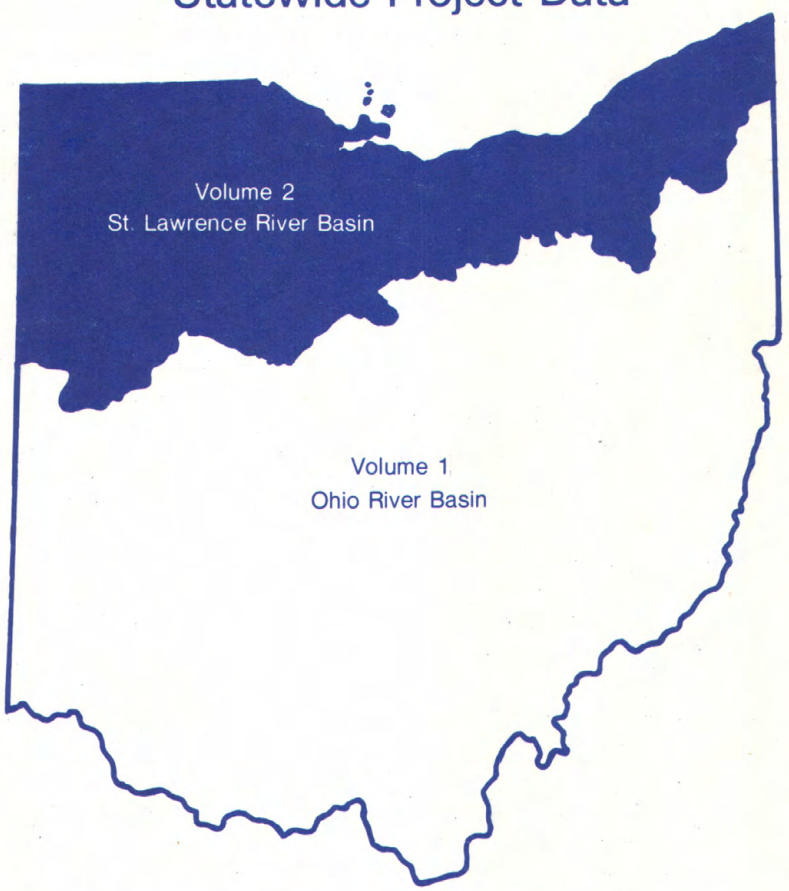
Water Resources Data Ohio Water Year 1981

Volume 2. St. Lawrence River Basin Statewide Project Data



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT OH-81-2
Prepared in cooperation with the State of Ohio
and with other agencies

CALENDAR FOR WATER YEAR 1981

1980

OCTOBER

S	M	T	W	T	F	S
			1	2	3	4
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1981

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AUGUST

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SEPTEMBER

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20	21	22	23	24	25	26
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Water Resources Data
Ohio
Water Year 1981

Volume 2. St. Lawrence River Basin
Statewide Project Data

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT OH-81-2
Prepared in cooperation with the State of Ohio
and with other agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

JAMES G. WATT, Secretary

GEOLOGICAL SURVEY

Dallas L. Peck, Director

For information on the water program in Ohio write to
District Chief, Water Resources Division
U.S. Geological Survey
975 West Third Avenue
Columbus, Ohio 43212

1981

PREFACE

This report was prepared by personnel of the Ohio district of the Water Resources Division of the U.S. Geological Survey under the supervision of S.M. Hindall, District Chief, and J.E. Biesecker, Regional Hydrologist, Northeastern Region. It was done in cooperation with the State of Ohio and with other agencies.

This report is one of a series issued State by State undee the general direction of Robert J. Dingman, Chief Hydrologist, U.S. Geological Survey, and John E. Moore, Deputy Assistant Chief Hydrologist for Scientific Publications and Data Management.

Data for Ohio are in two volumes as follows:

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

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

5. Report Date March 1982

6.

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Water resources data for the 1980 water year for Ohio consist of records of stage, discharge, and water quality of streams; stage and contents, and water quality of lakes and reservoirs; and water levels and water quality of groundwater wells. This report, in two volumes, contains records for water discharge at 169 gaging stations; stage and contents at 39 lakes and reservoirs; water quality at 53 gaging stations and 59 wells; and water levels at 280 observation wells. Also included are data from 81 crest-stage partial-records stations; 120 low-flow partial-record stations, and 331 coal hydrology 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 Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in Ohio.

17. Document Analysis a. Descriptors

*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, Benthic fauna.

b. Identifiers/Open-Ended Terms

c. COSATI Field/Group

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(Formerly NTIS-35)
Department of Commerce

CONTENTS

ILLUSTRATIONS

(Letter after station name designates type of data: (b) biological, (c) chemical, (d) discharge, (e) contents and (or) elevation, (HBM) hydrologic bench mark, (m) microbiological, (NASQAN) National stream-quality accounting network, (r) radiochemical, (s) sediment, (t) temperature.)

ST. LAWRENCE RIVER BASIN

STREAMS TRIBUTARY TO LAKE ERIE

GROUND-WATER STATIONS FOR WHICH RECORDS ARE PUBLISHED

(Letter after station location designates type of data: (c) chemical, (l) water level.)

WATER RESOURCES DATA FOR OHIO, 1981

INTRODUCTION

Water resources data for the 1981 water year for Ohio consist of records of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes and reservoirs; and water levels and water quality of ground-water wells. This two-volume report, contains records for water discharge at 169 gaging stations; stage stations and contents for 39 lakes and reservoirs; water quality for 53 gaging stations and 59 wells; and water levels for 280 observation wells. Also included are 81 crest-stage stations, 120 low-flow stations, and 6 water-quality partial-record stations, and 331 coal hydrology synoptic sites. Locations of these sites are shown on figures 2a-2d. Additional water data which were collected at various sites not involved in the systematic data-collection program are published as miscellaneous measurements. Data collected for short-term projects are presented in volume 2. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State, local, and Federal agencies in Ohio.

Records of discharge and stage of streams, and contents or stage of lakes and reservoirs were first published in a series of U.S. Geological Survey water-supply papers entitled, "Surface Water Supply of the United States." Through September 30, 1960, these water-supply papers were in an annual series and then in a 5-year series for 1961-65 and 1966-70. Records of chemical quality, water temperatures, and suspended sediment were published from 1941 to 1970 in an annual series of water-supply papers entitled "Quality of Surface Waters of the United States." Records of ground-water levels were published from 1935 to 1974 in a series of water-supply papers entitled "Ground-Water levels in the United States." Water-supply papers may be consulted in the libraries of the principal cities in the United States or may be purchased from the Branch of Distribution, U.S. Geological Survey, 604 South Pickett Street, Alexandria, Virginia, 22304.

For water years 1961 through 1974, streamflow data were released by the Geological Survey in annual reports on a State-boundary basis. Water-quality records for water years 1964 through 1974 were similarly released either in separate reports or in conjunction with streamflow records.

Beginning with the 1975 water year, water data for streamflow, water quality, and ground water are published in official Survey reports on a State-boundary basis. These official Survey reports carry an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report OH-81-2." These water-data reports are for sale, in paper copy or in microfiche, by the National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia, 22161.

COOPERATION

The U.S. Geological Survey and organizations of the State of Ohio have had cooperative agreements for the systematic collection of streamflow records since 1898, for ground-water levels since 1936, and for water-quality records since 1946. Organizations that assisted in collecting data through cooperative agreement with the Survey are:

Ohio Department of Natural Resources, R.W. Teater, director.

Ohio Environmental Protection Agency, W. F. Nichols, director.

Ohio Department of Transportation, D.L. Weir, director.

Miami Conservancy District, L.B. Coy, general manager and secretary.

City of Columbus Department of Public Service, R.C. Parkinson, director.

City of Canton Water Department, J.D. Williams, superintendent.

Geauga County, Zane Lee, sanitary engineer.

Northeast Ohio Areawide Coordinating Agency, F.E.J. Pizzedaz, director.

Cuyahoga County, Leon Ozebek, chief, Planning Branch.

Assistance in the form of funds or services was given by the Corps of Engineers, U.S. Army, in collecting records for 142 hydrologic-data stations in this report.

Organizations that supplied data are acknowledged in station descriptions.

ACKNOWLEDGMENT

The water-resources data for Ohio were processed and prepared for publication under the supervision of Harold L. Shindel, Hydrologic Records Section; by R. V. Swisshelm (project information), Hydrologic Studies Section; C. G. Angelo and M. K. Katzenbach (water quality); A. C. Sedam (ground water); and C. M. Eberle (Publications Unit). Most of the data were collected, computed, and processed from the Columbus District Office and the New Philadelphia Subdistrict Office. Technicians and Hydrologists in charge of the various areas are as follows:

J. H. Klingler, Columbus, central and southeast area
J. P. Mangus, Columbus, north-central and northwest area
L. L. Stewart, Columbus, southwest area and Miami Conservancy District
J. R. Kolva, New Philadelphia, Acting Subdistrict Chief
L. E. Trimble, New Philadelphia
D. K. Helsel, QW and Sediment Hydrologic Studies
A. C. Razem, QW Studies
W. P. Bartlett, Jr., SW Studies,

The data were collected, computed, and processed by other personnel as follows:

E.E. Webber	D.A. Storck	S.L. Westover
S.L. Jolley	D.L. Perry	J.T. de Roche
G.F. Ward	L.M. Hicks	J.W. Roberts
A.W. Coen, III	B.N. Sroka	J.M. Sherwood
M.J. De Grand	S.R. Frum	G.C. Mayer
S.W. Hatch	R.R. Fawcett,	D.D. Brooks
F.L. Santoro	R.I. Mayo	C.N. Owens
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R.C. Martin	F.F. Koltun	T.S. Sharp
C.A. Hawkins	J.D. Christman	J.D. Vasbinder
A.J. Tomasina	C.L. Pfaff	A.L. Enderle
C.C. Vince	M.M. Zielke	R.P. Frehs

SUMMARY OF HYDROLOGIC CONDITIONS

Surface Water

At the start of the 1981 water year, streamflow was normal throughout most of the State. The only exception was southwestern Ohio, where it was excessive. The month of November was normal except in eastern Ohio where persistant rain the last week of the month produced slightly excessive runoff. December streamflow was normal throughout the State.

Streamflow for January was normal in eastern and northwestern Ohio but deficient in the southwestern and central portion of the State. February was normal except in northwest and eastern Ohio where it was excessive.

March streamflow was deficient throughout the State. Streamflow returned to normal in April except in eastern Ohio, where it was excessive.

Streamflow in May was normal except in central and southwestern Ohio where it was excessive.

June streamflow was excessive throughout the State. Heavy thunderstorms June 13 and 14 caused flooding on numerous streams. Blanchard River near Findlay crested 0.69 feet above the previously recorded peak.

July streamflow remained excessive except in central Ohio, where it returned to normal. Streamflow in August remained normal.

Heavy rain the first week of September resulted in above-average precipitation totals for the entire month. runoff to be excessive and remained excessive for the entire month.

Figure 2 compares the 1981 mean discharges at four selected long-term stations with median discharges for the base period 1951-1980.

Water Quality

The chemical quality of surface waters statewide showed little change from previous years. Two samples taken on unnamed tributaries to Alum Creek in April showed a lead concentration in excess of the U.S. Public Health Standard of 250 micrograms per liter. Muskingum River at McConnelsville was above the limit for dissolved mercury when sampled in April. Scioto River at Higby, also sampled in April, was above limits for cadmium and chromium.

One of the four major basins in the State that have U.S. Geological Survey monitors at NASQAN sites showed slight improvement in water quality. The Cuyahoga River basin showed improved quality, which may be due to a cleanup of the upper reaches of the river by the National Park Service. The Park Service's National Recreation Area plan calls for relocation of industries that are major polluters. The city of Akron has also improved its sewage treatment facility which discharges into the upper reaches of the Cuyahoga River.

Chemical analyses of water from reconstructed wells located in reclaimed coal land in southeast Ohio showed phenol concentrations well above the U.S. Public Health Standard of 5 micrograms per liter.

Water samples from observation wells throughout Ohio showed very little change from previous years.

Ground-Water Levels in Ohio: 1981 Water Year

Most of the observation wells in Ohio are located in sand and gravel aquifers in buried-valley or watercourse systems associated with the State's principal streams. The observation network also includes some bedrock wells in areas where deeper aquifers are important water supplies, such as the carbonate rock region of northwestern Ohio and various sandstone units of Eastern Ohio. The yearly low for most wells occurs during the winter months, especially in colder, drier years. Otherwise, the low is likely to occur toward the end of the growing season. Highs for the year usually occur between March and June when recharge from snowmelt and springtime storms is greatest. The normal range of levels for both water-table and confined-aquifer wells is 3 to 5 feet.

Ground-water levels in 1981 were somewhat lower than the above-normal levels that prevailed throughout 1980, although the range between maximum and minimum levels was greater in 1981. At the beginning of the 1981 water year, water levels in most wells were still above normal but declining steadily. The decline continued into January with a minor rise in mid-December. Lows for the year were recorded in some wells in January after a dry and very cold period. Levels across the State rose abruptly in February due to thawing and rainfall, but declined again in March. Above-normal precipitation during April, May and June resulted in annual highs in mid-June for many wells. Levels in parts of northern Ohio rose higher than in 1980, and remained relatively high to the end of the 1981 water year. Across much of southern Ohio, however, levels were declining in most areas at the end of the water year, with lows being recorded at some stations.

With respect to long-term trends, ground-water levels throughout Ohio remained favorable.

DEFINITION OF TERMS

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

Acre-foot (AC-FT, acre-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.

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

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

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

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

Fecal coliform bacteria are bacteria that are present in the intestines 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 which produce blue colonies within 24 hours when incubated at 44.5°C ± 0.2°C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal streptococcal bacteria are bacteria found also in intestines of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organisms which produce red or pink colonies within 48 hours at 35°C ± 1.0°C on M-enterrococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

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

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

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

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

Bottom material: See Bed material.

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

Cfs-day is the volume of water represented by flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, about 646,000 gallons or 2,447 cubic meters.

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

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

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

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

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

Cubic 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.

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

Discharge is the volume of water (or more broadly, volume of fluid plus suspended sediment), that passes a given point within a given period of time.

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

Instantaneous discharge is the discharge at a particular instant of time.

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

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

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

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

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

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate ($CaCO_3$).

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

Methylene blue active substance (MBAS) is a measure of apparent detergents. This determination depends on the formation of a blue color when methylene blue dye reacts with synthetic detergent compounds.

Micrograms per gram (UG/G, ug/g) is a unit expressing the concentration of a chemical element as the mass (micrograms) of the element sorbed per unit mass (gram) of sediment.

Micrograms per kilogram (UG/KG, ug/kg) is a unit expressing the concentration of a chemical element as the mass (micrograms) of the element sorbed per unit mass (kilogram) of bottom material.

Micrograms per liter (UG/L, ug/L) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

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

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

Organism is any living entity, such as an insect, phytoplankter, or zooplankter.

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 meters (m^2), acres, or hectares. 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 milliliters (mL) or liters (L). Numbers of planktonic organisms can be expressed in these terms.

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

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

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

Particle-size classification used in this report agrees with recommendations made by the American Geophysical Union Subcommittee on Sediment Terminology.

The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay.....	0.00024 - 0.004	Sedimentation.
Silt.....	0.004 - 0.062	Sedimentation.
Sand.....	0.062 - 2.0	Sedimentation 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 material is removed and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native water analysis.

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

Periphyton is the assemblage of microorganisms attached to and growing upon solid surfaces. While primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms. Periphyton is a useful indicator of water quality.

Pesticides are chemical compounds used to control undesirable plants and animals. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides. Insecticides and herbicides, which control insects and plants respectively, are the two categories reported.

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

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.

Recoverable from bottom material.--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 only 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.

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

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

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

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

Suspended-sediment discharge (tons/day) is the rate at which dry weight of sediment passes a section of a stream or is the quantity of sediment, as measured by dry weight or volume, that passes a section in a given time. It is computed by multiplying discharge times mg/L times 0.0027.

Suspended-sediment load is the quantity of suspended sediment passing a section in a specified period.

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

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

Solute is any substance derived from the atmosphere, vegetation, soil, or rocks that is dissolved in water.

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

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

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

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of the total concentration in a water-sediment mixture. The water-sediment mixture is associated with (or sorbed on) that 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 water-suspended 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 would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

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

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45-micrometer membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total."

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

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

Tons per day is the quantity of substance in solution or suspension that passes a stream section during a 24-hour day.

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

Total in bottom material is the total 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 load (tons) is the total quantity of any individual constituent, as measured by dry mass or volume, that is dissolved in a specific amount of water (discharge) during a given time. It is computed by multiplying the total discharge, times the mg/L of the constituent, times the factor 0.0027, times the number of days.

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

WDR is used as an abbreviation for "Water-Data Report" in the REVISED RECORDS paragraph to refer to State annual basic-data reports published after 1975.

WRD is used as an abbreviation for "Water-Resources Data" in the REVISED RECORDS paragraph to refer to State annual basic-data reports published before 1975.

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

DOWNSTREAM ORDER AND STATION NUMBER

Since October 1, 1950, the order of listing hydrologic-station records in Survey 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 on which a station is situated 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.

As an added means of identification, each hydrologic station and partial-record station has been assigned a station number. These are in the same downstream order used in this report. In assigning station numbers no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete 8-digit number for each station such as 04041000, which appears just to the left of the station name, includes the 2-digit part number "04" plus the 6-digit downstream order number "041000".

NUMBERING SYSTEM FOR WELLS AND MISCELLANEOUS SITES

The 8-digit downstream order station numbers are not assigned to wells and miscellaneous sites where only random water-quality samples or discharge measurements are taken.

The well and miscellaneous site numbering system of the U.S. Geological Survey is based on the grid system of latitude and longitude. The system provides the geographic location of the well or miscellaneous site and a unique number for each site. The number consists of 15 digits. The first 6 digits denote the degrees, minutes, and seconds of latitude, the next 7 digits denote degrees, minutes, and seconds of longitude, and the last 2 digits (assigned sequentially) identify the wells or other sites within a 1-second grid. See figure 1.

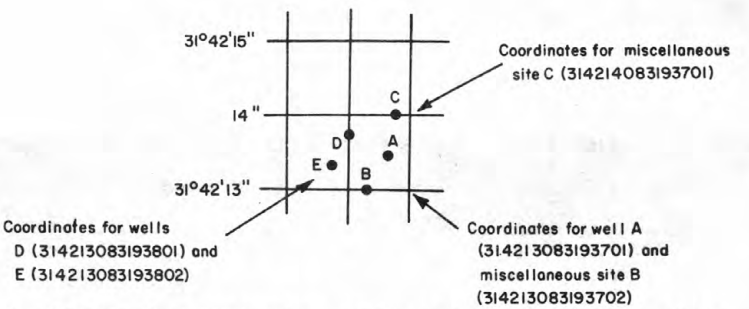

Figure 1.--System for numbering wells and miscellaneous sites (latitude and longitude)

SPECIAL NETWORKS AND PROGRAMS

Hydrologic bench-mark 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 bench-mark station may be used to separate effects of natural from manmade changes in other basins which have been developed and in which the physiography, climate, and geology are similar to those in the undeveloped bench-mark basin.

National stream-quality accounting network (NASQAN) is a data collection network designed by the U.S. Geological Survey to meet many of the information demands of agencies or groups involved in national or regional water-quality planning and management. Both accounting and broad-scale monitoring objectives have been incorporated into the network design. Areal configuration of the network is based on river-basin accounting units (identified by 8-digit hydrologic-unit numbers) designated by the Office of Water Data Coordination in consultation with the Water Resources Council. Primary objectives of the network are (1) to depict areal variability of streamflow and water-quality conditions nationwide on a year-by-year basis and (2) to detect and assess long-term changes in streamflow and stream quality.

Pesticide program is a network of regularly sampled water-quality stations where samples are collected to determine the concentration and distribution of pesticides in streams where potential contamination could result from the application of commonly used insecticides and herbicides. Operation of the network is a Federal interagency activity.

EXPLANATION OF STAGE AND WATER-DISCHARGE RECORDS

Collection and computation of data

The base data collected at gaging stations consist of records of stage and measurements of discharge of streams or canals, and stage, surface area, and contents of lakes or reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement base data in determining the daily flow or volume of water in storage. Records of stage are obtained from either direct readings on a nonrecording gage or from a water-stage recorder that gives either a continuous graph of the fluctuations or a tape punched at selected time intervals. Measurements of discharge are made with a current meter, using the general methods adopted by the Geological Survey. These methods are described in standard text-books, in Water-Supply Paper 888, and in U.S. Geological Survey Techniques of Water Resources Investigations, book 3, chapter A6.

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

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.

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

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

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

For some 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 on the basis of recorded range in stage, prior and subsequent records, discharge measurements, weather records, and comparison with records for other stations in the same or nearby basins. Likewise daily contents may be estimated on the basis of operator's log, prior and subsequent records, inflow-outflow studies, and other information.

The data in this report generally comprise a description of the station and tabulations of daily and monthly figures. For gaging stations on streams or canals a table showing the daily discharge and monthly and yearly discharge is given. For gaging stations on lakes and reservoirs, a monthly summary table of stage and contents is given. Records are published for the water year, which begins on October 1 and ends on September 30.

The description of the gaging station gives the location, drainage area, period of record, notations of revisions of previously published records, type and history of gages, general remarks, average discharge and extremes of discharge or contents. The location of the gaging station and the drainage area are obtained from the most accurate maps available. Periods for which there are published records for the present station or for stations generally equivalent to the present one are given under "PERIOD OF RECORD."

Previously published streamflow records of some stations have been found to be in error on the basis of data or information later obtained. Revisions of such records are usually published along with the current records in one of the annual or compilation reports. In order to make it easier to find such revised records, a paragraph headed "REVISED RECORDS" has been added to the description of all stations for which revised records have been published. Listed therein are all the reports in

which revisions have been published, each followed by the water years for which figures are revised in that report. In listing the water years only one number is given; for instance, 1965 stands for the water year October 1, 1964, to September 30, 1965. If no daily, monthly, or annual figures of discharge are affected by the revision, the fact is brought out by notations after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the revised figure was first published is given. It should be noted that for all stations for which cubic feet per second per square mile and runoff in inches are published, a revision of the drainage area necessitates corresponding revision of all figures based on the drainage area. Revised figures of cubic feet per second per square mile and runoff in inches resulting from a revision of the drainage area only are usually not published in the annual series of reports.

The type of gage currently in use, the datum of the present gage referred to National Geodetic Vertical Datum; and a condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE." National Geodetic Vertical Datum is explained in "DEFINITION OF TERMS" on page XX

Information pertaining to the accuracy of the discharge records and to conditions which affect the natural flow of the gaging station is given under "REMARKS." For reservoir stations information on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir is given under "REMARKS."

The average discharge for the number of years indicated is given under "AVERAGE DISCHARGE"; it is not given for stations having fewer than 5 complete years of record or for stations where changes in water development during the period of record cause the figure to have little significance. Under "EXTREMES" are given first, the extremes for period of record, second, information available outside the period of record, and last, those for the current year. Unless otherwise qualified, the maximum discharge (or contents) is the instantaneous maximum corresponding to the crest stage obtained by use of a water-stage recorder (graphic or digital), a crest-stage gage, or a nonrecording gage read at the time of the crest. If the maximum gage height did not occur on the same day as the maximum discharge (or contents), it is given separately. Similarly, the minimum is the instantaneous minimum unless otherwise qualified. For some stations peak discharges are listed with "EXTREMES FOR THE CURRENT YEAR"; if they are, all independent peaks, including the maximum for the year, above the selected base with the time of occurrence and corresponding gage heights are published in tabular format. The base discharge, which is given in the table heading, is selected so that an average of about three peaks a year will be presented. Peak discharges are not published for any canals, ditches, drains, or for any stream for which the peaks are subject to substantial control by man. Time of day is expressed in 24-hour local standard time; for example, 12:30 a.m. is 0030, 1:30 p.m. is 1330. The minimums for these stations are published in a separate paragraph following the table of peaks.

The daily table for stream-gaging stations gives the mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month also may be expressed in cubic feet per second per square mile (line headed "CFSM"), or in inches (line headed "IN"). Figures for cubic feet per second per square mile and runoff in inches are omitted if there is extensive regulation or diversion. In the yearly summary, below the monthly summary the figures shown are the appropriate daily discharges for the calendar and water years.

Footnotes to the table of daily discharge are introduced by the word "NOTE." Footnotes are used to indicate periods for which the discharge is computed or estimated by special methods because of no gage-height record, backwater from various sources, or other unusual conditions. Periods of no gage-height record are indicated if the period is continuous for a month or more or includes the maximum discharge for the year. Periods of backwater from an unusual source, of indefinite stage-relation, or of any other unusual condition at the gage site are indicated only if they are a month or more in length and the accuracy of the records is affected. Days on which the stage-discharge relation is affected by ice are not indicated. The methods used in computing discharge for various unusual conditions have been explained in preceding paragraphs.

Data collected at partial-record stations follow the information for continuous record sites. Data for partial-record stations are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations, and the second is a table of annual maximum stage and discharge at crest-stage 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. Occasionally, a series of discharge measurements are made or water-quality samples are taken to investigate the seepage gains or losses along a reach of a stream or to determine the low-flow characteristics of an area. Such measurements and chemical analyses are also given in special tables following the tables of partial-record stations.

For gaging stations on lakes and reservoirs the data presented comprise a description of the station and a monthly summary table of stage and contents.

Accuracy of field data and computed results

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

The station description under "REMARKS" states the degree of accuracy of the records. "Excellent" means that about 95 percent of the daily discharges are within 5 percent; "good", within 10 percent; and "fair" within 15 percent. "Poor" means that daily discharges have less than "fair" accuracy.

Figures of daily mean discharge in this report are shown to the nearest hundredth of a cubic foot per second for discharges of less than 1 ft^3/s; to tenths between 1.0 and 10 ft^3/s; to whole numbers between 10 and 1,000 ft^3/s; and to 3 significant figures above 1,000 ft^3/s. The number of significant figures used is based solely on the magnitude of the figure. The same rounding rules apply to discharge figures listed for partial-record stations.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, 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 data available

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

Information on the availability of unpublished data or statistical analyses may be obtained from the district office.

Records of discharge collected by agencies other than the Geological Survey

Records of discharge not published by the Geological Survey were collected during water year 1978 at many sites in Ohio by the National Weather Service, NOAA, U.S. Department of Commerce, by the Corps of Engineers, U.S. Army and by other agencies. The National Water Data Exchange, Water Resources Division, U.S. Geological Survey, National Center, Reston, Va. 22092, maintains an index of such sites. Information on records available at specific sites can be obtained upon request.

EXPLANATION OF WATER-QUALITY RECORDS

Collection and examination of data

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

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

For ground-water records, descriptive statements are given; the well number, depth of well, date of sampling and/or other pertinent data are given in the table containing the chemical analyses of the ground water.

Water analysis

Most methods for collecting and analyzing water samples are described in the U.S. Geological Survey Techniques of Water-Resources Investigations listed on a following page.

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.

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

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum and minimum values for each constituent measured and are based upon hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained from the district office.

Water temperature

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

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided day method. For periods when no samples were collected, daily 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 observations, such data are useful in establishing seasonal relations between quality and streamflow in predicting long-term sediment-discharge characteristics of the stream.

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

EXPLANATION OF GROUND-WATER LEVEL RECORDS

Collection of the data

Ground-water level data from a basic network of observation wells are published herein. This basic network contains observation wells so located that the most significant data are obtained from the fewest wells in the most important aquifers.

Each well is identified by means of (1) a 15-digit number that is based on latitude and longitude and (2) a local number that is provided for local needs. See figure 1.

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

Water-level measurements in this report are given in feet with reference to land-surface datum (lsd). Land-surface datum is a datum plane that is approximately at land surface at each well; National Geodetic Vertical Datum of 1929 is the datum plane on which the national network of precise levels is based. If known, the altitude of the land-surface datum above National Geodetic Vertical Datum of 1929 is given in the well description. The height of the measuring point (MP) above or below land-surface datum is given in each well description.

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

Thirty-four manuals by the U.S. Geological Survey have been published to date in the series on techniques describing procedures for planning and executing 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) is on surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises. The reports listed below are for sale by the U.S. Geological Survey, Branch of Distribution, 1200 South Eads Street, Arlington, VA 22202 (authorized agent of the Superintendent of Documents, Government Printing Office).

NOTE: When ordering any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations".

1-D1. *Water temperature--influential factors, field measurement, and data presentation,* by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.
1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents,* by W. W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.
2-D1. *Application of surface geophysics to ground-water investigations,* by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.
2-E1. *Application of borehole geophysics to water-resources investigations,* by W. S. Keys and L. M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages.
3-A1. *General field and office procedures for indirect discharge measurements,* by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.
3-A2. *Measurement of peak discharge by the slope-area method,* by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.
3-A3. *Measurement of peak discharge at culverts by indirect methods,* by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.
3-A4. *Measurement of peak discharge at width contractions by indirect methods,* by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages.
3-A5. *Measurement of peak discharge at dams by indirect methods,* by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.
3-A6. *General procedure for gaging streams,* by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.
3-A7. *Stage measurements at gaging stations,* by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages.
3-A8. *Discharge measurements at gaging stations,* by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages.
3-A11. *Measurement of discharge by moving-boat method,* by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages.
3-B1. *Aquifer-test design, observation, and data analysis,* by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages.
3-B2. *Introduction to ground-water hydraulics, a programed text for self-instruction,* by G. D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.
3-C1. *Fluvial sediment concepts,* by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.
3-C2. *Field methods for measurement of fluvial sediment,* by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.
3-C3. *Computation of fluvial-sediment discharge,* by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages.
4-A1. *Some statistical tools in hydrology,* by H. C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages.
4-A2. *Frequency curves,* by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages.
4-B1. *Low-flow investigations,* by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages.
4-B2. *Storage analyses for water supply,* by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.
4-B3. *Regional analyses of streamflow characteristics,* by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages.
4-D1. *Computation of rate and volume of stream depletion by wells,* by C. T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages.
5-A1. *Methods for determination of inorganic substances in water and fluvial sediments,* by M. W. Skougstad and others, editors: USGS--TWRI Book 5, Chapter A1. 1979. 626 pages.
5-A2. *Determination of minor elements in water by emission spectroscopy,* by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages.
5-A3. *Methods for analysis of organic substances in water,* by D. F. Goerlitz and Eugene Brown: USGS--TWRI Book 5, Chapter A3. 1972. 40 pages.
5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples,* edited by P. E. Greeson, T. A. Ehlke, G. A. Irwin, B. W. Lium, and K. V. Slack: USGS--TWRI Book 5, Chapter A4. 1977. 332 pages.
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, Chapter A5. 1977. 95 pages.
5-C1. *Laboratory theory and methods for sediment analysis,* by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.
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, Chapter C1. 1976. 116 pages.
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, Chapter C2. 1978. 90 pages.
8-A1. *Methods of measuring water levels in deep wells,* by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages.
8-B2. *Calibration and maintenance of vertical-axis type current meters,* by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages.

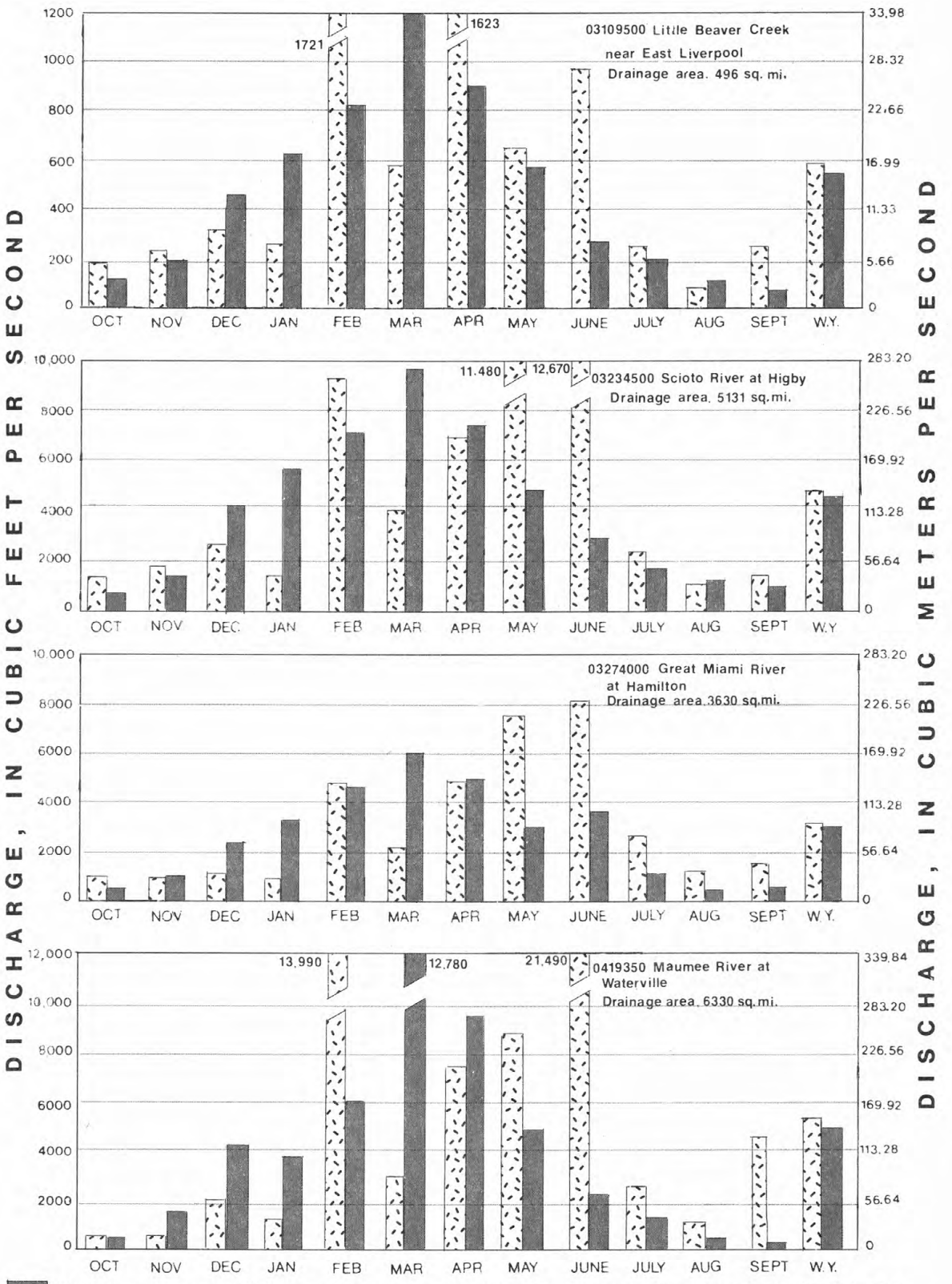

Figure 2. --Runoff during 1981 water year compared with median runoff for period 1951-80 for four representative gaging stations.

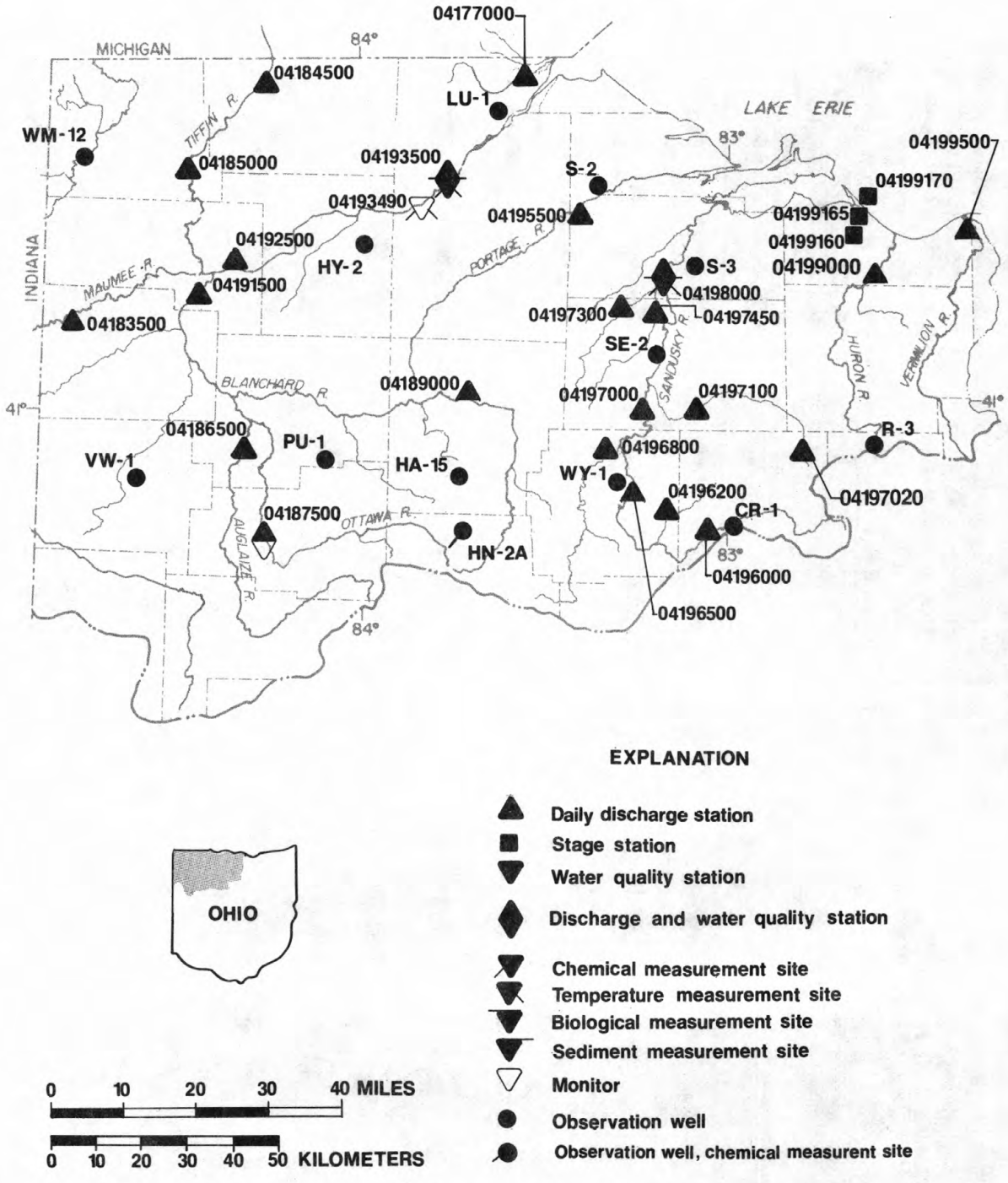

Figure 3a.--Location of data-collection stations excluding crest-stage and low-flow partial record sites.

