1035	<1	<1
FEB			
13...	1045	<1	<1
APR			
12...	0900	<1	<1
18...	1005	<1	<1
23...	1135	<1	<1
25...	0950	<1	<1
MAY			
07...	0940	<1	<1
15...	1105	<1	<1

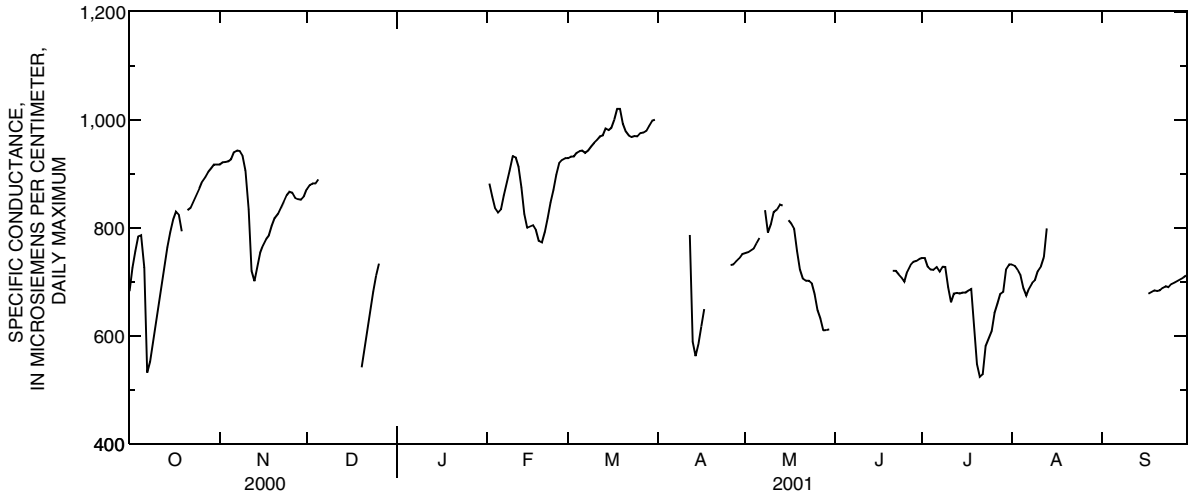
391904084362105. LOCAL NUMBER, BU-1155-1I

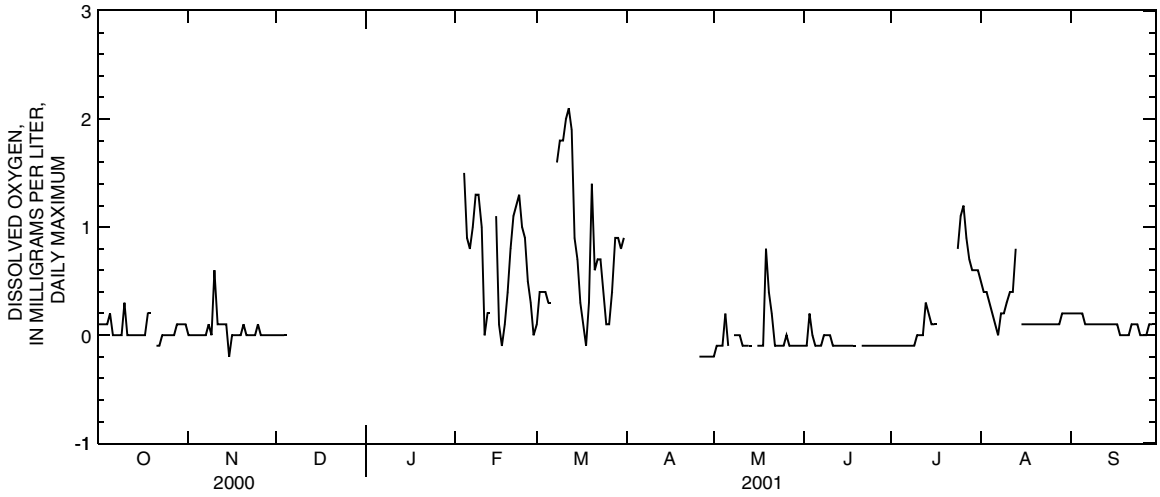
LOCATION.—Latitude 39°19′04″, longitude 84°36′21″, Butler County, Hydrologic Unit 05080002.
AQUIFER.—Glacial outwash, sand and gravel; 112OTSH.
WELL CHARACTERISTICS.—Inclined observation well drilled at 30 degree angle from horizontal by rotasonic techniques, diameter 4.0 in., depth 57 ft from top of casing to bottom of screen.
INSTRUMENTATION.—YSI Model 6600 data sonde with turbidity probe set for 60-minute records. Sonde set at an altitude of 521.86 feet above North American Vertical Datum of 1988 (NAVD of 88). Elevation estimated from angle of well (inclinometer) and length to transducer.
DATUM.—Altitude of land surface is 547.37 ft above North American Vertical Datum of 1988 (NAVD of 88). Measuring point is top of inner casing, 2.63 ft above land-surface datum.
REMARK.—This station is part of a network of wells designed to help model flow characteristics from the Great Miami River through the aquifer. Data collection began on October 7, 1999. Negative turbidity and dissolved oxygen values are due to the resolution of the data sonde and the close proximity of the actual value to zero.
PERIOD OF RECORD.—
WATER TEMPERATURE: October 7, 1999 to current year.
SPECIFIC CONDUCTANCE: October 7, 1999 to current year.
DISSOLVED OXYGEN: October 7, 1999 to current year.
WATER LEVEL ELEVATION: October 7, 1999 to current year.
pH: October 7, 1999 to current year.
TURBIDITY: October 7, 1999 to current year.
EXTREMES FOR PERIOD OF RECORD.—
WATER TEMPERATURE: Maximum, 28.8°C, Sept. 5, 2000; Minimum, 2.0°C, Feb. 1, 2000.
SPECIFIC CONDUCTANCE: Maximum, 1270 microsiemens per centimeter, Feb. 11 and 12, 2000; Minimum, 412 microsiemens per centimeter, Apr. 10, 2000.
DISSOLVED OXYGEN: Maximum, 9.4 milligrams per liter, Dec. 30, 1999; Minimum, -3.0 milligrams per liter, Nov. 9, 1999.
WATER LEVEL ELEVATION: Maximum daily low, 526.78 ft above NAVD of 88, Jan. 1 and 2, 2000; Maximum daily high, 537.53 ft above NAVD of 88, Apr. 9, 2000.
pH: Maximum, 8.2, Dec. 20-21, 2000 and Feb. 13, 2001; Minimum, 5.4, Mar. 5, 2000.
TURBIDITY: Maximum, 11.0 NTU, Jan. 4, 2000; Minimum, -1.4 NTU, June 17, 2000.
EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURE: Maximum, 26.6°C, Aug. 16-24, 2001; Minimum, 2.7°C, Dec. 26, 2000.
SPECIFIC CONDUCTANCE: Maximum, 1020 microsiemens per centimeter, Mar. 18-19, 2001; Minimum, 489 microsiemens per centimeter, Oct. 7, 2000.
DISSOLVED OXYGEN: Maximum, 2.1 milligrams per liter, Mar. 12, 2001; Minimum, -0.6 milligrams per liter, Nov. 15, 2001.
WATER LEVEL ELEVATION: Maximum daily low, 528.41 ft above NAVD of 88, Nov. 28, 2000; Maximum daily high, 536.68 ft above NAVD of 88, May 20, 2001.
pH: Maximum, 8.2, Dec. 20-21, 2000 and Feb. 13, 2001; Minimum, 7.2, Apr. 12, 2001.
TURBIDITY: Maximum, 3.9 NTU, Mar. 14, 2001; Minimum, -1.1 NTU, several days during period of record.

PROJECT DATA
Water Data for Bolton Well Field

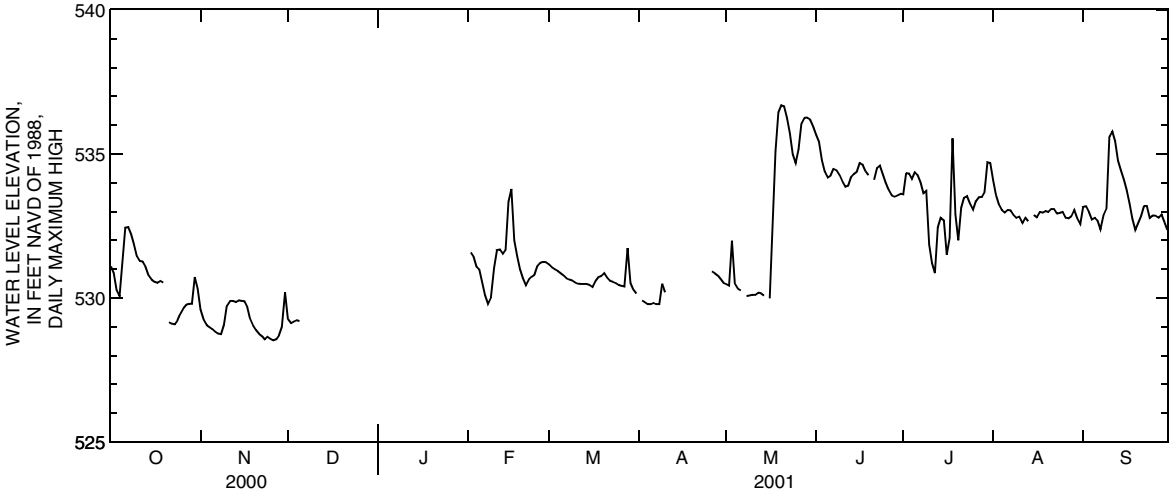
391904084362105. LOCAL NUMBER, BU-1155-1I—Continued

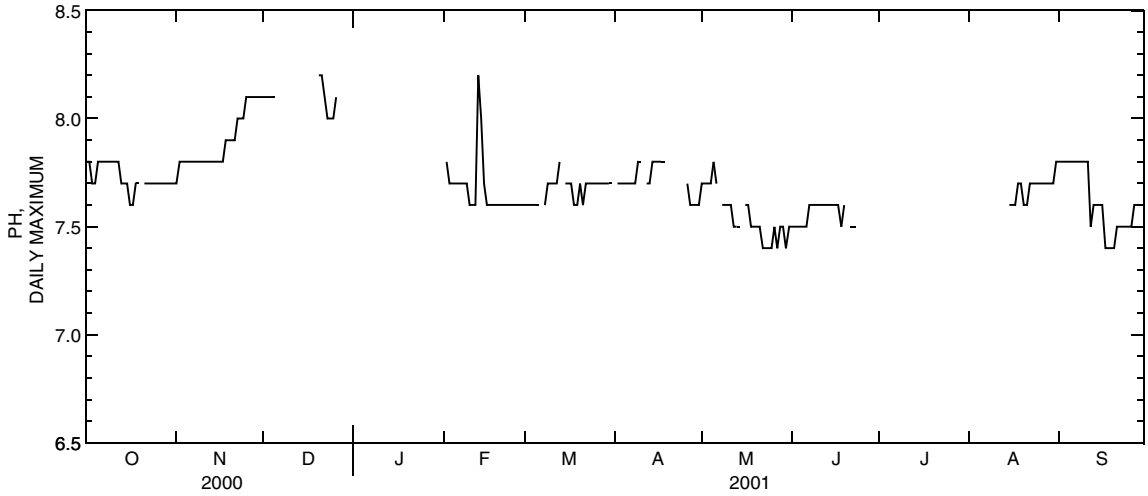


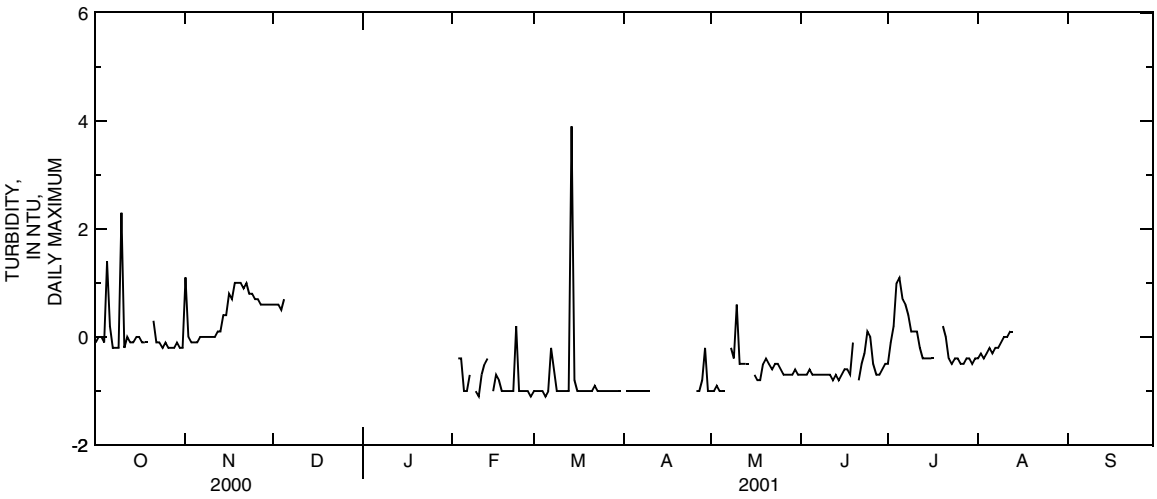




391904084362105. LOCAL NUMBER, BU-1155-1I—Continued







PROJECT DATA
Water Data for Bolton Well Field

391904084362105. LOCAL NUMBER, BU-1155-1I--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	18.3	18.1	18.6	17.7	6.6	6.4	---	---	---	---	7.1	6.7
2	18.2	18.1	17.7	16.8	6.8	6.6	---	---	4.6	4.4	7.4	7.1
3	18.5	18.2	16.8	16.1	6.9	6.8	---	---	4.6	4.5	7.6	7.4
4	19.0	18.5	16.1	16.0	7.0	6.9	---	---	4.6	4.5	7.8	7.6
5	19.8	19.0	16.2	16.0	6.9	6.7	---	---	4.7	4.5	8.0	7.8
6	20.2	19.8	16.3	16.2	---	---	---	---	4.7	4.6	8.2	8.0
7	20.2	19.9	16.2	15.8	---	---	---	---	4.7	4.6	8.4	8.2
8	19.9	19.1	15.8	15.2	---	---	---	---	4.8	4.5	8.3	8.3
9	19.1	18.1	15.2	14.9	---	---	---	---	4.5	4.5	8.3	8.2
10	18.1	16.9	15.1	14.8	---	---	---	---	4.7	4.5	8.2	8.1
11	16.9	15.6	15.1	15.0	---	---	---	---	5.1	4.7	8.1	7.9
12	15.6	14.7	15.0	14.2	---	---	---	---	5.5	5.1	7.9	7.8
13	14.7	14.2	14.2	13.4	---	---	---	---	6.2	5.5	7.9	7.8
14	14.2	14.0	13.4	12.7	---	---	---	---	6.3	5.8	8.2	7.8
15	14.1	14.0	12.7	12.2	---	---	---	---	5.8	5.8	8.0	7.9
16	14.5	14.1	12.2	11.6	---	---	---	---	6.0	5.8	8.2	8.0
17	15.1	14.5	11.6	10.9	---	---	---	---	6.2	6.0	8.6	8.2
18	15.7	15.1	10.9	10.2	---	---	---	---	6.2	6.2	9.0	8.6
19	16.0	15.5	10.2	9.5	---	---	---	---	6.2	6.1	9.3	9.0
20	---	---	9.5	8.7	6.4	4.3	---	---	6.1	6.0	9.3	9.2
21	16.5	16.2	8.7	8.1	5.0	3.9	---	---	6.0	5.9	9.2	9.2
22	16.6	16.5	8.1	7.4	3.9	3.7	---	---	5.9	5.8	9.2	9.2
23	16.9	16.6	7.4	6.7	3.7	3.5	---	---	6.0	5.8	9.2	9.1
24	17.1	16.9	6.7	5.9	3.5	3.1	---	---	6.0	5.9	9.2	9.1
25	17.4	17.1	5.9	5.4	3.2	3.0	---	---	6.0	6.0	9.3	9.2
26	17.6	17.4	5.4	5.3	3.2	2.7	---	---	6.2	6.0	9.6	9.3
27	17.9	17.6	5.5	5.3	---	---	---	---	6.4	6.2	9.9	9.6
28	18.2	17.9	5.9	5.5	---	---	---	---	6.7	6.4	9.9	9.9
29	18.5	18.2	6.2	5.9	---	---	---	---	---	---	9.9	9.9
30	18.7	18.5	6.4	6.2	---	---	---	---	---	---	9.9	9.8
31	18.8	18.6	---	---	---	---	---	---	---	---	9.8	9.7
MONTH	20.2	14.0	18.6	5.3	7.0	2.7	---	---	6.7	4.4	9.9	6.7

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	17.2	16.8	19.1	19.0	19.8	19.8	25.3	25.3	26.0	25.9
2	9.6	9.5	17.5	17.2	19.1	19.0	20.0	19.8	25.3	25.3	25.9	25.8
3	---	---	17.8	17.4	19.1	19.0	20.1	20.0	25.4	25.3	25.8	25.8
4	---	---	18.0	17.7	19.1	19.0	20.2	20.1	25.4	25.4	25.8	25.8
5	---	---	18.8	18.0	19.0	19.0	20.3	20.2	25.5	25.4	25.8	25.7
6	---	---	19.5	18.8	19.0	18.9	20.4	20.3	25.5	25.5	25.7	25.6
7	---	---	---	---	18.9	18.8	20.4	20.4	25.5	25.5	25.6	25.6
8	---	---	20.8	20.0	18.9	18.8	20.5	20.4	25.6	25.5	25.6	25.5
9	---	---	21.4	20.8	18.9	18.8	21.0	20.5	25.6	25.6	25.5	25.4
10	---	---	21.8	21.4	19.0	18.9	21.7	21.0	25.7	25.6	25.4	25.4
11	---	---	22.0	21.8	19.0	18.9	22.5	21.7	25.9	25.7	25.4	25.1
12	---	---	22.2	22.0	18.9	18.9	23.4	22.5	26.1	25.9	25.1	25.0
13	---	---	22.4	22.2	18.9	18.8	24.1	23.4	26.3	26.1	25.0	25.0
14	---	---	22.5	22.4	18.8	18.8	24.5	24.1	---	---	25.0	24.9
15	---	---	---	---	18.8	18.8	24.9	24.5	26.5	26.4	24.9	24.8
16	---	---	22.4	22.1	18.8	18.8	25.4	24.9	26.6	26.5	24.8	24.7
17	---	---	22.1	21.9	18.9	18.8	25.5	25.4	26.6	26.6	24.8	24.6
18	---	---	22.0	21.9	19.0	18.9	25.9	25.5	26.6	26.5	24.6	24.5
19	---	---	22.0	21.6	19.0	19.0	26.0	25.9	26.6	26.5	24.5	24.3
20	---	---	21.6	21.2	---	---	26.0	25.8	26.6	26.6	24.3	24.0
21	---	---	21.2	21.0	19.1	19.1	25.8	25.6	26.6	26.6	24.0	23.6
22	---	---	21.0	20.9	19.2	19.1	25.6	25.5	26.6	26.6	23.6	23.4
23	---	---	20.9	20.9	19.3	19.2	25.5	25.4	26.6	26.6	23.4	23.2
24	---	---	20.9	20.8	19.4	19.3	25.4	25.3	26.6	26.5	23.2	23.0
25	---	---	20.8	20.7	19.5	19.4	25.3	25.2	26.5	26.5	23.0	22.8
26	15.2	14.7	20.7	20.5	19.6	19.5	25.2	25.1	26.5	26.4	22.8	22.4
27	15.7	15.0	20.5	20.1	19.6	19.6	25.1	25.1	26.4	26.3	22.4	21.7
28	16.3	15.7	20.1	19.6	19.7	19.6	25.1	25.0	26.3	26.2	21.7	21.5
29	16.5	16.2	19.6	19.3	19.7	19.7	25.0	25.0	26.2	26.1	21.5	21.3
30	16.9	16.5	19.3	19.1	19.8	19.7	25.2	25.0	26.1	26.0	21.3	21.0
31	---	---	19.1	19.0	---	---	25.3	25.2	26.0	26.0	---	---
MONTH	16.9	9.5	22.5	16.8	19.8	18.8	26.0	19.8	26.6	25.3	26.0	21.0
YEAR	26.6	2.7										

391904084362105. LOCAL NUMBER, BU-1155-1I—Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	683	636	917	916	871	858	---	---	---	---	929	927
2	726	683	921	917	879	871	---	---	882	852	932	928
3	757	726	922	921	882	879	---	---	858	825	932	929
4	784	757	923	920	882	882	---	---	836	828	939	932
5	787	724	927	919	890	882	---	---	828	821	942	938
6	726	532	940	927	---	---	---	---	834	827	943	938
7	532	489	943	940	---	---	---	---	860	834	939	910
8	552	504	942	933	---	---	---	---	884	860	943	938
9	589	552	933	903	---	---	---	---	906	884	950	943
10	624	589	906	834	---	---	---	---	933	905	957	950
11	657	624	834	720	---	---	---	---	931	913	963	957
12	693	657	720	668	---	---	---	---	913	875	969	963
13	730	693	701	673	---	---	---	---	875	801	971	952
14	764	730	727	701	---	---	---	---	826	755	984	962
15	792	764	754	727	---	---	---	---	800	788	981	978
16	815	792	768	754	---	---	---	---	803	788	985	978
17	830	815	779	768	---	---	---	---	805	796	1000	985
18	824	730	786	779	---	---	---	---	796	776	1020	1000
19	794	716	804	786	---	---	---	---	776	765	1020	992
20	---	---	818	804	542	520	---	---	773	765	992	974
21	833	828	826	818	579	542	---	---	792	773	978	969
22	837	830	837	826	612	579	---	---	818	792	971	967
23	848	837	848	837	646	612	---	---	847	818	968	966
24	861	848	860	848	682	646	---	---	870	847	970	965
25	873	861	867	860	711	682	---	---	899	870	969	965
26	886	873	865	853	734	711	---	---	920	899	975	964
27	894	886	855	852	---	---	---	---	926	919	976	974
28	903	894	853	850	---	---	---	---	929	926	980	976
29	910	903	852	850	---	---	---	---	---	---	989	979
30	917	910	858	850	---	---	---	---	---	---	998	989
31	917	916	---	---	---	---	---	---	---	---	1000	998
MONTH	917	489	943	668	890	520	---	---	933	755	1020	910

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	753	749	---	---	744	741	732	729	---	---
2	1010	1010	755	751	---	---	744	727	730	722	---	---
3	---	---	758	752	---	---	728	721	722	709	---	---
4	---	---	762	754	---	---	723	718	712	686	---	---
5	---	---	772	760	---	---	722	718	688	671	---	---
6	---	---	781	771	---	---	727	716	675	670	---	---
7	---	---	---	---	---	---	719	716	688	675	---	---
8	---	---	833	774	---	---	728	717	698	687	---	---
9	---	---	791	779	---	---	727	690	703	695	---	---
10	---	---	806	789	---	---	690	658	720	699	---	---
11	---	---	829	806	---	---	662	655	729	719	---	---
12	787	589	834	828	---	---	678	662	746	729	---	---
13	589	551	843	833	---	---	679	667	799	746	---	---
14	563	551	841	833	---	---	678	674	---	---	---	---
15	585	563	---	---	---	---	680	676	---	---	---	---
16	618	585	814	799	---	---	680	676	---	---	---	---
17	650	618	807	798	---	---	684	678	---	---	678	660
18	---	---	798	757	---	---	687	610	---	---	681	678
19	---	---	757	722	696	657	610	548	---	---	684	679
20	---	---	723	704	---	---	548	524	---	---	683	670
21	---	---	706	697	720	712	524	519	---	---	684	675
22	---	---	702	697	720	713	529	519	---	---	689	682
23	---	---	702	696	714	707	581	529	---	---	692	688
24	---	---	697	677	708	697	596	581	---	---	690	689
25	---	---	677	646	700	695	609	596	---	---	696	690
26	731	724	647	632	719	700	643	609	---	---	699	696
27	732	727	632	610	731	718	660	643	---	---	702	698
28	738	731	610	602	737	730	678	660	---	---	705	700
29	743	738	611	601	739	735	682	678	---	---	708	703
30	751	743	612	604	742	738	724	679	---	---	712	708
31	---	---	---	---	---	---	732	723	---	---	---	---
MONTH	1010	551	843	601	742	657	744	519	799	670	712	660
YEAR	1020	489										

PROJECT DATA
Water Data for Bolton Well Field

391904084362105. LOCAL NUMBER, BU-1155-1I—Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	.1	.0	.0	.0	.0	.0	---	---	---	---	.1	.0
2	.1	.0	.0	.0	.0	.0	---	---	---	---	.4	.1
3	.1	.1	.0	.0	.0	.0	---	---	---	---	.4	.4
4	.1	.1	.0	.0	.0	.0	---	---	1.5	.9	.4	.3
5	.2	-.1	.0	.0	.0	.0	---	---	.9	.8	.3	.1
6	.0	-.1	.0	.0	---	---	---	---	.8	.1	.3	.1
7	.0	-.1	.0	.0	---	---	---	---	1.0	.3	---	---
8	.0	-.1	.1	.0	---	---	---	---	1.3	.8	1.6	.8
9	.0	.0	.0	.0	---	---	---	---	1.3	1.0	1.8	1.4
10	.3	-.1	.6	.0	---	---	---	---	1.0	.0	1.8	1.6
11	.0	-.1	.1	.1	---	---	---	---	.0	-.2	2.0	1.7
12	.0	-.1	.1	.1	---	---	---	---	.2	-.1	2.1	1.9
13	.0	.0	.1	.1	---	---	---	---	.2	-.1	1.9	.4
14	.0	.0	.1	-.4	---	---	---	---	---	---	.9	.3
15	.0	.0	-.2	-.6	---	---	---	---	1.1	.0	.7	.3
16	.0	.0	.0	-.2	---	---	---	---	.1	-.1	.3	.1
17	.0	.0	.0	.0	---	---	---	---	-.1	-.1	.1	-.1
18	.2	-.1	.0	.0	---	---	---	---	.1	-.1	-.1	-.1
19	.2	-.1	.0	.0	---	---	---	---	.4	.0	.3	-.1
20	---	---	.1	.0	---	---	---	---	.8	.3	1.4	.2
21	-.1	-.1	.0	.0	---	---	---	---	1.1	.8	.6	.4
22	-.1	-.1	.0	.0	---	---	---	---	1.2	1.0	.7	.4
23	.0	-.1	.0	.0	---	---	---	---	1.3	1.0	.7	.2
24	.0	-.1	.0	.0	---	---	---	---	1.0	.9	.4	-.1
25	.0	-.1	.1	.0	---	---	---	---	.9	.5	.1	-.2
26	.0	.0	.0	.0	---	---	---	---	.5	.3	.1	-.1
27	.0	.0	.0	.0	---	---	---	---	.3	.0	.4	.1
28	.1	.0	.0	-.5	---	---	---	---	.0	.0	.9	.4
29	.1	.0	.0	.0	---	---	---	---	---	---	.9	.3
30	.1	.1	.0	.0	---	---	---	---	---	---	.8	.5
31	.1	-.1	---	---	---	---	---	---	---	---	.9	.2
MONTH	.3	-.1	.6	-.6	.0	.0	---	---	1.5	-.2	2.1	-.2

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	-.2	-.3	-.1	-.2	-.1	-.1	.5	.4	.2	.2
2	---	---	-.1	-.2	-.1	-.2	-.1	-.1	.4	-.1	.2	.2
3	---	---	-.1	-.2	.2	-.3	-.1	-.1	.4	.3	.2	.2
4	---	---	-.1	-.2	.0	-.2	-.1	-.1	.3	.1	.2	.1
5	---	---	.2	-.2	-.1	-.2	-.1	-.1	.2	.1	.2	.1
6	---	---	-.1	-.3	-.1	-.1	-.1	-.1	.1	-.1	.1	.1
7	---	---	---	---	-.1	-.1	-.1	-.1	.0	-.2	.1	.1
8	---	---	.0	-.1	.0	-.2	-.1	-.1	.2	-.2	.1	.1
9	---	---	.0	-.1	.0	-.1	-.1	-.1	.2	-.1	.1	.1
10	---	---	.0	-.1	.0	-.2	.0	-.1	.3	-.2	.1	.1
11	---	---	-.1	-.1	-.1	-.2	.0	.0	.4	-.1	.1	.0
12	---	---	-.1	-.1	-.1	-.2	.0	.0	.4	-.1	.1	.0
13	---	---	-.1	-.1	-.1	-.2	.3	.0	.8	.0	.1	.1
14	---	---	-.1	-.1	-.1	-.2	.2	.1	---	---	.1	.1
15	---	---	---	---	-.1	-.2	.1	.0	.1	.0	.1	.0
16	---	---	-.1	-.1	-.1	-.2	.1	.0	.1	.0	.1	.0
17	---	---	-.1	-.1	-.1	-.2	.1	.1	.1	.1	.1	.0
18	---	---	-.1	-.1	-.1	-.2	---	---	.1	.0	.0	.0
19	---	---	.8	-.1	-.1	-.2	---	---	.1	.0	.0	.0
20	---	---	.4	.2	---	---	---	---	.1	.1	.0	.0
21	---	---	.2	-.1	-.1	-.1	---	---	.1	.1	.0	.0
22	---	---	-.1	-.1	-.1	-.1	---	---	.1	.0	.1	.0
23	---	---	-.1	-.1	-.1	-.1	---	---	.1	.1	.1	.0
24	---	---	-.1	-.1	-.1	-.1	.8	.6	.1	.1	.1	.0
25	---	---	-.1	-.1	-.1	-.1	1.1	.7	.1	.1	.0	.0
26	-.2	-.2	.0	-.1	-.1	-.1	1.2	.9	.1	.1	.0	.0
27	-.2	-.2	-.1	-.1	-.1	-.1	.9	.7	.1	.1	.0	.0
28	-.2	-.2	-.1	-.1	-.1	-.1	.7	.6	.1	.1	.1	.0
29	-.2	-.2	-.1	-.1	-.1	-.1	.6	.5	.2	.1	.1	.1
30	-.2	-.2	-.1	-.1	-.1	-.1	.6	.1	.2	.1	.1	.0
31	---	---	-.1	-.2	---	---	.6	.4	.2	.2	---	---
MONTH	-.2	-.2	.8	-.3	.2	-.3	1.2	-.1	.8	-.2	.2	.0
YEAR	2.1	-.6										

391904084362105. LOCAL NUMBER, BU-1155-1I—Continued

WATER LEVEL ELEVATION, FEET NAVD OF 1988, DATUM CORRECTED, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	531.10	---	529.60	529.24	529.26	528.91	---	---	---	---	531.17	531.07
2	530.87	530.27	529.24	529.07	529.13	528.98	---	---	531.59	531.43	531.07	531.00
3	530.27	530.06	529.07	528.99	529.19	529.13	---	---	531.43	531.08	531.00	530.94
4	530.06	529.88	528.99	528.92	529.23	529.18	---	---	531.08	530.98	530.94	530.87
5	531.16	529.83	528.92	528.83	529.20	529.09	---	---	530.98	530.53	530.87	530.79
6	532.44	531.16	528.83	528.75	---	---	---	---	530.53	530.08	530.79	530.69
7	532.47	532.22	528.76	528.72	---	---	---	---	530.08	529.80	530.69	530.45
8	532.22	531.87	528.74	528.70	---	---	---	---	529.80	529.64	530.64	530.61
9	531.87	531.45	529.07	528.72	---	---	---	---	530.02	529.65	530.61	530.54
10	531.45	531.16	529.73	529.07	---	---	---	---	531.05	530.02	530.54	530.50
11	531.29	531.17	529.90	529.73	---	---	---	---	531.67	531.05	530.50	530.45
12	531.26	531.08	529.90	529.75	---	---	---	---	531.68	531.54	530.49	530.45
13	531.08	530.80	529.86	529.70	---	---	---	---	531.54	531.13	530.48	530.31
14	530.80	530.64	529.92	529.82	---	---	---	---	531.69	531.11	530.49	530.31
15	530.64	530.50	529.90	529.80	---	---	---	---	533.35	531.19	530.45	530.25
16	530.56	530.41	529.89	529.68	---	---	---	---	533.79	532.01	530.39	530.26
17	530.53	530.35	529.68	529.26	---	---	---	---	532.01	531.46	530.59	530.39
18	530.60	530.50	529.26	529.04	---	---	---	---	531.46	531.00	530.72	530.59
19	530.54	530.38	529.04	528.89	---	---	---	---	531.00	530.68	530.77	530.72
20	---	---	528.89	528.77	---	---	---	---	530.69	530.39	530.87	530.69
21	529.16	529.11	528.77	528.68	---	---	---	---	530.45	530.29	530.71	530.60
22	529.11	529.08	528.68	528.57	---	---	---	---	530.64	530.45	530.60	530.56
23	529.08	529.03	528.57	528.48	---	---	---	---	530.74	530.64	530.56	530.52
24	529.23	529.02	528.65	528.47	---	---	---	---	530.81	530.74	530.52	530.45
25	529.47	529.23	528.59	528.51	---	---	---	---	531.11	530.81	530.45	530.42
26	529.64	529.47	528.53	528.51	---	---	---	---	531.22	531.11	530.42	530.38
27	529.76	529.64	528.56	528.52	---	---	---	---	531.25	531.22	530.40	530.36
28	529.80	529.76	528.71	528.41	---	---	---	---	531.24	531.17	531.73	530.38
29	529.80	529.79	529.00	528.71	---	---	---	---	---	---	530.52	530.29
30	530.73	529.78	530.20	529.00	---	---	---	---	---	---	530.29	530.15
31	530.33	529.60	---	---	---	---	---	---	---	---	530.15	530.00
MONTH	532.47	529.02	530.20	528.41	529.26	528.91	---	---	533.79	529.64	531.73	530.00

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	530.48	530.41	535.67	535.42	533.60	533.47	534.08	533.57	533.16	532.57
2	529.92	529.85	530.43	530.22	535.42	534.79	534.33	533.60	533.57	533.24	533.18	532.98
3	529.85	529.74	531.98	530.22	534.79	534.38	534.32	534.08	533.24	533.05	532.98	532.67
4	529.79	529.73	530.50	530.33	534.38	534.08	534.13	534.04	533.05	532.96	532.73	532.65
5	529.79	529.77	530.33	530.26	534.19	534.01	534.36	534.11	532.96	532.86	532.78	532.65
6	529.83	529.76	530.26	530.12	534.25	533.97	534.27	534.02	533.05	532.85	532.68	532.38
7	529.78	529.75	---	---	534.48	534.25	534.02	533.64	533.04	532.85	532.38	532.19
8	529.79	529.75	530.06	530.04	534.44	534.24	533.64	533.53	532.89	532.74	532.90	532.33
9	530.50	529.78	530.09	530.04	534.27	534.00	533.72	531.87	532.78	532.61	533.12	532.90
10	530.20	529.89	530.11	530.07	534.04	533.83	531.87	531.21	532.83	532.61	535.61	533.12
11	---	---	530.11	530.09	533.87	533.68	531.21	530.87	532.61	532.47	535.78	535.44
12	---	---	530.19	530.11	533.90	533.64	530.87	530.60	532.78	532.47	535.44	534.77
13	---	---	530.16	530.09	534.20	533.84	532.45	530.50	532.67	532.63	534.77	534.36
14	---	---	530.09	530.07	534.31	533.98	532.79	531.32	---	---	534.43	534.12
15	---	---	---	---	534.39	534.27	532.70	530.92	532.88	532.55	534.12	533.75
16	---	---	529.99	529.85	534.68	534.38	531.51	530.61	532.81	532.46	533.75	533.28
17	---	---	532.60	529.86	534.63	534.40	532.09	530.42	532.99	532.81	533.28	532.74
18	---	---	535.08	532.60	534.40	534.26	535.54	532.09	532.96	532.73	532.74	532.37
19	---	---	536.44	535.08	534.26	533.93	532.91	532.01	533.02	532.75	532.37	532.16
20	---	---	536.68	536.44	---	---	532.01	531.55	532.99	532.78	532.61	532.27
21	---	---	536.65	536.25	534.11	533.82	533.13	531.51	533.08	532.83	532.84	532.49
22	---	---	536.25	535.72	534.51	534.11	533.48	533.13	533.08	532.55	533.19	532.84
23	---	---	535.72	534.98	534.60	534.31	533.54	533.27	532.93	532.59	533.20	532.77
24	---	---	534.98	534.57	534.31	534.01	533.27	533.07	532.95	532.86	532.78	532.65
25	---	---	534.69	534.46	534.01	533.77	533.07	532.91	532.98	532.79	532.86	532.75
26	530.93	530.87	535.16	534.69	533.77	533.57	533.36	532.90	532.79	532.65	532.85	532.55
27	530.87	530.79	536.07	535.16	533.57	533.42	533.50	533.36	532.77	532.57	532.78	532.28
28	530.79	530.66	536.25	536.07	533.52	533.03	533.51	533.50	532.84	532.49	532.90	532.63
29	530.66	530.53	536.27	536.16	533.57	533.44	533.68	533.50	533.06	532.75	532.63	532.36
30	530.53	530.48	536.20	535.94	533.62	533.48	534.71	533.68	532.75	532.39	532.36	532.07
31	---	---	535.94	535.67	---	---	534.69	534.08	532.57	532.23	---	---
MONTH	530.93	529.73	536.68	529.85	535.67	533.03	535.54	530.42	534.08	532.23	535.78	532.07
YEAR	536.68	528.41										

PROJECT DATA
Water Data for Bolton Well Field

391904084362105. LOCAL NUMBER, BU-1155-1I—Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.8	7.8	7.7	7.7	8.1	8.1	---	---	---	---	7.6	7.6
2	7.8	7.7	7.8	7.7	8.1	8.1	---	---	7.8	7.7	7.6	7.6
3	7.7	7.7	7.8	7.7	8.1	8.1	---	---	7.7	7.7	7.6	7.6
4	7.7	7.7	7.8	7.8	8.1	8.1	---	---	7.7	7.7	7.6	7.6
5	7.8	7.7	7.8	7.8	8.1	8.1	---	---	7.7	7.7	7.6	7.6
6	7.8	7.8	7.8	7.8	---	---	---	---	7.7	7.7	7.6	7.6
7	7.8	7.8	7.8	7.7	---	---	---	---	7.7	7.7	---	---
8	7.8	7.8	7.8	7.8	---	---	---	---	7.7	7.7	7.6	7.6
9	7.8	7.8	7.8	7.8	---	---	---	---	7.7	7.6	7.7	7.6
10	7.8	7.8	7.8	7.8	---	---	---	---	7.6	7.6	7.7	7.6
11	7.8	7.8	7.8	7.8	---	---	---	---	7.6	7.6	7.7	7.6
12	7.8	7.7	7.8	7.8	---	---	---	---	7.6	7.6	7.7	7.7
13	7.7	7.7	7.8	7.8	---	---	---	---	8.2	7.6	7.8	7.6
14	7.7	7.7	7.8	7.8	---	---	---	---	8.0	7.7	---	---
15	7.7	7.6	7.8	7.8	---	---	---	---	7.7	7.6	7.7	7.7
16	7.6	7.6	7.8	7.8	---	---	---	---	7.6	7.6	7.7	7.7
17	7.6	7.6	7.8	7.8	---	---	---	---	7.6	7.6	7.7	7.6
18	7.7	7.6	7.9	7.8	---	---	---	---	7.6	7.6	7.6	7.6
19	7.7	7.7	7.9	7.9	---	---	---	---	7.6	7.6	7.6	7.6
20	---	---	7.9	7.9	8.2	8.1	---	---	7.6	7.6	7.7	7.6
21	7.7	7.7	7.9	7.9	8.2	8.1	---	---	7.6	7.6	7.6	7.6
22	7.7	7.7	8.0	7.9	8.1	8.0	---	---	7.6	7.6	7.7	7.6
23	7.7	7.7	8.0	8.0	8.0	8.0	---	---	7.6	7.6	7.7	7.7
24	7.7	7.7	8.0	8.0	8.0	8.0	---	---	7.6	7.6	7.7	7.7
25	7.7	7.7	8.1	8.0	8.0	8.0	---	---	7.6	7.6	7.7	7.7
26	7.7	7.7	8.1	8.1	8.1	8.0	---	---	7.6	7.6	7.7	7.7
27	7.7	7.7	8.1	8.1	---	---	---	---	7.6	7.6	7.7	7.7
28	7.7	7.7	8.1	8.1	---	---	---	---	7.6	7.6	7.7	7.7
29	7.7	7.7	8.1	8.1	---	---	---	---	---	---	7.7	7.7
30	7.7	7.7	8.1	8.1	---	---	---	---	---	---	7.7	7.7
31	7.7	7.7	---	---	---	---	---	---	---	---	7.7	7.7
MONTH	7.8	7.6	8.1	7.7	8.2	8.0	---	---	8.2	7.6	7.8	7.6

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	7.7	7.6	7.5	7.3	---	---	---	---	7.8	7.6
2	7.7	7.7	7.7	7.6	7.5	7.3	---	---	---	---	7.8	7.6
3	7.7	7.4	7.7	7.6	7.5	7.3	---	---	---	---	7.8	7.8
4	7.7	7.6	7.7	7.6	7.5	7.4	---	---	---	---	7.8	7.6
5	7.7	7.6	7.8	7.5	7.5	7.3	---	---	---	---	7.8	7.7
6	7.7	7.6	7.7	7.6	7.5	7.4	---	---	---	---	7.8	7.8
7	7.7	7.6	---	---	7.6	7.4	---	---	---	---	7.8	7.8
8	7.7	7.5	7.6	7.5	7.6	7.4	---	---	---	---	7.8	7.8
9	7.8	7.6	7.6	7.6	7.6	7.4	---	---	---	---	7.8	7.8
10	7.8	7.7	7.6	7.5	7.6	7.5	---	---	---	---	7.8	7.6
11	---	---	7.6	7.5	7.6	7.5	---	---	---	---	7.8	7.4
12	7.7	7.2	7.5	7.5	7.6	7.5	---	---	---	---	7.5	7.4
13	7.7	7.4	7.5	7.5	7.6	7.4	---	---	---	---	7.6	7.4
14	7.8	7.6	7.5	7.5	7.6	7.4	---	---	---	---	7.6	7.4
15	7.8	7.7	---	---	7.6	7.4	---	---	7.6	7.4	7.6	7.6
16	7.8	7.7	7.6	7.5	7.6	7.4	---	---	7.6	7.5	7.6	7.4
17	7.8	7.7	7.6	7.5	7.6	7.5	---	---	7.6	7.5	7.4	7.4
18	7.8	7.7	7.5	7.5	7.5	7.4	---	---	7.7	7.5	7.4	7.4
19	---	---	7.5	7.5	7.6	7.5	---	---	7.7	7.6	7.4	7.4
20	---	---	7.5	7.5	---	---	---	---	7.6	7.5	7.4	7.4
21	---	---	7.5	7.4	7.5	7.5	---	---	7.6	7.5	7.5	7.4
22	---	---	7.4	7.4	7.5	7.5	---	---	7.7	7.5	7.5	7.5
23	---	---	7.4	7.4	7.5	7.5	---	---	7.7	7.6	7.5	7.5
24	---	---	7.4	7.4	---	---	---	---	7.7	7.6	7.5	7.5
25	---	---	7.4	7.4	---	---	---	---	7.7	7.7	7.5	7.5
26	7.7	7.6	7.5	7.4	---	---	---	---	7.7	7.7	7.5	7.5
27	7.6	7.6	7.4	7.4	---	---	---	---	7.7	7.7	7.6	7.5
28	7.6	7.6	7.5	7.4	---	---	---	---	7.7	7.7	7.6	7.6
29	7.6	7.6	7.5	7.4	---	---	---	---	7.7	7.6	7.6	7.6
30	7.6	7.6	7.4	7.4	---	---	---	---	7.7	7.7	7.6	7.6
31	---	---	7.5	7.3	---	---	---	---	7.8	7.6	---	---
MONTH	7.8	7.2	7.8	7.3	7.6	7.3	---	---	7.8	7.4	7.8	7.4
YEAR	8.2	7.2										

391904084362105. LOCAL NUMBER, BU-1155-1I—CONTINUE

TURBIDITY (NTU), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	-.1	-.2	1.1	-.4	.6	.3	---	---	---	---	-1.0	-1.1
2	.0	-.2	.0	-.2	.6	.3	---	---	---	---	-1.0	-1.1
3	.0	-.3	-.1	-.3	.6	.3	---	---	-.4	-1.0	-1.0	-1.1
4	-.1	-.4	-.1	-.3	.5	.3	---	---	-.4	-1.0	-1.0	-1.1
5	1.4	-.4	-.1	-.3	.7	.3	---	---	-1.0	-1.1	-1.1	-1.1
6	.2	-.4	.0	-.2	---	---	---	---	-1.0	-1.1	-1.0	-1.1
7	-.2	-.3	.0	-.3	---	---	---	---	-.7	-1.1	-.2	-1.1
8	-.2	-.4	.0	-.2	---	---	---	---	---	---	-.6	-1.1
9	-.2	-.4	.0	-.2	---	---	---	---	-1.0	-1.1	-1.0	-1.1
10	2.3	-.4	.0	-.3	---	---	---	---	-1.1	-1.1	-1.0	-1.1
11	-.2	-.3	.0	-.1	---	---	---	---	-.7	-1.1	-1.0	-1.1
12	.0	-.2	.1	-.1	---	---	---	---	-.5	-.9	-1.0	-1.1
13	-.1	-.2	.1	-.1	---	---	---	---	-.4	-1.1	-1.0	-1.1
14	-.1	-.2	.4	.0	---	---	---	---	---	---	3.9	-1.1
15	.0	-.2	.4	.1	---	---	---	---	-1.0	-1.1	-.8	-1.1
16	.0	-.3	.8	.2	---	---	---	---	-.7	-1.1	-1.0	-1.1
17	-.1	-.3	.7	.3	---	---	---	---	-.8	-1.1	-1.0	-1.1
18	-.1	-.3	1.0	.6	---	---	---	---	-1.0	-1.1	-1.0	-1.1
19	-.1	-.3	1.0	.6	---	---	---	---	-1.0	-1.0	-1.0	-1.1
20	---	---	1.0	.6	---	---	---	---	-1.0	-1.1	-1.0	-1.1
21	.3	-.4	.9	.6	---	---	---	---	-1.0	-1.1	-1.0	-1.1
22	-.1	-.3	1.0	.6	---	---	---	---	-1.0	-1.1	-.9	-1.1
23	-.1	-.4	.8	.6	---	---	---	---	.2	-1.1	-1.0	-1.1
24	-.2	-.3	.8	.4	---	---	---	---	-1.0	-1.1	-1.0	-1.1
25	-.1	-.4	.7	.4	---	---	---	---	-1.0	-1.1	-1.0	-1.1
26	-.2	-.3	.7	.3	---	---	---	---	-1.0	-1.1	-1.0	-1.1
27	-.2	-.4	.6	.3	---	---	---	---	-1.0	-1.1	-1.0	-1.1
28	-.2	-.4	.6	.3	---	---	---	---	-1.1	-1.1	-1.0	-1.1
29	-.1	-.4	.6	.3	---	---	---	---	---	---	-1.0	-1.1
30	-.2	-.4	.6	.2	---	---	---	---	---	---	-1.0	-1.1
31	-.2	-.3	---	---	---	---	---	---	---	---	-1.0	-1.1
MONTH	2.3	-.4	1.1	-.4	.7	.3	---	---	.2	-1.1	3.9	-1.1

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	-1.0	-1.1	-.7	-.7	-.5	-.7	-.4	-.5	---	---
2	-1.0	-1.1	-1.0	-1.1	-.7	-.8	-.1	-.7	-.3	-.5	---	---
3	-1.0	-1.1	-.9	-1.1	-.7	-.8	.2	-.2	-.4	-.4	---	---
4	-1.0	-1.1	-1.0	-1.1	-.6	-.8	1.0	.2	-.3	-.4	---	---
5	-1.0	-1.1	-1.0	-1.1	-.7	-.8	1.1	.6	-.2	-.4	---	---
6	-1.0	-1.1	-1.0	-1.1	-.7	-.8	.7	.4	-.3	-.3	---	---
7	-1.0	-1.1	---	---	-.7	-.8	.6	.4	-.2	-.3	---	---
8	-1.0	-1.1	-.2	-.5	-.7	-.8	.4	-.5	-.2	-.2	---	---
9	-1.0	-1.1	-.4	-.5	-.7	-.8	.1	-.5	-.1	-.2	---	---
10	-1.0	-1.1	.6	-.5	-.7	-.8	.1	-.6	.0	-.2	---	---
11	---	---	-.5	-.5	-.7	-.8	.1	-.2	.0	-.1	---	---
12	---	---	-.5	-.5	-.8	-.8	-.2	-.4	.1	.0	---	---
13	---	---	-.5	-.5	-.7	-.8	-.4	-.5	.1	.0	---	---
14	---	---	-.5	-.5	-.8	-.8	-.4	-.5	---	---	---	---
15	---	---	---	---	-.7	-.8	-.4	-.5	---	---	---	---
16	---	---	-.7	-.8	-.6	-.8	-.4	-.5	---	---	---	---
17	---	---	-.8	-.8	-.6	-.8	-.4	-.5	---	---	---	---
18	---	---	-.8	-.8	-.7	-.8	---	---	---	---	---	---
19	---	---	-.5	-.8	-.1	-.7	---	---	---	---	---	---
20	---	---	-.4	-.7	---	---	.2	-.1	---	---	---	---
21	---	---	-.5	-.7	-.8	-.8	.0	-.4	---	---	---	---
22	---	---	-.6	-.7	-.5	-.8	-.4	-.5	---	---	---	---
23	---	---	-.5	-.7	-.3	-.5	-.5	-.5	---	---	---	---
24	---	---	-.5	-.7	.1	-.3	-.4	-.5	---	---	---	---
25	---	---	-.6	-.7	.0	-.5	-.4	-.5	---	---	---	---
26	-1.0	-1.1	-.7	-.8	-.5	-.7	-.5	-.5	---	---	---	---
27	-1.0	-1.1	-.7	-.8	-.7	-.8	-.5	-.5	---	---	---	---
28	-.8	-1.1	-.7	-.8	-.7	-.8	-.4	-.5	---	---	---	---
29	-.2	-1.1	-.7	-.8	-.6	-.8	-.4	-.5	---	---	---	---
30	-1.0	-1.1	-.6	-.7	-.5	-.7	-.5	-.5	---	---	---	---
31	---	---	-.7	-.7	---	---	-.4	-.5	---	---	---	---
MONTH	-.2	-1.1	.6	-1.1	.1	-.8	1.1	-.7	.1	-.5	---	---
YEAR	3.9	-1.1										

PROJECT DATA
Water Data for Bolton Well Field

391904084362105. LOCAL NUMBER, BU-1155-1I—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00025), USGS National Water Information System parameter code; mm of Hg, millimeters of mercury; mg/L, milligrams per liter; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; µg/L, micrograms per liter; <, concentration or value reported is less than that indicated; e, estimated concentration or value]

DATE	TIME	BAROMETRIC PRESSURE (MM OF HG) (00025)	DISSOLVED OXYGEN (MG/L) (00300)	DISSOLVED OXYGEN (PERCENT SATURATION) (00301)	PH WATER FIELD (STANDARD UNITS) (00400)	PH WATER LAB (STANDARD UNITS) (00403)	SPECIFIC CONDUCTANCE LAB (US/CM) (90095)	SPECIFIC CONDUCTANCE FIELD (US/CM) (00095)	TEMPERATURE, AIR (DEG C) (00020)	TEMPERATURE, WATER (DEG C) (00010)	HARDNESS, TOTAL (MG/L AS CACO3) (00900)	CALCIUM, DISSOLVED (MG/L AS CA) (00915)
APR												
11...	1445	734	2.8	30.2	7.6	7.9	901	886	31.0	17.0	324	79
12...	1030	---	---	---	7.6	7.9	694	689	---	---	242	59
14...	1000	---	0.2	---	7.7	7.9	571	553	---	19.4	218	53

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	ANC, WATER, UNFILTERED FIELD (MG/L AS CACO3) (00419)	ANC BICARBONATE, WATER, FIELD (MG/L AS HCO3) (00450)	ANC CARBONATE WATER FIELD (MG/L AS CO3) (00447)	BROMIDE, DISSOLVED (MG/L AS BR) (71870)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SULFATE, DISSOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)
APR												
11...	31	5.2	53	258	315	<1	0.13	84	0.4	5.0	70	533
12...	23	4.6	38	211	257	<1	0.05	58	0.5	5.1	49	404
14...	21	4.0	26	182	222	<1	0.15	38	0.4	5.0	37	354

DATE	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC, DISSOLVED (MG/L AS N) (00623)	NITROGEN, NO2 + NO3, DISSOLVED (MG/L AS N) (00631)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	PHOSPHORUS, DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	IRON, DISSOLVED (UG/L AS FE) (01046)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	2,6-DIETHYL ANILINE, WATER FLTRD (UG/L) (82660)	ACETOCHLOR, WATER, FLTRD (UG/L) (49260)	ALACHLOR, WATER, FLTRD (UG/L) (46342)	ALPHA BHC, WATER, FLTRD (UG/L) (34253)
APR												
11...	<0.04	0.21	0.10	0.059	0.26	0.22	<10	19	<0.002	<0.004	<0.002	<0.005
12...	<0.04	0.24	0.28	0.067	0.20	0.18	<10	27	<0.002	<0.004	<0.002	<0.005
14...	<0.04	0.48	2.5	0.38	0.20	0.18	<10	30	<0.002	0.012	<0.002	<0.005