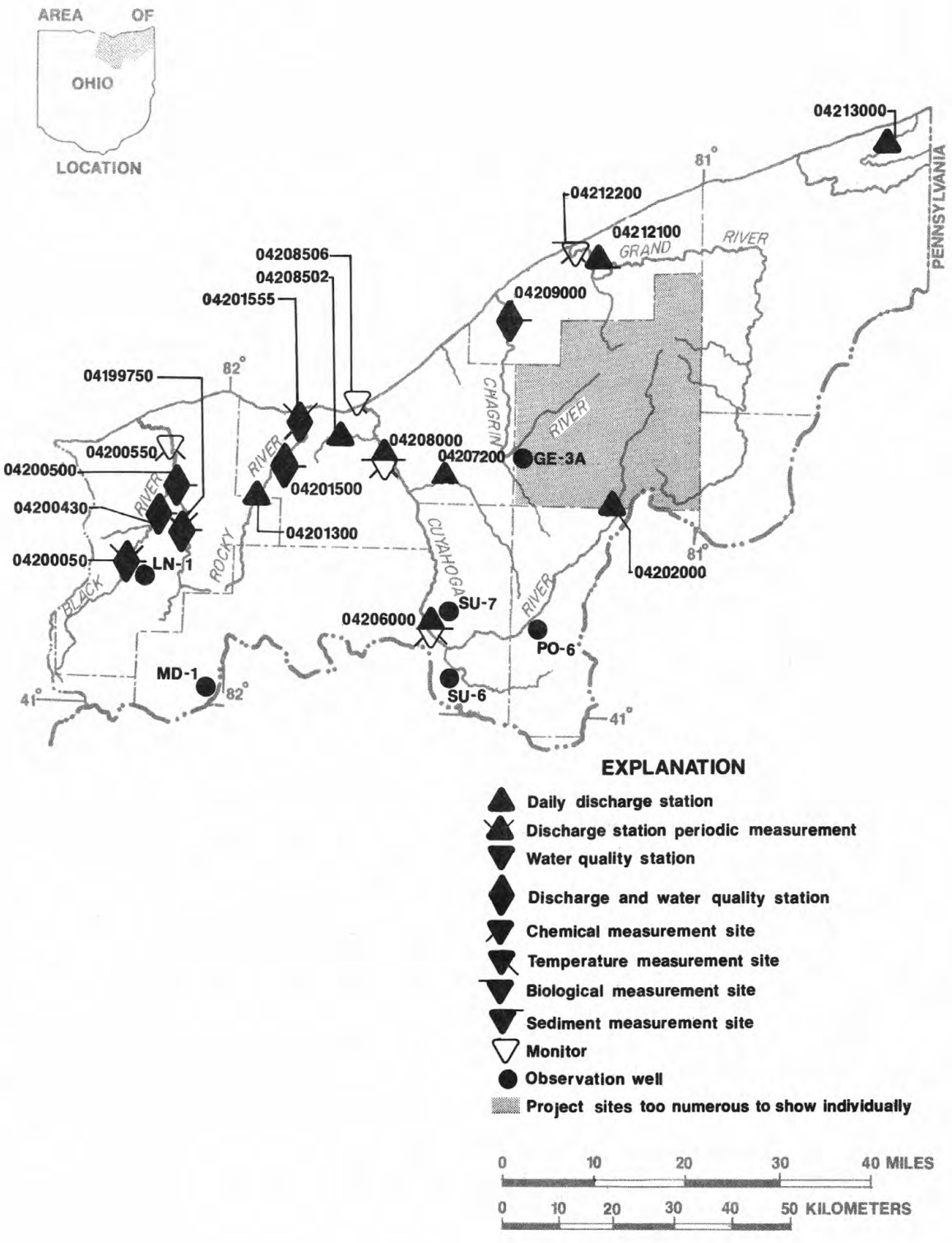

Figure 3b.--Location of data-collection stations excluding crest-stage and low-flow partial record sites.

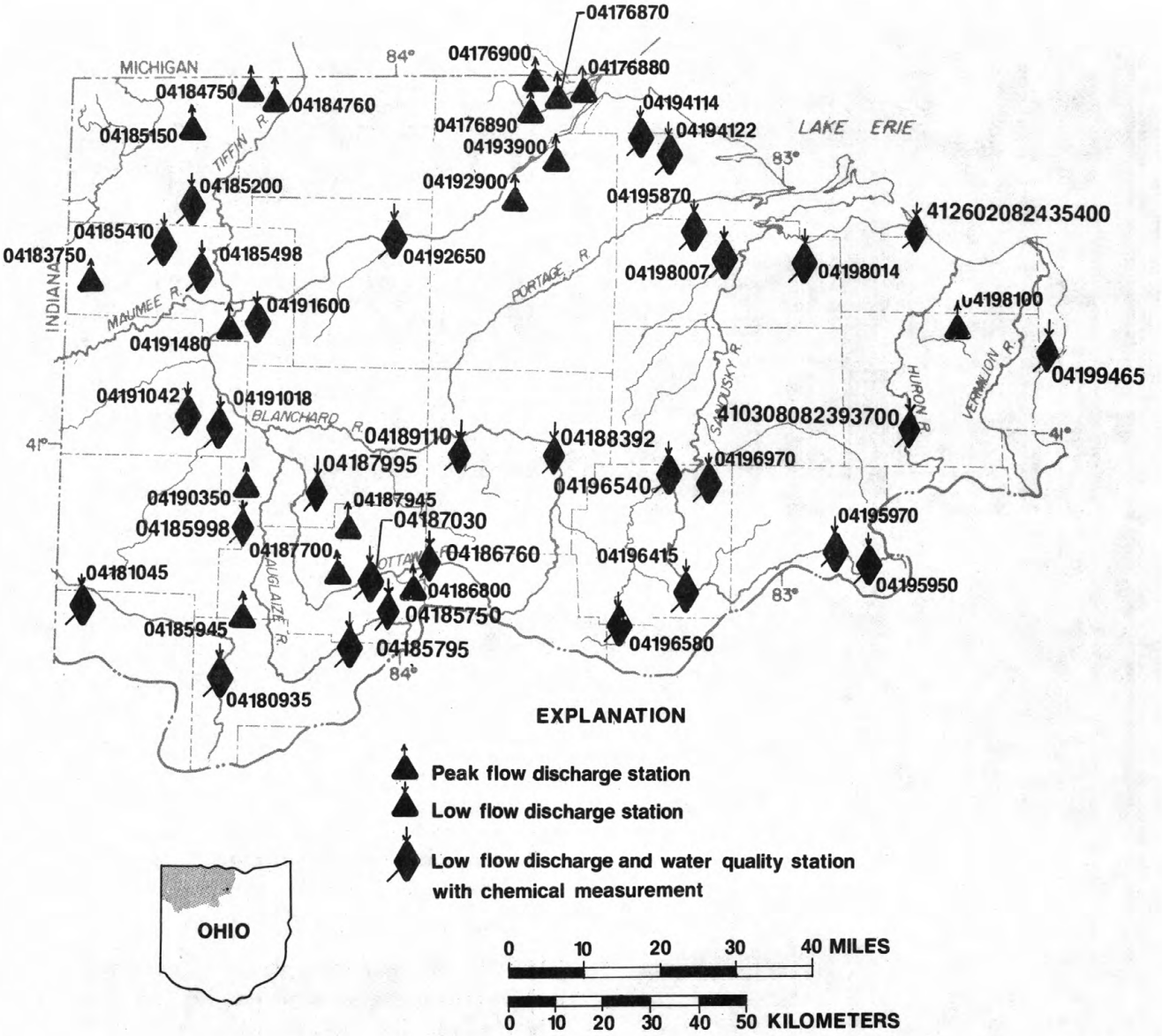

Figure 3c.--Location of crest-stage and low-flow partial record sites.

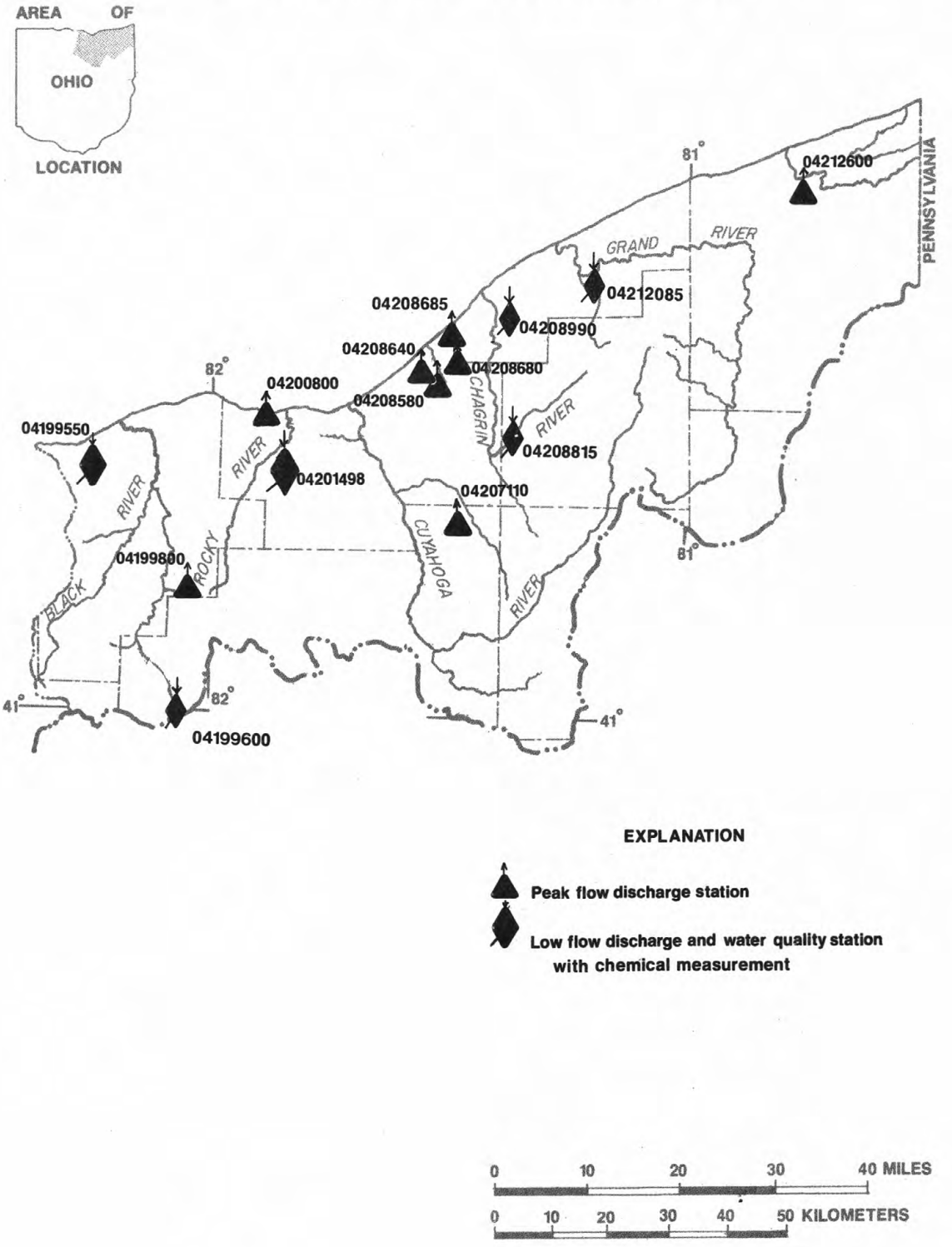

Figure 3d.--Location of crest-stage and low-flow partial record sites.

04177000 OTTAWA RIVER AT TOLEDO UNIVERSITY, TOLEDO, OH

LOCATION.--Lat 41°39'36", long 83°36'44", in NE 1/4 sec. 32, T.9 S., R.7 E., Lucas County, Hydrologic Unit 04100001, on left bank at auto bridge at Toledo University, Toledo, Ohio., 0.4 mi (0.6 km) downstream from Deline Ditch, 5.6 mi (9.0 km) upstream from Sibley Creek, and 10.9 mi (17.5 km) upstream from mouth.

DRAINAGE AREA.--150 mi² (388 km²). Area at site used prior to Sept. 30, 1948, 150 mi² (388 km²), 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 (175.650 m) National Geodetic Vertical Datum of 1929. (From Aug. 1976 to July, 1979 at site 500 ft (152.4 m) downstream. Prior to Sept. 30, 1948 water-stage recorder at site 2,500 ft (762 m) upstream at datum 3.72 ft (1.134 m) higher.

REMARKS.--Records poor. Water-quality data collected at this site 1977.

AVERAGE DISCHARGE.--8 years(1946-48, 1977-81) 117 ft³/s (3.313 m³/s) 10.59 in/yr 269 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3330 ft³/s (94.3 m³/s) Mar. 22, 1978, Sept. 4, 1981, gage height, 13.70 ft (4.176 m); minimum, no flow Aug. 24 to Sept. 19, 1945, July 7-15, Aug. 12-15, Sept. 1-9, 16-22, Oct. 5-10, 1946.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1, 1943 reached a stage of 15.1 ft (4.602 m) present datum, from floodmark, Lucas County Sanitary Engineers, discharge, 3,400 ft³/s (96.3 m³/s). Flood of Apr. 25, 1950 reached a stage of 15.0 ft (4.572 m) present datum, from floodmark, discharge, 3,300 ft³/s (93.5 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 900 ft³/s (25.5 m³/s) "revised" and maximums (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 18	----	2000	56.6	----	----	June 26	1130	1290	36.5	9.72	2.963
June 14	1830	1160	32.9	9.27	2.825	Sept. 4	1400	*3330	94.3	*13.70	4.176

Minimum daily discharge, 6.9 ft³/s (0.20 m³/s) Oct. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	12	13	16	94	240	26	269	41	111	72	63
2	28	11	39	15	98	180	27	145	35	91	57	47
3	20	9.8	21	14	80	160	29	96	43	81	67	502
4	13	8.6	25	13	68	120	31	77	45	67	73	3030
5	11	7.8	23	13	60	105	33	64	38	56	59	2770
6	9.4	7.2	18	13	50	91	35	61	36	52	47	2000
7	9.6	7.0	43	14	35	71	37	47	32	44	43	925
8	9.4	7.0	102	14	25	62	29	40	104	38	56	407
9	10	7.1	260	14	20	56	44	39	495	36	53	235
10	9.1	7.6	245	13	37	50	30	50	639	36	46	137
11	8.8	8.6	129	12	380	44	38	91	306	30	51	98
12	8.4	9.8	85	12	320	40	36	87	156	27	41	79
13	7.8	11	60	12	240	36	36	72	540	27	38	68
14	7.7	28	48	12	180	33	331	103	1010	24	33	62
15	7.4	15	40	12	98	30	777	328	892	23	29	57
16	7.2	9.6	35	12	200	28	360	474	358	23	28	88
17	11	8.6	30	12	900	26	205	260	192	22	25	107
18	10	8.4	26	12	1900	25	155	140	132	28	24	109
19	7.6	7.9	22	12	1600	24	108	100	109	23	22	83
20	7.2	8.3	19	12	1150	22	90	81	124	98	22	72
21	7.0	10	18	13	700	22	73	69	126	181	23	63
22	7.2	9.8	16	13	540	22	58	60	348	82	20	101
23	6.9	8.5	14	14	500	22	79	52	412	52	23	110
24	11	8.0	13	14	760	22	77	47	167	45	27	79
25	28	8.0	12	15	610	22	64	44	598	35	27	64
26	11	7.0	12	21	520	26	50	42	1210	261	24	61
27	9.5	15	13	30	370	33	43	62	515	394	22	197
28	27	20	13	50	290	38	111	55	177	425	41	244
29	15	14	14	94	---	35	481	46	107	590	71	104
30	11	13	15	104	---	31	595	46	81	252	47	214
31	15	---	15	82	---	27	---	44	---	105	260	---
TOTAL	362.2	313.6	1438	709	11825	1743	4088	3191	9068	3359	1471	12176
MEAN	11.7	10.5	46.4	22.9	422	56.2	136	103	302	108	47.5	406
MAX	28	28	260	104	1900	240	777	474	1210	590	260	3030
MIN	6.9	7.0	12	12	20	22	26	39	32	22	20	47
CFSM	.08	.07	.31	.15	2.81	.38	.91	.69	2.01	.72	.32	2.71
IN.	.09	.08	.36	.18	2.93	.43	1.01	.79	2.25	.83	.36	3.02

CAL YR 1980 TOTAL 39028.8 MEAN 107 MAX 1240 MIN 6.9 CFSM .71 IN 9.68
WTR YR 1981 TOTAL 49743.8 MEAN 136 MAX 3030 MIN 6.9 CFSM .91 IN 12.34

04183500 MAUMEE RIVER AT ANTWERP, OH

LOCATION.--Lat 41°11'56", long 84°44'40", in sec. 22,T. 3N., R.1 E., Paulding County, Hydrologic Unit 04100005, on left bank 425 ft (130 m) downstream from bridge on State Highway 49, 1 mi (2 km) north of Antwerp, 7 mi (11 km) downstream from Indiana State line and 10 mi (16 km) upstream from Marie DeLarme Creek.

DRAINAGE AREA.--2,129 mi² (5,514 km²).

PERIOD OF RECORD.--September 1921 to December 1935, April 1939 to current year.

REVISED RECORDS.--WSP 1174: 1927, 1933, 1940. WSP 1387: 1922-23, 1925-27, 1934. WDR OH-70-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 694.90 ft (211.805 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 13, 1925, nonrecording gage at site 400 ft (122 m) upstream at same datum.

REMARKS.--Records excellent except those for winter periods, which are fair. Low flow slightly regulated by powerplant at Fort Wayne, Indiana, 32 mi (51.5 km) upstream. Flow slightly regulated by upstream reservoirs. Water quality data collected at this site 1969 to 1977.

AVERAGE DISCHARGE.--56 years, 1,692 ft³/s (47.92 m³/s), 10.80 in/yr (274 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,200 ft³/s (742 m³/s) May 20, 1943, gage height, 20.29 ft (6.184 m); minimum daily, 26 ft³/s (0.74 m³/s) July 24, 1933.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 27, 1913, estimated as 40,000 ft³/s (1,130 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 8,000 ft³/s (227 m³/s) and maximums (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 20	0800	16400	464	17.20	5.243	June 15	0500	*18100	513	*18.09	5.514
Apr. 14	2100	9780	277	12.83	3.911	June 23	0500	8580	243	11.90	3.627
May 16	0300	9400	266	12.54	3.822						

Minimum daily discharge, 202 ft³/s (5.721 m³/s) Oct. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	336	402	349	390	880	4470	625	4540	1530	3190	1870	488
2	295	426	408	390	1180	3700	594	4620	1660	3350	2030	916
3	376	406	475	390	1100	3060	585	4650	1380	2120	1960	1760
4	339	387	733	390	1000	2490	692	4370	1460	1700	1710	2520
5	284	355	748	400	900	2220	687	3830	1230	1380	1540	4740
6	285	360	745	410	800	2090	728	4190	1370	1290	1060	4440
7	277	341	718	420	720	1720	674	3830	2940	1080	1090	3160
8	340	331	814	420	680	1680	619	3390	3320	939	893	2570
9	381	330	1900	420	630	1430	613	2450	4610	873	783	2070
10	202	317	2800	400	580	1250	780	2410	6030	525	650	1520
11	246	298	2510	380	800	1160	1020	2950	6700	425	545	1060
12	240	289	2120	370	1640	1210	1130	2870	5930	531	559	1020
13	239	289	1840	360	1790	1050	2200	2730	6300	497	494	762
14	232	293	1750	360	1890	1040	7770	3160	15300	523	474	663
15	219	300	1600	350	1750	984	9280	7740	17900	440	428	536
16	233	320	1200	340	2080	895	8380	9100	17000	393	485	534
17	243	291	1080	340	6450	847	6910	7680	15700	454	471	503
18	323	276	807	340	10700	822	5880	5740	14000	389	384	507
19	288	278	660	340	12600	770	5120	4780	12300	373	381	481
20	244	286	560	340	14100	721	4330	4000	10300	680	374	462
21	242	284	500	340	10500	660	3510	3010	7080	1510	389	417
22	247	317	480	350	9510	648	2820	2240	6680	850	369	446
23	728	333	480	365	9740	644	2370	1800	8130	1460	278	440
24	335	271	440	385	9930	557	1590	1480	6230	1950	298	342
25	332	285	430	440	9380	539	1790	1250	4510	2270	279	374
26	348	274	420	570	7950	571	1710	1200	6470	1830	317	372
27	300	266	410	920	6190	558	1860	1110	7490	1330	281	483
28	344	286	400	1200	5200	557	1730	1100	6580	1260	232	509
29	432	387	390	900	---	545	3840	1090	3870	1460	328	457
30	386	349	390	650	---	564	4770	1500	2420	1720	408	619
31	396	---	390	700	---	631	---	1470	---	1800	539	---
TOTAL	9712	9627	28547	14370	130670	40083	84607	106280	206420	38592	21899	35171
MEAN	313	321	921	464	4667	1293	2820	3428	6881	1245	706	1172
MAX	728	426	2800	1200	14100	4470	9280	9100	17900	3350	2030	4740
MIN	202	266	349	340	580	539	585	1090	1230	373	232	342
CFSM	.15	.15	.43	.22	2.19	.61	1.33	1.61	3.23	.59	.33	.55
IN.	.17	.17	.50	.25	2.28	.70	1.48	1.86	3.61	.67	.38	.61

CAL YR 1980 TOTAL 656849 MEAN 1795 MAX 11200 MIN 202 CFSM .84 IN 11.48
WTR YR 1981 TOTAL 725978 MEAN 1989 MAX 17900 MIN 202 CFSM .93 IN 12.69

04184500 BEAN CREEK AT POWERS, OH

LOCATION.--Lat 41°39'34", long 84°14'55", in NE 1/4 of SE 1/4, sec. 26, 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 (2.4 km) east of Powers, 1.7 mi (2.7 km) upstream from Iron Creek, 3.5 mi (5.6 km) downstream from Silver Creek, and 5.2 mi (8.4 km) east of Fayette.

DRAINAGE AREA.--206 mi² (534 km²).

PERIOD OF RECORD.--October 1940 to Semptember 1981 (discontinued).

REVISED RECORDS.--WSP 1307: 1948 (M) WSP 1912: Drainage area WDR OH-76-2: 1975.

GAGE.--Water-stage recorder. Datum of gage is 688.26 (209.782 m) (Revised) National Geodetic Vertical Datum of 1929. Prior to Jan. 18, 1941, nonrecording gage, Jan. 18, 1941 to Sept. 30, 1977, water-stage recorder at site 0.5 mi (0.8 km) upstream at datum 34.31 ft (10.458 m) higher. Oct. 1, 1977 to Oct. 30, 1981 at site 0.5 (0.8 km) mi upstream at datum 29.31 ft (8.934 m) higher.

REMARKS.--Records fair except those for no gage-height record, (March 23 to May 4 and Sept. 2-30) and winter period, which are poor. Water-quality data collected at this site 1969 to 1977.

AVERAGE DISCHARGE.--41 years, 167 ft³/s (4.729 m³/s), 11.01 in/yr (280 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,250 ft³/s (120 m³/s) Apr. 29, 1956, gage height, 18.82 ft (5.736 m) at site and datum then in use; minimum, 5.0 ft³/s (0.14 m³/s) Aug. 9, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 1,200 ft³/s (34.0 m³/s) and maximums (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 20	----	*2300	65.1	a/*20.03	6.105	July 27	----	1900	53.8	----	----
June 14	1645	2160	61.2	16.60	5.060	July 28	----	2100	59.5	----	----
June 26	1330	1200	34.0	14.15	4.313	Sept. 5	----	1800	51.0	----	----
July 20	2030	1540	43.6	15.18	4.627						

Minimum daily discharge: 34 ft³/s (0.96 m³/s) Jan. 15-19 due to ice.

a/ Ice jam

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	79	69	40	50	516	110	560	231	186	507	148
2	60	75	98	40	54	444	110	490	169	165	354	190
3	56	73	159	39	58	370	110	420	136	151	284	1200
4	57	68	154	39	58	318	110	370	245	152	272	1400
5	55	66	140	39	56	292	105	320	277	145	233	1600
6	52	66	122	39	54	267	100	269	190	130	194	1400
7	51	62	130	39	54	242	98	231	140	118	167	1000
8	50	60	347	39	54	220	94	203	114	117	158	500
9	50	59	829	38	58	208	92	181	470	98	156	250
10	48	56	617	38	68	202	92	178	503	85	152	220
11	48	55	462	37	100	196	94	267	337	77	129	190
12	47	53	295	36	160	184	100	303	239	79	119	160
13	48	51	239	35	165	173	115	258	518	75	117	150
14	48	51	206	35	170	163	160	226	1900	70	107	150
15	48	51	177	34	180	159	560	536	1940	68	100	160
16	48	52	155	34	230	152	740	617	1630	66	98	250
17	48	52	135	34	400	144	500	462	1060	60	90	350
18	49	51	125	34	780	138	370	357	608	60	85	400
19	48	51	100	34	1500	134	290	288	418	56	84	350
20	50	50	88	35	2000	129	210	225	335	637	79	280
21	50	49	76	36	1700	126	150	181	290	1160	70	250
22	47	49	66	36	1500	125	140	156	325	483	65	230
23	46	49	58	37	1350	118	135	136	416	308	62	290
24	45	49	54	38	1100	115	135	120	366	216	59	250
25	53	49	49	41	900	110	140	111	720	166	56	200
26	64	49	47	50	780	105	145	100	1130	1060	56	220
27	66	50	44	60	645	105	160	101	647	1420	57	310
28	64	54	43	64	560	105	190	125	361	1300	76	290
29	65	61	42	62	---	105	350	116	273	1780	103	270
30	85	65	41	58	---	105	680	129	222	1370	148	280
31	83	---	40	54	---	110	---	266	---	842	183	---
TOTAL	1684	1705	5207	1274	14784	5880	6385	8302	16210	12700	4420	12938
MEAN	54.3	56.8	168	41.1	528	190	213	268	540	410	143	431
MAX	85	79	829	64	2000	516	740	617	1940	1780	507	1600
MIN	45	49	40	34	50	105	92	100	114	56	56	148
CFSM	.26	.28	.82	.20	2.56	.92	1.03	1.30	2.62	1.99	.69	2.09
IN.	.30	.31	.94	.23	2.67	1.06	1.15	1.50	2.93	2.29	.80	2.34

CAL YR 1980 TOTAL 85615 MEAN 234 MAX 1820 MIN 40 CFSM 1.14 IN 15.46
WTR YR 1981 TOTAL 91489 MEAN 251 MAX 2000 MIN 34 CFSM 1.22 IN 16.52

04185000 TIFFIN RIVER AT STRYKER, OH

LOCATION.--Lat 41°30'16", long 84°25'47", in SW 1/4 sec. 5, T.6 N., R.4 E., Williams County, Hydrologic Unit 04100006, on left bank 0.5 mi (0.8 km) downstream from bridge on State Highway 191 at west edge of Stryker, 0.6 mi (1.0 km) upstream from Penn Central bridge, and 1.6 mi (2.6 km) downstream from Leatherwood Creek.

DRAINAGE AREA.--410 mi² (1,060 km²).

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. Datum of gage is 685.1 ft (208.82 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 30, 1928, nonrecording gage at site 3.5 mi (5.6 km) downstream at different datum. Oct. 13, 1940, to Jan. 17, 1941, nonrecording gage and Jan. 18, 1941, to Sept. 30, 1953, water-stage recorder, at site 0.5 mi (0.8 km) downstream at same datum.

REMARKS.--Records poor. Small diversion 12.5 mi (20.1 km) upstream from gage for municipal supply of Archbold. Diversion averaged 1.76 ft³/s (0.050 m³/s) is returned as sewage to Brush Creek which flows into Tiffin River about 15 mi (24 km) downstream from station. Water-quality data collected at this site 1965 to 1977. Sediment data collected 1969 to 1974.

AVERAGE DISCHARGE.--48 years, 316 ft³/s (8.949 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,640 ft³/s (188 m³/s) Apr. 25, 1950, gage height, 15.45 ft (4.709 m); maximum gage height, 16.36 ft (4.987 m) Mar. 23, 1978; minimum daily discharge, 3.9 ft³/s (0.11 m³/s) Aug. 30, 31, Sept. 1, 1953.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a stage of 16.0 ft (4.88 m), from floodmarks, discharge, 7,600 ft³/s (215 m³/s). Flood in 1937 reached a stage of 15.0 ft (4.57 m), from information by local resident, discharge, 6,000 ft³/s (170 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 1,850 ft³/s (52.4 m³/s) and maximums (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 21	0100	*3660	104	*14.66	4.468	June 16	1800	2200	62.3	12.79	3.898
Apr. 16	1800	1990	56.4	12.34	3.761						

Minimum daily discharge, 50 ft³/s (1.42 m³/s) Aug. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	81	235	196	78	90	1480	192	1500	464	308	1650	176
2	75	228	214	76	110	1250	191	1250	420	245	1390	155
3	79	219	280	74	110	990	179	920	350	213	912	200
4	81	206	329	72	100	750	177	830	332	194	501	1130
5	82	187	307	70	96	587	178	679	417	191	360	1370
6	79	173	273	70	92	502	171	516	451	176	290	1620
7	69	166	261	70	90	437	158	412	386	154	241	1610
8	64	165	348	70	90	381	150	350	332	135	210	1330
9	62	166	649	70	90	343	150	314	705	119	187	768
10	60	164	799	70	90	324	153	304	985	107	179	384
11	58	157	915	68	195	316	164	376	1130	96	175	254
12	58	146	915	68	300	304	171	464	1060	86	159	202
13	61	139	696	66	336	290	196	468	851	79	144	170
14	61	139	460	66	328	272	856	444	1590	74	132	148
15	61	149	344	64	316	256	1570	711	1920	68	117	139
16	64	155	289	64	363	247	1930	918	2160	64	109	198
17	80	155	228	64	948	230	1860	985	2130	60	104	266
18	91	152	150	64	1640	216	1560	915	1960	57	95	376
19	103	157	120	64	2310	202	1180	688	1700	55	85	442
20	109	161	100	64	3420	192	823	492	1340	57	77	366
21	111	161	94	62	3570	187	556	386	838	302	71	265
22	110	161	110	62	3470	181	425	331	797	662	66	205
23	110	161	120	66	3320	177	391	297	856	926	62	219
24	111	153	110	70	2970	174	370	271	775	793	58	248
25	139	140	100	80	2550	172	360	258	1340	391	54	213
26	181	130	94	86	2180	168	340	247	1590	289	52	184
27	197	131	90	90	1940	173	330	244	1420	556	50	227
28	202	149	86	100	1710	186	330	307	1280	999	52	342
29	224	171	82	100	---	191	390	328	982	1380	72	311
30	237	188	80	90	---	191	1700	304	510	1600	121	286
31	239	---	80	84	---	193	---	403	---	1730	164	---
TOTAL	3339	4964	8919	2262	32824	11562	17201	16912	31071	12166	7939	13804
MEAN	108	165	288	73.0	1172	373	573	546	1036	392	256	460
MAX	239	235	915	100	3570	1480	1930	1500	2160	1730	1650	1620
MIN	58	130	80	62	90	168	150	244	332	55	50	139

CAL YR 1980 TOTAL 144157 MEAN 394 MAX 2350 MIN 58
WTR YR 1981 TOTAL 162963 MEAN 446 MAX 3570 MIN 50

04186500 AUGLAIZE RIVER NEAR FORT JENNINGS, OH

LOCATION.--Lat 40°56'55", long 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 (61 m) upstream from bridge on U. S. Highway 224, 3.5 mi (5.6 km) northeast of Fort Jennings, 6 mi (10 km) upstream from Ottawa River, and 7.3 mi (11.7 km) downstream from Jennings Creek.

DRAINAGE AREA.--332 mi² (860 km²).

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 (217.51 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 6, 1930, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter periods and those for periods of no-gage height record, Nov. 3 to Dec. 9. which are fair. Beginning Jan. 4, 1971, water was diverted at a point 24.3 mi (39.1 km) 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 2,953 mil gal (11.18 hm³), equivalent to a mean withdrawal of 12.5 ft³/s (0.35 m³/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 (14.8 km) upstream from station. Annual figures of runoff are considered to be within 10 percent of natural yield. Sediment data collected at this site 1970 to 1974. Water-quality data collected at this site 1968 to 1978.

AVERAGE DISCHARGE.--55 years, 284 ft³/s (8.043 m³/s), 11.62 in/yr (295 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 12,000 ft³/s (340 m³/s) Jan. 23, 1959; maximum gage height, 20.30 ft (6.187 m) Jan. 23, 1959, from floodmark (ice jam); minimum daily discharge, 4.9 ft³/s (0.14 m³/s) Oct. 7, 1956.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2000 ft³/s (56.6 m³/s) and maximums (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 16	0400	2790	79.0	10.89	3.319	June 14	1700	*7930	225	*16.80	5.121

Minimum Daily Discharge, 8.6 ft³/s (0.24 m³/s) Oct. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	26	33	23	68	187	65	482	771	909	39	34
2	17	25	32	22	62	167	59	465	370	562	39	39
3	17	24	31	21	54	140	53	454	237	468	36	60
4	14	23	30	20	45	120	60	289	185	259	34	302
5	14	23	30	18	39	113	71	155	151	167	30	406
6	14	22	30	17	34	114	74	235	132	146	28	350
7	14	22	31	16	29	118	65	972	284	110	34	126
8	13	22	36	15	24	112	43	624	198	88	36	49
9	10	21	41	15	20	98	39	356	720	73	35	32
10	11	21	40	14	27	89	47	270	1250	62	30	28
11	9.8	20	46	14	150	86	73	559	827	54	30	24
12	10	20	60	14	525	86	457	715	416	50	30	18
13	8.6	20	41	14	818	83	973	480	1370	46	26	20
14	9.2	21	32	14	461	77	1850	490	7040	41	24	26
15	14	22	25	14	240	70	1290	2120	6610	37	23	29
16	15	22	23	14	232	66	561	2480	5590	36	21	293
17	14	22	22	14	662	61	325	1080	2000	37	19	572
18	15	22	21	14	1260	59	273	529	525	31	18	177
19	17	21	20	14	1260	56	223	346	346	33	19	180
20	13	21	20	15	1150	53	155	235	255	39	19	185
21	16	20	20	17	970	51	106	176	200	165	18	152
22	18	20	20	19	661	49	89	158	252	168	19	91
23	19	20	20	22	552	47	76	136	263	157	18	37
24	18	21	20	25	480	46	60	118	156	92	17	25
25	26	22	20	27	364	43	51	114	527	56	17	29
26	25	24	20	30	241	43	87	94	1370	45	17	32
27	21	25	21	35	175	54	83	103	1390	42	17	31
28	28	27	21	80	167	54	76	337	408	49	17	29
29	32	30	23	200	---	51	132	673	244	51	20	26
30	25	34	24	130	---	59	735	589	183	43	29	26
31	23	---	23	98	---	68	---	724	---	62	35	---
TOTAL	517.6	683	876	1005	10770	2520	8251	16558	34270	4178	794	3428
MEAN	16.7	22.8	28.3	32.4	385	81.3	275	534	1142	135	25.6	114
MAX	32	34	60	200	1260	187	1850	2480	7040	909	39	572
MIN	8.6	20	20	14	20	43	39	94	132	31	17	18
CFSM	.05	.07	.09	.10	1.16	.25	.83	1.61	3.44	.41	.08	.34
IN.	.06	.08	.10	.11	1.21	.28	.92	1.86	3.84	.47	.09	.38

CAL YR 1980 TOTAL 106880.6 MEAN 292 MAX 8780 MIN 8.6 CFSM .88 IN 11.98
WTR YR 1981 TOTAL 83850.6 MEAN 230 MAX 7040 MIN 8.6 CFSM .69 IN 9.40

04187500 OTTAWA RIVER AT ALLENTOWN, OH

LOCATION.--Lat 40°45'18", long 84°11'41", in NW 1/4 sec. 29, T.3S., R.6E., Allen County, Hydrologic Unit 04100007, on right bank at downstream side of bridge on State Highway 81 at Allentown, 0.3 mi (0.5 km) downstream from Kessler Run, and 1.5 mi (2.4 km) upstream from McBride Ditch.

DRAINAGE AREA.--160 mi² (414 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1923 to December 1935, August 1943 to current year (discontinued).

REVISED RECORDS.--WSP 1004: 1924. WSP 1144: 1944(M). WSP 1207: 1927. WSP 1387: 1924(M), 1927-28(M), 1929, 1930(M), 1935(M). WSP 1912: Drainage area. WRD OH-77-2: 1976 (P).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 789.14 ft (240.530 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1925, nonrecording gage and Oct. 1, 1925, to Dec. 30, 1935, water-stage recorder, at site 35 ft (11 m) downstream at same datum.

REMARKS.--Records fair. Diurnal fluctuation and some regulation caused by operation of water-supply and sewage-treatment plants of city of Lima upstream from station.

AVERAGE DISCHARGE.--50 years, 126 ft³/s (3.568 m³/s), 10.69 in/yr (372 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,740 ft³/s (219 m³/s) Jan. 22, 1959, gage height, 10.88 ft (3.316 m), from rating curve extended above 4,800 ft³/s (136 m³/s); minimum daily, 2.4 ft³/s (0.068 m³/s) June 28, July 21, 1933.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 15, 1939, reached a stage of 10.1 ft (3.08 m), discharge, 6,160 ft³/s (174 m³/s), and flood in May 1943 reached a stage of about 10 ft (3 m), discharge, about 6,000 ft³/s (170 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,860 ft³/s (166 m³/s) June 14, gage height, 10.09 ft (3.075 m), above base of 1,600 ft³/s (45.3 m³/s); minimum daily discharge 22 ft³/s (0.62 m³/s) Aug. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	28	39	32	107	120	78	216	159	1180	43	68
2	34	25	37	31	122	109	73	186	120	456	36	51
3	29	29	34	30	55	100	76	139	100	139	34	133
4	37	29	32	30	50	93	98	76	93	100	35	245
5	31	25	34	29	46	95	109	49	78	82	30	89
6	30	27	33	29	44	91	89	265	80	68	52	37
7	31	30	46	29	42	84	70	139	70	58	37	51
8	31	30	45	30	40	75	57	71	62	54	40	59
9	28	28	74	31	38	68	53	95	287	48	33	38
10	29	26	66	32	45	68	54	107	501	45	31	37
11	28	24	62	32	240	67	163	413	346	39	35	35
12	24	27	47	33	160	65	875	390	122	38	30	32
13	23	31	36	33	100	58	677	220	1660	42	27	30
14	24	32	35	33	62	55	624	360	5450	40	28	58
15	27	32	34	32	50	52	365	899	2500	40	28	122
16	28	26	33	33	180	50	152	758	849	38	25	50
17	28	26	32	33	418	50	152	360	375	35	25	33
18	38	34	32	34	412	50	166	148	182	33	25	73
19	28	34	31	34	357	47	84	112	122	35	28	65
20	26	30	31	43	451	45	59	82	91	145	27	76
21	28	32	30	43	365	42	50	76	95	114	28	63
22	30	31	30	38	231	38	45	78	95	87	28	47
23	28	26	30	39	190	38	53	68	84	49	27	40
24	28	29	29	38	208	38	43	58	71	54	23	37
25	71	32	29	47	155	36	51	54	700	42	24	34
26	33	30	29	93	94	32	62	52	229	49	22	31
27	26	39	29	147	61	75	60	133	117	80	24	33
28	49	56	32	101	91	53	59	578	80	105	26	30
29	33	45	39	52	---	51	559	443	67	71	25	32
30	29	44	38	50	---	70	341	365	58	36	67	38
31	30	---	34	58	---	63	---	520	---	36	58	---
TOTAL	969	937	1162	1349	4414	1978	5397	7510	14843	3438	1001	1767
MEAN	31.3	31.2	37.5	43.5	158	63.8	180	242	495	111	32.3	58.9
MAX	71	56	74	147	451	120	875	899	5450	1180	67	245
MIN	23	24	29	29	38	32	43	49	58	33	22	30
CFSM	.20	.20	.23	.27	.99	.40	1.13	1.51	3.09	.69	.20	.37
IN.	.23	.22	.27	.31	1.03	.46	1.25	1.75	3.45	.80	.23	.41

CAL YR 1980 TOTAL 45267 MEAN 124 MAX 3360 MIN 23 CFSM .78 IN 10.52
WTR YR 1981 TOTAL 44765 MEAN 123 MAX 5450 MIN 22 CFSM .77 IN 10.41

04187500 OTTAWA RIVER AT ALLENTOWN, OH--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1969 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: March 1969 to current year.
pH: October 1977 to current year.
WATER TEMPERATURES: March 1969 to current year.
DISSOLVED OXYGEN: October 1977 to current year.

INSTRUMENTATION.--Water-quality monitor.

REMARKS.--Interruptions in the water-quality record were due to malfunction of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 2,810 micromhos Feb. 11, 1977; minimum, 171 micromhos Mar. 8, 1980.
pH: Maximum, 9.4 units Feb. 26, 1978; minimum, 6.6 units Dec. 5, 6, 1980.
WATER TEMPERATURES: Maximum recorded, 31.5°C June 29, 1970, July 15, 1976; minimum, 0.0°C on many days during winter periods.
DISSOLVED OXYGEN: Maximum recorded, ≥20.0 mg/L May 1, 3, 4, 1980, Aug. 1, 1981; minimum recorded, 0.4 mg/L Sept. 23, 1980.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 2,060 micromhos Jan. 23; minimum, 432 micromhos Feb. 17, May 15.
pH: Maximum, 9.1 units Mar. 22; minimum, 6.6 units Dec. 5, 6.
WATER TEMPERATURES: Maximum, 28.0°C Aug. 5; minimum, 0.0°C Feb. 4.
DISSOLVED OXYGEN: Maximum recorded, ≥20.0 mg/L Aug. 1, minimum recorded, 1.9 mg/L Oct. 18.

04187500 OTTAWA RIVER AT ALLENTOWN, OH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	1440	1260	1450	1370	1480	1430	1760	1680	1310	1040	1000	948
2	1450	1290	1490	1380	1440	1360	1780	1670	1120	993	1010	960
3	1390	1230	1480	1430	1420	1240	1780	1660	1310	1130	1080	978
4	1480	1190	1450	1330	1510	1400	1780	1680	1470	1270	1120	1040
5	1480	1190	1340	1300	1580	1490	1750	1630	1360	1210	1100	1040
6	1470	1400	1350	1270	1630	1560	1690	1640	1430	1230	1050	1020
7	1560	1420	1450	1330	1670	1450	1470	1460	1440	1260	1080	1010
8	1500	1350	1420	1360	1500	1310	1630	1480	1440	1300	1070	1030
9	1530	1360	1430	1360	1420	1130	1610	1520	1510	1410	1080	1030
10	1440	1390	1470	1420	1290	1080	1670	1550	1510	1290	1150	1060
11	1440	1370	1440	1370	1300	1180	1690	1570	---	---	1150	1060
12	1550	1410	1410	1340	1330	1210	1690	1550	---	---	1160	1090
13	1550	1420	1500	1430	1460	1280	1660	1540	---	---	1190	1090
14	1450	1380	1600	1450	1440	1210	1630	1540	---	---	1160	1120
15	1460	1320	1600	1320	1300	1240	1630	1530	---	---	1190	1110
16	1590	1470	1630	1360	1370	1280	1650	1510	1150	807	1240	1160
17	1540	1390	1610	1460	1480	1340	1640	1510	771	432	---	---
18	1470	1240	1460	1270	1580	1440	1650	1540	588	450	1310	1290
19	1340	1210	1360	1250	1620	1400	1630	1530	684	573	1400	1270
20	1390	1300	1560	1320	---	---	1680	1520	666	606	1410	1340
21	1410	1330	1540	1290	---	---	1780	1560	705	630	1430	1350
22	1510	1330	1470	1400	---	---	2000	1740	786	696	1440	1340
23	1450	1370	1510	1430	---	---	2060	1840	852	792	1430	1300
24	1480	1370	1480	1400	---	---	1920	1720	813	789	1380	1330
25	1450	1040	1390	1250	---	---	1820	1570	861	783	1510	1360
26	1220	1010	1390	1280	---	---	1680	1310	996	834	1400	1370
27	1330	1250	1510	1410	---	---	1300	1040	1210	978	1480	1200
28	1320	1030	1480	1170	---	---	1130	999	1290	966	1250	1200
29	1110	981	1420	1210	1540	1410	1420	1120	---	---	---	---
30	1310	1120	1430	1290	1450	1320	1490	1290	---	---	---	---
31	1460	1290	---	---	1750	1420	1470	1310	---	---	1260	1170
MONTH	1590	981	1630	1170	1750	1080	2060	999	1510	432	1510	948

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	1290	1150	783	717			---	---	1620	1110	1040	858
2	1230	1180	846	768			---	---	1200	1110	1280	1030
3	1230	1170	918	810			---	---	1310	1180	1150	645
4	1210	1080	975	891			---	---	1340	1210	696	618
5	1060	993	1210	996			---	---	1410	1200	846	675
6	1060	942	1210	615			---	---	1320	1190	1120	858
7	1130	1060	861	744			---	---	1210	987	1440	990
8	1180	1110	1160	870			---	---	1410	1150	1060	990
9	1360	1160	1220	918			---	---	1390	1200	1180	1000
10	1380	1290	996	924			---	---	1430	1310	1350	1180
11	1410	675	918	537			---	---	1430	1250	1370	1230
12	606	471	666	531			---	---	1320	1240	1360	1290
13	633	549	828	648			---	---	1460	1280	1480	1290
14	636	570	864	489			1370	1340	1460	1340	1450	987
15	741	588	513	432			1500	1360	1450	1320	960	615
16	915	744	666	576			1510	1360	1530	1420	1080	723
17	990	804	771	663			1430	1310	1520	1470	1340	1090
18	873	789	---	---			1420	1350	1520	1460	1530	897
19	1020	846	---	---			1440	1340	1550	1370	1140	894
20	1180	1030	1140	897			1430	645	1650	1430	972	900
21	1200	1130	1180	933			1000	744	---	---	1030	905
22	1240	1150	1160	963			1070	861	---	---	1040	960
23	1300	1240	1180	1120			1460	1030	---	---	1250	1010
24	1270	1150	1150	1090			1380	1000	---	---	1330	1250
25	1360	1240	1220	1140			1140	1070	---	---	1350	1270
26	1280	1110	1230	1160			1180	1110	1550	1510	1450	1330
27	1210	1120	---	---			1130	822	1590	1500	1480	1340
28	1360	1180	---	---			1120	912	1590	1380	1480	1380
29	1210	486	---	---			1060	894	1650	1490	1540	1410
30	711	513	---	---			1310	1040	1660	1120	1420	1180
31	---	---	---	---			1510	1330	1210	1020	---	---
MONTH	1410	471	1230	432			1510	645	1660	987	1540	615
YEAR	2060	432										

STREAMS TRIBUTARY TO LAKE ERIE

04187500 OTTAWA RIVER AT ALLENTOWN, OH--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.3	7.3	7.6	7.3	7.2	7.0	7.3	6.9	7.7	7.5	8.0	7.8
2	7.9	7.2	7.9	7.3	7.2	7.0	7.4	7.0	7.8	7.5	8.2	7.8
3	8.2	7.3	7.5	7.1	7.3	7.0	7.4	7.1	7.8	7.6	8.2	7.9
4	8.4	7.8	7.3	7.1	7.2	7.0	7.3	7.1	7.6	7.3	8.2	7.8
5	8.3	7.6	7.6	7.2	7.1	6.6	7.3	7.1	7.7	7.6	8.1	7.8
6	8.5	7.6	7.8	7.2	6.8	6.6	7.1	7.1	7.7	7.6	8.3	7.9
7	8.2	7.3	7.3	7.1	7.0	6.8	7.2	7.0	7.7	7.6	8.3	7.9
8	8.3	7.2	7.3	7.1	7.2	7.0	7.2	7.1	7.9	7.7	8.4	8.0
9	8.3	7.2	7.5	7.1	7.3	7.0	7.2	7.2	7.9	7.8	8.4	8.0
10	8.4	7.3	7.6	7.1	7.4	7.2	7.2	7.1	7.8	7.6	8.4	7.9
11	8.1	7.2	8.1	7.4	7.4	7.2	7.4	7.3	---	---	8.4	7.9
12	8.2	7.6	8.2	7.4	7.4	7.1	7.3	7.2	---	---	8.6	8.1
13	8.3	7.4	7.7	7.2	7.3	7.1	7.3	7.2	---	---	8.7	8.1
14	8.1	7.3	7.2	7.0	7.4	7.1	7.4	7.3	---	---	8.8	8.4
15	8.3	7.1	7.3	7.0	7.3	7.1	7.5	7.3	---	---	8.7	8.4
16	8.0	7.0	7.7	7.3	7.4	7.1	7.6	7.4	7.7	7.5	8.7	8.4
17	7.2	7.0	7.5	7.3	7.4	6.8	7.8	7.5	7.5	7.4	---	---
18	7.6	7.0	8.0	7.4	7.2	6.8	7.9	7.6	7.5	7.5	---	---
19	7.8	7.2	7.9	7.3	7.4	6.9	7.9	7.6	7.6	7.5	---	---
20	7.9	7.3	7.8	7.2	---	---	8.0	7.6	7.6	7.5	---	---
21	7.6	7.2	7.5	7.2	---	---	7.8	7.4	7.7	7.6	---	---
22	7.6	7.1	7.7	7.1	---	---	7.8	7.5	7.8	7.7	9.1	8.7
23	7.6	7.1	7.3	7.0	---	---	7.8	7.3	7.8	7.7	9.0	8.8
24	7.4	7.1	7.2	7.0	---	---	8.0	7.4	7.9	7.8	8.9	8.7
25	8.1	7.1	7.7	7.1	---	---	8.0	7.4	7.9	7.8	8.8	8.7
26	8.6	7.9	7.6	7.1	---	---	7.9	7.5	7.9	7.8	8.7	8.6
27	8.5	7.7	7.3	7.1	---	---	7.8	7.5	7.9	7.7	8.0	7.7
28	8.0	7.7	7.2	7.0	---	---	7.8	7.5	7.9	7.7	8.1	7.8
29	8.4	7.5	7.4	7.0	7.3	7.1	7.9	7.6	---	---	---	---
30	8.2	7.4	7.3	7.1	7.2	7.0	7.9	7.6	---	---	---	---
31	7.7	7.4	---	---	7.2	7.0	7.8	7.6	---	---	8.9	8.4
MONTH	8.6	7.0	8.2	7.0	7.4	6.6	8.0	6.9	7.9	7.3	9.1	7.7

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.9	8.1	8.0	7.9			---	---	8.9	7.3	7.5	7.4
2	8.8	8.4	8.2	7.9			---	---	8.9	7.8	7.5	7.4
3	8.6	8.1	8.2	7.9			---	---	8.4	7.7	7.7	7.3
4	8.3	7.8	8.2	7.9			---	---	8.6	7.4	7.7	7.5
5	8.4	7.7	8.1	7.9			---	---	8.7	7.5	7.7	7.5
6	8.7	8.1	8.2	7.9			---	---	8.1	7.4	7.6	7.4
7	8.6	7.9	8.3	7.8			---	---	8.1	7.3	7.7	7.4
8	8.6	7.8	8.2	7.7			---	---	7.9	7.3	7.8	7.3
9	8.8	7.9	7.8	7.7			---	---	8.0	7.3	8.0	7.4
10	8.6	8.0	7.9	7.7			---	---	8.1	7.2	7.9	7.4
11	8.2	7.6	8.1	7.8			---	---	8.1	7.2	8.0	7.4
12	7.8	7.6	8.2	7.8			---	---	8.6	7.2	8.2	7.4
13	7.9	7.7	8.0	7.8			---	---	8.8	7.3	8.3	7.4
14	7.8	7.6	8.0	7.8			8.3	7.5	8.7	7.4	7.7	7.4
15	8.3	7.7	7.9	7.8			8.2	7.3	7.7	7.3	8.1	7.4
16	8.2	7.7	7.9	7.5			8.6	7.3	8.4	7.2	7.8	7.5
17	7.7	7.6	7.7	7.5			8.8	7.4	8.6	7.3	7.9	7.5
18	7.9	7.6	---	---			8.9	7.9	8.7	7.3	7.8	7.5
19	8.0	7.8	---	---			8.4	7.5	8.8	7.7	8.0	7.6
20	8.2	7.8	8.4	7.9			7.5	7.3	8.7	7.4	7.9	7.5
21	8.3	7.8	8.3	7.9			8.1	7.2	---	---	8.1	7.5
22	8.0	7.7	8.1	7.7			8.3	7.4	---	---	8.0	7.5
23	8.1	7.6	8.0	7.7			8.4	7.5	---	---	8.3	7.6
24	8.5	8.0	8.1	7.7			8.5	7.4	---	---	8.2	7.5
25	8.6	8.0	8.2	7.8			8.6	7.6	---	---	7.9	7.4
26	8.5	8.1	8.1	7.7			8.3	7.5	8.8	7.9	8.0	7.4
27	8.2	7.8	---	---			7.6	7.3	8.3	7.4	7.8	7.3
28	8.2	7.8	---	---			7.6	7.3	8.2	7.3	8.0	7.4
29	8.3	7.9	---	---			8.1	7.4	8.0	7.3	7.8	7.4
30	8.3	7.9	---	---			8.4	7.5	7.7	7.3	7.8	7.3
31	---	---	---	---			8.6	7.4	7.5	7.3	---	---
MONTH	8.9	7.6	8.4	7.5			8.9	7.2	8.9	7.2	8.3	7.3
YEAR	9.1	6.6										

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

04187500 OTTAWA RIVER AT ALLENTOWN, OH--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	21.0	18.0	10.5	8.5	8.5	6.0	4.5	3.5	3.5	2.5	6.0	5.5
2	19.5	17.5	9.5	7.0	9.0	5.5	3.5	2.0	3.5	.5	6.5	4.5
3	17.5	14.5	12.0	8.5	5.5	3.5	2.0	.5	.5	.5	6.0	3.0
4	14.5	13.5	11.5	10.5	5.0	2.5	.5	.5	.5	.0	5.5	4.5
5	14.0	12.0	10.0	8.5	7.5	5.0	.5	.5	.5	.5	5.5	4.5
6	14.0	11.0	9.5	7.0	10.5	7.5	.5	.5	.5	.5	5.0	3.0
7	16.0	12.5	11.5	8.5	12.0	10.5	.5	.5	.5	.5	4.0	2.5
8	17.0	14.0	11.5	10.5	12.5	11.0	.5	.5	.5	.5	5.0	3.5
9	17.5	15.5	13.0	10.0	11.0	8.5	.5	.5	1.0	.5	6.5	4.0
10	17.0	13.5	11.5	8.5	8.5	6.0	.5	.5	2.5	.5	7.0	5.0
11	16.0	13.0	8.0	6.0	6.0	4.5	.5	.5	---	---	6.0	5.0
12	13.0	11.0	7.0	4.5	7.0	5.0	.5	.5	---	---	9.0	4.0
13	12.0	9.5	9.0	6.0	6.5	4.5	.5	.5	---	---	8.5	6.0
14	12.5	10.5	9.5	9.0	4.5	3.5	.5	.5	---	---	8.0	4.0
15	15.5	12.5	9.0	7.5	4.5	3.5	.5	.5	---	---	9.0	5.5
16	17.0	15.0	8.0	6.5	5.0	3.5	.5	.5	5.0	3.0	8.0	6.0
17	16.5	16.0	6.5	5.0	4.0	2.0	.5	.5	3.0	2.0	---	---
18	16.5	15.0	6.5	4.5	5.0	3.0	.5	.5	3.5	2.0	7.0	5.0
19	14.5	11.5	6.5	4.5	4.5	1.0	1.5	.5	5.5	2.5	5.0	3.5
20	12.5	11.0	6.5	4.5	---	---	4.5	1.5	6.0	5.0	5.0	3.5
21	13.5	11.5	6.5	5.0	---	---	5.0	4.5	6.0	5.0	8.0	4.5
22	13.5	11.5	6.5	4.0	---	---	4.5	3.5	6.0	5.0	8.5	5.5
23	12.5	10.5	7.0	5.5	---	---	5.0	3.5	6.5	5.5	9.0	5.5
24	12.5	10.5	8.0	7.0	---	---	5.5	3.0	5.5	5.0	10.0	7.0
25	12.0	10.0	7.5	5.5	---	---	6.5	4.0	7.0	4.5	10.5	7.5
26	9.5	7.0	5.5	3.5	---	---	6.5	5.5	6.0	4.0	10.0	9.0
27	8.0	6.5	5.5	3.5	---	---	5.5	3.5	5.5	4.0	10.5	9.5
28	9.0	7.5	6.5	5.0	---	---	3.5	3.0	7.5	5.5	9.0	7.5
29	9.0	6.5	5.0	4.0	3.5	2.5	2.5	1.5	---	---	---	---
30	9.0	6.0	6.5	4.0	4.0	3.5	2.5	1.0	---	---	---	---
31	10.0	7.0	---	---	3.5	2.5	3.0	.5	---	---	16.5	15.5
MONTH	21.0	6.0	13.0	3.5	12.5	1.0	6.5	.5	7.5	.0	16.5	2.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	15.5	13.5	13.5	12.5			---	---	26.0	22.5	24.5	23.0
2	15.5	11.0	14.5	11.5			---	---	27.0	23.5	24.5	23.5
3	14.5	12.5	16.5	11.5			---	---	25.5	24.5	24.0	23.0
4	14.0	13.5	18.0	13.5			---	---	27.0	24.0	23.0	22.0
5	13.5	9.5	17.5	16.5			---	---	28.0	26.0	22.5	21.0
6	12.5	8.0	16.0	13.0			---	---	26.5	25.0	22.5	21.5
7	13.5	9.0	15.5	11.5			---	---	27.0	24.0	24.0	21.0
8	15.0	11.5	17.0	11.5			---	---	26.0	24.5	23.0	21.5
9	16.0	13.0	16.0	15.0			---	---	26.5	23.5	22.0	19.5
10	14.0	12.0	15.5	14.5			---	---	27.0	24.0	22.5	19.0
11	15.5	14.0	15.0	12.5			---	---	26.5	24.5	24.0	21.0
12	14.5	12.0	14.0	11.0			---	---	26.0	23.0	25.0	22.0
13	11.5	10.5	13.0	12.0			---	---	26.0	23.0	25.5	23.0
14	13.0	11.0	13.0	11.0			---	---	26.5	24.5	24.0	23.5
15	13.5	10.5	11.0	10.5			25.5	24.0	25.0	24.0	23.0	21.0
16	13.5	10.5	14.5	10.0			26.0	23.0	24.5	23.0	20.5	19.0
17	15.5	12.5	16.5	12.5			27.0	23.5	24.0	20.5	18.5	17.5
18	17.0	13.5	---	---			27.5	24.0	23.5	19.5	17.5	16.5
19	15.5	13.0	---	---			26.5	24.5	24.5	20.5	19.0	16.0
20	15.0	11.5	18.0	12.0			25.0	23.5	24.0	20.5	19.0	17.0
21	14.5	10.0	20.0	14.0			25.5	23.0	---	---	20.0	17.5
22	13.0	11.5	21.5	16.0			25.0	22.5	---	---	19.5	17.0
23	17.5	13.0	20.5	18.5			23.5	21.0	---	---	17.5	15.5
24	15.0	10.0	21.5	18.5			25.0	21.0	---	---	18.0	15.0
25	12.0	8.5	24.0	19.5			25.5	22.5	---	---	18.5	17.0
26	12.5	10.0	22.0	20.0			25.5	24.0	25.5	23.0	21.0	17.5
27	17.5	12.0	---	---			24.5	23.0	24.5	22.5	21.5	19.0
28	20.0	15.5	---	---			24.0	23.0	25.0	23.0	19.0	17.0
29	18.0	13.0	---	---			23.0	21.5	25.5	23.5	17.0	15.5
30	13.5	12.0	---	---			24.0	20.0	25.5	23.0	19.0	16.5
31	---	---	---	---			25.0	21.5	25.0	24.0	---	---
MONTH	20.0	8.0	24.0	10.0			27.5	20.0	28.0	19.5	25.5	15.0
YEAR	28.0	.0										

STREAMS TRIBUTARY TO LAKE ERIE

04187500 OTTAWA RIVER AT ALLENTOWN, OH--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	13.0	3.0	8.5	4.9	8.2	5.6	13.2	7.7	11.7	10.3	12.7	11.1
2	10.4	2.6	8.6	5.6	8.1	5.0	14.8	7.9	13.2	10.2	14.7	11.1
3	10.0	2.5	8.2	5.1	10.3	6.0	14.8	9.6	12.3	10.3	14.5	12.2
4	10.6	2.7	6.9	4.2	9.4	6.7	13.3	10.4	12.5	10.2	13.3	11.2
5	11.5	3.3	8.9	4.8	7.1	5.0	13.1	10.7	12.8	11.1	13.6	10.8
6	14.1	3.8	9.8	5.6	7.4	4.2	11.1	9.9	12.7	11.3	15.2	11.6
7	13.8	4.0	8.1	4.9	5.8	3.8	9.9	8.9	11.7	10.8	15.7	11.8
8	13.9	3.3	7.2	4.1	6.2	3.5	9.6	8.6	12.6	10.1	16.0	11.9
9	13.8	2.6	9.0	4.6	6.6	3.7	10.1	8.7	13.4	11.6	15.9	11.8
10	14.6	2.8	10.2	4.7	10.2	6.2	9.7	8.3	12.7	11.0	15.8	10.8
11	11.0	2.5	11.6	6.3	10.7	7.6	9.6	8.2	---	---	16.2	10.6
12	10.5	2.9	12.0	7.5	12.0	8.4	9.6	8.4	---	---	17.4	11.0
13	11.7	3.8	---	---	12.0	7.5	9.7	8.4	---	---	17.7	10.0
14	12.3	3.5	---	---	13.5	8.1	9.3	8.0	---	---	17.9	10.9
15	14.0	3.3	---	---	12.1	7.9	9.8	7.9	---	---	17.6	10.8
16	12.5	2.4	---	---	13.8	8.5	10.0	7.9	11.8	10.7	15.4	10.0
17	6.0	2.1	---	---	14.1	8.6	11.5	9.0	12.5	11.2	---	---
18	6.5	1.9	---	---	12.8	9.2	11.6	9.3	12.2	11.3	16.6	13.8
19	6.5	2.6	---	---	14.5	8.0	11.9	9.1	12.2	11.2	16.8	10.3
20	8.4	3.3	---	---	---	---	11.8	8.1	11.9	11.2	16.6	10.8
21	8.6	3.1	---	---	---	---	11.5	6.8	11.9	11.5	15.7	9.9
22	9.0	3.3	---	---	---	---	12.4	6.9	11.8	11.2	17.1	10.1
23	9.2	3.6	---	---	---	---	12.3	7.3	11.8	11.0	15.1	10.1
24	8.3	3.5	---	---	---	---	12.2	7.4	12.0	11.4	14.7	9.3
25	5.3	3.4	---	---	---	---	12.2	6.7	12.9	11.6	13.9	8.5
26	7.3	4.7	10.4	6.6	---	---	9.7	6.2	13.0	11.8	12.3	8.0
27	8.6	5.8	8.6	6.2	---	---	11.6	8.6	13.1	11.4	10.1	6.5
28	7.4	5.7	7.4	5.7	---	---	11.8	10.2	11.8	10.3	9.0	7.7
29	8.3	5.6	9.8	6.4	12.4	10.4	13.0	10.1	---	---	---	---
30	8.4	6.3	9.8	6.4	13.0	8.6	12.4	9.7	---	---	---	---
31	8.0	5.7	---	---	12.1	8.4	12.2	10.7	---	---	15.7	8.9
MONTH	14.6	1.9	12.0	4.1	14.5	3.5	14.8	6.2	13.4	10.1	17.9	6.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	15.7	5.7	7.1	6.9			---	---	20.0	4.9		
2	16.2	7.0	7.5	7.0			---	---	19.8	6.7		
3	13.2	6.3	8.4	6.6			---	---	14.2	6.3		
4	11.2	5.9	7.8	6.1			---	---	16.7	4.8		
5	10.5	6.5	6.5	4.5			---	---	---	---		
6	14.1	8.3	8.0	5.4			---	---	---	---		
7	14.5	8.0	7.8	6.3			---	---	---	---		
8	14.6	6.5	7.9	5.2			---	---	---	---		
9	14.7	6.0	6.0	4.1			---	---	---	---		
10	14.5	6.0	7.0	4.9			---	---	---	---		
11	9.4	4.5	8.4	5.7			---	---	---	---		
12	8.8	5.8	8.7	8.0			---	---	---	---		
13	9.4	8.6	8.6	7.4			---	---	---	---		
14	9.2	8.2	8.1	6.6			11.2	5.7	---	---		
15	9.5	8.3	8.1	6.7			12.9	3.7	---	---		
16	8.5	6.8	---	---			17.2	4.3	---	---		
17	7.0	6.3	---	---			18.5	4.8	---	---		
18	7.5	6.4	---	---			19.7	6.3	---	---		
19	7.0	6.1	---	---			11.3	5.3	---	---		
20	7.4	5.9	8.5	6.6			6.3	4.7	---	---		
21	7.3	5.9	7.6	6.4			11.8	4.5	---	---		
22	7.3	5.7	7.1	5.2			13.1	5.3	---	---		
23	8.0	5.5	6.2	4.6			14.6	5.4	---	---		
24	7.7	5.2	6.3	4.3			15.3	5.5	---	---		
25	8.9	7.2	5.5	4.0			17.7	6.5	---	---		
26	9.9	7.5	5.0	3.4			13.3	6.6	---	---		
27	8.7	5.7	---	---			7.6	4.7	---	---		
28	8.0	4.4	---	---			7.5	4.1	---	---		
29	8.0	4.7	---	---			11.6	4.7	---	---		
30	7.9	7.1	---	---			14.8	4.1	---	---		
31	---	---	---	---			17.4	5.5	---	---		
MONTH	16.2	4.4	8.7	3.4			19.7	3.7	20.0	4.8		
YEAR	20.0	1.9										

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

04189000 BLANCHARD RIVER NEAR FINDLAY, OH

LOCATION.--Lat 41°03'21", long 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 (3 km) west of Findlay, 3 mi (5 km) downstream from Eagle Creek, and 3 mi (5 km) upstream from Aurand Run.

DRAINAGE AREA.--346 mi² (896 km²).

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.

GAGE.--Water-stage recorder. Datum of gage is 754.55 ft (229.987 m) National Geodetic Vertical Datum of 1929. Prior to July 24, 1930, nonrecording gage at same site and datum.

REMARKS.--Records good except for winter periods which are fair. 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. No releases have been made for low-flow augmentation. Sediment data collected at this site 1970-74. Water-quality data collected at this site 1968 to 1980.

AVERAGE DISCHARGE.--53 years, 249 ft³/s (7.063 m³/s), 9.77 in/yr (248 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,000 ft³/s (368 m³/s) June 14, 1981, gage height, 17.43 ft (5.313 m) from measurement made on peak; minimum daily, 0.4 ft³/s (0.011 m³/s) Aug. 27, Sept. 3, 1934.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a stage of 18.5 ft (5.64 m); discharge, 22,000 ft³/s (623 m³/s), from rating curve extended above 10,000 ft³/s (283 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,400 ft³/s (68.0 m³/s) and maximums (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Apr. 14	1330	2480	70.2	7.37	2.246	June 22	1430	3420	96.8	9.04	2.755
June 10	0630	4300	122	10.34	3.152	Sept. 2	----	6800	193	---	---
June 14	1800	*13000	368	*17.43	5.313	Sept. 19	----	3700	105	---	---

Minimum daily discharge, 17 ft³/s (0.48 m³/s) Aug. 23.

REVISIONS.--The peak discharge and annual maximum (*) for water years 1959 and 1975 and discharge for Jan. 22, 1959 have been revised as shown in the following table. They supersede figures published in WSR 1627, 1727 and in the Annual report for 1975.

Water year	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Water year	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
1959	Jan. 22, 1959	1000	11300	320	16.11	4.910	1975	Feb. 24, 1975	2330	*8860	251	*14.28	4.352
1959	Feb. 11, 1959	0100	*12100	343	*16.76	5.108							

Jan. 22, 1959 ..... 10600.

Month	Total	Mean	Max	Min	CFSM	In
January 1959	35,206	1136	10,600	34	3.28	3.79
Wtr Yr 1959	139,746	383	10,600	7.6	1.11	15.02

04189000 BLANCHARD RIVER NEAR FINDLAY, OH--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	32	38	39	178	248	86	448	141	147	47	5800
2	33	31	39	37	217	218	78	291	121	313	38	5600
3	28	30	38	34	170	173	78	200	123	183	70	3400
4	27	30	37	32	112	147	92	152	109	131	60	2000
5	25	30	37	30	71	139	97	131	127	109	42	1100
6	26	29	35	29	54	136	63	147	113	94	38	680
7	27	29	48	28	43	126	46	146	86	81	36	420
8	27	27	48	27	38	107	45	164	108	72	32	270
9	28	27	85	27	32	91	72	128	2680	65	29	190
10	27	27	131	27	68	85	67	131	3910	60	28	146
11	25	27	142	27	921	85	74	1000	2220	56	44	116
12	24	25	115	27	805	80	380	1160	670	48	32	94
13	24	23	89	27	504	76	843	742	2600	47	53	80
14	26	26	67	27	271	67	2260	457	12000	46	42	78
15	25	26	62	27	205	58	1320	983	8650	42	32	108
16	25	25	59	27	421	60	592	1200	4000	40	27	620
17	27	25	48	27	1110	57	419	813	986	40	25	250
18	34	29	42	27	1160	45	365	407	472	38	23	1300
19	26	28	38	28	1170	47	338	291	339	38	22	3100
20	25	26	35	29	1510	45	263	207	266	79	21	700
21	24	25	33	30	1010	45	196	157	333	99	19	300
22	25	24	31	30	674	60	166	128	2870	190	19	200
23	26	23	30	31	822	61	166	105	1540	132	17	131
24	28	27	29	33	810	60	153	88	541	73	18	104
25	41	28	28	37	560	55	129	76	1670	51	18	88
26	28	26	28	72	401	59	100	68	714	63	18	84
27	27	36	27	376	302	108	87	142	372	88	19	82
28	42	34	27	510	269	116	130	214	254	108	19	62
29	34	36	31	371	---	103	656	213	194	75	51	56
30	35	37	41	234	---	105	746	214	158	62	290	70
31	34	---	40	164	---	99	---	203	---	62	1500	---
TOTAL	881	848	1578	2471	13908	2961	10107	10806	48367	2732	2729	27229
MEAN	28.4	28.3	50.9	79.7	497	95.5	337	349	1612	88.1	88.0	908
MAX	42	37	142	510	1510	248	2260	1200	12000	313	1500	5800
MIN	24	23	27	27	32	45	45	68	86	38	17	56
CFSM	.08	.08	.15	.23	1.44	.28	.97	1.01	4.66	.26	.25	2.62
IN.	.09	.09	.17	.27	1.50	.32	1.09	1.16	5.20	.29	.29	2.93

CAL YR 1980 TOTAL 98523 MEAN 269 MAX 4450 MIN 23 CFSM .78 IN 10.59
WTR YR 1981 TOTAL 124617 MEAN 341 MAX 12000 MIN 17 CFSM .99 IN 13.40

04191500 AUGLAIZE RIVER NEAR DEFIANCE, OH

LOCATION.--Lat 41°14'15", long 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 (38 m) downstream from dam of Toledo Edison Co., 0.2 mi (0.3 km) upstream from Jackson ditch, and 3 mi (5 km) south of Defiance.

DRAINAGE AREA.--2,318 mi² (6,004 km²).

PERIOD OF RECORD.--May to August 1903 (gage heights only), April 1915 to current year. Monthly discharge 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 (201.077 m) National Geodetic Vertical Datum of 1929. May 20 to Aug. 8, 1903, nonrecording gage at site 1.8 mi (2.9 km) downstream at different datum. April 13, 1915, to Dec. 6, 1933, nonrecording gage near right bank on upstream side of dam at datum 6.00 ft (1.829 m) higher, and auxiliary tailwater staff gage near right bank on downstream side of dam at present datum.

REMARKS.--Records good except those for winter periods and those for periods of missing record, Mar. 14 to Apr. 23, which are fair. Flow regulated by dam at former powerplant 125 ft (38 m) upstream from station; reservoir capacity, 9,800 acre-ft (12.1 hm³), operation of plant discontinued Jan. 10, 1963; occasional gate operation subsequently. Some diversion by Miami and Erie Canal from Grand Lake into Jennings Creek, tributary to Auglaize River 70 mi (113 km) upstream from station. Water-quality data collected at this site 1966 to 1977.

AVERAGE DISCHARGE.--66 years, 1,703 ft³/s (48.23 m³/s)

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 52,500 ft³/s (1,490 m³/s) Feb. 16, 1950, Feb. 12, 1959, gage height, 26.4 ft (8.05 m), from graph based on hourly powerplant tailwater-gage readings, respectively; maximum gage height, 27.65 ft (8.428 m) Feb. 13, 1959, from flood mark (ice jam); minimum daily discharge, 0.5 ft³/s (0.014 m³/s) Oct. 13, 14, 1952, during repairs to powerplant dam.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a stage of 38.8 ft (11.83 m), from reading on powerplant tailwater gage at present datum; discharge, 120,000 ft³/s (3,400 m³/s), from rating curve extended above 51,000 ft³/s (1,440 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 47,300 ft³/s (1,340 m³/s) June 15, gage height, 25.91 ft (7.897 m); minimum daily, 25 ft³/s (0.71 m³/s) Oct. 19, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	154	28	153	135	1080	1060	400	753	126	4020	256	682
2	1480	29	180	136	970	928	370	826	147	4780	214	2830
3	490	52	155	135	840	1140	340	970	158	2850	198	4790
4	39	69	153	136	720	957	390	889	180	1860	192	10300
5	39	74	152	136	610	833	440	1170	206	1160	153	7420
6	39	103	150	134	540	802	470	1310	228	812	153	4810
7	36	93	168	108	490	736	350	2550	255	629	170	3650
8	122	80	238	105	420	694	290	2910	281	498	167	1190
9	28	94	474	102	360	640	250	2080	300	389	152	833
10	28	76	565	100	300	580	280	1480	324	320	153	689
11	27	88	551	98	600	540	420	2830	350	285	158	490
12	27	91	534	98	1880	512	860	3710	375	258	144	369
13	28	96	477	96	2390	438	4000	3880	390	220	128	314
14	28	85	404	96	2420	470	8000	3900	453	193	117	255
15	29	91	324	95	2410	450	7200	9200	35000	200	111	218
16	28	96	269	95	2390	410	6000	11100	30000	180	87	259
17	28	98	227	96	3610	380	4300	8020	25000	169	93	497
18	26	98	215	96	6650	360	3000	4520	16000	158	88	642
19	25	102	185	98	8350	350	2200	2700	8200	153	78	616
20	25	103	158	100	10800	330	1600	1440	5400	158	73	687
21	26	101	148	108	11500	320	1300	1120	4200	208	71	939
22	26	94	142	114	6950	305	1050	1030	3500	459	69	792
23	26	95	132	120	5070	295	935	871	3000	575	69	556
24	26	96	135	130	5230	280	864	782	3400	499	62	378
25	26	97	129	139	3770	270	782	712	4170	398	56	292
26	26	98	129	162	3130	265	699	656	6690	327	57	261
27	27	117	128	250	2410	290	616	630	6440	238	63	225
28	28	138	125	575	1860	310	579	824	3160	254	76	179
29	28	140	123	1120	---	340	621	1090	1030	251	74	183
30	28	164	119	1360	---	370	695	615	873	291	78	209
31	30	---	126	1330	---	420	---	109	---	287	589	---
TOTAL	3023	2786	7168	7603	87750	16075	49301	74677	159836	23079	4149	45555
MEAN	97.5	92.9	231	245	3134	519	1643	2409	5328	744	134	1519
MAX	1480	164	565	1360	11500	1140	8000	11100	35000	4780	589	10300
MIN	25	28	119	95	300	265	250	109	126	153	56	179

CAL YR 1980 TOTAL 580360 MEAN 1586 MAX 28100 MIN 25
WTR YR 1981 TOTAL 481002 MEAN 1318 MAX 35000 MIN 25

04192500 MAUMEE RIVER NEAR DEFIANCE, OH

LOCATION.--Lat 41°17'30", long 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. (12 m) upstream from Independence Dam, 4 mi (6 km) downstream from mouth of Auglaize River, and 4.5 mi (7.2 km) east of Defiance.

DRAINAGE AREA.--5,545 mi² (14,362 km²).

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 (200.729 m), National Geodetic Vertical Datum of 1929. Prior to Nov. 13, 1924, nonrecording gage at same site and datum.

REMARKS.--Records fair. Flow affected by occasional regulation by Toledo Edison Co. dam on Auglaize River, 7 mi (11 km) upstream. Operation of hydroelectric plant there discontinued Jan. 10, 1963. Low flow slightly regulated by powerplant at Ft. Wayne, Indiana. Slight diversion 275 ft (83.8 m) upstream into Miami and Erie Canal through a 24 in (610 mm) conduit which bypasses station.