DATE	ATRAZINE, WATER, FLTRD (UG/L) (39632)	BENFLURALIN, WATER, FLTRD (UG/L) (82673)	BUTYLATE, WATER, FLTRD (UG/L) (04028)	CARBARYL, WATER, FLTRD (UG/L) (82680)	CARBOFURAN, WATER, FLTRD (UG/L) (82674)	CHLORPYRIFOS, WATER, FLTRD (UG/L) (38933)	CYANAZINE, WATER, FLTRD (UG/L) (04041)	DCPA, WATER, FLTRD (UG/L) (82682)	DEETHYL ATRAZINE, WATER, FLTRD (UG/L) (04040)	DIAZINON, WATER, FLTRD (UG/L) (39572)	DIELRIN, WATER, FLTRD (UG/L) (39381)	DISULFOTON, WATER, FLTRD (UG/L) (82677)
APR												
11...	0.10	<0.010	<0.002	<0.041	<0.020	<0.005	<0.018	<0.003	e0.02	0.007	<0.005	<0.021
12...	0.86	<0.010	<0.002	<0.041	<0.020	<0.005	e0.006	<0.003	e0.04	0.008	<0.005	<0.021
14...	1.1	<0.010	<0.002	<0.041	<0.020	<0.005	e0.007	<0.003	e0.07	0.009	<0.005	<0.021

391904084362105. LOCAL NUMBER, BU-1155-1I—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001—Continued

[(82668), USGS National Water Information System parameter code; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; µg/L, micrograms per liter; col/100 mL, colonies per 100 milliliters; <, concentration or value reported is less than that indicated; e, estimated concentration or value; MF, membrane filtration; E, value is estimated from a non-ideal colony count]

DATE	EPTC, WATER, FLTRD (UG/L) (82668)	ETHAL-FLUR-ALIN, WATER, FLTRD (UG/L) (82663)	ETHO-PROP, WATER, FLTRD (UG/L) (82672)	FONOFOS, WATER, FLTRD (UG/L) (04095)	LINDANE, WATER, FLTRD (UG/L) (39341)	LIN-URON, WATER, FLTRD (UG/L) (82666)	MALA-THION, WATER, FLTRD (UG/L) (39532)	METHYL-AZIN-PHOS, WATER, FLTRD (UG/L) (82686)	METHYL PARA-THION, WATER, FLTRD (UG/L) (82667)	METO-LACHLOR, WATER, FLTRD (UG/L) (39415)	METRI-BUZIN, WATER, FLTRD (UG/L) (82630)	MOL-INATE, WATER, FLTRD (UG/L) (82671)
APR												
11...	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.031	<0.006	<0.002
12...	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.23	0.13	<0.002
14...	<0.002	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.050	<0.006	0.32	0.28	<0.002

DATE	NAPROP-AMIDE, WATER, FLTRD (UG/L) (82684)	P,P' DDE, WATER, FLTRD (UG/L) (34653)	PARA-THION, WATER, FLTRD (UG/L) (39542)	PEB-ULATE, WATER, FLTRD (UG/L) (82669)	PENDI-METH-ALIN, WATER, FLTRD (UG/L) (82683)	CIS-PER-METHRIN, WATER, FLTRD (UG/L) (82687)	PHORATE, WATER, FLTRD (UG/L) (82664)	PRO-METON, WATER, FLTRD (UG/L) (04037)	PRON-AMIDE, WATER, FLTRD (UG/L) (82676)	PROPA-CHLOR, WATER, FLTRD (UG/L) (04024)	PRO-PANIL, WATER, FLTRD (UG/L) (82679)	PRO-PARGITE, WATER, FLTRD (UG/L) (82685)
APR												
11...	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	e0.012	<0.004	<0.010	<0.011	<0.023
12...	<0.007	<0.003	<0.007	<0.002	<0.020	<0.006	<0.011	e0.013	<0.004	<0.010	<0.011	<0.023
14...	<0.007	<0.003	<0.007	<0.002	<0.010	<0.006	<0.011	e0.013	<0.004	<0.010	<0.011	<0.023

DATE	SI-MAZINE, WATER, FLTRD (UG/L) (04035)	TEBU-THI-URON, WATER, FLTRD (UG/L) (82670)	TER-BACIL, WATER, FLTRD (UG/L) (82665)	TER-BUFOS, WATER, FLTRD (UG/L) (82675)	THIO-BENCARB, WATER, FLTRD (UG/L) (82681)	TRIAL-LATE, WATER, FLTRD (UG/L) (82678)	TRI-FLUR-ALIN, WATER, FLTRD (UG/L) (82661)
APR							
11...	0.015	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
12...	0.10	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009
14...	0.15	<0.016	<0.034	<0.017	<0.005	<0.002	<0.009

PROJECT DATA
Water Data for Bolton Well Field

391904084362105. LOCAL NUMBER, BU-1155-1I—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001—Continued

[(90901), USGS National Water Information System parameter code; MF, membrane filtration; col/100mL, colonies per 100 milliliters; <, concentration or value reported is less than that indicated; E, value is estimated from a non-ideal colony count; ---, no data]

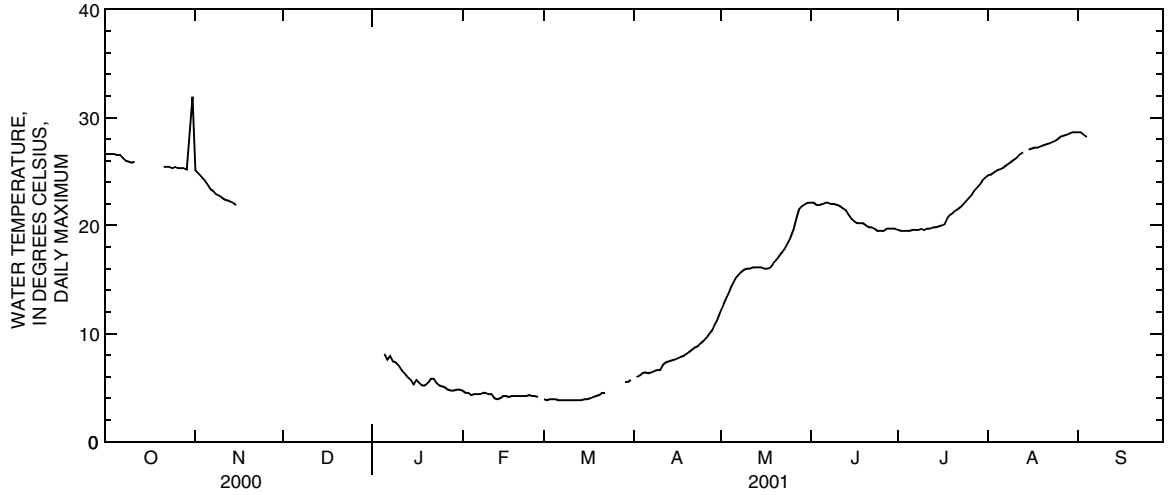
DATE	TIME	E COLI, MI MF, WATER (COL/ 100 ML) (90901)	TOTAL COLI-FORM, MI MF, WATER (COL/ 100 ML) (90900)
NOV			
15...	1100	E10	77
DEC			
12...	1105	300	380
17...	0845	13000	14000
17...	1630	17000	21000
18...	1035	22000	27000
19...	1130	6600	E8200
20...	1150	3700	4600
21...	0930	2400	3600
22...	1235	E12	890
26...	---	E4	540
FEB			
13...	1035	E3	E27
APR			
11...	1215	<33	E100
11...	1710	E10	560
12...	0900	93	5000
12...	1515	E10	E60
13...	0825	E10	430
13...	1050	E8	290
15...	0915	<1	48
16...	1015	E2	56
18...	1005	<1	E21
19...	1000	E2	E5
23...	1030	E1	26

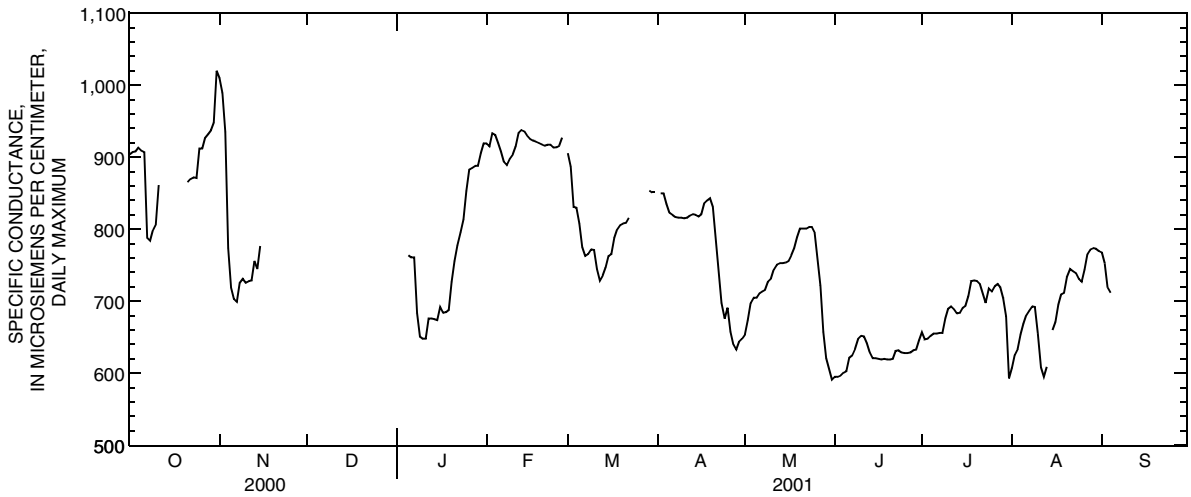
391905084372901. LOCAL NUMBER, BU-1156-8A

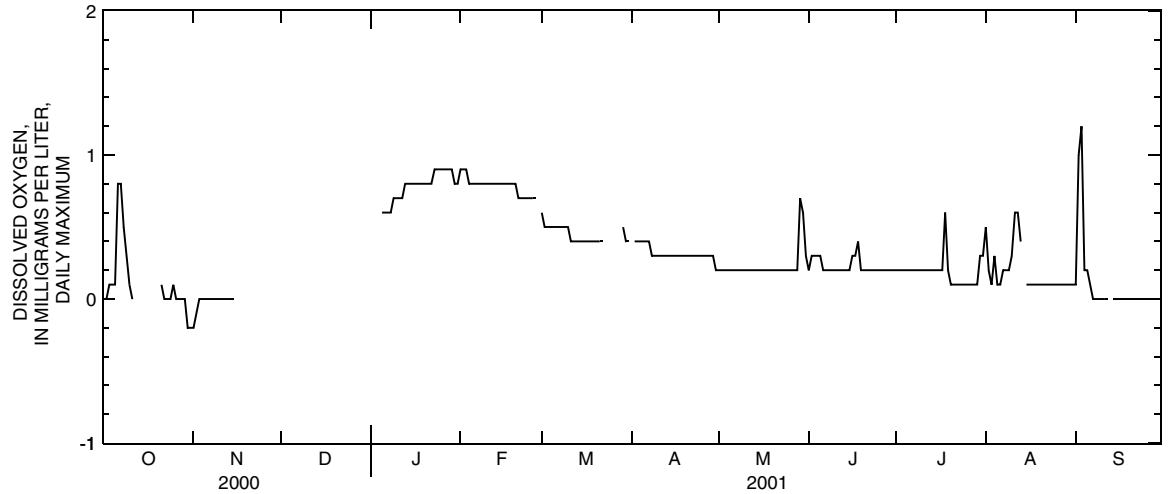
LOCATION.—Latitude 39°19′05″, longitude 84°37′29″, Butler County, Hydrologic Unit 05080002.
AQUIFER.—Glacial outwash, sand and gravel; 112OTSH.
WELL CHARACTERISTICS.—Observation well drilled by rotasonic techniques, diameter 4.0 in., depth 40 ft from land surface to bottom of screen.
INSTRUMENTATION.—YSI Model 6920 data sonde with turbidity probe set for 60-minute records. Sonde set at a depth of 38.4 ft below land surface.
DATUM.—Altitude of land surface is 541.32 ft above North American Vertical Datum of 1988 (NAVD of 88). Measuring point is top of inner casing, 4.42 ft above land-surface datum.
REMARK.—This station is part of a network of wells designed to help model flow characteristics from the Great Miami River through the aquifer. Data collection began on July 28, 1999. Negative turbidity and dissolved oxygen values are due to the resolution of the data sonde and the close proximity of the actual value to zero. Rotasonic drilling of a well in close proximity to this well began on September 7, 1999. This is a non-vented sonde, water level data is not corrected for barometric pressure.
PERIOD OF RECORD.—
WATER TEMPERATURE: July 28, 1999 to current year.
SPECIFIC CONDUCTANCE: July 28, 1999 to current year.
DISSOLVED OXYGEN: July 28, 1999 to current year.
WATER LEVEL ELEVATION: July 28, 1999 to current year.
pH: July 28, 1999 to current year.
TURBIDITY: July 28, 1999 to current year.
EXTREMES FOR PERIOD OF RECORD.—
WATER TEMPERATURE: Maximum, 31.9°C, Oct. 31, 2000; Minimum, 3.8°C, Feb. 13-14, 2001.
SPECIFIC CONDUCTANCE: Maximum, 1,220 microsiemens per centimeter, Feb. 29, 2000; Minimum, 580 microsiemens per centimeter, July 31, 2001.
DISSOLVED OXYGEN: Maximum, 3.7 milligrams per liter, Sept. 14, 1999; Minimum -1.0 milligrams per liter, June 28, 2000.
WATER LEVEL ELEVATION: Maximum daily low, 514.39 ft above NAVD of 88, Feb. 2, 2000; Maximum daily high, 538.00 ft above NAVD of 88, Apr. 9, 2000.
pH: Maximum, 7.7, Apr. 16-23, 2000 and Jan. 5-24, 2001; Minimum, 6.7, Sept. 11-14, 1999.
TURBIDITY: Maximum, 10 NTU, Sept. 13, 1999; Minimum, -3.0 NTU, Oct. 1, 1999.
EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURE: Maximum, 31.9°C, Oct. 31, 2000; Minimum, 3.8°C, Feb. 13-14, 2001.
SPECIFIC CONDUCTANCE: Maximum, 1,020 microsiemens per centimeter, Oct. 31, 2000; Minimum, 580 microsiemens per centimeter, July 31, 2001.
DISSOLVED OXYGEN: Maximum, 1.2 milligrams per liter, Sept. 3, 2001; Minimum -0.4 milligrams per liter, Oct. 30-31, 2000.
WATER LEVEL ELEVATION: Maximum daily low, 525.33 ft above NAVD of 88, Mar. 13, 2001; Maximum daily high, 534.62 ft above NAVD of 88, July 18, 2001.
pH: Maximum, 7.7, Apr. 16-23, 2000 and Jan. 5-24, 2001; Minimum, 7.1 several days during period of record.
TURBIDITY: Maximum, 1.0 NTU, several days during period of record; Minimum, -1.0 NTU, several days during period of record.

PROJECT DATA
Water Data for Bolton Well Field

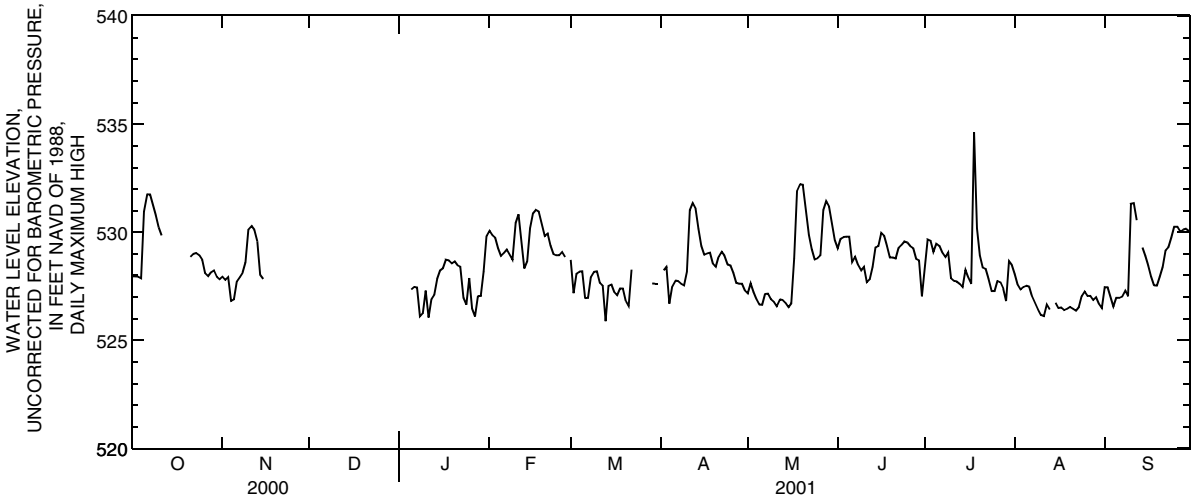
391905084372901. LOCAL NUMBER, BU-1156-8A—Continued

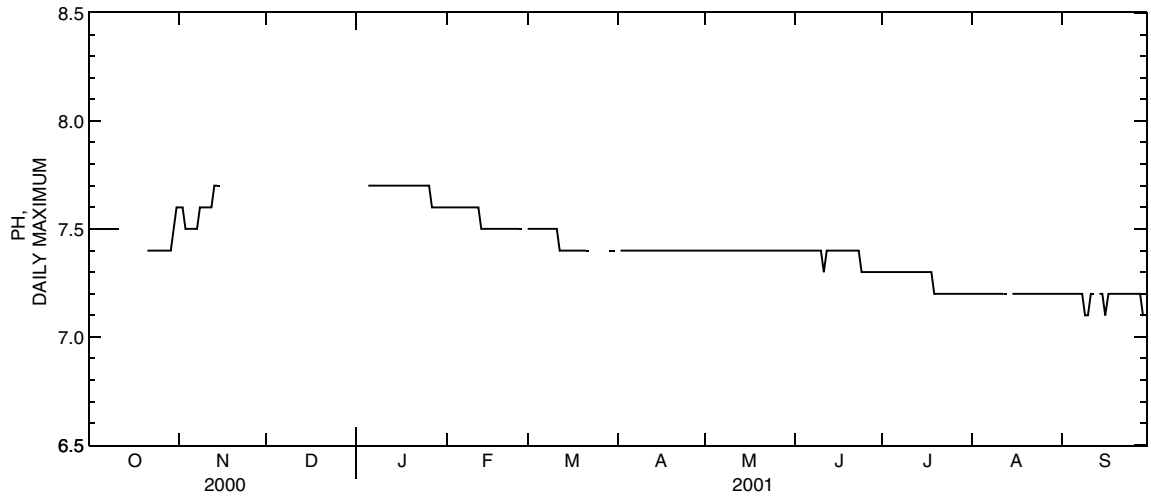


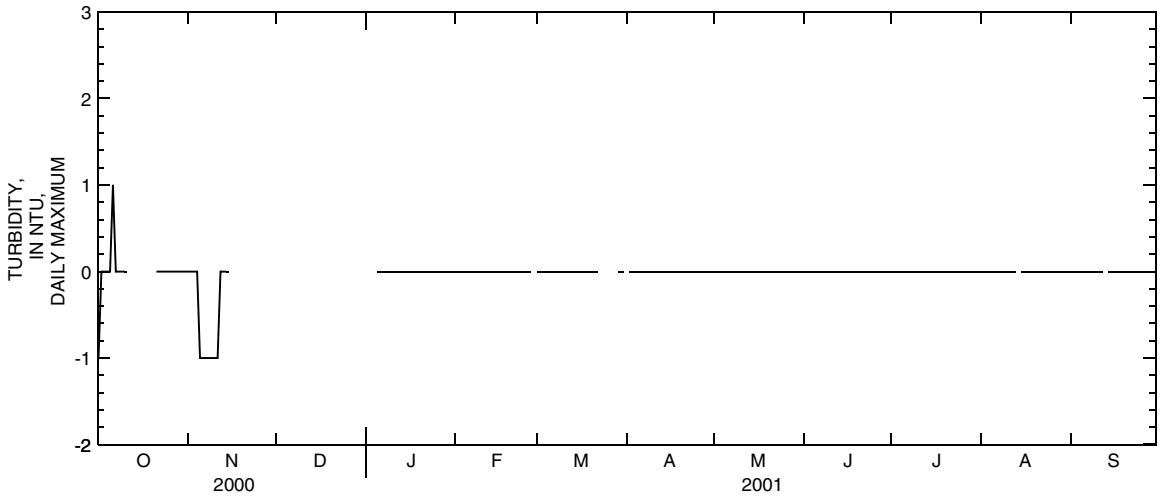




391905084372901. LOCAL NUMBER, BU-1156-8A—Continued







PROJECT DATA
Water Data for Bolton Well Field

391905084372901. LOCAL NUMBER, BU-1156-8A—Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	26.6	26.6	25.1	24.8	---	---	---	---	4.7	4.5	3.9	3.8
2	26.6	26.5	24.8	24.5	---	---	---	---	4.5	4.4	3.8	3.8
3	26.6	26.5	24.5	24.1	---	---	---	---	4.5	4.0	3.9	3.8
4	26.6	26.5	24.2	23.8	---	---	---	---	4.3	4.3	3.9	3.8
5	26.5	26.5	23.8	23.4	---	---	8.1	7.5	4.4	4.3	3.9	3.8
6	26.5	26.1	23.4	23.2	---	---	7.6	7.3	4.4	4.4	3.8	3.8
7	26.2	26.0	23.2	22.9	---	---	7.9	7.2	4.4	4.4	3.8	3.8
8	26.0	25.9	22.9	22.7	---	---	7.4	7.3	4.5	4.4	3.8	3.8
9	25.9	25.8	22.8	22.6	---	---	7.3	7.0	4.5	4.3	3.8	3.8
10	25.8	25.7	22.6	22.4	---	---	7.0	6.5	4.4	4.3	3.8	3.8
11	25.9	25.7	22.4	22.2	---	---	6.6	6.3	4.4	4.0	3.8	3.8
12	---	---	22.3	22.2	---	---	6.3	5.9	4.0	3.9	3.8	3.8
13	---	---	22.2	22.1	---	---	6.0	5.7	3.9	3.8	3.8	3.8
14	---	---	22.1	21.9	---	---	5.7	5.3	4.0	3.8	3.8	3.8
15	---	---	21.9	21.7	---	---	5.3	5.2	4.2	4.0	3.9	3.8
16	---	---	---	---	---	---	5.7	5.1	4.2	4.1	3.9	3.8
17	---	---	---	---	---	---	5.4	5.1	4.1	4.1	4.0	3.9
18	---	---	---	---	---	---	5.2	5.1	4.2	4.1	4.1	4.0
19	---	---	---	---	---	---	5.2	5.1	4.2	4.1	4.2	4.1
20	---	---	---	---	---	---	5.4	5.0	4.2	4.1	4.3	4.2
21	25.4	25.3	---	---	---	---	5.8	5.3	4.2	4.1	4.5	4.3
22	25.4	25.3	---	---	---	---	5.8	5.4	4.2	4.0	4.5	4.4
23	25.4	25.3	---	---	---	---	5.4	5.2	4.2	4.2	---	---
24	25.3	25.3	---	---	---	---	5.2	5.1	4.3	4.2	---	---
25	25.4	25.3	---	---	---	---	5.1	5.0	4.2	4.2	---	---
26	25.3	25.2	---	---	---	---	5.0	4.8	4.2	4.1	---	---
27	25.3	25.1	---	---	---	---	4.8	4.7	4.1	3.9	---	---
28	25.3	25.2	---	---	---	---	4.7	4.6	---	---	---	---
29	25.2	25.1	---	---	---	---	4.7	4.6	---	---	5.5	5.4
30	28.7	25.0	---	---	---	---	4.8	4.6	---	---	5.5	5.4
31	31.9	25.0	---	---	---	---	4.8	4.7	---	---	5.7	5.5
MONTH	31.9	25.0	25.1	21.7	---	---	8.1	4.6	4.7	3.8	5.7	3.8

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	12.1	11.4	22.1	22.1	19.6	19.4	24.6	24.4	28.6	28.6
2	6.0	5.8	12.7	12.1	22.1	21.9	19.5	19.4	24.7	24.6	28.6	28.4
3	6.1	5.8	13.4	12.7	21.9	21.8	19.5	19.4	24.9	24.7	28.4	28.2
4	6.3	6.1	14.0	13.4	21.9	21.8	19.5	19.5	25.1	24.9	28.2	28.0
5	6.4	6.3	14.6	14.0	22.0	21.8	19.5	19.5	25.2	25.1	---	---
6	6.3	6.3	15.1	14.6	22.1	22.0	19.6	19.5	25.3	25.2	---	---
7	6.4	6.3	15.4	15.1	22.1	22.0	19.6	19.6	25.5	25.3	---	---
8	6.5	6.4	15.7	15.4	22.0	22.0	19.6	19.6	25.7	25.5	---	---
9	6.6	6.5	15.9	15.7	22.0	21.9	19.7	19.6	25.9	25.7	---	---
10	6.6	6.5	16.0	15.9	21.9	21.8	19.6	19.6	26.1	25.9	---	---
11	7.1	6.5	16.0	16.0	21.8	21.6	19.7	19.6	26.3	26.1	---	---
12	7.3	7.1	16.1	16.0	21.6	21.3	19.7	19.7	26.6	26.3	---	---
13	7.4	7.3	16.1	16.1	21.4	21.0	19.8	19.7	26.8	26.6	---	---
14	7.5	7.4	16.1	16.1	21.0	20.6	19.8	19.8	---	---	---	---
15	7.6	7.5	16.1	16.0	20.6	20.3	19.9	19.8	27.0	26.9	---	---
16	7.7	7.6	16.0	16.0	20.4	20.1	20.0	19.9	27.1	27.0	---	---
17	7.8	7.7	16.0	15.9	20.2	20.0	20.1	20.0	27.2	27.1	---	---
18	7.9	7.8	16.1	15.9	20.2	19.9	20.7	20.0	27.2	27.2	---	---
19	8.1	7.9	16.5	16.1	20.2	19.7	21.0	20.7	27.3	27.2	---	---
20	8.3	8.1	16.8	16.5	20.0	19.6	21.2	21.0	27.4	27.3	---	---
21	8.5	8.3	17.2	16.8	19.8	19.6	21.4	21.2	27.5	27.4	---	---
22	8.7	8.5	17.5	17.2	19.8	19.5	21.6	21.4	27.6	27.5	---	---
23	8.8	8.7	17.9	17.5	19.7	19.4	21.8	21.6	27.7	27.6	---	---
24	9.1	8.8	18.4	17.9	19.5	19.4	22.1	21.8	27.8	27.7	---	---
25	9.3	9.1	18.9	18.4	19.5	19.4	22.4	22.1	28.0	27.8	---	---
26	9.6	9.3	19.6	18.9	19.5	19.4	22.7	22.4	28.2	28.0	---	---
27	10.0	9.6	20.6	19.6	19.7	19.5	23.1	22.7	28.3	28.2	---	---
28	10.3	10.0	21.5	20.6	19.7	19.5	23.4	23.1	28.4	28.3	---	---
29	10.9	10.3	21.8	21.5	19.7	19.5	23.7	23.4	28.5	28.4	---	---
30	11.4	10.9	22.0	21.8	19.7	19.6	24.1	23.7	28.6	28.5	---	---
31	---	---	22.1	22.0	---	---	24.4	24.1	28.6	28.6	---	---
MONTH	11.4	5.8	22.1	11.4	22.1	19.4	24.4	19.4	28.6	24.4	28.6	28.0
YEAR	31.9	3.8										

391905084372901. LOCAL NUMBER, BU-1156-8A—Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	904	894	1010	974	---	---	---	---	919	914	906	887
2	907	897	989	924	---	---	---	---	915	914	887	824
3	908	890	935	774	---	---	---	---	933	903	831	804
4	913	884	774	719	---	---	---	---	931	920	830	808
5	909	876	719	702	---	---	764	750	920	908	808	775
6	907	753	703	697	---	---	761	761	908	894	775	752
7	788	753	699	697	---	---	761	683	894	889	763	745
8	784	766	726	698	---	---	684	651	889	887	766	743
9	799	784	731	719	---	---	651	646	898	889	772	761
10	807	799	726	711	---	---	648	644	904	898	771	745
11	861	807	728	715	---	---	648	643	915	901	745	728
12	---	---	729	718	---	---	676	648	934	915	729	725
13	---	---	756	728	---	---	676	661	938	931	736	725
14	---	---	745	737	---	---	675	673	936	922	747	729
15	---	---	777	743	---	---	674	672	930	925	763	736
16	---	---	---	---	---	---	692	672	925	923	766	750
17	---	---	---	---	---	---	684	683	923	922	788	766
18	---	---	---	---	---	---	685	683	922	920	800	788
19	---	---	---	---	---	---	688	685	920	918	806	800
20	---	---	---	---	---	---	727	688	918	916	808	806
21	865	861	---	---	---	---	756	726	916	913	809	807
22	870	864	---	---	---	---	778	742	917	913	816	808
23	872	869	---	---	---	---	796	760	917	913	---	---
24	871	868	---	---	---	---	814	795	913	910	---	---
25	912	868	---	---	---	---	853	814	914	910	---	---
26	912	898	---	---	---	---	883	853	916	913	---	---
27	927	906	---	---	---	---	885	877	927	913	---	---
28	932	921	---	---	---	---	888	865	---	---	---	---
29	937	923	---	---	---	---	888	866	---	---	854	844
30	948	864	---	---	---	---	905	867	---	---	851	850
31	1020	835	---	---	---	---	919	905	---	---	851	847
MONTH	1020	753	1010	697	---	---	919	643	938	887	906	725

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	654	648	595	589	657	646	607	589	768	753
2	850	843	674	649	595	594	647	646	626	607	753	714
3	850	835	698	661	597	595	648	646	634	626	719	701
4	835	823	705	686	601	597	652	648	654	634	712	699
5	823	817	705	685	603	600	655	652	669	654	---	---
6	820	817	711	705	622	603	655	654	681	669	---	---
7	817	816	714	710	625	621	656	655	687	679	---	---
8	816	815	716	714	634	622	656	655	693	687	---	---
9	816	815	727	716	648	634	676	653	692	656	---	---
10	815	814	731	727	652	645	690	675	656	608	---	---
11	816	811	744	731	651	642	693	689	608	591	---	---
12	819	816	751	744	642	629	689	681	595	588	---	---
13	821	819	753	751	629	621	683	681	609	589	---	---
14	820	818	753	753	621	619	684	681	---	---	---	---
15	818	816	754	753	621	620	691	681	660	637	---	---
16	821	815	756	754	620	619	694	682	671	654	---	---
17	836	821	764	756	619	619	707	694	695	670	---	---
18	840	836	774	764	620	618	728	701	710	695	---	---
19	843	831	789	774	619	618	729	727	712	705	---	---
20	831	784	801	789	619	618	728	724	734	712	---	---
21	784	743	801	800	620	618	724	711	745	734	---	---
22	743	698	801	801	631	620	711	697	742	737	---	---
23	698	666	803	801	632	624	698	695	739	727	---	---
24	676	666	803	795	629	628	718	698	731	724	---	---
25	691	658	795	758	628	628	714	708	727	724	---	---
26	658	639	758	713	628	627	721	714	744	727	---	---
27	640	632	722	658	629	627	724	719	766	744	---	---
28	633	629	658	621	632	629	719	704	772	766	---	---
29	644	633	621	606	633	628	704	679	774	772	---	---
30	648	643	606	585	646	633	679	593	773	770	---	---
31	---	---	591	586	---	---	593	580	770	768	---	---
MONTH	850	629	803	585	652	589	729	580	774	588	768	699
YEAR	1020	580										

PROJECT DATA
Water Data for Bolton Well Field

391905084372901. LOCAL NUMBER, BU-1156-8A—Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	.0	.0	-.2	-.3	---	---	---	---	.9	.4	.6	.5
2	.0	.0	-.1	-.2	---	---	---	---	.9	.8	.5	.5
3	.1	.0	.0	-.2	---	---	---	---	.9	.8	.5	.5
4	.1	.0	.0	-.1	---	---	---	---	.8	.8	.5	.5
5	.1	.0	.0	.0	---	---	.6	.6	.8	.8	.5	.5
6	.8	.0	.0	.0	---	---	.6	.6	.8	.8	.5	.5
7	.8	.5	.0	.0	---	---	.6	.6	.8	.8	.5	.5
8	.5	.3	.0	-.1	---	---	.6	.6	.8	.8	.5	.5
9	.3	.1	.0	-.1	---	---	.7	.6	.8	.8	.5	.4
10	.1	.0	.0	-.1	---	---	.7	.7	.8	.8	.5	.4
11	.0	.0	.0	.0	---	---	.7	.7	.8	.8	.4	.4
12	---	---	.0	.0	---	---	.7	.7	.8	.8	.4	.4
13	---	---	.0	.0	---	---	.8	.7	.8	.8	.4	.3
14	---	---	.0	.0	---	---	.8	.8	.8	.6	.4	.4
15	---	---	.0	.0	---	---	.8	.8	.8	.8	.4	.4
16	---	---	---	---	---	---	.8	.8	.8	.8	.4	.4
17	---	---	---	---	---	---	.8	.8	.8	.8	.4	.4
18	---	---	---	---	---	---	.8	.8	.8	.7	.4	.4
19	---	---	---	---	---	---	.8	.8	.8	.7	.4	.4
20	---	---	---	---	---	---	.8	.8	.8	.7	.4	.4
21	.1	.0	---	---	---	---	.8	.8	.7	.7	.4	.4
22	.0	.0	---	---	---	---	.8	.8	.7	.7	.4	.4
23	.0	.0	---	---	---	---	.9	.3	.7	.7	---	---
24	.0	.0	---	---	---	---	.9	.9	.7	.7	---	---
25	.1	-.1	---	---	---	---	.9	.8	.7	.7	---	---
26	.0	-.1	---	---	---	---	.9	.8	.7	.7	---	---
27	.0	-.1	---	---	---	---	.9	.8	.7	.7	---	---
28	.0	-.1	---	---	---	---	.9	.8	---	---	---	---
29	.0	-.3	---	---	---	---	.9	.8	---	---	.5	.4
30	-.2	-.4	---	---	---	---	.8	.8	---	---	.4	.4
31	-.2	-.4	---	---	---	---	.8	.8	---	---	.4	.4
MONTH	.8	-.4	.0	-.3	---	---	.9	.3	.9	.4	.6	.3

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	.2	.2	.2	.2	.2	.2	.5	.2	.1	.1
2	.4	.4	.2	.2	.3	.2	.2	.2	.2	.1	1.0	.1
3	.4	.4	.2	.2	.3	.2	.2	.2	.1	.1	1.2	.2
4	.4	.4	.2	.2	.3	.2	.2	.2	.3	.1	.2	.1
5	.4	.3	.2	.2	.3	.2	.2	.2	.1	.1	.2	.0
6	.4	.3	.2	.2	.2	.2	.2	.2	.1	.1	.1	.0
7	.4	.3	.2	.0	.2	.2	.2	.2	.2	.1	.0	.0
8	.3	.3	.2	.2	.2	.1	.2	.1	.2	.1	.0	.0
9	.3	.3	.2	.2	.2	.2	.2	.1	.2	.0	.0	.0
10	.3	.3	.2	.1	.2	.2	.2	.2	.3	.1	.0	.0
11	.3	.0	.2	.2	.2	.2	.2	.2	.6	.3	.0	.0
12	.3	.1	.2	.2	.2	.2	.2	.2	.6	.3	.0	.0
13	.3	.2	.2	.2	.2	.2	.2	.2	.4	.2	---	---
14	.3	.1	.2	.2	.2	.2	.2	.1	---	---	.0	.0
15	.3	.3	.2	.2	.2	.2	.2	.1	.1	.1	.0	.0
16	.3	.3	.2	.2	.3	.2	.2	.1	.1	.1	.0	.0
17	.3	.3	.2	.2	.3	.3	.2	.1	.1	.1	.0	.0
18	.3	.1	.2	.2	.4	.2	.6	.1	.1	.1	.0	.0
19	.3	.3	.2	.2	.2	.2	.2	.1	.1	.1	.0	.0
20	.3	.3	.2	.2	.2	.2	.1	.1	.1	.1	.0	.0
21	.3	.3	.2	.2	.2	.2	.1	.1	.1	.1	.0	.0
22	.3	.3	.2	.2	.2	.2	.1	.1	.1	.1	.0	.0
23	.3	.1	.2	.2	.2	.2	.1	.1	.1	.1	.0	.0
24	.3	.2	.2	.2	.2	.2	.1	.1	.1	.1	.0	.0
25	.3	.1	.2	.2	.2	.2	.1	.1	.1	.1	.0	.0
26	.3	.2	.2	.2	.2	.2	.1	.1	.1	.1	.0	.0
27	.3	.2	.2	.2	.2	.2	.1	.1	.1	.1	.0	.0
28	.3	.2	.2	.2	.2	.2	.1	.1	.1	.1	.0	.0
29	.3	.2	.7	.2	.2	.2	.1	.1	.1	.1	.0	.0
30	.2	.0	.6	.2	.2	.2	.3	.1	.1	.1	.0	.0
31	---	---	.3	.2	---	---	.3	.2	.1	.1	---	---
MONTH	.4	.0	.7	.0	.4	.1	.6	.1	.6	.0	1.2	.0
YEAR	1.2	-.4										

391905084372901. LOCAL NUMBER, BU-1156-8A—Continued

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	527.96	527.66	527.94	526.61	---	---	---	---	530.08	529.82	528.72	527.18
2	527.96	527.72	527.79	526.50	---	---	---	---	529.87	529.71	527.18	527.03
3	527.95	526.81	527.92	526.56	---	---	---	---	529.75	528.31	528.09	526.86
4	527.87	526.50	526.84	526.73	---	---	---	---	529.25	528.89	528.18	527.98
5	530.97	527.87	526.90	526.75	---	---	527.34	525.56	528.91	528.81	528.20	526.88
6	531.74	530.97	527.73	526.55	---	---	527.47	527.34	529.04	528.78	526.95	526.85
7	531.74	531.26	527.93	526.58	---	---	527.43	525.98	529.20	528.97	526.96	526.65
8	531.26	530.79	528.13	526.44	---	---	526.10	525.94	528.97	528.71	527.95	526.49
9	530.79	530.22	528.61	526.34	---	---	526.26	526.10	528.73	528.17	528.16	527.95
10	530.22	529.84	530.12	528.61	---	---	527.30	526.05	530.43	528.68	528.19	527.65
11	529.86	529.68	530.28	530.11	---	---	526.05	525.90	530.84	529.50	527.65	527.53
12	---	---	530.11	529.58	---	---	526.92	525.89	529.50	528.33	527.53	525.40
13	---	---	529.58	528.02	---	---	527.12	525.89	528.33	528.02	525.88	525.33
14	---	---	528.02	527.83	---	---	527.85	527.12	528.65	527.35	527.52	525.88
15	---	---	527.84	527.57	---	---	528.23	527.85	530.20	528.65	527.58	526.28
16	---	---	---	---	---	---	528.35	526.77	530.87	530.20	527.24	526.23
17	---	---	---	---	---	---	528.73	528.35	531.04	530.87	527.08	526.41
18	---	---	---	---	---	---	528.69	528.45	530.97	530.43	527.39	527.08
19	---	---	---	---	---	---	528.57	528.40	530.43	529.50	527.39	526.82
20	---	---	---	---	---	---	528.65	527.26	529.82	529.70	526.82	526.52
21	528.86	528.77	---	---	---	---	528.48	527.26	529.94	529.38	526.58	526.28
22	529.00	528.86	---	---	---	---	528.42	526.96	529.38	528.81	528.27	526.58
23	529.04	528.93	---	---	---	---	526.96	526.61	529.00	528.86	---	---
24	528.93	528.72	---	---	---	---	526.65	526.49	528.93	528.16	---	---
25	528.72	527.17	---	---	---	---	527.88	526.46	528.93	527.94	---	---
26	528.11	527.13	---	---	---	---	526.46	525.66	529.08	528.85	---	---
27	527.97	527.83	---	---	---	---	526.11	525.70	528.85	527.35	---	---
28	528.15	527.85	---	---	---	---	527.04	526.01	---	---	---	---
29	528.24	526.97	---	---	---	---	527.06	526.57	---	---	527.64	526.03
30	527.94	526.71	---	---	---	---	528.20	526.59	---	---	527.61	527.34
31	527.82	526.61	---	---	---	---	529.84	528.20	---	---	527.61	526.25
MONTH	531.74	526.50	530.28	526.34	---	---	529.84	525.56	531.04	527.35	528.72	525.33

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	527.17	527.01	529.26	528.52	528.25	526.63	528.05	527.54	527.45	526.49
2	528.23	526.31	527.63	527.05	529.70	529.26	529.67	528.25	527.57	527.35	527.45	527.01
3	528.40	526.70	527.24	526.90	529.78	529.70	529.62	529.08	527.35	527.02	527.01	526.55
4	526.70	526.37	526.90	526.41	529.80	529.66	529.10	528.99	527.47	527.22	526.56	526.41
5	527.49	526.24	526.65	526.44	529.79	528.50	529.47	529.07	527.53	527.41	526.97	526.32
6	527.77	527.47	526.63	526.38	528.63	528.15	529.37	529.06	527.48	527.01	526.97	526.61
7	527.73	527.49	527.15	526.38	528.87	528.50	529.06	528.56	527.02	526.70	527.02	526.61
8	527.62	527.52	527.16	526.79	528.50	528.17	528.85	528.53	526.72	526.40	527.31	526.69
9	527.55	527.22	526.91	526.77	528.24	527.85	529.08	527.87	526.44	526.09	527.03	526.74
10	528.18	527.15	526.79	526.57	528.40	527.69	527.87	527.64	526.18	526.07	531.32	526.97
11	531.02	528.18	526.58	526.42	527.69	527.37	527.74	527.65	526.12	525.88	531.35	530.56
12	531.35	530.91	526.89	526.48	527.82	527.33	527.72	527.58	526.65	525.93	530.56	529.73
13	531.09	530.17	526.86	526.72	528.40	527.74	527.62	527.47	526.44	526.35	---	---
14	530.17	529.37	526.73	526.53	529.30	527.96	527.47	527.09	---	---	529.29	528.91
15	529.37	528.82	526.53	526.18	529.36	529.16	528.26	526.80	526.74	526.34	528.91	528.46
16	528.96	528.81	526.71	526.16	529.97	529.36	527.90	526.69	526.49	526.24	528.46	527.95
17	529.02	528.84	528.78	526.71	529.84	529.36	527.62	526.38	526.52	526.39	527.95	527.54
18	529.05	528.54	531.93	528.66	529.36	527.82	534.62	527.62	526.40	525.78	527.55	527.33
19	528.54	528.04	532.22	531.93	528.84	527.55	530.20	528.93	526.45	525.84	527.53	527.25
20	528.40	527.91	532.20	531.06	528.84	527.71	528.93	528.34	526.55	526.44	527.94	527.53
21	528.88	528.40	531.06	529.88	528.79	527.92	528.37	527.94	526.46	526.30	528.38	527.88
22	529.09	528.88	529.88	529.22	529.27	527.81	528.31	527.85	526.37	526.08	529.16	528.05
23	528.92	528.46	529.22	528.73	529.41	528.24	527.85	527.13	526.53	526.22	529.30	529.02
24	528.51	528.41	528.74	528.51	529.57	529.41	527.27	527.03	527.06	526.45	529.75	529.02
25	528.46	528.12	528.80	528.66	529.53	529.36	527.27	527.01	527.25	527.05	530.25	529.75
26	528.12	527.66	528.93	528.54	529.37	529.22	527.74	527.14	527.06	526.84	530.25	530.02
27	527.66	527.36	531.02	528.93	529.26	528.05	527.69	527.39	527.05	526.85	530.04	529.88
28	527.61	527.48	531.44	531.02	528.77	527.83	527.39	526.68	526.85	526.63	530.12	529.86
29	527.62	527.30	531.18	530.39	528.69	527.03	526.82	526.48	527.00	526.68	530.17	530.06
30	527.30	527.03	530.39	529.63	527.03	526.73	528.65	526.82	526.68	526.04	530.06	529.82
31	---	---	529.63	528.85	---	---	528.48	528.05	526.49	525.88	---	---
MONTH	531.35	526.24	532.22	526.16	529.97	526.73	534.62	526.38	528.05	525.78	531.35	526.32
YEAR	534.62	525.33										

PROJECT DATA
Water Data for Bolton Well Field

391905084372901. LOCAL NUMBER, BU-1156-8A—Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.5	7.5	7.6	7.4	---	---	---	---	7.6	7.6	7.5	7.5
2	7.5	7.5	7.6	7.4	---	---	---	---	7.6	7.6	7.5	7.5
3	7.5	7.4	7.5	7.5	---	---	---	---	7.6	7.6	7.5	7.5
4	7.5	7.5	7.5	7.5	---	---	---	---	7.6	7.6	7.5	7.5
5	7.5	7.5	7.5	7.5	---	---	7.7	7.7	7.6	7.6	7.5	7.5
6	7.5	7.4	7.5	7.5	---	---	7.7	7.7	7.6	7.6	7.5	7.5
7	7.5	7.5	7.5	7.5	---	---	7.7	7.7	7.6	7.6	7.5	7.5
8	7.5	7.5	7.6	7.5	---	---	7.7	7.7	7.6	7.6	7.5	7.5
9	7.5	7.5	7.6	7.5	---	---	7.7	7.7	7.6	7.6	7.5	7.5
10	7.5	7.5	7.6	7.5	---	---	7.7	7.7	7.6	7.6	7.5	7.5
11	7.5	7.4	7.6	7.5	---	---	7.7	7.7	7.6	7.6	7.5	7.4
12	---	---	7.6	7.5	---	---	7.7	7.7	7.6	7.5	7.4	7.4
13	---	---	7.7	7.5	---	---	7.7	7.7	7.5	7.5	7.4	7.4
14	---	---	7.7	7.5	---	---	7.7	7.7	7.5	7.5	7.4	7.4
15	---	---	7.7	7.6	---	---	7.7	7.7	7.5	7.5	7.4	7.4
16	---	---	---	---	---	---	7.7	7.7	7.5	7.5	7.4	7.4
17	---	---	---	---	---	---	7.7	7.7	7.5	7.5	7.4	7.4
18	---	---	---	---	---	---	7.7	7.7	7.5	7.5	7.4	7.4
19	---	---	---	---	---	---	7.7	7.7	7.5	7.5	7.4	7.4
20	---	---	---	---	---	---	7.7	7.7	7.5	7.5	7.4	7.4
21	7.4	7.3	---	---	---	---	7.7	7.7	7.5	7.5	7.4	7.4
22	7.4	7.3	---	---	---	---	7.7	7.7	7.5	7.5	7.4	7.4
23	7.4	7.3	---	---	---	---	7.7	7.7	7.5	7.5	---	---
24	7.4	7.3	---	---	---	---	7.7	7.7	7.5	7.5	---	---
25	7.4	7.3	---	---	---	---	7.7	7.6	7.5	7.5	---	---
26	7.4	7.4	---	---	---	---	7.7	7.6	7.5	7.5	---	---
27	7.4	7.4	---	---	---	---	7.6	7.6	7.5	7.5	---	---
28	7.4	7.4	---	---	---	---	7.6	7.6	---	---	---	---
29	7.4	7.4	---	---	---	---	7.6	7.6	---	---	7.4	7.4
30	7.5	7.4	---	---	---	---	7.6	7.6	---	---	7.4	7.4
31	7.6	7.4	---	---	---	---	7.6	7.6	---	---	7.4	7.4
MONTH	7.6	7.3	7.7	7.4	---	---	7.7	7.6	7.6	7.5	7.5	7.4

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	7.4	7.4	7.4	7.4	7.3	7.3	7.2	7.2	7.2	7.2
2	7.4	7.4	7.4	7.4	7.4	7.4	7.3	7.3	7.2	7.2	7.2	7.2
3	7.4	7.4	7.4	7.4	7.4	7.4	7.3	7.3	7.2	7.2	7.2	7.2
4	7.4	7.4	7.4	7.4	7.4	7.4	7.3	7.3	7.2	7.2	7.2	7.2
5	7.4	7.4	7.4	7.4	7.4	7.4	7.3	7.3	7.2	7.2	7.2	7.1
6	7.4	7.4	7.4	7.4	7.4	7.4	7.3	7.3	7.2	7.2	7.2	7.1
7	7.4	7.4	7.4	7.4	7.4	7.4	7.3	7.3	7.2	7.2	7.2	7.1
8	7.4	7.4	7.4	7.4	7.4	7.4	7.3	7.3	7.2	7.2	7.2	7.1
9	7.4	7.4	7.4	7.4	7.4	7.3	7.3	7.3	7.2	7.2	7.1	7.1
10	7.4	7.4	7.4	7.4	7.4	7.3	7.3	7.3	7.2	7.2	7.1	7.1
11	7.4	7.4	7.4	7.4	7.3	7.3	7.3	7.3	7.2	7.2	7.2	7.1
12	7.4	7.4	7.4	7.4	7.4	7.3	7.3	7.3	7.2	7.2	7.2	7.1
13	7.4	7.4	7.4	7.4	7.4	7.4	7.3	7.3	7.2	7.2	---	---
14	7.4	7.4	7.4	7.4	7.4	7.4	7.3	7.3	---	---	7.2	7.1
15	7.4	7.4	7.4	7.4	7.4	7.4	7.3	7.3	7.2	7.2	7.2	7.1
16	7.4	7.4	7.4	7.4	7.4	7.4	7.3	7.3	7.2	7.2	7.1	7.1
17	7.4	7.4	7.4	7.4	7.4	7.3	7.3	7.3	7.2	7.2	7.2	7.1
18	7.4	7.4	7.4	7.4	7.4	7.3	7.3	7.2	7.2	7.2	7.2	7.1
19	7.4	7.4	7.4	7.4	7.4	7.3	7.2	7.2	7.2	7.2	7.2	7.1
20	7.4	7.4	7.4	7.4	7.4	7.3	7.2	7.1	7.2	7.2	7.2	7.1
21	7.4	7.4	7.4	7.4	7.4	7.3	7.2	7.2	7.2	7.2	7.2	7.2
22	7.4	7.4	7.4	7.4	7.4	7.3	7.2	7.1	7.2	7.2	7.2	7.2
23	7.4	7.4	7.4	7.4	7.4	7.3	7.2	7.1	7.2	7.2	7.2	7.2
24	7.4	7.4	7.4	7.4	7.3	7.3	7.2	7.2	7.2	7.2	7.2	7.2
25	7.4	7.4	7.4	7.4	7.3	7.3	7.2	7.1	7.2	7.2	7.2	7.2
26	7.4	7.4	7.4	7.4	7.3	7.3	7.2	7.1	7.2	7.2	7.2	7.2
27	7.4	7.4	7.4	7.4	7.3	7.3	7.2	7.1	7.2	7.2	7.2	7.2
28	7.4	7.4	7.4	7.4	7.3	7.3	7.2	7.2	7.2	7.2	7.2	7.1
29	7.4	7.4	7.4	7.4	7.3	7.3	7.2	7.2	7.2	7.2	7.1	7.1
30	7.4	7.4	7.4	7.4	7.3	7.3	7.2	7.2	7.2	7.2	7.1	7.1
31	---	---	7.4	7.4	---	---	7.2	7.2	7.2	7.2	---	---
MONTH	7.4	7.4	7.4	7.4	7.4	7.3	7.3	7.1	7.2	7.2	7.2	7.1
YEAR	7.7	7.1										

391905084372901. LOCAL NUMBER, BU-1156-8A—Continued

TURBIDITY (NTU), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	-1.0	-1.0	.0	-1.0	---	---	---	---	.0	.0	.0	.0
2	.0	-1.0	.0	-1.0	---	---	---	---	.0	.0	.0	.0
3	.0	-1.0	.0	-1.0	---	---	---	---	.0	.0	.0	.0
4	.0	-1.0	.0	-1.0	---	---	---	---	.0	.0	.0	.0
5	.0	-1.0	-1.0	-1.0	---	---	.0	.0	.0	.0	.0	.0
6	1.0	.0	-1.0	-1.0	---	---	.0	.0	.0	.0	.0	.0
7	.0	.0	-1.0	-1.0	---	---	.0	.0	.0	.0	.0	.0
8	.0	.0	-1.0	-1.0	---	---	.0	.0	.0	.0	.0	.0
9	.0	.0	-1.0	-1.0	---	---	.0	.0	.0	.0	.0	.0
10	.0	.0	-1.0	-1.0	---	---	.0	.0	.0	.0	.0	.0
11	.0	.0	-1.0	-1.0	---	---	.0	.0	.0	.0	.0	.0
12	---	---	.0	-1.0	---	---	.0	.0	.0	.0	.0	.0
13	---	---	.0	-1.0	---	---	.0	.0	.0	.0	.0	.0
14	---	---	.0	-1.0	---	---	.0	.0	.0	.0	.0	.0
15	---	---	.0	-1.0	---	---	.0	.0	.0	.0	.0	.0
16	---	---	---	---	---	---	.0	.0	.0	.0	.0	.0
17	---	---	---	---	---	---	.0	.0	.0	.0	.0	.0
18	---	---	---	---	---	---	.0	.0	.0	.0	.0	.0
19	---	---	---	---	---	---	.0	.0	.0	.0	.0	.0
20	---	---	---	---	---	---	.0	.0	.0	.0	.0	.0
21	.0	.0	---	---	---	---	.0	.0	.0	.0	.0	.0
22	.0	.0	---	---	---	---	.0	.0	.0	.0	.0	.0
23	.0	.0	---	---	---	---	.0	.0	.0	.0	---	---
24	.0	.0	---	---	---	---	.0	.0	.0	.0	---	---
25	.0	-1.0	---	---	---	---	.0	.0	.0	.0	---	---
26	.0	-1.0	---	---	---	---	.0	.0	.0	.0	---	---
27	.0	-1.0	---	---	---	---	.0	.0	.0	.0	---	---
28	.0	-1.0	---	---	---	---	.0	.0	---	---	---	---
29	.0	-1.0	---	---	---	---	.0	.0	---	---	.0	.0
30	.0	-1.0	---	---	---	---	.0	.0	---	---	.0	.0
31	.0	-1.0	---	---	---	---	.0	.0	---	---	.0	.0
MONTH	1.0	-1.0	.0	-1.0	---	---	.0	.0	.0	.0	.0	.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
4	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
5	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
9	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
11	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	-1.0
12	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	---	---
14	.0	.0	.0	.0	.0	.0	.0	.0	---	---	.0	.0
15	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
16	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
17	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
18	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
19	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
20	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
21	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
22	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
23	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
24	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
25	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
26	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
27	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
28	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
29	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
30	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
31	---	---	.0	.0	---	---	.0	.0	.0	.0	---	---
MONTH	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	-1.0
YEAR	1.0	-1.0										