AVERAGE DISCHARGE.--49 years, 4,110 ft³/s (116.4 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 87,100 ft³/s (2,470 m³/s) Feb. 16, 1950, gage height, 13.70 ft (4.176 m); maximum gage height, 13.77 ft (4.197 m) Feb. 11, 1959 (ice jam); minimum discharge, 2 ft³/s (0.057 m³/s) Sept. 3, 1925; minimum gage height, 1.09 ft (0.332 m) Sept. 26, 1928.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 23,000 ft³/s (651 m³/s) and maximums (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 21	0600	35200	997	7.11	2.167	June 15	2400	*76500	2170	*12.35	3.764
Apr. 15	1000	29100	824	6.44	1.963	June 22	1300	24700	700	5.92	1.804
May 16	0800	25600	725	6.04	1.841	Sept. 4	1300	24800	702	5.94	1.811
June 10	0800	24700	700	5.93	1.807						

Minimum daily discharge, 319 ft³/s (9.03 m³/s) Oct. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	626	617	680	716	2000	9770	1240	12300	6510	8290	3660	1820
2	1900	622	740	705	2510	7830	1150	11000	5140	10500	3760	3980
3	1420	657	700	696	3010	7080	1150	10200	3500	7770	3820	9030
4	453	662	820	689	2450	5850	1210	8880	3140	4560	3510	22900
5	471	623	940	739	1840	4810	1220	7190	3000	3540	2680	21400
6	416	626	1050	823	1550	4230	1280	7060	4270	2690	2200	16700
7	402	606	1200	796	1360	3780	1370	8010	3740	2350	1710	12200
8	456	576	1800	743	1220	3210	1320	7990	5340	1910	1540	7220
9	422	577	3000	743	1070	2930	1180	6260	13700	1640	1340	5240
10	521	537	5600	728	1010	2570	1190	4950	23500	1470	1230	4140
11	347	543	5290	697	2090	2300	1490	8480	22900	1130	1110	2810
12	319	529	4540	655	3060	2180	2200	9080	19200	858	961	1970
13	340	522	3940	646	4180	2060	6290	8920	21100	947	882	1720
14	337	518	3420	616	4460	1910	20000	9290	47900	865	781	1360
15	353	517	2930	593	4090	1820	28500	19500	69900	862	758	1140
16	352	522	2430	580	5150	1610	23400	25200	72700	828	644	1050
17	365	542	1850	570	11700	1530	18200	21300	55700	750	669	1250
18	383	547	1670	562	18000	1450	14100	15300	34900	769	667	1600
19	411	521	1230	562	24400	1390	11500	10900	22800	737	590	1740
20	452	508	773	562	30900	1320	8780	8080	17100	724	529	1790
21	384	500	822	562	33600	1250	7200	5990	13900	1130	523	2050
22	363	500	736	562	26200	1150	5800	4760	20000	2080	515	1890
23	351	500	860	595	22400	1090	4750	3650	21300	2200	530	1570
24	745	500	888	604	22400	1060	3940	3030	15900	3050	438	1330
25	554	500	758	598	20500	999	3140	2610	17300	3560	388	1140
26	449	500	720	727	17900	957	3230	2330	18700	3400	413	1090
27	514	510	736	939	14400	951	3090	2260	18600	2540	411	1070
28	525	520	639	1580	11700	952	3360	2470	14400	2340	427	1090
29	542	540	648	2460	---	1030	7720	4980	9120	2560	408	1290
30	641	580	716	2920	---	1090	11400	5080	5820	3070	433	1390
31	625	---	716	2530	---	1110	---	4140	---	3370	936	---
TOTAL	16439	16522	52842	27498	295150	81269	200400	261190	611080	82490	38463	134970
MEAN	530	551	1705	887	10540	2622	6680	8425	20370	2661	1241	4499
MAX	1900	662	5600	2920	33600	9770	28500	25200	72700	10500	3820	22900
MIN	319	500	639	562	1010	951	1150	2260	3000	724	388	1050

CAL YR 1980 TOTAL 1647973 MEAN 4503 MAX 43100 MIN 319
WTR YR 1981 TOTAL 1818313 MEAN 4982 MAX 72700 MIN 319

04193490 MAUMEE RIVER NEAR WATERVILLE, OH

LOCATION.--Lat 41°28'34", long 83°44'20", Lucas County, Hydrologic Unit 04100009, in Bowling Green water-treatment plant, 2.0 mi (3.2 km) upstream from discharge station at Waterville.

DRAINAGE AREA.--6,313 mi² (16,351 km²).

PERIOD OF RECORD.--Water years 1950 to 1976 (published as Maumee River at Waterville). 1976 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: May 1963 to current year.
pH: May 1963 to current year.
WATER TEMPERATURES: March 1950 to current year.
DISSOLVED OXYGEN: May 1963 to current year.

INSTRUMENTATION.--Water-quality monitor since May 1963. Prior to June 1974 water-quality monitor located in water-treatment plant 2,500 ft (762 m) upstream from discharge station. Prior to May 1963 alcohol-actuated thermograph located at discharge station.

REMARKS.--Interruptions in the water-quality record were due to malfunction of the instrument. Prior to October 1976, records published as 04193500, Maumee River at Waterville, Ohio. See records of daily discharge for gaging station at Waterville (04193500).

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 1,260 micromhos Feb. 16, 1977; minimum, 213 micromhos Jan. 30, 1952.
pH: Maximum, 11.4 units Jan. 16, 1965; minimum, 5.0 units Nov. 24, 1968.
WATER TEMPERATURES: Maximum, 34.0°C July 1, 1953; minimum, 0.0°C on many days during winter periods.
DISSOLVED OXYGEN: Maximum, ≥20.0 mg/L Nov. 18-21, 1980, Mar. 27-29, 1981; minimum, 0.3 mg/L Nov. 10, 1965.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 1010 micromhos Jan. 29; minimum, 270 micromhos June 15.
pH: Maximum recorded, 9.1 units Nov. 2; minimum recorded, 7.1 units Sept. 3.
WATER TEMPERATURES: Maximum, 29.5°C July 8; minimum, 0.0°C on many days during winter periods.
DISSOLVED OXYGEN: Maximum recorded, ≥20.0 mg/L Mar. 27, 28, 29; minimum recorded, 4.4 mg/L Aug. 26.

04193490 MAUMEE RIVER NEAR WATERVILLE, OH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	624	594	699	690	837	819	789	774	906	879	576	561
2	624	609	699	690	864	840	786	783	900	846	579	573
3	609	588	717	699	867	855	---	---	930	903	588	570
4	603	597	711	705	867	855	---	---	909	879	594	567
5	606	600	711	705	879	870	---	---	885	858	621	594
6	603	594	720	708	876	867	---	---	858	828	636	621
7	603	591	729	720	870	861	876	867	825	807	639	612
8	606	600	726	720	879	870	867	858	813	795	639	630
9	609	603	735	726	888	846	876	864	828	804	---	---
10	615	594	738	726	843	810	894	876	816	804	660	651
11	612	600	744	738	813	711	918	888	801	588	669	657
12	612	600	747	741	705	672	906	897	627	534	672	669
13	603	582	759	744	729	699	912	900	624	555	690	666
14	582	567	759	747	732	714	918	909	681	621	696	669
15	570	564	759	750	735	717	921	906	672	639	693	681
16	570	558	759	753	720	711	918	906	633	429	684	675
17	567	552	768	756	723	717	915	906	429	390	690	675
18	588	567	771	765	720	714	921	915	---	---	693	678
19	597	588	777	771	741	720	942	924	---	---	693	684
20	603	594	780	771	759	741	957	939	363	345	702	678
21	618	603	780	768	771	756	948	930	408	363	696	681
22	642	618	777	771	774	759	939	918	459	408	---	---
23	672	636	777	774	762	753	945	924	495	462	---	---
24	669	654	792	780	753	738	960	939	498	483	---	---
25	687	669	798	792	756	738	978	957	510	495	---	---
26	693	687	798	795	765	744	987	966	519	507	---	---
27	693	687	804	792	762	750	987	969	543	522	594	588
28	696	681	819	795	762	750	975	960	561	543	594	585
29	687	675	822	807	768	756	1010	939	---	---	609	585
30	687	678	825	813	768	762	933	909	---	---	633	603
31	696	687	---	---	777	762	924	885	---	---	651	630
MONTH	696	552	825	690	888	672	1010	774	930	345	702	561

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	672	633	603	531	732	699	414	399	537	513	579	501
2	675	663	642	576	735	705	489	402	---	---	522	510
3	693	513	576	537	708	699	537	462	---	---	546	510
4	711	690	564	543	699	669	459	423	---	---	681	372
5	708	699	570	564	672	669	477	423	489	477	366	321
6	720	702	---	---	687	666	483	462	480	468	375	321
7	762	690	---	---	690	654	462	438	474	468	408	381
8	717	705	567	564	660	642	435	420	477	474	408	378
9	723	711	603	567	642	399	444	429	480	477	393	381
10	738	723	618	603	438	372	465	447	486	480	495	393
11	768	735	651	618	465	432	486	465	486	483	432	414
12	777	765	642	636	489	465	504	486	489	486	447	435
13	774	762	633	618	483	372	519	507	495	486	462	447
14	771	705	651	633	384	291	537	519	507	492	465	462
15	687	537	663	576	288	270	546	528	522	507	468	459
16	549	531	570	507	279	273	558	546	528	522	480	468
17	564	552	513	501	309	279	567	558	537	528	492	480
18	576	555	534	513	354	312	576	567	543	534	510	492
19	582	576	555	537	381	354	579	570	549	540	531	510
20	594	582	573	555	399	384	582	573	555	546	555	531
21	606	573	579	573	417	399	585	576	561	552	558	549
22	612	600	585	576	423	342	597	579	567	558	---	---
23	618	603	588	582	405	339	624	600	570	555	---	---
24	621	609	---	---	420	405	645	627	576	564	---	---
25	630	615	---	---	441	369	645	588	573	561	---	---
26	639	630	---	---	378	357	681	600	564	525	---	---
27	648	630	---	---	453	372	687	612	555	507	---	---
28	657	642	---	---	450	405	606	549	534	507	---	---
29	678	642	---	---	405	390	609	555	543	519	---	---
30	633	561	684	666	402	393	645	612	555	543	---	---
31	---	---	696	687	---	---	618	528	555	504	---	---
MONTH	777	513	696	501	735	270	687	399	576	468	681	321
YEAR	1010	270										

04193490 MAUMEE RIVER NEAR WATERVILLE, OH--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.5	8.3	9.0	8.9	8.7	8.6	8.1	7.9	7.8	7.7	8.1	8.1
2	8.6	8.4	9.1	8.9	8.6	8.5	8.1	8.0	7.8	7.7	8.2	8.1
3	8.6	8.4	8.9	8.8	8.5	8.4	---	---	7.8	7.6	8.2	8.2
4	8.5	8.3	8.9	8.8	8.5	8.4	---	---	7.6	7.6	8.2	7.9
5	8.5	8.3	9.0	8.8	8.7	8.4	---	---	7.6	7.6	8.0	7.9
6	8.6	8.4	8.9	8.7	8.7	8.6	---	---	7.7	7.6	8.1	7.9
7	8.7	8.4	8.8	8.7	8.8	8.7	8.1	7.9	7.7	7.6	8.0	7.9
8	8.7	8.5	8.8	8.6	8.8	8.6	8.0	7.9	7.8	7.6	8.1	8.0
9	8.7	8.6	8.7	8.5	8.6	8.4	8.1	7.9	7.9	7.7	---	---
10	8.9	8.6	8.7	8.6	8.4	8.2	8.1	8.0	7.9	7.7	8.1	8.0
11	8.8	8.7	8.6	8.5	8.2	8.1	8.1	7.9	7.8	7.6	8.1	8.1
12	8.9	8.8	8.7	8.5	8.1	8.0	8.1	8.0	7.6	7.5	8.1	8.1
13	8.9	8.7	8.6	8.5	8.1	8.1	8.1	8.0	7.5	7.5	8.3	8.2
14	8.8	8.6	8.5	8.4	8.1	8.0	8.1	8.0	7.5	7.5	8.3	8.2
15	8.9	8.7	8.5	8.3	8.1	8.0	8.1	8.0	7.5	7.5	8.4	8.3
16	8.9	8.7	8.6	8.4	8.1	8.0	8.1	8.0	7.5	7.4	8.5	8.4
17	8.8	8.7	8.6	8.5	8.1	8.0	8.1	8.0	7.4	7.4	8.7	8.5
18	8.8	8.6	8.6	8.5	8.1	8.0	8.1	8.0	---	---	8.8	8.6
19	8.8	8.7	8.7	8.5	8.0	8.0	8.2	8.0	---	---	8.8	8.7
20	8.9	8.7	8.6	8.5	8.1	8.0	8.2	8.0	7.6	7.5	8.9	8.7
21	9.0	8.8	8.7	8.6	8.1	8.0	8.1	7.9	7.6	7.6	8.8	8.7
22	9.0	8.8	8.7	8.6	8.1	8.0	8.1	7.9	7.7	7.6	---	---
23	9.0	8.8	8.7	8.6	8.2	8.0	8.1	7.9	7.8	7.7	---	---
24	9.0	8.9	8.7	8.6	8.1	8.0	8.2	7.9	7.8	7.8	---	---
25	8.9	8.9	8.8	8.6	8.1	8.0	8.2	7.9	7.8	7.8	---	---
26	8.9	8.9	8.8	8.6	8.1	8.0	8.2	7.9	7.8	7.8	---	---
27	9.0	8.9	8.8	8.6	8.1	7.9	8.2	7.9	7.9	7.8	9.0	8.8
28	9.0	8.9	8.7	8.5	8.1	7.9	8.1	7.9	8.1	8.0	9.0	8.8
29	9.0	8.8	8.6	8.5	8.1	7.9	8.0	7.8	---	---	8.9	8.8
30	8.9	8.8	8.6	8.5	8.1	7.9	7.8	7.7	---	---	8.9	8.8
31	9.0	8.8	---	---	8.1	7.9	7.8	7.7	---	---	8.9	8.7
MONTH	9.0	8.3	9.1	8.3	8.8	7.9	8.2	7.7	8.1	7.4	9.0	7.9
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.8	8.7	---	---	8.7	8.5	8.0	7.9	8.3	8.0	8.3	7.7
2	8.8	8.7	---	---	8.6	8.3	8.1	7.9	---	---	7.7	7.6
3	8.8	8.7	---	---	8.3	8.1	8.1	7.9	---	---	7.7	7.1
4	8.7	8.5	---	---	8.2	8.1	7.9	7.8	---	---	7.5	7.2
5	8.6	8.4	---	---	8.1	8.0	8.0	7.8	8.0	7.8	7.3	7.2
6	8.7	8.5	---	---	8.3	8.1	8.1	8.0	8.0	7.9	7.4	7.3
7	8.6	8.4	---	---	8.2	8.1	8.1	8.1	8.4	7.8	7.5	7.3
8	8.4	8.3	8.1	8.0	8.2	8.1	8.2	8.1	8.4	8.0	7.8	7.4
9	8.6	8.3	8.0	8.0	8.1	7.6	8.2	8.1	8.5	8.3	7.8	7.6
10	8.8	8.6	8.1	8.0	7.6	7.5	8.4	8.2	8.5	8.3	7.8	7.5
11	8.7	8.6	8.1	7.9	7.6	7.5	8.4	8.2	8.6	8.4	7.7	7.5
12	8.6	8.5	8.0	7.9	7.6	7.6	8.7	8.3	8.7	8.5	7.8	7.6
13	8.5	8.4	8.0	8.0	7.7	7.5	8.7	8.4	8.7	8.6	8.0	7.7
14	8.4	7.9	8.0	8.0	7.5	7.4	8.7	8.5	8.7	8.6	8.0	7.8
15	7.9	7.7	8.0	7.8	7.6	7.5	8.8	8.5	8.7	8.4	8.2	7.9
16	7.8	7.7	7.8	7.7	7.6	7.5	8.7	8.5	8.6	8.4	8.3	8.0
17	7.8	7.8	7.8	7.7	7.6	7.5	8.7	8.5	8.6	8.4	8.2	7.9
18	7.9	7.8	7.9	7.8	7.6	7.5	8.7	8.4	8.6	8.4	8.0	7.9
19	7.9	7.9	8.0	7.9	7.6	7.6	8.8	8.5	8.7	8.5	8.2	7.7
20	8.0	7.9	8.0	8.0	7.8	7.7	8.8	8.5	8.7	8.5	8.3	8.0
21	8.1	8.0	8.1	8.0	7.8	7.8	8.8	8.6	8.8	8.6	8.4	8.1
22	8.1	8.1	8.1	8.0	7.9	7.6	8.8	8.6	8.8	8.5	---	---
23	8.2	8.1	8.1	8.0	7.7	7.6	8.7	8.5	8.8	8.4	---	---
24	8.2	8.1	---	---	7.8	7.7	8.8	8.6	8.8	8.5	---	---
25	8.3	8.2	---	---	7.8	7.5	8.8	8.6	8.8	8.6	---	---
26	8.4	8.1	---	---	7.6	7.6	8.6	8.4	8.9	8.3	---	---
27	8.4	8.2	---	---	7.8	7.6	8.5	8.4	8.7	8.2	---	---
28	8.4	8.2	---	---	7.8	7.7	8.6	8.3	8.4	7.5	---	---
29	8.2	7.9	---	---	7.8	7.8	9.0	8.5	8.5	8.1	---	---
30	8.0	7.9	8.4	8.3	7.9	7.8	8.7	8.3	8.5	8.2	---	---
31	---	---	8.7	8.4	---	---	8.5	8.2	8.4	8.2	---	---
MONTH	8.8	7.7	8.7	7.7	8.7	7.4	9.0	7.8	8.9	7.5	8.4	7.1
YEAR	9.1	7.1										

04193490 MAUMEE RIVER NEAR WATERVILLE, OH--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	20.0	18.5	7.5	6.5	4.0	3.0	.5	.5	.5	.0	3.5	3.0
2	20.0	18.5	8.0	6.5	5.0	4.0	.5	.5	.0	.0	3.5	3.0
3	18.5	16.0	9.0	7.0	3.5	2.0	---	---	.5	.0	3.0	2.0
4	15.5	14.5	9.5	8.5	2.0	1.5	---	---	.5	.0	2.5	2.5
5	14.0	13.5	9.0	8.0	2.5	1.5	---	---	.5	.0	3.5	2.5
6	13.5	12.0	8.5	7.5	4.0	2.5	---	---	.5	.5	3.5	2.0
7	14.5	12.0	8.5	7.5	6.0	4.0	.5	.5	.5	.5	3.0	1.5
8	15.0	12.5	8.5	8.0	6.5	6.0	.5	.5	.5	.5	4.0	2.0
9	15.0	14.0	9.5	8.5	6.5	4.5	.5	.5	.5	.5	---	---
10	16.0	13.5	9.5	8.5	4.5	4.0	.5	.5	.5	.5	4.5	3.5
11	15.0	13.0	8.0	7.0	4.0	3.0	.5	.5	.5	.5	4.0	3.5
12	13.0	11.5	7.0	5.5	4.5	3.5	.5	.5	.5	.0	3.0	3.0
13	12.0	10.5	6.5	5.5	4.0	3.0	.5	.5	.5	.5	5.0	4.5
14	11.0	10.5	6.5	6.5	3.0	2.0	.5	.5	.5	.0	4.5	3.0
15	11.5	10.5	6.5	6.0	2.5	2.0	.5	.5	.5	.0	6.0	3.5
16	12.5	11.0	6.5	5.5	2.0	1.0	.5	.5	.5	.0	5.5	4.5
17	13.5	12.5	6.0	5.0	1.0	.5	.5	.5	.5	.0	5.0	4.0
18	14.0	13.0	4.5	4.0	1.0	.5	.5	.5	---	---	5.0	3.5
19	13.0	11.5	4.5	3.5	1.0	.5	.5	.5	---	---	4.0	3.0
20	11.5	11.0	4.0	3.5	.5	.5	.5	.5	1.0	.0	3.5	2.5
21	12.5	10.0	4.0	3.5	.5	.5	.5	.5	1.5	1.0	4.0	3.0
22	11.5	10.0	4.0	3.0	.5	.5	.5	.5	3.0	1.5	---	---
23	11.5	10.5	4.0	4.0	.5	.5	.5	.0	3.5	3.0	---	---
24	11.0	10.0	4.5	4.0	.5	.5	.5	.0	3.5	3.0	---	---
25	10.5	8.5	5.0	4.0	.5	.5	.5	.0	3.5	2.5	---	---
26	8.5	6.5	4.5	3.5	.5	.5	.5	.0	3.0	2.5	---	---
27	7.0	6.5	4.0	3.0	.5	.5	.5	.0	3.0	2.5	8.0	8.0
28	7.0	6.0	3.5	3.0	.5	.5	.5	.0	3.5	3.0	10.0	8.0
29	7.5	6.0	3.0	2.5	.5	.5	.5	.0	---	---	11.5	10.0
30	7.5	6.0	3.5	2.5	.5	.5	.5	.0	---	---	12.0	11.5
31	7.5	6.0	---	---	.5	.5	.5	.0	---	---	14.0	11.5
MONTH	20.0	6.0	9.5	2.5	6.5	.5	.5	.0	3.5	.0	14.0	1.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	14.0	13.0	14.5	13.5	22.0	19.5	24.0	22.5	25.5	23.0	24.0	23.0
2	13.5	11.5	15.5	13.0	21.5	19.5	24.0	22.5	---	---	23.5	23.0
3	13.5	13.0	16.0	13.0	22.5	20.5	24.0	22.5	---	---	23.0	21.5
4	14.5	14.0	17.0	14.5	22.5	21.0	24.5	22.5	---	---	21.5	20.5
5	14.0	10.5	16.0	15.5	22.5	21.5	26.5	23.5	---	---	20.5	20.0
6	11.5	9.0	---	---	24.0	21.5	27.5	25.0	25.5	24.0	20.5	20.0
7	12.0	10.5	---	---	24.0	20.5	28.0	25.5	26.0	24.0	21.0	19.5
8	13.0	11.5	17.0	14.0	23.5	22.0	29.5	27.5	25.5	24.0	21.0	19.5
9	15.0	13.0	16.0	15.5	23.0	19.5	29.0	27.5	24.5	23.0	20.5	18.0
10	14.5	13.5	16.0	15.0	20.0	19.0	29.0	27.5	26.0	24.5	20.5	18.5
11	15.0	13.5	15.0	12.5	20.0	19.0	28.5	26.5	26.0	24.5	22.0	19.5
12	15.0	12.5	14.5	11.5	20.5	19.5	28.5	27.0	25.5	24.0	22.5	21.0
13	12.5	12.0	14.5	13.0	20.5	20.0	28.0	27.0	25.5	24.0	23.5	22.0
14	13.0	12.0	14.0	12.0	21.5	20.0	28.5	27.0	25.0	24.5	23.5	22.5
15	12.0	11.0	12.0	11.5	23.5	21.5	27.5	25.5	24.5	24.0	22.5	21.0
16	12.5	11.0	12.5	10.5	24.0	23.5	26.0	25.0	23.5	22.5	21.0	19.5
17	14.0	12.0	13.5	12.0	24.0	23.0	25.5	25.0	23.0	21.0	19.5	17.5
18	15.0	13.0	13.0	12.0	24.0	22.5	27.0	25.5	22.0	21.0	17.0	16.0
19	14.0	13.0	14.0	12.0	23.5	23.0	27.5	26.0	22.0	21.0	17.0	15.5
20	14.0	12.5	15.5	12.0	23.5	22.0	26.5	26.0	23.0	21.0	18.0	16.5
21	14.0	11.5	17.0	13.5	24.0	22.5	28.0	25.5	23.0	22.0	18.0	17.0
22	13.0	12.0	18.5	15.5	23.5	21.0	26.0	24.5	23.0	22.0	---	---
23	15.5	13.0	18.5	17.5	21.0	20.0	25.5	24.0	23.5	22.0	---	---
24	14.0	11.5	---	---	22.0	20.5	26.0	23.5	23.5	22.5	---	---
25	12.0	10.5	---	---	22.0	21.0	26.5	24.5	23.0	22.5	---	---
26	12.5	10.5	---	---	21.5	19.5	26.5	25.0	24.0	23.0	---	---
27	15.0	11.5	---	---	22.5	20.5	25.5	23.5	23.5	23.0	---	---
28	15.5	14.0	---	---	22.5	20.5	23.5	22.5	24.0	23.0	---	---
29	15.0	12.5	---	---	24.0	21.5	23.5	21.0	25.5	24.0	---	---
30	14.5	12.0	21.5	20.5	24.5	22.5	24.5	21.5	25.0	24.0	---	---
31	---	---	22.0	19.0	---	---	25.0	22.5	24.5	23.5	---	---
MONTH	15.5	9.0	22.0	10.5	24.5	19.0	29.5	21.0	26.0	21.0	24.0	15.5
YEAR	29.5	.0										

04193490 MAUMEE RIVER NEAR WATERVILLE, OH--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	10.2	9.1	13.3	11.6	15.0	13.3	13.7	12.4	13.7	12.7	13.3	13.0
2	11.5	9.1	13.9	11.5	13.5	12.2	13.8	12.5	13.5	12.5	13.4	13.2
3	10.7	8.6	13.1	11.6	12.8	12.0	---	---	13.3	12.4	13.7	13.3
4	10.5	8.2	12.1	10.8	14.2	12.3	---	---	12.6	12.3	13.5	13.0
5	10.9	8.9	13.3	10.4	14.4	13.3	---	---	13.0	12.2	13.2	12.9
6	11.9	9.2	12.8	10.9	14.2	13.3	---	---	13.1	12.3	13.4	13.0
7	13.2	10.3	12.0	10.8	14.3	13.3	14.0	12.4	13.0	12.4	13.5	13.0
8	12.8	10.8	12.3	10.8	14.0	12.2	13.6	12.3	13.8	12.3	13.7	13.2
9	12.8	11.0	12.2	9.8	12.2	11.2	13.9	12.2	14.5	12.8	---	---
10	15.1	10.4	11.7	10.4	12.1	11.7	13.8	12.8	14.7	12.9	13.5	13.2
11	13.0	10.6	11.9	10.1	12.1	11.5	14.0	12.8	13.4	12.3	13.7	13.1
12	13.1	10.6	14.0	10.6	12.2	11.3	14.0	12.6	13.0	12.1	13.4	13.2
13	15.5	11.8	13.4	11.8	12.5	11.9	13.8	12.9	12.2	11.9	13.7	12.9
14	16.1	13.1	12.4	11.9	12.9	12.2	14.1	12.8	12.3	11.9	14.5	13.2
15	16.0	13.2	12.3	10.8	12.8	12.5	14.1	12.5	12.7	12.2	14.1	13.6
16	16.5	13.2	14.2	11.2	13.0	12.4	14.3	12.7	12.7	12.1	15.4	13.0
17	15.2	11.9	13.5	12.2	13.2	12.7	13.8	12.3	12.1	12.0	16.2	13.8
18	12.2	10.7	13.9	12.2	13.2	12.8	14.3	12.6	---	---	17.5	14.6
19	11.9	10.4	14.7	12.7	13.3	12.7	14.7	12.6	---	---	17.8	15.3
20	12.8	10.1	13.7	13.0	14.1	13.4	15.0	12.8	11.8	11.3	18.8	15.8
21	14.1	10.6	14.2	13.0	14.7	13.6	14.7	12.4	12.3	11.8	19.6	16.3
22	14.1	11.4	14.4	13.2	14.5	13.4	15.0	12.1	12.6	12.3	---	---
23	14.6	11.8	14.7	13.8	14.3	13.0	15.5	12.7	12.4	12.2	---	---
24	14.0	12.3	14.7	13.7	13.8	12.9	16.4	13.2	12.6	12.3	---	---
25	12.1	10.3	16.1	13.0	13.7	12.9	16.7	13.6	12.8	12.6	---	---
26	10.8	10.1	17.6	14.0	13.9	13.0	16.8	13.9	13.1	12.8	---	---
27	12.4	10.2	16.5	14.1	13.8	12.8	16.2	13.2	13.2	13.0	20.0	18.8
28	12.9	11.1	14.8	12.7	14.1	12.8	14.8	13.0	13.2	13.1	20.0	20.0
29	13.7	11.7	14.1	12.5	14.4	12.8	14.5	13.2	---	---	20.0	15.9
30	13.4	11.9	14.4	13.0	13.9	12.6	13.6	12.6	---	---	16.0	13.5
31	13.0	11.7	---	---	13.9	12.6	13.9	13.0	---	---	14.4	12.5
MONTH	16.5	8.2	17.6	9.8	15.0	11.2	16.8	12.1	14.7	11.3	20.0	12.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	14.2	11.3			---	---	7.6	6.7	7.6	6.5	8.3	6.3
2	12.5	10.5			---	---	7.0	6.3	---	---	6.8	5.7
3	12.4	10.8			---	---	7.2	6.2	---	---	6.8	6.1
4	10.8	9.8			---	---	7.4	6.2	---	---	6.6	6.0
5	10.5	9.2			---	---	6.9	6.3	---	---	6.6	5.9
6	11.7	9.9			---	---	7.2	6.2	7.2	5.4	7.0	6.3
7	11.7	10.7			---	---	7.1	6.6	6.7	5.7	7.1	6.7
8	11.2	10.0			---	---	7.0	6.6	6.4	5.4	7.3	6.8
9	11.8	9.5			---	---	6.8	6.1	6.5	5.3	7.9	6.8
10	12.8	10.6			---	---	7.6	6.3	7.2	5.7	8.0	7.4
11	12.5	9.9			---	---	7.5	6.2	8.8	6.1	7.5	7.1
12	10.8	9.2			---	---	9.3	6.2	10.5	7.0	7.5	6.8
13	10.9	9.4			---	---	9.0	6.9	9.5	8.0	8.1	6.7
14	10.3	9.1			---	---	9.1	7.3	9.2	7.3	8.2	6.8
15	10.0	9.0			---	---	10.1	6.9	8.1	6.1	9.9	7.0
16	9.5	9.1			---	---	8.9	7.4	8.1	6.0	10.3	7.8
17	9.5	9.3			---	---	8.1	6.6	8.3	6.8	8.0	6.7
18	9.4	9.3			---	---	8.7	6.1	8.7	7.0	8.1	7.0
19	9.4	9.3			---	---	7.6	6.1	9.1	7.1	8.7	7.6
20	9.8	9.3			---	---	7.6	6.1	9.7	7.0	10.0	7.4
21	10.1	9.6			---	---	10.8	6.2	9.6	6.3	10.2	8.4
22	10.0	9.6			---	---	10.2	7.8	9.4	5.8	---	---
23	9.8	9.3			---	---	9.7	7.4	9.9	4.7	---	---
24	9.7	9.2			---	---	9.1	7.1	9.6	5.1	---	---
25	10.7	9.6			7.1	6.8	11.5	7.0	9.2	5.4	---	---
26	11.4	10.0			7.2	6.9	9.6	6.9	12.2	4.4	---	---
27	12.0	10.0			7.4	6.7	8.3	6.9	13.9	5.4	---	---
28	10.9	9.6			7.3	6.4	9.1	7.7	12.5	5.0	---	---
29	9.7	9.0			7.2	6.6	13.9	7.4	15.0	9.7	---	---
30	9.5	9.2			7.5	6.4	11.5	7.7	11.7	8.9	---	---
31	---	---			---	---	8.7	6.6	8.9	7.3	---	---
MONTH	14.2	9.0			7.5	6.4	13.9	6.1	15.0	4.4	10.3	5.7
YEAR	20.0	4.4										

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

04193500 MAUMEE RIVER AT WATERVILLE, OH

(National stream quality accounting network station)

LOCATION.--Lat 41°30'00", long 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, 3 mi (5 km) downstream from Tontogany Creek, and 20.7 mi (33.3 km) upstream from mouth.

DRAINAGE AREA.--6,330 mi² (16,395 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1898 to December 1901, August 1921 to December 1935, March 1939 to current year.

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.

GAGE.--Water-stage recorder. Datum of gage is 595.71 ft (181.572 m) National Geodetic Vertical Datum of 1929. 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. Low flow slightly regulated by powerplants upstream from station. Small diversion upstream from gage into Portage River basin (see station 04195500).

AVERAGE DISCHARGE.--56 years (1921-35, 1939-80) 4,857 ft³/s (137.6 m³/s), 10.42 in/yr (265 mm/yr): includes flow in Miami and Erie Canal at Waterville 1922-29; canal was abandoned in 1929 and was filled in prior to March 1939.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 94,000 ft³/s (2,662 m³/s) Feb. 16, 1950, gage height, 14.52 ft (4.426 m); maximum gage height, 16.17 ft (4.929 m) Feb. 12, 1959 (ice jam); practically no flow at times prior to June 30, 1929, when entire river flow was being diverted by canal; minimum daily since canal was abandoned, 26 ft³/s (0.74 m³/s) Oct. 24, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a stage of 19.9 ft (6.07 m), from information by local resident, estimated discharge, 180,000 ft³/s (5,100 m³/s), from rating curve extended above 94,000 ft³/s (2,662 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 72,700 ft³/s (2,059 m³/s) June 16, gage height, 13.31 ft (4.057 m); minimum daily, 208 ft³/s (5.89 m³/s) Oct. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	709	505	694	1010	3100	11000	1860	13600	5570	6050	3450	2410
2	663	546	1130	1000	4400	9800	1170	11800	6430	9710	3660	2300
3	2130	618	694	1010	3900	7800	1450	10700	4100	8860	3810	8620
4	842	709	878	1010	3100	6400	1690	9760	3810	5330	3720	19800
5	466	560	1150	1000	2400	5500	1710	7910	3480	3950	2940	23100
6	453	633	1320	1000	2100	4810	1590	7200	5170	2990	2430	18700
7	392	560	1390	1000	1850	4270	1760	7720	5330	2560	1930	13700
8	441	546	1640	980	1600	3630	1840	8220	5070	2200	1660	9810
9	404	709	4160	960	1400	3390	1670	7230	19200	1900	1430	5790
10	453	441	6220	940	1600	2900	1600	5640	31100	1600	1300	5090
11	574	466	6150	920	2900	2660	2030	7880	28300	1350	1210	3590
12	358	505	5510	890	4500	2520	2370	10700	21200	1000	1030	2510
13	304	519	4650	860	6400	2210	4820	9300	20900	900	951	1970
14	293	492	4100	830	7300	2200	17500	8700	50600	1000	878	1710
15	325	505	3450	810	7200	2100	33300	17500	65200	940	933	1340
16	314	519	3010	800	9800	1760	28600	25800	69700	920	741	1260
17	325	505	2450	790	15200	1800	21000	22800	57100	840	694	1270
18	404	589	2040	780	19300	1660	16800	17000	37000	760	757	1650
19	293	546	1600	770	26200	1640	13400	12100	23300	820	757	1950
20	325	479	1250	770	45400	1600	10800	9180	16600	760	678	1770
21	381	574	1160	770	44000	1260	8290	6720	13800	820	633	1900
22	273	429	1250	780	35700	1180	7130	5470	21000	1540	648	2120
23	235	466	949	800	30100	1350	6260	4280	25100	2030	678	1820
24	369	532	980	840	29400	1210	4920	3540	16900	2530	663	1500
25	896	589	1000	900	26900	1150	3970	3050	18500	3250	505	1250
26	492	505	987	1010	23500	1090	3750	2590	19900	3690	519	1170
27	208	466	980	1200	18500	1090	3600	2430	18300	2960	519	1240
28	492	694	960	2200	14000	1130	3930	2560	15100	2670	589	887
29	492	663	930	3500	---	1270	8720	3690	10600	2560	574	1080
30	546	574	970	4800	---	1410	12200	6470	6470	2830	546	1370
31	678	---	1000	3500	---	1170	---	4040	---	3220	1170	---
TOTAL	15530	16444	64652	38430	391750	92960	229730	275580	644830	82540	42003	142677
MEAN	501	548	2086	1240	13990	2999	7658	8890	21490	2663	1355	4756
MAX	2130	709	6220	4800	45400	11000	33300	25800	69700	9710	3810	23100
MIN	208	429	694	770	1400	1090	1170	2430	3480	760	505	887
CFSM	.08	.09	.33	.20	2.21	.47	1.21	1.40	3.40	.42	.21	.75
IN.	.09	.10	.38	.23	2.30	.55	1.35	1.62	3.79	.49	.25	.84

CAL YR 1980 TOTAL 1915509 MEAN 5234 MAX 44400 MIN 208 CFSM .83 IN 11.26
WTR YR 1981 TOTAL 2037126 MEAN 5581 MAX 69700 MIN 208 CFSM .88 IN 11.97

04193500 MAUMEE RIVER AT WATERVILLE, OH--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1950 to current year.

PERIOD OF DAILY RECORD.--
SUSPENDED SEDIMENT DISCHARGE: April 1950 to current year.

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, and 1963.
SEDIMENT LOADS: Maximum daily, 208,000 tons (189,000 tonnes) Feb. 12, 1959; minimum daily, 0.26 ton (0.24 tonne) Sept. 18, 1955.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,880 mg/L May 17; minimum daily mean, 4 mg/L on Dec. 1.
SEDIMENT LOADS: Maximum daily, 142,000 tons (129,000 tonnes) June 15, minimum daily, 7.3 tons (6.6 tonnes) Nov. 30.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT 15...	1100	369	690	8.8	11.5	.90	13.3	120	41	8
NOV 04...	1230	694	800	8.8	10.5	1.0	11.3	100	44	K4
DEC 01...	1200	694	765	8.7	5.0	1.3	19.0	150	40	K7
JAN 07...	0830	1000	865	7.4	.0	2.0	13.7	94	22	10
FEB 03...	1330	3900	1050	7.7	.5	2.9	13.2	92	36	120
MAR 04...	1200	6500	555	8.1	2.5	7.9	12.8	93	26	310
APR 07...	1430	1810	690	8.3	15.0	11	11.6	110	36	K1
MAY 13...	1400	9550	600	8.1	16.0	85	9.8	98	34	690
JUN 09...	1105	21300	535	7.8	22.5	150	8.3	94	--	2100
JUL 10...	1030	1410	430	8.0	29.0	110	8.9	110	62	170
AUG 11...	1315	1190	490	8.6	27.5	50	10.8	140	51	72
SEP 01...	1240	2740	550	8.7	25.5	28	8.6	100	58	940

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 15...	300	230	88	60	19	25	4.9	76	42	.4
NOV 04...	50	260	90	63	25	47	6.2	92	57	.6
DEC 01...	K1	320	77	79	29	52	6.4	110	66	.5
JAN 07...	11	360	120	98	27	32	6.1	110	63	.5
FEB 03...	30	360	140	93	30	64	6.3	160	110	.7
MAR 04...	67	210	63	59	16	10	3.2	52	31	.2
APR 07...	110	260	110	60	26	31	3.8	110	51	.4
MAY 13...	930	280	110	78	21	19	3.1	71	28	.3
JUN 09...	5500	250	110	71	18	18	3.9	50	27	.3
JUL 10...	120	210	75	59	14	10	3.9	43	17	.3
AUG 11...	15	220	63	63	16	14	4.5	42	23	.3
SEP 01...	1000	220	81	54	21	23	4.0	70	39	.4

04193500 MAUMEE RIVER AT WATERVILLE, OH--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHYTO-PLANK-TON, TOTAL (CELLS PER ML)
OCT										
15...	.0	368	314	.93	.98	1.5	6.6	.120	--	--
NOV										
04...	.2	437	396	1.4	1.40	2.1	9.1	.180	8.1	160000
DEC										
01...	.7	520	493	.95	.97	2.1	9.2	.080	9.3	--
JAN										
07...	5.6	549	511	.60	.93	6.2	28	.190	--	--
FEB										
03...	4.7	654	620	--	--	--	--	.350	8.1	--
MAR										
04...	6.3	351	300	.76	.95	8.4	37	.140	7.3	1100
APR										
07...	.0	421	380	.86	.97	2.7	12	.100	--	--
MAY										
13...	8.3	406	356	1.5	1.60	7.3	32	.240	5.3	7900
JUN										
09...	7.7	390	314	1.3	1.50	9.0	40	.520	14	7800
JUL										
10...	7.3	320	249	.81	.87	4.3	19	.260	--	1700
AUG										
11...	7.9	308	275	1.1	1.20	3.1	14	.170	11	110000
SEP										
01...	1.0	367	297	1.3	1.30	1.4	6.1	.100	11	--

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)
OCT									
15...	1100	3	2	250	50	0	0	<10	0
JAN									
07...	0830	3	3	100	70	0	0	20	10
APR									
07...	1430	0	0	50	50	2	2	<10	<10
JUL									
10...	1030	3	1	100	40	1	<1	10	<10

DATE	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)
OCT									
15...	0	0	5	4	680	30	4	0	60
JAN									
07...	0	0	6	5	400	40	3	0	30
APR									
07...	0	0	4	0	340	0	13	0	60
JUL									
10...	1	0	6	6	4100	<10	13	1	70

DATE	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY DIS-SOLVED (UG/L AS HG)	SELE-NIUM, TOTAL (UG/L AS SE)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT									
15...	4	.1	.1	0	0	0	0	30	0
JAN									
07...	20	.1	.1	0	0	1	0	30	8
APR									
07...	3	.1	<.1	1	0	0	0	40	0
JUL									
10...	4	.1	.1	0	0	0	0	80	5

04193500 MAUMEE RIVER AT WATERVILLE, OH--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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	709	55	105	505	15	23	694	4	7.4
2	663	45	84	546	17	27	1130	9	32
3	2130	123	740	618	19	35	694	9	18
4	842	68	168	709	21	41	878	10	23
5	466	54	72	560	19	29	1150	18	57
6	453	42	55	633	20	34	1320	23	81
7	392	40	45	560	21	32	1390	25	93
8	441	45	54	546	22	32	1640	27	118
9	404	56	60	709	23	44	4160	21	227
10	453	49	61	441	23	28	6220	22	379
11	574	37	58	466	16	20	6150	31	515
12	358	28	30	505	9	13	5510	74	1090
13	304	32	30	519	7	10	4650	70	881
14	293	48	42	492	6	8.3	4100	48	537
15	325	31	30	505	8	10	3450	35	323
16	314	34	32	519	11	15	3010	29	239
17	325	44	42	505	11	16	2450	27	182
18	404	41	49	589	10	16	2040	25	140
19	293	38	34	546	9	14	1600	24	120
20	325	36	35	479	8	11	1250	22	89
21	381	29	34	574	12	18	1160	20	63
22	273	23	19	429	19	22	1250	19	64
23	235	18	13	466	21	27	949	18	45
24	369	37	47	532	20	29	980	16	51
25	896	48	126	589	16	24	1000	15	45
26	492	24	38	505	11	16	987	14	38
27	208	15	14	466	11	15	980	13	44
28	492	16	24	694	10	18	960	12	37
29	492	9	14	663	5	9.9	930	11	29
30	546	11	18	574	5	7.3	970	11	33
31	678	13	26	---	---	---	1000	10	29
TOTAL	15530	---	2199	16444	---	644.5	64652	---	5629.4
		JANUARY			FEBRUARY			MARCH	
1	1010	9	27	3100	20	167	11000	233	9250
2	1000	9	23	4400	15	178	9800	278	9200
3	1010	8	22	3900	12	126	7800	184	5550
4	1010	7	19	3100	10	84	6400	36	843
5	1000	7	18	2400	10	65	5500	83	1220
6	1000	6	16	2100	10	57	4810	25	325
7	1000	6	16	1850	10	50	4270	14	166
8	980	6	16	1600	10	43	3630	14	138
9	960	6	15	1400	10	38	3390	17	151
10	940	6	15	1600	10	43	2900	14	112
11	920	6	15	2900	10	78	2660	16	112
12	890	7	17	4500	10	121	2520	22	148
13	860	7	16	6400	10	173	2210	19	115
14	830	7	16	7300	10	197	2200	17	103
15	810	7	15	7200	10	194	2100	22	127
16	800	7	15	9800	50	1320	1760	24	114
17	790	7	15	15200	200	8210	1800	15	76
18	780	7	15	19300	600	31300	1660	16	70
19	770	8	17	26200	700	49500	1640	13	56
20	770	8	17	45400	625	77400	1600	14	59
21	770	8	17	44000	49	5880	1260	19	64
22	780	8	17	35700	32	3120	1180	26	82
23	800	8	17	30100	48	3910	1350	28	102
24	840	8	18	29400	49	3910	1210	28	92
25	900	8	19	26900	83	6020	1150	23	71
26	1010	9	25	23500	104	6610	1090	19	57
27	1200	9	29	18500	107	5770	1090	31	87
28	2200	15	89	14000	121	5490	1130	100	301
29	3500	50	485	---	---	---	1270	41	134
30	4800	30	390	---	---	---	1410	45	171
31	3500	25	236	---	---	---	1170	27	81
TOTAL	38430	---	1687	391750	---	210054	92960	---	29177

04193500 MAUMEE RIVER AT WATERVILLE, OH--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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	28	147	13600	108	3960	5570	70	1070
2	1170	29	87	11800	105	3330	6430	65	1130
3	1450	27	104	10700	102	2930	4100	53	588
4	1690	25	110	9760	100	2640	3810	49	506
5	1710	21	92	7910	129	2760	3480	66	624
6	1590	17	68	7200	99	1930	5170	258	3950
7	1760	14	62	7720	68	1410	5330	399	5810
8	1840	14	69	8220	106	2340	5070	505	7150
9	1670	13	56	7230	373	7230	19200	603	32700
10	1600	14	59	5640	202	3180	31100	819	68600
11	2030	18	101	7880	103	2070	28300	663	50500
12	2370	24	156	10700	89	2590	21200	722	41900
13	4820	121	1790	9300	190	4850	20900	625	36200
14	17500	380	19800	8700	383	9000	50600	724	98800
15	33300	461	41400	17500	398	18800	65200	805	142000
16	28600	345	26900	25800	521	36300	69700	724	136000
17	21000	323	18300	22800	1880	113000	57100	579	89500
18	16800	285	13100	17000	668	32400	37000	366	37600
19	13400	123	4460	12100	247	8230	23300	179	11300
20	10800	104	3040	9180	118	2970	16600	181	8160
21	8290	93	2080	6720	68	1250	13800	167	6120
22	7130	65	1250	5470	57	836	21000	356	18700
23	6260	68	1150	4280	48	557	25100	378	25500
24	4920	58	770	3540	41	389	16900	520	25900
25	3970	64	685	3050	52	431	18500	563	29500
26	3750	45	454	2590	56	389	19900	757	41200
27	3600	39	380	2430	57	374	18300	646	31800
28	3930	49	526	2560	58	404	15100	808	32900
29	8720	78	1830	3690	74	745	10600	563	16300
30	12200	104	3420	6470	59	1020	6470	352	6190
31	---	---	---	4040	46	498	---	---	---
TOTAL	229730	---	142446	275580	---	268813	644830	---	1008198
		JULY			AUGUST			SEPTEMBER	
1	6050	283	4660	3450	78	729	2410	91	534
2	9710	288	7550	3660	100	990	2300	67	420
3	8860	214	5100	3810	102	1050	8620	144	3520
4	5330	222	3220	3720	99	1000	19800	336	18700
5	3950	141	1520	2940	179	1400	23100	409	25600
6	2990	124	1000	2430	120	793	18700	336	17100
7	2560	111	753	1930	81	424	13700	212	7940
8	2200	118	700	1660	73	331	9810	121	3270
9	1900	110	564	1430	65	251	5790	86	1350
10	1600	103	445	1300	92	318	5090	111	1520
11	1350	68	248	1210	70	229	3590	87	849
12	1000	62	167	1030	56	155	2510	69	470
13	900	63	154	951	49	126	1970	66	350
14	1000	62	167	878	51	122	1710	63	289
15	940	50	127	933	50	125	1340	48	175
16	920	39	97	741	46	93	1260	46	156
17	840	37	84	694	43	80	1270	40	135
18	760	37	76	757	42	87	1650	36	159
19	820	36	80	757	45	91	1950	36	188
20	760	36	74	678	44	81	1770	52	250
21	820	32	70	633	50	85	1900	37	191
22	1540	39	173	648	33	58	2120	35	202
23	2030	78	427	678	25	45	1820	36	178
24	2530	84	572	663	23	41	1500	34	138
25	3250	79	696	505	24	32	1250	53	177
26	3690	63	628	519	20	28	1170	135	420
27	2960	51	409	519	21	30	1240	67	224
28	2670	31	221	589	24	38	887	45	109
29	2560	35	244	574	26	41	1080	55	161
30	2830	36	279	546	51	74	1370	76	285
31	3220	50	437	1170	235	857	---	---	---
TOTAL	82540	---	30942	42003	---	9804	142677	---	85060
YEAR	2037126		1794653.9						

04193500 MAUMEE RIVER AT WATERVILLE, OH--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT					
15...	1100	369	11.5	30	30
NOV					
04...	1230	694	10.5	22	41
DEC					
01...	1200	694	5.0	4	7.5
JAN					
07...	0830	1000	.0	6	16
FEB					
03...	1330	3900	.5	10	105
MAR					
04...	1200	6500	2.5	24	421
APR					
07...	1430	1810	15.0	13	64
MAY					
13...	1400	9550	16.0	84	2170
JUN					
09...	1105	21300	22.5	438	25200
JUL					
10...	1030	1410	29.0	116	442
AUG					
11...	1315	1190	27.5	64	206
SEP					
01...	1240	2740	25.5	215	1590

04195500 PORTAGE RIVER AT WOODVILLE, OH

LOCATION.--Lat 41°26'58", long 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, 600 ft (183 m) downstream from unnamed right bank tributary, and 10.3 mi (16.6 km) upstream from Sugar Creek.

DRAINAGE AREA.--428 mi² (1,109 km²).

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 (187.376 m) National Geodetic Vertical Datum of 1929. 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 those for winter period, which are fair. Flow supplemented by water imported from Maumee River basin for municipal supply for city of Bowling Green 16 mi (26 km) upstream. The importation of this water began Sept. 1, 1951. Sediment data collected at this site 1950 to 1956. Water-quality data collected at this site 800 ft (244 m) downstream 1968 to 1980.

AVERAGE DISCHARGE (adjusted for diversion).--49 years, 313 ft³/s (8.864 m³/s), 9.93 in/yr (252 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,500 ft³/s (326 m³/s) Feb. 15, 1950, gage height, 14.51 ft (4.423 m); minimum daily (prior to diversion) 0.4 ft³/s (0.011 m³/s) Aug. 26, 1931; (subsequent to diversion) 1.8 ft³/s (0.051 m³/s) Sept. 22, 1955.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a stage of 17 ft (5.2 m), from information by local residents, discharge, 17,000 ft³/s (481 m³/s), from rating curve extended above 11,500 ft³/s (326 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,500 ft³/s (99.1 m³/s) and maximums (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 20	2330	4160	118	8.99	2.740	June 23	1900	4130	117	8.96	2.731
June 10	1430	*7910	224	*12.04	3.670	Sept. 1	2200	6130	174	10.71	3.264
June 15	0400	7740	219	11.92	3.633	Sept. 5	1300	4930	140	9.70	2.956

Minimum daily discharge, 8.2 ft³/s (0.23 m³/s) Aug. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	28	29	40	240	440	79	692	146	154	33	4610
2	20	24	33	40	280	355	69	421	118	129	25	4410
3	22	21	33	40	240	282	66	289	105	114	26	3270
4	27	19	31	40	210	226	70	223	121	103	21	3810
5	27	18	25	39	180	213	86	189	140	91	20	4420
6	21	16	21	39	140	204	88	177	249	79	23	1820
7	17	15	23	38	110	168	75	167	351	67	23	676
8	17	17	51	37	52	139	70	142	213	57	25	319
9	15	18	175	36	80	121	72	128	3010	49	23	306
10	14	17	271	36	210	116	89	129	7330	46	17	205
11	14	16	249	35	640	114	94	988	6340	41	18	144
12	14	17	173	35	1300	110	117	1670	2740	37	17	97
13	14	17	130	35	780	104	172	827	1720	33	18	82
14	13	18	96	35	480	98	1490	497	5730	29	18	68
15	13	19	77	35	270	85	2600	1310	7470	27	15	380
16	13	21	68	36	420	81	1180	1530	5130	25	15	364
17	14	21	58	36	720	83	660	962	1440	24	14	1140
18	14	20	50	36	1300	77	529	552	697	24	13	1750
19	14	18	45	36	2200	72	456	375	405	22	12	1510
20	25	17	41	36	3720	68	354	275	287	27	11	1260
21	26	17	39	37	3650	67	277	205	215	33	10	503
22	18	18	37	37	2050	62	219	166	1520	46	9.8	299
23	15	17	36	38	1920	55	232	143	3840	44	9.8	215
24	15	17	35	42	1800	52	249	127	1920	33	9.5	158
25	18	17	35	46	1250	49	207	114	1350	27	9.2	122
26	16	17	35	92	850	48	157	101	1990	26	8.2	101
27	27	19	36	315	593	52	130	96	816	25	8.4	94
28	31	21	36	500	500	60	159	342	389	28	9.5	197
29	30	30	37	640	---	63	532	453	260	35	12	163
30	32	34	39	450	---	68	1070	271	194	51	20	155
31	32	---	40	325	---	76	---	196	---	47	831	---
TOTAL	606	584	2084	3262	26185	3808	11648	13757	56236	1573	1324.4	32648
MEAN	19.5	19.5	67.2	105	935	123	388	444	1875	50.7	42.7	1088
MAX	32	34	271	640	3720	440	2600	1670	7470	154	831	4610
MIN	13	15	21	35	52	48	66	96	105	22	8.2	68
+	5.2	4.8	4.1	4.6	4.8	4.5	4.8	4.9	4.6	4.7	4.6	4.3
MEAN ≠	14.3	14.7	63.1	100	930	118	383	439	1870	46.0	38.1	1084
CFSM≠	.03	.03	.15	.23	2.17	.28	.89	1.02	4.37	.11	.09	2.53
IN ≠	.04	.04	.17	.27	2.26	.32	1.00	1.18	4.87	.12	.10	2.83

CAL YR 1980 TOTAL 111432.0 MEAN 304 MAX 5400 MIN 13.0 (+) 4.7 MEAN≠ 299 CFSM ≠ .70 in≠ 9.54
WTR YR 1981 TOTAL 153715.4 MEAN 421 MAX 7470 MIN 8.2 (+) 4.7 MEAN≠ 416 CFSM ≠ .97 in≠=13.21

04196000 SANDUSKY RIVER NEAR BUCYRUS, OH

LOCATION.--Lat 40°48'13", long 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 mile (2 km) upstream from unnamed left bank tributary, 1.5 mi (2.4 km) west of Bucyrus, and 12 mi (19 km) downstream from Loss Creek.

DRAINAGE AREA.--88.8 mi² (230 km²).

PERIOD OF RECORD.--August 1925 to November 1935, July 1938 to December 1951, December 1963 to current year (discontinued).

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 (291.096 m) National Geodetic Vertical Datum of 1929. Prior to May 11, 1940, nonrecording gage, and May 12, 1940, to December 31, 1951, water-stage recorder, at same site and datum.

REMARKS.--Records good except those for winter periods, which are fair. Low flow slightly affected by operation of reservoirs 5.3 mi (8.5 km) to 6.0 mi (9.7 km) upstream from station, for municipal supply of Bucyrus. Water-quality data collected at this site 1965 to 1977. Sediment data collected 1970 to 1974.

AVERAGE DISCHARGE.--40 years (1925-35, 1938-51, 1964-81), 86.9 ft³/s (2.461 m³/s), 13.29 in/yr (338 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 5,800 ft³/s (164 m³/s) Dec. 14, 1927, gage height, 9.15 ft (2.789 m) from rating curve extended above 2.500 ft³/s (70.8 m³/s); maximum gage height, 9.83 ft (2.996 m) Dec. 14, 1977; minimum daily discharge, 0.6 ft³/s (0.017 m³/s Sept. 28-30, 1941, Sept. 25-26, 1946.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 23, 1913 reached a stage of 14.5 ft (4.42 m), from floodmarks. Flood of Jan. 22, 1959 reached a stage of 11.9 ft (3.63 m), from floodmarks, discharge, 13,500 ft³/s (382 m³/s), on basis of contracted-opening measurement of peak flow at site 2.8 mi (4.5 km) upstream with drainage area of 85.4 mi² (221 km²), adjusted to gage site by 0.8 power of drainage-area ratio.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34.0 m³/s) and maximums (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Apr. 12	1200	1200	34.0	5.73	1.747	June 14	1000	*3850	109	*9.58	2.920
June 9	2400	2930	83.0	8.59	2.618	Aug. 31	0515	2020	57.2	7.32	2.231

Minimum daily discharge, 2.7 ft³/s (0.08 m³/s) Aug. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.6	10	65	8.6	64	70	29	153	30	28	9.4	279
2	11	8.9	65	8.4	45	62	26	90	26	25	8.7	693
3	9.8	8.7	71	8.0	30	56	24	64	25	22	9.0	450
4	7.8	11	41	8.0	23	50	25	52	26	21	9.7	505
5	8.1	9.2	29	7.8	19	46	38	52	25	19	11	174
6	5.3	6.6	22	7.8	17	44	74	260	34	18	9.6	99
7	4.1	7.3	20	7.6	15	42	54	215	29	18	4.8	66
8	3.8	10	39	7.6	14	39	46	90	67	11	3.4	72
9	4.3	9.8	88	7.4	13	37	39	61	1950	17	2.9	71
10	4.1	9.2	140	7.2	40	35	38	56	1890	22	5.7	46
11	3.6	6.3	90	7.0	509	33	135	360	366	15	16	34
12	5.7	5.5	58	7.0	300	32	935	463	166	10	18	27
13	4.8	5.3	49	7.0	190	30	456	177	815	9.6	9.5	22
14	3.3	9.2	43	7.0	100	28	414	130	3310	11	5.8	71
15	3.3	9.2	32	7.0	84	26	242	362	780	11	6.7	137
16	5.3	5.5	27	7.0	200	25	130	315	224	11	6.9	67
17	11	5.7	22	7.0	360	24	125	151	174	9.9	6.5	40
18	12	7.6	18	7.0	450	23	176	93	97	9.3	4.6	100
19	21	6.6	16	7.0	560	21	118	69	69	9.5	3.6	64
20	13	6.3	15	7.2	660	20	83	55	54	146	3.4	51
21	9.5	6.8	13	7.2	400	20	64	45	87	112	3.1	35
22	8.4	6.3	12	7.4	260	19	57	38	741	47	2.7	27
23	5.3	6.3	11	7.6	290	18	67	33	259	26	4.9	23
24	5.0	8.7	9.8	7.8	280	17	73	30	110	17	5.9	20
25	13	8.4	9.0	9.0	190	17	58	28	197	10	4.1	19
26	12	16	8.6	55	140	17	47	26	139	9.7	3.2	17
27	13	27	8.4	130	90	22	41	49	68	10	3.9	16
28	18	92	8.6	105	80	39	55	70	49	15	5.7	15
29	26	66	8.6	70	---	38	443	66	39	14	5.9	13
30	19	45	8.6	55	---	37	357	49	33	12	18	15
31	15	---	8.6	50	---	34	---	38	---	11	1170	---
TOTAL	291.1	440.4	1056.2	652.6	5423	1021	4469	3740	11879	727.0	1382.6	3268
MEAN	9.39	14.7	34.1	21.1	194	32.9	149	121	396	23.5	44.6	109
MAX	26	92	140	130	660	70	935	463	3310	146	1170	693
MIN	3.3	5.3	8.4	7.0	13	17	24	26	25	9.3	2.7	13
CFSM	.11	.17	.38	.24	2.19	.37	1.68	1.36	4.46	.27	.50	1.23
IN.	.12	.18	.44	.27	2.27	.43	1.87	1.57	4.98	.30	.58	1.37

CAL YR 1980 TOTAL 30990.1 MEAN 84.7 MAX 1580 MIN 3.3 CFSM .95 IN 12.98
WTR YR 1981 TOTAL 34349.9 MEAN 94.1 MAX 3310 MIN 2.7 CFSM 1.06 IN 14.39

04196200 BROKEN SWORD CREEK NEAR NEVADA, OH

LOCATION.--Lat 40°49'34", long 83°09'11", in sec. 32, T.25 N., R. 15 E., Wyandot County, Hydrologic Unit 04100011, on right bank at bridge on State Highway 182, 1.2 mi (1.93 km) northwest of Nevada, 5.0 mi (8.0 km) upstream from mouth.

DRAINAGE AREA.--83.8 mi² (217 km²).

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1959, 1962-65, 1967, 1969-71. February 1976 to September 1981 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 880 ft (268 m) from topographic map.

REMARKS.--Records fair except those for the winter periods, which are poor. Water-quality data collected at this site 1976 to 1977.

AVERAGE DISCHARGE.--5 years, 102 ft³/s (2.889 m³/s) 16.5 in/yr (419 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 3,700 ft ³/s (105 m³/s) Mar. 15, 1978; maximum recorded gage height 12.54 ft (3.822 m) Sept. 2, 1981; minimum observed discharge, 0.01 ft ³/s (0.0003 m³/s) Oct. 4, 1963.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 1,100 ft³/s (31.2 m³/s) and maximums (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
June 14	unknown	2680	75.9	11.86	3.615	Sept. 2	0630	*3420	96.9	*12.54	3.822
Aug. 31	1000	1700	48.1	11.17	3.405						

Minimum daily discharge 1.2 ft³/s (.034 m³/s) Aug. 25, 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.1	15	34	7.6	60	78	34	239	21	26	4.2	372
2	6.4	13	46	7.4	80	64	28	105	16	23	3.7	2070
3	6.6	14	37	7.2	58	52	25	69	18	20	3.4	1650
4	6.6	13	27	7.1	30	44	23	53	15	18	5.1	898
5	6.6	12	23	7.0	27	43	27	43	16	18	3.7	418
6	7.5	11	23	7.0	18	47	35	99	13	18	3.1	136
7	5.2	11	23	6.8	16	42	27	160	13	14	3.4	87
8	5.0	9.7	26	6.8	14	36	24	80	66	11	2.3	68
9	4.4	10	66	6.8	13	34	24	56	946	11	2.1	63
10	3.8	10	114	6.6	80	36	21	46	700	16	2.1	44
11	4.3	9.4	85	6.6	170	36	23	218	300	16	4.3	31
12	4.3	9.9	55	6.6	210	34	444	343	155	12	3.8	23
13	4.0	9.4	43	6.6	150	32	510	171	600	9.1	3.8	18
14	4.1	7.3	35	6.6	110	28	482	117	1800	9.9	3.3	98
15	4.1	7.3	29	6.8	62	25	510	357	1500	7.2	2.8	174
16	4.0	7.3	25	6.8	180	25	154	438	229	6.6	2.4	52
17	3.8	8.9	21	6.8	608	23	101	182	140	6.3	2.2	32
18	6.6	9.4	17	6.8	673	21	91	96	95	5.2	2.5	605
19	6.0	8.4	14	6.8	632	21	77	69	72	5.2	2.4	382
20	12	8.2	13	6.8	834	19	59	52	56	40	2.0	113
21	8.7	8.4	12	6.8	651	18	47	43	61	61	1.7	57
22	8.0	7.7	11	6.8	241	17	40	35	863	28	1.5	37
23	6.8	7.1	10	7.0	286	17	43	30	440	16	1.5	27
24	5.6	7.3	9.8	7.2	316	19	44	26	139	14	1.5	20
25	9.2	7.7	9.4	7.6	190	16	38	24	189	8.4	1.2	16
26	8.9	9.7	8.8	25	126	17	30	24	170	7.0	1.2	14
27	12	13	8.6	70	90	28	29	24	76	7.6	1.4	14
28	16	25	8.4	160	80	53	29	32	50	7.5	1.4	12
29	22	43	8.2	110	---	40	421	29	40	8.3	1.6	9.8
30	27	32	8.0	80	---	39	758	27	32	7.5	1.9	9.4
31	19	---	7.8	56	---	40	---	22	---	5.7	949	---
TOTAL	255.6	365.1	858.0	673.9	6005	1044	4198	3309	8831	463.5	1026.5	7550.2
MEAN	8.25	12.2	27.7	21.7	214	33.7	140	107	294	15.0	33.1	252
MAX	27	43	114	160	834	78	758	438	1800	61	949	2070
MIN	3.8	7.1	7.8	6.6	13	16	21	22	13	5.2	1.2	9.4
CFSM	.10	.15	.33	.26	2.55	.40	1.67	1.28	3.51	.18	.40	3.01
IN.	.11	.16	.38	.30	2.67	.46	1.86	1.47	3.92	.21	.46	3.35

CAL YR 1980 TOTAL 29782.2 MEAN 81.4 MAX 1240 MIN 3.8 CFSM .97 IN 13.22
WTR YR 1981 TOTAL 34579.8 MEAN 94.7 MAX 2070 MIN 1.2 CFSM 1.13 IN 15.35

04196500 SANDUSKY RIVER NEAR UPPER SANDUSKY, OH

LOCATION.--Lat 40°51'02", long 83°15'23", in sec. 21, T.2 S., R.14 E., Wyandot County, Hydrologic Unit 04100011, on left bank at downstream side of county road bridge, 0.7 mi (1.1 km) downstream from unnamed right bank tributary, 0.8 mi (1.3 km) upstream from Rock Run, and 2 mi (3 km) northeast of Upper Sandusky.

DRAINAGE AREA.--298 mi² (772 km²).

PERIOD OF RECORD.--October 1921 to December 1935, January 1938 to current year (discontinued). Gage height records collected at site 3 mi (5 km) upstream since 1912 (fragmentary) are contained in reports of National Weather Service.

REVISED RECORDS.--WSP 874: 1927-30, 1933. WSP 1387: 1922(M), 1923-29, 1944. WSP 1912: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 792.25 ft (241.478 m) National Geodetic Vertical Datum of 1929 prior to Sept. 14, 1924, nonrecording gage at same site and datum. Water-quality data collected at this site 1969 to 1980.

REMARKS.--Records good except those for winter periods, and those for doubtful or missing records, July 26 to Aug. 29, which are fair. Water-quality data collected at this site 1969 to 1979.

AVERAGE DISCHARGE.--57 years, 246 ft³/s (6.967 m³/s), 11.21 in/yr (285 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 10,000 ft³/s (283 m³/s) Jan. 22, 1959; maximum gage height, 15.00 ft (4.572 m) in gage well, 15.55 ft (4.740 m) from outside floodmark, Jan. 22, 1959 (ice jam); minimum discharge, 0.50 ft³/s (0.014 m³/s) Oct. 2, 1963.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1937 reached a stage of 14.3 ft (4.36 m), from high-water marks in gage well.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft³/s (70.8 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 20	1730	2560	72.5	5.97	1.820						
June 11	0600	4520	128	8.17	2.490						
June 14	----	a*7400	210	a*10.80	3.292						

Minimum discharge, 11 ft³/s (0.31 m³/s) Oct. 12, but may have been less during the period of no gage height record.

a. estimated

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	42	98	28	200	269	117	800	121	121	45	3720
2	26	36	124	28	180	232	93	359	106	119	42	3640
3	23	30	131	27	125	195	81	233	97	98	37	4000
4	26	25	122	27	88	167	78	180	92	83	34	3110
5	26	25	89	27	64	158	88	155	83	73	31	1410
6	25	24	68	27	54	159	251	211	88	68	26	638
7	22	24	66	26	49	156	154	633	79	63	24	379
8	21	23	73	26	45	139	112	353	121	55	24	280
9	17	20	118	26	43	125	91	215	1960	49	24	263
10	15	22	292	25	113	120	83	177	3730	49	23	209
11	13	24	313	25	634	123	114	478	3370	67	21	152
12	12	23	183	25	1500	118	951	1130	880	53	20	120
13	14	22	132	25	891	111	1590	765	1550	43	20	98
14	14	20	112	25	408	103	1020	412	6000	36	20	164
15	14	20	99	24	278	90	1090	836	6800	34	21	759
16	16	19	88	24	305	87	568	1190	2360	34	22	414
17	15	24	75	25	1060	84	352	766	701	32	21	215
18	17	25	78	25	1570	78	368	388	463	31	19	1430
19	32	26	60	25	1840	75	345	265	313	29	18	2100
20	29	25	50	26	2410	73	253	211	237	138	17	753
21	34	26	43	26	1870	69	195	175	222	377	16	367
22	29	25	38	26	955	65	163	148	1170	195	16	228
23	20	24	34	27	880	62	165	131	1460	109	15	156
24	18	26	32	29	1130	61	173	118	495	73	15	119
25	24	26	30	32	785	62	166	107	341	59	14	97
26	17	27	29	63	514	59	136	100	548	48	14	83
27	27	37	28	250	350	71	117	111	273	40	14	74
28	33	62	28	490	287	136	115	174	177	37	14	65
29	47	136	28	300	---	144	376	209	140	41	15	58
30	55	130	28	210	---	125	1370	182	119	51	24	56
31	57	---	28	185	---	127	---	147	---	48	1790	---
TOTAL	762	1018	2717	2154	18628	3643	10775	11359	34096	2353	2456	25157
MEAN	24.6	33.9	87.6	69.5	665	118	359	366	1137	75.9	79.2	839
MAX	57	136	313	490	2410	269	1590	1190	6800	377	1790	4000
MIN	12	19	28	24	43	59	78	100	79	29	14	56
CFSM	.08	.11	.29	.23	2.23	.40	1.21	1.23	3.82	.26	.27	2.82
IN.	.10	.13	.34	.27	2.33	.45	1.35	1.42	4.26	.29	.31	3.14

CAL YR 1980 TOTAL 101356 MEAN 277 MAX 4500 MIN 12 CFSM .93 IN 12.65
WTR YR 1981 TOTAL 115118 MEAN 315 MAX 6800 MIN 12 CFSM 1.06 IN 14.37

04196800 TYMOCHTEE CREEK AT CRAWFORD, OH

LOCATION.--Lat 40°55'22", long 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 (0.6 km) northwest of Crawford, 1.5 mi (2.4 km) downstream from Lick Run, 2.7 mi (4.3 km) upstream from Little Tymochtee Creek, and 3 mi (5 km) southeast of Carey.

DRAINAGE AREA.--229 mi² (593 km²).

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 (239.530 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter periods and period of doubtful gage-height record Aug. 30 to Sept. 30, which are fair. Beginning Mar. 9, 1972 water was diverted at a point 29.4 mi (47.3 km) upstream from station into Killdeer Reservoir. Storage is available for low-flow augmentation. No withdrawals or releases were made during the year. Water-quality data collected at this site 1968 to 1977. Sediment data collected 1970 to 1974.

AVERAGE DISCHARGE.--17 years, 175 ft³/s (4.956 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,390 ft³/s (181 m³/s) March 17, 1978, gage height, 9.94 ft (3.030 m); maximum gage height, 11.21 ft (3.417 m) Mar. 6, 1963 (backwater from ice); no flow Aug. 10, Sept. 13-18, Oct. 23 to Nov. 4, 1964, Aug. 23-26, 1965.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in January 1959 reached a stage of 12.9 ft (3.93 m), from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 1,800 ft³/s (51.0m³/s) and maximums (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
June 15	0630	*5710	162	*9.16	2.792	Sept. 3	----	2300	65.1	---	---

Minimum daily discharge 0.42 ft³/s (0.012 m³/s) Oct. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	12	25	7.0	50	170	27	374	124	49	22	800
2	4.8	13	25	7.0	54	150	27	206	96	560	16	1300
3	4.4	18	19	7.1	58	118	26	129	69	298	15	1900
4	3.2	19	18	7.0	30	94	26	91	60	133	14	900
5	2.5	19	21	7.0	25	82	21	73	48	95	13	500
6	1.8	18	21	7.0	22	82	20	85	40	72	11	300
7	.64	16	20	7.0	20	83	23	236	36	48	12	200
8	.62	15	19	6.9	18	76	23	242	54	35	13	120
9	1.1	14	26	6.8	17	66	23	145	1170	27	10	80
10	1.5	13	33	6.6	40	60	20	110	1440	25	9.1	60
11	1.3	15	41	6.6	90	52	25	723	1510	19	9.5	50
12	1.4	18	51	6.6	250	51	347	1160	1180	16	9.3	45
13	1.2	17	41	6.6	530	47	723	1210	1560	16	8.9	40
14	1.1	16	28	6.6	230	42	855	593	4170	15	9.1	60
15	.72	14	23	6.6	100	38	583	849	5310	12	9.4	600
16	.49	13	19	6.6	250	36	329	1160	3160	11	8.1	250
17	.42	15	16	6.7	653	33	200	1050	1540	11	8.1	80
18	.91	19	14	6.8	886	33	191	476	628	12	8.1	1000
19	.73	18	13	6.8	942	29	318	255	140	11	7.9	1200
20	.71	18	12	7.0	1120	26	227	170	52	19	6.7	923
21	1.2	19	10	7.0	1050	25	147	131	125	89	5.7	358
22	2.1	19	9.4	7.0	762	23	108	102	250	227	5.4	120
23	2.6	19	8.6	7.2	669	23	91	71	145	307	5.4	70
24	2.5	18	8.0	7.4	785	20	92	61	95	125	5.0	45
25	5.7	17	7.4	8.0	633	18	91	52	108	62	4.8	33
26	8.2	18	7.2	16	393	17	73	44	77	40	4.8	21
27	7.3	23	7.2	32	258	23	55	44	86	29	4.8	16
28	7.9	22	7.0	66	191	27	48	69	57	39	4.8	13
29	7.7	20	7.0	130	---	28	206	162	38	28	4.7	12
30	9.3	21	7.0	105	---	28	503	183	29	24	5.7	11
31	13	---	7.0	68	---	28	---	150	---	32	1200	---
TOTAL	100.04	516	570.8	589.9	10126	1628	5448	10406	23397	2486	1471.3	11107
MEAN	3.23	17.2	18.4	19.0	362	52.5	182	336	780	80.2	47.5	370
MAX	13	23	51	130	1120	170	855	1210	5310	560	1200	1900
MIN	.42	12	7.0	6.6	17	17	20	44	29	11	4.7	11

CAL YR 1980 TOTAL 68521.04 MEAN 187 MAX 4070 MIN .42
WTR YR 1981 TOTAL 67846.04 MEAN 186 MAX 5310 MIN .42

04197000 SANDUSKY RIVER NEAR MEXICO, OH

LOCATION.--Lat 41°02'39", long 83°11'42", in sec. 13, T.1 N., R.14 E., Seneca County, Hydrologic Unit 04100011, on right bank at downstream side of county road bridge, 4.1 mi (6.6 km) upstream from Honey Creek, 4.2 mi (6.8 km) north of Mexico, 4.9 mi (7.9 km) south of Tiffin, and 8.3 mi (13.4 km) downstream from Mile Run.

DRAINAGE AREA.--774 mi² (2,005 km²).

PERIOD OF RECORD.--November 1898 to November 1900 (gage height and discharge measurements only), March 1923 to December 1935, July 1938 to current year. Discharge records for November 1898 to November 1900, published in 22nd Annual Report, Part 4, are unreliable and should not be used.

REVISED RECORDS.--WSP 714: 1929-30. WSP 874: 1927(M). WSP 1387: 1925, 1928-29, 1930(M), 1931. WSP 1912: Drainage area. See also Period of Record.

GAGE.--Water-stage recorder. Datum of gage is 733.1 ft (223.45 m) National Geodetic Vertical Datum of 1929. Prior to Aug. 15, 1929, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter periods and periods of doubtful record, Jan. 28 to Mar. 13, which are poor. Water-quality data collected at this site 1965, 1966, 1969, 1971 to 1973, 1976, 1977. Sediment data collected 1969 to 1974.

AVERAGE DISCHARGE.--55 years, 587 ft³/s (16.62 m³/s), 10.30 in/yr (262 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,900 ft³/s (535 m³/s) Jan. 23, 1959, gage height, 22.43 ft (6.837 m), from floodmark; minimum, 1.8 ft³/s (0.051 m³/s) Oct. 31, 1942, during repairs to small dam upstream from station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1937 reached a stage of 22.5 ft (6.86 m), from information by local residents, discharge, 19,000 ft³/s (538 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,200 ft³/s (119 m³/s) and maximums (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 20	----	5000	142	ice	jam	June 22	1700	5630	159	12.31	3.752
June 11	0230	6150	174	12.88	3.926	Sept. 3	0530	7670	217	14.30	4.359
June 15	2230	*14200	402	*19.36	5.901	Sept.19	0900	5500	156	12.17	3.709

Minimum daily discharge, 34 ft³/s (0.96 m³/s) Oct. 15, 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	88	163	45	500	673	204	1940	324	270	113	4940
2	51	74	149	44	470	615	187	1030	259	428	100	6280
3	50	67	166	43	420	490	163	612	227	716	97	7440
4	51	67	170	43	380	392	158	426	236	389	82	7100
5	52	60	154	42	300	341	153	327	184	288	71	5190
6	51	56	133	42	250	324	177	347	172	264	64	2010
7	50	51	120	42	210	316	281	652	163	229	61	964
8	48	48	128	41	200	297	195	916	159	185	61	668
9	46	47	192	41	200	263	165	575	3320	158	62	523
10	42	47	306	41	420	241	136	407	5750	138	58	447
11	41	46	438	41	1200	232	142	1130	6010	145	52	340
12	39	44	384	41	1400	230	712	2310	5290	164	49	263
13	37	43	276	40	2000	220	2460	2410	3950	138	49	212
14	36	44	218	40	1200	208	3220	1650	10800	104	49	191
15	34	45	183	40	660	191	2570	1930	13800	92	56	966
16	34	45	145	40	1400	178	1630	2950	13700	82	58	1200
17	35	45	120	40	2200	171	924	2490	9080	83	55	563
18	38	43	98	40	2700	166	737	1510	3460	77	49	2100
19	40	44	80	40	4000	160	766	826	1110	73	44	5420
20	44	44	70	40	4600	152	715	575	760	101	41	4200
21	55	46	66	41	4000	146	525	449	708	348	40	1890
22	57	47	62	41	3300	136	404	370	4360	564	38	903
23	58	49	60	43	2600	128	353	294	4360	490	37	563
24	54	49	58	48	2500	124	335	256	1820	383	36	391
25	53	49	56	70	1900	120	335	216	2170	215	36	294
26	50	49	54	110	1400	122	300	189	1530	168	36	238
27	51	52	52	200	998	168	246	187	936	136	36	201
28	52	62	50	400	759	202	237	268	555	246	36	172
29	55	110	48	1150	---	237	834	429	396	208	39	155
30	71	185	47	860	---	227	1950	456	314	162	66	145
31	79	---	46	560	---	216	---	420	---	128	2280	---
TOTAL	1507	1746	4292	4349	42167	7686	21214	28547	95903	7172	3951	55969
MEAN	48.6	58.2	138	140	1506	248	707	921	3197	231	127	1866
MAX	79	185	438	1150	4600	673	3220	2950	13800	716	2280	7440
MIN	34	43	46	40	200	120	136	187	159	73	36	145
CFSM	.06	.08	.18	.18	1.95	.32	.91	1.19	4.13	.30	.16	2.41
IN.	.07	.08	.21	.21	2.03	.37	1.02	1.37	4.61	.34	.19	2.69

CAL YR 1980 TOTAL 236823 MEAN 647 MAX 7390 MIN 34 CFSM .84 IN 11.38
WTR YR 1981 TOTAL 274503 MEAN 752 MAX 13800 MIN 34 CFSM .97 IN 13.19

04197020 HONEY CREEK NEAR NEW WASHINGTON, OH

LOCATION.--Lat 40°57'37", long 82°47'19", in SE 1/4, sec. 7, T.22 N., R.20 W., Crawford County, Hydrologic Unit 04100011, on left bank 250 ft (76 m) downstream from State Route 103 bridge and 3.4 mi (5.5 km) east of New Washington.