PROJECT DATA
Water Data for Bolton Well Field

391905084372901. LOCAL NUMBER, BU-1156-8A—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

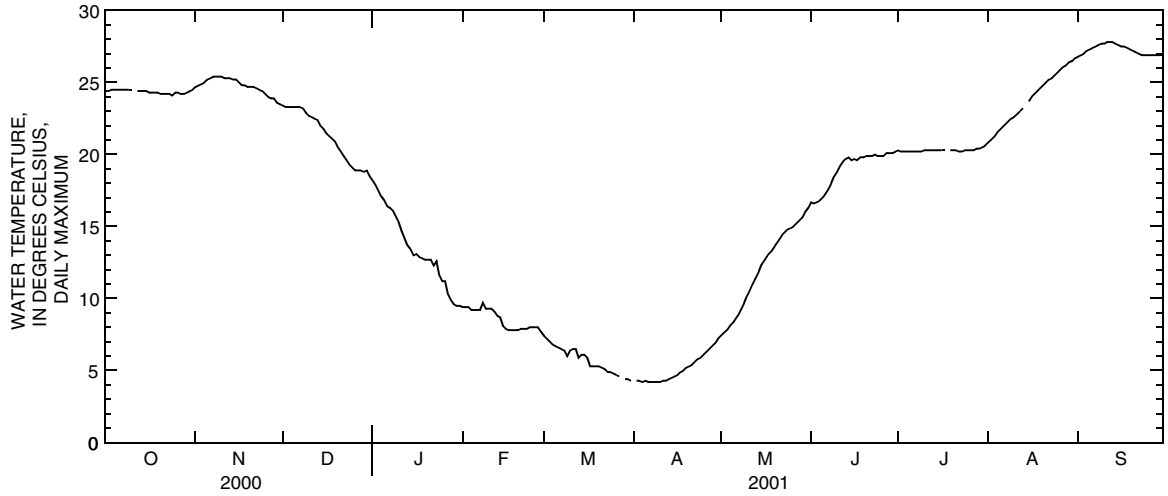
[(90901), USGS National Water Information System parameter code; MF, membrane filtration; col/100mL, colonies per 100 milliliters; <, concentration or value reported is less than that indicated; E, value is estimated from a non-ideal colony count]

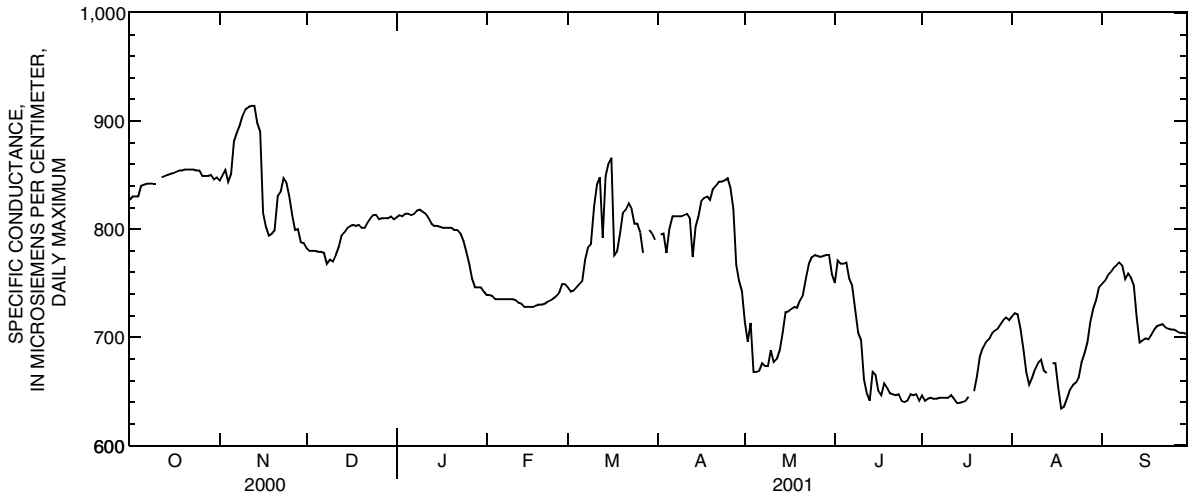
DATE	TIME	E COLI, MI MF, WATER (COL/ 100 ML) (90901)	TOTAL COLI-FORM, MI MF, WATER (COL/ 100 ML) (90900)
OCT			
11...	0935	<1	<1
JAN			
23...	1022	<1	<1
MAR			
13...	1025	<1	E1
APR			
11...	1410	<1	<1
12...	1220	<1	E1
18...	1150	<1	<1
23...	0855	<1	<1
25...	1200	<1	<1
30...	0910	<1	<1
MAY			
07...	1120	<1	<1

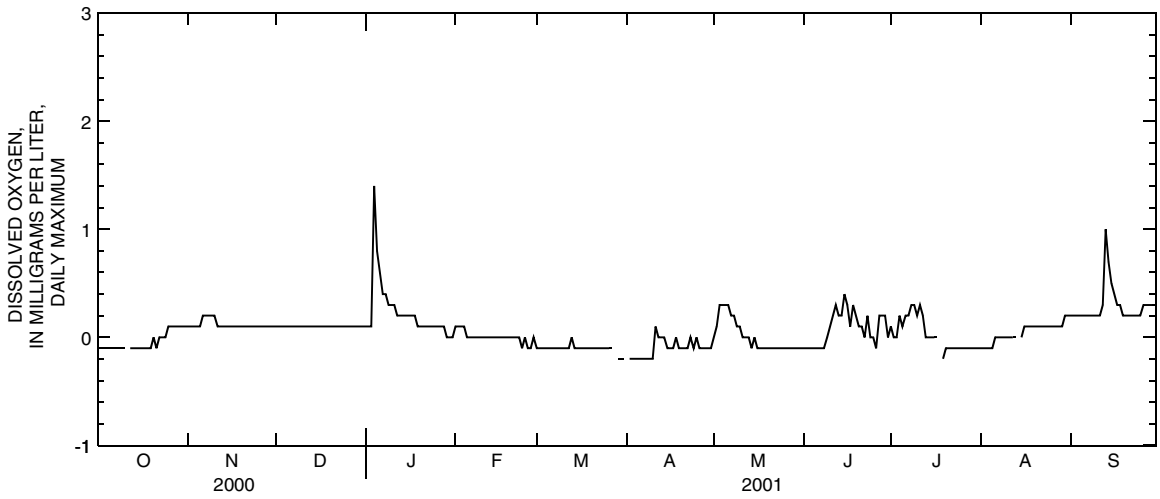
391905084372902. LOCAL NUMBER, BU-1157-8B

LOCATION.—Latitude 39°19′05″, longitude 84°37′29″, Butler County, Hydrologic Unit 05080002.
AQUIFER.—Glacial outwash, sand and gravel; 112OTSH.
WELL CHARACTERISTICS.—Observation well drilled by rotasonic techniques, diameter 4.0 in., depth 60 ft from land surface to bottom of screen.
INSTRUMENTATION.—YSI Model 6920 data sonde with turbidity probe set for 60-minute records. Sonde set at a depth of 58.2 ft below land surface.
DATUM.—Altitude of land surface is 543.74 ft above North American Vertical Datum of 1988 (NAVD of 88). Measuring point is top of inner casing, 2.41 ft above land-surface datum.
REMARK.—This station is part of a network of wells designed to help model flow characteristics from the Great Miami River through the aquifer. Data collection began on July 28, 1999. Negative and dissolved oxygen values are due to the resolution of the data sonde and the close proximity of the actual value to zero. This is a non-vented sonde, water level data is not corrected for barometric pressure.
PERIOD OF RECORD.—
WATER TEMPERATURE: July 28, 1999 to current year.
SPECIFIC CONDUCTANCE: July 28, 1999 to current year.
DISSOLVED OXYGEN: July 28, 1999 to current year.
WATER LEVEL ELEVATION: July 28, 1999 to current year.
pH: July 28, 1999 to current year.
EXTREMES FOR PERIOD OF RECORD.—
WATER TEMPERATURE: Maximum, 29.0°C, Sept. 24-26 and 29, 1999; Minimum, 4.2°C, Apr. 2-11, 2001.
SPECIFIC CONDUCTANCE: Maximum, 1130 microsiemens per centimeter, Apr.12, 2000; Minimum, 629 microsiemens per centimeter, Aug. 18 and 19, 2001.
DISSOLVED OXYGEN: Maximum, 9.8 milligrams per liter, Aug. 10, 1999; Minimum -0.4 milligrams per liter, May 15, 2001.
WATER LEVEL ELEVATION: Maximum daily low, 520.37 ft above NAVD of 88, Dec. 12, 1999; Maximum daily high, 537.66 ft above NAVD of 88, Apr. 9, 2000.
pH: Maximum, 7.8, July 12, 2000 and Apr. 12-13, 2001; Minimum, 6.3, Sept. 30, 2001.
EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURE: Maximum, 27.8°C, Sept. 11-13, 2001; Minimum, 4.2°C, Apr. 2-11, 2001.
SPECIFIC CONDUCTANCE: Maximum, 914 microsiemens per centimeter, Nov. 12-13, 2000; Minimum, 629 microsiemens per centimeter, Aug. 18-19, 2001.
DISSOLVED OXYGEN: Maximum, 1.4 milligrams per liter, Jan. 4, 2001; Minimum -0.4 milligrams per liter, May 15, 2001.
WATER LEVEL ELEVATION: Maximum daily low, 524.48 ft above NAVD of 88, Mar. 13, 2001; Maximum daily high, 531.73 ft above NAVD of 88, Oct. 6-7, 2000.
pH: Maximum, 7.8, Apr. 12-13, 2001; Minimum, 6.3, Sept. 30, 2001.

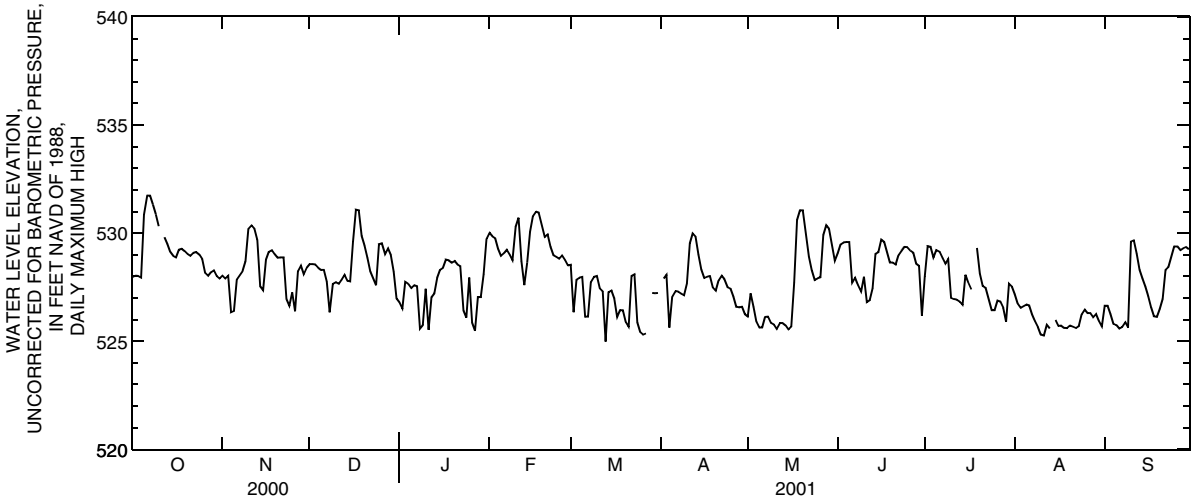
391905084372902. LOCAL NUMBER, BU-1157-8B—Continued

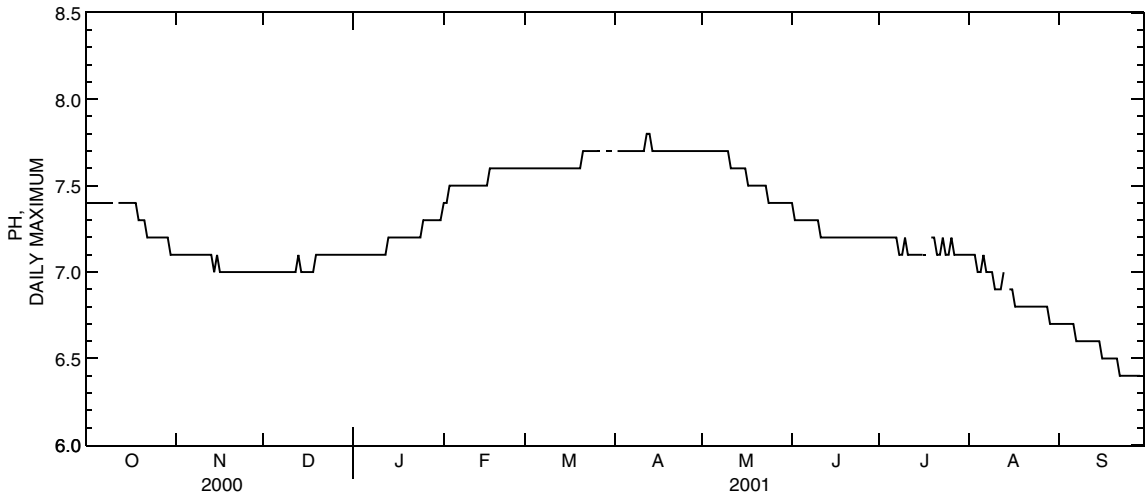






391905084372902. LOCAL NUMBER, BU-1157-8B—Continued





PROJECT DATA
Water Data for Bolton Well Field

391905084372902. LOCAL NUMBER, BU-1157-8B—Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	24.4	24.4	24.7	24.5	23.4	23.2	18.2	17.8	9.4	9.3	7.4	7.2
2	24.4	24.4	24.8	24.6	23.3	23.2	17.9	17.4	9.4	9.3	7.2	6.9
3	24.5	24.4	24.9	24.8	23.3	23.2	17.5	17.0	9.4	9.0	7.0	6.6
4	24.5	24.4	25.0	24.9	23.3	23.2	17.1	16.6	9.2	9.1	6.8	6.6
5	24.5	24.5	25.2	25.0	23.3	23.2	16.8	16.4	9.2	9.1	6.7	6.5
6	24.5	24.5	25.3	25.2	23.3	23.2	16.4	16.2	9.2	9.1	6.6	6.3
7	24.5	24.5	25.4	25.3	23.3	23.1	16.3	16.0	9.2	9.1	6.5	6.1
8	24.5	24.5	25.4	25.3	23.2	22.9	16.1	15.7	9.7	9.2	6.4	5.8
9	24.5	24.5	25.4	25.4	22.9	22.7	15.7	15.1	9.3	9.2	6.0	5.7
10	24.5	24.5	25.4	25.3	22.7	22.6	15.3	14.7	9.3	9.2	6.4	5.5
11	---	---	25.3	25.3	22.6	22.5	14.7	14.2	9.3	8.9	6.5	6.2
12	24.4	24.4	25.3	25.3	22.5	22.3	14.2	13.7	9.1	8.8	6.5	5.5
13	24.4	24.4	25.3	25.1	22.4	22.0	13.7	13.2	8.8	8.4	5.9	5.5
14	24.4	24.4	25.2	25.2	22.0	21.7	13.4	13.0	8.7	8.1	6.1	5.4
15	24.4	24.3	25.2	25.0	21.8	21.5	13.0	12.9	8.1	7.9	6.1	5.2
16	24.3	24.3	25.0	24.8	21.5	21.3	13.1	12.7	7.9	7.8	5.9	5.2
17	24.3	24.3	24.8	24.8	21.3	21.1	12.9	12.7	7.8	7.8	5.3	5.2
18	24.3	24.3	24.8	24.7	21.1	20.9	12.8	12.7	7.8	7.7	5.3	5.1
19	24.3	24.2	24.7	24.7	20.9	20.5	12.7	12.6	7.8	7.7	5.3	5.3
20	24.2	24.2	24.7	24.6	20.5	20.2	12.7	12.4	7.8	7.8	5.3	5.1
21	24.2	24.2	24.7	24.6	20.2	19.9	12.7	12.3	7.9	7.7	5.2	5.1
22	24.2	24.2	24.6	24.4	19.9	19.6	12.3	12.0	7.9	7.8	5.1	4.9
23	24.2	24.1	24.5	24.4	19.6	19.3	12.6	11.6	7.9	7.8	4.9	4.9
24	24.1	24.1	24.4	24.1	19.3	19.0	11.6	11.1	8.0	7.8	4.9	4.8
25	24.3	24.1	24.2	24.0	19.1	18.9	11.2	10.7	8.0	7.9	4.8	4.7
26	24.3	24.2	24.0	23.8	18.9	18.8	11.2	10.3	8.0	7.9	4.7	4.6
27	24.2	24.2	23.9	23.7	18.9	18.8	10.3	9.9	8.0	7.6	4.6	4.5
28	24.2	24.2	23.9	23.6	18.9	18.8	9.9	9.6	7.7	7.4	---	---
29	24.3	24.1	23.6	23.4	18.8	18.7	9.6	9.4	---	---	4.4	4.4
30	24.4	24.2	23.5	23.3	18.9	18.5	9.5	9.4	---	---	4.4	4.3
31	24.5	24.3	---	---	18.5	18.2	9.5	9.4	---	---	4.3	4.3
MONTH	24.5	24.1	25.4	23.3	23.4	18.2	18.2	9.4	9.7	7.4	7.4	4.3

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	7.4	7.2	16.7	16.3	20.3	20.2	20.8	20.6	26.8	26.7
2	4.3	4.2	7.6	7.4	16.6	16.5	20.2	20.2	21.0	20.8	26.9	26.8
3	4.3	4.2	7.8	7.6	16.7	16.6	20.2	20.2	21.2	21.0	27.0	26.9
4	4.2	4.2	8.1	7.8	16.8	16.7	20.2	20.2	21.5	21.2	27.2	27.0
5	4.3	4.2	8.3	8.1	17.0	16.8	20.2	20.2	21.7	21.5	27.3	27.2
6	4.2	4.2	8.6	8.3	17.3	17.0	20.2	20.2	21.9	21.7	27.4	27.3
7	4.2	4.2	8.9	8.6	17.6	17.3	20.2	20.2	22.1	21.9	27.5	27.4
8	4.2	4.2	9.3	8.9	18.0	17.6	20.2	20.1	22.3	22.1	27.6	27.5
9	4.2	4.2	9.7	9.3	18.5	18.0	20.2	20.1	22.5	22.3	27.7	27.6
10	4.2	4.2	10.2	9.7	18.8	18.4	20.3	20.2	22.6	22.5	27.7	27.7
11	4.3	4.2	10.6	10.2	19.2	18.8	20.3	20.3	22.8	22.6	27.8	27.7
12	4.3	4.3	11.1	10.6	19.5	19.2	20.3	20.3	23.0	22.8	27.8	27.8
13	4.4	4.3	11.5	11.1	19.7	19.5	20.3	20.3	23.2	23.0	27.8	27.7
14	4.5	4.4	11.9	11.5	19.8	19.6	20.3	20.3	---	---	27.7	27.6
15	4.6	4.5	12.4	11.9	19.6	19.6	20.3	20.3	23.7	23.4	27.6	27.5
16	4.7	4.6	12.7	12.4	19.7	19.6	20.3	20.2	24.0	23.7	27.5	27.5
17	4.9	4.7	13.0	12.7	19.6	19.6	20.3	20.3	24.2	24.0	27.5	27.4
18	5.0	4.9	13.2	13.0	19.8	19.6	---	---	24.4	24.2	27.4	27.3
19	5.2	5.0	13.5	13.2	19.8	19.7	20.3	20.3	24.6	24.4	27.3	27.2
20	5.3	5.2	13.8	13.5	19.9	19.7	20.3	20.2	24.8	24.6	27.2	27.1
21	5.4	5.3	14.1	13.8	19.9	19.8	20.3	20.2	25.0	24.8	27.1	27.0
22	5.6	5.4	14.4	14.1	19.9	19.8	20.2	20.2	25.2	25.0	27.0	26.9
23	5.8	5.6	14.6	14.4	20.0	19.8	20.2	20.2	25.3	25.2	26.9	26.8
24	5.9	5.8	14.8	14.6	19.9	19.9	20.3	20.2	25.5	25.3	26.9	26.8
25	6.1	5.9	14.9	14.8	19.9	19.9	20.3	20.3	25.7	25.5	26.9	26.8
26	6.3	6.1	15.0	14.9	19.9	19.9	20.3	20.3	25.9	25.7	26.9	26.8
27	6.5	6.3	15.2	15.0	20.1	19.9	20.3	20.3	26.1	25.9	26.9	26.8
28	6.7	6.5	15.4	15.2	20.1	20.0	20.4	20.3	26.2	26.1	26.9	26.9
29	6.9	6.7	15.6	15.4	20.1	20.0	20.4	20.4	26.4	26.2	26.9	26.9
30	7.2	6.9	16.0	15.6	20.2	20.1	20.5	20.4	26.5	26.4	26.9	26.9
31	---	---	16.3	16.0	---	---	20.6	20.5	26.7	26.5	---	---
MONTH	7.2	4.2	16.3	7.2	20.2	16.3	20.6	20.1	26.7	20.6	27.8	26.7
YEAR	27.8	4.2										

391905084372902. LOCAL NUMBER, BU-1157-8B—Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	827	822	845	839	782	774	811	808	739	738	746	741
2	830	827	850	839	780	777	813	810	739	737	742	741
3	830	783	855	844	780	779	812	810	738	729	743	741
4	830	802	844	841	780	778	814	812	735	733	746	742
5	840	830	851	842	779	777	814	812	735	733	749	745
6	841	840	881	851	779	777	813	811	735	734	752	746
7	842	841	889	865	778	768	814	812	735	733	772	752
8	842	841	896	876	768	764	817	813	735	732	783	768
9	842	841	905	877	772	764	818	816	735	733	786	769
10	842	841	911	905	770	768	816	813	735	733	821	773
11	---	---	913	910	776	768	814	809	734	732	841	819
12	848	847	914	902	783	776	810	804	732	730	848	776
13	849	848	914	750	794	782	805	799	731	726	792	772
14	850	848	898	876	797	791	803	799	728	721	849	770
15	851	849	890	796	801	796	803	801	728	726	861	772
16	852	851	815	802	803	800	802	798	728	727	866	773
17	853	851	802	793	804	802	801	799	728	727	776	771
18	854	853	794	793	803	802	801	799	729	728	780	771
19	854	853	796	794	804	801	801	800	730	728	796	780
20	855	854	799	796	801	797	801	797	730	729	815	796
21	855	854	831	799	801	797	799	796	731	730	818	810
22	855	854	835	816	806	800	799	795	733	730	824	813
23	855	854	847	831	810	806	796	788	734	732	819	800
24	854	854	843	830	813	810	789	778	736	733	805	799
25	854	825	830	813	813	807	779	768	738	734	805	792
26	849	848	813	796	809	807	768	754	741	738	797	778
27	849	848	799	788	810	808	754	746	749	741	778	775
28	849	848	800	771	810	808	746	740	749	744	---	---
29	850	842	788	785	810	809	746	742	---	---	799	781
30	846	838	787	779	812	808	746	741	---	---	796	790
31	848	842	---	---	809	806	742	739	---	---	790	785
MONTH	855	783	914	750	813	764	818	739	749	721	866	741

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	714	692	750	734	646	639	719	716	749	745
2	795	782	696	676	771	750	641	636	722	719	752	748
3	796	778	713	666	768	763	643	641	721	708	757	752
4	778	770	668	665	768	763	644	642	708	689	760	753
5	800	769	668	666	769	738	643	640	689	667	764	759
6	812	800	669	667	754	740	643	642	668	654	766	762
7	812	810	676	667	748	727	644	643	656	652	769	761
8	812	810	673	671	727	704	644	642	662	652	766	754
9	812	810	673	669	704	674	644	637	670	662	754	746
10	813	809	688	669	697	661	644	634	676	670	759	748
11	814	809	677	672	661	648	646	639	679	666	755	748
12	810	772	680	676	648	639	643	636	669	663	748	718
13	774	767	688	680	641	638	639	636	667	660	718	677
14	802	774	704	688	668	639	639	637	---	---	695	693
15	812	792	723	704	665	650	640	637	676	672	697	695
16	826	811	724	716	650	640	641	640	676	653	699	696
17	829	826	726	724	646	641	645	640	653	634	698	696
18	830	825	728	722	657	646	---	---	634	629	702	698
19	827	823	727	724	653	639	650	645	636	629	707	702
20	837	827	734	725	648	639	664	650	643	636	710	707
21	840	836	739	732	647	637	682	664	652	643	711	709
22	844	840	755	739	646	635	690	682	656	652	712	709
23	844	843	768	754	647	635	695	690	658	651	709	708
24	845	844	774	768	641	635	698	694	663	652	708	707
25	847	838	776	773	640	637	703	697	677	657	707	706
26	838	810	775	773	641	639	706	701	685	671	707	705
27	819	767	774	771	647	638	708	706	695	682	705	704
28	767	745	775	772	646	636	712	708	714	693	704	703
29	752	742	776	774	647	637	716	707	726	714	704	703
30	742	711	776	758	641	632	718	706	734	723	703	702
31	---	---	758	735	---	---	716	706	746	734	---	---
MONTH	847	711	776	665	771	632	718	634	746	629	769	677
YEAR	914	629										

PROJECT DATA
Water Data for Bolton Well Field

391905084372902. LOCAL NUMBER, BU-1157-8B—Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	-.1	-.1	.1	.1	.1	.1	.1	.1	.1	.0	-.1	-.1
2	-.1	-.1	.1	.1	.1	.1	.1	.1	.1	.0	-.1	-.1
3	-.1	-.1	.1	.1	.1	.1	.1	.1	.1	.0	-.1	-.1
4	-.1	-.1	.1	.1	.1	.1	1.4	.1	.1	.0	-.1	-.1
5	-.1	-.1	.1	.1	.1	.1	.8	.6	.0	.0	-.1	-.1
6	-.1	-.1	.2	.1	.1	.1	.6	.4	.0	.0	-.1	-.1
7	-.1	-.1	.2	.2	.1	.1	.4	.4	.0	.0	-.1	-.1
8	-.1	-.1	.2	.2	.1	.1	.4	.3	.0	.0	-.1	-.1
9	-.1	-.1	.2	.2	.1	.1	.3	.3	.0	.0	-.1	-.1
10	-.1	-.1	.2	.1	.1	.1	.3	.3	.0	.0	-.1	-.1
11	---	---	.1	.1	.1	.1	.3	.2	.0	.0	-.1	-.1
12	-.1	-.1	.1	.1	.1	.1	.2	.2	.0	.0	-.1	-.1
13	-.1	-.1	.1	.1	.1	.1	.2	.2	.0	.0	.0	-.1
14	-.1	-.1	.1	.1	.1	.1	.2	.2	.0	.0	-.1	-.1
15	-.1	-.1	.1	.1	.1	.1	.2	.2	.0	.0	-.1	-.1
16	-.1	-.1	.1	.1	.1	.1	.2	.2	.0	.0	-.1	-.1
17	-.1	-.1	.1	.1	.1	.1	.2	.2	.0	.0	-.1	-.1
18	-.1	-.2	.1	.1	.1	.1	.2	.1	.0	.0	-.1	-.1
19	-.1	-.1	.1	.1	.1	.1	.1	.1	.0	.0	-.1	-.1
20	.0	-.1	.1	.1	.1	.1	.1	.1	.0	.0	-.1	-.1
21	-.1	-.1	.1	.1	.1	.1	.1	.1	.0	.0	-.1	-.1
22	.0	-.1	.1	.1	.1	.1	.1	.1	.0	.0	-.1	-.1
23	.0	.0	.1	.1	.1	.1	.1	.1	.0	-.1	-.1	-.1
24	.0	.0	.1	.1	.1	.1	.1	.1	-.1	-.1	-.1	-.1
25	.1	.0	.1	.1	.1	.1	.1	.1	.0	-.1	-.1	-.1
26	.1	.1	.1	.1	.1	.1	.1	.1	-.1	-.1	-.1	-.1
27	.1	.1	.1	.1	.1	.1	.1	.1	-.1	-.1	-.1	-.1
28	.1	.1	.1	.1	.1	.1	.1	.0	.0	-.1	---	---
29	.1	.1	.1	.1	.1	.1	.0	.0	---	---	-.2	-.2
30	.1	.1	.1	.1	.1	.1	.0	.0	---	---	-.2	-.2
31	.1	.1	---	---	.1	.1	.0	.0	---	---	-.2	-.2
MONTH	.1	-.2	.2	.1	.1	.1	1.4	.0	.1	-.1	.0	-.2

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	.0	-.1	-.1	-.1	.1	.0	-.1	-.1	.2	.2
2	-.2	-.2	.1	.0	-.1	-.1	.0	-.1	-.1	-.1	.2	.2
3	-.2	-.2	.3	.0	-.1	-.1	.0	-.1	-.1	-.1	.2	.2
4	-.2	-.2	.3	.2	-.1	-.1	.2	.0	-.1	-.1	.2	.2
5	-.2	-.2	.3	.2	-.1	-.1	.1	.0	-.1	-.1	.2	.2
6	-.2	-.2	.3	.1	-.1	-.1	.2	.0	.0	-.1	.2	.2
7	-.2	-.2	.2	.0	-.1	-.1	.2	.1	.0	-.1	.2	.2
8	-.2	-.2	.2	.0	-.1	-.1	.3	.1	.0	.0	.2	.2
9	-.2	-.2	.1	-.1	.0	-.1	.3	.0	.0	.0	.2	.2
10	-.2	-.2	.1	.0	.1	-.1	.2	.0	.0	.0	.2	.2
11	.1	-.2	.0	-.1	.2	.1	.3	.1	.0	.0	.2	.1
12	.0	-.3	.0	-.1	.3	.2	.2	.0	.0	.0	.3	.2
13	.0	-.3	.0	-.1	.2	.1	.0	.0	.0	.0	1.0	.3
14	.0	-.2	-.1	-.1	.2	-.1	.0	.0	---	---	.7	.5
15	-.1	-.2	.0	-.4	.4	-.1	.0	.0	.0	.0	.5	.4
16	-.1	-.2	-.1	-.3	.3	.0	.0	.0	.1	.0	.4	.3
17	-.1	-.1	-.1	-.1	.1	.0	.0	.0	.1	.1	.3	.3
18	.0	-.1	-.1	-.1	.3	.0	---	---	.1	.1	.3	.2
19	-.1	-.1	-.1	-.1	.2	-.1	-.2	-.2	.1	.1	.2	.2
20	-.1	-.1	-.1	-.1	.1	-.1	-.1	-.2	.1	.1	.2	.2
21	-.1	-.1	-.1	-.1	.1	.0	-.1	-.1	.1	.1	.2	.2
22	-.1	-.1	-.1	-.1	.0	-.1	-.1	-.1	.1	.1	.2	.2
23	.0	-.1	-.1	-.1	.2	-.1	-.1	-.1	.1	.1	.2	.2
24	-.1	-.1	-.1	-.1	.0	-.1	-.1	-.1	.1	.1	.2	.2
25	.0	-.1	-.1	-.1	.0	-.1	-.1	-.1	.1	.1	.2	.2
26	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	.1	.1	.3	.2
27	-.1	-.1	-.1	-.1	.2	-.1	-.1	-.1	.1	.1	.3	.2
28	-.1	-.1	-.1	-.1	.2	-.1	-.1	-.1	.1	.1	.3	.3
29	-.1	-.1	-.1	-.1	.2	.0	-.1	-.1	.1	.1	.3	.3
30	-.1	-.1	-.1	-.1	.0	-.1	-.1	-.1	.2	.1	.3	.3
31	---	---	-.1	-.1	---	---	-.1	-.1	.2	.2	---	---
MONTH	.1	-.3	.3	-.4	.4	-.1	.3	-.2	.2	-.1	1.0	.1
YEAR	1.4	-.4										

391905084372902. LOCAL NUMBER, BU-1157-8B—Continued

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	527.97	527.67	528.03	526.12	528.57	526.74	526.79	526.41	530.02	529.75	528.53	526.35
2	528.03	527.74	527.89	525.99	528.56	528.40	526.51	526.07	529.86	529.68	526.35	526.20
3	528.02	526.26	528.03	526.07	528.55	528.40	527.74	525.72	529.76	527.68	527.86	526.01
4	527.94	525.97	526.34	526.20	528.40	528.10	527.66	525.42	529.27	528.91	527.95	527.76
5	530.86	527.94	526.40	526.26	528.30	528.01	527.45	525.09	528.94	528.82	527.97	526.05
6	531.73	530.86	527.87	526.08	528.30	527.77	527.58	527.44	529.07	528.81	526.13	526.03
7	531.73	531.32	528.06	526.12	527.77	525.69	527.54	525.48	529.23	529.01	526.13	525.80
8	531.32	530.88	528.26	525.98	526.34	525.76	525.59	525.44	529.01	528.74	527.75	525.64
9	530.88	530.32	528.70	525.88	527.65	526.10	525.74	525.58	528.74	528.14	527.97	527.75
10	530.32	529.94	530.20	528.70	527.73	527.65	527.42	525.52	530.30	528.62	528.01	527.43
11	---	---	530.36	530.20	527.66	525.20	525.52	525.37	530.71	528.71	527.43	527.29
12	529.81	529.50	530.21	529.69	527.86	525.93	527.03	525.36	528.71	527.60	527.30	524.55
13	529.50	529.11	529.69	527.52	528.08	527.51	527.21	525.34	527.60	527.37	524.98	524.48
14	529.12	528.94	527.52	527.34	527.79	527.50	527.94	527.21	528.64	526.67	527.28	524.98
15	528.94	528.79	527.35	527.08	527.77	526.98	528.31	527.94	530.07	528.64	527.34	525.40
16	528.87	528.74	528.77	526.73	529.62	526.77	528.40	526.19	530.80	530.07	526.98	525.30
17	529.23	528.70	529.14	528.77	531.08	529.62	528.77	528.40	531.00	530.80	526.12	525.47
18	529.27	529.16	529.21	529.00	531.05	529.87	528.74	528.51	530.95	530.43	526.43	526.12
19	529.17	529.02	529.02	528.62	529.87	529.42	528.64	528.46	530.43	529.78	526.43	525.88
20	529.03	528.86	528.86	528.55	529.42	528.85	528.71	526.68	529.82	529.71	525.88	525.58
21	528.94	528.86	528.88	527.12	528.85	528.22	528.55	526.69	529.94	529.37	525.66	525.32
22	529.08	528.94	528.88	526.94	528.22	527.89	528.47	526.41	529.37	528.80	528.04	525.66
23	529.13	529.01	526.94	526.62	527.89	527.33	526.41	526.03	528.98	528.85	528.10	525.87
24	529.01	528.80	526.64	526.43	527.59	527.30	526.09	525.91	528.91	528.13	525.87	525.41
25	528.80	526.64	527.26	526.12	529.48	527.59	527.94	525.86	528.81	527.88	525.42	525.26
26	528.16	526.60	526.39	526.18	529.52	529.02	525.86	525.04	528.97	528.76	525.31	525.25
27	528.03	527.88	528.26	526.39	529.03	528.51	525.48	525.07	528.76	526.62	525.36	525.25
28	528.20	527.90	528.51	526.56	529.30	528.86	527.03	525.41	528.50	526.80	---	---
29	528.28	526.46	528.11	526.22	528.99	526.60	527.04	526.54	---	---	527.23	524.98
30	528.02	526.18	528.40	526.53	528.22	526.56	528.11	526.55	---	---	527.21	526.91
31	527.89	526.05	---	---	526.96	526.73	529.75	528.11	---	---	527.24	525.20
MONTH	531.73	525.97	530.36	525.88	531.08	525.20	529.75	525.04	531.00	526.62	528.53	524.48

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	526.15	525.99	529.07	527.60	528.00	525.78	527.17	526.67	526.64	525.67
2	527.89	525.23	527.22	526.02	529.48	529.07	529.39	528.00	526.74	526.54	526.64	526.25
3	528.08	525.64	526.60	525.89	529.57	529.48	529.37	528.86	526.54	526.15	526.25	525.81
4	525.64	525.28	525.89	525.34	529.59	529.45	528.88	528.76	526.62	526.38	525.81	525.67
5	527.07	525.13	525.63	525.38	529.58	527.60	529.22	528.85	526.69	526.59	525.74	525.58
6	527.32	527.05	525.64	525.36	527.72	527.27	529.14	528.85	526.66	526.18	525.59	525.24
7	527.29	527.07	526.12	525.36	527.94	527.60	528.86	528.36	526.24	525.87	525.66	525.24
8	527.20	527.10	526.13	525.77	527.60	527.29	528.60	528.31	525.92	525.57	525.88	525.34
9	527.13	526.78	525.86	525.71	527.29	527.00	528.82	527.01	525.65	525.23	525.64	525.35
10	527.68	526.72	525.78	525.53	527.98	526.82	527.01	526.81	525.30	525.22	529.62	525.56
11	529.52	527.18	525.57	525.40	526.82	526.50	526.94	526.84	525.26	525.02	529.67	529.05
12	529.99	529.50	525.84	525.46	526.91	526.46	526.92	526.79	525.75	525.09	529.05	528.29
13	529.84	529.01	525.84	525.71	527.46	526.84	526.84	526.68	525.59	525.50	528.29	527.83
14	529.01	528.31	525.73	525.54	529.06	527.10	526.68	526.27	---	---	527.89	527.52
15	528.31	527.79	525.54	525.18	529.12	528.93	528.07	525.97	525.98	525.52	527.52	527.08
16	527.93	527.78	525.68	525.16	529.71	529.12	527.69	525.82	525.70	525.42	527.08	526.56
17	527.99	527.80	527.71	525.68	529.60	529.13	527.40	525.52	525.72	525.58	526.56	526.15
18	528.02	527.48	530.61	527.59	529.13	526.98	---	---	525.61	524.98	526.15	525.93
19	527.48	526.97	531.05	530.61	528.63	526.70	529.32	528.13	525.60	525.04	526.12	525.85
20	527.33	526.84	531.06	530.03	528.64	526.86	528.13	527.53	525.72	525.60	526.49	526.12
21	527.82	527.33	530.03	528.92	528.54	527.02	527.56	527.14	525.67	525.52	526.94	526.44
22	528.03	527.82	528.92	528.28	529.00	526.90	527.47	527.00	525.61	525.27	528.30	526.62
23	527.87	527.44	528.28	527.80	529.19	527.33	527.00	526.28	525.70	525.40	528.44	528.17
24	527.50	527.40	527.83	527.59	529.37	529.19	526.44	526.21	526.25	525.67	528.89	528.17
25	527.43	527.07	527.91	527.75	529.35	529.18	526.44	526.15	526.46	526.25	529.38	528.89
26	527.07	526.60	527.96	527.60	529.20	529.05	526.87	526.30	526.29	526.08	529.38	529.18
27	526.60	526.30	529.91	527.95	529.09	527.27	526.83	526.54	526.29	526.10	529.21	529.07
28	526.57	526.43	530.36	529.91	528.60	527.05	526.54	525.83	526.11	525.88	529.31	529.04
29	526.59	526.25	530.20	529.48	528.49	526.18	525.90	525.60	526.25	525.93	529.37	529.26
30	526.25	526.01	529.48	528.73	526.18	525.86	527.65	525.90	525.93	525.28	529.26	529.02
31	---	---	528.73	527.97	---	---	527.53	527.17	525.67	525.11	---	---
MONTH	529.99	525.13	531.06	525.16	529.71	525.86	529.39	525.52	527.17	524.98	529.67	525.24
YEAR	531.73	524.48										

PROJECT DATA
Water Data for Bolton Well Field

391905084372902. LOCAL NUMBER, BU-1157-8B—Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.4	7.4	7.1	7.1	7.0	7.0	7.1	7.1	7.4	7.3	7.6	7.6
2	7.4	7.4	7.1	7.1	7.0	7.0	7.1	7.1	7.4	7.4	7.6	7.6
3	7.4	7.4	7.1	7.1	7.0	7.0	7.1	7.1	7.5	7.4	7.6	7.6
4	7.4	7.4	7.1	7.1	7.0	7.0	7.1	7.0	7.5	7.4	7.6	7.6
5	7.4	7.4	7.1	7.1	7.0	7.0	7.1	7.0	7.5	7.5	7.6	7.6
6	7.4	7.4	7.1	7.1	7.0	7.0	7.1	7.1	7.5	7.5	7.6	7.6
7	7.4	7.4	7.1	7.1	7.0	7.0	7.1	7.1	7.5	7.5	7.6	7.6
8	7.4	7.4	7.1	7.0	7.0	7.0	7.1	7.1	7.5	7.5	7.6	7.6
9	7.4	7.4	7.1	7.1	7.0	7.0	7.1	7.1	7.5	7.5	7.6	7.6
10	7.4	7.4	7.1	7.1	7.0	7.0	7.1	7.1	7.5	7.5	7.6	7.6
11	---	---	7.1	7.1	7.0	7.0	7.1	7.1	7.5	7.5	7.6	7.6
12	7.4	7.4	7.1	7.1	7.0	7.0	7.1	7.1	7.5	7.5	7.6	7.6
13	7.4	7.4	7.1	7.0	7.1	7.0	7.2	7.1	7.5	7.5	7.6	7.6
14	7.4	7.4	7.0	7.0	7.0	7.0	7.2	7.2	7.5	7.5	7.6	7.6
15	7.4	7.4	7.1	7.0	7.0	7.0	7.2	7.2	7.5	7.5	7.6	7.6
16	7.4	7.4	7.0	7.0	7.0	7.0	7.2	7.2	7.5	7.5	7.6	7.6
17	7.4	7.4	7.0	7.0	7.0	7.0	7.2	7.2	7.6	7.5	7.6	7.6
18	7.4	7.3	7.0	7.0	7.0	7.0	7.2	7.2	7.6	7.6	7.6	7.6
19	7.3	7.3	7.0	7.0	7.1	7.0	7.2	7.2	7.6	7.6	7.6	7.6
20	7.3	7.3	7.0	7.0	7.1	7.1	7.2	7.2	7.6	7.6	7.6	7.6
21	7.3	7.2	7.0	7.0	7.1	7.1	7.2	7.2	7.6	7.6	7.7	7.6
22	7.2	7.2	7.0	7.0	7.1	7.1	7.2	7.2	7.6	7.6	7.7	7.6
23	7.2	7.2	7.0	7.0	7.1	7.1	7.2	7.1	7.6	7.6	7.7	7.7
24	7.2	7.2	7.0	7.0	7.1	7.1	7.2	7.2	7.6	7.6	7.7	7.7
25	7.2	7.2	7.0	7.0	7.1	7.1	7.3	7.2	7.6	7.6	7.7	7.7
26	7.2	7.2	7.0	7.0	7.1	7.1	7.3	7.3	7.6	7.6	7.7	7.7
27	7.2	7.2	7.0	7.0	7.1	7.1	7.3	7.3	7.6	7.6	7.7	7.7
28	7.2	7.2	7.0	7.0	7.1	7.1	7.3	7.3	7.6	7.6	---	---
29	7.2	7.1	7.0	7.0	7.1	7.1	7.3	7.3	---	---	7.7	7.7
30	7.1	7.1	7.0	7.0	7.1	7.1	7.3	7.3	---	---	7.7	7.7
31	7.1	7.1	---	---	7.1	7.1	7.3	7.3	---	---	7.7	7.7
MONTH	7.4	7.1	7.1	7.0	7.1	7.0	7.3	7.0	7.6	7.3	7.7	7.6

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	7.7	7.7	7.4	7.3	7.2	7.2	7.1	7.1	6.7	6.7
2	7.7	7.7	7.7	7.6	7.3	7.3	7.2	7.2	7.1	7.1	6.7	6.7
3	7.7	7.7	7.7	7.7	7.3	7.3	7.2	7.2	7.1	7.0	6.7	6.7
4	7.7	7.7	7.7	7.7	7.3	7.3	7.2	7.2	7.0	7.0	6.7	6.7
5	7.7	7.7	7.7	7.7	7.3	7.3	7.2	7.2	7.0	7.0	6.7	6.7
6	7.7	7.7	7.7	7.7	7.3	7.3	7.2	7.2	7.1	7.0	6.7	6.6
7	7.7	7.7	7.7	7.6	7.3	7.3	7.2	7.1	7.0	7.0	6.6	6.6
8	7.7	7.7	7.7	7.7	7.3	7.3	7.1	7.1	7.0	6.9	6.6	6.6
9	7.7	7.7	7.7	7.7	7.3	7.3	7.1	7.1	7.0	6.9	6.6	6.6
10	7.7	7.7	7.7	7.6	7.3	7.2	7.2	7.1	6.9	6.9	6.6	6.6
11	7.7	7.6	7.6	7.6	7.2	7.2	7.1	7.1	6.9	6.9	6.6	6.5
12	7.8	7.6	7.6	7.6	7.2	7.2	7.1	7.1	6.9	6.9	6.6	6.6
13	7.8	7.7	7.6	7.6	7.2	7.2	7.1	7.1	7.0	6.9	6.6	6.4
14	7.7	7.7	7.6	7.6	7.2	7.2	7.1	7.1	---	---	6.6	6.6
15	7.7	7.7	7.6	7.5	7.2	7.2	7.1	7.1	6.9	6.9	6.6	6.5
16	7.7	7.7	7.6	7.5	7.2	7.2	7.1	7.1	6.9	6.8	6.5	6.5
17	7.7	7.7	7.5	7.5	7.2	7.2	7.1	7.1	6.8	6.8	6.5	6.5
18	7.7	7.6	7.5	7.5	7.2	7.2	---	---	6.8	6.8	6.5	6.5
19	7.7	7.7	7.5	7.5	7.2	7.2	7.2	7.2	6.8	6.8	6.5	6.5
20	7.7	7.7	7.5	7.5	7.2	7.2	7.2	7.1	6.8	6.8	6.5	6.4
21	7.7	7.7	7.5	7.5	7.2	7.2	7.1	7.1	6.8	6.8	6.5	6.4
22	7.7	7.7	7.5	7.4	7.2	7.2	7.1	7.1	6.8	6.8	6.4	6.4
23	7.7	7.7	7.5	7.4	7.2	7.2	7.2	7.1	6.8	6.8	6.4	6.4
24	7.7	7.7	7.4	7.4	7.2	7.2	7.1	7.1	6.8	6.8	6.4	6.4
25	7.7	7.7	7.4	7.4	7.2	7.2	7.1	7.1	6.8	6.8	6.4	6.4
26	7.7	7.7	7.4	7.4	7.2	7.2	7.2	7.1	6.8	6.8	6.4	6.4
27	7.7	7.6	7.4	7.4	7.2	7.2	7.1	7.1	6.8	6.8	6.4	6.4
28	7.7	7.7	7.4	7.4	7.2	7.2	7.1	7.1	6.8	6.7	6.4	6.4
29	7.7	7.7	7.4	7.4	7.2	7.2	7.1	7.1	6.7	6.7	6.4	6.4
30	7.7	7.6	7.4	7.4	7.2	7.2	7.1	7.1	6.7	6.7	6.4	6.3
31	---	---	7.4	7.4	---	---	7.1	7.1	6.7	6.7	---	---
MONTH	7.8	7.6	7.7	7.4	7.4	7.2	7.2	7.1	7.1	6.7	6.7	6.3
YEAR	7.8	6.3										

391905084372902. LOCAL NUMBER, BU-1157-8B—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(90901), USGS National Water Information System parameter code; MF, membrane filtration; col/100mL, colonies per 100 milliliters; <, concentration or value reported is less than that indicated; E, value is estimated from a non-ideal colony count]

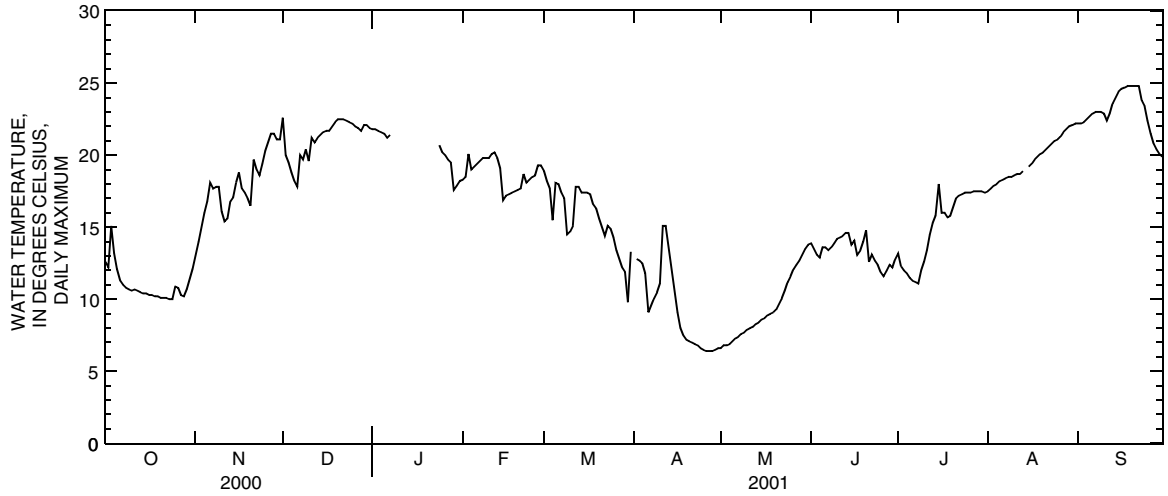
DATE	TIME	E COLI, MI MF, WATER (COL/ 100 ML) (90901)	TOTAL COLI-FORM, MI MF, WATER (COL/ 100 ML) (90900)
OCT			
11...	0910	<1	<1
JAN			
23...	1022	<1	E1
MAR			
13...	1025	<1	<1
APR			
11...	1410	<1	<1
12...	1210	<1	<1
14...	1240	<1	<1
18...	1230	<1	<1
25...	1240	<1	<1
30...	0915	<1	<1
MAY			
07...	1155	<1	<1
15...	0850	<1	<1

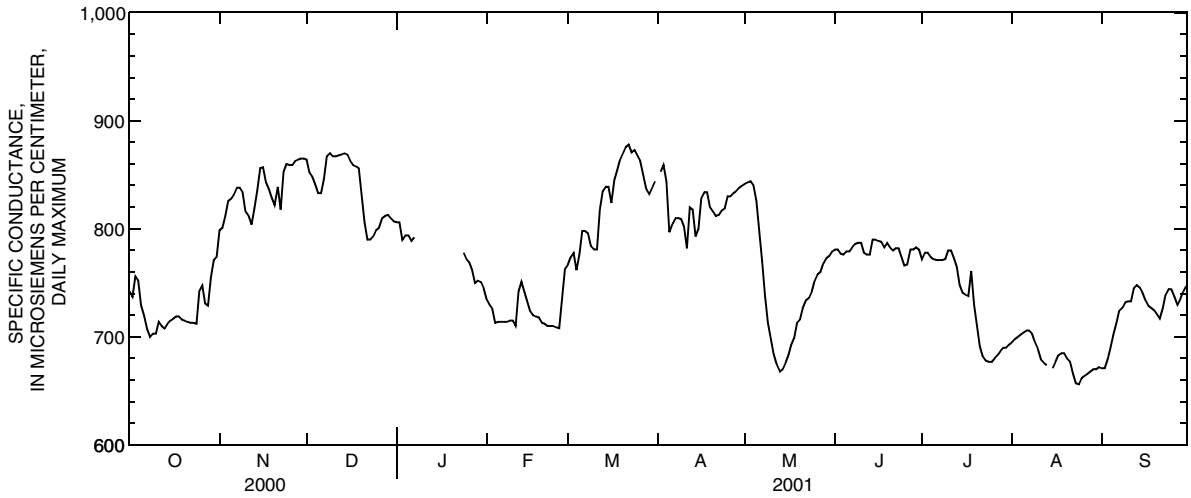
PROJECT DATA
Water Data for Bolton Well Field

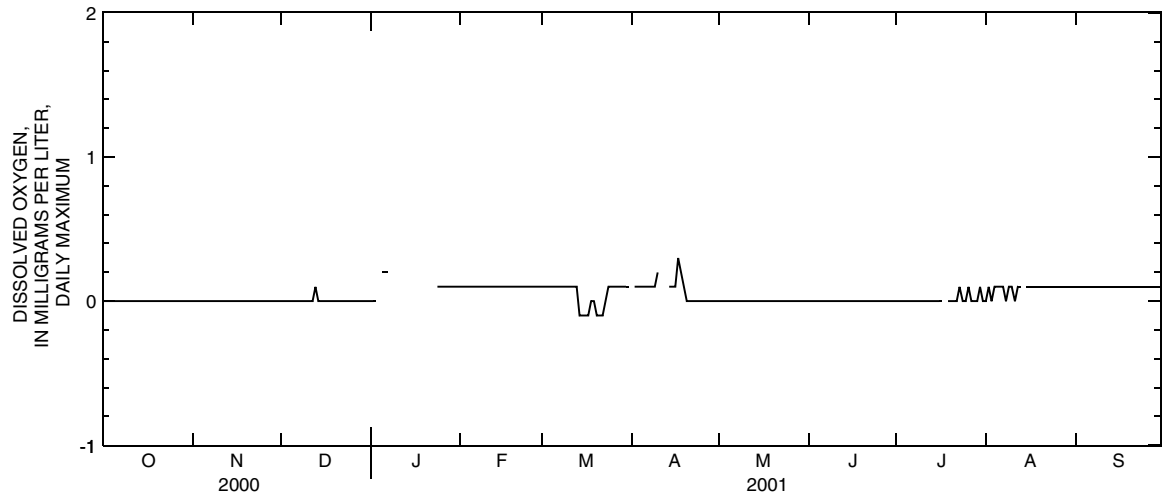
391905084372903. LOCAL NUMBER, BU-1158-8C

LOCATION.—Latitude 39°19′05″, longitude 84°37′29″, Butler County, Hydrologic Unit 05080002.
AQUIFER.—Glacial outwash, sand and gravel; 112OTSH.
WELL CHARACTERISTICS.—Observation well drilled by rotasonic techniques, diameter 4.0 in., depth 96 ft from land surface to bottom of screen.
INSTRUMENTATION.—YSI Model 6920 data sonde with turbidity probe set for 60-minute records. Sonde set at a depth of 93.9 ft below land surface.
DATUM.— Altitude of land surface is 545.46 ft above North American Vertical Datum of 1988 (NAVD of 88). Measuring point is top of inner casing, 2.24 ft above land-surface datum.
REMARK.— This station is part of a network of wells designed to help model flow characteristics from the Great Miami River through the aquifer. Data collection began on July 27, 1999. Negative dissolved oxygen values are due to the resolution of the data sonde and the close proximity of the actual value to zero. This is a non-vented sonde, water level data is not corrected for barometric pressure.
PERIOD OF RECORD.—
WATER TEMPERATURE: July 27, 1999 to current year.
SPECIFIC CONDUCTANCE: July 27, 1999 to current year.
DISSOLVED OXYGEN: July 27, 1999 to current year.
WATER LEVEL ELEVATION: July 27, 1999 to current year.
pH: July 27, 1999 to current year.
EXTREMES FOR PERIOD OF RECORD.—
WATER TEMPERATURE: Maximum, 24.8°C, Oct. 14, 1999 and Sept. 18-22, 2001; Minimum, 6.3°C, Apr. 25-26, 2001.
SPECIFIC CONDUCTANCE: Maximum, 1130 microsiemens per centimeter, Nov. 3, 1999; Minimum, 609 microsiemens per centimeter, Aug. 29, 2000.
DISSOLVED OXYGEN: Maximum, 1.1 milligrams per liter, Jan. 1 and 2, 2000; Minimum, -0.7 milligrams per liter, Dec. 23, 1999.
WATER LEVEL ELEVATION: Maximum daily low, 518.33 ft above NAVD of 88, Dec. 12, 1999; Maximum daily high, 538.01 ft above NAVD of 88, Apr. 9, 2000.
pH: Maximum, 7.6, several days during period of record; Minimum, 6.8, Sept. 22-26, 2001.
EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURE: Maximum, 24.8°C, Sept. 18-22, 2001; Minimum, 6.3°C, Apr. 25-26, 2001.
SPECIFIC CONDUCTANCE: Maximum, 878 microsiemens per centimeter, Mar. 22, 2001; Minimum, 654 microsiemens per centimeter, Aug. 24, 2001.
DISSOLVED OXYGEN: Maximum, 0.3 milligrams per liter, Apr. 17, 2001; Minimum, -0.1 milligrams per liter, Mar. 13-23 and 25-28, 2001.
WATER LEVEL ELEVATION: Maximum daily low, 521.78 ft above NAVD of 88, Mar. 13,2001; Maximum daily high, 533.66 ft above NAVD of 88, July 18, 2001.
pH: Maximum, 7.6, Jan. 24-31, Feb. 1-4, 12, 14-22, and 27, 2001; Minimum, 6.8, Sept. 22-26, 2001.