DRAINAGE AREA.--17 mi² (44.0 km²).

PERIOD OF RECORD.--June 1979 to current year.

GAGE.--Water-stage recorder. Datum of gage is 940.00 ft (286.512 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,810 ft³/s (51.3 m³/s) June 13, 1981, gage height, 20.13 ft (6.136 m), from rating curve extended above 325 ft³/s (9.20 m³/s) on basis of step backwater analysis; minimum, No flow Oct. 17, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 250 ft³/s (7.08 m³/s) and maximums (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 11	0845	250	7.08	13.42	4.090	June 13	2130	*1810	51.3	*20.13	6.136
Apr. 29	0945	325	9.20	14.16	4.316	Sept. 2	0800	982	27.8	17.50	5.334
June 2	0415	504	14.3	15.32	4.670						

Minimum discharge, no flow, Oct. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.30	1.5	9.5	.96	8.0	11	6.7	43	3.4	5.6	.30	6.7
2	.64	1.3	6.9	.94	10	8.2	5.4	21	3.3	4.5	.28	397
3	2.2	1.1	4.9	.94	8.0	6.0	5.1	14	3.3	3.9	.27	100
4	.71	1.1	3.3	.92	5.4	5.4	7.4	10	1.9	3.6	.73	86
5	.40	1.2	3.0	.92	2.9	5.9	14	8.2	2.5	3.5	.57	38
6	.30	1.1	2.6	.90	2.3	6.2	8.4	43	5.7	2.9	.36	20
7	.25	1.0	3.0	.90	1.9	5.6	6.2	19	2.7	2.2	.67	12
8	.17	1.1	6.0	.90	1.6	4.6	5.6	11	15	1.9	.81	13
9	.11	1.0	23	.90	1.5	4.5	4.8	8.0	289	2.5	.56	9.5
10	.08	.94	13	.88	4.6	4.6	3.8	7.1	123	5.0	.77	6.2
11	.04	.86	9.0	.88	40	4.9	16	98	57	2.1	2.3	4.8
12	.04	.71	6.8	.88	25	4.4	127	79	27	1.5	1.0	3.1
13	.02	.71	5.8	.88	12	4.1	61	25	401	1.5	.29	1.8
14	.02	.86	4.5	.88	8.0	3.1	162	23	377	3.7	.23	6.4
15	.01	.94	3.4	.88	10	3.3	57	65	89	1.5	.23	6.1
16	.02	.94	2.5	.90	67	4.6	26	55	48	1.3	.33	2.2
17	.01	.94	2.2	.90	87	4.5	20	19	28	1.0	.25	1.5
18	1.1	1.0	2.0	.90	78	4.2	18	12	21	.78	.15	2.9
19	1.4	.94	1.5	.90	164	3.9	12	8.7	16	.72	.06	9.1
20	1.0	.94	1.3	.90	145	3.8	10	6.7	12	12	.05	3.5
21	.78	.94	1.2	.90	68	3.5	7.6	5.4	12	5.4	.25	1.9
22	.64	.94	1.1	.90	44	3.3	6.9	4.6	75	2.2	.14	1.5
23	.51	.78	1.1	.90	62	3.4	12	3.9	29	1.3	.10	1.1
24	.51	.94	1.1	.90	46	3.3	11	3.5	16	.97	.08	.91
25	1.3	1.7	1.0	1.0	25	3.0	7.6	3.0	107	.80	.19	.82
26	2.0	1.8	1.0	12	16	3.3	6.4	2.4	32	.70	.21	.78
27	1.6	3.7	1.0	30	12	17	5.9	3.1	16	.72	.20	.73
28	3.0	13	1.0	17	14	11	25	7.4	11	1.5	.14	.72
29	4.1	7.1	1.0	10	---	9.1	193	6.9	8.9	1.5	.22	.74
30	2.3	5.2	.98	7.8	---	11	88	4.9	7.5	.87	1.4	.75
31	1.7	---	.98	6.0	---	8.5	---	4.4	---	.56	15	---
TOTAL	27.26	56.28	125.66	105.46	969.2	179.2	939.8	625.2	1840.2	78.22	28.14	739.75
MEAN	.88	1.88	4.05	3.40	34.6	5.78	31.3	20.2	61.3	2.52	.91	24.7
MAX	4.1	13	23	30	164	17	193	98	401	12	15	397
MIN	.01	.71	.98	.88	1.5	3.0	3.8	2.4	1.9	.56	.05	.72
CFSM	.05	.11	.24	.20	2.04	.34	1.84	1.19	3.61	.15	.05	1.45
IN.	.06	.12	.27	.23	2.12	.39	2.06	1.37	4.03	.17	.06	1.62

CAL YR 1980 TOTAL 5656.30 MEAN 15.5 MAX 424 MIN .01 CFSM .91 IN 12.38
WTR YR 1981 TOTAL 5714.37 MEAN 15.7 MAX 401 MIN .01 CFSM .92 IN 12.50

04197100 HONEY CREEK AT MELMORE, OH

LOCATION.--Lat 41°01'20", long 83°06'35", Seneca County, Hydrologic Unit 04100011, at bridge on State Highways 67 and 100 at Melmore, 1.5 mi (2.4 km) upstream from Buckeye Creek.

DRAINAGE AREA.--149 mi² (386 km²).

PERIOD OF RECORD.--Annual maximum, water years 1961-75, February 1976 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 818 ft (250 m) from topographic map.

REMARKS.--Records fair except those for winter periods which are poor. Water-quality data collected at this site 1976 to 1977.

AVERAGE DISCHARGE.--5 years, 138 ft³/s (3.908 m³/s), 12.58 in/yr (320 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,400 ft³/s (125 m³/s) June 13, 1981, gage height, 11.00 ft (3.353 m); minimum discharge 0.58 ft³/s (0.016 m³/s) Sept. 11, 28, 29, 30, 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 1,500 ft³/s (42.5 m³/s) and maximums (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
June 9	0430	3030	85.8	9.48	2.890	June 22	0800	2010	56.9	8.01	2.441
June 13	1730	*4400	125	*11.00	3.353	Sept. 18	0930	2480	70.2	8.72	2.658
June 21	2300	2060	58.3	8.08	2.463						

Minimum daily discharge 2.6 ft³/s (0.07 m³/s) Nov. 19-26, Aug. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.4	12	23	9.4	66	100	43	336	23	56	11	300
2	4.6	9.6	23	9.2	86	84	35	164	19	45	8.6	985
3	5.2	8.2	26	9.0	45	69	29	95	18	38	9.1	1100
4	5.1	7.0	22	9.0	34	58	27	66	16	32	8.2	866
5	5.1	5.9	18	8.8	28	53	28	51	18	27	7.8	567
6	5.1	5.1	16	8.6	24	52	30	62	22	23	7.8	280
7	5.1	5.1	14	8.4	20	48	30	104	24	20	7.4	148
8	4.7	4.7	18	8.2	18	43	24	80	218	16	6.6	93
9	4.4	3.8	72	8.2	21	39	21	53	2240	14	5.9	66
10	3.5	3.5	131	8.0	37	38	20	46	1950	16	5.5	51
11	3.8	3.2	114	7.8	110	38	21	159	1060	22	4.7	39
12	3.8	3.2	66	7.8	180	37	50	319	543	18	4.1	29
13	3.8	3.0	43	7.6	150	35	285	271	1430	14	3.5	23
14	3.8	2.8	34	7.6	120	32	874	195	3490	12	4.4	58
15	4.1	2.8	25	7.8	80	27	878	431	2070	13	4.7	46
16	4.4	2.8	23	7.8	158	25	420	476	1080	12	4.7	51
17	5.5	2.8	19	8.0	530	24	206	354	570	10	4.7	36
18	6.6	3.2	17	8.0	724	23	159	275	305	8.6	4.1	1180
19	7.8	2.6	14	8.0	808	22	120	210	183	7.4	3.2	637
20	6.6	2.6	13	8.0	981	21	85	165	112	40	2.8	283
21	5.9	2.6	11	8.2	898	19	64	145	262	87	2.6	128
22	7.4	2.6	9.1	8.2	567	18	51	115	1690	56	2.8	71
23	8.6	2.6	8.6	8.4	455	17	52	98	1360	27	3.0	49
24	8.6	2.6	9.4	8.8	488	16	56	80	591	18	3.0	39
25	9.6	2.6	9.4	10	339	16	51	62	910	13	3.0	32
26	9.6	2.6	9.4	43	210	16	42	63	1050	11	3.0	27
27	9.6	3.5	9.4	210	139	46	36	66	543	10	3.0	23
28	11	6.2	9.4	140	111	77	35	76	216	14	5.1	19
29	14	25	9.4	100	---	60	229	90	117	62	6.2	18
30	16	28	9.4	80	---	50	488	110	75	29	11	18
31	18	---	9.4	64	---	49	---	31	---	14	158	---
TOTAL	215.7	172.2	834.9	845.8	7427	1252	4489	4848	22205	785.0	319.5	7262
MEAN	6.96	5.74	26.9	27.3	265	40.4	150	156	740	25.3	10.3	242
MAX	18	28	131	210	981	100	878	476	3490	87	158	1180
MIN	3.5	2.6	8.6	7.6	18	16	20	31	16	7.4	2.6	18
CFSM	.05	.04	.18	.18	1.78	.27	1.01	1.05	4.97	.17	.07	1.62
IN.	.05	.04	.21	.21	1.85	.31	1.12	1.21	5.54	.20	.08	1.81

CAL YR 1980 TOTAL 36283.2 MEAN 99.1 MAX 1700 MIN 2.6 CFSM .67 IN 9.06
WTR YR 1981 TOTAL 50656.1 MEAN 139 MAX 3490 MIN 2.6 CFSM .93 IN 12.65

04197300 WOLF CREEK AT BETTSVILLE, OH

LOCATION.--Lat 41°14'58", long 83°14'08", Seneca County, Hydrologic Unit 04100011, at bridge on State Highway 590 at Bettsville, 3.5 mi (5.6 km) upstream from East Branch.

DRAINAGE AREA.--66.2 mi² (171.5 km²).

PERIOD OF RECORD.--Annual maximum, water years 1961-75. February 1976 to current year (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 690 ft (210 m) from topographic map.

REMARKS.--Records fair except those for winter periods, which are poor. Water-quality data collected at this site 1976 to 1977.

AVERAGE DISCHARGE.--5 years, 58.5 ft³/s (1.657 m³/s), 12.00 in/yr (305 mm/yr).

EXTREMES FOR PERIOD OF RECORD.-- Maximum discharge, 4,280 ft³/s (121 m³/s) Feb. 27, 1962, gage height, 8.0 ft (2.438 m); minimum recorded discharge, 0.08 ft³/s (0.002 m³/s) Sept. 29, 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 600 ft³/s (17.0 m³/s), and maximums (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 3	0700	915	25.9	5.61	1.710	June 22	1930	1130	32.0	5.95	1.814
Feb. 20	1100	663	18.8	5.17	1.576	June 25	1430	1100	31.2	5.91	1.801
Apr. 14	1530	903	25.6	5.59	1.704	Sept. 1	0900	1990	56.4	6.99	2.131
June 9	1530	2190	62.0	7.19	2.192	Sept. 15	1030	730	20.7	5.29	1.612
June 14	1600	*2270	64.3	*7.27	2.216	Sept. 19	0400	1680	47.6	6.66	2.030

Minimum daily discharge, 0.42 ft³/s (0.01 m³/s) Aug. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.56	1.4	1.4	2.0	41	50	9.8	101	44	18	2.3	1770
2	.54	1.4	1.5	2.0	50	39	7.8	59	30	14	1.8	1140
3	.54	1.4	1.4	2.0	35	29	7.4	36	24	12	2.1	1180
4	.56	1.4	1.6	2.0	29	25	10	32	19	10	2.4	532
5	.54	1.4	1.6	2.0	24	25	12	30	17	9.5	2.9	236
6	.56	1.4	1.4	1.9	21	23	12	28	23	7.9	2.2	123
7	.54	1.4	1.5	1.9	19	19	9.8	27	29	6.4	2.2	69
8	.51	1.3	3.1	1.9	17	17	8.9	23	37	5.5	2.0	39
9	.53	1.3	9.3	1.8	15	15	9.0	22	1690	4.6	1.6	27
10	.51	1.3	19	1.8	14	15	8.2	22	1330	3.9	1.3	18
11	.49	1.2	18	1.9	60	15	8.8	239	363	3.5	1.4	12
12	.51	1.2	12	1.9	70	15	15	186	145	3.1	1.4	8.7
13	.51	1.1	9.3	1.9	80	14	43	100	365	2.8	1.2	7.2
14	.52	1.2	6.1	1.9	55	11	713	76	1970	2.7	1.1	24
15	.51	1.2	5.4	1.9	32	11	366	221	701	2.4	1.1	449
16	.54	1.2	4.7	1.9	26	11	151	253	158	2.3	1.0	99
17	.59	1.2	4.2	1.9	48	11	97	133	80	2.2	.87	380
18	.88	1.1	3.7	1.9	90	10	104	76	43	2.0	.77	885
19	1.0	1.1	3.3	1.9	289	9.3	80	52	31	1.8	.72	1510
20	1.0	1.0	2.8	1.9	542	8.9	56	31	24	2.9	.63	479
21	1.1	1.1	2.6	2.0	278	8.2	33	29	20	6.2	.54	165
22	1.1	1.1	2.4	2.1	182	7.4	35	23	686	5.3	.48	98
23	1.0	1.1	2.2	2.3	304	6.8	42	20	495	3.8	.42	63
24	.98	1.1	2.1	3.4	240	6.5	38	18	116	2.7	.44	36
25	1.2	1.1	2.0	4.5	144	6.2	31	16	791	2.0	.54	29
26	1.2	1.0	2.0	14	91	6.2	24	13	357	1.8	.54	24
27	1.4	1.2	2.0	87	63	7.4	22	15	103	1.8	.51	86
28	1.7	1.4	2.0	152	58	9.8	25	69	52	3.5	.48	56
29	1.4	1.7	2.0	95	---	10	150	74	30	6.5	.83	30
30	1.3	1.7	2.0	65	---	11	193	59	24	4.3	36	33
31	1.4	---	2.0	46	---	11	---	104	---	3.1	708	---
TOTAL	25.72	37.7	134.6	511.6	2917	463.7	2321.7	2187	9797	158.5	779.77	9607.9
MEAN	.83	1.26	4.34	16.5	104	15.0	77.4	70.5	327	5.11	25.2	320
MAX	1.7	1.7	19	152	542	50	713	253	1970	18	708	1770
MIN	.49	1.0	1.4	1.8	14	6.2	7.4	13	17	1.8	.42	7.2
CFSM	.01	.02	.07	.25	1.57	.23	1.17	1.07	4.94	.08	.38	4.83
IN.	.01	.02	.08	.29	1.64	.26	1.30	1.23	5.51	.09	.44	5.40

CAL YR 1980 TOTAL 14721.52 MEAN 40.2 MAX 970 MIN .38 CFSM .61 IN 8.27
WTR YR 1981 TOTAL 28942.19 MEAN 79.3 MAX 1970 MIN .42 CFSM 1.20 IN 16.26

04197450 EAST BRANCH WOLF CREEK NEAR BETTSVILLE, OH

LOCATION.--Lat 41°15'40", long 83°11'04", in SW 1/4 sec. 31, T.4N., R.15E., Sandusky County, Hydrologic Unit 04100011, on right bank at downstream side of bridge on Gilmore Road, 2.7 mi (4.3 km) northeast of Bettsville, 0.9 mi (1.4 km) upstream from mouth.

DRAINAGE AREA.--82.4 mi² (213 km²).

PERIOD OF RECORD.--February 1976 to current year (discontinued).

REVISED RECORDS.--WRD OH-80-2: Datum.

GAGE.--Water-stage recorder. Datum of gage is 657.67 ft (200.458 m), Sandusky County bench mark.

REMARKS.--Records good except those for winter periods, which are fair. Water-quality data collected at this site 1976 to 1977.

AVERAGE DISCHARGE.--5 years, 96.8 ft³/s (2.741 m³/s), 15.95 in/yr (405 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,890 ft³/s (110 m³/s) Mar. 16, 1978, gage height, 11.09 ft (3.380 m); minimum discharge, 0.12 ft³/s (0.003 m³/s) Aug. 4, 5, 1977, Nov. 13, 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 1,300 ft³/s (36.8 m³/s) and maximums (*).

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
June 10	0030	2260	64.0	9.22	2.810	June 25	1515	1610	45.6	8.35	2.545
June 14	1430	*3400	96.3	*10.58	3.225	Sept. 1	0715	2450	69.4	9.02	2.749
June 23	0415	1350	38.2	8.00	2.438	Sept. 19	0700	3000	85.0	9.58	2.920

Minimum daily discharge, 0.61 ft³/s (0.02 m³/s) Aug. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	4.2	4.0	2.3	24	48	12	123	55	37	8.9	1890
2	2.6	3.2	3.8	2.3	26	40	11	68	36	32	7.5	1160
3	2.9	3.1	3.6	2.2	36	32	9.0	49	29	28	6.4	1520
4	4.1	2.7	4.2	2.2	27	29	8.7	38	23	26	5.1	653
5	3.3	2.8	4.1	2.2	22	27	8.7	31	26	23	4.6	220
6	3.1	2.6	3.7	2.1	19	25	8.7	28	52	22	6.4	114
7	3.9	2.6	3.7	2.1	17	21	9.0	29	62	19	8.2	69
8	1.6	2.6	4.2	2.1	15	17	5.9	26	52	17	6.4	46
9	1.6	2.7	7.5	2.1	14	16	9.0	23	1720	15	5.4	34
10	1.4	2.8	11	2.1	14	15	6.7	22	1690	12	4.3	23
11	1.3	2.7	15	2.1	80	15	7.0	238	475	12	3.8	17
12	1.1	2.5	14	2.1	135	14	9.0	264	161	12	4.0	13
13	.99	2.3	12	2.1	120	14	36	123	336	11	5.1	12
14	1.0	2.8	9.6	2.1	90	13	622	80	2700	9.3	5.1	9.7
15	1.5	3.1	7.6	2.1	69	11	645	289	1170	9.3	4.3	346
16	1.8	2.7	6.4	2.1	45	10	154	421	219	9.3	4.0	96
17	1.4	2.8	5.4	2.1	200	10	92	181	113	9.3	3.3	265
18	2.2	3.1	4.5	2.1	260	9.8	13	92	71	8.5	2.5	1050
19	2.4	3.1	3.8	2.2	270	9.8	87	64	51	8.2	2.2	2680
20	2.4	2.9	3.3	2.2	421	9.4	58	46	39	8.9	1.8	683
21	2.6	2.9	2.8	2.2	241	9.0	43	34	33	11	1.7	187
22	2.5	2.6	2.4	2.2	143	9.0	34	28	629	12	1.7	110
23	2.4	2.6	2.3	2.3	213	8.7	37	25	893	11	2.2	75
24	2.4	2.4	2.3	2.4	198	7.7	38	23	167	9.3	2.3	55
25	3.8	2.4	2.3	2.8	114	7.0	32	20	1050	8.5	1.3	41
26	2.9	2.4	2.3	8.7	78	7.0	25	18	617	7.5	.84	34
27	2.5	2.8	2.3	62	61	7.0	21	17	141	7.5	.61	48
28	3.1	3.0	2.3	102	54	9.8	21	42	78	8.9	.68	50
29	4.2	4.1	2.4	87	---	15	147	69	52	9.3	1.2	31
30	4.6	4.3	2.4	56	---	14	302	65	39	9.3	147	28
31	3.3	---	2.4	35	---	14	---	105	---	9.7	516	---
TOTAL	77.49	86.8	157.6	405.5	3006	494.2	2511.7	2681	12779	432.8	774.83	11559.7
MEAN	2.50	2.89	5.08	13.1	107	15.9	83.7	86.5	426	14.0	25.0	385
MAX	4.6	4.3	15	102	421	48	645	421	2700	37	516	2680
MIN	.99	2.3	2.3	2.1	14	7.0	5.9	17	23	7.5	.61	9.7
CFSM	.03	.04	.06	.16	1.30	.19	1.02	1.05	5.17	.17	.30	4.67
IN.	.03	.04	.07	.18	1.36	.22	1.13	1.21	5.77	.20	.35	5.22

CAL YR 1980 TOTAL 17334.09 MEAN 47.4 MAX 1350 MIN .99 CFSM .58 IN 7.83
WTR YR 1981 TOTAL 34966.62 MEAN 95.8 MAX 2700 MIN .61 CFSM 1.16 IN 15.79

04198000 SANDUSKY RIVER NEAR FREMONT, OH
(National stream quality accounting network station)

LOCATION.--Lat 41°18'28", long 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 (3.7 km) upstream from Ballville diversion dam, 2.5 mi (4.0 km) downstream from Wolf Creek, and 3.5 mi (5.6 km) southwest of Fremont.

DRAINAGE AREA.--1,251 mi² (3,240 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1898 to March 1901 (gage height and discharge measurements only, published at "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 (190.90 m) National Geodetic Vertical Datum, adjustment of 1912. Nov. 18, 1898, to Mar. 10, 1901, nonrecording gage at site 4 mi (6 km) downstream at different datum. Nov. 8, 1923, to Sept. 5, 1930, nonrecording gage at present site and datum.

REMARKS.--Records good except those for winter periods, which are poor.

AVERAGE DISCHARGE.--55 years (1923-35, 1938-81), 974 ft³/s (27.58 m³/s), 10.58 in/yr (269 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,500 ft³/s (1034 m³/s) Mar. 16, 1978 gage height, 13.57 ft (4.136 m); maximum gage height, 16.14 ft (4.919 m) Feb. 24, 1979, (ice jam); minimum discharge, 4.4 ft³/s (0.12 m³/s) Feb. 29, 1964 (result of freezeup); minimum gage height, 0.78 ft (0.238 m) Oct. 20, 1963.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 7,000 ft³/s (198 m³/s) and maximums(*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Jan. 29	1600	ice	jam	5.32	1.622	June 14	1930	*25200	714	*10.61	3.234
Feb. 12	1000	ice	jam	6.70	2.042	June 22	2330	12900	365	6.95	2.118
Feb. 17	2300	ice	jam	8.95	2.728	June 25	1800	10400	295	6.10	1.859
Feb. 20	0330	8640	245	5.47	1.667	Sept. 3	0800	13700	388	7.21	2.198
Apr. 14	2000	8780	249	5.52	1.682	Sept. 19	0730	15900	450	7.88	2.402
June 9	1930	15400	436	7.75	2.362						

Minimum daily discharge, 37 ft³/s (1.05 m³/s) Aug. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	86	115	245	80	780	1030	346	3530	542	542	184	10300
2	80	128	217	79	720	896	314	2140	466	455	159	11700
3	79	112	205	78	660	756	279	1200	396	766	141	13300
4	77	99	227	77	540	633	266	791	353	696	144	11900
5	74	100	216	76	420	555	256	597	346	483	132	8720
6	75	89	200	75	310	513	247	560	483	396	110	4480
7	75	85	185	74	250	481	319	683	389	361	106	1980
8	71	79	174	73	210	455	352	1250	360	305	103	1260
9	67	73	216	72	170	422	281	992	11000	258	100	868
10	64	69	417	72	500	384	245	673	13900	236	94	694
11	59	70	613	71	1200	365	237	1730	10000	213	106	565
12	56	69	649	70	3200	360	298	3860	7840	214	107	448
13	55	60	489	70	2200	343	2490	3930	6170	223	77	369
14	54	69	371	69	1200	323	7110	3010	21400	209	74	326
15	55	73	299	69	1000	301	6440	3530	21800	193	72	1650
16	49	71	255	68	1700	281	3690	5150	18600	185	80	1970
17	44	71	200	68	4000	267	2060	4340	14600	179	81	1800
18	56	74	170	68	4200	253	1550	2830	6550	175	78	5250
19	58	74	150	68	5830	241	1390	1530	2260	172	65	14600
20	54	72	135	68	8060	233	1240	992	1350	170	64	8540
21	56	66	125	68	6970	221	936	706	1000	267	49	4040
22	65	76	115	68	5380	210	695	560	7710	748	49	1960
23	70	77	110	68	4090	199	625	466	10500	636	60	1170
24	74	74	105	70	4170	188	597	404	4820	569	45	771
25	84	75	100	75	3700	182	560	353	7730	396	37	585
26	83	78	95	150	2550	180	516	306	6050	266	43	480
27	72	83	91	350	1710	206	442	306	2890	213	53	520
28	74	94	88	1100	1250	309	419	419	1580	213	43	459
29	84	105	86	1900	---	373	1130	634	954	324	53	348
30	80	165	84	1300	---	401	3580	730	677	302	374	329
31	92	---	82	800	---	365	---	829	---	231	2800	---
TOTAL	2122	2545	6714	7394	66970	11926	38910	49031	182716	10596	5683	111382
MEAN	68.5	84.8	217	239	2392	385	1297	1582	6091	342	183	3713
MAX	92	165	649	1900	8060	1030	7110	5150	21800	766	2800	14600
MIN	44	60	82	68	170	180	237	306	346	170	37	326
CFSM	.06	.07	.17	.19	1.91	.31	1.04	1.27	4.87	.27	.15	2.97
IN.	.06	.08	.20	.22	1.99	.35	1.16	1.46	5.43	.32	.17	3.31

CAL YR 1980 TOTAL 390884 MEAN 1068 MAX 15000 MIN 44 CFSM .85 IN 11.62
WTR YR 1981 TOTAL 495989 MEAN 1359 MAX 21800 MIN 37 CFSM 1.09 IN 14.75

04198000 SANDUSKY RIVER NEAR FREMONT, OH--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1950-56, 1978 to current year.

PERIOD OF DAILY RECORD.--
SUSPENDED SEDIMENT DISCHARGE: Water years 1950-1956, 1979 to current year.

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 1952-1956, and Jan. 10, 1980.
SEDIMENT LOADS: Maximum daily, 124,000 tons (112,000 tonnes) June 14, 1981; minimum daily, less than 0.05 ton (.045 tonne) on several days during 1952 and 1954.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,420 mg/L June 9; minimum daily mean, 2 mg/L Dec. 5, 7.
SEDIMENT LOADS: Maximum daily, 124,000 tons (112,000 tonnes) June 14; minimum daily, 0.52 tons (0.47 tonnes) Nov. 25.

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT					
06...	1145	74	13.0	18	3.6
DEC					
09...	1120	212	6.0	9	5.2
FEB					
11...	1130	1200	.5	113	366
APR					
14...	1130	8200	12.0	540	12000
JUN					
09...	1121	12400	20.0	1770	59300
AUG					
05...	1630	129	28.5	54	19

04198000 SANDUSKY RIVER NEAR FREMONT, OH--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT										
06...	1145	74	740	8.5	13.0	4.8	10.6	100	--	33
DEC										
09...	1120	212	870	8.0	6.0	2.1	12.6	100	100	670
FEB										
11...	1130	1200	530	7.8	.5	14	12.7	88	61	1400
APR										
14...	1130	8200	490	8.0	12.0	32	9.2	85	74	980
JUN										
09...	1121	12400	320	7.6	20.0	230	8.0	87	130	580
AUG										
05...	1630	129	555	8.7	28.5	23	15.0	190	32	110

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT										
06...	50	300	140	69	30	26	5.0	160	39	.5
DEC										
09...	240	320	100	86	26	32	5.2	140	59	.4
FEB										
11...	7000	200	180	57	13	17	4.9	73	35	.3
APR										
14...	5300	230	140	63	18	16	4.2	62	30	.3
JUN										
09...	47000	140	64	38	10	8.1	6.0	31	12	.3
AUG										
05...	680	220	130	46	25	19	4.1	120	33	.4

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHYTO-PLANK-TON, TOTAL (CELLS PER ML)
OCT										
06...	.0	487	426	1.1	1.10	1.2	5.1	.110	--	62000
DEC										
09...	.9	552	490	.56	.64	2.5	11	.140	5.1	5400
FEB										
11...	5.0	350	297	1.7	2.50	7.0	31	.460	11	--
APR										
14...	8.5	328	307	3.8	4.10	11	47	.230	--	5900
JUN										
09...	7.3	254	189	1.7	2.70	9.6	43	2.90	--	2900
AUG										
05...	.9	348	303	1.1	1.10	1.5	6.8	.120	--	390000

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)
OCT									
06...	1145	2	2	100	70	0	0	10	10
APR									
14...	1130	2	2	250	50	1	1	20	<10
JUN									
09...	1121	1	0	400	30	2	2	70	10
AUG									
05...	1630	2	2	100	30	1	1	10	10

04198000 SANDUSKY RIVER NEAR FREMONT, OH--Continued

DATE	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)
OCT									
06...	0	0	9	4	510	10	1	1	100
APR									
14...	7	0	17	6	13000	80	23	0	360
JUN									
09...	22	--	54	--	61000	1600	60	--	1200
AUG									
05...	1	<1	8	8	1200	10	6	--	90

DATE	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY DIS-SOLVED (UG/L AS HG)	SELE-NIUM, TOTAL (UG/L AS SE)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT									
06...	5	.3	.3	0	0	--	--	40	10
APR									
14...	20	.2	.2	1	1	0	0	90	10
JUN									
09...	40	.1	<.1	1	0	0	--	280	90
AUG									
05...	3	5.1	3.4	<1	<1	<1	<1	30	7

04198000 SANDUSKY RIVER NEAR FREMONT, OH--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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	86	30	7.0	115	12	3.9	245	12	7.6
2	80	31	6.8	128	14	4.7	217	6	3.7
3	79	29	6.2	112	15	4.4	205	3	1.9
4	77	24	5.1	99	13	3.5	227	4	2.3
5	74	23	4.5	100	12	3.1	216	2	1.4
6	75	18	3.6	89	14	3.3	200	3	1.5
7	75	16	3.2	85	16	3.8	185	2	1.1
8	71	16	3.1	79	15	3.1	174	4	1.7
9	67	19	3.5	73	12	2.5	216	8	4.8
10	64	20	3.5	69	10	1.9	417	27	32
11	59	21	3.3	70	8	1.4	613	24	40
12	56	19	2.8	69	6	1.1	649	19	33
13	55	17	2.6	60	6	1.0	489	15	21
14	54	18	2.6	69	7	1.3	371	12	12
15	55	18	2.7	73	5	.91	299	9	7.0
16	49	18	2.4	71	5	1.0	255	7	4.9
17	44	19	2.3	71	4	.85	200	5	3.5
18	56	20	3.0	74	5	.94	170	4	2.2
19	58	18	2.9	74	6	1.1	150	4	3.3
20	54	15	2.2	72	4	.85	135	4	13
21	56	15	2.3	66	5	.84	125	4	10
22	65	14	2.5	76	5	.99	115	4	7.2
23	70	12	2.3	77	3	.70	110	4	5.3
24	74	12	2.4	74	4	.76	105	4	1.1
25	84	12	2.7	75	3	.52	100	4	1.1
26	83	10	2.2	78	3	.58	95	4	1.0
27	72	10	1.9	83	4	.87	91	4	.98
28	74	10	2.0	94	4	1.0	88	4	.95
29	84	10	2.3	105	3	.92	86	4	.93
30	80	10	2.2	165	6	2.7	84	4	.91
31	92	11	2.8	---	---	---	82	4	.89
TOTAL	2122	---	98.9	2545	---	54.53	6714	---	228.26
		JANUARY			FEBRUARY			MARCH	
1	80	4	.86	780	22	46	1030	21	58
2	79	4	.85	720	21	41	896	18	44
3	78	4	.84	660	32	57	756	14	29
4	77	4	.83	540	46	67	633	11	18
5	76	4	.82	420	41	46	555	10	14
6	75	4	.81	310	33	28	513	8	10
7	74	4	.80	250	28	19	481	8	10
8	73	4	.79	210	26	15	455	8	9.5
9	72	4	.78	170	26	12	422	6	7.3
10	72	4	.78	500	23	31	384	7	7.8
11	71	4	.77	1200	130	421	365	11	11
12	70	4	.76	3200	300	2590	360	15	14
13	70	4	.76	2200	230	1370	343	18	17
14	69	4	.74	1200	113	366	323	23	20
15	69	4	.74	1000	120	320	301	26	21
16	68	4	.73	1700	81	372	281	22	17
17	68	4	.73	4000	273	2950	267	28	20
18	68	4	.73	4200	335	3800	253	22	15
19	68	4	.73	5830	397	6290	241	17	11
20	68	4	.73	8060	442	9620	233	19	12
21	68	4	.73	6970	307	5820	221	11	6.4
22	68	4	.73	5380	163	2420	210	11	6.5
23	68	4	.73	4090	90	995	199	11	5.9
24	70	4	.76	4170	68	769	188	12	6.0
25	75	4	.81	3700	57	574	182	13	6.3
26	150	4	1.6	2550	47	328	180	14	6.9
27	350	4	3.8	1710	32	148	206	16	9.1
28	1100	10	30	1250	25	84	309	26	22
29	1900	20	103	---	---	---	373	32	32
30	1300	40	140	---	---	---	401	40	44
31	800	30	65	---	---	---	365	34	33
TOTAL	7394	---	362.74	66970	---	39599	11926	---	543.7

04198000 SANDUSKY RIVER NEAR FREMONT, OH--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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	346	41	38	3530	234	2180	542	55	90
2	314	41	35	2140	172	983	466	71	104
3	279	36	27	1200	114	354	396	61	78
4	266	34	24	791	87	172	353	53	61
5	256	31	22	597	73	109	346	87	109
6	247	27	18	560	67	94	483	117	176
7	319	41	37	683	63	108	389	88	110
8	352	43	41	1250	71	227	360	825	1650
9	281	25	19	992	58	144	11000	2420	64700
10	245	23	15	673	35	60	13900	1220	46700
11	237	25	16	1730	109	612	10000	709	19500
12	298	34	31	3860	244	2470	7840	485	10400
13	2490	147	1110	3930	306	3140	6170	611	12700
14	7110	452	8950	3010	221	1720	21400	2230	124000
15	6440	300	5390	3530	152	1380	21800	970	58100
16	3690	158	1600	5150	182	2460	18600	668	33700
17	2060	96	537	4340	178	2010	14600	382	15300
18	1550	78	321	2830	135	994	6550	274	4920
19	1390	71	261	1530	83	323	2260	219	1380
20	1240	58	188	992	62	166	1350	150	552
21	936	47	115	706	53	101	1000	128	347
22	695	49	87	560	53	80	7710	1540	44600
23	625	47	76	466	77	97	10500	1180	34900
24	597	43	66	404	72	78	4820	598	8190
25	560	35	50	353	72	69	7730	1130	25400
26	516	33	44	306	74	61	6050	711	12300
27	442	47	54	306	76	63	2890	344	2780
28	419	62	66	419	78	88	1580	185	811
29	1130	124	519	634	85	145	954	114	298
30	3580	257	2410	730	79	156	677	90	166
31	---	---	---	829	68	152	---	---	---
TOTAL	38910	---	22167	49031	---	20796	182716	---	524122
		JULY			AUGUST			SEPTEMBER	
1	542	86	126	184	43	21	10300	539	14900
2	455	86	106	159	46	20	11700	374	11700
3	766	119	251	141	36	14	13300	250	9010
4	696	96	183	144	50	19	11900	184	5940
5	483	110	143	132	53	19	8720	141	3330
6	396	103	110	110	55	16	4480	107	1330
7	361	93	91	106	61	18	1980	71	393
8	305	81	67	103	58	16	1260	48	163
9	258	64	45	100	58	16	868	45	104
10	236	64	41	94	52	13	694	67	126
11	213	26	15	106	51	14	565	37	56
12	214	32	18	107	44	13	448	30	37
13	223	36	22	77	39	8.1	369	31	31
14	209	35	20	74	32	6.3	326	35	31
15	193	35	18	72	28	5.4	1650	247	1170
16	185	33	17	80	26	5.6	1970	127	677
17	179	31	15	81	24	5.3	1800	137	674
18	175	36	17	78	21	4.3	5250	241	3790
19	172	37	17	65	18	3.1	14600	237	9450
20	170	68	32	64	18	3.1	8540	149	3500
21	267	115	85	49	19	2.5	4040	113	1250
22	748	148	298	49	19	2.6	1960	67	358
23	636	86	148	60	23	3.8	1170	53	169
24	569	86	132	45	28	3.5	771	40	83
25	396	85	90	37	27	2.7	585	33	52
26	266	69	50	43	22	2.6	480	27	35
27	213	63	36	53	22	3.1	520	29	41
28	213	74	43	43	29	3.3	459	32	40
29	324	88	77	53	36	5.2	348	25	24
30	302	74	61	374	159	195	329	22	20
31	231	56	35	2800	495	4930	---	---	---
TOTAL	10596	---	2409	5683	---	5394.5	111382	---	68485
YEAR	495989		684260.63						

04199000 HURON RIVER AT MILAN, OH

LOCATION.--Lat 41°18'04", long 82°36'36", 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 (0.3 km) northwest of Milan and 2.0 mi (3.2 km) downstream from confluence of East and West Branches.

DRAINAGE AREA.--371 mi² (961 km²).

PERIOD OF RECORD.--March 1950 to current year (discontinued).

REVISED RECORDS.--WSP 1912: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 573.26 ft (174.730 m) National Geodetic Vertical Datum of 1929. July 29, 1953 to Oct. 5, 1979, water-stage recorder at site of former highway bridge 500 ft (152 m) downstream at same datum. July 29, 1953, nonrecording gage at site of former highway 450 ft (137 m) downstream at same datum.

REMARKS.--Records fair. Water-quality data collected at this site 1969 to 1974, 1978 to 1980. Sediment data collected 1970 to 1974.