391905084372903. LOCAL NUMBER, BU-1158-8C—Continued

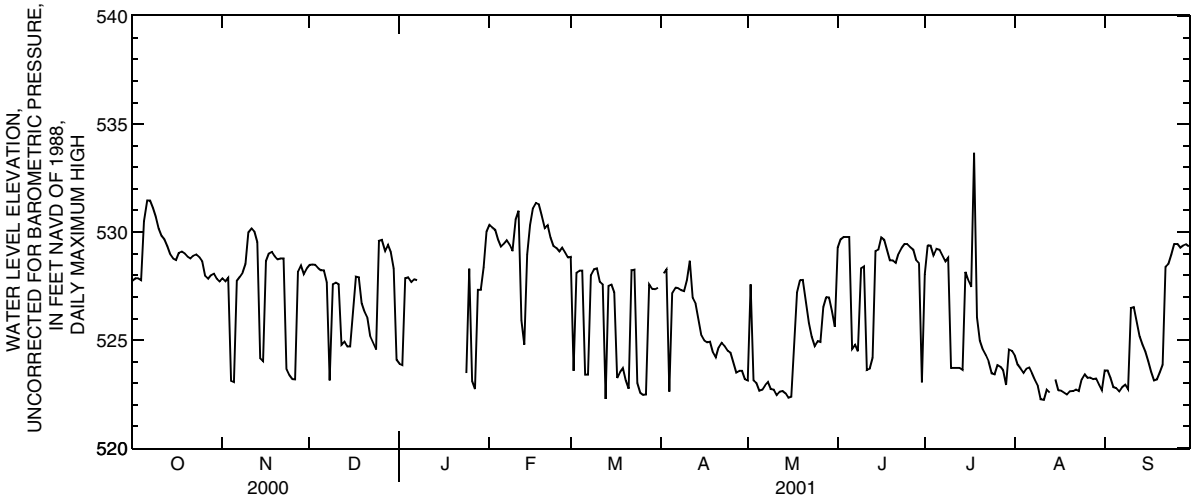


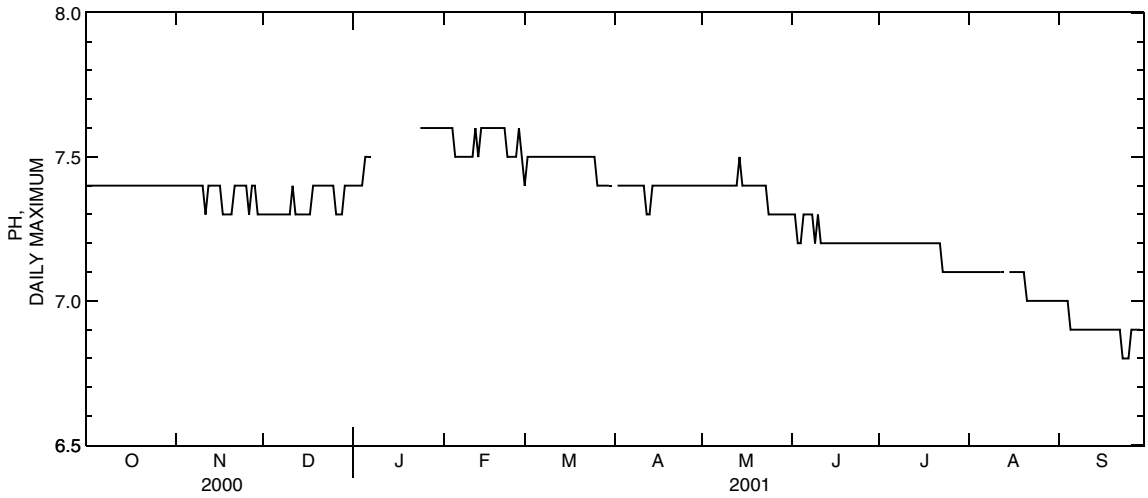




PROJECT DATA
Water Data for Bolton Well Field

391905084372903. LOCAL NUMBER, BU-1158-8C—Continued





391905084372903. LOCAL NUMBER, BU-1158-8C—Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	12.6	12.2	13.0	11.7	22.6	19.8	21.8	21.8	18.3	18.1	18.9	16.9
2	12.2	11.8	14.0	12.4	20.0	19.5	21.8	21.7	18.5	18.3	18.2	17.6
3	15.1	11.8	15.0	13.4	19.5	18.8	21.7	21.5	20.1	18.5	17.7	15.2
4	13.2	12.1	16.0	15.0	18.8	18.2	21.6	21.0	19.0	18.9	15.5	15.2
5	12.1	11.3	16.8	16.0	18.2	17.8	21.5	21.2	19.2	19.0	18.1	15.3
6	11.3	11.0	18.1	16.0	17.8	17.6	21.2	21.2	19.4	19.2	18.0	17.1
7	11.0	10.8	17.7	16.4	20.0	17.6	21.4	21.1	19.6	19.4	17.4	16.8
8	10.8	10.7	17.8	16.3	19.7	19.2	---	---	19.8	19.6	17.0	13.7
9	10.7	10.6	17.8	16.1	20.4	19.6	---	---	19.8	19.7	14.5	14.3
10	10.6	10.6	16.1	15.4	19.6	19.3	---	---	19.8	19.8	14.7	14.4
11	10.7	10.6	15.4	14.9	21.2	19.3	---	---	20.1	19.7	15.1	14.7
12	10.6	10.5	15.6	14.6	20.9	20.7	---	---	20.2	19.8	17.8	15.1
13	10.5	10.4	16.8	14.5	21.2	20.9	---	---	19.8	19.1	17.8	17.2
14	10.4	10.4	17.1	16.0	21.4	21.2	---	---	19.1	16.8	17.4	14.1
15	10.4	10.3	18.1	17.1	21.6	21.4	---	---	16.9	16.6	17.4	14.1
16	10.3	10.3	18.8	17.7	21.7	21.6	---	---	17.2	16.9	17.4	14.1
17	10.3	10.2	17.7	17.4	21.7	21.6	---	---	17.3	17.1	17.3	16.6
18	10.2	10.2	17.4	17.0	22.0	21.7	---	---	17.4	17.2	16.6	16.3
19	10.2	10.1	17.0	16.5	22.3	22.0	---	---	17.5	17.1	16.3	15.6
20	10.1	10.1	16.5	16.0	22.5	22.3	---	---	17.6	17.5	15.6	15.0
21	10.1	10.1	19.7	16.0	22.5	22.4	---	---	17.7	17.6	15.0	14.4
22	10.1	10.0	19.0	16.7	22.5	22.4	---	---	18.7	17.7	14.4	11.1
23	10.0	10.0	18.6	17.8	22.4	22.3	---	---	18.1	18.0	15.1	11.0
24	10.0	10.0	19.4	18.6	22.3	22.2	20.7	20.2	18.3	18.1	14.9	14.1
25	10.9	10.0	20.3	19.4	22.2	22.0	20.2	18.8	18.5	18.3	14.3	13.4
26	10.8	10.3	20.9	20.2	22.0	21.9	20.0	19.6	18.6	18.5	13.4	12.8
27	10.3	10.2	21.5	20.0	21.9	21.5	19.7	19.3	19.3	18.5	12.8	12.1
28	10.2	10.0	21.5	19.9	21.7	21.4	19.5	17.6	19.3	17.6	12.2	9.8
29	10.7	10.0	21.1	19.9	22.1	21.5	17.6	17.4	---	---	11.9	9.1
30	11.4	10.7	21.1	20.0	22.1	21.6	17.9	17.5	---	---	9.8	9.3
31	12.1	11.1	---	---	21.9	21.8	18.2	17.9	---	---	13.3	9.7
MONTH	15.1	10.0	21.5	11.7	22.6	17.6	21.8	17.4	20.2	16.6	18.9	9.1

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	6.6	6.6	13.9	13.5	13.2	12.3	17.5	17.4	22.2	22.1
2	12.8	9.1	6.8	6.6	13.5	13.1	12.3	12.0	17.7	17.5	22.2	22.1
3	12.7	9.3	6.8	6.7	13.1	12.9	12.0	11.8	17.9	17.7	22.3	22.1
4	12.5	11.8	6.9	6.8	12.9	12.6	11.8	11.5	18.0	17.9	22.5	22.3
5	11.8	8.6	7.1	6.9	13.6	12.4	11.5	11.3	18.2	18.0	22.7	22.5
6	9.1	8.6	7.3	7.1	13.6	13.0	11.3	11.2	18.3	18.2	22.9	22.7
7	9.6	9.1	7.4	7.3	13.4	13.3	11.2	11.1	18.4	18.3	23.0	22.8
8	10.1	9.5	7.6	7.4	13.6	13.3	11.1	10.9	18.5	18.4	23.0	23.0
9	10.5	10.0	7.7	7.6	13.9	13.4	12.0	10.9	18.5	18.5	23.0	22.9
10	11.1	10.4	7.9	7.7	14.2	13.4	12.6	11.5	18.6	18.5	22.9	22.4
11	15.1	11.1	8.0	7.9	14.3	14.1	13.4	12.6	18.7	18.6	22.4	22.2
12	15.1	13.6	8.1	8.0	14.4	14.3	14.5	13.4	18.7	18.7	22.9	22.3
13	13.6	12.2	8.3	8.1	14.6	14.4	15.3	14.5	18.9	18.7	23.6	22.9
14	12.2	10.6	8.4	8.3	14.6	13.8	15.8	15.3	---	---	24.0	23.6
15	10.6	9.1	8.6	8.4	13.8	13.5	18.0	15.0	19.2	19.0	24.4	24.0
16	9.1	8.0	8.7	8.6	14.1	13.1	16.0	15.0	19.4	19.2	24.6	24.4
17	8.0	7.5	8.9	8.7	13.1	12.8	16.0	14.9	19.7	19.4	24.7	24.6
18	7.5	7.2	9.0	8.9	13.4	12.6	15.7	14.1	19.9	19.7	24.8	24.7
19	7.2	7.1	9.1	9.0	14.0	12.6	15.8	15.1	20.1	19.9	24.8	24.8
20	7.1	7.0	9.3	9.1	14.8	12.3	16.4	15.8	20.2	20.1	24.8	24.8
21	7.0	6.9	9.7	9.3	12.6	12.1	17.0	16.4	20.4	20.2	24.8	24.7
22	6.9	6.8	10.1	9.7	13.1	12.2	17.2	17.0	20.6	20.4	24.8	23.8
23	6.8	6.6	10.6	10.1	12.7	12.0	17.3	17.2	20.8	20.6	23.8	23.4
24	6.6	6.4	11.2	10.6	12.4	11.8	17.4	17.3	21.0	20.8	23.4	22.4
25	6.5	6.3	11.6	11.2	11.9	11.6	17.4	17.3	21.1	21.0	22.4	21.5
26	6.4	6.3	12.1	11.6	11.6	11.5	17.4	17.3	21.3	21.1	21.5	20.8
27	6.4	6.4	12.4	12.1	12.0	11.4	17.5	17.4	21.6	21.3	20.8	20.4
28	6.4	6.4	12.7	12.4	12.4	11.6	17.5	17.5	21.8	21.6	20.4	20.1
29	6.5	6.4	13.1	12.7	12.2	11.7	17.5	17.5	22.0	21.8	20.1	19.9
30	6.6	6.5	13.5	13.1	12.8	12.1	17.5	17.3	22.1	22.0	19.9	19.7
31	---	---	13.8	13.5	---	---	17.4	17.3	22.2	22.1	---	---
MONTH	15.1	6.3	13.8	6.6	14.8	11.4	18.0	10.9	22.2	17.4	24.8	19.7
YEAR	24.8	6.3										

PROJECT DATA
Water Data for Bolton Well Field

391905084372903. LOCAL NUMBER, BU-1158-8C—Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	742	737	799	774	864	851	806	798	735	730	767	747
2	737	707	801	797	852	847	806	790	730	726	774	766
3	756	704	812	800	848	841	790	781	726	677	778	762
4	752	712	826	802	841	833	794	785	713	704	762	751
5	729	719	828	826	833	832	794	784	714	713	776	715
6	719	706	832	818	833	831	789	779	714	712	798	766
7	707	698	838	819	846	832	792	783	714	712	798	790
8	700	697	838	815	867	840	---	---	714	706	796	783
9	703	699	834	816	870	866	---	---	715	712	784	779
10	703	701	816	812	867	865	---	---	715	710	781	778
11	714	703	812	804	867	856	---	---	710	685	781	776
12	710	708	804	795	868	864	---	---	742	680	818	771
13	708	708	819	794	869	868	---	---	751	742	835	818
14	712	708	836	799	870	869	---	---	742	733	839	822
15	715	712	856	836	869	863	---	---	733	724	839	814
16	717	715	857	842	863	858	---	---	724	719	824	770
17	719	717	843	837	859	854	---	---	720	718	845	794
18	719	716	837	828	858	855	---	---	719	717	854	844
19	716	714	829	822	856	832	---	---	718	710	864	852
20	715	713	822	810	832	806	---	---	713	711	870	863
21	714	712	839	805	806	790	---	---	712	709	876	869
22	713	712	818	805	790	789	---	---	710	707	878	866
23	713	711	853	818	790	788	---	---	710	708	871	825
24	712	710	860	853	793	790	778	771	710	708	873	811
25	743	708	859	845	799	792	772	764	709	708	868	863
26	748	730	859	852	801	799	769	761	708	706	863	850
27	731	729	863	849	810	800	762	742	736	681	851	826
28	729	726	864	848	812	810	750	742	763	711	837	820
29	755	721	865	848	813	793	752	748	---	---	832	820
30	771	750	865	856	810	801	751	743	---	---	838	832
31	774	765	---	---	807	796	745	735	---	---	844	828
MONTH	774	697	865	774	870	788	806	735	763	677	878	715

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	842	840	781	779	772	770	695	693	671	667
2	853	829	843	842	781	777	778	771	698	695	671	667
3	859	818	844	840	777	776	778	774	700	698	679	671
4	844	794	840	826	776	769	774	770	702	700	690	679
5	797	783	826	796	779	755	772	770	704	702	702	690
6	805	796	796	770	779	768	771	770	706	704	712	702
7	810	805	770	738	783	776	771	770	706	703	724	711
8	810	806	738	713	786	783	771	770	703	695	727	724
9	809	802	713	697	787	785	772	761	695	689	732	726
10	802	782	698	684	787	778	780	763	689	679	733	720
11	782	678	684	673	778	775	780	773	679	674	733	720
12	820	720	674	668	776	774	773	765	676	673	745	733
13	818	790	668	667	776	772	765	748	674	670	748	745
14	793	787	670	667	790	766	748	734	---	---	746	741
15	800	790	676	669	790	789	741	733	671	669	741	734
16	829	800	683	675	789	785	739	730	677	671	734	728
17	834	829	693	683	788	778	738	731	683	677	729	727
18	834	820	699	693	783	775	761	730	685	682	727	725
19	820	815	713	699	787	772	730	710	685	680	725	721
20	816	812	716	713	783	769	710	691	680	677	721	717
21	812	810	727	716	780	773	691	682	677	666	717	710
22	813	810	734	726	782	774	682	678	666	657	726	703
23	817	812	736	734	782	770	678	675	657	655	739	726
24	819	816	742	736	774	766	677	675	656	654	744	739
25	830	818	752	742	766	764	677	675	662	656	744	736
26	830	828	758	752	767	764	680	677	664	662	737	730
27	833	830	760	758	781	765	683	680	666	664	730	726
28	835	832	768	759	781	769	687	683	668	666	735	726
29	838	833	773	768	783	768	690	686	670	667	742	735
30	840	838	775	773	781	771	690	688	670	669	747	742
31	---	---	779	775	---	---	693	688	672	670	---	---
MONTH	859	678	844	667	790	755	780	675	706	654	748	667
YEAR	878	654										

391905084372903. LOCAL NUMBER, BU-1158-8C—Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	.0	.0	.0	.0	.0	.0	.0	.0	.1	.1	.1	.1
2	.0	.0	.0	.0	.0	.0	.0	.0	.1	.1	.1	.1
3	.0	.0	.0	.0	.0	.0	.0	.0	.1	.1	.1	.1
4	.0	.0	.0	.0	.0	.0	---	---	.1	.1	.1	.1
5	.0	.0	.0	.0	.0	.0	.2	.2	.1	.1	.1	.1
6	.0	.0	.0	.0	.0	.0	.2	.2	.1	.1	.1	.1
7	.0	.0	.0	.0	.0	.0	.2	.2	.1	.1	.1	.1
8	.0	.0	.0	.0	.0	.0	---	---	.1	.1	.1	.1
9	.0	.0	.0	.0	.0	.0	---	---	.1	.1	.1	.1
10	.0	.0	.0	.0	.0	.0	---	---	.1	.1	.1	.1
11	.0	.0	.0	.0	.0	.0	---	---	.1	.1	.1	.1
12	.0	.0	.0	.0	.0	.0	---	---	.1	.1	.1	.1
13	.0	.0	.0	.0	.1	.0	---	---	.1	.1	.1	-.1
14	.0	.0	.0	.0	.0	.0	---	---	.1	.0	-.1	-.1
15	.0	.0	.0	.0	.0	.0	---	---	.1	.1	-.1	-.1
16	.0	.0	.0	.0	.0	.0	---	---	.1	.1	-.1	-.1
17	.0	.0	.0	.0	.0	.0	---	---	.1	.1	-.1	-.1
18	.0	.0	.0	.0	.0	.0	---	---	.1	.1	.0	-.1
19	.0	.0	.0	.0	.0	.0	---	---	.1	.1	.0	-.1
20	.0	.0	.0	.0	.0	.0	---	---	.1	.1	-.1	-.1
21	.0	.0	.0	.0	.0	.0	---	---	.1	.1	-.1	-.1
22	.0	.0	.0	.0	.0	.0	---	---	.1	.1	-.1	-.1
23	.0	.0	.0	.0	.0	.0	---	---	.1	.1	.0	-.1
24	.0	.0	.0	.0	.0	.0	.1	.1	.1	.1	.1	.0
25	.0	.0	.0	.0	.0	.0	.1	.1	.1	.1	.1	-.1
26	.0	.0	.0	.0	.0	.0	.1	.1	.1	.1	.1	-.1
27	.0	.0	.0	.0	.0	.0	.1	.1	.1	.1	.1	-.1
28	.0	.0	.0	.0	.0	.0	.1	.1	.1	.1	.1	-.1
29	.0	.0	.0	.0	.0	.0	.1	.1	---	---	.1	.0
30	.0	.0	.0	.0	.0	.0	.1	.1	---	---	.1	.1
31	.0	.0	---	---	.0	.0	.1	.1	---	---	.1	.1
MONTH	.0	.0	.0	.0	.1	.0	.2	.0	.1	.0	.1	-.1

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	.0	.0	.0	.0	.0	.0	.0	.0	.1	.1
2	.1	.1	.0	.0	.0	.0	.0	.0	.1	.0	.1	.1
3	.1	.1	.0	.0	.0	.0	.0	.0	.0	.0	.1	.1
4	.1	.1	.0	.0	.0	.0	.0	.0	.1	.0	.1	.1
5	.1	.1	.0	.0	.0	.0	.0	.0	.1	.0	.1	.1
6	.1	.1	.0	.0	.0	.0	.0	.0	.1	.0	.1	.1
7	.1	.1	.0	.0	.0	.0	.0	.0	.1	.0	.1	.1
8	.1	.1	.0	.0	.0	.0	.0	.0	.0	.0	.1	.1
9	.1	.1	.0	.0	.0	.0	.0	.0	.1	.0	.1	.1
10	.2	.1	.0	.0	.0	.0	.0	.0	.1	.0	.1	.1
11	---	---	.0	.0	.0	.0	.0	.0	.0	.0	.1	.1
12	---	---	.0	.0	.0	.0	.0	.0	.1	.0	.1	.1
13	---	---	.0	.0	.0	.0	.0	.0	.1	.0	.1	.1
14	.1	.0	.0	.0	.0	.0	.0	.0	---	---	.1	.1
15	.1	.0	.0	.0	.0	.0	.0	.0	.1	.1	.1	.1
16	.1	.0	.0	.0	.0	.0	.0	.0	.1	.1	.1	.1
17	.3	.1	.0	.0	.0	.0	.0	.0	.1	.1	.1	.1
18	.2	.1	.0	.0	.0	.0	---	---	.1	.1	.1	.1
19	.1	.0	.0	.0	.0	.0	.0	.0	.1	.1	.1	.1
20	.0	.0	.0	.0	.0	.0	.0	.0	.1	.1	.1	.1
21	.0	.0	.0	.0	.0	.0	.0	.0	.1	.1	.1	.1
22	.0	.0	.0	.0	.0	.0	.0	.0	.1	.1	.1	.1
23	.0	.0	.0	.0	.0	.0	.1	.0	.1	.1	.1	.1
24	.0	.0	.0	.0	.0	.0	.0	.0	.1	.1	.1	.1
25	.0	.0	.0	.0	.0	.0	.0	.0	.1	.1	.1	.1
26	.0	.0	.0	.0	.0	.0	.1	.0	.1	.1	.1	.1
27	.0	.0	.0	.0	.0	.0	.0	.0	.1	.1	.1	.1
28	.0	.0	.0	.0	.0	.0	.0	.0	.1	.1	.1	.1
29	.0	.0	.0	.0	.0	.0	.0	.0	.1	.1	.1	.1
30	.0	.0	.0	.0	.0	.0	.1	.0	.1	.1	.1	.1
31	---	---	.0	.0	---	---	.0	.0	.1	.1	---	---
MONTH	.3	.0	.0	.0	.0	.0	.1	.0	.1	.0	.1	.1
YEAR	.3	-.1										

PROJECT DATA
Water Data for Bolton Well Field

391905084372903. LOCAL NUMBER, BU-1158-8C—Continued

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	527.75	527.45	527.86	522.94	528.49	523.63	523.91	523.45	530.33	530.03	528.85	523.57
2	527.86	527.55	527.73	522.71	528.50	528.34	523.85	523.35	530.21	530.03	523.57	523.41
3	527.86	522.85	527.89	522.80	528.48	528.33	527.87	522.77	530.11	524.86	528.13	523.28
4	527.77	522.57	523.12	522.84	528.33	528.03	527.90	522.72	529.65	529.29	528.21	528.01
5	530.52	527.77	523.06	522.92	528.23	527.93	527.68	522.40	529.33	529.21	528.22	523.32
6	531.47	530.52	527.76	522.85	528.23	527.68	527.81	527.68	529.47	529.21	523.40	523.29
7	531.47	531.12	527.94	522.92	527.68	522.46	527.78	522.67	529.63	529.41	523.40	523.09
8	531.12	530.71	528.13	522.87	523.14	522.55	---	---	529.41	529.12	528.03	522.92
9	530.71	530.16	528.53	522.78	527.60	523.03	---	---	529.12	528.47	528.28	528.03
10	530.16	529.79	530.00	528.53	527.67	527.60	---	---	530.59	528.96	528.32	527.70
11	529.81	529.62	530.17	530.00	527.60	521.99	---	---	530.99	525.92	527.70	527.57
12	529.65	529.34	530.03	529.53	524.77	522.72	---	---	525.92	524.79	527.57	522.03
13	529.34	528.96	529.53	524.16	524.93	524.39	---	---	524.79	524.60	522.28	521.78
14	528.97	528.78	524.16	524.02	524.71	524.39	---	---	528.97	523.89	527.52	522.28
15	528.78	528.62	524.03	523.77	524.70	523.90	---	---	530.33	528.97	527.58	522.52
16	528.71	528.58	528.66	523.45	526.38	523.70	---	---	531.12	530.33	527.21	522.60
17	529.05	528.54	529.02	528.66	527.94	526.38	---	---	531.35	531.12	523.25	522.77
18	529.10	528.99	529.09	528.88	527.91	526.70	---	---	531.30	530.79	523.54	523.25
19	529.01	528.85	528.89	528.49	526.70	526.31	---	---	530.79	529.39	523.71	523.13
20	528.87	528.69	528.73	528.42	526.31	525.77	---	---	530.19	530.08	523.13	522.75
21	528.78	528.69	528.77	523.97	526.02	525.15	---	---	530.32	529.74	522.76	522.42
22	528.92	528.78	528.77	523.65	525.15	524.85	---	---	529.74	529.20	528.23	522.76
23	528.97	528.84	523.65	523.36	524.85	524.29	---	---	529.35	529.22	528.27	523.01
24	528.84	528.64	523.38	523.19	524.56	524.27	523.48	523.16	529.27	528.47	523.01	522.57
25	528.64	523.18	523.19	522.87	529.60	524.56	528.30	523.10	529.11	528.20	522.58	522.40
26	527.97	523.14	523.18	522.96	529.64	529.12	523.10	522.29	529.28	529.06	522.46	522.38
27	527.84	527.69	528.19	523.18	529.14	528.59	522.73	522.33	529.06	524.10	522.49	522.38
28	528.01	527.71	528.46	523.43	529.41	529.04	527.33	522.68	528.83	524.04	527.57	522.14
29	528.09	523.26	528.06	523.22	529.08	523.63	527.33	526.82	---	---	527.38	522.14
30	527.84	522.80	528.32	523.38	528.32	523.54	528.37	526.83	---	---	527.35	527.05
31	527.71	522.83	---	---	524.09	523.72	530.03	528.37	---	---	527.43	522.28
MONTH	531.47	522.57	530.17	522.71	529.64	521.99	530.03	522.29	531.35	523.89	528.85	521.78

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	523.14	522.89	529.29	524.53	528.05	522.62	524.29	523.65	523.60	522.68
2	528.10	522.21	527.58	522.87	529.67	529.29	529.39	528.05	523.87	523.50	523.60	523.25
3	528.29	522.62	523.13	522.82	529.77	529.67	529.38	528.91	523.68	523.03	523.25	522.83
4	522.62	522.24	523.02	522.27	529.78	529.66	528.93	528.82	523.49	523.25	522.83	522.71
5	527.19	522.13	522.67	522.30	529.77	524.48	529.23	528.89	523.69	523.46	522.78	522.61
6	527.43	527.17	522.70	522.29	524.60	524.11	529.18	528.90	523.74	523.13	522.63	522.29
7	527.40	527.19	522.91	522.22	524.80	524.48	528.91	528.40	523.47	522.82	522.83	522.20
8	527.32	527.22	523.06	522.73	524.48	524.18	528.65	528.35	523.16	522.52	522.94	522.44
9	527.27	526.91	522.73	522.50	528.33	523.92	528.83	523.72	522.89	522.15	522.72	522.41
10	527.79	526.83	522.71	522.34	528.43	523.63	523.72	523.53	522.26	522.09	526.48	522.65
11	528.68	523.94	522.45	522.29	523.63	523.31	523.72	523.58	522.23	522.01	526.53	525.88
12	526.96	526.23	522.62	522.29	523.68	523.26	523.72	523.60	522.70	522.07	525.88	525.18
13	526.69	525.95	522.65	522.52	524.19	523.62	523.72	523.53	522.58	522.49	525.18	524.76
14	525.95	525.23	522.54	522.34	529.13	523.88	523.62	523.12	---	---	524.80	524.47
15	525.23	524.72	522.34	521.94	529.20	529.00	528.16	522.90	523.17	522.41	524.47	524.03
16	524.99	524.69	522.38	521.91	529.75	529.20	527.76	522.63	522.68	522.32	524.03	523.53
17	524.90	524.72	524.65	522.38	529.65	529.18	527.47	522.40	522.67	522.46	523.53	523.13
18	524.93	524.44	527.23	524.42	529.18	523.98	533.66	526.06	522.57	521.96	523.14	522.92
19	524.44	523.91	527.78	527.23	528.69	523.55	526.06	524.97	522.48	522.02	523.17	522.83
20	524.20	523.76	527.79	526.85	528.69	523.74	524.97	524.39	522.63	522.47	523.51	523.17
21	524.68	524.20	526.85	525.80	528.58	523.75	524.57	524.01	522.65	522.50	523.87	523.41
22	524.89	524.68	525.80	525.16	529.02	523.67	524.32	523.89	522.72	522.17	528.40	523.65
23	524.73	524.38	525.16	524.70	529.26	524.06	524.03	523.28	522.64	522.30	528.53	528.26
24	524.51	524.42	524.74	524.38	529.44	529.26	523.47	523.13	523.20	522.62	528.96	528.25
25	524.42	523.97	524.96	524.66	529.44	529.28	523.42	523.03	523.41	523.20	529.45	528.96
26	523.97	523.50	524.91	524.42	529.31	529.16	523.85	523.18	523.25	523.03	529.45	529.26
27	523.50	523.20	526.53	524.80	529.20	524.32	523.78	523.50	523.27	523.09	529.29	529.15
28	523.57	523.39	526.99	526.53	528.71	524.11	523.59	522.86	523.19	522.90	529.39	529.12
29	523.57	523.14	526.97	526.35	528.55	522.99	522.93	522.62	523.22	522.94	529.45	529.34
30	523.20	522.99	526.35	525.60	523.05	522.68	524.57	522.93	522.94	522.31	529.34	529.10
31	---	---	525.62	524.86	---	---	524.52	524.07	522.68	522.14	---	---
MONTH	528.68	522.13	527.79	521.91	529.78	522.68	533.66	522.40	524.29	521.96	529.45	522.20
YEAR	533.66	521.78										

391905084372903. LOCAL NUMBER, BU-1158-8C—Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.4	7.4	7.4	7.4	7.3	7.3	7.4	7.3	7.6	7.6	7.4	7.4
2	7.4	7.4	7.4	7.4	7.3	7.3	7.4	7.4	7.6	7.6	7.5	7.4
3	7.4	7.4	7.4	7.4	7.3	7.3	7.4	7.4	7.6	7.6	7.5	7.5
4	7.4	7.4	7.4	7.4	7.3	7.3	7.4	7.4	7.6	7.5	7.5	7.5
5	7.4	7.4	7.4	7.4	7.3	7.3	7.5	7.4	7.5	7.5	7.5	7.5
6	7.4	7.4	7.4	7.4	7.3	7.3	7.5	7.5	7.5	7.5	7.5	7.5
7	7.4	7.4	7.4	7.4	7.3	7.3	7.5	7.5	7.5	7.5	7.5	7.5
8	7.4	7.4	7.4	7.4	7.3	7.3	---	---	7.5	7.5	7.5	7.5
9	7.4	7.4	7.4	7.3	7.3	7.3	---	---	7.5	7.5	7.5	7.5
10	7.4	7.4	7.4	7.3	7.3	7.3	---	---	7.5	7.5	7.5	7.5
11	7.4	7.4	7.3	7.3	7.4	7.3	---	---	7.5	7.5	7.5	7.5
12	7.4	7.4	7.4	7.3	7.3	7.3	---	---	7.6	7.5	7.5	7.5
13	7.4	7.4	7.4	7.3	7.3	7.3	---	---	7.5	7.5	7.5	7.4
14	7.4	7.4	7.4	7.4	7.3	7.3	---	---	7.6	7.5	7.5	7.5
15	7.4	7.4	7.4	7.4	7.3	7.3	---	---	7.6	7.6	7.5	7.5
16	7.4	7.4	7.4	7.3	7.3	7.3	---	---	7.6	7.6	7.5	7.5
17	7.4	7.4	7.3	7.3	7.3	7.3	---	---	7.6	7.6	7.5	7.5
18	7.4	7.4	7.3	7.3	7.4	7.3	---	---	7.6	7.6	7.5	7.4
19	7.4	7.4	7.3	7.3	7.4	7.4	---	---	7.6	7.6	7.5	7.5
20	7.4	7.4	7.3	7.3	7.4	7.4	---	---	7.6	7.6	7.5	7.5
21	7.4	7.4	7.4	7.3	7.4	7.4	---	---	7.6	7.6	7.5	7.5
22	7.4	7.4	7.4	7.3	7.4	7.4	---	---	7.6	7.5	7.5	7.5
23	7.4	7.4	7.4	7.4	7.4	7.4	---	---	7.5	7.5	7.5	7.5
24	7.4	7.4	7.4	7.4	7.4	7.4	7.6	7.6	7.5	7.5	7.5	7.5
25	7.4	7.4	7.4	7.3	7.4	7.3	7.6	7.6	7.5	7.5	7.5	7.4
26	7.4	7.4	7.3	7.3	7.3	7.3	7.6	7.6	7.5	7.5	7.4	7.4
27	7.4	7.4	7.4	7.3	7.3	7.3	7.6	7.6	7.6	7.5	7.4	7.4
28	7.4	7.4	7.4	7.3	7.3	7.3	7.6	7.6	7.5	7.4	7.4	7.4
29	7.4	7.4	7.3	7.3	7.4	7.3	7.6	7.6	---	---	7.4	7.4
30	7.4	7.4	7.3	7.3	7.4	7.3	7.6	7.6	---	---	7.4	7.4
31	7.4	7.4	---	---	7.4	7.4	7.6	7.6	---	---	7.4	7.4
MONTH	7.4	7.4	7.4	7.3	7.4	7.3	7.6	7.3	7.6	7.4	7.5	7.4

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	7.4	7.4	7.3	7.3	7.2	7.2	7.1	7.1	7.0	7.0
2	7.4	7.4	7.4	7.4	7.3	7.2	7.2	7.2	7.1	7.1	7.0	7.0
3	7.4	7.4	7.4	7.4	7.2	7.2	7.2	7.2	7.1	7.1	7.0	7.0
4	7.4	7.4	7.4	7.4	7.2	7.2	7.2	7.2	7.1	7.1	7.0	6.9
5	7.4	7.4	7.4	7.4	7.3	7.2	7.2	7.2	7.1	7.1	6.9	6.9
6	7.4	7.4	7.4	7.4	7.3	7.2	7.2	7.2	7.1	7.1	6.9	6.9
7	7.4	7.4	7.4	7.4	7.3	7.3	7.2	7.2	7.1	7.1	6.9	6.9
8	7.4	7.4	7.4	7.4	7.3	7.2	7.2	7.2	7.1	7.1	6.9	6.9
9	7.4	7.4	7.4	7.4	7.2	7.2	7.2	7.2	7.1	7.1	6.9	6.9
10	7.4	7.4	7.4	7.4	7.3	7.2	7.2	7.2	7.1	7.1	6.9	6.9
11	7.4	7.3	7.4	7.4	7.2	7.2	7.2	7.2	7.1	7.1	6.9	6.9
12	7.3	7.3	7.4	7.4	7.2	7.2	7.2	7.2	7.1	7.1	6.9	6.9
13	7.3	7.3	7.4	7.4	7.2	7.2	7.2	7.2	7.1	7.1	6.9	6.9
14	7.4	7.3	7.5	7.4	7.2	7.2	7.2	7.2	---	---	6.9	6.9
15	7.4	7.4	7.4	7.4	7.2	7.2	7.2	7.2	7.1	7.1	6.9	6.9
16	7.4	7.4	7.4	7.4	7.2	7.2	7.2	7.1	7.1	7.1	6.9	6.9
17	7.4	7.4	7.4	7.4	7.2	7.2	7.2	7.2	7.1	7.1	6.9	6.9
18	7.4	7.4	7.4	7.4	7.2	7.2	7.2	7.1	7.1	7.1	6.9	6.9
19	7.4	7.4	7.4	7.4	7.2	7.2	7.2	7.2	7.1	7.1	6.9	6.9
20	7.4	7.4	7.4	7.4	7.2	7.2	7.2	7.2	7.1	7.0	6.9	6.9
21	7.4	7.4	7.4	7.4	7.2	7.2	7.2	7.2	7.0	7.0	6.9	6.9
22	7.4	7.4	7.4	7.3	7.2	7.2	7.2	7.1	7.0	7.0	6.9	6.8
23	7.4	7.4	7.4	7.3	7.2	7.2	7.1	7.1	7.0	7.0	6.8	6.8
24	7.4	7.4	7.3	7.3	7.2	7.2	7.1	7.1	7.0	7.0	6.8	6.8
25	7.4	7.4	7.3	7.3	7.2	7.2	7.1	7.1	7.0	7.0	6.8	6.8
26	7.4	7.4	7.3	7.3	7.2	7.2	7.1	7.1	7.0	7.0	6.9	6.8
27	7.4	7.4	7.3	7.3	7.2	7.2	7.1	7.1	7.0	7.0	6.9	6.9
28	7.4	7.4	7.3	7.3	7.2	7.2	7.1	7.1	7.0	7.0	6.9	6.9
29	7.4	7.4	7.3	7.3	7.2	7.2	7.1	7.1	7.0	7.0	6.9	6.9
30	7.4	7.4	7.3	7.3	7.2	7.2	7.1	7.1	7.0	7.0	6.9	6.9
31	---	---	7.3	7.3	---	---	7.1	7.1	7.0	7.0	---	---
MONTH	7.4	7.3	7.5	7.3	7.3	7.2	7.2	7.1	7.1	7.0	7.0	6.8
YEAR	7.6	6.8										

PROJECT DATA
Water Data for Bolton Well Field

391905084372903. LOCAL NUMBER, BU-1158-8C—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

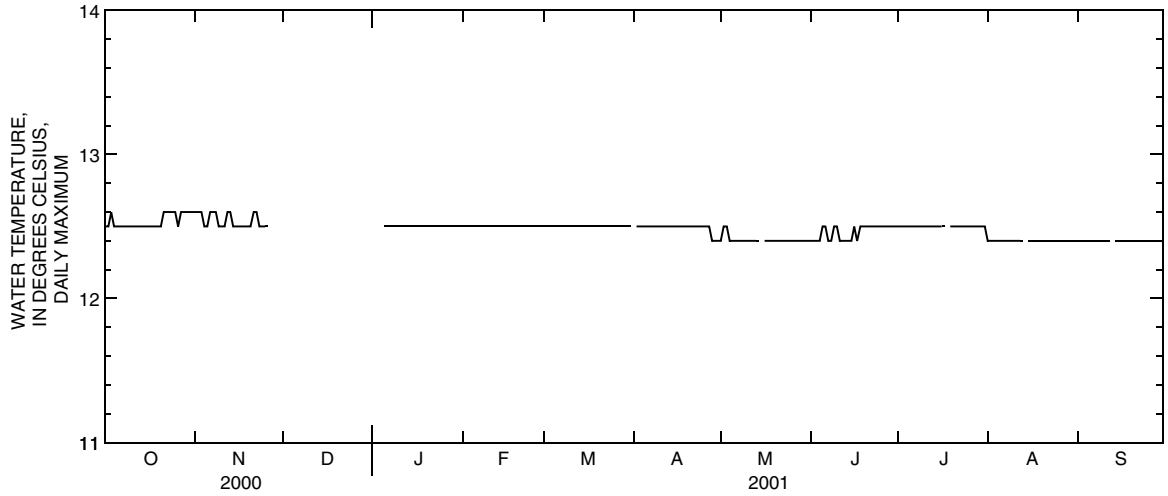
[(90901), USGS National Water Information System parameter code; MF, membrane filtration; col/100mL, colonies per 100 milliliters; <, concentration or value reported is less than that indicated; E, value is estimated from a non-ideal colony count]

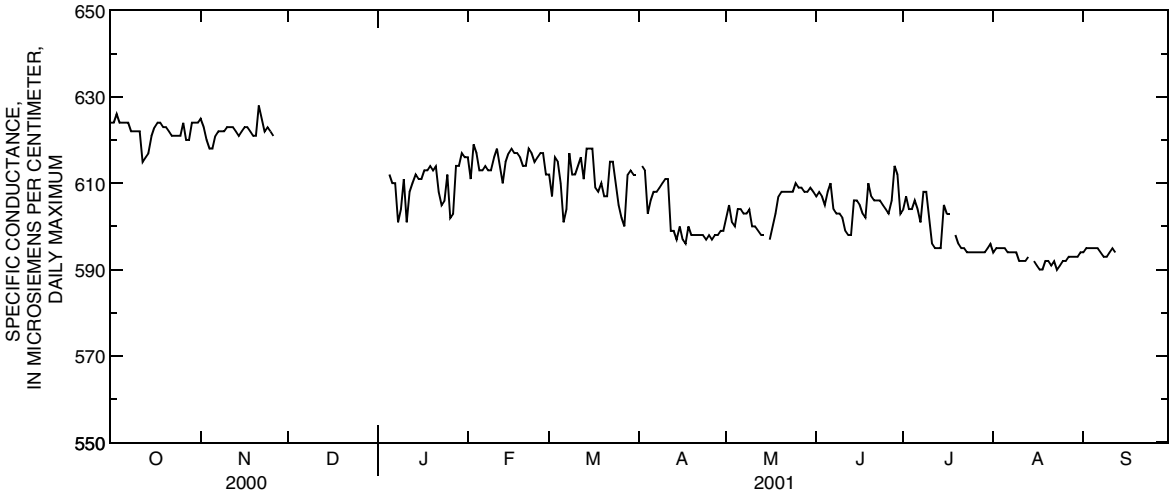
DATE	TIME	E COLI, MI MF, WATER (COL/ 100 ML) (90901)	TOTAL COLI-FORM, MI MF, WATER (COL/ 100 ML) (90900)
OCT			
11...	1055	<1	<1
JAN			
23...	1218	<1	<1
MAR			
13...	1135	<1	<1
APR			
11...	1530	<1	<1
12...	1228	<1	<1
18...	1220	<1	<1
25...	1140	<1	<1
MAY			
07...	1105	<1	<1
15...	0900	<1	<1
17...	0955	<1	<1

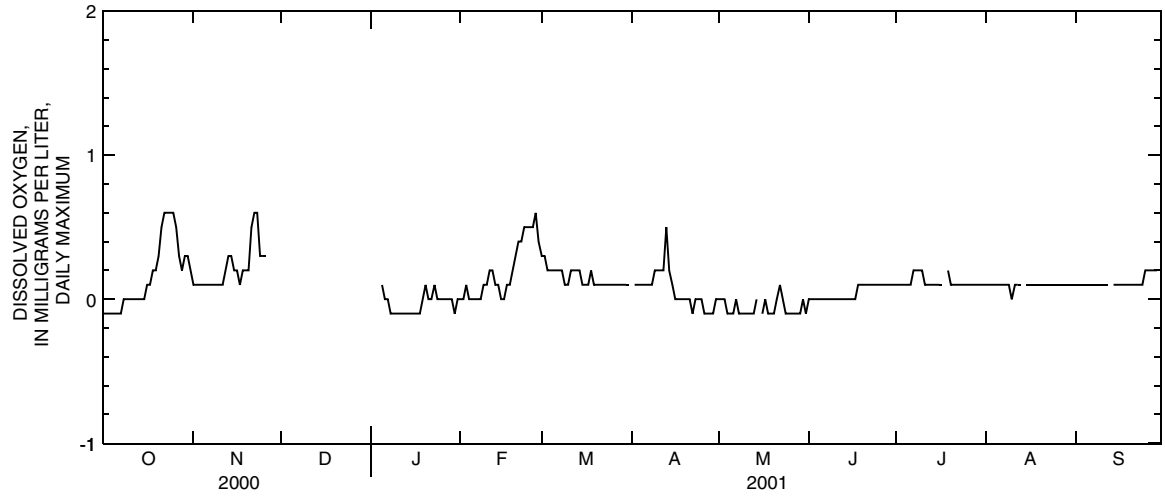
391905084372904. LOCAL NUMBER, BU-1159-8D

LOCATION.—Latitude 39°19′05″, longitude 84°37′29″, Butler County, Hydrologic Unit 05080002.
AQUIFER.—Glacial outwash, sand and gravel; 112OTSH.
WELL CHARACTERISTICS.—Observation well drilled by rotasonic techniques, diameter 4.0 in., depth 185 ft from land surface to bottom of screen.
INSTRUMENTATION.— YSI Model 6920 data sonde with turbidity probe set for 60-minute records. Sonde set at a depth of 183.5 ft below land surface.
DATUM.—Altitude of land surface is 545.75 ft above North American Vertical Datum of 1988 (NAVD of 88). Measuring point is top of inner casing, 2.20 ft above land-surface datum.
REMARK.—This station is part of a network of wells designed to help model flow characteristics from the Great Miami River through the aquifer. Data collection began on July 28, 1999. Negative dissolved oxygen values are due to the resolution of the data sonde and the close proximity of the actual value to zero. This is a non-vented sonde, water level data is not corrected for barometric pressure.
PERIOD OF RECORD.—
WATER TEMPERATURE: July 28, 1999 to current year.
SPECIFIC CONDUCTANCE: July 28, 1999 to current year.
DISSOLVED OXYGEN: July 28, 1999 to current year.
WATER LEVEL ELEVATION: July 28, 1999 to current year.
pH: July 28, 1999 to current year.
EXTREMES FOR PERIOD OF RECORD.—
WATER TEMPERATURE: Maximum, 12.6°C, several days during period of record; Minimum, 12.3°C, Jan. 5, 2000.
SPECIFIC CONDUCTANCE: Maximum, 646 microsiemens per centimeter, Jan. 1 and 12, 2000; Minimum, 585 microsiemens per centimeter, July 21-22, 2001.
DISSOLVED OXYGEN: Maximum, 1.8 milligrams per liter, Aug. 21, 1999; Minimum -0.2 milligrams per liter, several days during period of record.
WATER LEVEL ELEVATION: Maximum daily low, 515.24 ft above NAVD of 88, Dec. 12, 1999; Maximum daily high, 537.90 ft above NAVD of 88, Apr. 9, 2000.
pH: Maximum, 7.5, several days during period of record; Minimum, 7.1, July 6-31, Aug. 1, and Sept. 27-30, 2001.
EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURE: Maximum, 12.6°C, several days during period of record; Minimum, 12.4°C, several days during period of record.
SPECIFIC CONDUCTANCE: Maximum, 628 microsiemens per centimeter, Nov. 21, 2000; Minimum, 585 microsiemens per centimeter, July 21-22, 2001.
DISSOLVED OXYGEN: Maximum, 0.6 milligrams per liter, Oct. 22-25, Nov. 22-23, 2000, and Feb. 27, 2001; Minimum -0.2 milligrams per liter, several days during period of record.
WATER LEVEL ELEVATION: Maximum daily low, 517.09 ft above NAVD of 88, May 16, 2001; Maximum daily high, 532.04 ft above NAVD of 88, Oct. 6-7, 2000.
pH: Maximum, 7.5, Jan. 9-20, 25, 28-31, and Feb. 1, 2001; Minimum, 7.1, July 6-31, Aug. 1, and Sept. 27-30, 2001.