AVERAGE DISCHARGE.--31 years, 300 ft³/s (8.496 m³/s), 10.98 in/yr (279 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,600 ft³/s (1,400 m³/s) July 5, 1969, gage height, 31.1 ft (9.48 m) (from floodmark), from rating curve extended above 11,000 ft³/s (312 m³/s) on basis of contracted-opening measurement of peak flow; minimum, 2.2 ft³/s (0.062 m³/s) Sept. 10, 15, 19, 20, 21, 1955.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,680 ft³/s (161 m³/s) June 25, gage height, 16.19 ft (4.935 m), above base of 4,700 ft³/s (133 m³/s); minimum daily discharge 16 ft³/s (0.45 m³/s) Oct. 11, 12, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	29	61	32	520	265	115	637	100	61	57	230
2	31	27	61	32	700	235	96	379	84	50	108	980
3	34	27	50	32	450	189	89	267	73	56	63	1070
4	32	26	43	32	300	151	91	207	187	44	45	692
5	30	28	39	32	200	142	37	175	104	41	35	362
6	29	23	49	31	160	138	52	195	115	37	31	199
7	27	22	41	31	120	127	74	228	350	35	30	149
8	24	21	45	30	96	119	43	175	1100	33	30	119
9	21	20	117	30	94	115	31	134	1600	31	30	84
10	18	20	228	30	130	115	26	123	1000	66	50	65
11	16	20	217	30	260	110	60	335	450	247	125	52
12	16	21	138	30	620	110	123	893	600	151	80	49
13	16	21	76	30	430	106	352	578	6000	71	54	43
14	17	20	52	30	300	100	2580	369	4000	44	45	61
15	18	20	41	30	200	93	1480	917	1320	34	40	56
16	18	22	38	29	370	96	621	874	803	35	41	61
17	19	23	35	29	620	94	439	506	498	36	34	57
18	29	23	33	29	1100	91	463	312	340	57	32	123
19	26	23	32	29	1900	89	369	230	263	149	29	387
20	29	22	31	29	3060	89	265	170	207	78	28	167
21	29	22	31	29	1650	87	197	123	175	52	27	87
22	27	23	32	30	886	82	156	102	1390	39	27	63
23	26	25	33	31	825	21	170	93	1650	34	27	49
24	36	27	33	32	867	19	195	93	481	32	27	43
25	41	29	33	60	590	20	177	87	3270	52	27	39
26	29	37	33	200	416	50	142	23	2110	39	26	38
27	29	45	32	900	321	108	115	28	554	32	29	48
28	34	48	32	1400	286	219	165	115	333	30	27	38
29	30	69	32	600	---	163	1720	119	197	29	26	35
30	30	71	32	290	---	138	1330	134	40	27	33	37
31	30	---	32	220	---	151	---	129	---	26	63	---
TOTAL	820	854	1782	4399	17471	3632	11773	8750	29394	1748	1326	5483
MEAN	26.5	28.5	57.5	142	624	117	392	282	980	56.4	42.8	183
MAX	41	71	228	1400	3060	265	2580	917	6000	247	125	1070
MIN	16	20	31	29	94	19	26	23	40	26	26	35
CFSM	.07	.08	.16	.38	1.68	.32	1.06	.76	2.64	.15	.12	.49
IN.	.08	.09	.18	.44	1.75	.36	1.18	.88	2.95	.18	.13	.55

CAL YR 1980 TOTAL 94552 MEAN 258 MAX 3180 MIN 16 CFSM .70 IN 9.48
WTR YR 1981 TOTAL 87432 MEAN 240 MAX 6000 MIN 16 CFSM .65 IN 8.77

04199160 OLD WOMAN'S CREEK ABOVE U.S. 6 AT HURON, OH

LOCATION.--Lat 41°22'37", long 82°30'37", Erie County, Hydrologic Unit 04100012, about 0.5 mi (0.8 km) south of bridge on U.S. Highway 6 and State Highway 2, 0.75 mi (1.2 km) east of Huron.

DRAINAGE AREA>--26.3 mi² (681 km²).

PERIOD OF RECORD.--May 1980 to current year.

GAGE.--Water-stage recorder. Datum of gage is 560.00 ft (170.688 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Interruptions in record are due to malfunctions of the instruments.

EXTREMES FOR PERIOD OF RECORD.--Maximum recorded gage height, 15.65 ft (4.770 m) May 13, 1981; minimum recorded gage height, 12.08 ft (3.682 m) March 17, 1981.

EXTREMES FOR PERIOD May to September 1980.--Maximum recorded gage height, 14.90 ft (4.542 m) Aug. 13; minimum recorded gage height 13.55 ft (4.130 m) Sept. 17.

EXTREMES FOR CURRENT YEAR.--Maximum recorded gage height, 15.65 ft (4.770 m) May 13; minimum recorded gage height, 12.08 ft (3.682 m) March 17.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								---		---	14.47	---
2								---		---	14.19	---
3								---		---	14.06	---
4								---		---	13.99	---
5								---		---	14.19	---
6								---		---	14.24	13.97
7								---		---	14.20	14.07
8								---		---	14.08	14.17
9								---		---	14.39	14.18
10								---		---	14.47	14.34
11								---		14.52	14.48	14.70
12								---		14.50	14.42	14.78
13								---		14.50	14.82	14.83
14								---		14.47	14.89	14.85
15								13.99		14.43	14.45	14.71
16								14.00		14.41	13.99	14.03
17								14.06		14.52	14.13	13.68
18								14.08		14.54	14.14	13.67
19								13.98		14.53	14.02	13.69
20								14.01		14.57	14.13	13.72
21								14.22		14.79	---	13.74
22								---		---	---	13.74
23								---		---	---	13.74
24								---		---	---	13.73
25								---		---	---	---
26								---		---	---	---
27								---		---	---	---
28								---		---	---	---
29								---		---	---	---
30								---		---	---	---
31								---		14.84	---	---
MEAN								---		---	---	---
MAX								---		---	---	---
MIN								---		---	---	---

04199160 OLD WOMAN'S CREEK ABOVE U.S. 6 AT HURON, OH--Continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	14.27	15.51	---	12.77		13.52	---	---	---	14.18
2	---	---	14.35	15.51	---	12.76		13.45	---	14.07	---	14.20
3	---	---	14.36	15.50	---	12.88		13.34	---	13.88	---	14.23
4	---	---	14.38	---	---	12.81		13.26	13.89	13.81	---	14.24
5	---	---	14.41	---	---	13.21		14.08	13.98	13.82	---	14.26
6	---	---	14.43	---	---	12.93		14.12	14.01	13.81	---	14.26
7	---	13.85	14.48	---	---	12.91		13.79	13.72	13.78	---	14.24
8	13.73	13.87	14.56	---	---	12.86		13.91	---	13.82	---	14.23
9	13.73	13.87	14.80	---	---	12.82		14.13	---	13.92	---	14.21
10	13.73	13.84	15.08	---	---	12.83		14.53	---	13.90	---	14.20
11	13.74	13.84	15.23	---	---	12.88		14.82	13.39	13.87	---	14.19
12	13.73	13.85	15.32	---	---	12.54		15.08	13.55	13.96	---	14.40
13	13.75	13.86	15.36	---	---	12.90		14.97	13.75	13.98	---	14.55
14	13.79	13.86	15.39	---	---	13.00		13.58	13.55	13.99	---	14.65
15	13.69	13.87	15.42	---	---	12.38		13.78	13.54	13.76	---	14.67
16	13.77	13.88	15.44	---	---	13.51		13.68	13.66	13.94	---	14.72
17	13.75	13.89	15.45	---	---	12.81		13.38	13.59	14.02	---	14.76
18	13.79	13.91	15.46	---	---	12.90		13.31	13.95	---	---	14.76
19	13.69	13.93	15.46	---	---	13.03		13.38	13.80	---	---	14.75
20	13.81	13.92	15.39	---	---	12.78		13.38	13.80	---	14.14	14.75
21	13.82	13.94	15.28	---	---	12.99		13.37	13.83	---	14.12	14.73
22	13.83	13.94	15.41	---	12.73	13.12		13.34	13.67	---	14.09	14.71
23	13.74	13.95	15.41	---	12.62	13.07		13.74	14.02	---	14.07	14.71
24	13.84	13.97	15.43	---	12.52	---		13.53	13.83	---	14.05	14.73
25	---	13.97	14.93	---	12.71	---		13.45	13.80	---	14.03	14.71
26	---	13.98	15.42	---	12.93	---		13.65	13.70	---	14.02	14.70
27	---	14.02	15.42	---	12.89	---		13.64	14.06	---	14.01	14.70
28	---	14.12	15.41	---	12.65	---		13.75	---	---	14.03	---
29	---	14.19	15.44	---	---	---		---	---	---	14.05	---
30	---	14.25	15.46	---	---	---		---	---	---	14.06	---
31	---	---	15.48	---	---	---		---	---	---	14.13	---
MEAN	---	---	15.10	---	---	---		---	---	---	---	---
MAX	---	---	15.48	---	---	---		---	---	---	---	---
MIN	---	---	14.27	---	---	---		---	---	---	---	---

04199165 OLD WOMAN'S CREEK AT U.S. 6 AT HURON, OH

LOCATION.--Lat 41°22'51", long 82°30'53", Erie County, Hydrologic Unit 04100012, on left bank at U.S. Highway 6 and State Highway 2 bridge, 0.75 mi (1.2 km) east of Huron.

DRAINAGE AREA.--26.5 mi² (68.6 km²).

PERIOD OF RECORD.--May 1980 to current year.

GAGE.--Water-stage recorder. Datum of gage is 560.00 ft (170.688 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Interruptions in record are due to malfunctions of the instruments.

EXTREMES FOR PERIOD OF RECORD.--Maximum recorded gage height, 15.86 ft (4.834 m) Jan. 26, 1981; minimum recorded gage height, 11.19 ft (3.411 m) February 8, 1981.

EXTREMES FOR PERIOD May-September 1980.--Maximum recorded gage height, 15.13 ft (4.612 m) June 16; minimum recorded gage height 13.54 (4.137 m) Sept. 25.

EXTREMES FOR CURRENT YEAR.--Maximum recorded gage height, 15.86 ft (4.834 m) January 26; minimum recorded gage height, 11.19 ft (3.411 m) February 8.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									---	14.40	14.78	---
2									---	14.37	---	---
3									---	14.37	---	---
4									---	14.36	---	---
5									14.17	14.37	---	---
6									14.25	14.42	---	13.92
7									14.32	14.43	---	13.98
8									14.89	14.43	---	13.99
9									14.44	14.43	---	14.00
10									14.46	14.46	---	14.12
11									14.39	14.47	---	14.13
12									14.41	14.47	---	14.13
13									14.28	14.47	---	14.14
14									14.12	14.46	---	14.39
15									14.17	14.45	---	14.63
16									15.03	14.43	---	14.68
17									14.99	14.43	---	14.73
18									14.63	14.41	---	14.76
19									14.34	14.40	---	14.77
20									14.36	14.38	---	14.79
21									14.41	14.36	---	14.80
22									14.44	14.40	---	14.79
23									14.45	14.48	---	14.24
24									14.46	14.49	---	13.93
25									14.46	14.49	---	13.68
26									14.46	14.46	---	13.60
27									14.46	14.45	---	13.62
28									14.44	14.52	---	13.63
29									14.42	14.71	---	13.63
30									14.40	14.75	---	13.64
31									---	14.81	---	---
MEAN									---	14.46	---	---
MAX									---	14.81	---	---
MIN									---	14.36	---	---

04199165 OLD WOMAN'S CREEK AT U.S. 6 AT HURON, OH--Continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.65	---	14.20	15.39	11.81	12.58	12.61	13.43	13.62	14.21	13.72	14.09
2	13.65	---	14.25	15.40	11.57	12.53	12.69	13.59	13.71	14.12	13.46	14.13
3	13.67	---	14.26	15.41	11.38	12.65	12.56	13.31	13.80	13.96	13.54	14.17
4	13.67	---	14.28	15.41	11.70	12.60	12.36	13.32	13.83	13.86	13.54	14.22
5	13.66	---	14.31	15.40	11.79	12.99	12.53	13.26	13.94	13.82	13.61	14.23
6	13.66	---	14.34	15.40	11.60	12.71	12.68	14.16	13.99	13.83	13.63	14.25
7	13.67	13.77	14.39	15.42	11.84	12.66	12.68	14.22	14.02	13.82	13.63	14.27
8	13.68	13.76	14.46	15.41	11.52	12.66	12.56	13.79	13.61	13.80	13.56	14.29
9	13.67	13.77	14.68	15.40	11.68	12.62	12.62	13.84	13.71	13.79	13.51	14.29
10	13.67	13.74	14.96	15.40	11.98	12.61	12.73	13.94	13.42	13.91	13.52	14.29
11	13.69	13.74	15.12	15.39	11.85	12.65	12.74	14.17	13.49	13.92	13.56	14.28
12	13.70	13.74	15.22	15.38	11.73	12.32	13.61	14.51	13.51	13.91	13.59	14.27
13	13.72	13.77	15.26	15.38	11.97	12.69	13.31	14.77	13.62	13.90	13.48	14.26
14	13.76	13.77	15.29	15.38	11.99	12.70	13.40	14.94	13.74	13.98	13.49	14.24
15	---	13.77	15.31	15.38	12.01	12.18	13.13	15.31	13.54	14.01	13.48	14.22
16	---	13.78	15.34	15.38	11.96	13.26	12.93	14.13	13.54	14.01	13.81	14.23
17	---	13.79	15.35	15.38	12.08	12.55	12.87	13.61	13.66	14.00	14.17	14.48
18	---	13.81	15.36	15.38	12.12	12.67	13.00	13.78	13.66	13.98	14.18	14.57
19	---	13.83	15.35	15.38	12.20	12.78	13.10	13.71	13.68	13.96	14.16	14.68
20	---	13.84	15.34	15.38	12.56	12.53	13.64	13.41	14.05	14.02	14.16	14.70
21	---	13.84	15.33	15.38	12.38	12.77	13.45	13.30	13.79	14.24	14.15	14.74
22	---	13.85	15.31	15.38	12.52	12.90	13.36	13.28	13.74	14.61	14.12	14.76
23	---	13.86	15.31	15.39	12.43	12.82	13.37	13.38	13.89	14.66	14.12	14.75
24	---	13.87	15.33	15.39	12.30	12.68	13.35	13.37	13.80	14.66	14.10	14.74
25	---	---	15.32	15.42	12.51	12.73	13.57	13.34	13.74	14.66	14.08	14.74
26	---	---	15.32	15.56	12.72	12.66	13.75	13.33	14.01	14.68	14.07	14.74
27	---	---	15.31	12.39	12.69	12.76	13.89	13.48	13.82	14.68	14.05	14.75
28	---	14.03	15.31	11.93	12.46	12.75	13.81	13.78	13.81	14.70	14.05	---
29	---	14.10	15.33	11.88	---	12.60	13.55	13.44	13.72	14.77	14.05	---
30	---	14.17	15.35	11.97	---	12.63	13.33	13.43	13.80	14.79	14.08	---
31	---	---	15.37	11.94	---	12.74	---	13.67	---	14.53	14.09	---
MEAN	---	---	15.02	14.85	12.05	12.68	13.11	13.77	13.74	14.19	13.83	---
MAX	---	---	15.37	15.56	12.72	13.26	13.89	15.31	14.05	14.79	14.18	---
MIN	---	---	14.20	11.88	11.38	12.18	12.36	13.26	13.42	13.79	13.46	---

04199170 LAKE ERIE AT HURON, OH

LOCATION.--Lat 41°23'09", long 82°30'49", Erie County, Hydrologic Unit 04100012, about 600 ft (183 m) off shore of mouth of Old Woman's Creek, 0.75 mi (1.2 km) east of Huron.

PERIOD OF RECORD.--May 1980 to current year.

GAGE.--Water-stage recorder. Datum of gage is 560.00 ft (170.688 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Interruptions in record are due to malfunctions of the instruments.

EXTREMES FOR PERIOD OF RECORD.--Maximum recorded gage height, 18.03 ft (5.496 m) July 29, 1981; minimum recorded gage height, 4.88 ft (1.487 m) Jan. 8, 9, 1981.

EXTREMES FOR PERIOD May-September 1980.--Maximum recorded gage height 15.06 ft (4.590 m) Sept. 13; minimum recorded gage height 12.64 ft (3.853 m) Sept. 26.

EXTREMES FOR CURRENT YEAR.--Maximum recorded gage height, 18.03 ft (5.496 m) July 29; minimum recorded gage height, 4.88 ft (1.487 m) Jan. 8, 9.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								---	13.82	13.77	13.64	---
2								---	13.52	13.77	---	---
3								---	13.76	13.75	---	---
4								---	13.78	13.74	---	---
5								---	13.86	13.89	---	---
6								---	13.69	13.69	---	13.75
7								---	13.88	14.17	---	13.76
8								---	13.90	---	---	13.72
9								---	13.81	---	---	13.57
10								---	13.95	13.77	---	13.78
11								---	13.81	13.70	---	13.37
12								---	13.81	13.85	---	13.65
13								---	13.85	13.73	---	13.74
14								---	13.83	13.66	---	13.71
15								13.71	14.03	13.67	---	13.82
16								13.78	14.04	13.70	---	13.48
17								13.74	13.88	13.75	---	13.53
18								13.63	13.85	13.70	---	13.56
19								13.78	13.79	13.65	---	13.50
20								13.83	13.77	13.62	---	13.32
21								13.75	13.86	13.48	---	13.35
22								13.73	13.85	13.81	---	13.45
23								13.77	13.86	13.79	---	13.63
24								13.75	13.84	13.67	---	13.65
25								13.83	13.80	13.68	---	13.44
26								13.88	13.81	13.72	---	13.31
27								13.74	13.82	13.75	---	13.27
28								13.71	13.89	13.71	---	13.49
29								13.75	13.78	---	---	13.47
30								13.59	13.76	---	---	13.31
31								13.52	---	13.76	---	---
MEAN								---	13.83	---	---	---
MAX								---	14.04	---	---	---
MIN								---	13.52	---	---	---

04199170 LAKE ERIE AT HURON, OH--Continued

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.18	13.73	13.31	13.58	11.33	12.94	12.44	13.25	13.47	14.04	15.70	13.46
2	13.21	13.74	12.78	12.79	9.49	12.74	12.61	13.26	13.33	13.91	15.49	13.55
3	13.14	13.58	13.47	11.37	8.18	12.63	12.35	13.17	13.24	13.74	15.31	13.67
4	13.10	13.16	13.60	5.81	10.66	12.63	12.25	13.10	13.25	13.68	14.74	13.38
5	13.20	13.66	13.79	6.72	---	12.59	12.37	13.12	13.29	13.69	14.60	13.64
6	13.04	13.18	13.62	11.49	11.48	12.53	12.51	13.75	13.21	13.69	14.66	13.75
7	13.07	13.42	13.46	11.23	11.77	12.51	12.51	13.35	13.29	13.64	14.48	13.71
8	13.57	13.81	13.44	6.07	11.46	12.32	12.43	13.22	13.19	13.60	14.22	13.60
9	14.46	13.43	13.66	7.38	11.59	12.68	12.57	13.09	13.31	13.58	14.02	13.62
10	14.24	13.70	13.23	8.75	11.92	12.13	12.55	13.26	13.29	13.78	13.95	13.02
11	13.53	13.79	13.57	6.90	11.32	13.66	12.64	13.34	13.38	13.61	13.78	13.39
12	13.91	13.66	13.10	7.81	7.43	12.73	13.27	13.13	13.41	13.59	13.78	13.46
13	13.96	13.48	13.52	12.03	10.25	12.58	12.87	13.12	13.45	13.56	13.64	13.52
14	14.04	13.65	12.93	12.06	11.92	12.79	12.79	13.47	13.43	13.88	13.66	13.42
15	14.20	13.90	13.61	11.96	11.92	12.47	12.85	13.30	13.43	13.71	13.54	13.77
16	14.07	14.03	13.87	11.96	11.85	12.66	12.77	13.21	13.45	13.62	13.93	13.77
17	13.90	13.96	13.49	11.84	11.94	12.72	12.70	13.40	13.56	13.49	13.92	13.80
18	13.54	14.11	13.00	11.87	12.01	12.64	12.78	13.50	13.56	13.51	13.81	13.88
19	13.68	13.32	13.65	11.79	12.13	12.55	12.89	13.44	13.58	13.40	13.88	13.24
20	13.69	13.27	12.94	12.01	12.21	12.54	13.29	13.25	13.80	13.42	13.80	13.63
21	13.72	13.00	12.88	11.76	12.39	---	13.15	13.19	13.54	13.75	13.71	13.51
22	14.04	13.27	13.35	11.53	12.39	---	13.04	13.19	13.52	13.77	13.66	13.81
23	14.28	13.36	13.19	11.85	12.66	---	12.86	13.28	13.67	13.76	13.56	13.25
24	13.98	13.53	13.90	11.88	12.63	---	12.80	13.27	13.69	13.69	13.57	13.58
25	13.68	13.53	10.69	11.75	12.48	---	12.96	13.20	13.57	13.54	13.73	13.46
26	12.80	13.48	12.01	11.43	12.52	---	12.94	13.23	13.77	13.50	13.57	13.46
27	13.75	13.80	13.45	11.75	12.59	12.60	12.96	13.37	13.74	13.74	13.61	13.41
28	14.05	13.09	13.38	11.69	12.55	12.49	13.15	13.43	13.68	13.53	13.57	---
29	13.77	12.85	13.46	11.86	---	12.51	13.02	13.27	13.63	15.76	13.50	---
30	13.59	13.07	13.61	11.80	---	---	13.09	13.31	13.75	16.63	13.38	---
31	13.13	---	13.68	11.80	---	---	---	13.37	---	15.91	13.44	---
MEAN	13.66	13.52	13.28	10.79	---	---	12.78	13.29	13.48	13.89	14.01	---
MAX	14.46	14.11	13.90	13.58	---	---	13.29	13.75	13.80	16.63	15.70	---
MIN	12.80	12.85	10.69	5.81	---	---	12.25	13.09	13.19	13.40	13.38	---

04199500 VERMILION RIVER NEAR VERMILION, OH

LOCATION.--Lat 41°22'55", long 82°19'01", in T.6 N., R.19 W., Lorain County, Hydrologic Unit 04100012, on right bank 40 ft (12 m) downstream from bridge on North Ridge Road, 3.5 mi (5.6 km) southeast of Vermilion and 4.5 mi (7.2 km) upstream from mouth.

DRAINAGE AREA.--262 mi² (679 km²).

PERIOD OF RECORD.--March 1950 to current year.

REVISED RECORDS.--WSP 1912: Drainage area. WDR-OH-70-1: 1969.

GAGE.--Water-stage recorders. Datum of gage is 595.14 ft (181.399 m) National Geodetic Vertical Datum of 1929. Prior to Aug. 3, 1953, nonrecording gage at site 40 ft (12 m) upstream at same datum.

REMARKS.--Records good except those for winter period, and discharges above 1,000 ft³/s, which are fair. Water-quality data collected at this site 1969 to 1980.

AVERAGE DISCHARGE.--31 years, 210 ft³/s (7.335 m³/s), 13.43 in/yr (341 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,800 ft³/s (1,160 m³/s) July 6, 1969, gage height, 17.14 ft (5.224 m), from rating curve extended above 7,000 ft³/s (198 m³/s on basis of contracted-opening measurement of peak flow; no flow at times in many years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,200 ft³/s (90.6 m³/s) and maximums (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 19	---	*8000	227	a*13.16	4.011	June 14	0730	5290	150	7.11	2.167

Minimum daily discharge, 4.3 ft³/s (0.12 m³/s) Oct. 13-16.

a ice jam.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	15	60	20	480	175	119	630	47	92	17	221
2	12	14	56	20	400	159	97	330	38	72	12	283
3	11	13	55	19	300	133	81	199	33	61	13	1510
4	9.4	12	58	19	210	112	76	150	45	53	11	1030
5	8.9	10	50	19	150	99	76	121	61	48	9.2	429
6	8.0	8.4	39	18	110	97	175	119	36	39	8.0	213
7	7.1	8.4	38	18	84	95	150	248	28	34	7.3	153
8	6.7	8.4	48	18	72	93	105	195	57	30	8.7	124
9	6.3	9.4	143	18	70	91	85	131	925	26	7.5	97
10	5.9	8.4	275	18	120	91	72	112	1180	25	6.7	107
11	5.9	8.0	266	18	400	91	67	144	695	18	9.1	69
12	4.6	8.0	168	18	1200	89	368	557	287	16	91	49
13	4.3	7.5	115	18	700	81	473	520	397	15	52	37
14	4.3	8.4	94	18	300	72	1970	261	4430	15	28	29
15	4.3	9.4	76	18	200	65	1790	306	2710	15	21	25
16	4.3	8.9	64	18	300	62	616	490	681	13	20	31
17	7.0	8.9	54	18	900	62	397	339	333	12	19	67
18	10	10	47	18	3000	57	413	192	210	11	21	36
19	12	11	41	18	7000	57	330	136	145	9.2	14	32
20	11	10	38	18	2910	56	224	105	108	23	10	45
21	9.7	10	35	18	1910	59	172	87	88	114	8.7	57
22	9.0	9.9	32	18	833	72	136	74	357	91	7.5	43
23	8.5	9.9	30	19	651	91	150	64	947	43	6.7	29
24	8.4	10	28	20	800	87	175	56	374	26	6.0	22
25	11	12	27	25	520	77	188	49	816	18	5.3	19
26	10	15	26	250	339	72	150	43	2600	15	5.0	16
27	12	18	24	840	240	248	121	39	680	12	5.0	17
28	16	34	23	700	199	339	128	52	269	25	6.3	14
29	18	50	23	450	---	228	1310	57	169	31	6.3	11
30	17	74	22	230	---	168	1540	65	121	22	8.3	12
31	16	---	21	120	---	185	---	60	---	22	25	---
TOTAL	289.6	439.9	2076	3057	24398	3463	11754	5931	18867	1046.2	475.6	4827
MEAN	9.34	14.7	67.0	98.6	871	112	392	191	629	33.7	15.3	161
MAX	18	74	275	840	7000	339	1970	630	4430	114	91	1510
MIN	4.3	7.5	21	18	70	56	67	39	28	9.2	5.0	11
CFSM	.04	.06	.26	.38	3.32	.43	1.50	.73	2.40	.13	.06	.62
IN.	.04	.06	.29	.43	3.46	.49	1.67	.84	2.68	.15	.07	.69

CAL YR 1980 TOTAL 68653.1 MEAN 188 MAX 3100 MIN 4.3 CFSM .72 IN 9.75
WTR YR 1981 TOTAL 76624.3 MEAN 210 MAX 7000 MIN 4.3 CFSM .80 IN 10.88

04200430 WEST BRANCH BLACK RIVER ABOVE LAKE STREET AT ELYRIA, OH

LOCATION.--Lat 41°22'14", long 82°06'47", Lorain County, Hydrologic Unit 04110001, on right bank, 400 ft (120 m) upstream from Lake Street Bridge and 1,600 ft (500 m) upstream of confluence with East Branch Black River at Elyria, Ohio.

DRAINAGE AREA.--174 mi² (451 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1980 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 700 ft (213 m) from topographic map.

REMARKS.--Records good, except those for winter period which are poor. Some low-flow regulation for industrial use.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,320 ft³/s (94.0 m³/s) June 15, 1981, gage height, 8.58 ft (2.615 m), minimum daily discharge, 3.3 ft³/s (0.093 m³/s) July 4, 20, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,800 ft³/s (51.0 m³/s) and maximums (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 20	1030	2740	77.6	7.67	2.338	Apr. 29	2315	1860	52.7	6.39	1.948
Apr. 14	2400	2880	81.6	7.89	2.405	June 15	0300	*3320	94.0	*8.58	2.615

Minimum daily discharge, 4.1 ft³/s (0.116 m³/s) Oct. 14-16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.2	10	55	7.1	140	112	73	363	38	46	19	72
2	12	9.2	58	7.0	340	100	60	194	31	40	13	49
3	8.6	10	61	7.0	210	92	49	125	27	39	22	339
4	7.5	8.1	59	7.0	150	80	43	100	26	42	14	427
5	7.6	7.4	46	6.9	100	76	37	88	30	43	12	236
6	6.4	7.4	36	6.9	76	76	66	100	27	39	10	107
7	5.5	8.8	37	6.9	60	76	78	156	21	34	9.2	72
8	5.3	8.8	56	6.8	42	72	58	128	20	27	12	55
9	6.5	7.8	201	6.8	36	68	45	88	905	29	6.8	44
10	5.6	9.2	273	6.8	43	67	38	73	715	32	7.8	40
11	4.3	9.6	203	6.8	247	70	45	84	326	21	23	36
12	5.6	7.1	107	6.7	396	68	646	160	143	15	43	23
13	4.8	5.9	72	6.7	250	64	540	216	173	16	33	19
14	4.1	7.4	52	6.7	137	55	2150	130	2640	14	25	18
15	4.1	6.5	38	6.7	97	48	2240	162	2430	13	27	14
16	4.1	5.9	45	6.6	126	46	450	336	346	11	29	14
17	10	6.8	36	6.6	471	45	303	229	169	10	32	14
18	11	8.1	32	6.6	843	45	385	125	109	9.2	20	16
19	10	7.4	27	6.6	1820	44	256	94	78	7.8	14	21
20	9.2	7.8	15	6.6	2630	45	189	73	60	36	12	18
21	8.1	8.8	8.6	6.5	1860	49	117	60	50	117	11	15
22	6.8	8.1	7.4	6.5	606	63	97	50	200	69	9.6	12
23	6.5	6.8	7.2	6.5	514	89	120	42	307	31	7.1	11
24	5.9	9.6	7.2	6.5	657	92	158	37	139	22	7.1	9.6
25	11	10	7.1	10	374	76	152	33	272	18	7.8	8.5
26	7.8	11	7.1	99	236	72	115	31	1140	14	7.1	6.2
27	8.8	17	7.0	648	175	373	93	34	242	13	7.1	5.9
28	19	38	7.0	693	144	366	87	43	118	33	8.1	6.2
29	16	67	7.0	340	---	164	964	45	78	45	11	5.4
30	13	66	7.5	130	---	112	1330	51	59	28	18	13
31	11	---	7.3	86	---	97	---	49	---	23	21	---
TOTAL	255.3	401.5	1589.4	2167.8	12780	2902	10984	3499	10919	937.0	498.7	1726.8
MEAN	8.24	13.4	51.3	69.9	456	93.6	366	113	364	30.2	16.1	57.6
MAX	19	67	273	693	2630	373	2240	363	2640	117	43	427
MIN	4.1	5.9	7.0	6.5	36	44	37	31	20	7.8	6.8	5.4
CFSM	.05	.08	.30	.40	2.62	.54	2.10	.65	2.09	.17	.09	.33
IN.	.05	.09	.34	.46	2.73	.62	2.35	.75	2.33	.20	.11	.37

WTR YR 1981 TOTAL 48660.5 MEAN 133 MAX 2640 MIN 4.1 CFSM .76 IN 10.40

04200430 WEST BRANCH BLACK RIVER ABOVE LAKE STREET AT ELYRIA, OH--Continued

SEDIMENT ANALYSES

PERIOD OF RECORD.--Water years June 1980 to June 1981 (discontinued).

REMARKS.--Sediment sampling site is at gage for low water sampling and at bridge approximately 700 ft (213 m) below discharge station for high water sampling, and a third site is located at the Broad Street Bridge about 1,700 ft (518 m) upstream of discharge station for high water sampling.

PERIOD OF DAILY RECORD.--June 1980 to June 1981 (discontinued).

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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	9.2	15	.37	10	8	.22	55	8	1.2
2	12	13	.42	9.2	8	.20	58	8	1.3
3	8.6	12	.28	10	8	.22	61	8	1.3
4	7.5	9	.18	8.1	8	.17	59	8	1.3
5	7.6	7	.14	7.4	8	.16	46	8	.99
6	6.4	6	.10	7.4	8	.16	36	9	.87
7	5.5	6	.09	8.8	8	.19	37	11	1.1
8	5.3	6	.09	8.8	8	.19	56	16	2.4
9	6.5	8	.14	7.8	8	.17	201	72	39
10	5.6	9	.14	9.2	8	.20	273	62	46
11	4.3	7	.08	9.6	8	.21	203	47	26
12	5.6	14	.21	7.1	8	.15	107	25	7.2
13	4.8	11	.14	5.9	8	.13	72	18	3.5
14	4.1	8	.09	7.4	8	.16	52	14	2.0
15	4.1	7	.08	6.5	8	.14	38	13	1.3
16	4.1	7	.08	5.9	8	.13	45	12	1.5
17	10	9	.24	6.8	8	.15	36	11	1.1
18	11	21	.62	8.1	8	.17	32	10	.86
19	10	13	.35	7.4	7	.14	27	8	.58
20	9.2	10	.25	7.8	7	.15	15	8	.32
21	8.1	10	.22	8.8	7	.17	8.6	7	.16
22	6.8	10	.18	8.1	7	.15	7.4	7	.14
23	6.5	10	.17	6.8	7	.13	7.2	16	.31
24	5.9	12	.19	9.6	7	.18	7.2	13	.25
25	11	14	.43	10	7	.19	7.1	12	.23
26	7.8	8	.17	11	7	.21	7.1	11	.21
27	8.8	8	.19	17	15	.69	7.0	9	.17
28	19	8	.40	38	10	1.0	7.0	8	.15
29	16	8	.34	67	9	1.6	7.0	13	.25
30	13	8	.28	66	8	1.4	7.5	13	.26
31	11	8	.24	---	---	---	7.3	13	.26
TOTAL	255.3	---	6.90	401.5	---	9.13	1589.4	---	142.21

04200430 WEST BRANCH BLACK RIVER ABOVE LAKE STREET AT ELYRIA, OH--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		JANUARY			FEBRUARY			MARCH	
1	7.1	12	.23	140	70	26	112	25	7.6
2	7.0	12	.23	340	72	66	100	25	6.8
3	7.0	12	.23	210	70	40	92	20	5.0
4	7.0	11	.21	150	67	27	80	17	3.7
5	6.9	11	.20	100	63	17	76	17	3.5
6	6.9	10	.19	76	61	13	76	16	3.3
7	6.9	10	.19	60	58	9.4	76	15	3.1
8	6.8	10	.18	42	56	6.4	72	15	2.9
9	6.8	10	.18	36	53	5.2	68	14	2.6
10	6.8	10	.18	43	51	5.9	67	14	2.5
11	6.8	9	.17	247	56	37	70	13	2.4
12	6.7	9	.16	396	140	150	68	13	2.4
13	6.7	9	.16	250	87	59	64	13	2.2
14	6.7	9	.16	137	60	22	55	12	1.8
15	6.7	9	.16	97	50	13	48	12	1.6
16	6.6	9	.16	126	45	15	46	11	1.4
17	6.6	13	.23	471	74	96	45	10	1.2
18	6.6	17	.30	843	100	229	45	10	1.2
19	6.6	24	.43	1820	576	2970	44	10	1.2
20	6.6	23	.41	2630	440	3120	45	9	1.1
21	6.5	21	.37	1860	254	1260	49	9	1.2
22	6.5	20	.35	606	120	196	63	10	1.7
23	6.5	18	.32	514	80	111	89	11	2.7
24	6.5	17	.30	657	98	174	92	12	3.0
25	10	38	1.0	374	70	71	76	12	2.5
26	99	59	16	236	52	33	72	23	5.0
27	648	229	424	175	40	19	373	113	120
28	693	145	271	144	30	12	366	185	186
29	340	48	44	---	---	---	164	88	39
30	130	53	19	---	---	---	112	53	16
31	86	54	13	---	---	---	97	34	8.9
TOTAL	2167.8	---	793.70	12780	---	8802.9	2902	---	443.5
		APRIL			MAY			JUNE	
1	73	25	4.9	363	171	179	38	32	3.1
2	60	19	3.1	194	71	37	31	30	2.3
3	49	14	1.9	125	50	17	27	28	1.8
4	43	12	1.4	100	43	11	26	27	1.7
5	37	12	1.2	88	39	9.1	30	24	1.7
6	66	17	3.0	100	38	10	27	22	1.4
7	78	14	2.9	156	40	17	21	19	.92
8	58	13	2.0	128	27	9.3	20	17	.73
9	45	13	1.6	88	20	4.6	905	521	1570
10	38	12	1.2	73	18	3.5	715	343	721
11	45	15	1.8	84	20	4.4	326	143	126
12	646	256	524	160	78	38	143	82	31
13	540	153	224	216	133	75	173	98	61
14	2150	827	5160	130	87	31	2640	810	5680
15	2240	463	3430	162	98	46	2430	365	2660
16	450	210	255	336	190	172	346	78	73
17	303	118	97	229	173	106	169	94	43
18	385	120	125	125	108	36	109	62	18
19	256	100	69	94	63	16	78	47	9.6
20	189	72	37	73	30	5.8	60	37	5.8
21	117	52	16	60	18	2.8	50	29	3.8
22	97	35	9.0	50	18	2.3	200	175	117
23	120	32	10	42	22	2.4	307	170	141
24	158	43	18	37	25	2.4	139	83	31
25	152	42	17	33	20	1.7	272	96	125
26	115	28	8.6	31	15	1.2	1140	888	3040
27	93	22	5.4	34	13	1.1	242	145	95
28	87	35	8.0	43	13	1.4	118	90	28
29	964	348	1460	45	13	1.5	78	62	13
30	1330	403	1390	51	27	3.6	59	47	7.2
31	---	---	---	49	34	4.3	---	---	---
TOTAL	10984	---	12888.0	3499	---	852.4	10919	---	14613.05

04200500 BLACK RIVER AT ELYRIA, OH

LOCATION.--Lat 41°22'49", long 82°06'17", in T.6 N., R.17 W., Lorain County, Hydrologic Unit 04110001, on left bank in Cascade Park at Elyria, 0.8 mi (1.3 km) downstream from confluence of East and West Branches.

DRAINAGE AREA.--396 mi² (1,026 km²).

WATER-DISCHARGE RECORDS

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 (189.229 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter periods, which are fair. Some regulation at low flow for industrial use. Water-quality data collected at this site 1969 to 1974. Sediment data collected 1970 to 1974.