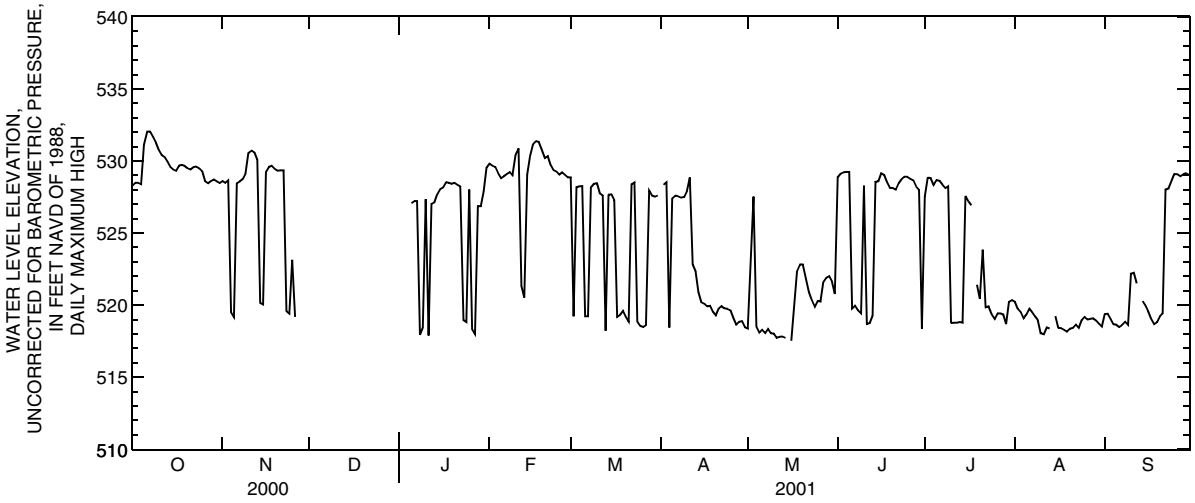
391905084372904. LOCAL NUMBER, BU-1159-8D—Continued

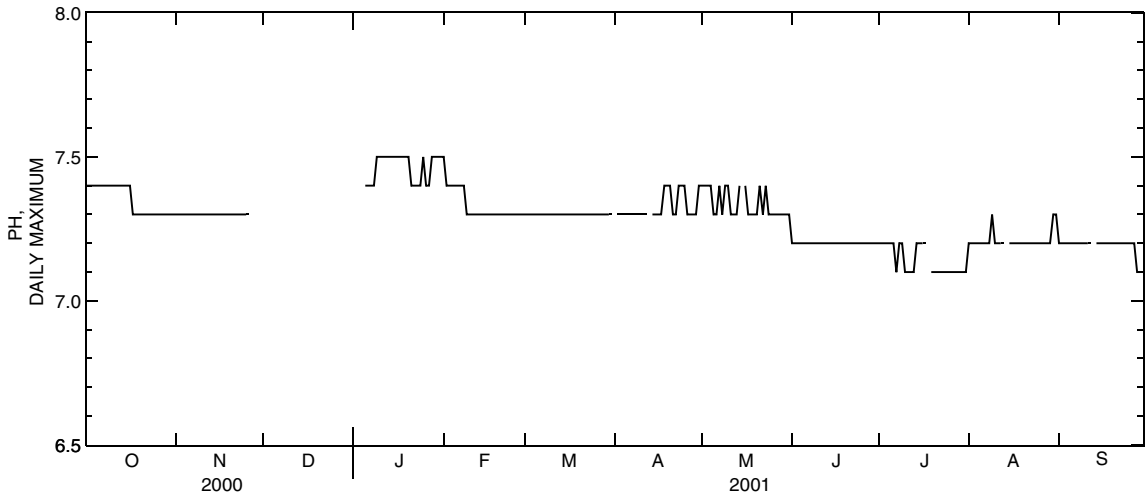






391905084372904. LOCAL NUMBER, BU-1159-8D—Continued





PROJECT DATA
Water Data for Bolton Well Field

391905084372904. LOCAL NUMBER, BU-1159-8D—Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	12.5	12.5	12.6	12.5	---	---	---	---	12.5	12.5	12.5	12.5
2	12.5	12.5	12.6	12.5	---	---	---	---	12.5	12.5	12.5	12.5
3	12.6	12.5	12.6	12.5	---	---	---	---	12.5	12.5	12.5	12.5
4	12.5	12.5	12.5	12.5	---	---	---	---	12.5	12.5	12.5	12.5
5	12.5	12.5	12.5	12.5	---	---	12.5	12.5	12.5	12.5	12.5	12.5
6	12.5	12.5	12.6	12.5	---	---	12.5	12.5	12.5	12.5	12.5	12.5
7	12.5	12.5	12.6	12.5	---	---	12.5	12.5	12.5	12.5	12.5	12.5
8	12.5	12.5	12.6	12.5	---	---	12.5	12.5	12.5	12.5	12.5	12.5
9	12.5	12.5	12.5	12.5	---	---	12.5	12.5	12.5	12.5	12.5	12.5
10	12.5	12.5	12.5	12.5	---	---	12.5	12.5	12.5	12.5	12.5	12.5
11	12.5	12.5	12.5	12.5	---	---	12.5	12.5	12.5	12.5	12.5	12.5
12	12.5	12.5	12.6	12.5	---	---	12.5	12.5	12.5	12.5	12.5	12.5
13	12.5	12.5	12.6	12.5	---	---	12.5	12.5	12.5	12.5	12.5	12.5
14	12.5	12.5	12.5	12.5	---	---	12.5	12.5	12.5	12.5	12.5	12.5
15	12.5	12.5	12.5	12.5	---	---	12.5	12.5	12.5	12.5	12.5	12.5
16	12.5	12.5	12.5	12.5	---	---	12.5	12.4	12.5	12.5	12.5	12.5
17	12.5	12.5	12.5	12.5	---	---	12.5	12.5	12.5	12.5	12.5	12.5
18	12.5	12.5	12.5	12.5	---	---	12.5	12.5	12.5	12.5	12.5	12.5
19	12.5	12.5	12.5	12.5	---	---	12.5	12.5	12.5	12.5	12.5	12.5
20	12.5	12.5	12.5	12.5	---	---	12.5	12.4	12.5	12.5	12.5	12.5
21	12.6	12.5	12.6	12.5	---	---	12.5	12.5	12.5	12.5	12.5	12.5
22	12.6	12.6	12.6	12.5	---	---	12.5	12.5	12.5	12.5	12.5	12.5
23	12.6	12.6	12.5	12.5	---	---	12.5	12.5	12.5	12.5	12.5	12.5
24	12.6	12.6	12.5	12.5	---	---	12.5	12.5	12.5	12.5	12.5	12.5
25	12.6	12.5	12.5	12.5	---	---	12.5	12.5	12.5	12.5	12.5	12.5
26	12.5	12.5	12.5	12.5	---	---	12.5	12.5	12.5	12.5	12.5	12.5
27	12.6	12.5	---	---	---	---	12.5	12.5	12.5	12.5	12.5	12.5
28	12.6	12.6	---	---	---	---	12.5	12.5	12.5	12.5	12.5	12.5
29	12.6	12.5	---	---	---	---	12.5	12.5	---	---	12.5	12.5
30	12.6	12.5	---	---	---	---	12.5	12.5	---	---	12.5	12.5
31	12.6	12.5	---	---	---	---	12.5	12.5	---	---	12.5	12.5
MONTH	12.6	12.5	12.6	12.5	---	---	12.5	12.4	12.5	12.5	12.5	12.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	12.4	12.4	12.4	12.4	12.5	12.5	12.4	12.4	12.4	12.4
2	12.5	12.5	12.5	12.4	12.4	12.4	12.5	12.5	12.4	12.4	12.4	12.4
3	12.5	12.5	12.5	12.4	12.4	12.4	12.5	12.5	12.4	12.4	12.4	12.4
4	12.5	12.5	12.4	12.4	12.4	12.4	12.5	12.5	12.4	12.4	12.4	12.4
5	12.5	12.5	12.4	12.4	12.5	12.4	12.5	12.5	12.4	12.4	12.4	12.4
6	12.5	12.5	12.4	12.4	12.5	12.4	12.5	12.5	12.4	12.4	12.4	12.4
7	12.5	12.5	12.4	12.4	12.4	12.4	12.5	12.5	12.4	12.4	12.4	12.4
8	12.5	12.5	12.4	12.4	12.4	12.4	12.5	12.5	12.4	12.4	12.4	12.4
9	12.5	12.5	12.4	12.4	12.5	12.4	12.5	12.5	12.4	12.4	12.4	12.4
10	12.5	12.5	12.4	12.4	12.5	12.4	12.5	12.5	12.4	12.4	12.4	12.4
11	12.5	12.5	12.4	12.4	12.4	12.4	12.5	12.5	12.4	12.4	12.4	12.4
12	12.5	12.5	12.4	12.4	12.4	12.4	12.5	12.5	12.4	12.4	12.4	12.4
13	12.5	12.5	12.4	12.4	12.4	12.4	12.5	12.5	12.4	12.4	---	---
14	12.5	12.5	12.4	12.4	12.4	12.4	12.5	12.5	---	---	12.4	12.4
15	12.5	12.5	---	---	12.4	12.4	12.5	12.5	12.4	12.4	12.4	12.4
16	12.5	12.5	12.4	12.4	12.5	12.4	12.5	12.5	12.4	12.4	12.4	12.4
17	12.5	12.5	12.4	12.4	12.4	12.4	12.5	12.5	12.4	12.4	12.4	12.4
18	12.5	12.5	12.4	12.4	12.5	12.4	---	---	12.4	12.4	12.4	12.4
19	12.5	12.5	12.4	12.4	12.5	12.4	12.5	12.5	12.4	12.4	12.4	12.4
20	12.5	12.5	12.4	12.4	12.5	12.4	12.5	12.5	12.4	12.4	12.4	12.4
21	12.5	12.5	12.4	12.4	12.5	12.5	12.5	12.5	12.4	12.4	12.4	12.4
22	12.5	12.5	12.4	12.4	12.5	12.4	12.5	12.5	12.4	12.4	12.4	12.4
23	12.5	12.5	12.4	12.4	12.5	12.5	12.5	12.5	12.4	12.4	12.4	12.4
24	12.5	12.5	12.4	12.4	12.5	12.5	12.5	12.5	12.4	12.4	12.4	12.4
25	12.5	12.4	12.4	12.4	12.5	12.5	12.5	12.5	12.4	12.4	12.4	12.4
26	12.5	12.5	12.4	12.4	12.5	12.5	12.5	12.5	12.4	12.4	12.4	12.4
27	12.5	12.4	12.4	12.4	12.5	12.5	12.5	12.5	12.4	12.4	12.4	12.4
28	12.4	12.4	12.4	12.4	12.5	12.5	12.5	12.5	12.4	12.4	12.4	12.4
29	12.4	12.4	12.4	12.4	12.5	12.5	12.5	12.4	12.4	12.4	12.4	12.4
30	12.4	12.4	12.4	12.4	12.5	12.5	12.5	12.4	12.4	12.4	12.4	12.4
31	---	---	12.4	12.4	---	---	12.5	12.4	12.4	12.4	---	---
MONTH	12.5	12.4	12.5	12.4	12.5	12.4	12.5	12.4	12.4	12.4	12.4	12.4
YEAR	12.6	12.4										

391905084372904. LOCAL NUMBER, BU-1159-8D—Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	624	622	625	611	---	---	---	---	616	611	612	601
2	624	622	623	610	---	---	---	---	611	609	607	602
3	626	615	620	608	---	---	---	---	619	606	616	600
4	624	616	618	614	---	---	---	---	617	611	615	609
5	624	621	618	616	---	---	612	600	613	610	610	599
6	624	623	621	609	---	---	610	609	613	612	601	600
7	624	622	622	611	---	---	610	601	614	612	604	600
8	622	621	622	612	---	---	601	598	613	608	617	603
9	622	621	622	620	---	---	604	599	613	609	612	611
10	622	620	623	621	---	---	611	600	616	613	612	610
11	622	611	623	621	---	---	601	599	618	606	614	610
12	615	612	623	616	---	---	608	599	614	601	616	602
13	616	614	622	612	---	---	610	599	610	600	611	597
14	617	615	621	604	---	---	612	610	615	599	618	607
15	621	617	622	615	---	---	611	610	617	614	618	606
16	623	620	623	612	---	---	611	604	618	616	618	606
17	624	621	623	620	---	---	613	611	617	616	609	602
18	624	622	622	620	---	---	613	612	617	615	608	602
19	623	622	621	620	---	---	614	612	616	612	610	603
20	623	620	621	620	---	---	613	606	614	612	607	602
21	622	620	628	613	---	---	614	604	614	613	607	603
22	621	620	625	613	---	---	608	600	618	613	615	603
23	621	619	622	620	---	---	605	593	617	612	615	603
24	621	619	623	621	---	---	606	603	615	613	610	601
25	621	612	622	612	---	---	612	601	616	614	605	602
26	624	619	621	610	---	---	602	601	617	616	602	600
27	620	618	---	---	---	---	603	601	617	606	600	599
28	620	617	---	---	---	---	614	602	612	603	612	600
29	624	613	---	---	---	---	614	612	---	---	613	603
30	624	611	---	---	---	---	617	611	---	---	612	610
31	624	612	---	---	---	---	616	612	---	---	612	602
MONTH	626	611	628	604	---	---	617	593	619	599	618	597

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	602	598	607	606	604	595	594	593	594	593
2	614	598	605	598	608	606	607	604	595	594	595	593
3	613	598	601	597	607	604	604	602	595	593	595	594
4	603	599	600	596	605	604	604	602	595	594	595	594
5	606	598	604	599	608	602	606	603	595	591	595	594
6	608	606	604	598	610	602	604	600	594	592	595	594
7	608	607	603	596	604	602	601	600	594	591	594	588
8	609	607	603	601	603	600	608	599	594	592	593	592
9	610	608	604	600	603	599	608	600	594	587	593	592
10	611	605	600	598	602	598	602	596	592	591	594	592
11	611	599	600	598	599	597	596	595	592	591	595	593
12	599	592	599	597	598	597	595	594	592	590	594	591
13	599	594	598	597	598	597	595	593	593	592	---	---
14	597	595	598	596	606	598	595	593	---	---	---	---
15	600	595	---	---	606	604	605	595	592	590	---	---
16	597	595	597	596	605	601	603	595	591	590	---	---
17	596	595	600	592	603	601	603	597	590	590	---	---
18	600	595	603	598	602	600	---	---	590	589	---	---
19	598	597	607	603	610	601	598	595	592	590	---	---
20	598	596	608	606	607	602	596	594	592	590	---	---
21	598	597	608	606	606	602	595	585	591	590	---	---
22	598	596	608	600	606	600	595	585	592	589	---	---
23	598	596	608	601	606	601	594	593	590	589	---	---
24	597	596	608	607	605	604	594	593	591	590	---	---
25	598	592	610	607	604	603	594	593	592	591	---	---
26	597	595	609	602	603	602	594	593	592	591	---	---
27	598	595	609	607	606	601	594	594	593	591	---	---
28	598	596	608	607	614	605	594	593	593	591	---	---
29	599	598	608	607	612	603	594	593	593	591	---	---
30	599	597	609	605	603	596	595	594	593	591	---	---
31	---	---	608	606	---	---	596	589	594	592	---	---
MONTH	614	592	610	592	614	596	608	585	595	587	595	588
YEAR	628	585										

PROJECT DATA
Water Data for Bolton Well Field

391905084372904. LOCAL NUMBER, BU-1159-8D—Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	-.1	-.1	.1	.1	---	---	---	---	.0	.0	.3	.2
2	-.1	-.1	.1	.1	---	---	---	---	.0	.0	.3	.2
3	-.1	-.1	.1	.1	---	---	---	---	.1	.0	.2	.2
4	-.1	-.1	.1	.0	---	---	---	---	.0	.0	.2	.1
5	-.1	-.1	.1	.0	---	---	.1	-.1	.0	.0	.2	.2
6	-.1	-.1	.1	.0	---	---	.0	-.1	.0	.0	.2	.1
7	-.1	-.1	.1	.0	---	---	.0	-.2	.0	.0	.2	.1
8	.0	-.1	.1	.0	---	---	-.1	-.1	.0	.0	.2	.1
9	.0	-.1	.1	.0	---	---	-.1	-.1	.1	.0	.1	.1
10	.0	.0	.1	.0	---	---	-.1	-.2	.1	.0	.1	.1
11	.0	.0	.1	.1	---	---	-.1	-.1	.2	.1	.2	.1
12	.0	.0	.2	.1	---	---	-.1	-.2	.2	.1	.2	.1
13	.0	.0	.3	.2	---	---	-.1	-.1	.1	.0	.2	.1
14	.0	.0	.3	.1	---	---	-.1	-.1	.1	.0	.2	.1
15	.0	.0	.2	.1	---	---	-.1	-.1	.0	.0	.1	.1
16	.1	.0	.2	.1	---	---	-.1	-.2	.0	.0	.1	.1
17	.1	.1	.1	.1	---	---	-.1	-.1	.1	.0	.1	.1
18	.2	.1	.2	.1	---	---	-.1	-.1	.1	.0	.2	.1
19	.2	.2	.2	.1	---	---	.0	-.1	.2	.1	.1	.1
20	.3	.1	.2	.2	---	---	.1	.0	.3	.2	.1	.1
21	.5	.3	.5	.2	---	---	.0	.0	.4	.3	.1	.0
22	.6	.5	.6	.3	---	---	.0	-.1	.4	.4	.1	.1
23	.6	.5	.6	.2	---	---	.1	-.1	.5	.4	.1	.0
24	.6	.5	.3	.2	---	---	.0	.0	.5	.5	.1	.1
25	.6	.5	.3	.1	---	---	.0	-.1	.5	.4	.1	.0
26	.5	.2	.3	.2	---	---	.0	.0	.5	.4	.1	.0
27	.3	.1	---	---	---	---	.0	-.1	.6	.4	.1	.0
28	.2	.1	---	---	---	---	.0	-.1	.4	.2	.1	.0
29	.3	.1	---	---	---	---	.0	-.1	---	---	.1	.0
30	.3	.2	---	---	---	---	-.1	-.1	---	---	.1	.0
31	.2	.1	---	---	---	---	.0	-.1	---	---	.1	.1
MONTH	.6	-.1	.6	.0	---	---	.1	-.2	.6	.0	.3	.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	.0	-.1	.0	-.1	.1	.1	.1	.0	.1	.1
2	.1	.0	.0	-.1	.0	-.1	.1	.1	.1	.0	.1	.1
3	.1	.1	.0	-.1	.0	-.1	.1	.1	.1	.0	.1	.1
4	.1	.1	-.1	-.1	.0	.0	.1	.1	.1	.0	.1	.1
5	.1	.0	-.1	-.1	.0	.0	.1	.1	.1	.0	.1	.1
6	.1	.0	-.1	-.1	.0	.0	.1	.1	.1	.0	.1	.1
7	.1	.1	.0	-.1	.0	.0	.2	.1	.1	.0	.1	.1
8	.1	.1	-.1	-.1	.0	.0	.2	.2	.1	.0	.1	.1
9	.2	.1	-.1	-.1	.0	.0	.2	.2	.1	.0	.1	.1
10	.2	.2	-.1	-.1	.0	.0	.2	.1	.0	.0	.1	.1
11	.2	.1	-.1	-.1	.0	.0	.1	.1	.1	.0	.1	.1
12	.2	.1	-.1	-.1	.0	.0	.1	.1	.1	.0	.1	.1
13	.5	.1	-.1	-.1	.0	.0	.1	.1	.1	.0	---	---
14	.2	.1	.0	-.1	.0	.0	.1	.1	---	---	.1	.1
15	.1	.0	---	---	.0	.0	.1	.1	.1	.0	.1	.1
16	.0	.0	-.1	-.1	.0	.0	.1	.1	.1	.0	.1	.1
17	.0	.0	.0	-.1	.0	.0	.1	.1	.1	.0	.1	.1
18	.0	.0	-.1	-.1	.1	.0	---	---	.1	.0	.1	.1
19	.0	-.1	-.1	-.1	.1	.0	.2	.1	.1	.0	.1	.1
20	.0	-.1	-.1	-.1	.1	.0	.1	.1	.1	.0	.1	.1
21	.0	-.1	.0	-.1	.1	.0	.1	.1	.1	.0	.1	.1
22	-.1	-.1	.1	-.1	.1	.1	.1	.1	.1	.1	.1	.1
23	.0	-.1	.0	-.1	.1	.0	.1	.1	.1	.1	.1	.1
24	.0	-.1	-.1	-.1	.1	.1	.1	.1	.1	.1	.1	.1
25	.0	-.1	-.1	-.1	.1	.1	.1	.1	.1	.1	.2	.1
26	-.1	-.1	-.1	-.1	.1	.1	.1	.0	.1	.1	.2	.2
27	-.1	-.1	-.1	-.1	.1	.1	.1	.0	.1	.1	.2	.2
28	-.1	-.1	-.1	-.1	.1	.1	.1	.0	.1	.1	.2	.2
29	-.1	-.1	-.1	-.1	.1	.1	.1	.0	.1	.1	.2	.2
30	.0	-.1	.0	-.1	.1	.1	.1	.0	.1	.1	.2	.2
31	---	---	-.1	-.1	---	---	.1	.0	.1	.1	---	---
MONTH	.5	-.1	.1	-.1	.1	-.1	.2	.0	.1	.0	.2	.1
YEAR	.6	-.2										

391905084372904. LOCAL NUMBER, BU-1159-8D—Continued

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	528.28	527.98	528.61	519.26	---	---	---	---	529.83	529.55	528.87	519.22
2	528.49	528.19	528.49	519.22	---	---	---	---	529.70	529.50	519.22	519.06
3	528.48	518.90	528.65	519.01	---	---	---	---	529.60	519.86	528.18	519.04
4	528.39	518.71	519.49	518.95	---	---	---	---	529.15	528.78	528.24	528.05
5	531.16	528.39	519.15	519.00	---	---	527.10	517.70	528.83	528.69	528.26	519.11
6	532.04	531.16	528.47	518.90	---	---	527.23	527.09	528.96	528.70	519.22	519.11
7	532.04	531.70	528.60	519.14	---	---	527.21	517.81	529.11	528.88	519.23	518.96
8	531.70	531.30	528.75	519.20	---	---	517.94	517.74	529.24	528.79	528.18	518.81
9	531.30	530.78	529.13	519.12	---	---	518.46	517.94	529.03	528.37	528.41	528.18
10	530.78	530.41	530.58	529.13	---	---	527.36	517.84	530.50	528.85	528.45	527.75
11	530.43	530.24	530.74	530.58	---	---	517.89	517.78	530.90	521.33	527.75	527.61
12	530.28	529.97	530.60	530.10	---	---	527.04	517.78	521.33	520.31	527.63	518.16
13	529.97	529.59	530.10	520.10	---	---	527.14	517.83	520.54	520.14	518.22	517.72
14	529.60	529.41	520.15	520.02	---	---	527.71	527.14	529.07	519.55	527.67	518.17
15	529.42	529.27	520.06	519.79	---	---	528.06	527.71	530.36	529.07	527.69	518.54
16	529.34	529.22	529.25	519.46	---	---	528.18	518.48	531.16	530.36	527.29	518.50
17	529.68	529.18	529.59	529.25	---	---	528.53	528.18	531.38	531.16	519.20	518.71
18	529.73	529.63	529.65	529.45	---	---	528.49	528.27	531.33	530.82	519.34	519.06
19	529.65	529.49	529.45	529.09	---	---	528.41	528.23	530.82	530.09	519.60	519.17
20	529.51	529.34	529.34	529.00	---	---	528.49	518.80	530.23	530.11	519.17	518.70
21	529.42	529.34	529.36	520.02	---	---	528.35	518.87	530.35	529.74	518.84	518.36
22	529.57	529.42	529.36	519.58	---	---	528.24	518.95	529.74	529.21	528.39	518.65
23	529.61	529.49	519.58	519.38	---	---	518.95	518.43	529.37	529.24	528.54	518.85
24	529.49	529.28	519.40	519.21	---	---	518.82	518.31	529.30	528.43	518.85	518.54
25	529.28	519.20	523.14	518.91	---	---	528.03	518.31	529.06	528.14	518.56	518.42
26	528.60	519.18	519.19	518.96	---	---	518.31	517.53	529.23	529.02	518.50	518.42
27	528.47	528.30	---	---	---	---	517.98	517.56	529.04	519.86	518.62	518.42
28	528.63	528.32	---	---	---	---	526.86	517.94	528.87	519.68	527.96	518.24
29	528.72	519.57	---	---	---	---	526.86	526.30	---	---	527.59	518.24
30	528.60	518.86	---	---	---	---	527.88	526.32	---	---	527.53	527.16
31	528.48	518.69	---	---	---	---	529.55	527.88	---	---	527.62	518.17
MONTH	532.04	518.69	530.74	518.90	---	---	529.55	517.53	531.38	519.55	528.87	517.72

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	518.38	518.02	528.89	519.61	527.53	517.75	520.26	519.34	519.39	518.51
2	528.35	518.07	522.49	517.97	529.13	528.89	528.84	527.53	519.76	519.16	519.40	519.06
3	528.54	518.45	527.53	518.00	529.22	529.13	528.81	528.35	519.54	518.65	519.06	518.66
4	518.46	518.14	518.48	517.59	529.24	529.10	528.36	528.24	519.10	518.86	518.67	518.55
5	527.39	518.05	518.10	517.59	529.24	519.50	528.68	528.33	519.36	519.06	518.64	518.46
6	527.60	527.35	518.28	517.54	519.76	519.20	528.61	528.35	519.75	518.84	518.49	518.14
7	527.56	527.33	518.07	517.42	519.96	519.63	528.35	527.82	519.52	518.53	518.61	517.85
8	527.46	527.36	518.36	518.05	519.65	519.36	528.13	527.78	519.22	518.25	518.84	518.32
9	527.51	526.99	518.06	517.69	519.42	519.15	528.25	518.70	518.96	517.83	518.61	518.29
10	527.93	526.93	518.03	517.48	528.29	518.69	518.75	518.50	518.04	517.75	522.19	518.56
11	528.85	519.63	517.74	517.51	518.69	518.40	518.77	518.62	517.98	517.74	522.24	521.52
12	522.82	521.79	517.80	517.50	518.76	518.37	518.77	518.63	518.46	517.85	521.52	520.84
13	522.36	520.88	517.83	517.71	519.27	518.70	518.82	518.56	518.37	518.26	---	---
14	520.88	520.20	517.74	517.52	528.56	518.95	518.77	518.17	---	---	520.29	519.98
15	520.20	519.70	---	---	528.60	528.41	527.57	518.02	519.25	518.07	519.98	519.55
16	520.11	519.74	517.53	517.09	529.16	523.58	527.19	517.70	518.42	518.00	519.55	519.06
17	519.92	519.71	519.73	517.53	529.04	528.52	526.93	517.48	518.40	518.13	519.06	518.69
18	519.96	519.53	522.37	519.61	528.52	519.22	---	---	518.30	517.72	518.70	518.50
19	519.53	519.01	522.82	522.37	528.14	518.75	521.43	520.45	518.16	517.80	518.81	518.41
20	519.29	518.87	522.82	521.90	528.14	518.94	520.45	519.85	518.36	518.14	519.22	518.81
21	519.75	519.29	521.90	520.92	528.01	518.72	523.86	519.56	518.43	518.28	519.42	518.99
22	519.94	519.75	520.92	520.33	528.45	518.71	519.86	519.39	518.66	517.87	528.01	519.25
23	519.77	519.41	520.33	519.56	528.72	519.08	519.91	518.95	518.42	517.99	528.08	527.81
24	519.73	519.62	519.90	519.57	528.91	528.72	519.36	518.74	518.96	518.41	528.60	527.81
25	519.64	519.11	520.29	519.79	528.91	528.75	519.06	518.63	519.18	518.96	529.10	528.60
26	519.11	518.65	520.26	519.51	528.78	528.63	519.43	518.70	519.00	518.77	529.10	528.92
27	518.65	518.35	521.61	520.00	528.67	519.60	519.43	519.16	519.04	518.84	528.95	528.81
28	518.86	518.63	521.92	521.50	528.21	519.43	519.35	518.64	519.08	518.66	529.10	528.78
29	518.88	518.31	522.02	521.44	527.99	518.10	518.69	518.42	518.94	518.71	529.15	529.04
30	518.47	518.24	521.65	520.77	518.36	517.81	520.26	518.69	518.71	518.14	529.04	528.80
31	---	---	520.79	520.03	---	---	520.35	519.64	518.51	517.98	---	---
MONTH	528.85	518.05	527.53	517.09	529.24	517.81	528.84	517.48	520.26	517.72	529.15	517.85
YEAR	532.04	517.09										

PROJECT DATA
Water Data for Bolton Well Field

391905084372904. LOCAL NUMBER, BU-1159-8D—Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.4	7.4	7.3	7.3	---	---	---	---	7.5	7.4	7.3	7.3
2	7.4	7.4	7.3	7.3	---	---	---	---	7.4	7.4	7.3	7.3
3	7.4	7.3	7.3	7.3	---	---	---	---	7.4	7.4	7.3	7.3
4	7.4	7.4	7.3	7.3	---	---	---	---	7.4	7.4	7.3	7.3
5	7.4	7.4	7.3	7.3	---	---	7.4	7.4	7.4	7.4	7.3	7.3
6	7.4	7.4	7.3	7.3	---	---	7.4	7.4	7.4	7.4	7.3	7.3
7	7.4	7.4	7.3	7.3	---	---	7.4	7.4	7.4	7.4	7.3	7.3
8	7.4	7.4	7.3	7.3	---	---	7.4	7.4	7.4	7.3	7.3	7.3
9	7.4	7.4	7.3	7.3	---	---	7.5	7.4	7.3	7.3	7.3	7.3
10	7.4	7.4	7.3	7.3	---	---	7.5	7.4	7.3	7.3	7.3	7.3
11	7.4	7.3	7.3	7.3	---	---	7.5	7.5	7.3	7.3	7.3	7.3
12	7.4	7.4	7.3	7.3	---	---	7.5	7.4	7.3	7.3	7.3	7.3
13	7.4	7.4	7.3	7.3	---	---	7.5	7.4	7.3	7.3	7.3	7.3
14	7.4	7.4	7.3	7.3	---	---	7.5	7.5	7.3	7.3	7.3	7.3
15	7.4	7.4	7.3	7.3	---	---	7.5	7.5	7.3	7.3	7.3	7.3
16	7.4	7.3	7.3	7.3	---	---	7.5	7.4	7.3	7.3	7.3	7.3
17	7.3	7.3	7.3	7.3	---	---	7.5	7.4	7.3	7.3	7.3	7.3
18	7.3	7.3	7.3	7.3	---	---	7.5	7.4	7.3	7.3	7.3	7.3
19	7.3	7.3	7.3	7.3	---	---	7.5	7.5	7.3	7.3	7.3	7.3
20	7.3	7.3	7.3	7.3	---	---	7.5	7.4	7.3	7.3	7.3	7.3
21	7.3	7.3	7.3	7.3	---	---	7.4	7.4	7.3	7.3	7.3	7.3
22	7.3	7.3	7.3	7.3	---	---	7.4	7.4	7.3	7.3	7.3	7.3
23	7.3	7.3	7.3	7.3	---	---	7.4	7.4	7.3	7.3	7.3	7.3
24	7.3	7.3	7.3	7.3	---	---	7.4	7.4	7.3	7.3	7.3	7.3
25	7.3	7.3	7.3	7.3	---	---	7.5	7.4	7.3	7.3	7.3	7.3
26	7.3	7.3	7.3	7.3	---	---	7.4	7.4	7.3	7.3	7.3	7.3
27	7.3	7.3	---	---	---	---	7.4	7.4	7.3	7.2	7.3	7.3
28	7.3	7.3	---	---	---	---	7.5	7.4	7.3	7.3	7.3	7.3
29	7.3	7.3	---	---	---	---	7.5	7.5	---	---	7.3	7.3
30	7.3	7.3	---	---	---	---	7.5	7.5	---	---	7.3	7.3
31	7.3	7.3	---	---	---	---	7.5	7.5	---	---	7.3	7.3
MONTH	7.4	7.3	7.3	7.3	---	---	7.5	7.4	7.5	7.2	7.3	7.3

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	7.4	7.3	7.2	7.2	7.2	7.2	7.2	7.1	7.2	7.2
2	7.3	7.3	7.4	7.3	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2
3	7.3	7.3	7.4	7.3	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2
4	7.3	7.3	7.4	7.3	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2
5	7.3	7.3	7.3	7.3	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2
6	7.3	7.3	7.3	7.3	7.2	7.2	7.2	7.1	7.2	7.2	7.2	7.2
7	7.3	7.3	7.4	7.3	7.2	7.2	7.1	7.1	7.2	7.2	7.2	7.2
8	7.3	7.3	7.3	7.3	7.2	7.2	7.2	7.1	7.2	7.2	7.2	7.2
9	7.3	7.3	7.4	7.3	7.2	7.2	7.2	7.1	7.3	7.2	7.2	7.2
10	7.3	7.3	7.4	7.3	7.2	7.2	7.1	7.1	7.2	7.2	7.2	7.2
11	7.3	7.3	7.3	7.3	7.2	7.2	7.1	7.1	7.2	7.2	7.2	7.2
12	7.3	7.3	7.3	7.3	7.2	7.2	7.1	7.1	7.2	7.2	7.2	7.2
13	---	---	7.3	7.3	7.2	7.2	7.1	7.1	7.2	7.2	---	---
14	7.3	7.3	7.4	7.3	7.2	7.2	7.2	7.1	---	---	7.2	7.2
15	7.3	7.3	---	---	7.2	7.2	7.2	7.1	7.2	7.2	7.2	7.2
16	7.3	7.3	7.4	7.3	7.2	7.2	7.2	7.1	7.2	7.2	7.2	7.2
17	7.3	7.3	7.3	7.3	7.2	7.2	7.2	7.1	7.2	7.2	7.2	7.2
18	7.4	7.3	7.3	7.3	7.2	7.2	---	---	7.2	7.2	7.2	7.2
19	7.4	7.3	7.3	7.3	7.2	7.2	7.1	7.1	7.2	7.2	7.2	7.2
20	7.4	7.3	7.3	7.3	7.2	7.2	7.1	7.1	7.2	7.2	7.2	7.2
21	7.3	7.3	7.4	7.3	7.2	7.2	7.1	7.1	7.2	7.2	7.2	7.2
22	7.3	7.3	7.3	7.3	7.2	7.2	7.1	7.1	7.2	7.2	7.2	7.2
23	7.4	7.3	7.4	7.3	7.2	7.2	7.1	7.1	7.2	7.2	7.2	7.2
24	7.4	7.3	7.3	7.3	7.2	7.2	7.1	7.1	7.2	7.2	7.2	7.2
25	7.4	7.3	7.3	7.3	7.2	7.2	7.1	7.1	7.2	7.2	7.2	7.2
26	7.3	7.3	7.3	7.3	7.2	7.2	7.1	7.1	7.2	7.2	7.2	7.2
27	7.3	7.3	7.3	7.3	7.2	7.2	7.1	7.1	7.2	7.2	7.2	7.1
28	7.3	7.3	7.3	7.3	7.2	7.2	7.1	7.1	7.2	7.2	7.1	7.1
29	7.3	7.3	7.3	7.3	7.2	7.2	7.1	7.1	7.2	7.2	7.1	7.1
30	7.4	7.3	7.3	7.3	7.2	7.2	7.1	7.1	7.3	7.2	7.1	7.1
31	---	---	7.3	7.2	---	---	7.1	7.1	7.3	7.2	---	---
MONTH	7.4	7.3	7.4	7.2	7.2	7.2	7.2	7.1	7.3	7.1	7.2	7.1
YEAR	7.5	7.1										

391905084372904. LOCAL NUMBER, BU-1159-8D—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(90901), USGS National Water Information System parameter code; MF, membrane filtration; col/100mL, colonies per 100 milliliters; <, concentration or value reported is less than that indicated; E, value is estimated from a non-ideal colony count]

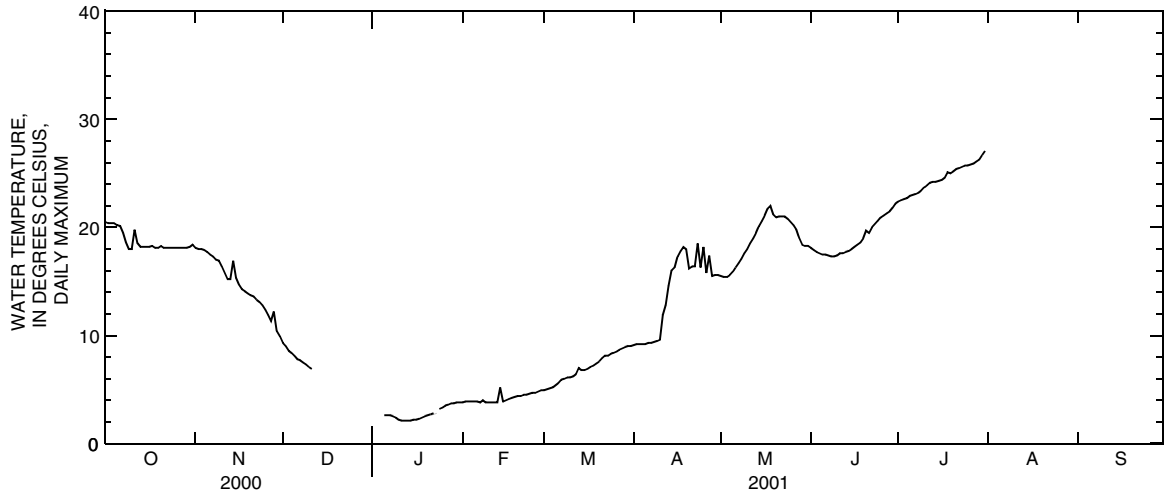
DATE	TIME	E COLI, MI MF, WATER (COL/ 100 ML) (90901)	TOTAL COLI-FORM, MI MF, WATER (COL/ 100 ML) (90900)
OCT			
11...	1100	<1	<1
JAN			
23...	1155	<1	<1
MAR			
13...	1135	<1	<1
APR			
11...	1445	<1	E1
12...	1223	<1	<1
18...	1155	<1	<1
25...	1145	<1	<1
MAY			
07...	1135	<1	<1
15...	0910	<1	<1
17...	0950	<1	<1

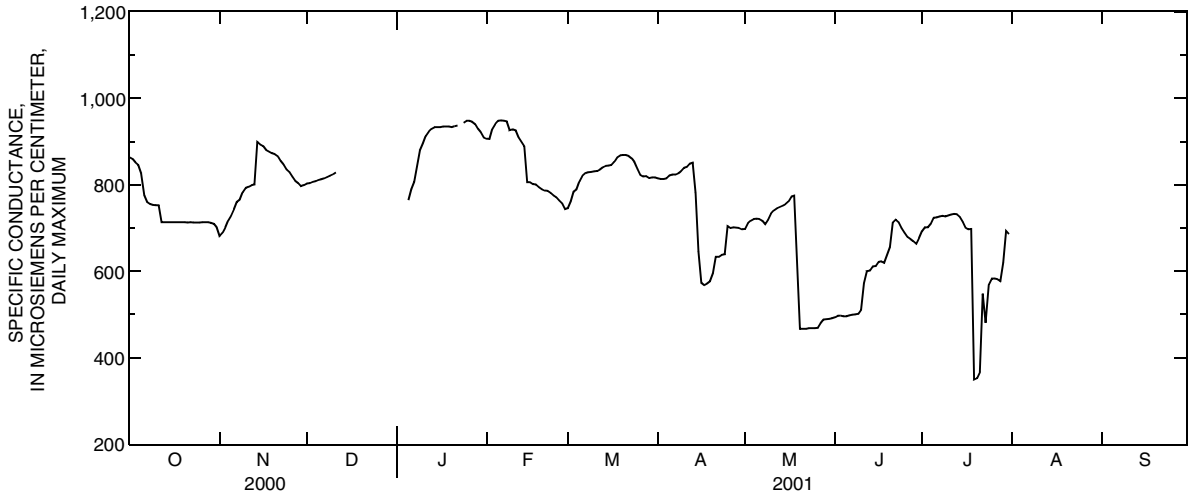
PROJECT DATA
Water Data for Bolton Well Field

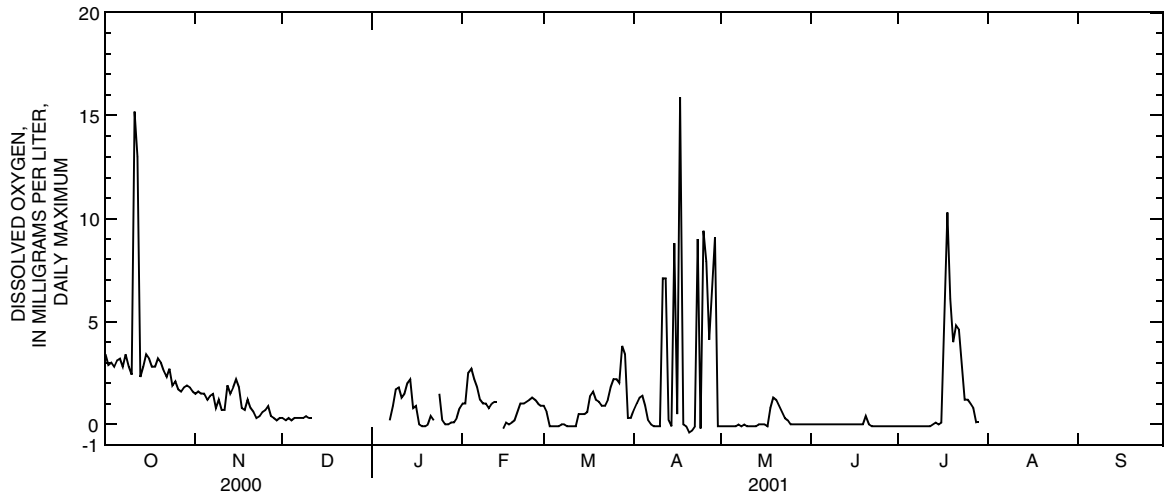
391905084372905. LOCAL NUMBER, BU-1160-8I

LOCATION.—Latitude 39°19′05″, longitude 84°37′29″, Butler County, Hydrologic Unit 05080002.
AQUIFER.—Glacial outwash, sand and gravel; 112OTSH.
WELL CHARACTERISTICS.—Inclined observation well drilled at 20 degree angle from horizontal by rotasonic techniques, diameter 4.0 in., depth 55 ft from land surface to bottom of screen.
INSTRUMENTATION.—YSI Model 6920 data sonde with turbidity probe set for 60-minute records. Sonde set at an altitude of 515.80 feet above North American Vertical Datum of 1988 (NAVD of 88). Elevation estimated from angle of well (inclinometer) and length to transducer.
DATUM.—Altitude of land surface is 532.88 ft above North American Vertical Datum of 1988 (NAVD of 88). Measuring point is top of inner casing, 3.05 ft above land-surface datum.
REMARK.—This station is part of a network of wells designed to help model flow characteristics from the Great Miami River through the aquifer. Data collection began on November 4, 1999. Negative turbidity and dissolved oxygen values are due to the resolution of the data sonde and the close proximity of the actual value to zero.
PERIOD OF RECORD.—
WATER TEMPERATURE: November 4, 1999 to current year.
SPECIFIC CONDUCTANCE: November 4, 1999 to current year.
DISSOLVED OXYGEN: November 4, 1999 to current year.
WATER LEVEL ELEVATION: November 4, 1999 to current year.
pH: November 4, 1999 to current year.
TURBIDITY: November 4, 1999 to current year.
EXTREMES FOR PERIOD OF RECORD.—
WATER TEMPERATURE: Maximum, 27.2°C, Sept. 8, 2000; Minimum, 2.0°C, Jan. 12-13, 2001.
SPECIFIC CONDUCTANCE: Maximum, 1200 microsiemens per centimeter, Feb. 6 and 7, 2000; Minimum, 341 microsiemens per centimeter, July 18, 2001.
DISSOLVED OXYGEN: Maximum, 15.9 milligrams per liter, Apr. 17, 2001; Minimum, -5.4 milligrams per liter, April 11, 2001.
WATER LEVEL ELEVATION: Maximum daily low, 517.98 ft above NAVD of 88, Sept. 19, 2000; Maximum daily high, 537.67 ft above NAVD of 88, July 18, 2001.
pH: Maximum, 8.8, Nov. 14, 2000; Minimum, 6.7, Mar. 21, 2000.
TURBIDITY: Maximum, 1200 NTU, Jan. 3, 4, Feb. 8, and Apr. 12, 2000; Minimum, -3.7 NTU, Aug. 6-8, 2000.
EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURE: Maximum, 27.2°C, Sept. 8, 2000; Minimum, 2.0°C, Jan. 12-13, 2001.
SPECIFIC CONDUCTANCE: Maximum, 949 microsiemens per centimeter, Feb. 6, 2001; Minimum, 341 microsiemens per centimeter, July 18, 2001.
DISSOLVED OXYGEN: Maximum, 15.9 milligrams per liter, Apr. 17, 2001; Minimum, -5.4 milligrams per liter, Apr. 11, 2001.
WATER LEVEL ELEVATION: Maximum daily low, 522.57 ft above NAVD of 88, Oct. 4, 2000; Maximum daily high, 537.67 ft above NAVD of 88, July 18, 2001.
pH: Maximum, 8.8, Nov. 14, 2000; Minimum, 6.8, May 23-26, 2001.
TURBIDITY: Maximum, 700 NTU, July 18, 2001; Minimum, -3.6 NTU, Oct. 6, 7, 17, 25, and 26, 2001.

391905084372905. LOCAL NUMBER, BU-1160-8I—Continued

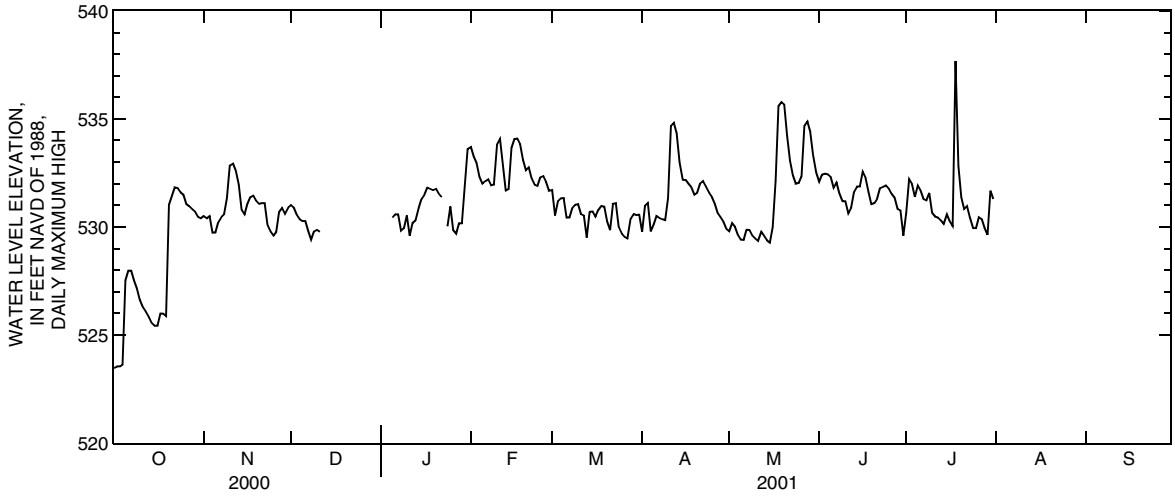


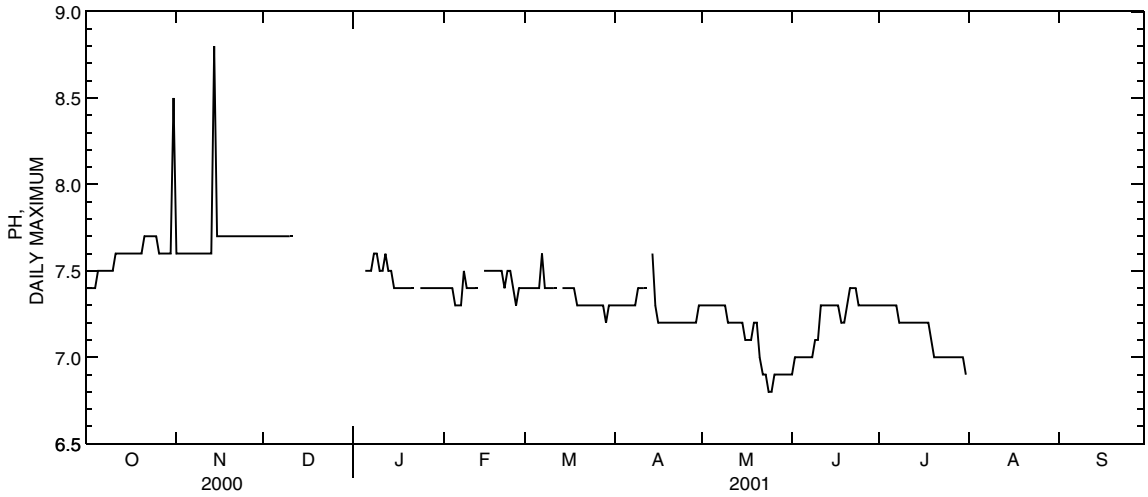


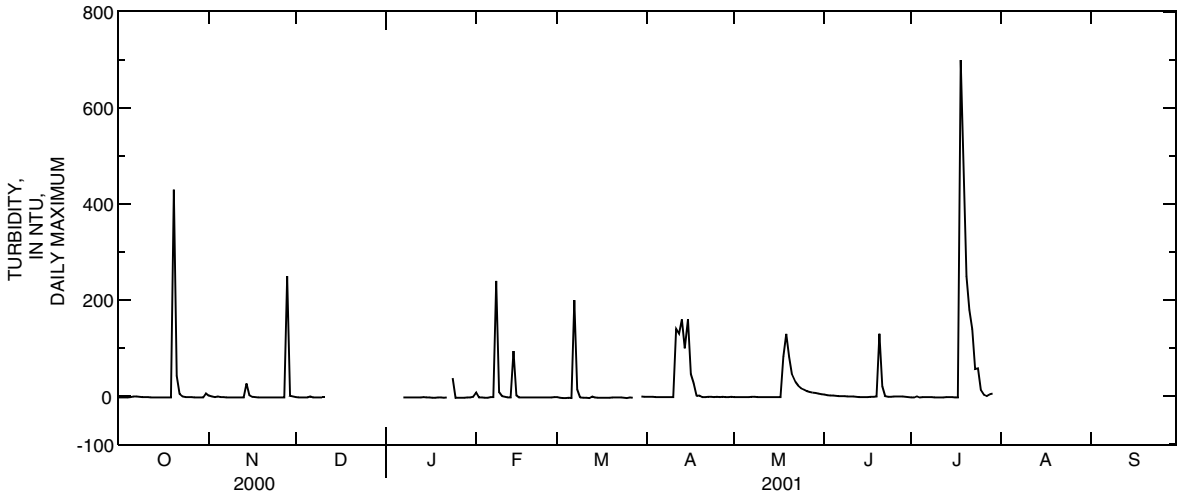


PROJECT DATA
Water Data for Bolton Well Field

391905084372905. LOCAL NUMBER, BU-1160-8I—Continued







391905084372905. LOCAL NUMBER, BU-1160-8I—Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	20.5	20.4	18.1	18.0	9.3	9.0	---	---	3.8	3.8	4.9	4.9
2	20.4	20.4	18.0	17.9	9.0	8.6	---	---	3.9	3.8	5.0	4.9
3	20.4	20.3	18.0	17.9	8.6	8.4	---	---	3.9	3.9	5.1	5.0
4	20.4	20.2	17.9	17.7	8.4	8.1	---	---	3.9	3.9	5.2	5.1
5	20.2	20.1	17.7	17.5	8.1	7.8	2.6	2.3	3.9	3.9	5.4	5.2
6	20.1	19.5	17.5	17.3	7.8	7.7	2.6	2.6	3.9	3.8	5.6	5.4
7	19.5	18.6	17.3	17.0	7.7	7.5	2.6	2.5	3.8	3.8	5.9	5.6
8	18.6	18.0	17.0	16.9	7.5	7.3	2.5	2.4	4.0	3.8	6.0	5.8
9	18.0	17.8	16.9	16.4	7.3	7.1	2.4	2.2	3.8	3.8	6.1	6.0
10	18.0	17.9	16.4	15.8	7.1	6.9	2.2	2.1	3.8	3.8	6.1	6.1
11	19.8	18.0	15.8	15.2	6.9	6.8	2.1	2.1	3.8	3.8	6.2	6.1
12	18.5	18.2	15.2	15.1	---	---	2.1	2.0	3.8	3.8	6.4	6.2
13	18.2	18.2	15.2	15.1	---	---	2.1	2.0	3.8	3.8	7.0	6.4
14	18.2	18.2	16.9	15.1	---	---	2.1	2.1	5.2	3.8	6.8	6.7
15	18.2	18.2	15.3	14.7	---	---	2.2	2.1	3.9	3.9	6.8	6.8
16	18.2	18.2	14.7	14.3	---	---	2.2	2.2	4.0	3.9	6.9	6.8
17	18.3	18.1	14.3	14.1	---	---	2.3	2.2	4.1	4.0	7.1	6.9
18	18.1	18.1	14.1	13.9	---	---	2.4	2.3	4.2	4.1	7.2	7.1
19	18.1	18.1	13.9	13.7	---	---	2.5	2.4	4.3	4.2	7.4	7.2
20	18.3	18.1	13.7	13.5	---	---	2.6	2.5	4.4	4.3	7.6	7.4
21	18.1	18.1	13.6	13.3	---	---	2.7	2.6	4.4	4.4	7.9	7.6
22	18.1	18.1	13.3	13.1	---	---	2.8	2.7	4.5	4.4	8.1	7.9
23	18.1	18.1	13.1	12.8	---	---	---	---	4.5	4.5	8.1	8.1
24	18.1	18.1	12.8	12.4	---	---	3.2	3.1	4.6	4.5	8.3	8.1
25	18.1	18.1	12.4	11.9	---	---	3.3	3.2	4.7	4.6	8.4	8.3
26	18.1	18.1	11.9	11.3	---	---	3.5	3.3	4.7	4.7	8.5	8.4
27	18.1	18.1	11.3	10.6	---	---	3.6	3.5	4.8	4.7	8.7	8.5
28	18.1	18.1	12.2	10.4	---	---	3.7	3.6	4.9	4.8	8.8	8.7
29	18.1	18.1	10.4	9.9	---	---	3.7	3.7	---	---	8.9	8.8
30	18.2	18.1	9.9	9.3	---	---	3.8	3.7	---	---	9.0	8.9
31	18.4	18.1	---	---	---	---	3.8	3.8	---	---	9.0	9.0
MONTH	20.5	17.8	18.1	9.3	9.3	6.8	3.8	2.0	5.2	3.8	9.0	4.9

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.1	9.0	15.5	15.4	18.1	17.9	22.4	22.2	---	---	---	---
2	9.2	9.1	15.4	15.4	17.9	17.7	22.5	22.4	---	---	---	---
3	9.2	9.2	15.4	15.4	17.7	17.6	22.6	22.5	---	---	---	---
4	9.2	9.2	15.6	15.4	17.6	17.5	22.7	22.6	---	---	---	---
5	9.2	9.2	15.9	15.6	17.5	17.5	22.9	22.7	---	---	---	---
6	9.3	9.2	16.3	15.9	17.5	17.4	23.0	22.9	---	---	---	---
7	9.3	9.3	16.7	16.3	17.4	17.3	23.1	23.0	---	---	---	---
8	9.4	9.3	17.1	16.7	17.3	17.3	23.2	23.1	---	---	---	---
9	9.5	9.4	17.6	17.1	17.3	17.3	23.4	23.2	---	---	---	---
10	9.6	9.5	18.0	17.6	17.4	17.3	23.7	23.4	---	---	---	---
11	11.9	9.6	18.5	18.0	17.6	17.4	23.9	23.7	---	---	---	---
12	12.8	11.1	19.0	18.5	17.6	17.6	24.1	23.9	---	---	---	---
13	14.6	11.1	19.5	19.0	17.7	17.6	24.2	24.1	---	---	---	---
14	16.0	12.4	20.1	19.5	17.8	17.7	24.2	24.2	---	---	---	---
15	16.3	13.8	20.6	20.1	18.0	17.8	24.3	24.2	---	---	---	---
16	17.3	14.6	21.1	20.6	18.2	18.0	24.4	24.3	---	---	---	---
17	17.8	15.3	21.7	21.1	18.4	18.2	24.6	24.4	---	---	---	---
18	18.2	15.8	22.0	21.2	18.6	18.4	25.1	24.0	---	---	---	---
19	18.0	15.8	21.2	20.6	19.0	18.6	25.0	24.5	---	---	---	---
20	16.2	16.0	20.9	20.5	19.7	19.0	25.2	25.0	---	---	---	---
21	16.4	16.2	21.0	20.9	19.5	19.3	25.4	25.2	---	---	---	---
22	16.4	16.3	21.0	21.0	20.0	19.5	25.5	25.4	---	---	---	---
23	18.5	16.3	21.0	20.8	20.3	20.0	25.6	25.5	---	---	---	---
24	16.3	16.0	20.8	20.5	20.6	20.3	25.7	25.6	---	---	---	---
25	18.2	15.8	20.5	20.2	20.9	20.6	25.7	25.7	---	---	---	---
26	15.8	15.5	20.2	19.8	21.1	20.9	25.8	25.7	---	---	---	---
27	17.4	15.4	19.8	19.0	21.3	21.1	25.9	25.8	---	---	---	---
28	15.5	15.5	19.0	18.4	21.5	21.3	26.1	25.9	---	---	---	---
29	15.6	15.5	18.4	18.3	21.8	21.5	26.3	26.1	---	---	---	---
30	15.6	15.5	18.3	18.3	22.2	21.8	26.7	26.3	---	---	---	---
31	---	---	18.3	18.1	---	---	27.1	26.7	---	---	---	---
MONTH	18.5	9.0	22.0	15.4	22.2	17.3	27.1	22.2	---	---	---	---
YEAR	27.1	2.0										

PROJECT DATA
Water Data for Bolton Well Field

391905084372905. LOCAL NUMBER, BU-1160-8I—Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	864	859	682	680	803	796	---	---	907	902	746	741
2	860	852	689	682	804	800	---	---	906	902	762	745
3	852	846	702	689	807	803	---	---	930	904	785	761
4	846	827	718	702	808	805	---	---	941	930	790	784
5	827	776	729	718	811	807	765	642	948	939	808	789
6	776	760	744	729	813	809	790	765	949	946	821	807
7	760	756	761	744	815	811	807	784	948	944	827	821
8	756	753	766	760	818	814	845	807	947	924	829	823
9	754	753	783	766	822	817	880	845	927	925	830	827
10	753	752	793	782	825	821	896	879	928	925	831	828
11	753	714	796	792	829	824	914	896	926	910	832	829
12	714	714	799	795	---	---	923	912	910	898	836	831
13	714	714	801	798	---	---	930	920	899	888	841	830
14	714	714	899	801	---	---	934	928	889	638	844	840
15	714	714	894	889	---	---	934	930	806	802	845	842
16	714	714	890	881	---	---	934	930	806	802	846	843
17	714	713	881	876	---	---	935	932	802	799	854	846
18	714	714	877	872	---	---	935	931	801	794	864	853
19	714	714	874	870	---	---	935	931	795	789	868	864
20	714	711	871	866	---	---	934	931	790	785	869	866
21	713	711	866	854	---	---	936	930	787	783	869	866
22	714	711	855	845	---	---	937	933	786	780	867	862
23	713	711	847	836	---	---	---	---	782	775	862	853
24	713	711	836	827	---	---	944	907	776	771	853	837
25	713	711	830	818	---	---	948	944	771	764	837	823
26	714	711	819	809	---	---	948	943	764	757	823	817
27	714	712	810	802	---	---	946	940	757	743	819	817
28	714	711	805	785	---	---	941	929	744	741	820	771
29	712	709	797	792	---	---	930	920	---	---	816	773
30	710	701	799	795	---	---	922	908	---	---	817	814
31	702	680	---	---	---	---	910	904	---	---	817	813
MONTH	864	680	899	680	829	796	948	642	949	638	869	741

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	815	811	698	692	494	491	693	677	---	---	---	---
2	814	810	711	698	497	494	702	692	---	---	---	---
3	814	809	717	710	497	495	702	700	---	---	---	---
4	815	809	721	716	496	494	710	702	---	---	---	---
5	822	815	722	720	496	494	724	709	---	---	---	---
6	824	820	721	716	498	493	725	723	---	---	---	---
7	824	820	717	706	499	496	727	724	---	---	---	---
8	827	822	709	704	500	498	728	725	---	---	---	---
9	832	826	719	709	502	498	727	726	---	---	---	---
10	839	830	734	719	511	502	729	726	---	---	---	---
11	842	616	741	733	573	506	731	728	---	---	---	---
12	849	581	746	741	600	573	733	730	---	---	---	---
13	851	477	749	745	602	599	732	726	---	---	---	---
14	782	387	752	747	611	601	726	714	---	---	---	---
15	646	449	756	751	612	610	715	701	---	---	---	---
16	574	423	762	756	622	610	701	690	---	---	---	---
17	568	358	773	762	623	618	697	688	---	---	---	---
18	572	352	775	624	619	614	698	341	---	---	---	---
19	577	366	624	466	637	609	350	344	---	---	---	---
20	595	577	467	465	656	635	353	350	---	---	---	---
21	634	595	467	465	713	656	367	353	---	---	---	---
22	634	592	467	466	719	705	548	360	---	---	---	---
23	638	472	468	465	714	699	481	375	---	---	---	---
24	639	622	468	466	700	690	570	375	---	---	---	---
25	705	438	468	466	690	680	583	566	---	---	---	---
26	700	698	469	466	680	675	583	576	---	---	---	---
27	702	462	480	468	675	670	582	575	---	---	---	---
28	701	698	488	480	670	663	577	566	---	---	---	---
29	700	696	489	487	664	660	620	564	---	---	---	---
30	697	691	490	488	677	661	694	620	---	---	---	---
31	---	---	491	488	---	---	686	672	---	---	---	---
MONTH	851	352	775	465	719	491	733	341	---	---	---	---
YEAR	949	341										

391905084372905. LOCAL NUMBER, BU-1160-8I—Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	3.4	1.5	1.5	-.9	.3	.1	---	---	1.0	.8	.9	.4
2	2.9	1.0	1.6	-1.8	.2	-.1	---	---	1.0	.8	.6	-.1
3	3.0	1.0	1.5	-.8	.3	-.1	---	---	2.5	1.0	-.1	-.1
4	2.8	1.1	1.5	-.3	.2	-.1	---	---	2.7	2.0	-.1	-.1
5	3.1	1.1	1.2	-.9	.3	.1	---	---	2.2	1.8	-.1	-.1
6	3.2	1.1	1.4	-.9	.3	.1	---	---	1.8	1.2	-.1	-.1
7	2.8	1.3	1.5	-.5	.3	-.2	.2	.2	1.2	1.0	.0	-.7
8	3.4	.2	.8	-1.3	.3	.0	.9	.2	1.0	.4	.0	-.1
9	2.8	.9	1.2	-.9	.4	.0	1.7	.9	1.0	.8	-.1	-.2
10	2.4	.2	.7	-.6	.3	-.1	1.8	1.2	.8	.6	-.1	-.2
11	15.2	.2	.7	-.9	.3	.0	1.3	1.0	1.0	.7	-.1	-.2
12	13.0	.2	1.9	-.6	---	---	1.5	1.2	1.1	1.0	-.1	-.2
13	2.3	-1.3	1.5	-1.6	---	---	2.0	1.5	1.1	1.0	.5	-1.0
14	2.8	-.7	1.8	-4.8	---	---	2.2	.8	---	---	.5	.3
15	3.4	-1.0	2.2	-2.6	---	---	.8	.2	-.2	-.3	.5	.3
16	3.2	.3	1.8	-1.0	---	---	.9	.0	.1	-.2	.6	.3
17	2.8	.9	.8	-1.0	---	---	.0	-.1	.0	-.1	1.4	.6
18	2.8	.3	.7	-.6	---	---	-.1	-.1	.1	.0	1.6	1.2
19	3.2	-2.7	1.2	-.4	---	---	-.1	-.1	.2	.1	1.2	.9
20	3.0	.2	.8	-1.2	---	---	.0	-.1	.6	.2	1.1	.9
21	2.6	.1	.6	-.1	---	---	.4	-.1	1.0	.5	.9	.7
22	2.3	-2.5	.3	.0	---	---	.2	.1	1.0	.9	.9	.7
23	2.7	.5	.4	-.1	---	---	---	---	1.1	.9	1.2	.8
24	1.9	-.1	.6	-.2	---	---	1.5	.2	1.2	1.1	1.8	1.1
25	2.1	-.2	.7	-.3	---	---	.2	.0	1.3	1.1	2.2	1.7
26	1.7	-1.2	.9	-.4	---	---	.0	.0	1.2	.9	2.2	2.0
27	1.6	-.4	.4	-.2	---	---	.0	-.1	1.0	.4	2.0	.7
28	1.8	-.8	.3	-1.3	---	---	.1	-.1	.9	.0	3.8	.6
29	1.9	.0	.2	.0	---	---	.1	.0	---	---	3.4	.3
30	1.8	-1.6	.3	.0	---	---	.3	.0	---	---	.3	.2
31	1.6	-1.8	---	---	---	---	.8	.3	---	---	.3	.2
MONTH	15.2	-2.7	2.2	-4.8	.4	-.2	2.2	-.1	2.7	-.3	3.8	-1.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	.7	.2	-.1	-.1	.0	.0	-.1	-.1	---	---	---	---
2	1.0	.7	-.1	-.1	.0	.0	-.1	-.1	---	---	---	---
3	1.3	.8	-.1	-.1	.0	.0	-.1	-.1	---	---	---	---
4	1.4	.9	-.1	-.1	.0	.0	-.1	-.1	---	---	---	---
5	.9	.2	-.1	-.1	.0	.0	-.1	-.1	---	---	---	---
6	.2	.0	-.1	-.1	.0	.0	-.1	-.1	---	---	---	---
7	.0	-.1	.0	-.1	.0	.0	-.1	-.1	---	---	---	---
8	-.1	-.1	-.1	-.1	.0	.0	-.1	-.1	---	---	---	---
9	-.1	-.1	.0	-.1	.0	.0	-.1	-.1	---	---	---	---
10	-.1	-.2	-.1	-.1	.0	.0	-.1	-.1	---	---	---	---
11	7.1	-5.4	-.1	-.1	.0	.0	-.1	-.1	---	---	---	---
12	7.1	-5.3	-.1	-.1	.0	.0	-.1	-.1	---	---	---	---
13	.2	-5.2	-.1	-.1	.0	.0	.0	-.1	---	---	---	---
14	-.1	-5.1	.0	-.1	.0	.0	.1	.0	---	---	---	---
15	8.8	-.3	.0	-.1	.0	.0	.0	.0	---	---	---	---
16	.5	-4.8	.0	-.1	.0	.0	.1	.0	---	---	---	---
17	15.9	-4.8	-.1	-.1	.0	.0	4.7	.0	---	---	---	---
18	.0	-4.7	.8	-.1	.0	.0	10.3	4.0	---	---	---	---
19	-.1	-4.7	1.3	.8	.0	.0	6.1	3.5	---	---	---	---
20	-.4	-.4	1.2	.9	.4	.0	4.0	3.1	---	---	---	---
21	-.3	-.4	.9	.6	.0	-.1	4.8	3.7	---	---	---	---
22	-.1	-.3	.6	.3	-.1	-.1	4.6	2.6	---	---	---	---
23	9.0	-4.9	.3	.2	-.1	-.1	2.8	.6	---	---	---	---
24	-.2	-.3	.2	.0	-.1	-.1	1.2	.1	---	---	---	---
25	9.4	-4.7	.0	.0	-.1	-.1	1.2	.2	---	---	---	---
26	7.9	-.1	.0	.0	-.1	-.1	1.0	.2	---	---	---	---
27	4.1	-5.0	.0	.0	-.1	-.1	.8	.1	---	---	---	---
28	6.7	3.8	.0	.0	-.1	-.1	.1	.0	---	---	---	---
29	9.1	-.1	.0	.0	-.1	-.1	.1	.0	---	---	---	---
30	-.1	-.1	.0	.0	-.1	-.1	---	---	---	---	---	---
31	---	---	.0	.0	---	---	---	---	---	---	---	---
MONTH	15.9	-5.4	1.3	-.1	.4	-.1	10.3	-.1	---	---	---	---
YEAR	15.9	-5.4										

PROJECT DATA
Water Data for Bolton Well Field

391905084372905. LOCAL NUMBER, BU-1160-8I—Continued

WATER LEVEL ELEVATION, FEET NAVD OF 1988, DATUM CORRECTED, WATER YEAR OCTOBER 2000 TO SEPTEMBER 20001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	523.48	---	530.51	529.54	531.01	530.15	---	---	533.71	533.26	531.71	530.54
2	523.54	523.32	530.40	529.45	530.90	530.52	---	---	533.26	532.95	530.54	530.42
3	523.54	522.80	530.51	529.50	530.57	530.36	---	---	532.95	531.77	531.18	530.34
4	523.64	522.57	529.73	529.64	530.36	530.07	---	---	532.32	531.99	531.32	531.08
5	527.53	523.64	529.74	529.58	530.28	529.97	530.44	529.00	532.01	531.92	531.34	530.40
6	527.97	527.53	530.22	529.39	530.28	529.81	530.59	530.44	532.12	531.88	530.44	530.37
7	527.97	527.51	530.45	529.41	529.81	528.74	530.59	529.61	532.21	531.93	530.44	529.97
8	527.51	527.15	530.58	529.29	529.41	528.84	529.83	529.61	531.93	531.44	530.87	529.86
9	527.15	526.62	531.34	529.22	529.80	529.17	529.95	529.80	531.96	531.31	531.03	530.87
10	526.62	526.24	532.85	531.34	529.87	529.78	530.53	529.60	533.84	531.96	531.06	530.58
11	526.29	525.06	532.93	532.60	529.78	528.43	529.60	529.46	534.10	532.82	530.60	530.48
12	526.10	525.85	532.60	531.97	---	---	530.20	529.46	532.82	531.69	530.53	528.90
13	525.85	525.51	531.97	530.79	---	---	530.30	529.42	531.69	531.28	529.51	528.19
14	525.57	525.40	530.79	529.22	---	---	530.88	530.30	531.76	529.78	530.69	529.51
15	525.42	525.30	530.59	530.34	---	---	531.31	530.88	533.66	531.76	530.71	529.77
16	525.42	525.31	531.08	530.03	---	---	531.50	530.34	534.06	533.66	530.47	529.87
17	525.99	525.29	531.39	531.08	---	---	531.82	531.50	534.09	533.83	530.78	530.19
18	525.98	525.86	531.46	531.22	---	---	531.77	531.53	533.83	533.10	530.97	530.77
19	525.88	525.72	531.22	530.84	---	---	531.71	531.49	533.10	532.45	530.93	530.24
20	531.02	525.71	531.08	530.78	---	---	531.77	530.80	532.62	532.49	530.24	529.86
21	531.43	531.02	531.09	530.27	---	---	531.53	530.79	532.76	532.24	529.86	529.60
22	531.82	531.43	531.09	530.08	---	---	531.38	530.26	532.24	531.76	531.07	529.86
23	531.80	531.60	530.08	529.79	---	---	---	---	531.96	531.81	531.10	529.98
24	531.60	531.41	529.80	529.60	---	---	530.03	529.85	531.89	531.15	529.98	529.66
25	531.49	530.45	529.60	529.34	---	---	530.95	529.84	532.30	531.01	529.70	529.50
26	531.08	530.43	529.76	529.46	---	---	529.84	529.15	532.36	532.07	529.54	529.46
27	530.96	530.79	530.69	529.76	---	---	529.68	529.26	532.07	530.96	529.48	529.36
28	530.84	530.72	530.88	529.97	---	---	530.16	529.46	531.68	530.96	530.38	529.39
29	530.72	529.77	530.61	529.62	---	---	530.16	529.80	---	---	530.60	529.39
30	530.48	529.58	530.89	529.98	---	---	532.00	529.90	---	---	530.55	530.31
31	530.40	529.33	---	---	---	---	533.62	532.00	---	---	530.57	529.55
MONTH	531.82	522.57	532.93	529.22	531.01	528.43	533.62	529.00	534.10	529.78	531.71	528.19

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	529.79	529.40	529.80	529.63	532.09	531.57	530.66	529.35	---	---	---	---
2	530.98	529.73	530.17	529.75	532.42	532.09	532.21	530.66	---	---	---	---
3	531.11	529.80	530.00	529.64	532.46	532.39	531.98	531.29	---	---	---	---
4	529.80	529.38	529.64	529.21	532.43	532.27	531.40	531.22	---	---	---	---
5	530.11	529.27	529.41	529.22	532.32	531.33	531.91	531.37	---	---	---	---
6	530.51	530.08	529.40	529.13	531.83	531.12	531.67	531.29	---	---	---	---
7	530.42	530.18	529.88	529.16	532.06	531.56	531.29	530.82	---	---	---	---
8	530.36	530.27	529.86	529.51	531.56	531.19	531.24	530.81	---	---	---	---
9	530.32	530.05	529.60	529.46	531.19	530.84	531.57	530.64	---	---	---	---
10	531.33	530.05	529.47	529.28	531.18	530.64	530.64	530.41	---	---	---	---
11	534.67	530.33	529.35	529.19	530.64	530.34	530.48	530.38	---	---	---	---
12	534.82	533.98	529.77	529.33	530.91	530.32	530.43	530.26	---	---	---	---
13	534.33	533.00	529.59	529.39	531.64	530.82	530.29	530.13	---	---	---	---
14	533.00	531.99	529.39	529.19	531.87	530.96	530.13	529.80	---	---	---	---
15	532.19	530.71	529.27	529.12	531.88	531.61	530.58	529.55	---	---	---	---
16	532.16	531.33	530.00	529.24	532.55	531.84	530.26	529.47	---	---	---	---
17	531.99	530.87	532.12	530.00	532.27	531.63	530.03	529.17	---	---	---	---
18	531.83	531.16	535.61	531.95	531.63	530.42	537.67	530.03	---	---	---	---
19	531.50	530.97	535.78	535.37	531.05	530.22	532.84	531.39	---	---	---	---
20	531.59	531.03	535.66	534.21	531.10	530.26	531.39	530.75	---	---	---	---
21	532.01	531.59	534.21	533.07	531.31	530.67	530.84	530.42	---	---	---	---
22	532.12	531.87	533.07	532.38	531.80	530.67	530.97	530.44	---	---	---	---
23	531.87	530.86	532.38	531.94	531.85	531.09	530.44	529.85	---	---	---	---
24	531.58	531.35	532.00	531.77	531.93	531.77	529.95	529.77	---	---	---	---
25	531.38	530.53	532.03	531.79	531.79	531.52	529.95	529.71	---	---	---	---
26	531.08	530.64	532.35	531.72	531.53	531.31	530.45	529.83	---	---	---	---
27	530.64	530.08	534.69	532.35	531.33	530.41	530.36	529.95	---	---	---	---
28	530.45	530.19	534.90	534.42	530.84	530.22	529.95	529.29	---	---	---	---
29	530.24	529.91	534.42	533.34	530.77	529.60	529.63	529.19	---	---	---	---
30	529.91	529.60	533.34	532.51	529.60	529.40	531.68	529.63	---	---	---	---
31	---	---	532.51	531.76	---	---	531.30	530.62	---	---	---	---
MONTH	534.82	529.27	535.78	529.12	532.55	529.40	537.67	529.17	---	---	---	---
YEAR	537.67	522.57										

391905084372905. LOCAL NUMBER, BU-1160-8I—Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.4	7.4	7.6	7.6	7.7	7.7	---	---	7.4	7.4	7.4	7.3
2	7.4	7.4	7.6	7.6	7.7	7.7	---	---	7.4	7.4	7.4	7.3
3	7.4	7.4	7.6	7.6	7.7	7.7	---	---	7.4	7.4	7.4	7.4
4	7.4	7.4	7.6	7.6	7.7	7.7	---	---	7.4	7.3	7.4	7.4
5	7.5	7.4	7.6	7.6	7.7	7.7	7.5	7.5	7.3	7.3	7.4	7.4
6	7.5	7.5	7.6	7.6	7.7	7.7	7.5	7.5	7.3	7.3	7.4	7.4
7	7.5	7.5	7.6	7.6	7.7	7.7	7.5	7.5	7.3	7.3	7.6	7.4
8	7.5	7.5	7.6	7.6	7.7	7.7	7.6	7.5	7.5	7.3	7.4	7.4
9	7.5	7.5	7.6	7.6	7.7	7.7	7.6	7.5	7.4	7.4	7.4	7.4
10	7.5	7.5	7.6	7.6	7.7	7.7	7.5	7.5	7.4	7.4	7.4	7.4
11	7.6	7.5	7.6	7.6	7.7	7.7	7.5	7.5	7.4	7.4	7.4	7.4
12	7.6	7.6	7.6	7.6	---	---	7.6	7.5	7.4	7.4	7.4	7.4
13	7.6	7.6	7.6	7.6	---	---	7.5	7.5	7.4	7.4	---	---
14	7.6	7.6	8.8	7.6	---	---	7.5	7.4	---	---	7.4	7.4
15	7.6	7.6	7.7	7.7	---	---	7.4	7.4	7.5	7.5	7.4	7.4
16	7.6	7.6	7.7	7.7	---	---	7.4	7.4	7.5	7.5	7.4	7.4
17	7.6	7.6	7.7	7.7	---	---	7.4	7.4	7.5	7.5	7.4	7.4
18	7.6	7.6	7.7	7.7	---	---	7.4	7.4	7.5	7.5	7.4	7.3
19	7.6	7.6	7.7	7.7	---	---	7.4	7.4	7.5	7.5	7.3	7.3
20	7.6	7.6	7.7	7.7	---	---	7.4	7.4	7.5	7.5	7.3	7.3
21	7.7	7.6	7.7	7.7	---	---	7.4	7.4	7.5	7.4	7.3	7.3
22	7.7	7.7	7.7	7.7	---	---	7.4	7.4	7.4	7.4	7.3	7.3
23	7.7	7.7	7.7	7.7	---	---	---	---	7.5	7.4	7.3	7.2
24	7.7	7.6	7.7	7.7	---	---	7.4	7.4	7.5	7.4	7.3	7.2
25	7.7	7.6	7.7	7.7	---	---	7.4	7.4	7.4	7.3	7.3	7.3
26	7.6	7.6	7.7	7.7	---	---	7.4	7.4	7.3	7.3	7.3	7.3
27	7.6	7.6	7.7	7.7	---	---	7.4	7.4	7.4	7.3	7.3	7.3
28	7.6	7.6	7.7	7.7	---	---	7.4	7.4	7.4	7.4	7.3	7.2
29	7.6	7.6	7.7	7.7	---	---	7.4	7.4	---	---	7.2	7.2
30	7.6	7.5	7.7	7.7	---	---	7.4	7.4	---	---	7.3	7.2
31	8.5	7.5	---	---	---	---	7.4	7.4	---	---	7.3	7.3
MONTH	8.5	7.4	8.8	7.6	7.7	7.7	7.6	7.4	7.5	7.3	7.6	7.2

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.3	7.3	7.3	7.2	6.9	6.9	7.3	7.3	---	---	---	---
2	7.3	7.3	7.3	7.2	7.0	6.9	7.3	7.3	---	---	---	---
3	7.3	7.3	7.3	7.3	7.0	7.0	7.3	7.3	---	---	---	---
4	7.3	7.3	7.3	7.3	7.0	7.0	7.3	7.3	---	---	---	---
5	7.3	7.3	7.3	7.3	7.0	7.0	7.3	7.3	---	---	---	---
6	7.3	7.3	7.3	7.3	7.0	7.0	7.3	7.3	---	---	---	---
7	7.3	7.3	7.3	7.3	7.0	7.0	7.3	7.2	---	---	---	---
8	7.3	7.3	7.3	7.3	7.0	7.0	7.2	7.2	---	---	---	---
9	7.4	7.3	7.3	7.2	7.1	7.0	7.2	7.2	---	---	---	---
10	7.4	7.3	7.2	7.2	7.1	7.1	7.2	7.2	---	---	---	---
11	7.4	7.3	7.2	7.2	7.3	7.1	7.2	7.2	---	---	---	---
12	7.4	7.3	7.2	7.2	7.3	7.3	7.2	7.2	---	---	---	---
13	---	---	7.2	7.2	7.3	7.3	7.2	7.2	---	---	---	---
14	7.6	7.2	7.2	7.2	7.3	7.3	7.2	7.2	---	---	---	---
15	7.3	7.2	7.2	7.1	7.3	7.3	7.2	7.2	---	---	---	---
16	7.2	7.1	7.1	7.1	7.3	7.3	7.2	7.2	---	---	---	---
17	7.2	7.2	7.1	7.1	7.3	7.2	7.2	7.2	---	---	---	---
18	7.2	7.2	7.1	7.0	7.2	7.2	7.2	6.9	---	---	---	---
19	7.2	7.2	7.2	7.1	7.2	7.2	7.1	7.0	---	---	---	---
20	7.2	7.2	7.2	7.0	7.3	7.2	7.0	7.0	---	---	---	---
21	7.2	7.2	7.0	6.9	7.4	7.3	7.0	7.0	---	---	---	---
22	7.2	7.2	6.9	6.9	7.4	7.3	7.0	7.0	---	---	---	---
23	7.2	7.2	6.9	6.8	7.4	7.3	7.0	7.0	---	---	---	---
24	7.2	7.2	6.8	6.8	7.3	7.3	7.0	6.9	---	---	---	---
25	7.2	7.1	6.8	6.8	7.3	7.3	7.0	7.0	---	---	---	---
26	7.2	7.2	6.9	6.8	7.3	7.3	7.0	7.0	---	---	---	---
27	7.2	7.2	6.9	6.9	7.3	7.3	7.0	7.0	---	---	---	---
28	7.2	7.2	6.9	6.9	7.3	7.3	7.0	7.0	---	---	---	---
29	7.2	7.2	6.9	6.9	7.3	7.3	7.0	7.0	---	---	---	---
30	7.3	7.2	6.9	6.9	7.3	7.3	7.0	6.9	---	---	---	---
31	---	---	6.9	6.9	---	---	6.9	6.9	---	---	---	---
MONTH	7.6	7.1	7.3	6.8	7.4	6.9	7.3	6.9	---	---	---	---
YEAR	8.8	6.8										

PROJECT DATA
Water Data for Bolton Well Field

391905084372905. LOCAL NUMBER, BU-1160-8I—Continued

TURBIDITY (NTU), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	-2.6	-2.8	1.7	-2.4	-2.1	-2.5	---	---	8.5	-2.2	-1.9	-3.2
2	-2.6	-2.9	-.7	-2.6	-2.4	-2.6	---	---	-2.2	-3.2	-3.1	-3.5
3	-2.6	-2.9	-1.6	-2.6	-2.4	-2.6	---	---	-2.8	-3.3	-3.4	-3.5
4	-2.8	-2.9	-.8	-2.6	-2.5	-2.7	---	---	-3.2	-3.3	-3.4	-3.5
5	-2.1	-2.9	-1.5	-2.6	-2.6	-2.7	---	---	-3.0	-3.5	-3.3	-3.5
6	-.6	-2.1	-1.5	-2.6	-.7	-2.7	---	---	-1.5	-3.1	-3.5	-3.6
7	-.9	-1.3	-2.4	-2.7	-2.6	-2.8	-2.6	-3.0	-1.8	-2.1	200	-3.6
8	-1.3	-1.5	-2.4	-2.8	-2.7	-2.9	-2.9	-3.2	240	-2.1	14	-2.4
9	-1.5	-1.9	-2.7	-2.8	-2.7	-2.9	-2.7	-3.0	8.6	.4	-2.4	-3.4
10	-1.8	-2.2	-2.7	-2.8	-2.6	-2.9	-2.6	-2.9	.4	-1.6	-3.3	-3.5
11	-1.6	-3.6	-2.6	-2.8	-2.9	-2.9	-2.7	-2.9	-1.2	-2.9	-3.3	-3.5
12	-2.9	-3.2	-2.6	-2.9	---	---	-2.8	-3.0	-2.9	-3.1	-3.5	-3.5
13	-2.8	-3.1	-2.7	-2.9	---	---	-2.6	-3.0	-2.8	-3.1	-.8	-3.5
14	-2.7	-2.9	27	-3.4	---	---	-1.6	-3.2	94	-3.5	-2.5	-3.5
15	-2.6	-2.8	2.1	-1.3	---	---	-2.2	-3.2	2.5	-3.2	-3.3	-3.5
16	-2.5	-2.7	-1.3	-2.2	---	---	-2.4	-3.2	-2.7	-2.9	-3.2	-3.5
17	-2.4	-2.7	-1.9	-2.5	---	---	-3.0	-3.4	-2.8	-3.2	-3.3	-3.6
18	-2.4	-2.7	-2.3	-2.5	---	---	-3.0	-3.3	-2.9	-3.1	-3.3	-3.5
19	-2.5	-2.7	-2.4	-2.6	---	---	-2.8	-3.0	-2.8	-3.0	-3.0	-3.5
20	430	-2.9	-2.2	-2.7	---	---	-2.7	-3.1	-2.8	-3.0	-2.9	-3.3
21	43	4.7	-2.5	-2.7	---	---	-3.0	-3.3	-2.8	-3.0	-2.7	-3.3
22	4.7	-.6	-2.6	-2.8	---	---	-2.8	-3.2	-2.8	-2.9	-2.8	-3.2
23	-.5	-1.9	-2.7	-2.8	---	---	---	---	-2.7	-2.9	-2.6	-3.4
24	-1.7	-2.2	-2.6	-2.9	---	---	38	-3.1	-2.6	-2.7	-3.2	-3.5
25	-2.1	-2.4	-2.7	-2.9	---	---	-3.1	-3.4	-2.2	-2.6	-3.4	-3.6
26	-2.0	-2.6	-2.8	-2.9	---	---	-3.3	-3.4	-2.4	-2.6	-2.9	-3.6
27	-2.4	-2.7	-2.9	-3.0	---	---	-3.2	-3.4	-2.4	-3.1	-3.3	-3.5
28	-2.5	-2.7	250	-3.0	---	---	-3.2	-3.4	-2.1	-3.3	---	---
29	-2.6	-2.7	.8	-1.6	---	---	-2.9	-3.3	---	---	---	---
30	-2.6	-2.8	-.9	-2.2	---	---	-2.6	-3.0	---	---	-.8	-1.8
31	6.0	-2.8	---	---	---	---	-1.3	-2.7	---	---	-1.1	-1.3
MONTH	430	-3.6	250	-3.4	-.7	-2.9	38	-3.4	240	-3.5	200	-3.6

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	-1.1	-1.7	-1.9	-2.1	3.6	2.5	-2.2	-2.6	---	---	---	---
2	-1.1	-1.8	-2.0	-2.1	2.5	1.7	-2.4	-2.9	---	---	---	---
3	-1.3	-1.9	-1.9	-2.1	1.7	1.2	.4	-2.7	---	---	---	---
4	-1.6	-1.9	-2.0	-2.2	1.2	.8	-2.2	-2.4	---	---	---	---
5	-1.6	-1.9	-1.9	-2.1	.8	.4	-2.1	-2.6	---	---	---	---
6	-1.6	-1.8	-1.5	-2.0	.5	.1	-2.1	-2.4	---	---	---	---
7	-1.6	-1.8	-1.0	-1.8	.1	-.1	-2.1	-2.4	---	---	---	---
8	-1.8	-1.9	-1.3	-2.0	-.1	-.2	-2.1	-2.5	---	---	---	---
9	-1.7	-1.9	-1.7	-2.0	-.2	-.4	-2.3	-2.6	---	---	---	---
10	-1.8	-1.9	-1.8	-2.1	-.4	-.6	-2.2	-2.6	---	---	---	---
11	140	-1.9	-2.0	-2.2	-.5	-1.2	-2.2	-2.4	---	---	---	---
12	130	-1.5	-2.1	-2.2	-1.2	-1.5	-2.2	-2.4	---	---	---	---
13	160	-1.9	-2.1	-2.2	-1.4	-1.6	-2.0	-2.5	---	---	---	---
14	100	-1.8	-2.1	-2.2	-1.5	-1.6	-2.1	-2.6	---	---	---	---
15	160	-.1	-2.1	-2.2	-1.5	-1.6	-1.8	-2.8	---	---	---	---
16	46	-2.0	-2.1	-2.2	-1.5	-1.6	-2.6	-2.9	---	---	---	---
17	27	-1.9	-2.1	-2.2	-1.3	-1.5	-2.6	-2.9	---	---	---	---
18	1.0	-1.9	83	-2.2	-1.3	-1.5	700	-2.9	---	---	---	---
19	1.3	-1.9	130	82	-.9	-1.6	410	250	---	---	---	---
20	-1.7	-1.9	82	45	130	-1.6	250	180	---	---	---	---
21	-1.7	-1.9	45	30	21	-.4	180	140	---	---	---	---
22	-1.0	-1.7	30	22	.4	-1.8	140	32	---	---	---	---
23	-1.0	-1.5	22	17	-1.1	-1.9	57	33	---	---	---	---
24	-1.5	-1.6	17	14	-1.1	-1.8	58	13	---	---	---	---
25	-1.0	-2.1	14	11	-.8	-1.6	13	3.2	---	---	---	---
26	-1.9	-2.0	11	8.9	-.5	-1.7	3.2	-.2	---	---	---	---
27	-1.0	-2.1	8.9	6.9	-.2	-1.6	.7	-.6	---	---	---	---
28	-1.9	-2.1	7.1	6.4	-.6	-2.0	4.5	-.2	---	---	---	---
29	-1.9	-2.0	6.7	5.5	-1.1	-1.9	5.6	-.8	---	---	---	---
30	-1.0	-2.0	5.5	4.3	-1.6	-2.5	---	---	---	---	---	---
31	---	---	4.5	3.4	---	---	---	---	---	---	---	---
MONTH	160	-2.1	130	-2.2	130	-2.5	700	-2.9	---	---	---	---
YEAR	700	-3.6										

391905084372905. LOCAL NUMBER, BU-1160-8I—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(90901), USGS National Water Information System parameter code; MF, membrane filtration; col/100mL, colonies per 100 milliliters; <, concentration or value reported is less than that indicated; E, value is estimated from a non-ideal colony count]

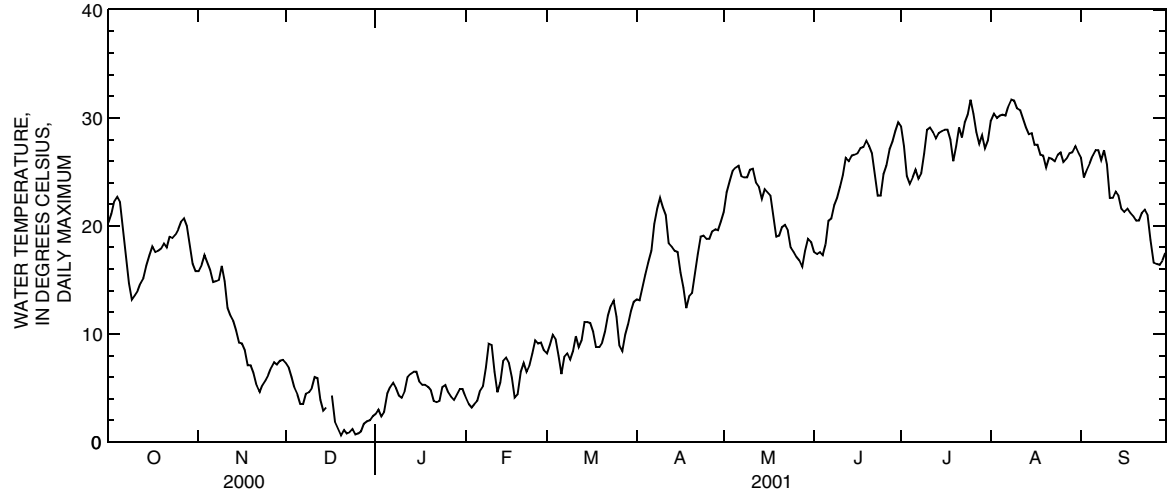
DATE	TIME	E COLI, MI MF, WATER (COL/ 100 ML) (90901)	TOTAL COLI-FORM, MI MF, WATER (COL/ 100 ML) (90900)
OCT			
11...	1020	E8	190
JAN			
23...	1225	15	83
MAR			
13...	1025	<1	E1
APR			
11...	1205	<33	<33
12...	1600	E25	840
13...	1010	E28	500
14...	1155	E15	250
15...	0930	13	430
16...	1130	E7	140
18...	1150	E10	220
19...	0905	E13	170
23...	0905	E9	140
25...	1130	E2	E14

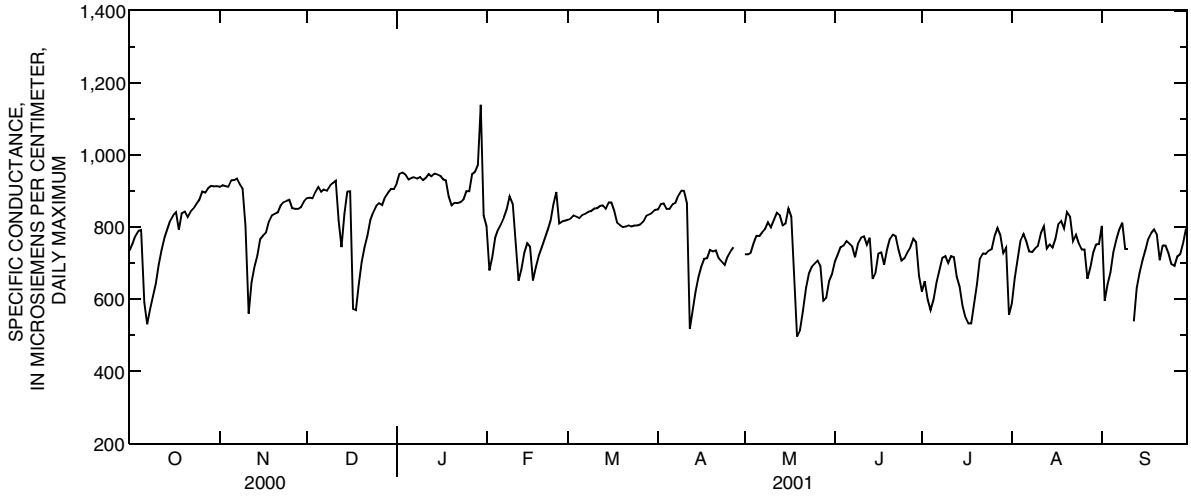
PROJECT DATA
Water Data for Bolton Well Field

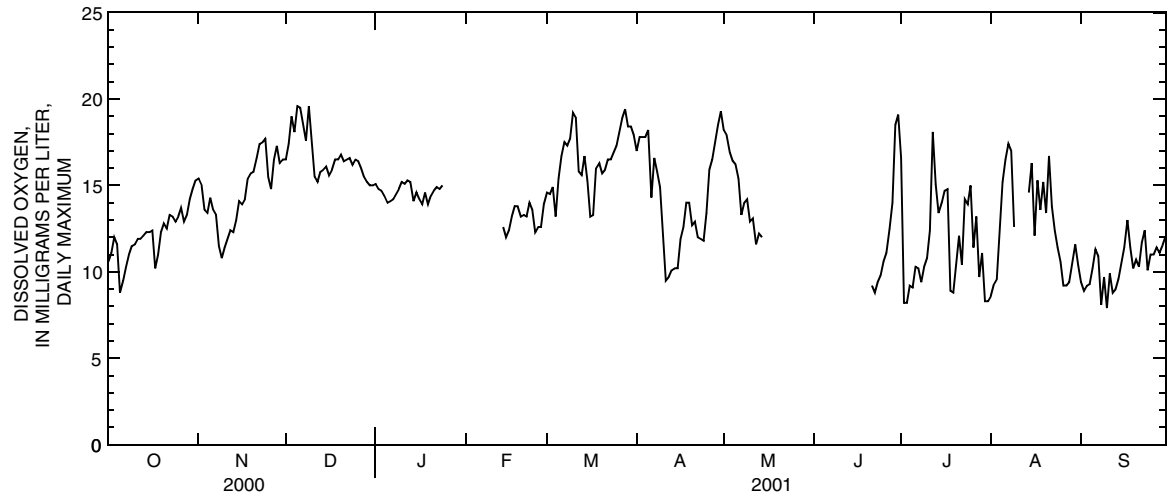
03274060 GREAT MIAMI RIVER NEAR FAIRFIELD, OHIO

LOCATION.—Latitude 39°19′03″, longitude 84°36′22″, Butler County, Hydrologic Unit 05080002, north of Miami River Road, northeast of Cincinnati Water Works, Bolton Plant, Fairfield, Ohio.
INSTRUMENTATION.—YSI Model 6600 data sonde with turbidity probe set for 30-minute records, ISCO water sampler and CR10 data recorder with water-stage gage.
DATUM.—Datum of gage is 530 ft above North American Vertical Datum of 1988 (NAVD of 88).
REMARK.—This station is part of a flow path study designed to help model flow characteristics from the Great Miami River through the aquifer. Data collection began on August 3, 1999.
PERIOD OF RECORD.—
WATER TEMPERATURE: August 3, 1999 to current year.
SPECIFIC CONDUCTANCE: August 3, 1999 to current year.
DISSOLVED OXYGEN: August 3, 1999 to current year.
WATER LEVEL ELEVATION: August 3, 1999 to current year.
pH: August 3, 1999 to current year.
TURBIDITY: August 3, 1999 to current year.
EXTREMES FOR PERIOD OF RECORD.—
WATER TEMPERATURE: Maximum, 31.7°C, Aug. 8, 2001; Minimum, 0.1°C, Dec. 22, 23, 25 and 26, 2000.
SPECIFIC CONDUCTANCE: Maximum, 1,260 microsiemens per centimeter, Jan. 26 and 27, 2000; Minimum, 235 microsiemens per centimeter, June 21, 2000.
DISSOLVED OXYGEN: Maximum, 19.6 milligrams per liter, Dec. 5 and 9, 2000; Minimum 0.1 milligrams per liter, July 17, 2000.
WATER LEVEL ELEVATION: Minimum daily stage, 531.92 ft above NAVD of 88, Sept. 17, 1999; Maximum daily stage, 545.95 ft above NAVD of 88, Apr. 8, 2000.
pH: Maximum, 9.2, Oct. 14, 1999; Minimum, 7.1, Apr. 11, 2001.
TURBIDITY: Maximum, 1200 NTU, several days during period of record; Minimum, 0.7 NTU, Mar. 10, 2001.
EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURE: Maximum, 31.7°C, Aug. 8, 2001; Minimum, 0.1°C, Dec. 22, 23, 25 and 26, 2000.
SPECIFIC CONDUCTANCE: Maximum, 1,140 microsiemens per centimeter, Jan. 30, 2001; Minimum, 291 microsiemens per centimeter, July 18, 2001.
DISSOLVED OXYGEN: Maximum, 19.6 milligrams per liter, Dec. 5 and 9, 2000; Minimum 4.5 milligrams per liter, Aug. 9, 2001.
WATER LEVEL ELEVATION: Minimum daily stage, 532.68 ft above NAVD of 88, Oct. 4, 2000; Maximum daily stage, 545.19 ft above NAVD of 88, July 18, 2001.
pH: Maximum, 8.9, Aug. 6, 7 and 15, 2001; Minimum, 7.1, Apr. 11, 2001.
TURBIDITY: Maximum, 1200 NTU, Apr. 6-7, May 18, June 6, July 18, and Aug. 28, 2001; Minimum, 0.7 NTU, Mar. 10, 2001.

03274060 GREAT MIAMI RIVER NEAR FAIRFIELD, OHIO—Continued

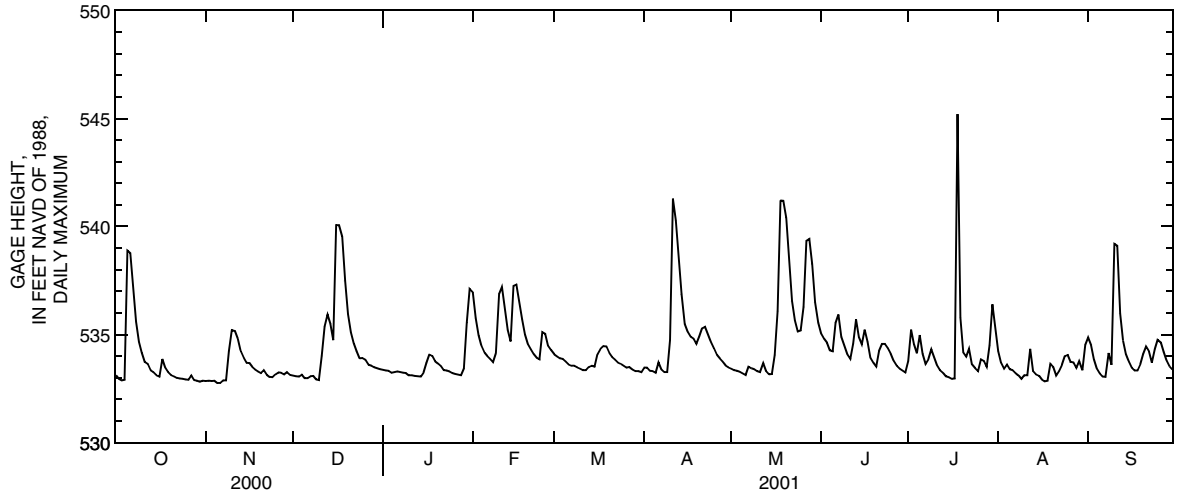


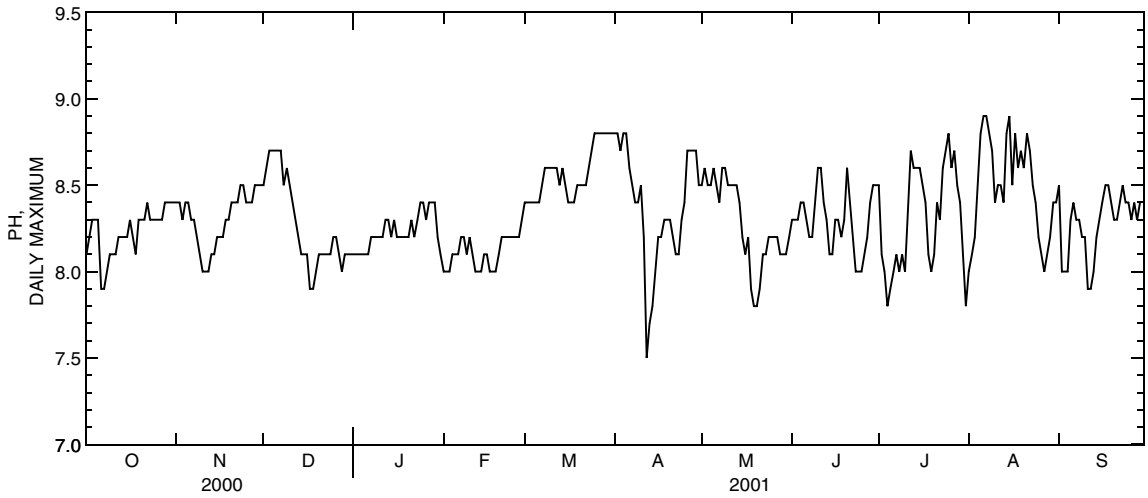


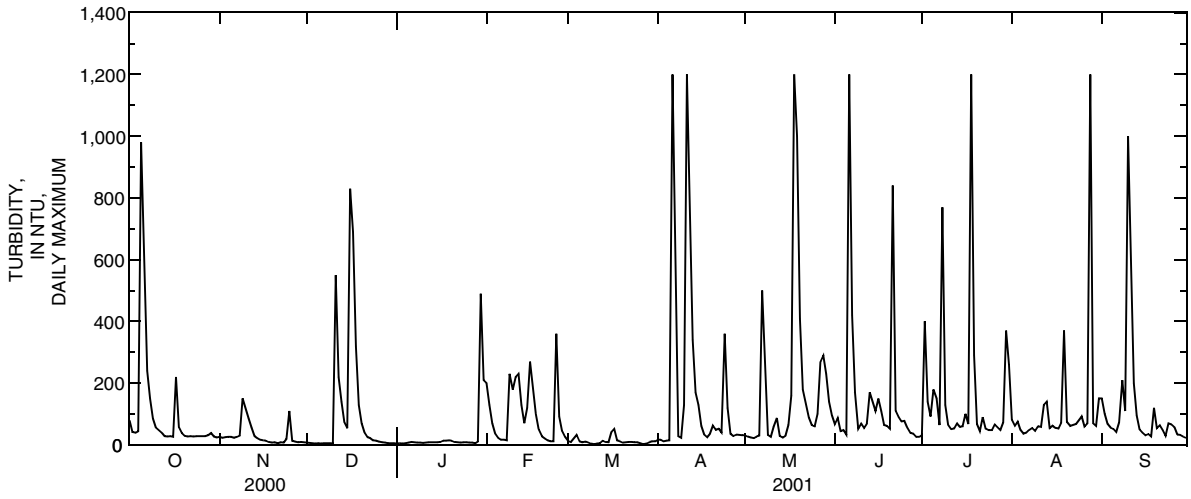


PROJECT DATA
Water Data for Bolton Well Field

03274060 GREAT MIAMI RIVER NEAR FAIRFIELD, OHIO—Continued







03274060 GREAT MIAMI RIVER NEAR FAIRFIELD, OHIO—Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	20.3	17.5	15.8	14.4	7.3	6.7	2.6	1.6	4.1	3.0	8.2	6.5
2	21.1	18.3	16.4	14.9	6.9	5.9	3.0	2.1	3.5	2.8	9.0	7.6
3	22.3	19.7	17.3	16.2	6.0	4.9	2.4	1.5	3.2	2.5	9.9	8.6
4	22.7	21.0	16.6	15.7	5.0	4.1	2.8	1.7	3.5	2.9	9.5	8.0
5	22.2	19.5	15.9	14.6	4.4	3.5	4.5	2.8	3.8	3.3	8.0	6.1
6	19.5	17.3	14.8	13.7	3.5	2.9	5.1	4.1	4.8	3.7	6.3	5.4
7	17.3	14.7	14.9	14.0	3.5	2.8	5.5	4.2	5.2	4.4	7.9	6.1
8	14.7	12.9	15.0	14.3	4.5	3.5	5.0	4.1	6.9	5.1	8.2	7.0
9	13.2	12.4	16.3	14.9	4.6	3.3	4.3	3.4	9.1	6.9	7.6	6.6
10	13.6	11.8	14.9	12.2	5.0	4.2	4.1	2.8	9.0	6.5	8.4	6.0
11	14.0	12.1	12.4	11.6	6.0	5.0	4.7	3.4	6.5	4.6	9.8	7.2
12	14.7	12.6	11.7	11.0	5.9	3.8	6.0	4.5	4.6	3.6	8.8	8.2
13	15.2	13.2	11.2	10.3	3.9	2.9	6.3	5.0	5.5	4.2	9.4	8.5
14	16.3	14.0	10.3	9.0	2.9	2.6	6.5	5.7	7.5	5.5	11.1	8.9
15	17.3	15.5	9.2	8.3	3.2	2.4	6.5	5.6	7.8	7.3	11.1	10.3
16	18.1	16.4	9.1	8.5	---	---	5.6	5.0	7.3	6.0	11.0	10.2
17	17.6	16.7	8.5	7.1	4.3	1.8	5.3	5.0	6.0	4.1	10.2	8.5
18	17.7	16.2	7.1	6.3	1.8	1.0	5.3	4.5	4.1	3.1	8.8	7.3
19	17.9	16.2	7.1	5.8	1.2	.4	5.1	4.8	4.4	3.3	8.8	7.4
20	18.4	16.3	6.4	5.2	.6	.1	4.8	3.8	6.5	4.4	9.2	7.8
21	18.0	16.9	5.2	3.8	1.1	.6	3.8	2.7	7.3	5.8	10.2	8.7
22	19.0	17.0	4.6	3.3	.8	.1	3.7	2.3	6.5	5.6	11.7	9.5
23	18.9	17.5	5.3	3.5	.9	.1	3.8	2.6	7.1	5.5	12.6	10.7
24	19.2	18.0	5.7	4.1	1.2	.5	5.1	3.5	8.2	6.7	13.1	11.6
25	19.7	18.3	6.2	5.2	.7	.1	5.3	4.0	9.4	8.2	11.6	8.9
26	20.4	18.7	6.9	6.2	.8	.1	4.6	3.9	9.1	7.9	8.9	7.2
27	20.7	19.3	7.4	6.3	1.0	.3	4.2	3.5	9.2	8.3	8.4	6.7
28	20.0	18.2	7.2	6.5	1.7	.4	3.9	2.9	8.5	7.3	9.9	7.3
29	18.2	16.4	7.5	6.6	1.9	1.2	4.4	3.3	---	---	10.9	9.0
30	16.5	15.2	7.6	6.8	2.0	1.4	4.9	3.8	---	---	12.1	9.9
31	15.8	14.3	---	---	2.4	1.7	4.9	4.0	---	---	13.0	11.0
MONTH	22.7	11.8	17.3	3.3	7.3	.1	6.5	1.5	9.4	2.5	13.1	5.4

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	13.2	11.7	21.3	19.2	17.6	17.0	29.2	27.4	29.7	27.2	26.3	24.0
2	13.1	10.9	23.1	20.6	17.4	16.3	27.4	23.5	30.4	28.4	24.5	23.2
3	14.3	12.0	24.2	21.7	17.6	16.6	24.6	23.0	30.0	29.1	25.2	22.9
4	15.5	12.7	25.1	22.9	17.3	16.9	23.9	22.3	30.2	28.4	25.8	24.0
5	16.6	13.6	25.4	23.0	18.3	16.6	24.5	22.9	30.3	28.0	26.5	23.9
6	17.7	15.6	25.6	23.0	20.5	17.7	25.2	22.6	30.2	27.9	27.0	24.0
7	20.2	17.0	24.6	22.8	20.7	19.4	24.4	23.1	31.1	28.3	27.0	25.1
8	21.6	19.0	24.5	22.5	21.9	20.4	24.9	24.0	31.7	28.9	26.1	25.4
9	22.6	20.3	24.5	22.0	22.6	20.7	26.7	24.4	31.6	30.0	27.0	25.6
10	21.7	20.8	25.2	22.5	23.6	20.9	28.9	26.2	30.9	29.6	25.7	22.6
11	21.0	17.7	25.3	23.1	24.7	22.0	29.1	27.5	30.7	28.8	22.6	19.4
12	18.4	17.5	24.0	22.4	26.3	24.1	28.7	26.8	29.9	27.2	22.6	21.2
13	18.1	17.1	23.6	21.1	26.0	25.1	28.1	25.8	29.1	26.1	23.2	21.8
14	17.7	16.5	22.5	20.2	26.5	25.2	28.6	25.4	28.5	26.6	22.8	21.2
15	17.6	15.7	23.4	20.6	26.6	24.7	28.8	25.3	28.6	25.7	21.6	20.3
16	15.7	14.3	23.1	22.3	26.7	25.1	28.9	25.6	27.5	26.5	21.3	19.6
17	14.3	11.8	22.8	20.9	27.2	25.5	28.9	26.2	27.5	25.2	21.6	19.4
18	12.4	10.9	20.9	19.0	27.3	24.9	28.0	22.4	26.6	25.2	21.2	20.7
19	13.5	11.5	19.0	18.5	27.9	25.5	26.0	24.1	26.5	24.3	20.9	20.3
20	13.8	12.9	19.1	17.9	27.4	25.5	27.4	25.7	25.4	23.9	20.5	19.4
21	15.5	13.4	19.9	19.0	26.7	24.5	29.1	27.2	26.3	23.4	20.5	19.6
22	17.4	15.4	20.1	19.4	24.7	22.6	28.2	27.3	26.2	24.0	21.2	19.4
23	19.0	17.4	19.6	18.0	22.8	21.8	29.6	27.6	26.0	25.0	21.5	19.4
24	19.1	18.0	18.0	16.9	22.8	20.8	30.3	28.7	26.6	24.9	21.0	18.7
25	18.8	16.8	17.6	16.8	24.8	22.0	31.7	29.2	26.8	25.4	18.7	16.6
26	18.8	16.2	17.1	16.5	25.6	23.3	30.4	28.3	25.9	25.0	16.6	15.7
27	19.5	17.0	16.8	15.3	27.1	25.0	28.7	27.1	26.2	24.3	16.5	15.1
28	19.7	17.5	16.2	14.8	27.8	25.4	27.6	27.0	26.7	24.6	16.4	15.0
29	19.6	17.3	17.7	15.7	28.8	26.3	28.4	26.5	26.8	25.4	16.8	14.9
30	20.4	17.4	18.8	17.1	29.6	27.1	27.2	25.4	27.4	25.4	17.5	15.3
31	---	---	18.5	17.5	---	---	27.9	25.4	26.8	25.8	---	---
MONTH	22.6	10.9	25.6	14.8	29.6	16.3	31.7	22.3	31.7	23.4	27.0	14.9
YEAR	31.7	.1										

PROJECT DATA
Water Data for Bolton Well Field

03274060 GREAT MIAMI RIVER NEAR FAIRFIELD, OHIO—Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	735	688	912	900	880	867	921	905	803	662	821	813
2	754	729	917	901	882	871	949	913	680	658	824	816
3	776	753	914	819	880	869	952	934	718	680	833	824
4	790	774	912	771	898	878	947	916	771	718	830	808
5	792	569	930	850	912	886	933	922	794	771	825	812
6	591	393	931	913	899	876	937	929	809	794	834	821
7	531	421	935	598	905	887	939	922	827	808	838	825
8	573	531	919	813	902	887	935	923	850	827	843	834
9	607	573	907	767	916	887	940	919	886	850	845	836
10	644	606	804	426	923	912	931	916	864	760	852	841
11	696	643	560	308	929	789	937	926	762	634	853	840
12	737	696	647	515	819	655	948	930	652	631	859	844
13	771	737	690	362	745	703	942	930	684	652	861	840
14	795	767	721	636	837	727	949	938	729	684	852	837
15	819	795	767	676	899	803	947	935	755	729	869	842
16	833	819	777	767	900	500	943	919	745	616	869	843
17	842	675	785	774	574	529	933	912	653	622	846	813
18	793	750	816	783	570	537	930	873	689	653	813	795
19	839	777	833	807	642	570	885	861	720	689	806	788
20	844	826	838	817	703	642	861	841	745	720	800	792
21	829	816	841	825	745	703	868	844	769	745	802	742
22	843	825	861	841	777	745	867	848	792	769	806	794
23	852	837	870	851	820	777	870	847	818	792	802	781
24	866	851	873	861	842	820	877	863	864	815	805	733
25	877	866	876	820	859	841	900	872	898	795	805	791
26	899	875	853	835	867	850	900	885	811	787	807	797
27	896	881	851	833	862	850	948	899	816	797	815	804
28	909	886	851	832	884	854	954	916	818	811	832	808
29	915	900	856	833	896	883	973	941	---	---	836	816
30	913	879	871	856	906	892	1140	823	---	---	840	817
31	914	891	---	---	906	895	832	786	---	---	848	826
MONTH	915	393	935	308	929	500	1140	786	898	616	869	733

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	849	841	725	479	704	669	622	549	589	557	804	547
2	864	840	725	654	724	699	650	458	659	589	596	538
3	866	834	729	510	745	724	599	432	709	483	642	596
4	851	825	755	568	750	734	570	447	764	503	675	640
5	851	830	776	746	762	741	598	519	782	747	731	675
6	864	739	775	744	755	542	648	519	761	683	765	717
7	868	781	786	742	747	633	681	648	733	681	792	762
8	888	868	795	742	717	639	716	639	731	672	813	667
9	902	874	814	757	757	712	720	651	741	687	740	711
10	901	858	799	763	772	754	701	654	748	690	740	311
11	867	415	819	649	775	735	719	701	784	747	---	---
12	518	415	840	799	751	682	717	662	803	511	539	431
13	568	518	833	798	771	534	662	634	742	505	631	539
14	622	568	806	777	656	540	634	582	752	715	674	631
15	662	622	811	775	674	558	582	540	743	721	708	674
16	691	662	852	811	727	667	550	523	767	729	736	708
17	712	691	830	656	731	592	533	509	808	767	768	736
18	714	707	656	473	696	593	533	291	817	787	784	766
19	737	709	496	454	738	625	586	471	797	684	794	738
20	733	718	514	460	768	738	642	586	842	788	779	691
21	736	699	566	510	780	676	713	642	829	759	709	691
22	714	693	631	558	775	703	727	687	762	706	750	709
23	705	692	671	610	737	686	726	684	780	722	749	726
24	695	679	690	666	708	686	735	668	755	721	728	678
25	719	690	699	686	714	689	740	664	738	711	698	659
26	734	719	707	675	730	690	775	733	738	657	693	666
27	744	732	692	535	745	727	798	757	657	623	719	693
28	---	---	596	550	767	730	778	698	687	643	726	704
29	---	---	604	562	758	600	729	698	729	678	757	726
30	---	---	650	604	665	551	744	410	752	709	797	757
31	---	---	670	639	---	---	557	419	753	688	---	---
MONTH	902	415	852	454	780	534	798	291	842	483	813	311
YEAR	1140	291										

03274060 GREAT MIAMI RIVER NEAR FAIRFIELD, OHIO—Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	10.6	8.8	15.4	10.3	16.5	13.4	15.1	14.4	---	---	14.6	12.6
2	11.1	8.5	15.0	10.1	17.4	13.6	14.8	14.2	---	---	14.5	12.1
3	12.0	8.0	13.6	9.6	19.0	14.1	14.7	14.1	---	---	14.9	11.9
4	11.6	7.7	13.4	9.5	18.1	14.7	14.4	13.8	---	---	13.2	11.9
5	8.8	7.8	14.3	9.8	19.6	14.8	14.0	13.2	---	---	15.4	12.1
6	9.5	8.5	13.6	10.1	19.5	15.3	14.1	13.1	---	---	16.7	13.1
7	10.3	9.5	13.3	10.3	18.6	15.3	14.2	13.1	---	---	17.5	13.1
8	11.0	10.3	11.5	10.2	17.6	14.6	14.5	13.3	---	---	17.3	12.9
9	11.5	11.0	10.8	9.8	19.6	14.7	14.8	12.9	---	---	17.7	13.0
10	11.6	11.2	11.4	10.1	17.5	14.5	15.2	13.7	---	---	19.2	13.3
11	11.9	11.2	11.9	11.4	15.5	13.8	15.1	13.6	---	---	18.9	13.0
12	11.9	10.9	12.4	11.9	15.2	13.7	15.3	13.5	---	---	15.8	12.2
13	12.1	10.8	12.3	12.1	15.8	15.2	15.2	13.4	---	---	15.6	11.9
14	12.3	10.6	13.0	12.2	15.9	15.8	14.1	13.2	12.6	11.8	16.7	11.9
15	12.3	10.2	14.1	12.7	16.1	15.6	14.6	13.1	12.0	11.6	15.3	11.5
16	12.4	9.8	13.9	13.0	15.6	14.6	14.2	13.4	12.4	12.0	13.2	11.3
17	10.2	9.6	14.2	13.0	15.9	14.6	13.9	13.5	13.2	12.4	13.3	11.5
18	11.0	9.8	15.4	13.6	16.5	15.9	14.6	13.5	13.8	13.2	16.0	12.5
19	12.3	9.8	15.7	14.0	16.5	15.5	13.9	13.3	13.8	13.2	16.3	13.0
20	12.8	9.8	15.8	14.0	16.8	16.4	14.4	13.2	13.2	12.6	15.7	12.9
21	12.5	9.6	16.6	14.4	16.4	16.1	14.7	13.4	13.3	12.5	15.9	12.3
22	13.3	9.6	17.4	15.2	16.5	16.1	14.9	13.4	13.2	12.6	16.5	12.1
23	13.2	9.5	17.5	15.0	16.6	16.2	14.8	13.4	14.0	12.6	16.5	11.7
24	12.9	9.4	17.7	14.7	16.2	16.1	15.0	13.3	13.6	12.1	16.9	11.6
25	13.2	9.1	15.5	14.1	16.5	16.1	---	---	12.3	11.4	17.3	11.7
26	13.7	8.9	14.8	13.5	16.4	16.0	---	---	12.6	11.4	18.1	12.8
27	12.9	8.7	16.5	13.5	16.0	15.5	---	---	12.6	11.8	18.9	13.7
28	13.3	8.6	17.3	13.5	15.5	15.2	---	---	13.9	12.1	19.4	13.3
29	14.2	9.3	16.3	13.5	15.2	14.8	---	---	---	---	18.4	12.7
30	14.8	9.8	16.5	13.4	15.0	14.6	---	---	---	---	18.4	12.1
31	15.3	10.2	---	---	15.0	14.6	---	---	---	---	17.9	11.8
MONTH	15.3	7.7	17.7	9.5	19.6	13.4	15.3	12.9	14.0	11.4	19.4	11.3

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	17.0	11.2	18.2	9.7	---	---	16.6	7.0	8.6	7.5	9.4	7.4
2	17.8	11.6	17.9	9.1	---	---	8.2	6.1	9.3	7.3	8.9	7.9
3	17.8	11.3	16.9	8.6	---	---	8.2	7.2	9.6	7.2	9.2	8.0
4	17.8	10.9	16.4	8.1	---	---	9.2	7.5	12.1	7.3	9.3	7.7
5	18.2	10.6	16.2	7.9	---	---	9.1	8.1	15.2	7.4	10.2	7.4
6	14.3	9.8	15.4	7.7	---	---	10.3	9.1	16.5	7.7	11.3	7.2
7	16.6	8.9	13.3	7.6	---	---	10.2	8.8	17.4	7.3	10.9	6.9
8	15.8	8.4	14.0	7.6	---	---	9.4	8.4	17.0	6.2	8.1	6.9
9	14.9	7.9	14.2	8.1	---	---	10.3	8.4	12.6	4.5	9.7	7.0
10	12.0	7.9	12.9	8.0	---	---	10.8	9.1	---	---	7.9	7.1
11	9.5	8.3	13.1	8.0	---	---	12.4	8.9	---	---	9.9	7.9
12	9.7	9.5	11.6	7.9	---	---	18.1	8.9	---	---	8.8	8.5
13	10.1	9.7	12.2	8.4	---	---	15.1	8.7	---	---	9.0	8.5
14	10.2	9.9	12.0	8.7	---	---	13.4	6.9	14.6	5.5	9.6	8.7
15	10.2	9.8	---	---	---	---	14.0	6.4	16.3	6.6	10.5	8.9
16	11.9	10.2	---	---	---	---	14.7	5.5	12.1	6.2	11.4	9.1
17	12.6	10.9	---	---	---	---	14.8	6.4	15.3	6.0	13.0	9.2
18	14.0	11.9	---	---	---	---	8.9	7.7	13.6	6.1	11.4	8.9
19	14.0	11.8	---	---	---	---	8.8	7.5	15.2	6.6	10.2	8.8
20	12.7	11.2	---	---	---	---	10.4	7.4	13.4	7.3	10.7	9.1
21	12.9	11.1	---	---	9.2	7.6	12.1	7.4	16.7	7.4	10.3	9.1
22	12.0	10.6	---	---	8.8	7.9	10.4	7.4	13.8	7.3	11.7	9.2
23	11.9	9.9	---	---	9.4	8.5	14.2	7.2	12.4	7.3	12.4	9.1
24	11.8	9.4	---	---	9.8	9.0	13.9	7.3	11.4	7.2	10.1	8.8
25	13.4	9.9	---	---	10.6	8.9	15.0	6.8	10.6	7.5	11.0	9.4
26	15.9	10.1	---	---	11.1	8.7	11.4	7.1	9.2	7.4	11.0	10.0
27	16.5	10.0	---	---	12.5	8.5	13.2	7.2	9.2	7.4	11.4	10.4
28	17.5	9.9	---	---	14.0	8.2	9.7	7.3	9.4	7.2	11.1	10.3
29	18.5	10.0	---	---	18.5	8.0	11.1	7.2	10.5	7.2	11.5	10.3
30	19.3	10.1	---	---	19.1	7.4	8.3	7.8	11.6	7.3	12.0	10.1
31	---	---	---	---	---	---	8.3	7.7	10.4	7.0	---	---
MONTH	19.3	7.9	18.2	7.6	19.1	7.4	18.1	5.5	17.4	4.5	13.0	6.9
YEAR	19.6	4.5										

PROJECT DATA
Water Data for Bolton Well Field

03274060 GREAT MIAMI RIVER NEAR FAIRFIELD, OHIO—Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	533.10	532.95	532.84	532.79	533.09	533.05	533.36	533.32	536.95	535.67	534.09	533.95
2	532.95	532.75	532.85	532.77	533.07	532.97	533.33	533.29	535.76	534.90	533.98	533.88
3	532.87	532.74	532.84	532.78	533.05	533.00	533.32	533.07	534.96	534.44	533.89	533.78
4	532.91	532.68	532.86	532.76	533.14	532.95	533.23	533.08	534.45	534.16	533.86	533.73
5	538.88	532.91	532.76	532.73	532.98	532.89	533.25	533.21	534.16	533.98	533.74	533.61
6	538.77	537.10	532.75	532.71	532.98	532.93	533.28	533.23	534.00	533.81	533.62	533.53
7	537.11	535.60	532.87	532.75	533.06	532.92	533.26	533.21	533.87	533.71	533.56	533.49
8	535.60	534.65	532.87	532.81	533.08	532.80	533.23	533.20	533.72	533.63	533.55	533.46
9	534.67	534.03	534.24	532.83	532.92	532.88	533.21	533.10	534.13	533.64	533.48	533.40
10	534.15	533.62	535.20	534.24	532.88	532.70	533.10	533.06	536.87	534.11	533.42	533.32
11	533.73	533.54	535.15	534.79	534.01	532.70	533.11	533.04	537.20	536.27	533.35	533.31
12	533.64	533.34	534.79	534.21	535.37	534.01	533.08	533.05	536.27	535.22	533.34	533.31
13	533.34	533.07	534.21	533.90	535.93	535.15	533.07	533.04	535.22	534.66	533.49	533.31
14	533.25	533.11	533.92	533.68	535.49	534.74	533.05	533.03	534.68	534.42	533.55	533.48
15	533.11	533.05	533.69	533.52	534.74	534.24	533.24	533.04	537.25	534.44	533.51	533.47
16	533.05	532.99	533.67	533.44	540.05	534.15	533.69	533.24	537.32	536.43	534.08	533.48
17	533.86	533.01	533.49	533.20	540.06	539.38	534.07	533.69	536.53	535.67	534.32	534.08
18	533.47	533.26	533.38	533.27	539.53	537.34	534.01	533.75	535.70	534.97	534.46	534.24
19	533.26	533.12	533.28	533.20	537.50	535.92	533.76	533.62	535.00	534.51	534.44	534.11
20	533.13	533.06	533.21	533.17	535.96	535.08	533.65	533.53	534.54	534.27	534.14	533.94
21	533.06	532.99	533.35	533.13	535.11	534.56	533.54	533.30	534.30	534.07	533.95	533.80
22	533.00	532.95	533.14	533.02	534.59	533.97	533.35	533.23	534.09	533.91	533.83	533.69
23	532.96	532.92	533.04	533.00	534.22	533.74	533.33	533.27	533.92	533.82	533.71	533.62
24	532.94	532.91	533.01	532.97	533.89	533.74	533.28	533.20	533.85	533.70	533.64	533.55
25	532.92	532.89	533.16	532.96	533.91	533.69	533.21	533.16	535.11	533.70	533.55	533.44
26	532.90	532.86	533.24	533.16	533.83	533.54	533.17	533.12	535.03	534.43	533.46	533.42
27	533.10	532.73	533.23	533.14	533.60	533.53	533.14	533.09	534.47	534.26	533.49	533.30
28	532.89	532.82	533.16	533.11	533.55	533.47	533.11	533.06	534.28	534.05	533.38	533.28
29	532.85	532.80	533.26	533.11	533.48	533.42	533.42	533.01	---	---	533.31	533.27
30	532.81	532.78	533.13	533.09	533.43	533.38	535.54	533.37	---	---	533.31	533.24
31	532.85	532.78	---	---	533.40	533.34	537.10	535.54	---	---	533.26	533.22
MONTH	538.88	532.68	535.20	532.71	540.06	532.70	537.10	533.01	537.32	533.63	534.46	533.22

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	533.46	533.22	533.41	533.33	535.04	534.78	533.77	533.11	534.24	533.69	534.85	534.52
2	533.47	533.29	533.35	533.30	534.79	534.57	535.23	533.77	533.69	533.37	534.52	533.85
3	533.32	533.18	533.32	533.26	534.62	534.24	534.54	533.79	533.42	533.34	533.85	533.42
4	533.31	533.18	533.27	533.19	534.26	534.14	534.13	533.78	533.61	533.35	533.42	533.19
5	533.23	533.19	533.20	533.13	534.22	534.03	534.98	534.00	533.40	533.32	533.20	533.05
6	533.71	533.15	533.13	533.09	535.54	534.03	534.10	533.64	533.35	533.18	533.05	532.96
7	533.37	533.23	533.50	533.09	535.92	534.88	533.64	533.43	533.22	533.10	533.04	532.85
8	533.25	533.22	533.43	533.28	534.88	534.45	533.86	533.43	533.10	532.94	534.14	532.97
9	533.26	533.21	533.39	533.26	534.45	534.07	534.30	533.77	532.94	532.89	533.59	533.25
10	534.75	533.26	533.31	533.21	534.07	533.86	533.94	533.57	533.10	532.87	539.20	533.59
11	541.29	534.73	533.26	533.16	533.87	533.69	533.57	533.34	533.10	532.91	539.10	535.98
12	540.29	538.45	533.67	533.26	534.58	533.69	533.34	533.13	534.34	532.93	535.98	534.73
13	538.68	536.85	533.31	533.12	535.70	534.33	533.23	533.07	533.31	533.16	534.73	534.08
14	536.87	535.40	533.16	533.11	534.87	534.38	533.07	533.01	533.16	533.02	534.08	533.75
15	535.48	535.09	533.17	533.09	534.54	534.15	533.01	532.94	533.09	532.92	533.75	533.46
16	535.12	534.77	534.06	533.09	535.23	534.38	532.95	532.87	532.92	532.83	533.46	533.28
17	534.91	534.82	536.07	534.06	534.67	533.91	532.96	532.85	532.83	532.79	533.33	533.22
18	534.82	534.56	541.19	535.88	533.91	533.68	545.19	532.96	532.85	532.74	533.33	533.19
19	534.56	534.30	541.18	539.87	533.69	533.50	535.78	534.16	533.64	532.85	533.63	533.32
20	534.91	534.25	540.40	538.26	533.51	533.47	534.16	533.72	533.49	533.11	534.10	533.55
21	535.28	534.78	538.37	536.51	534.25	533.47	533.97	533.53	533.11	533.03	534.44	533.85
22	535.36	534.97	536.56	535.63	534.56	533.96	534.34	533.61	533.32	532.98	534.21	533.70
23	535.02	534.63	535.65	535.14	534.56	534.28	533.61	533.44	533.59	533.27	533.70	533.45
24	534.64	534.32	535.14	534.97	534.37	534.11	533.44	533.31	533.99	533.29	534.30	533.44
25	534.36	534.05	535.18	534.89	534.12	533.78	533.31	533.18	534.05	533.63	534.76	534.25
26	534.06	533.88	536.28	534.97	533.79	533.55	533.85	533.18	533.73	533.45	534.63	534.17
27	533.89	533.72	539.35	536.28	533.55	533.41	533.78	533.49	533.71	533.38	534.19	533.75
28	533.74	533.56	539.44	538.08	533.42	533.24	533.49	533.25	533.45	533.13	533.80	533.52
29	533.57	533.44	538.27	536.47	533.33	533.23	534.51	533.20	533.76	533.34	533.53	533.37
30	533.48	533.39	536.50	535.45	533.24	533.16	536.39	534.51	533.34	533.05	533.37	533.25
31	---	---	535.54	535.02	---	---	535.38	534.24	534.52	533.02	---	---
MONTH	541.29	533.15	541.19	533.09	535.92	533.16	545.19	532.85	534.52	532.74	539.20	532.85
YEAR	545.19	532.68										

03274060 GREAT MIAMI RIVER NEAR FAIRFIELD, OHIO—Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.1	8.0	8.4	8.2	8.5	8.3	8.1	8.0	8.0	7.9	8.4	8.3
2	8.2	8.0	8.4	8.2	8.6	8.3	8.1	8.0	8.0	7.9	8.4	8.3
3	8.3	7.9	8.3	8.1	8.7	8.3	8.1	8.0	8.0	8.0	8.4	8.3
4	8.3	8.0	8.4	8.1	8.7	8.4	8.1	8.1	8.1	8.0	8.4	8.2
5	8.3	7.8	8.4	8.1	8.7	8.4	8.1	8.1	8.1	8.1	8.4	8.2
6	7.9	7.7	8.3	8.2	8.7	8.4	8.1	8.1	8.1	8.1	8.4	8.2
7	7.9	7.8	8.3	8.1	8.7	8.4	8.2	8.1	8.2	8.1	8.5	8.3
8	8.0	7.9	8.2	8.0	8.5	8.3	8.2	8.1	8.2	8.1	8.6	8.4
9	8.1	8.0	8.1	8.0	8.6	8.3	8.2	8.1	8.1	8.0	8.6	8.4
10	8.1	8.0	8.0	8.0	8.5	8.3	8.2	8.1	8.2	8.1	8.6	8.4
11	8.1	8.1	8.0	7.9	8.4	8.3	8.2	8.1	8.1	8.0	8.6	8.4
12	8.2	8.1	8.0	8.0	8.3	8.1	8.3	8.1	8.0	8.0	8.6	8.4
13	8.2	8.1	8.1	8.0	8.2	8.1	8.3	8.1	8.0	7.9	8.5	8.4
14	8.2	8.1	8.1	8.1	8.1	8.1	8.2	8.1	8.0	8.0	8.6	8.4
15	8.2	8.1	8.2	8.1	8.1	8.1	8.3	8.1	8.1	8.0	8.5	8.3
16	8.3	8.1	8.2	8.2	8.1	7.9	8.2	8.1	8.1	7.9	8.4	8.3
17	8.2	8.1	8.2	8.2	7.9	7.9	8.2	8.1	8.0	8.0	8.4	8.3
18	8.1	8.1	8.3	8.2	7.9	7.9	8.2	8.1	8.0	8.0	8.4	8.3
19	8.3	8.1	8.3	8.2	8.0	7.8	8.2	8.1	8.0	8.0	8.5	8.3
20	8.3	8.1	8.4	8.2	8.1	8.0	8.2	8.1	8.1	8.0	8.5	8.4
21	8.3	8.1	8.4	8.2	8.1	8.1	8.3	8.1	8.2	8.1	8.5	8.3
22	8.4	8.1	8.4	8.3	8.1	8.1	8.2	8.0	8.2	8.1	8.5	8.3
23	8.3	8.1	8.5	8.3	8.1	8.1	8.3	8.1	8.2	8.1	8.6	8.4
24	8.3	8.0	8.5	8.3	8.1	8.1	8.4	8.1	8.2	8.1	8.7	8.4
25	8.3	8.0	8.4	8.3	8.2	8.1	8.4	8.1	8.2	8.1	8.8	8.6
26	8.3	8.1	8.4	8.2	8.2	8.1	8.3	8.1	8.2	8.1	8.8	8.6
27	8.3	8.1	8.4	8.2	8.1	8.0	8.4	8.2	8.2	8.1	8.8	8.6
28	8.4	8.1	8.5	8.2	8.0	8.0	8.4	8.1	8.3	8.2	8.8	8.6
29	8.4	8.2	8.5	8.3	8.1	8.0	8.4	8.2	---	---	8.8	8.6
30	8.4	8.2	8.5	8.3	8.1	8.0	8.2	8.0	---	---	8.8	8.6
31	8.4	8.2	---	---	8.1	8.1	8.1	8.0	---	---	8.8	8.6
MONTH	8.4	7.7	8.5	7.9	8.7	7.8	8.4	8.0	8.3	7.9	8.8	8.2

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.8	8.6	8.5	8.1	8.3	8.2	8.5	7.7	8.0	7.8	8.5	7.9
2	8.8	8.6	8.6	8.1	8.3	8.3	8.1	7.8	8.1	7.9	8.0	7.8
3	8.7	8.6	8.5	8.1	8.3	8.3	8.0	7.6	8.2	8.0	8.0	7.9
4	8.8	8.5	8.5	8.0	8.4	8.3	7.8	7.6	8.5	8.2	8.0	7.9
5	8.8	8.5	8.6	8.1	8.4	8.3	7.9	7.7	8.8	8.4	8.3	7.9
6	8.6	8.3	8.5	8.1	8.3	8.2	8.0	7.7	8.9	8.6	8.4	8.1
7	8.5	8.1	8.4	8.1	8.2	8.0	8.1	8.0	8.9	8.4	8.3	8.1
8	8.4	8.0	8.6	8.2	8.2	8.1	8.0	7.9	8.8	8.3	8.3	7.9
9	8.4	8.0	8.6	8.4	8.4	8.1	8.1	7.8	8.7	8.1	8.2	8.0
10	8.5	8.1	8.5	8.2	8.6	8.3	8.0	7.9	8.4	8.1	8.2	7.6
11	8.2	7.1	8.5	8.3	8.6	8.1	8.3	8.0	8.5	8.1	7.9	7.6
12	7.5	7.2	8.5	8.3	8.4	8.0	8.7	8.2	8.5	7.7	7.9	7.7
13	7.7	7.5	8.5	8.2	8.3	7.8	8.6	8.0	8.4	7.7	8.0	7.8
14	7.8	7.7	8.4	8.2	8.1	7.7	8.6	8.2	8.8	8.4	8.2	8.0
15	8.0	7.8	8.2	7.9	8.1	7.8	8.6	8.1	8.9	8.4	8.3	8.2
16	8.2	8.0	8.1	7.9	8.3	8.1	8.5	8.0	8.5	8.2	8.4	8.2
17	8.2	8.1	8.2	7.9	8.3	7.9	8.4	7.8	8.8	8.3	8.5	8.3
18	8.3	8.2	7.9	7.7	8.2	8.0	8.1	7.5	8.6	8.2	8.5	8.4
19	8.3	8.2	7.8	7.7	8.3	8.1	8.0	7.8	8.7	8.3	8.4	8.3
20	8.3	8.2	7.8	7.7	8.6	8.2	8.1	7.9	8.6	8.4	8.3	8.2
21	8.2	8.0	7.9	7.8	8.4	8.2	8.4	8.0	8.8	8.5	8.3	8.2
22	8.1	7.9	8.1	7.9	8.2	8.0	8.3	8.2	8.7	8.3	8.4	8.2
23	8.1	7.9	8.1	8.1	8.0	7.9	8.6	8.2	8.5	8.3	8.5	8.3
24	8.3	8.0	8.2	8.1	8.0	7.8	8.7	8.4	8.4	8.1	8.4	8.3
25	8.4	8.2	8.2	8.1	8.0	7.8	8.8	8.3	8.2	8.0	8.4	8.3
26	8.7	8.3	8.2	8.2	8.1	7.9	8.6	8.2	8.1	7.9	8.3	8.2
27	8.7	8.4	8.2	8.1	8.2	8.0	8.7	8.3	8.0	7.9	8.4	8.3
28	8.7	8.4	8.1	7.9	8.4	8.1	8.5	8.2	8.1	7.9	8.3	8.3
29	8.7	8.3	8.1	7.9	8.5	7.9	8.4	8.1	8.2	8.0	8.4	8.3
30	8.5	8.1	8.1	7.9	8.5	7.8	8.1	7.5	8.4	8.1	8.4	8.3
31	---	---	8.2	8.1	---	---	7.8	7.6	8.4	8.2	---	---
MONTH	8.8	7.1	8.6	7.7	8.6	7.7	8.8	7.5	8.9	7.7	8.5	7.6
YEAR	8.9	7.1										

PROJECT DATA
Water Data for Bolton Well Field

03274060 GREAT MIAMI RIVER NEAR FAIRFIELD, OHIO—Continued

TURBIDITY (NTU), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	80	34	26	19	7.4	6.1	4.3	3.6	200	100	13	5.9
2	41	30	23	19	6.2	5.5	5.6	4.0	130	69	9.2	5.2
3	40	27	25	20	5.5	4.3	4.6	4.1	69	37	21	5.7
4	45	25	26	20	4.4	3.4	5.6	4.4	37	23	32	6.4
5	980	30	26	19	5.5	3.7	7.3	4.9	23	16	11	3.4
6	690	240	23	19	4.4	3.2	9.6	6.6	16	14	7.9	1.2
7	240	150	26	21	4.8	3.0	8.6	6.8	16	12	9.7	2.1
8	150	85	30	21	4.9	3.3	7.4	5.7	15	11	8.5	2.5
9	85	55	150	27	4.8	3.5	7.1	5.7	230	14	4.2	1.0
10	56	46	120	69	4.0	3.6	6.1	4.8	180	40	2.6	.7
11	47	37	85	56	550	3.6	7.3	4.9	220	120	3.9	1.6
12	39	28	56	29	220	82	7.9	5.4	230	130	4.8	2.1
13	28	22	29	21	140	68	8.1	6.4	130	71	14	3.5
14	27	22	22	17	72	54	8.5	7.1	71	41	9.6	4.6
15	28	23	17	12	54	37	8.1	6.9	120	35	7.9	3.8
16	26	23	15	12	830	36	9.5	6.9	270	120	41	6.5
17	220	22	13	9.3	690	310	14	8.6	190	98	52	14
18	57	38	9.3	6.3	320	130	14	9.0	100	49	15	8.3
19	38	25	7.4	5.3	130	70	15	8.7	50	28	11	5.4
20	29	23	8.2	5.0	70	40	13	9.3	28	20	6.9	3.6
21	27	22	5.6	4.2	40	25	9.5	7.6	21	15	7.9	3.8
22	28	23	8.7	4.5	25	20	8.1	6.5	15	10	9.3	4.4
23	27	20	7.5	4.7	22	14	7.0	5.6	11	6.6	9.2	4.1
24	28	21	20	4.7	15	11	7.8	5.8	11	6.9	8.5	4.6
25	28	21	110	4.8	13	8.8	8.8	6.9	360	8.3	7.9	4.2
26	28	20	13	8.3	10	7.6	7.6	6.3	92	44	4.8	1.9
27	28	19	10	8.0	7.8	6.6	7.0	5.4	44	24	2.6	1.1
28	31	19	8.9	6.7	6.9	5.6	5.7	4.9	26	12	3.9	2.2
29	38	19	9.3	6.9	5.8	5.0	12	4.5	---	---	8.0	3.6
30	27	20	9.0	7.1	5.8	4.7	490	6.6	---	---	11	7.2
31	24	18	---	---	5.0	4.2	210	110	---	---	12	8.3
MONTH	980	18	150	4.2	830	3.0	490	3.6	360	6.6	52	.7

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	16	9.4	31	24	67	50	32	13	81	54	150	89
2	16	8.0	27	22	88	43	400	32	62	38	100	64
3	11	7.1	24	20	45	34	140	78	75	32	67	48
4	14	9.2	22	17	47	27	93	68	48	27	56	40
5	15	10	27	16	32	24	180	61	37	28	52	34
6	1200	10	30	17	1200	24	150	60	40	32	42	32
7	570	22	500	18	420	130	64	46	49	33	73	31
8	28	14	240	30	170	52	770	42	55	35	210	40
9	23	13	32	24	53	34	130	65	46	29	110	48
10	130	17	26	19	70	32	65	42	60	25	1000	58
11	1200	48	59	19	55	32	51	37	58	30	620	200
12	760	330	87	20	69	32	53	36	130	30	200	95
13	340	170	29	15	170	40	70	40	140	44	95	47
14	170	97	24	14	140	83	58	40	55	42	50	34
15	130	60	30	14	110	69	60	42	62	46	40	30
16	61	28	64	13	150	65	100	36	55	40	31	22
17	33	22	160	38	110	55	67	29	53	37	35	19
18	25	17	1200	160	65	52	1200	30	72	33	27	20
19	36	16	1000	390	61	43	290	67	370	41	120	24
20	62	19	410	180	52	42	67	36	74	45	54	38
21	49	25	180	130	840	40	44	30	61	41	63	36
22	52	31	130	88	110	75	90	30	64	42	48	27
23	40	27	88	57	90	64	53	36	68	54	29	22
24	360	34	64	45	75	57	47	36	80	49	70	20
25	120	29	60	42	78	37	47	37	92	52	66	39
26	37	22	100	44	56	29	66	39	59	43	57	33
27	29	21	270	98	38	26	57	43	70	50	33	28
28	33	24	290	230	36	22	48	38	1200	49	32	26
29	32	24	230	140	26	19	72	36	70	52	27	22
30	31	25	140	96	26	15	370	72	61	48	23	19
31	---	---	96	62	---	---	260	79	150	43	---	---
MONTH	1200	7.1	1200	13	1200	15	1200	13	1200	25	1000	19
YEAR	1200	.7										

03274060 GREAT MIAMI RIVER NEAR FAIRFIELD, OHIO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(90901), USGS National Water Information System parameter code; MF, membrane filtration; col/100mL, colonies per 100 milliliters; <, concentration or value reported is less than that indicated; E, value is estimated from a non-ideal colony count; ---, no data; >, concentration or value reported is greater than that indicated]

DATE	TIME	E COLI, MI MF, WATER (COL/ 100 ML) (90901)	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	TOTAL COLI-FORM, MI MF, WATER (COL/ 100 ML) (90900)
OCT				
11...	1215	E620	---	4300
NOV				
15...	1020	830	---	16000
DEC				
12...	1200	E100000	---	>80000
17...	0900	E980000	---	E1100000
17...	1550	E890000	---	E1000000
18...	0840	1400000	---	1900000
19...	1150	700000	---	870000
20...	1245	640000	---	770000
21...	1100	<3300	---	230000
22...	1130	E710	---	38000
26...	---	<3	---	E18
FEB				
13...	0925	E590	---	7900
MAR				
13...	1011	E620	---	7000
APR				
11...	1010	E9300	---	180000
11...	1115	E3100	<3300	75000
11...	1449	E7900	<3300	300000
11...	1730	E20000	---	580000
12...	0826	E5400	7100	300000
12...	1500	E6000	130	410000
13...	0815	2100	E860	170000
13...	1055	E1700	---	100000
14...	1045	590	260	30000
15...	0835	230	110	15000
16...	1030	240	190	8700
18...	1005	E10	E10	380
23...	1005	150	---	7500

PROJECT DATA
Water Data for Bolton Well Field

MANUAL GROUND-WATER LEVEL MEASUREMENTS

LOCAL WELL NUMBER	LATITUDE	LONGITUDE	DEPTH OF WELL (FEET)	ALTITUDE OF LAND SURFACE (FEET)	WATER LEVEL (FEET)	ALTITUDE OF WATER LEVEL (FEET)	MEASUREMENT TIME	WATER-LEVEL DATE
BU-1151-1A	391904	843621	30	546.87	17.98	528.89	1121	10/11/00
					18.82	528.05	1020	10/20/00
					17.89	528.98	0920	11/15/00
					19.25	527.62	1216	11/24/00
					18.40	528.47	1045	01/04/01
					18.25	528.62	1255	01/23/01
					16.39	530.48	1114	02/01/01
					16.51	530.36	1032	02/13/01
					16.73	530.14	1157	02/28/01
					17.40	529.47	0948	03/13/01
					14.95	531.92	1056	03/28/01
					16.77	530.10	1204	03/28/01
					16.40	530.47	1317	04/11/01
					13.08	533.79	1237	06/20/01
					13.92	532.95	1113	07/18/01
					14.15	532.72	1132	08/14/01
BU-1152-1B	391904	843621	45	547.58	19.24	528.34	1129	10/11/00
					18.00	529.58	1026	10/20/00
					19.17	528.41	0910	11/15/00
					20.53	527.05	1217	11/24/00
					19.07	528.51	1510	01/04/01
					17.74	529.84	1120	02/01/01
					17.85	529.73	0900	02/13/01
					18.06	529.52	1155	02/28/01
					18.74	528.84	0943	03/13/01
					15.67	531.91	1054	03/28/01
					17.77	529.81	1422	04/11/01
					13.77	533.81	1236	06/20/01
					15.24	532.34	1112	07/18/01
					14.84	532.74	1146	08/14/01
BU-1153-1C	391904	843621	60	547.6	20.55	527.05	1134	10/11/00
					21.30	526.30	1125	10/20/00
					21.59	526.01	0844	11/15/00
					21.89	525.71	1219	11/24/00
					19.53	528.07	1520	01/04/01
					21.05	526.55	1307	01/23/01
					19.22	528.38	1125	02/01/01
					19.39	528.21	0901	02/13/01
					19.58	528.02	1151	02/28/01
					20.24	527.36	0937	03/13/01
					15.70	531.90	1052	03/28/01
					19.28	528.32	1426	04/11/01
					13.79	533.81	1235	06/20/01
					16.69	530.91	1111	07/18/01
					14.86	532.74	1157	08/14/01
BU-1154-1D	391904	843621	87	547.7	21.97	525.73	1132	10/11/00
					22.74	524.96	1145	10/20/00
					22.07	525.63	0846	11/15/00
					23.31	524.39	1221	11/24/00
					22.07	525.63	1540	01/04/01
					22.57	525.13	1309	01/23/01
					20.80	526.90	1128	02/01/01
					20.96	526.74	1031	02/13/01
					21.16	526.54	1146	02/28/01
					21.78	525.92	0927	03/13/01
					15.75	531.95	1051	03/28/01
					20.82	526.88	1426	04/11/01
					13.84	533.86	1233	06/20/01
					18.25	529.45	1110	07/18/01
					14.92	532.78	1152	08/14/01
BU-1156-8A	391905	843729	40	541.32	11.65	529.67	0952	10/11/00
					12.36	528.96	1230	10/20/00
					13.55	527.77	0956	11/15/00
					13.65	527.67	1240	01/04/01
					14.41	526.91	0920	01/23/01
					10.98	530.34	1033	02/01/01
					13.08	528.24	1005	02/13/01
					13.52	527.80	1018	02/28/01
					15.15	526.17	1034	03/13/01
					13.84	527.48	1019	03/28/01
					10.74	530.58	1400	04/11/01
					12.97	528.35	1107	06/20/01
					8.42	532.90	1015	07/18/01
					15.01	526.31	1429	08/14/01

MANUAL GROUND-WATER LEVEL MEASUREMENTS—CONTINUED

LOCAL WELL NUMBER	LATITUDE	LONGITUDE	DEPTH OF WELL (FEET)	ALTITUDE OF LAND SURFACE (FEET)	WATER LEVEL (FEET)	ALTITUDE OF WATER LEVEL (FEET)	MEASUREMENT TIME	WATER-LEVEL DATE
BU-1157-8B	391905	843729	60	543.74	14.23	529.51	0958	10/11/00
					14.96	528.78	1235	10/20/00
					16.62	527.12	954	11/15/00
					16.12	527.62	1225	01/04/01
					17.54	526.20	0920	01/23/01
					13.55	530.19	1031	02/01/01
					16.29	527.45	1015	02/13/01
					16.72	527.02	1018	02/28/01
					18.36	525.38	1044	03/13/01
					16.36	527.38	1017	03/28/01
					14.46	529.28	1402	04/11/01
					15.46	528.28	1106	06/20/01
					11.91	531.83	1014	07/18/01
					18.17	525.57	1429	08/14/01
BU-1158-8C	391905	843729	96	545.46	15.96	529.50	1001	10/11/00
					16.72	528.74	1257	10/20/00
					21.53	523.93	0954	11/15/00
					17.88	527.58	1200	01/04/01
					22.37	523.09	1145	01/23/01
					15.35	530.11	1030	02/01/01
					21.33	524.13	1015	02/13/01
					21.60	523.86	1008	02/28/01
					23.01	522.45	1049	03/13/01
					18.13	527.33	1015	03/28/01
					19.62	525.84	1351	04/11/01
					17.24	528.22	1104	06/20/01
					17.27	528.19	1013	07/18/01
					23.15	522.31	1415	08/14/01
BU-1159-8D	391905	843729	185	545.75	16.27	529.48	1011	10/11/00
					16.93	528.82	1250	10/20/00
					26.31	519.44	0952	11/15/00
					18.01	527.74	1115	01/04/01
					26.95	518.80	1105	01/23/01
					15.60	530.15	1028	02/01/01
					25.91	519.84	1027	02/13/01
					26.23	519.52	1011	02/28/01
					18.15	527.60	1013	03/28/01
					25.46	520.29	1355	04/11/01
					17.39	528.36	1102	06/20/01
					22.37	523.38	1012	07/18/01
					27.63	518.12	1424	08/14/01

PROJECT DATA

Effects of Combined-Sewer Overflows on Recreational Waters and Aquatic Life of the Mahoning River and Tributaries in Youngstown, Ohio

The data described in the following tables were collected as part of the Youngstown, Ohio, sewer-overflow project. The goal of this project is to develop an improved understanding of the effects of combined-sewer overflows on attainment of water-quality standards for both primary-contact recreation and the protection of aquatic life. In order to attain this goal, microbiological and chemical water-quality data of the Mahoning River and its tributaries were collected during two storm events. Water-quality data were collected from 14 sites; 8 sites along Mill Creek and tributaries, 5 sites along the Mahoning River and tributaries, and the Youngstown wastewater-treatment plant outfall. Continuous hydrologic data were collected at selected sites.

[mi^2, square miles]

STATION NUMBER	STATION NAME	DRAINAGE AREA (MI^2)
03098000	Mahoning River at Youngstown, Ohio	898
03098406	Mill Creek at Shields Road at Boardman, Ohio	53.7
03098500	Mill Creek at Youngstown, Ohio	66.3
03098513	Mill Creek at Price Road at Youngstown, Ohio	78.4
03098600	Mahoning River below West Avenue at Youngstown, Ohio	978
03098700	Crab Creek at Youngstown, Ohio	14
03099500	Mahoning River at Lowellville, Ohio	1073
405916080412400	Mill Creek at Western Reserve Road near Boardman, Ohio	28.4
410048080422700	Indian Run near Canfield, Ohio	14.8
410247080405200	Cranberry Run at Boardman, Ohio	3.66
410440080415900	Ax Factory Run at Youngstown, Ohio	3.21
410447080371900	Mahoning River at Center Street at Youngstown, Ohio	980
410514080404700	Bears Den Run at Youngstown, Ohio	3.89
410526080383000	Youngstown Waste Water Treatment Plant Outfall at Youngstown, Ohio	---

PROJECT DATA
Effects of Combined-Sewer Overflows on Recreational Waters and Aquatic Life of the Mahoning River and Tributaries in Youngstown, Ohio
WATER-QUALITY DATA

03098000 MAHONING RIVER AT YOUNGSTOWN, OHIO

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00061), USGS National Water Information System parameter code; mm of Hg, millimeters of mercury; mg/L, milligrams per liter; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; col/100 mL, colonies per 100 milliliters; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; K, value is estimated from a non-ideal colony count]

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)
OCT									
06...	1215	---	738	83	7.6	7.5	352	---	23.0
07...	1035	---	738	84	8.0	7.7	464	---	17.6
08...	0915	---	737	59	5.6	7.7	479	4.5	16.5

DATE	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
OCT											
06...	130	37.3	10.1	6.1	36.6	88	105	56.4	.6	5.1	61.5
07...	---	---	---	---	---	---	---	---	---	---	---
08...	---	---	---	---	---	---	---	---	---	---	---

DATE	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	BOD OXYGEN DEMAND, BIOCHEM CARBON. 5 DAY (MG/L) (80082)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)
OCT											
06...	.76	.87	.201	1.66	.051	.201	.170	---	<2.0	30	14
07...	.68	.84	.139	.885	.030	.125	.106	.190	<2.0	20	17
08...	---	---	---	---	---	---	---	---	---	---	---

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	CLOS-TRIDIUM PERFRI-GENS, MF-MCP, (COL/ 100 ML) (90915)	CLOS-TRIDIUM PERFRI-GENS, ETH TRT (COL/ 100 ML) (99765)	COLI-PHAGE, E. COLI C HOST, 1-AGAR, (PLAQUE 100 ML) (90905)	COLI-PHAGE, E. COLI F-AMP, 1-AGAR, (PLAQUE 100 ML) (90904)	E. COLI WATER WHOLE TOTAL UREASE (COL/ 100 ML) (31633)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CAF-FEINE WATER, UNFLTRD RECOV-ERABLE (UG/L) (81436)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
OCT										
06...	294	---	---	---	---	290	30	89	---	14
07...	---	---	---	---	---	K510	---	---	---	---
08...	---	---	---	---	---	93	---	---	---	---

PROJECT DATA

Effects of Combined-Sewer Overflows on Recreational Waters and Aquatic Life of the Mahoning River and Tributaries in Youngstown, Ohio

WATER-QUALITY DATA—CONTINUED

03098406 MILL CREEK AT SHIELDS ROAD AT BOARDMAN, OHIO

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00061), USGS National Water Information System parameter code; mm of Hg, millimeters of mercury; mg/L, milligrams per liter; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; col/100 mL, colonies per 100 milliliters; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; K, value is estimated from a non-ideal colony count; E, estimated value]

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)
OCT									
06...	1500	---	733	77	7.5	7.1	541	---	14.9
07...	0830	---	738	74	7.6	7.2	584	---	12.8
08...	0915	---	737	81	9.0	6.8	739	4.0	9.1

DATE	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
OCT											
06...	160	47.3	10.5	4.8	39.3	84	103	56.1	.4	6.8	74.1
07...	---	---	---	---	---	---	---	---	---	---	---
08...	---	---	---	---	---	---	---	---	---	---	---

DATE	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	BOD OXYGEN DEMAND, BIOCHEM CARBON. 5 DAY (MG/L) (80082)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)
OCT											
06...	.42	.76	E.036	1.98	.014	.158	.132	---	<2.0	20	52
07...	.48	.79	.047	2.11	.013	.144	.117	---	<2.0	<10	31
08...	---	---	---	---	---	---	---	---	---	---	---

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	CLOS-TRIDIUM PERFRI-GENS, MF-MCP, (COL/ 100 ML) (90915)	CLOS-TRIDIUM PERFRI-GENS, ETH TRT (COL/ 100 ML) (99765)	COLI-PHAGE, E. COLI C HOST, 1-AGAR, (PLAQUE 100 ML) (90905)	COLI-PHAGE, E. COLI F-AMP, 1-AGAR, (PLAQUE 100 ML) (90904)	E. COLI WATER WHOLE TOTAL UREASE (COL/ 100 ML) (31633)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CAF-FEINE WATER, UNFLTRD RECOV-ERABLE (UG/L) (81436)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
OCT										
06...	315	K72	K42	54	3	5000	20	131	---	54
07...	---	---	---	---	---	9200	---	---	---	---
08...	---	---	---	---	---	1300	---	---	---	---

WATER-QUALITY DATA—CONTINUED

03098500 MILL CREEK AT YOUNGSTOWN, OHIO

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00061), USGS National Water Information System parameter code; mm of Hg, millimeters of mercury; mg/L, milligrams per liter; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; col/100 mL, colonies per 100 milliliters; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated]

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)
OCT									
06...	1400	---	737	95	9.0	7.2	744	---	16.4
07...	1030	---	738	95	9.4	7.5	679	---	14.5
08...	1100	---	737	98	10.1	7.2	597	---	12.4

DATE	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
OCT											
06...	---	---	---	---	---	100	120	---	---	---	---
07...	---	---	---	---	---	---	---	---	---	---	---
08...	---	---	---	---	---	---	---	---	---	---	---

DATE	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	BOD OXYGEN DEMAND, BIOCHEM CARBON. 5 DAY (MG/L) (80082)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)
OCT											
06...	.54	.98	.063	3.81	.026	.183	.155	---	<2.0	18	20
07...	.48	.79	.057	3.23	.023	.160	.130	.237	<2.0	19	15
08...	---	---	---	---	---	---	---	---	---	---	---

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	CLOS-TRIDIUM PERFRI-GENS, MF-MCP, (COL/ 100 ML) (90915)	CLOS-TRIDIUM PERFRI-GENS, ETH TRT (COL/ 100 ML) (99765)	COLI-PHAGE, E. COLI C HOST, 1-AGAR, (PLAQUE 100 ML) (90905)	COLI-PHAGE, E. COLI F-AMP, 1-AGAR, (PLAQUE 100 ML) (90904)	E. COLI WATER WHOLE TOTAL UREASE (COL/ 100 ML) (31633)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CAF-FEINE WATER, UNFLTRD RECOV-ERABLE (UG/L) (81436)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
OCT										
06...	---	93	80	4	<1	2400	---	---	---	23
07...	---	---	---	---	---	820	---	---	---	---
08...	---	---	---	---	---	870	---	---	---	---

PROJECT DATA

Effects of Combined-Sewer Overflows on Recreational Waters and Aquatic Life of the Mahoning River and Tributaries in Youngstown, Ohio

WATER-QUALITY DATA—CONTINUED

03098513 MILL CREEK AT PRICE ROAD AT YOUNGSTOWN, OHIO

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00061), USGS National Water Information System parameter code; mm of Hg, millimeters of mercury; mg/L, milligrams per liter; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; col/100 mL, colonies per 100 milliliters; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; K, value is estimated from a non-ideal colony count; E, estimated value]

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)
OCT									
06...	1400	---	738	97	9.6	8.0	550	---	15.9
07...	1115	---	738	98	10.1	8.0	613	---	14.0
08...	1245	---	737	103	10.5	7.7	658	---	13.1

DATE	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
OCT											
06...	150	45.2	9.82	4.7	41.5	89	107	61.4	.4	6.2	73.6
07...	---	---	---	---	---	---	---	---	---	---	---
08...	---	---	---	---	---	---	---	---	---	---	---

DATE	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	BOD OXYGEN DEMAND, BIOCHEM CARBON. 5 DAY (MG/L) (80082)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)
OCT											
06...	.51	.86	.055	1.71	.019	.069	.050	.170	<2.0	23	17
07...	.50	.85	.070	2.18	.022	.079	.061	.173	<2.0	17	16
08...	---	---	---	---	---	---	---	---	---	---	---

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	CLOS-TRIDIUM PERFRI-GENS, MF-MCP, (COL/ 100 ML) (90915)	CLOS-TRIDIUM PERFRI-GENS, ETH TRT (COL/ 100 ML) (99765)	COLI-PHAGE, E. COLI C HOST, 1-AGAR, (PLAQUE 100 ML) (90905)	COLI-PHAGE, E. COLI F-AMP, 1-AGAR, (PLAQUE 100 ML) (90904)	E. COLI WATER WHOLE TOTAL UREASE (COL/ 100 ML) (31633)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CAF-FEINE WATER, UNFLTRD RECOV-ERABLE (UG/L) (81436)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
OCT										
06...	321	100	K36	12	<1	800	E10	50	---	21
07...	---	---	---	---	---	1500	---	---	---	---
08...	---	---	---	---	---	680	---	---	---	---

PROJECT DATA
Effects of Combined-Sewer Overflows on Recreational Waters and Aquatic Life of the Mahoning River and Tributaries in Youngstown, Ohio
WATER-QUALITY DATA—CONTINUED

03098600 MAHONING RIVER BELOW WEST AVENUE AT YOUNGSTOWN, OHIO

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00061), USGS National Water Information System parameter code; mm of Hg, millimeters of mercury; mg/L, milligrams per liter; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; col/100 mL, colonies per 100 milliliters; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; K, value is estimated from a non-ideal colony count; E, estimated value]

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)
OCT									
06...	1030	---	737	---	---	7.8	371	14.5	21.1
07...	0915	---	746	---	---	7.9	353	5.4	18.7
08...	0935	---	737	62	5.9	7.5	463	4.5	15.7

DATE	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
OCT											
06...	150	42.3	10.8	5.6	37.3	84	101	54.3	.5	5.7	62.3
07...	---	---	---	---	---	---	---	---	---	---	---
08...	---	---	---	---	---	---	---	---	---	---	---

DATE	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	BOD OXYGEN DEMAND, BIOCHEM CARBON. 5 DAY (MG/L) (80082)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	RESIDUE TOTAL AT 105 DEG. C SUS-PENDED (MG/L (00530)
OCT											
06...	.62	.85	.134	1.29	.044	.147	.123	.205	<2.0	23	16
07...	.43	.49	E.022	.842	.006	.049	.037	.088	<2.0	21	18
08...	---	---	---	---	---	---	---	---	---	---	---

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	CLOS-TRIDIUM PERFRI-GENS, MF-MCP, (COL/ 100 ML) (90915)	CLOS-TRIDIUM PERFRI-GENS, ETH TRT (COL/ 100 ML) (99765)	COLI-PHAGE, E. COLI C HOST, 1-AGAR, (PLAQUE 100 ML) (90905)	COLI-PHAGE, E. COLI F-AMP, 1-AGAR, (PLAQUE 100 ML) (90904)	E. COLI WATER WHOLE TOTAL UREASE (COL/ 100 ML) (31633)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CAF-FEINE WATER, UNFLTRD RECOV-ERABLE (UG/L) (81436)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
OCT										
06...	289	---	---	---	---	K1100	30	75	---	18
07...	---	---	---	---	---	1500	---	---	---	---
08...	---	---	---	---	---	240	---	---	---	---

PROJECT DATA
Effects of Combined-Sewer Overflows on Recreational Waters and Aquatic Life of the Mahoning River and Tributaries in Youngstown, Ohio
WATER-QUALITY DATA—CONTINUED

03098700 CRAB CREEK AT YOUNGSTOWN, OHIO

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00061), USGS National Water Information System parameter code; mm of Hg, millimeters of mercury; mg/L, milligrams per liter; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; col/100 mL, colonies per 100 milliliters; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated value]

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)
OCT									
06...	1100	---	737	92	9.6	7.7	483	---	14.4
07...	1000	---	746	87	9.3	7.6	573	5.0	11.4
08...	1000	---	737	71	7.9	7.4	657	4.5	9.0

DATE	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
OCT											
06...	150	46.9	9.04	4.3	36.5	112	132	50.7	.5	9.3	42.8
07...	---	---	---	---	---	---	---	---	---	---	---
08...	---	---	---	---	---	---	---	---	---	---	---

DATE	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	BOD OXYGEN DEMAND, BIOCHEM CARBON. 5 DAY (MG/L) (80082)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)
OCT											
06...	.40	.69	E.030	.564	.011	.061	.042	.119	<2.0	24	8
07...	.24	.37	<.041	.503	.007	.033	.021	.066	<2.0	16	<5
08...	---	---	---	---	---	---	---	---	---	---	---

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	CLOS-TRIDIUM PERFRI-GENS, MF-MCP, (COL/ 100 ML) (90915)	CLOS-TRIDIUM PERFRI-GENS, ETH TRT (COL/ 100 ML) (99765)	COLI-PHAGE, E. COLI C HOST, 1-AGAR, (PLAQUE 100 ML) (90905)	COLI-PHAGE, E. COLI F-AMP, 1-AGAR, (PLAQUE 100 ML) (90904)	E. COLI WATER WHOLE TOTAL UREASE (COL/ 100 ML) (31633)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CAF-FEINE WATER, UNFLTRD RECOV-ERABLE (UG/L) (81436)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
OCT										
06...	283	---	---	---	---	4600	50	32	---	11
07...	---	---	---	---	---	1700	---	---	---	---
08...	---	---	---	---	---	2000	---	---	---	---

WATER-QUALITY DATA—CONTINUED

03099500 MAHONING RIVER AT LOWELLVILLE, OHIO

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00061), USGS National Water Information System parameter code; mm of Hg, millimeters of mercury; mg/L, milligrams per liter; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; col/100 mL, colonies per 100 milliliters; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated]

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)
OCT									
06...	1330	---	737	79	7.0	7.8	506	---	19.4
07...	1130	---	746	73	6.7	7.6	521	8.7	18.4
08...	1045	---	737	78	7.5	7.4	508	5.5	15.3

DATE	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
OCT											
06...	160	44.5	11.2	5.4	38.2	87	104	54.4	.5	6.0	69.9
07...	---	---	---	---	---	---	---	---	---	---	---
08...	---	---	---	---	---	---	---	---	---	---	---

DATE	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	BOD OXYGEN DEMAND, BIOCHEM CARBON. 5 DAY (MG/L) (80082)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)
OCT											
06...	.68	1.0	.182	1.45	.051	.180	.150	---	<2.0	26	30
07...	.68	.88	.199	1.63	.055	.179	.148	---	<2.0	22	16
08...	---	---	---	---	---	---	---	---	---	---	---

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	CLOS-TRIDIUM PERFRI-GENS, MF-MCP, (COL/ 100 ML) (90915)	CLOS-TRIDIUM PERFRI-GENS, ETH TRT (COL/ 100 ML) (99765)	COLI-PHAGE, E. COLI C HOST, 1-AGAR, (PLAQUE 100 ML) (90905)	COLI-PHAGE, E. COLI F-AMP, 1-AGAR, (PLAQUE 100 ML) (90904)	E. COLI WATER WHOLE TOTAL UREASE (COL/ 100 ML) (31633)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CAF-FEINE WATER, UNFLTRD RECOV-ERABLE (UG/L) (81436)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
OCT										
06...	330	---	---	---	---	4200	30	66	---	31
07...	---	---	---	---	---	890	---	---	---	---
08...	---	---	---	---	---	620	---	---	---	---

405916080412400 MILL CREEK AT WESTERN RESERVE ROAD NEAR BOARDMAN, OHIO

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00061), USGS National Water Information System parameter code; mm of Hg, millimeters of mercury; mg/L, milligrams per liter; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; col/100 mL, colonies per 100 milliliters; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated]

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)
OCT									
06...	1530	---	737	64	6.3	7.7	500	11.1	14.2
07...	0905	---	738	68	7.3	7.5	698	---	11.4
08...	1000	---	737	78	8.7	7.1	764	---	9.1

DATE	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
OCT											
06...	180	46.3	14.8	6.2	25.6	83	102	36.0	.3	7.9	104
07...	---	---	---	---	---	---	---	---	---	---	---
08...	---	---	---	---	---	---	---	---	---	---	---

DATE	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	BOD OXYGEN DEMAND, BIOCHEM CARBON. 5 DAY (MG/L) (80082)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)
OCT											
06...	.54	1.0	.101	.931	.018	.065	.044	---	<2.0	31	37
07...	.74	.93	.074	1.03	.016	.040	.020	.220	<2.0	25	25
08...	---	---	---	---	---	---	---	---	---	---	---

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	CLOS-TRIDIUM PERFRI-GENS, MF-MCP, (COL/ 100 ML) (90915)	CLOS-TRIDIUM PERFRI-GENS, ETH TRT (COL/ 100 ML) (99765)	COLI-PHAGE, E. COLI C HOST, 1-AGAR, (PLAQUE 100 ML) (90905)	COLI-PHAGE, E. COLI F-AMP, 1-AGAR, (PLAQUE 100 ML) (90904)	E. COLI WATER WHOLE TOTAL UREASE (COL/ 100 ML) (31633)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CAF-FEINE WATER, UNFLTRD RECOV-ERABLE (UG/L) (81436)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
OCT										
06...	321	300	280	510	110	37000	40	1060	---	44
07...	---	---	---	---	---	16000	---	---	---	---
08...	---	---	---	---	---	2300	---	---	---	---

WATER-QUALITY DATA—CONTINUED

410048080422700 INDIAN RUN NEAR CANFIELD, OHIO

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00061), USGS National Water Information System parameter code; mm of Hg, millimeters of mercury; mg/L, milligrams per liter; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; col/100 mL, colonies per 100 milliliters; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; K, value is estimated from a non-ideal colony count; E, estimated value]

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)
OCT									
06...	0925	14	---	---	---	---	---	---	---
06...	1550	---	737	117	10.4	7.7	566	13.0	19.2
07...	0830	5.7	738	388	9.8	8.0	670	---	11.3
08...	0940	---	737	87	9.8	7.0	694	---	8.8

DATE	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
OCT											
06...	---	---	---	---	---	---	---	---	---	---	---
06...	160	46.3	10.0	5.6	43.0	106	127	67.7	.3	6.6	65.4
07...	---	---	---	---	---	---	---	---	---	---	---
08...	---	---	---	---	---	---	---	---	---	---	---

DATE	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	BOD OXYGEN DEMAND, BIOCHEM CARBON. 5 DAY (MG/L) (80082)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)
OCT											
06...	---	---	---	---	---	---	---	---	---	---	---
06...	.44	.68	<.041	.404	.010	.050	.028	.126	<2.0	26	22
07...	.47	.60	<.041	.395	E.005	.038	.025	.084	<2.0	24	8
08...	---	---	---	---	---	---	---	---	---	---	---

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	CLOS-TRIDIUM PERFRI-GENS, MF-MCP, (COL/ 100 ML) (90915)	CLOS-TRIDIUM PERFRI-GENS, ETH TRT (COL/ 100 ML) (99765)	COLI-PHAGE, E. COLI C HOST, 1-AGAR, (PLAQUE 100 ML) (90905)	COLI-PHAGE, E. COLI F-AMP, 1-AGAR, (PLAQUE 100 ML) (90904)	E. COLI WATER WHOLE TOTAL UREASE (COL/ 100 ML) (31633)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CAF-FEINE WATER, UNFLTRD RECOV-ERABLE (UG/L) (81436)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
OCT										
06...	---	---	---	---	---	---	---	---	---	---
06...	336	130	K14	48	12	10000	30	32	---	38
07...	---	---	---	---	---	1900	---	---	---	---
08...	---	---	---	---	---	1500	---	---	---	---

PROJECT DATA

Effects of Combined-Sewer Overflows on Recreational Waters and Aquatic Life of the Mahoning River and Tributaries in Youngstown, Ohio

WATER-QUALITY DATA—CONTINUED

410247080405200 CRANBERRY RUN AT BOARDMAN, OHIO

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00061), USGS National Water Information System parameter code; mm of Hg, millimeters of mercury; mg/L, milligrams per liter; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; col/100 mL, colonies per 100 milliliters; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; K, value is estimated from a non-ideal colony count]

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)
OCT									
06...	1730	---	737	78	7.7	7.7	342	10.5	14.6
07...	0915	.96	738	83	8.9	7.4	472	---	10.9
08...	0920	---	737	87	9.9	6.8	577	---	8.2

DATE	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
OCT											
06...	98	31.8	4.40	3.2	23.6	82	99	31.9	.3	8.3	28.2
07...	---	---	---	---	---	---	---	---	---	---	---
08...	---	---	---	---	---	---	---	---	---	---	---

DATE	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	BOD OXYGEN DEMAND, BIOCHEM CARBON. 5 DAY (MG/L) (80082)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)
OCT											
06...	.36	.52	<.041	.857	.016	.048	.030	.088	<2.0	21	5
07...	.66	.85	.172	1.21	.044	.117	.106	.203	<2.0	20	<5
08...	---	---	---	---	---	---	---	---	---	---	---

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	CLOS-TRIDIUM PERFRI-GENS, MF-MCP, (COL/ 100 ML) (90915)	CLOS-TRIDIUM PERFRI-GENS, ETH TRT (COL/ 100 ML) (99765)	COLI-PHAGE, E. COLI C HOST, 1-AGAR, (PLAQUE 100 ML) (90905)	COLI-PHAGE, E. COLI F-AMP, 1-AGAR, (PLAQUE 100 ML) (90904)	E. COLI WATER WHOLE TOTAL UREASE (COL/ 100 ML) (31633)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CAF-FEINE WATER, UNFLTRD RECOV-ERABLE (UG/L) (81436)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
OCT										
06...	203	110	K6	8	17	5800	50	9	---	13
07...	---	---	---	---	---	1900	---	---	---	---
08...	---	---	---	---	---	800	---	---	---	---

WATER-QUALITY DATA—CONTINUED

410440080415900 AX FACTORY RUN AT YOUNGSTOWN, OHIO

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00061), USGS National Water Information System parameter code; mm of Hg, millimeters of mercury; mg/L, milligrams per liter; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; col/100 mL, colonies per 100 milliliters; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; K, value is estimated from a non-ideal colony count; E, estimated value]

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)
OCT									
06...	1100	6.2	737	95	9.1	6.8	274	---	15.6
07...	1210	.73	738	96	10.2	7.3	279	---	11.1
08...	1125	---	737	97	11.0	7.4	286	---	8.5

DATE	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
OCT											
06...	91	29.8	4.02	2.8	18.1	62	74	23.4	.5	6.6	29.9
07...	---	---	---	---	---	---	---	---	---	---	---
08...	---	---	---	---	---	---	---	---	---	---	---

DATE	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	BOD OXYGEN DEMAND, BIOCHEM CARBON. 5 DAY (MG/L) (80082)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)
OCT											
06...	.38	.89	E.031	.254	.011	.014	<.018	.099	2.4	23	15
07...	.26	.68	<.041	.377	.006	.016	<.018	.082	<2.0	21	15
08...	---	---	---	---	---	---	---	---	---	---	---

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	CLOS-TRIDIUM PERFRI-GENS, MF-MCP, (COL/ 100 ML) (90915)	CLOS-TRIDIUM PERFRI-GENS, ETH TRT (COL/ 100 ML) (99765)	COLI-PHAGE, E. COLI C HOST, 1-AGAR, (PLAQUE 100 ML) (90905)	COLI-PHAGE, E. COLI F-AMP, 1-AGAR, (PLAQUE 100 ML) (90904)	E. COLI WATER WHOLE TOTAL UREASE (COL/ 100 ML) (31633)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CAF-FEINE WATER, UNFLTRD RECOV-ERABLE (UG/L) (81436)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
OCT										
06...	162	K7	K19	8	17	2400	70	8	---	18
07...	---	---	---	---	---	1500	---	---	---	---
08...	---	---	---	---	---	930	---	---	---	---

PROJECT DATA

Effects of Combined-Sewer Overflows on Recreational Waters and Aquatic Life of the Mahoning River and Tributaries in Youngstown, Ohio

WATER-QUALITY DATA—CONTINUED

410447080371900 MAHONING RIVER AT CENTER STREET AT YOUNGSTOWN, OHIO

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00061), USGS National Water Information System parameter code; mm of Hg, millimeters of mercury; mg/L, milligrams per liter; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; col/100 mL, colonies per 100 milliliters; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated]

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)
OCT									
06...	1215	---	737	69	6.1	7.8	497	12.8	19.7
07...	1045	---	746	69	6.3	7.6	514	7.4	18.7
08...	1030	---	737	71	6.8	7.5	498	5.5	15.5

DATE	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
OCT											
06...	150	42.6	10.6	5.8	37.1	85	102	53.5	.3	6.1	62.8
07...	---	---	---	---	---	---	---	---	---	---	---
08...	---	---	---	---	---	---	---	---	---	---	---

DATE	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	BOD OXYGEN DEMAND, BIOCHEM CARBON. 5 DAY (MG/L) (80082)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)
OCT											
06...	.63	.88	.132	1.50	.042	.175	.145	---	<2.0	15	22
07...	.61	.87	.177	1.57	.051	.157	.125	.222	<2.0	17	13
08...	---	---	---	---	---	---	---	---	---	---	---

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	CLOS-TRIDIUM PERFRI-GENS, MF-MCP, (COL/ 100 ML) (90915)	CLOS-TRIDIUM PERFRI-GENS, ETH TRT (COL/ 100 ML) (99765)	COLI-PHAGE, E. COLI C HOST, 1-AGAR, (PLAQUE 100 ML) (90905)	COLI-PHAGE, E. COLI F-AMP, 1-AGAR, (PLAQUE 100 ML) (90904)	E. COLI WATER WHOLE TOTAL UREASE (COL/ 100 ML) (31633)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CAF-FEINE WATER, UNFLTRD RECOV-ERABLE (UG/L) (81436)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
OCT										
06...	293	---	---	---	---	4700	30	69	---	25
07...	---	---	---	---	---	770	---	---	---	---
08...	---	---	---	---	---	490	---	---	---	---

WATER-QUALITY DATA—CONTINUED

410514080404700 BEARS DEN RUN AT YOUNGSTOWN, OHIO

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00061), USGS National Water Information System parameter code; mm of Hg, millimeters of mercury; mg/L, milligrams per liter; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; col/100 mL, colonies per 100 milliliters; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated value]

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)
OCT									
06...	1245	2.4	737	95	9.4	7.0	421	---	14.2
07...	1130	.55	738	84	8.9	7.4	594	---	11.1
08...	1220	---	737	97	11.0	7.3	749	---	8.5

DATE	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
OCT											
06...	120	38.3	6.10	3.3	30.0	90	109	42.9	.4	11.9	41.6
07...	---	---	---	---	---	---	---	---	---	---	---
08...	---	---	---	---	---	---	---	---	---	---	---

DATE	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	BOD OXYGEN DEMAND, BIOCHEM CARBON. 5 DAY (MG/L) (80082)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)
OCT											
06...	.77	.51	E.021	.779	.009	.058	.039	.085	<2.0	14	<5
07...	.30	.39	E.035	.738	.007	.048	.036	.067	<2.0	<10	<5
08...	---	---	---	---	---	---	---	---	---	---	---

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	CLOS-TRIDIUM PERFRI-GENS, MF-MCP, (COL/ 100 ML) (90915)	CLOS-TRIDIUM PERFRI-GENS, ETH TRT (COL/ 100 ML) (99765)	COLI-PHAGE, E. COLI C HOST, 1-AGAR, (PLAQUE 100 ML) (90905)	COLI-PHAGE, E. COLI F-AMP, 1-AGAR, (PLAQUE 100 ML) (90904)	E. COLI WATER WHOLE TOTAL UREASE (COL/ 100 ML) (31633)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CAF-FEINE WATER, UNFLTRD RECOV-ERABLE (UG/L) (81436)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
OCT										
06...	250	150	80	28	5	4000	30	17	---	6
07...	---	---	---	---	---	580	---	---	---	---
08...	---	---	---	---	---	810	---	---	---	---

PROJECT DATA

Effects of Combined-Sewer Overflows on Recreational Waters and Aquatic Life of the Mahoning River and Tributaries in Youngstown, Ohio

WATER-QUALITY DATA—CONTINUED

410526080383000 YOUNGSTOWN WASTE WATER TREATMENT PLANT OUTFALL AT YOUNGSTOWN, OHIO

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00061), USGS National Water Information System parameter code; mm of Hg, millimeters of mercury; mg/L, milligrams per liter; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; col/100 mL, colonies per 100 milliliters; µg/L, micrograms per liter; ---, no data; <, concentration or value reported is less than that indicated; K, value is estimated from a non-ideal colony count; E, estimated value]

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)
OCT									
05...	2325	---	---	---	---	---	---	---	---
07...	0935	---	---	---	---	---	---	---	---
08...	0940	---	---	---	---	---	---	---	---

DATE	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
OCT											
05...	110	32.2	6.02	5.7	59.0	---	---	74.8	.9	7.6	59.9
07...	---	---	---	---	---	---	---	---	---	---	---
08...	---	---	---	---	---	---	---	---	---	---	---

DATE	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	BOD OXYGEN DEMAND, BIOCHEM CARBON. 5 DAY (MG/L) (80082)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)
OCT											
05...	1.3	3.6	.438	5.80	.101	.865	.832	---	E4.1	76	68
07...	.80	.96	E.031	7.84	.007	.669	.627	.768	<2.0	30	<5
08...	---	---	---	---	---	---	---	---	---	---	---

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	CLOS-TRIDIUM PERFRI-GENS, MF-MCP, (COL/ 100 ML) (90915)	CLOS-TRIDIUM PERFRI-GENS, ETH TRT (COL/ 100 ML) (99765)	COLI-PHAGE, E. COLI C HOST, 1-AGAR, (PLAQUE 100 ML) (90905)	COLI-PHAGE, E. COLI F-AMP, 1-AGAR, (PLAQUE 100 ML) (90904)	E. COLI WATER WHOLE TOTAL UREASE (COL/ 100 ML) (31633)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CAF-FEINE WATER, UNFLTRD RECOV-ERABLE (UG/L) (81436)	SEDI-MENT, SUS-PENDED (MG/L) (80154)
OCT										
05...	341	6100	---	7200	520	12000	70	27	---	---
07...	---	---	---	---	---	K86	---	---	---	---
08...	---	---	---	---	---	80	---	---	---	---

Columbus Well Field, Southern Franklin County

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.

PROJECT DATA
Columbus Well Field, Southern Franklin County

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, 60-minute record.
DATUM.—Elevation of land-surface datum is 721 ft above sea level. Measuring point: Floor of instrument shelter, 2.10 ft above land-surface datum.
PERIOD OF RECORD.—Aug. 1982 to current year.
EXTREMES FOR PERIOD OF RECORD.—Maximum daily low, 48.15 ft below land-surface datum, Feb. 28 and 29, 1992; minimum daily low, 27.21 ft below land-surface datum, May 3, 1984.

DEPTH BELOW LAND SURFACE (WATER LEVEL), FEET, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36.61	42.09	41.70	39.74	---	---	---	---	---	---	---	---
2	36.69	42.38	41.74	39.52	---	---	---	---	---	---	---	---
3	37.39	42.61	41.73	---	---	---	---	---	---	---	---	---
4	38.12	42.86	41.70	---	---	---	---	---	---	---	---	---
5	38.61	42.95	41.68	---	---	---	---	---	---	---	---	---
6	39.52	42.67	42.12	---	---	---	---	---	---	---	---	---
7	40.31	42.14	42.87	---	---	---	---	---	---	---	---	---
8	40.81	41.90	43.32	---	---	---	---	---	---	---	---	---
9	40.94	41.66	43.31	---	---	---	---	---	---	---	---	---
10	40.59	41.50	42.96	---	---	---	---	---	---	---	---	---
11	40.43	41.50	43.37	---	---	---	---	---	---	---	---	---
12	40.49	42.23	43.55	---	---	---	---	---	---	---	---	---
13	40.39	42.73	43.58	---	---	---	---	---	---	---	---	---
14	40.17	43.03	43.58	---	---	---	---	---	---	---	---	---
15	40.01	43.15	43.58	---	---	---	---	---	---	---	---	---
16	39.69	42.92	43.58	---	---	---	---	---	---	---	---	---
17	39.69	42.65	43.43	---	---	---	---	---	---	---	---	---
18	40.21	42.54	42.95	---	---	---	---	---	---	---	---	---
19	40.94	43.11	41.54	---	---	---	---	---	---	---	---	---
20	41.47	43.27	40.59	---	---	---	---	---	---	---	---	---
21	41.83	42.87	39.82	---	---	---	---	---	---	---	---	---
22	41.96	42.44	39.43	---	---	---	---	---	---	---	---	---
23	42.12	42.22	39.68	---	---	---	---	---	---	---	---	---
24	42.24	42.06	39.87	---	---	---	---	---	---	---	---	---
25	42.33	41.90	39.90	---	---	---	---	---	---	---	---	---
26	42.49	41.76	39.93	---	---	---	---	---	---	---	---	---
27	42.66	41.68	39.94	---	---	---	---	---	---	---	---	---
28	42.78	41.60	39.27	---	---	---	---	---	---	---	---	---
29	42.59	41.53	38.80	---	---	---	---	---	---	---	---	---
30	41.84	41.50	38.94	---	---	---	---	---	---	---	---	---
31	41.58	---	39.50	---	---	---	---	---	---	---	---	---
MEAN	40.56	42.31	41.55	---	---	---	---	---	---	---	---	---
MAX	42.78	43.27	43.58	---	---	---	---	---	---	---	---	---

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, 60-minute record.
DATUM.—Elevation of land-surface datum is 710 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 1999 TO SEPTEMBER 2000
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.88	14.24	e14.93	e15.38	15.67	e15.40	e15.21	14.99	e12.18	e13.35	e12.94	13.51
2	13.87	e14.26	14.95	e15.38	15.68	e15.40	15.35	15.00	e12.14	e13.20	e12.94	13.53
3	13.89	14.28	e14.97	e15.40	15.66	e15.50	e15.39	15.01	e12.15	e13.03	e12.97	e13.56
4	13.90	14.30	14.98	e15.41	15.69	e15.43	e15.38	15.02	e12.15	e12.99	12.97	e13.54
5	13.89	14.32	14.99	e15.42	15.72	e15.41	e15.36	15.03	12.17	e12.82	13.00	13.54
6	13.88	14.34	15.01	e15.44	15.73	e15.38	15.40	15.05	e12.26	12.71	13.01	e13.39
7	e13.88	14.36	15.02	e15.45	15.74	e15.32	15.43	15.06	e12.25	e12.70	13.03	e13.26
8	e13.89	14.39	15.05	e15.46	15.76	e15.27	15.44	15.07	e12.29	e12.53	13.04	e13.24
9	e13.90	14.39	15.08	e15.48	15.76	e15.13	15.41	15.07	e12.37	e12.51	13.07	e13.18
10	13.92	14.43	e15.09	e15.49	15.77	e15.17	15.30	15.07	e12.42	e12.40	13.10	13.11
11	e13.93	14.47	e15.11	e15.50	15.79	e15.17	15.13	15.09	e12.54	e12.34	13.12	e13.12
12	e13.94	14.48	15.13	e15.51	15.80	15.14	15.04	15.11	e12.69	e12.34	13.15	e13.12
13	13.95	14.49	15.15	e15.51	15.80	e15.10	14.96	15.11	e12.78	e12.32	13.18	e13.14
14	13.95	14.52	15.16	e15.53	15.74	e15.12	14.90	15.10	e12.76	e12.36	e13.20	e13.17
15	13.97	14.54	15.18	e15.55	15.72	15.16	e14.91	15.01	e12.89	e12.43	13.15	e13.17
16	13.99	14.55	e15.18	e15.56	15.69	e15.11	e14.91	14.06	e12.95	12.47	e13.18	e13.14
17	14.00	14.58	e15.18	e15.56	15.68	e15.06	e14.90	13.68	e13.07	e12.50	e13.24	e13.13
18	14.01	14.62	e15.21	e15.56	15.63	e15.12	e14.89	e13.31	e13.18	12.50	13.29	e13.17
19	e14.01	14.63	e15.22	e15.56	15.60	e15.11	14.90	e13.17	e13.27	12.56	e13.29	e13.15
20	e14.01	14.66	e15.22	15.56	15.57	e15.14	14.90	e13.00	e13.38	12.60	e13.34	e13.24
21	14.04	14.69	e15.23	15.59	15.53	e15.12	e14.90	e12.91	e13.38	12.58	e13.38	e13.20
22	14.07	14.72	e15.25	15.59	15.49	e15.17	e14.90	e12.83	e13.41	e12.67	e13.37	e13.24
23	14.09	14.74	e15.27	15.59	15.45	e15.12	e14.92	e12.77	e13.45	e12.80	e13.40	e13.26
24	14.10	14.76	e15.27	15.60	15.42	e15.05	e14.94	e12.65	e13.46	e12.80	e13.42	e13.27
25	14.11	14.77	e15.28	15.59	15.41	e15.10	14.95	e12.60	e13.45	e12.82	13.48	13.24
26	14.12	14.78	e15.29	15.62	15.39	e15.02	14.94	e12.40	13.41	e12.84	13.50	e13.30
27	14.13	14.81	e15.30	15.65	15.39	e15.16	e14.96	e12.31	e13.47	e12.90	13.53	e13.29
28	14.16	e14.84	e15.32	15.65	15.39	e15.11	14.99	e12.27	13.46	e12.91	13.56	e13.40
29	14.19	14.87	e15.34	15.64	---	e15.11	14.98	e12.22	13.44	e12.94	13.58	e13.45
30	e14.20	e14.89	e15.35	15.63	---	e15.14	14.97	e12.23	13.46	e12.89	13.60	e13.45
31	14.22	---	e15.36	15.65	---	15.16	---	e12.17	---	e12.92	13.64	---
MEAN	14.00	14.56	15.16	15.53	15.63	15.19	15.09	13.88	12.88	12.70	13.25	13.28
MAX	14.22	14.89	15.36	15.65	15.80	15.50	15.44	15.11	13.47	13.35	13.64	13.56

e Estimated.

PROJECT DATA
Bacteriological and Selected Water-Quality Data at Ohio Beaches

The following tables list the results of bacteriological, water-quality, and physical measurments of water samples collected in the nearshore and interstitial zones of one Lake Erie beach in Cuyahoga County and one inland reservoir beach in Trumbull County, Ohio, during May through September 2001. Samples were collected as part of a study to develop a predictive model for *Escherichia coli* in recreational waters and investigate the storage of *E. coli* in sediments.

WATER-QUALITY RECORDS

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[(00028), USGS National Water Information System parameter code; NTU, nephelometric turbidity units; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; mg/L of N, milligrams per liter as nitrogen;MF, membrane filtration; col/100 mL, colonies per 100 milliliters; µg/L, micrograms per liter; F, sampling medium is interstitial water; 9, sampling medium is lake water; <, concentration or value reported is less than that indicated; K, value is estimated from a non-ideal colony count; ---, no data]

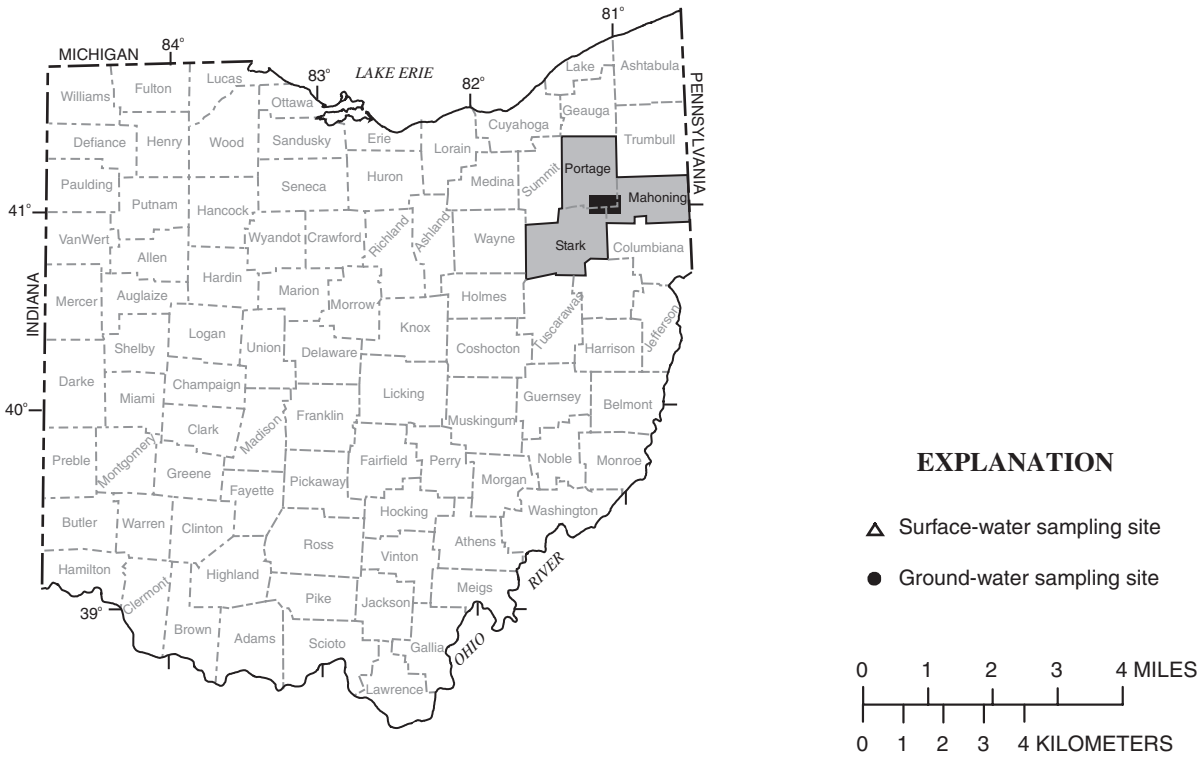
DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	MEDIUM CODE	TURBIDITY (NTU) (00076)	SPECIFIC CONDUCTANCE (US/CM) (00095)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)
411812080454610 MOSQUITO CREEK LAKE AT STATE PARK BEACH 1										
JUN										
13...	0830	80020	1028	F	320	783	22.7	19.7	1.7	<3
13...	0839	80020	1028	F	160	835	22.7	19.7	3.9	K23
411812080454620 MOSQUITO CREEK LAKE AT STATE PARK BEACH 2										
JUN										
13...	0902	80020	1028	F	440	620	22.7	19.7	.71	K30
13...	0910	80020	1028	F	420	620	22.7	19.3	.66	1000
411812080454630 MOSQUITO CREEK LAKE AT STATE PARK BEACH 3										
JUN										
13...	0935	80020	1028	F	350	556	22.7	20.3	.71	<10
13...	0943	80020	1028	F	550	564	22.7	20.2	.73	K110

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	MEDIUM CODE	DEPTH BOTTOM AT SAMPLE LOCATION, (FEET) (81903)	TURBIDITY (NTU) (00076)	SPECIFIC CONDUCTANCE (US/CM) (00095)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	PHEOPHYTIN A, PHYTOPHYTON (UG/L) (62360)	CHLOR-A PHYTOPLANKTON CHROMO FLUOROM (UG/L) (70953)
412917081442810 LAKE ERIE AT EDGEWATER PARK 1													
JUN													
28...	0750	80020	1028	F	---	23	323	23.4	23.5	.24	670	---	---
28...	0753	80020	1028	F	---	15	620	23.4	23.1	.80	1800	---	---
AUG													
05...	0825	80020	1028	F	---	46	515	24.5	25.1	.66	1300	---	---
05...	0840	80020	1028	F	---	90	849	24.5	24.6	5.9	23000	---	---
JUN													
28...	1005	80020	1028	9	5	1.8	329	24.1	23.2	---	K13	4.6	11.1
AUG													
05...	1057	80020	1028	9	5	2.0	285	24.5	26.3	---	22	1.4	2.6
412917081442830 LAKE ERIE AT EDGEWATER PARK 3													
JUN													
28...	0815	80020	1028	F	---	22	480	23.4	23.0	.99	3500	---	---
28...	0827	80020	1028	F	---	100	548	23.4	23.7	1.6	3400	---	---
AUG													
05...	0905	80020	1028	F	---	50	330	24.5	26.6	.27	39000	---	---
05...	0915	80020	1028	F	---	170	599	24.5	26.0	.75	K110000	---	---
JUN													
28...	0930	80020	1028	9	5	1.7	332	24.1	22.0	---	K4	4.0	10.4
AUG													
05...	1030	80020	1028	9	5	3.0	283	24.5	26.1	---	31	1.9	4.1

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	MEDIUM CODE	DEPTH BOTTOM AT SAMPLE LOCATION, (FEET) (81903)	TURBIDITY (NTU) (00076)	SPECIFIC CONDUCTANCE (US/CM) (00095)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)
412917081442840 LAKE ERIE AT EDGEWATER PARK 4											
JUN											
28...	0840	80020	1028	F	.70	32	483	23.4	24.0	2.0	490
28...	0845	80020	1028	F	.80	66	546	23.4	24.5	1.2	K67000
AUG											
05...	0935	80020	1028	F	.41	72	313	24.5	24.9	.24	1500
05...	0940	80020	1028	F	.66	63	319	24.5	25.7	.22	1600

PROJECT DATA
Water Data for Berlin Reservoir Area, Ohio

The following tables contain ground- and surface-water quality data collected as part of a cooperative study with the Bureau of Land Management.



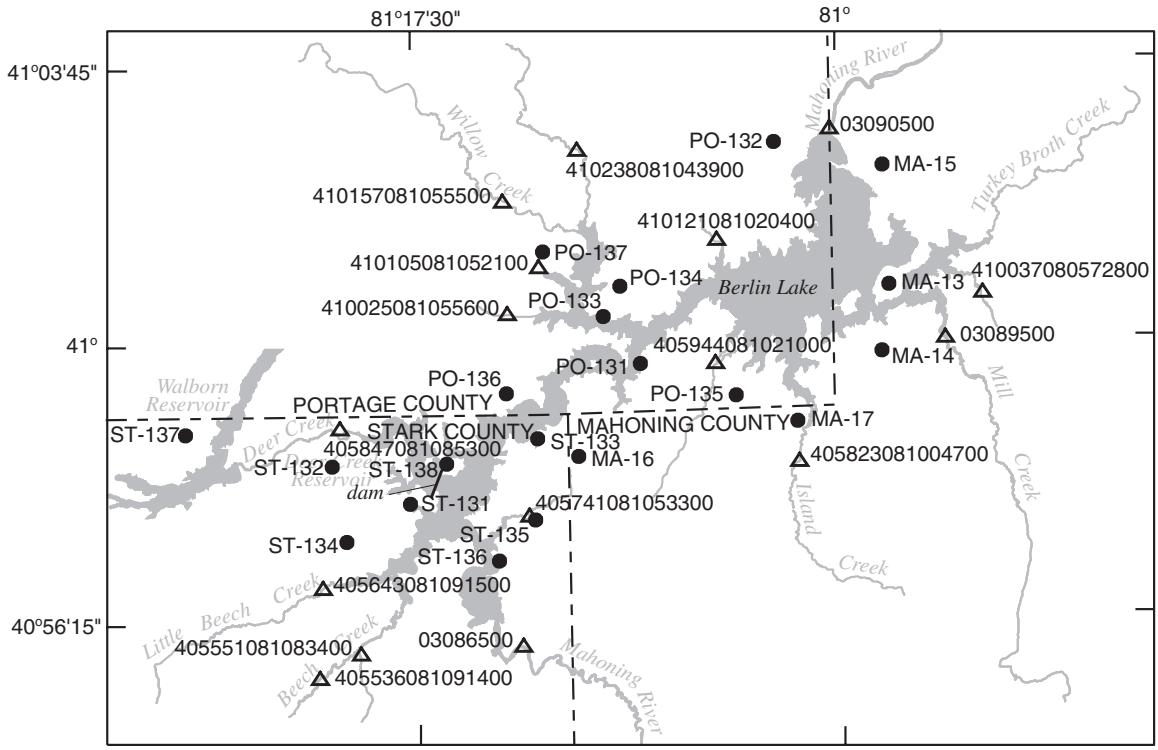
EXPLANATION

△ Surface-water sampling site

● Ground-water sampling site

0 1 2 3 4 MILES

0 1 2 3 4 KILOMETERS



GROUND-WATER DATA

Chemical analyses of 19 ground-water samples collected between July 20 and August 9, 2001. All samples were collected from domestic wells that were in regular use. Samples were collected from spigots using the existing plumbing fixtures and well pumps. Well owners identified spigots that provided untreated water and the system was checked when applicable. Objectives of the study were to obtain background water quality data in the vicinity of Berlin Lake. Well construction data were obtained from drillers' logs or from measurements made by U.S. Geological Survey personnel, unless otherwise indicated. Open interval refers to the interval of the well that is not cased; this interval is constructed as open hole or open end, unless otherwise noted.

WELL-SITE DESCRIPTIONS

[mp, measuring point; ls, below land surface; ST, Stark County; PO, Portage County; MA, Mahoning County]

WELL NAME	SITE IDENTIFIER	LATITUDE	LONGITUDE	CASING DIAMETER (INCHES)	LAND SURFACE DATUM (FEET)	MP HEIGHT (FEET ABOVE LS)	PRIMARY GEOLOGIC UNIT	OPEN INTERVAL (FEET BELOW LS)	
								TOP	BOTTOM
ST-131	405753081073900	405753	0810739	5	1046	---	glacial	56	56
ST-132	405824081085900	405824	0810859	4	1100	---	Pottsville	35	202
ST-133	405847081051800	405847	0810518	4.2	1060	1.6	Pottsville	76	138
ST-134	405725081084300	405725	0810843	5	1086	1.25	Pottsville	47	111
ST-135	405742081052700	405742	0810527	5	1060	.85	Pottsville	57	115
ST-136	405712081060600	405712	0810606	5.5	1072	---	glacial	89	89
ST-137	405852081113400	405852	0811134	4	1140	2.2	Pottsville	69	100
ST-138	405825081070100	405825	0810701	5	1040	1.65	Pottsville	170	186
PO-131	405943081033200	405943	0810332	6	1048	1.65	Pottsville	123	175
PO-132	410238081010400	410238	0810104	5	1077	---	Pottsville	32	124
PO-133	410019081040500	410019	0810405	5	1044	1.9	Pottsville	38	114
PO-134	410046081035100	410046	0810351	6	1050	2.1	Pottsville	30	100
PO-135	405919081015400	405919	0810154	5.5	1058	1.0	Pottsville	29	67
PO-136	405922081055400	405922	0810554	5	1059	1.4	Pottsville	75	105
MA-13	410048080590600	410048	0805906	6	1050	1.6	Pottsville	22	151
MA-14	405953080591300	405953	0805913	4	1088	1.2	Pottsville	182	203
MA-15	410221080590900	410221	0805909	6	1050	1.55	Pottsville	114	175
MA-17	405853081004500	405853	0810045	5	1074	1.3	Pottsville	40	315

PROJECT DATA
Water Data for Berlin Reservoir Area, Ohio

GROUND-WATER DATA—CONTINUED

SUMMARY OF GROUND-WATER QUALITY

[(72019), USGS National Water Information System parameter code; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; mg/L, milligrams per liter; ST, Stark County; PO, Portage County; MA, Mahoning County; ---, no data; <, concentration or value reported is less than that indicated; E, estimated value]

STATION NAME	DATE	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	DEPTH OF WELL, TOTAL (FEET) (72008)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH, WATER WHOLE, FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	OXYGEN, DISSOLVED (MG/L) (00300)	HARDNESS, TOTAL (MG/L AS CACO3) (00900)	CALCIUM, DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)
ST-131	07/24/01	---	56	1100	7.1	12.8	0.4	569	139	53.7	39.4
ST-132	07/25/01	25.73	202	630	6.9	12.4	5.1	341	91	27.7	10.8
ST-133	07/25/01	31.59	134	1760	7.4	11.8	<.1	329	84.5	28.5	312
ST-134[a]	07/25/01	38.90	111	712	8.7	12.9	2.7	3.07	.73	.301	177
ST-135	07/25/01	35.77	115	1400	7.6	12.1	<.1	191	49.1	16.5	259
ST-136	07/25/01	---	89	1590	6.8	14.7	2.7	949	262	71.7	12.9
ST-137	08/08/01	7.09	100	721	6.9	14.3	.1	390	111	28.5	7.5
ST-138	08/08/01	7.09	186	1150	7.2	12.2	<.1	480	117	45.3	75.9
PO-131	07/24/01	30.85	175	2430	7.2	14.3	.4	869	195	92.7	231
PO-132	07/25/01	---	124	1630	7.0	12.0	1.7	470	122	41	221
PO-133[a]	07/25/01	22.49	114	1200	7.1	12.3	<.1	68.4	14.8	7.6	281
PO-134	07/26/01	9.59	100	1690	7.1	11.1	.9	321	75.8	31.9	291
PO-135	07/26/01	14.28	67	930	7.2	12.0	5.8	499	135	39.6	19
PO-136	08/08/01	30.81	105	950	7.2	12.3	.1	400	99	37	63.3
MA-13	07/20/01	36.35	151	1020	7.5	11.7	1.4	435	132	25.6	34.7
MA-14[a]	07/20/01	66.70	203	1180	8.9	13.3	.5	19	5.39	1.35	282
MA-15	07/25/01	67.31	175	764	7.6	12.1	.4	317	84.5	25.8	48.9
MA-17	08-09/01	114.80	315	5060	7.4	12.9	<.1	175	49.7	12.4	996

STATION NAME	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	BICARBONATE WATER DIS IT, FIELD (MG/L AS HCO3) (00453)	ALKALINITY, WATER, WHOLE, FIELD (MG/L AS CACO3) (39086)	SULFATE, DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	BROMIDE, DISSOLVED (MG/L AS BR) (71870)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG C, DISSOLVED (MG/L) (70300)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	IRON, DISSOLVED (UG/L AS FE) (01046)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)
ST-131	3.9	498	409	235	11.5	0.1	18.3	747	E.1	510	335
ST-132	1.68	296	243	104	3.5	.05	14.9	400	.3	260	394
ST-133	5.6	604	498	465	27.2	.3	11.4	1230	.8	180	112
ST-134[a]	1.43	407	344	41.2	2.3	.08	7.4	432	1.5	E7.6	E2.0
ST-135	4.68	657	542	177	37.3	.46	8.2	877	1.6	80	45.1
ST-136	5.21	282	232	723	20.4	.15	14.7	1250	E.1	3510	1710
ST-137	2.28	444	365	90.6	2.1	.03	15.4	477	.2	1130	78.9
ST-138	3.81	512	421	184	52.3	.36	19	752	E.1	1700	26.4
PO-131	8.42	789	648	778	16.9	.18	10.5	1720	.4	80	69.7
PO-132	9.39	771	633	295	16.1	.12	8.8	1090	.5	30	135
PO-133[a]	5.07	834	685	1.6	15.1	.2	6.6	743	.6	280	18.3
PO-134	8.3	839	690	310	9.6	.12	7.2	1150	.5	340	110
PO-135	2.95	364	299	184	46.2	.25	13.2	619	.2	770	67.8
PO-136	5.26	389	320	230	6.2	.08	12	645	.2	590	41.5
MA-13	2.6	317		65.9	122	.12	14.6	553	.2	<10	<3.0
MA-14[a]	2.22	617	529	.6	58.6	.57	6.9	663	1.7	30	5
MA-15	4.26	323	266	148	2.8	.04	14.6	489	.2	570	77.7
MA-17	6.37	454	375	E.9	1450	.81	7.3	---	.4	450	25.3

[a] Although efforts were made to collect untreated water that would be representative of the aquifer, the high sodium concentration and unusually low concentrations of hardness, calcium, magnesium, iron, manganese, and strontium suggest that this water sample was softened by ion-exchange methods.

SURFACE WATER-QUALITY DATA
SURFACE-WATER DATA

Chemical analyses of 14 surface-water samples collected between July 17 and July 26, 2001. Objectives of the study were to obtain background water quality data in the vicinity of Berlin Lake.

SUMMARY OF SURFACE-WATER QUALITY

STATION IDENTIFIER	STATION NAME	LATITUDE	LONGITUDE
410037080572800	Unnamed tributary to Turkey Broth Creek at Berlin Station, Ohio	410037	0805728
03086500	Mahoning River at Alliance, Ohio	410254	0810005
405744081053300	Unnamed tributary at Greenbower Road	405744	0810533
410121081020400	Unnamed Tributary to Berlin Lake near Deerfield, Ohio	410121	0810204
405643081091500	Little Beech Creek at State Route 619	405643	0810915
03090500	Mahoning Rivere below Berlin Dam near Berlin Center, Ohio	410001	0805807
405551081083400	Tributary to Beech Creek at Vine Street	405555	0810834
03089500	Mill Creek near Berlin Center, Ohio	405558	0810541
405536081091400	Beech Creek at Freshley Avenue	405536	0810914
410025081055600	Unnamed tributary at State Route 225 near Fewtown Road	410025	0810556
405847081085300	Deer Creek above Deer Creek at Limaville, Ohio	405847	0810853
410157081055500	Willow Creek at State Route 225	410157	0810555
410238081043900	Unnamed tributary at Notman Road	410238	0810439
410105081052100	Tributary near Portage-Stark Range	410105	0810521

PROJECT DATA
Water Data for Berlin Reservoir Area, Ohio

SURFACE-WATER DATA—CONTINUED

SUMMARY OF SURFACE-WATER QUALITY

[cfs, cubic feet per second; (90095), USGS National Water Information System parameter code; µS/cm, microsiemens per centimeter; deg C, degrees Celsius; mg/L, milligrams per liter; ---, no data; <, concentration or value reported is less than that indicated; E, estimated value; NA, not applicable]

STATION IDENTIFIER	DATE	DISCHARGE, MEASURED (CFS)	SPECIFIC CONDUCTANCE (US/CM) (90095)	PH, WATER WHOLE, FIELD (STANDARD UNITS) (00400)	TEMPERATURE, WATER (DEG C) (00010)	OXYGEN, DISSOLVED (MG/L) (00300)	HARDNESS, TOTAL (MG/L AS CACO3) (00900)	CALCIUM, DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)
410037080572800	07/18/01	0.02	565	8.0	17.3	7.8	286	75.5	23.7	9.4	2.24
03086500	07/18/01	7.07[a]	823	8.1	25.9	8.6	307	82.2	24.7	45.1	7.14
405744081053300	07/18/01	.001	1410	7.4	22.3	5.1	672	150	72.4	50.2	7.83
410121081020400	07/17/01	.007	1410	7.9	22.8	8.9	NA	NA	NA	NA	NA
405643081091500	07/19/01	.21	720	7.7	21	4.9	305	82.3	24.1	27.2	3.05
03090500	07/19/01	168[b]	560	7.4	17.8	7.2	186	50.7	14.4	33.3	5.05
405551081083400	07/19/01	.03	910	8.0	20.8	7.5	275	78.4	19.1	73.8	3.61
03089500	07/18/01	.08	782	7.8	20.5	4.7	314	81	27.2	36.1	5.99
405536081091400	07/19/01	.22	795	7.8	22	5.9	293	81.3	21.8	47.3	4.7
410025081055600	07/25/01	.18	1080	7.9	19.8	7.8	590	150	52	17.7	7.5
405847081085300	07/24/01	13.3	489	7.8	28.4	5.8	162	43.7	12.8	30.1	4.45
410157081055500	07/24/01	E.01	1280	7.8	25.5	7.4	660	153	67.5	35.9	5.12
410238081043900	07/24/01	.02	2060	8.1	25.7	9.4	520	122	52.5	226	18.4
410105081052100	07/26/01	3	1800	7.8	NA	NA	913	249	70.5	56.3	11.7

STATION ID	BICARBONATE WATER DIS IT, FIELD (MG/L AS HCO3) (00453)	ALKALINITY, WATER, WHOLE, FIELD (MG/L AS CACO3) (39086)	SULFATE, DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	BROMIDE, DISSOLVED (MG/L AS BR) (71870)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG C, DISSOLVED (MG/L) (70300)	FLOURIDE, DISSOLVED (MG/L AS F) (00950)	IRON, DISSOLVED (UG/L AS FE) (01046)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)
410037080572800	244	202	57.5	7.3	<0.01	15.5	313	0.4	10	135
03086500	182	152	140	60.8	.02	7.1	459	.4	E9.3	140
405744081053300	149	123	569	48.8	<.01	4.3	981	.4	50	4750
410121081020400	437	367	NA	28.6	.02	NA	NA	NA	NA	NA
405643081091500	292	242	72	47.6	<.01	8.6	408	.2	20	508
03090500	129	106	70.6	58.7	<.01	2.8	299	.2	E7.3	672
405551081083400	259	215	58.9	117	.06	10.3	488	.3	20	117
03089500	231	191	78.8	57	<.01	8	409	.3	<10	295
405536081091400	288	238	72.5	71.8	<.01	5.4	441	.3	10	250
410025081055600	240	199	384	20.6	.03	8.3	758	.3	<10	174
405847081085300	136	113	38.8	53.9	<.01	1.5	253	.2	<10	142
410157081055500	278	233	445	33.5	.02	3.9	882	.3	<10	346
410238081043900	336	280	335	256	.19	7.5	1180	.2	<30	17.9
410105081052100	154	127	762	86.2	.14	8.2	1320	1.4	<10	619

[a] Discharge from USGS rating curve.
[b] Discharge from rating curve provided by U.S. Army Corps of Engineers.

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CONVERSION FACTORS AND VERTICAL DATUM

Multiply	*By*	*To obtain*
	Length	
inch (in.)	2.54×10^{1}	millimeter
	2.54×10^{-2}	meter
foot (ft)	3.048×10^{-1}	meter
mile (mi)	1.609×10^{0}	kilometer
	Area	
acre	4.047×10^{3}	square meter
	4.047×10^{-1}	square hectometer
	4.047×10^{-3}	square kilometer
square mile (mi^2)	2.590×10^{0}	square kilometer
	Volume	
gallon (gal)	3.785×10^{0}	liter
	3.785×10^{0}	cubic decimeter
	3.785×10^{-3}	cubic meter
million gallons (Mgal)	3.785×10^{3}	cubic meter
	3.785×10^{-3}	cubic hectometer
cubic foot (ft^3)	2.832×10^{1}	cubic decimeter
	2.832×10^{-2}	cubic meter
cubic-foot-per-second day [(ft^3/s) d]	2.447×10^{3}	cubic meter
	2.447×10^{-3}	cubic hectometer
acre-foot (acre-ft)	1.233×10^{3}	cubic meter
	1.233×10^{-3}	cubic hectometer
	1.233×10^{-6}	cubic kilometer
	Flow	
cubic foot per second (ft^3/s)	2.832×10^{1}	liter per second
	2.832×10^{1}	cubic decimeter per second
	2.832×10^{-2}	cubic meter per second
gallon per minute (gal/min)	6.309×10^{-2}	liter per second
	6.309×10^{-2}	cubic decimeter per second
	6.309×10^{-5}	cubic meter per second
million gallons per day (Mgal/d)	4.381×10^{1}	cubic decimeter per second
	4.381×10^{-2}	cubic meter per second
	Mass	
ton (short)	9.072×10^{-1}	megagram or metric ton

Sea level: In this report "sea level" refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929)—a geodetic datum derived from a general adjustment for the first-order level nets of both the United States and Canada, formerly called Sea Level Datum of 1929.

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