AVERAGE DISCHARGE.--37 years, 324 ft³/s (9.176 m³/s), 11.11 in/yr (282 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 51,700 ft³/s (1,460 m³/s) July 6, 1969, gage height, 26.4 ft (8.05 m), (from flood mark), from rating curve extended above 13,000 ft³/s (368 m³/s) on basis of slope-area measurement of peak flow; no flow for part of Oct. 10, 1956 (result of temporary storage at dam upstream).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,200 ft³/s (90.6 m³/s) and maximums (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 20	1730	5920	168	11.42	3.481	Apr. 30	0215	3290	93.2	8.36	2.548
Apr. 15	0945	6340	180	11.84	3.609	June 15	0400	*7680	217	*13.10	3.993

Minimum daily discharge, 13 ft³/s (0.37 m³/s) Oct. 11, 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	48	173	42	310	263	192	950	69	97	34	77
2	31	44	169	42	800	234	157	443	58	312	27	65
3	23	38	197	42	540	208	127	272	51	138	49	815
4	21	33	207	41	370	184	117	194	50	122	28	1190
5	20	30	159	41	270	171	127	168	52	93	25	694
6	19	29	116	41	190	175	409	234	47	189	21	323
7	18	28	117	40	135	182	288	560	40	151	20	188
8	14	28	163	40	110	173	182	398	73	83	25	136
9	16	26	465	40	100	161	138	220	1800	80	19	130
10	15	26	715	40	118	161	114	166	1510	70	19	113
11	13	25	592	40	530	166	134	228	804	45	47	96
12	19	25	320	40	820	162	1130	512	358	35	67	62
13	15	24	200	40	370	148	1810	577	465	36	56	48
14	13	29	152	40	290	129	4800	353	5410	32	47	45
15	14	25	110	40	245	114	5340	426	5990	28	59	35
16	14	24	92	40	278	106	876	937	860	27	68	34
17	27	25	80	91	949	102	669	731	363	26	63	38
18	31	31	68	40	1930	99	839	348	250	23	44	40
19	26	28	60	40	4000	101	567	212	171	21	34	55
20	21	28	53	40	5490	99	355	155	124	86	26	43
21	20	31	49	40	4450	109	234	123	101	214	23	41
22	24	28	46	40	1600	138	208	102	360	117	20	46
23	22	26	45	40	1190	198	281	86	758	60	17	39
24	19	34	44	40	1500	206	393	75	470	44	15	31
25	36	34	43	50	935	177	363	68	702	34	14	27
26	29	36	42	321	563	161	263	63	2380	31	13	24
27	28	60	42	1510	398	808	202	68	754	26	13	25
28	53	104	42	1730	312	1060	190	82	254	76	15	20
29	51	169	42	911	---	488	1270	89	152	82	17	19
30	46	196	43	370	---	305	2580	115	108	45	28	39
31	45	---	44	230	---	245	---	93	---	42	24	---
TOTAL	769	1312	4690	6142	28793	7033	24355	9048	24584	2465	977	4538
MEAN	24.8	43.7	151	198	1028	227	812	292	819	79.5	31.5	151
MAX	53	196	715	1730	5490	1060	5340	950	5990	312	68	1190
MIN	13	24	42	40	100	99	114	63	40	21	13	19
CFSM	.06	.11	.38	.50	2.60	.57	2.05	.74	2.07	.20	.08	.38
IN.	.07	.12	.44	.58	2.70	.66	2.29	.85	2.31	.23	.09	.43

CAL YR 1980 TOTAL 112064 MEAN 306 MAX 5520 MIN 13 CFSM .77 IN 10.53
WTR YR 1981 TOTAL 114706 MEAN 314 MAX 5990 MIN 13 CFSM .79 IN 10.78

04200500 BLACK RIVER AT ELYRIA, OH--Continued

SEDIMENT ANALYSIS

PERIOD OF RECORD.--1970 to 1974, June 1980 to June, 1981 (discontinued).

REMARKS.--Sediment sampling is at gage. Samples at high water are taken from cable car.

PERIOD OF DAILY RECORD.--June 1980 to June, 1981 (discontinued).

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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	26	17	1.2	48	5	.65	173	7	3.3
2	31	28	2.3	44	5	.59	169	7	3.2
3	23	17	1.1	38	4	.41	197	7	3.7
4	21	16	.91	33	4	.36	207	8	4.5
5	20	16	.86	30	4	.32	159	8	3.4
6	19	15	.77	29	4	.31	116	8	2.5
7	18	14	.68	28	4	.30	117	8	2.5
8	14	12	.55	28	4	.30	163	15	6.6
9	16	11	.48	26	4	.28	465	110	138
10	15	10	.41	26	4	.28	715	60	116
11	13	9	.32	25	4	.27	592	30	48
12	19	13	.67	25	4	.27	320	18	16
13	15	8	.32	24	4	.26	200	13	7.0
14	13	7	.25	29	5	.39	152	11	4.5
15	14	7	.26	25	6	.41	110	10	3.0
16	14	7	.26	24	7	.45	92	8	2.0
17	27	13	.95	25	8	.54	80	7	1.5
18	31	18	1.5	31	8	.67	68	7	1.3
19	26	12	.84	28	9	.68	60	7	1.1
20	21	12	.68	28	10	.76	53	7	1.0
21	20	12	.65	31	11	.92	49	7	.93
22	24	11	.71	28	12	.91	46	7	.87
23	22	11	.65	26	12	.84	45	7	.85
24	19	12	.62	34	8	.73	44	7	.83
25	36	32	3.1	34	7	.64	43	7	.81
26	29	20	1.6	36	7	.68	42	7	.79
27	28	14	1.1	60	14	2.3	42	7	.79
28	53	17	2.4	104	13	3.7	42	7	.79
29	51	8	1.1	169	11	5.0	42	7	.79
30	46	5	.62	196	9	4.8	43	7	.81
31	45	5	.61	---	---	---	44	7	.83
TOTAL	769	---	28.47	1312	---	29.02	4690	---	378.19

04200500 BLACK RIVER AT ELYRIA, OH--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		JANUARY			FEBRUARY			MARCH	
1	42	7	.79	310	43	36	263	22	16
2	42	7	.79	800	64	138	234	18	11
3	42	7	.79	540	48	73	208	17	9.5
4	41	7	.77	370	33	33	184	17	8.4
5	41	7	.77	270	30	22	171	17	7.8
6	41	7	.77	190	40	21	175	15	7.1
7	40	7	.76	135	42	15	182	14	6.9
8	40	7	.76	110	47	14	173	13	6.1
9	40	7	.76	100	52	14	161	12	5.2
10	40	8	.86	118	52	17	161	10	4.3
11	40	8	.86	530	55	82	166	9	4.0
12	40	9	.97	820	140	310	162	8	3.5
13	40	9	.97	370	132	132	148	7	2.8
14	40	10	1.1	290	57	45	129	7	2.4
15	40	10	1.1	245	47	31	114	7	2.2
16	40	10	1.1	278	42	32	106	7	2.0
17	91	10	1.1	949	47	121	102	6	1.7
18	40	10	1.1	1930	130	677	99	6	1.6
19	40	10	1.1	4000	485	5530	101	6	1.6
20	40	10	1.1	5490	420	6230	99	5	1.3
21	40	10	1.1	4450	210	2520	109	5	1.5
22	40	10	1.1	1600	120	518	138	7	2.6
23	40	10	1.1	1190	95	305	198	9	4.8
24	40	10	1.1	1500	185	749	206	10	5.6
25	50	10	1.4	935	73	184	177	10	4.8
26	321	129	169	563	48	73	161	20	8.7
27	1510	260	1060	398	34	37	808	233	565
28	1730	135	631	312	26	22	1060	210	619
29	911	65	160	---	---	---	488	102	134
30	370	33	31	---	---	---	305	57	47
31	230	28	18	---	---	---	245	46	30
TOTAL	6142	---	2093.12	28793	---	17981	7033	---	1528.4
		APRIL			MAY			JUNE	
1	192	38	20	950	139	349	69	26	4.8
2	157	31	13	443	71	85	58	22	3.4
3	127	22	7.5	272	45	33	51	21	2.9
4	117	16	5.1	194	36	19	50	20	2.7
5	127	15	5.1	168	34	15	52	20	2.8
6	409	28	31	234	54	34	47	20	2.5
7	288	23	18	560	105	159	40	20	2.2
8	182	17	8.4	398	74	80	73	30	5.9
9	138	12	4.5	220	53	31	1800	530	3080
10	114	7	2.2	166	43	19	1510	565	2300
11	134	25	9.0	228	68	42	804	240	521
12	1130	213	720	512	130	180	358	135	130
13	1810	357	1750	577	70	109	465	117	212
14	4800	596	8280	353	46	44	5410	591	8990
15	5340	436	6500	426	87	100	5990	487	8550
16	876	198	748	937	201	509	860	124	405
17	669	87	157	731	142	280	363	62	61
18	839	109	247	348	127	119	250	52	35
19	567	75	115	212	52	30	171	49	23
20	355	47	45	155	40	17	124	48	16
21	234	33	21	123	34	11	101	43	12
22	208	28	16	102	25	6.9	360	127	125
23	281	30	23	86	20	4.6	758	325	667
24	393	70	74	75	18	3.6	470	282	358
25	363	73	72	68	17	3.1	702	214	507
26	263	50	36	63	17	2.9	2380	708	4260
27	202	26	14	68	17	3.1	754	360	734
28	190	25	13	82	16	3.5	254	155	106
29	1270	226	1540	89	16	3.8	152	90	37
30	2580	318	2160	115	30	9.3	108	80	23
31	---	---	---	93	30	7.5	---	---	---
TOTAL	24355	---	22654.8	9048	---	2313.3	24584	---	31179.2

04200550 BLACK RIVER BELOW ELYRIA, OH

LOCATION.--Lat 41°24'42", long 82°05'45", in T.6 N., R.17 W., Lorain County, Hydrologic Unit 04110001, at Ford Road bridge on north edge of Elyria, 0.7 mi (1.1 km) downstream from Elyria sewage disposal plant, and 5.2 mi (8.4 km) downstream from discharge station at Elyria.

DRAINAGE AREA.--412 mi² (1,067 km²).

PERIOD OF RECORD.--January 1966 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: January 1966 to current year.
pH: October 1976 to current year.
WATER TEMPERATURES: January 1966 to current year.
DISSOLVED OXYGEN: January 1966 to current year.

INSTRUMENTATION.--Water-quality monitor.

REMARKS.--Interruptions in the water-quality record were due to malfunction of the instrument. See records of discharge for station at Elyria (station 04200500).

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 2,900 micromhos Feb. 11, 1977; minimum, 117 micromhos Jan. 27, 1976.
pH: Maximum, 9.5 units Apr. 30, 1978; minimum, 6.0 units May 29, July 3, 1979.
WATER TEMPERATURES: Maximum, 33.0°C June 7, 1973; minimum, 0.0°C on many days during winter periods.
DISSOLVED OXYGEN: Maximum, 15.1 mg/L Jan. 12, 1980; minimum, 0.0 mg/L
June 3, 5, 6, July 3, 4, 1966, July 31, Aug. 1, 2, 22, 23, 1974, Aug. 27, 1977, Aug. 3, Sept. 14, 1978.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 1,610 micromhos Dec. 30; minimum, 246 micromhos June 14.
pH: Maximum 9.0 units May 24, 25; minimum, 7.0 units Oct. 18, Nov. 27, Aug. 31, Sept. 3.
WATER TEMPERATURES: Maximum, 31.0°C July 9; minimum, 0.0°C on several days during winter periods.
DISSOLVED OXYGEN: Maximum, 14.3 mg/L Feb. 4; minimum, 1.1 mg/L Oct. 2.

04200550 BLACK RIVER BELOW ELYRIA, OH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	1090	781	1020	906	903	864	1280	1200	---	---	627	573
2	1000	775	896	876	930	850	1220	1150	---	---	678	582
3	980	793	1040	856	867	840	1140	1070	---	---	708	648
4	960	760	1190	986	846	780	1060	1020	540	519	750	681
5	793	661	1220	1050	867	780	1030	1010	612	534	810	735
6	960	631	1220	1030	880	795	1180	1020	837	588	771	732
7	1140	830	1130	1030	---	---	1200	1050	816	714	783	696
8	1100	800	1220	1030	---	---	1200	1070	804	741	711	672
9	1310	920	1140	1010	---	---	1220	1090	801	714	777	687
10	1470	1000	1140	954	699	609	1230	1090	1250	774	789	747
11	---	---	1260	1020	669	609	1120	1020	1140	591	819	753
12	---	---	1320	1020	660	588	1070	990	588	480	840	759
13	---	---	1310	1070	642	591	1200	1030	522	483	867	786
14	---	---	1290	1100	657	618	1250	1080	552	477	894	777
15	---	---	1250	1040	681	612	1270	1090	570	519	789	735
16	---	---	1150	1000	771	669	1350	1130	747	549	939	723
17	---	---	1150	954	860	750	1360	1180	633	477	1010	864
18	---	---	1290	1090	870	777	1240	1100	---	---	912	795
19	---	---	1210	1030	960	840	1190	1100	---	---	1260	792
20	---	---	1340	1070	1050	909	1460	1210	---	---	1170	1030
21	---	---	1320	1080	1050	927	1560	1370	---	---	1170	981
22	---	---	1380	1080	1080	960	1490	1290	---	---	966	801
23	---	---	1190	1020	1170	930	1270	1210	---	---	810	762
24	---	---	1180	900	1140	1010	---	---	480	444	789	744
25	---	---	1120	910	1060	888	---	---	492	465	795	744
26	---	---	1170	969	888	873	---	---	531	480	831	750
27	1010	842	1150	834	897	864	---	---	582	522	753	459
28	1010	836	897	828	894	861	---	---	597	564	486	423
29	976	836	900	828	1560	870	---	---	---	---	474	432
30	1040	886	894	849	1610	1470	---	---	---	---	534	453
31	1110	936	---	---	1490	1220	---	---	---	---	585	522
MONTH	1470	631	1380	828	1610	588	1560	990	1250	444	1260	423

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1					---	---	597	576	870	753	1110	762
2					---	---	633	525	792	720	876	750
3					921	876	504	438	942	630	819	477
4					927	813	540	420	939	687	450	381
5					957	828	510	450	1040	843	477	429
6					942	837	555	477	1150	885	522	474
7					894	780	657	567	1260	960	528	519
8					822	753	609	561	1120	792	594	528
9					807	318	702	441	819	753	633	561
10					462	318	609	489	951	801	693	600
11					489	444	762	591	981	672	705	630
12					570	495	747	642	783	726	816	684
13					639	486	732	648	831	735	777	684
14					507	246	900	684	867	717	927	711
15					312	279	978	789	828	678	957	705
16					438	318	1020	804	---	---	1030	846
17					513	441	1080	849	768	663	873	714
18					552	507	1010	855	963	756	1000	840
19					606	543	942	816	936	816	966	705
20					654	600	828	555	951	855	774	723
21					678	627	708	522	1130	900	843	759
22					639	447	666	582	1020	879	939	759
23					531	375	735	630	879	819	---	---
24					513	435	837	630	1100	819	---	---
25					510	429	861	693	1270	1010	---	---
26					411	327	813	693	1240	1050	---	---
27					405	333	828	669	1280	1050	---	---
28					444	405	1010	528	1310	1060	---	---
29					537	441	672	534	1340	1110	---	---
30					600	528	849	645	1160	783	---	---
31					---	---	924	741	1180	831	---	---
MONTH					957	246	1080	420	1340	630	1110	381

YEAR 1610 246

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

STREAMS TRIBUTARY TO LAKE ERIE

04200550 BLACK RIVER BELOW ELYRIA, OH--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.8	7.3	7.9	7.8	8.2	8.1	8.0	7.9	---	---	8.1	8.0
2	7.8	7.6	8.0	7.8	8.1	7.8	8.0	7.9	---	---	8.1	8.0
3	7.8	7.6	7.9	7.7	8.1	7.9	8.0	7.9	---	---	8.1	8.1
4	8.0	7.5	7.8	7.7	8.1	8.0	8.1	8.0	7.9	7.9	8.2	8.1
5	7.9	7.8	7.9	7.7	8.0	7.7	8.0	7.9	8.1	7.9	8.2	8.1
6	8.0	7.7	---	---	7.8	7.7	8.0	7.9	7.9	7.8	8.4	8.2
7	7.9	7.6	7.7	7.6	7.8	7.5	7.9	7.8	7.9	7.9	8.2	8.2
8	7.9	7.7	7.8	7.6	7.9	7.7	7.9	7.8	8.0	7.9	8.2	8.2
9	8.0	7.7	7.8	7.7	8.1	7.7	7.8	7.7	8.0	7.9	8.2	8.2
10	8.0	7.8	7.8	7.7	8.1	8.0	7.8	7.8	8.1	7.8	8.2	8.2
11	8.1	7.8	7.8	7.7	8.1	8.0	7.9	7.8	8.1	7.8	8.2	8.2
12	8.0	7.6	7.8	7.7	8.1	8.0	7.9	7.8	8.0	7.8	8.3	8.2
13	7.9	7.6	7.8	7.7	8.1	8.0	7.8	7.7	7.9	7.8	8.3	8.2
14	7.9	7.7	7.7	7.6	8.1	8.0	7.8	7.8	7.8	7.8	8.3	8.2
15	7.9	7.7	7.8	7.6	8.1	8.0	7.8	7.7	7.8	7.8	8.3	8.2
16	7.7	7.3	7.9	7.7	8.0	8.0	7.6	7.5	7.9	7.8	8.3	8.2
17	7.6	7.4	7.8	7.7	8.1	8.0	7.6	7.6	7.9	7.7	8.4	8.2
18	7.7	7.0	7.8	7.6	8.0	7.9	7.8	7.6	7.7	7.5	8.4	8.3
19	8.0	7.6	7.8	7.6	8.1	8.0	7.9	7.8	7.7	7.6	8.5	8.3
20	8.0	7.8	7.8	7.7	8.0	7.9	7.9	7.8	7.7	7.6	8.5	8.4
21	8.2	7.9	7.7	7.6	8.0	7.9	7.9	7.8	7.7	7.6	8.5	8.4
22	8.1	7.8	7.8	7.7	8.0	7.9	7.9	7.9	---	---	8.7	8.4
23	8.0	7.9	7.8	7.6	7.9	7.8	7.9	7.9	---	---	8.7	8.4
24	8.0	7.8	7.7	7.5	7.9	7.8	---	---	7.9	7.7	8.7	8.3
25	7.8	7.5	7.8	7.6	7.9	7.8	---	---	8.0	7.9	8.8	8.3
26	8.0	7.7	7.8	7.6	7.9	7.8	---	---	8.0	7.7	8.8	8.3
27	8.1	7.9	7.9	7.0	7.9	7.8	---	---	8.0	7.9	8.4	8.0
28	7.9	7.7	8.1	7.7	7.9	7.8	---	---	8.1	7.9	8.2	8.0
29	7.9	7.6	8.1	7.9	7.9	7.6	---	---	---	---	8.0	8.0
30	7.9	7.7	8.2	8.1	7.8	7.8	---	---	---	---	8.0	7.9
31	7.9	7.7	---	---	7.9	7.8	---	---	---	---	8.2	8.0
MONTH	8.2	7.0	8.2	7.0	8.2	7.5	8.1	7.5	8.1	7.5	8.8	7.9
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.5	8.0	8.0	7.8	8.1	7.7	7.9	7.6	8.4	7.7	7.6	7.2
2	8.7	8.1	8.0	7.9	8.3	7.8	8.3	7.8	8.9	8.0	7.3	7.1
3	8.7	8.1	8.1	7.9	8.2	7.8	8.1	7.8	8.5	7.2	7.2	7.0
4	8.5	8.1	8.0	7.9	8.2	7.7	7.9	7.6	8.0	7.7	7.4	7.1
5	8.4	8.1	8.0	7.8	8.0	7.7	7.9	7.7	8.1	7.6	7.4	7.1
6	8.4	8.2	8.3	7.8	7.7	7.5	8.2	7.8	8.0	7.5	---	---
7	8.3	8.1	8.2	8.2	---	---	8.2	8.1	7.9	7.6	---	---
8	8.4	8.1	8.2	8.0	---	---	8.0	7.8	7.7	7.4	---	---
9	8.4	7.9	8.1	8.0	---	---	8.1	7.5	7.7	7.3	---	---
10	8.4	7.9	8.1	7.9	---	---	7.9	7.6	7.9	7.6	---	---
11	8.2	7.8	8.0	7.9	---	---	8.1	7.5	8.0	7.5	---	---
12	7.9	7.7	8.1	8.0	---	---	8.1	7.8	8.4	7.6	---	---
13	7.9	7.8	8.1	8.0	---	---	8.4	7.7	8.2	7.6	---	---
14	7.9	7.7	---	---	---	---	8.5	7.7	8.3	7.8	---	---
15	7.8	7.7	---	---	---	---	8.5	7.8	7.9	7.6	---	---
16	8.0	7.8	---	---	---	---	8.2	7.9	---	---	---	---
17	8.0	8.0	---	---	---	---	---	---	7.8	7.4	---	---
18	8.0	7.9	---	---	---	---	---	---	7.7	7.6	---	---
19	8.1	8.0	---	---	---	---	---	---	7.6	7.4	---	---
20	8.1	8.0	8.1	8.0	---	---	---	---	7.6	7.4	---	---
21	8.2	8.1	8.1	8.0	---	---	8.3	7.6	7.6	7.3	---	---
22	8.2	8.1	8.4	8.0	---	---	8.3	7.8	7.3	7.2	---	---
23	8.2	8.1	8.5	8.1	---	---	7.9	7.6	7.3	7.2	---	---
24	8.2	8.1	9.0	8.2	---	---	7.9	7.6	7.4	7.1	---	---
25	8.3	8.1	9.0	8.4	---	---	7.9	7.5	7.4	7.2	---	---
26	8.5	8.2	8.8	8.0	---	---	7.8	7.6	7.3	7.2	---	---
27	8.4	8.2	8.4	7.8	---	---	8.1	7.4	7.3	7.2	---	---
28	8.3	7.8	8.0	7.9	---	---	7.9	7.4	7.2	7.1	---	---
29	7.9	7.8	7.9	7.7	---	---	8.4	7.6	7.3	7.1	---	---
30	8.0	7.8	8.1	7.6	---	---	8.3	7.8	7.3	7.1	---	---
31	---	---	8.0	7.8	---	---	8.2	7.8	7.2	7.0	---	---
MONTH	8.7	7.7	9.0	7.6	8.3	7.5	8.5	7.4	8.9	7.0	7.6	7.0
YEAR	9.0	7.0										

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

04200550 BLACK RIVER BELOW FLYRIA, OH--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	22.0	16.5	9.5	7.0	5.0	2.5	2.5	1.5	---	---	5.0	4.5
2	20.5	18.0	9.5	6.0	6.5	4.0	2.0	.5	---	---	5.5	4.0
3	18.0	15.5	11.0	6.5	4.0	2.0	2.0	1.0	---	---	5.0	3.0
4	16.5	14.0	11.5	9.5	2.5	1.5	1.5	.0	.5	.0	4.0	3.0
5	14.5	12.5	11.0	8.5	3.0	2.0	2.5	.5	.5	.0	4.0	3.0
6	16.0	12.5	10.5	7.5	4.5	3.0	2.5	1.0	1.5	.5	5.0	2.5
7	17.5	13.0	12.5	8.5	7.0	4.5	2.5	1.5	1.5	.5	3.5	2.0
8	19.0	13.5	12.0	10.5	10.0	7.0	3.0	.5	1.5	.5	4.0	2.5
9	18.5	15.0	14.0	10.0	9.5	8.5	3.0	.5	2.0	.5	6.0	3.0
10	18.0	13.0	12.0	9.5	8.0	6.5	3.0	.5	2.5	1.0	6.5	4.0
11	17.0	14.5	10.0	7.5	6.0	5.0	2.0	.5	2.0	.0	5.5	4.0
12	16.5	12.5	10.0	6.0	5.5	4.5	3.0	.5	.5	.0	7.0	3.5
13	16.0	13.0	11.0	7.0	5.0	3.5	3.0	1.0	1.0	.0	7.0	4.5
14	16.5	13.5	11.5	9.5	4.0	2.5	3.5	1.5	1.0	.0	7.0	3.5
15	16.0	12.0	10.5	8.5	3.5	2.0	3.5	1.5	2.0	.5	7.5	4.0
16	18.5	14.5	9.5	6.5	3.5	2.5	3.0	1.5	2.0	1.0	6.5	4.5
17	19.5	15.5	8.0	5.5	3.5	2.0	3.0	1.0	1.5	1.0	6.5	4.0
18	17.0	15.0	9.5	5.5	4.5	3.0	3.0	1.0	2.0	1.0	6.0	3.0
19	15.5	12.5	8.5	5.5	3.5	1.5	3.5	1.0	4.0	1.5	5.0	2.5
20	14.0	12.0	8.0	4.0	2.5	1.0	3.5	2.0	5.5	4.0	4.5	2.5
21	16.0	12.0	7.5	4.5	3.0	1.0	3.0	1.5	---	---	6.0	3.5
22	14.0	11.0	8.0	4.0	3.5	1.5	2.5	1.5	---	---	6.5	2.5
23	14.0	9.5	8.0	4.5	4.5	2.0	2.0	1.5	---	---	8.0	3.0
24	15.0	10.0	9.5	6.0	3.5	2.0	---	---	6.5	5.5	8.5	4.0
25	15.0	10.0	7.0	5.0	3.0	1.0	---	---	5.5	4.5	9.5	4.5
26	10.0	8.0	6.5	2.5	3.0	1.0	---	---	5.0	4.0	9.0	5.5
27	11.0	7.0	7.0	4.0	3.5	1.5	---	---	5.0	3.5	7.5	6.5
28	11.0	8.0	5.0	3.5	3.5	1.0	---	---	5.5	4.5	8.5	5.5
29	9.5	6.5	4.0	3.0	5.0	2.0	---	---	---	---	10.0	7.5
30	9.5	6.0	3.5	2.0	3.0	2.0	---	---	---	---	11.5	10.0
31	10.5	7.0	---	---	3.0	1.5	---	---	---	---	14.5	10.5
MONTH	22.0	6.0	14.0	2.0	10.0	1.0	3.5	.0	6.5	.0	14.5	2.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	15.5	12.0	14.0	12.0	21.5	15.5	27.5	23.5	27.0	22.0	26.0	23.0
2	16.0	11.5	14.5	12.0	22.0	17.5	26.0	23.5	27.5	23.0	24.5	23.5
3	15.5	12.5	16.0	11.5	23.0	19.0	26.5	23.0	25.5	24.0	23.5	22.5
4	15.0	14.0	18.5	12.5	25.0	20.0	26.5	23.0	28.0	23.5	22.0	21.5
5	14.0	11.0	17.5	15.0	25.5	20.5	27.5	23.0	27.5	25.0	21.5	21.0
6	11.5	9.5	15.5	13.5	26.5	22.0	27.5	23.5	26.5	24.0	21.5	20.0
7	13.0	10.0	14.5	12.5	26.5	20.5	28.5	24.5	26.5	23.5	24.5	18.5
8	15.5	10.5	15.0	11.5	24.5	20.5	29.0	24.5	27.5	23.5	22.0	18.5
9	16.0	13.0	14.5	13.0	22.0	19.5	31.0	26.0	27.0	23.5	21.0	18.5
10	16.0	12.0	15.0	13.5	21.5	19.5	29.5	25.0	27.5	23.5	21.5	17.5
11	17.5	14.0	14.5	13.5	21.0	19.5	28.5	23.5	26.5	24.0	23.5	19.0
12	16.0	13.0	14.5	12.5	22.0	20.0	29.0	24.0	26.5	22.5	23.5	20.5
13	13.0	12.5	13.5	12.5	21.0	20.5	28.5	25.0	28.0	23.5	25.0	21.0
14	13.0	12.0	13.0	12.5	22.5	20.5	29.0	25.0	27.0	24.5	23.0	22.0
15	12.5	11.5	12.0	11.5	24.5	22.5	27.5	23.5	26.0	24.0	22.5	20.5
16	13.0	11.0	14.0	11.0	25.5	23.5	27.0	23.5	---	---	21.5	18.5
17	14.0	12.0	14.0	12.0	24.5	22.0	28.5	22.5	25.0	22.0	19.0	17.5
18	15.5	13.5	13.5	12.5	24.5	21.0	29.0	24.0	25.5	19.5	19.0	16.5
19	14.0	13.0	15.0	12.0	24.5	21.5	27.0	25.0	25.5	20.0	19.5	15.5
20	13.5	11.5	17.0	11.5	24.0	21.5	25.5	24.0	26.5	21.0	20.0	14.0
21	13.5	10.5	19.0	12.5	24.0	21.5	24.5	23.5	24.5	21.5	18.5	15.0
22	13.0	10.5	21.0	14.5	23.0	21.5	26.0	22.0	25.5	21.5	17.5	16.5
23	15.5	12.0	19.5	16.5	22.5	20.5	25.5	20.5	25.5	20.5	---	---
24	13.5	11.5	21.5	17.5	22.0	20.0	27.0	21.5	24.0	21.0	---	---
25	12.0	10.5	22.5	18.5	24.0	21.0	27.5	22.0	25.0	20.0	---	---
26	12.5	10.0	22.5	18.5	21.5	20.0	25.5	24.5	25.0	20.0	---	---
27	16.0	10.5	20.0	19.0	21.5	19.0	25.0	23.0	25.5	21.0	---	---
28	17.0	12.5	19.0	17.5	23.0	19.5	24.5	22.5	26.5	22.5	---	---
29	15.5	13.0	22.5	17.5	25.5	20.5	24.5	21.5	26.0	23.5	---	---
30	13.5	12.5	20.0	18.5	27.0	23.0	26.0	20.0	25.0	22.0	---	---
31	---	---	21.5	17.0	---	---	26.5	21.0	25.0	22.5	---	---
MONTH	17.5	9.5	22.5	11.0	27.0	15.5	31.0	20.0	28.0	19.5	26.0	14.0
YEAR	31.0	.0										

STREAMS TRIBUTARY TO LAKE ERIE

04200550 BLACK RIVER BELOW ELYRIA, OH--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	5.6	3.8	8.1	7.0	10.3	7.9	10.4	9.8	---	---	10.7	10.4
2	6.8	1.1	8.8	7.1	---	---	10.7	10.4	---	---	10.6	10.4
3	6.1	4.3	8.2	6.2	---	---	10.7	10.5	---	---	12.0	10.5
4	7.2	3.9	6.7	5.7	---	---	10.8	10.4	14.3	13.1	11.6	11.0
5	7.1	5.6	7.2	5.3	10.1	8.2	10.8	10.2	13.1	12.4	11.3	11.0
6	7.7	5.6	---	---	9.5	8.6	10.6	9.4	12.4	12.0	11.6	11.3
7	7.7	5.7	6.0	4.5	---	---	10.0	9.3	12.1	11.6	11.9	11.3
8	7.0	5.5	5.5	4.2	---	---	10.0	9.6	11.8	11.6	12.0	11.6
9	6.7	4.3	5.8	4.3	10.9	9.5	9.8	8.4	11.8	11.5	11.8	11.3
10	6.1	4.5	6.7	3.9	11.5	10.9	9.8	8.9	11.5	10.3	11.4	11.0
11	4.9	3.2	6.8	5.2	11.9	11.6	10.2	9.9	12.9	10.6	11.4	11.0
12	6.6	3.1	7.6	5.7	11.9	11.5	10.3	9.3	13.2	12.9	11.5	10.6
13	7.1	5.8	7.3	5.5	11.7	11.5	9.8	8.5	13.1	12.5	10.9	10.5
14	6.9	5.3	5.3	2.5	12.1	11.7	9.6	8.8	12.6	11.9	11.4	10.5
15	6.7	5.6	6.4	4.5	12.2	11.8	---	---	12.2	11.6	11.5	10.6
16	6.0	4.6	7.9	5.7	12.1	11.8	---	---	11.9	11.2	11.5	10.2
17	3.9	1.1	6.5	4.9	12.3	11.9	---	---	12.3	11.7	11.4	10.3
18	3.5	2.5	7.3	5.2	11.9	11.2	---	---	12.5	12.3	11.7	10.3
19	6.9	2.7	8.4	6.3	11.9	10.8	---	---	12.6	11.7	11.9	10.4
20	7.3	5.6	8.3	6.6	11.0	10.6	---	---	12.1	11.4	12.0	10.6
21	7.2	5.8	7.6	6.5	11.1	10.7	---	---	12.3	11.4	12.0	10.5
22	7.9	5.3	7.9	6.6	10.9	10.3	---	---	---	---	12.9	10.9
23	7.6	5.8	7.9	6.7	10.5	9.7	---	---	---	---	12.6	10.3
24	7.3	5.7	6.6	6.1	10.2	9.8	---	---	11.1	10.7	12.5	10.3
25	6.5	3.3	7.8	7.0	10.7	9.8	---	---	11.2	10.9	13.3	10.2
26	6.9	5.5	8.1	7.3	10.7	10.1	---	---	11.4	10.0	12.8	8.7
27	8.0	6.2	---	---	---	---	---	---	11.4	10.5	11.0	9.2
28	7.3	5.5	8.3	7.5	---	---	---	---	10.6	10.3	11.5	10.5
29	8.5	7.0	8.3	7.7	---	---	---	---	---	---	10.6	9.6
30	8.6	7.0	10.5	9.0	10.1	9.6	---	---	---	---	9.6	8.9
31	8.2	7.1	---	---	10.2	9.8	---	---	---	---	10.2	8.8
MONTH	8.6	1.1	10.5	2.5	12.3	7.9	10.8	8.4	14.3	10.0	13.3	8.7

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	10.8	8.5	10.1	9.1	9.9	5.9	5.8	5.3	8.8	6.8		
2	11.7	8.4	9.7	9.2	9.9	6.2	7.1	5.4	10.0	5.3		
3	11.8	7.8	9.6	8.7	9.7	5.2	6.7	5.6	10.0	5.3		
4	9.8	7.4	9.1	7.9	9.0	5.3	5.8	4.9	9.5	6.0		
5	10.0	7.4	8.9	7.2	---	---	5.7	5.0	7.3	4.5		
6	11.1	8.8	10.2	7.3	---	---	6.2	5.4	7.0	3.2		
7	11.0	9.1	10.0	9.0	---	---	6.8	5.4	---	---		
8	10.9	8.1	9.8	8.6	---	---	6.3	4.5	---	---		
9	11.0	7.8	9.3	8.5	---	---	7.6	5.3	---	---		
10	11.2	7.1	9.0	8.2	8.7	8.1	7.1	5.5	---	---		
11	9.7	6.3	8.5	7.7	8.5	8.0	6.8	5.4	---	---		
12	9.9	6.9	9.4	8.5	8.1	7.6	7.2	5.9	---	---		
13	10.1	9.4	9.9	9.2	8.1	6.6	8.1	5.3	---	---		
14	11.2	10.1	9.4	8.7	8.9	8.5	9.0	5.8	---	---		
15	11.6	11.0	9.6	9.0	9.0	8.1	9.1	5.1	---	---		
16	11.0	9.6	9.9	9.2	8.1	7.2	10.1	6.7	---	---		
17	10.2	9.3	10.0	9.2	7.7	7.3	10.3	5.9	---	---		
18	9.6	9.2	9.5	9.0	7.7	7.1	10.6	5.4	---	---		
19	9.8	9.4	9.1	8.5	7.3	6.6	6.5	5.8	---	---		
20	9.7	9.4	9.2	8.2	7.0	6.5	7.2	5.9	---	---		
21	10.0	9.5	9.2	7.7	6.7	6.1	7.1	6.1	---	---		
22	9.7	8.4	10.5	7.6	7.6	6.0	6.8	5.8	---	---		
23	9.3	8.6	10.8	7.3	8.2	7.8	6.8	5.6	---	---		
24	9.2	8.7	12.8	7.1	8.3	7.1	6.8	5.5	---	---		
25	10.2	8.9	12.5	6.8	8.5	6.7	6.9	5.6	---	---		
26	10.4	9.4	12.2	6.3	9.0	8.5	7.4	5.8	---	---		
27	10.5	8.6	8.4	4.4	8.9	7.8	8.4	6.3	---	---		
28	10.6	9.2	7.3	5.5	8.2	7.1	7.1	4.1	---	---		
29	10.7	9.1	8.4	6.0	7.4	5.9	7.8	6.1	---	---		
30	10.5	9.8	6.9	5.0	6.3	5.5	8.1	5.9	---	---		
31	---	---	8.0	5.9	---	---	8.8	6.2	---	---		
MONTH	11.8	6.3	12.8	4.4	9.9	5.2	10.6	4.1	10.0	3.2		
YEAR	14.3	1.1										

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

04201300 WEST BRANCH ROCKY RIVER NEAR VALLEY CITY, OH

LOCATION.--Lat 41°14'16", long 81°55'28", in R.15 W., T.4 N., Medina County, Hydrologic Unit 04110001, on right bank at downstream side of bridge, on State Route 303, 0.91 mi (1.46 km) downstream from confluence of Cossett Creek and West Branch Rocky River, and 2.1 mi (3.4 km) downstream from confluence of Mallet Creek and West Branch Rocky River.

DRAINAGE AREA.--119 mi² (308 km²).

PERIOD OF RECORD.--March 1980 to September 1981 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 790 ft (241 m) from topographic map.

REMARKS.--Records fair except those for winter periods and period of no-gage height record Dec. 20 - Feb. 3, which are poor. Some inter-basin transfer of water from Lake Erie for municipal water supply by Cleveland Metro Water District. Diversion above station from North Branch Rocky River for Municipal Supply of Medina.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,350 ft³/s (123 m³/s) June 13, 1981, gage height, 10.39 ft (3.167 m); minimum daily, 2.90 ft³/s (0.08 m³/s) Oct. 7, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (56.6 m³/s) and maximums (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 19	1530	3860	109	9.24	2.816	June 9	0700	3360	95.2	8.17	2.490
Apr. 14	0900	3640	103	8.76	2.670	June 13	2400	*4350	123	*10.39	3.167
Apr. 29	1030	2290	64.9	5.99	1.826	June 25	1300	2080	58.9	5.57	1.698

Minimum daily discharge, 2.9 ft³/s (0.08 m³/s) Oct. 7.

REVISIONS.--Revised figures of discharge of the water year 1980, superseding those published in the report for 1980 are given herein.

EXTREMES FOR PERIOD MARCH TO SEPTEMBER 1980.--Peak discharges above base of 2,000 ft³/s (56.6 m³/s) and maximums (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Mar. 8	0830	3120	88.1	7.66	2.335	Apr. 4	1900	2920	82.7	7.25	2.210
Mar. 21	1630	2670	75.6	6.74	2.054	Aug. 21	2200	*3430	97.1	*8.30	2.530
Apr. 4	0730	2440	69.1	6.29	1.917						

Minimum daily discharge, 3.8 ft³/s (0.108 m³/s) July 21, Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						100	240	27	60	9.8	9.2	4.4
2						90	147	25	336	8.6	63	7.1
3						80	120	24	240	7.6	416	10
4						70	1570	23	99	7.6	113	7.1
5						200	336	25	49	15	40	20
6						350	158	24	154	32	42	8.6
7						170	124	23	194	10	25	5.4
8						2400	105	23	502	6.2	12	6.2
9						597	277	23	109	5.8	8.1	8.1
10						328	165	20	83	26	6.2	20
11						247	130	35	42	13	20	11
12						147	109	109	27	29	102	8.1
13						120	124	147	18	21	31	7.6
14						105	1730	120	13	9.2	16	96
15						86	1300	75	27	6.2	12	54
16						92	626	47	165	5.1	9.8	26
17						194	214	47	63	5.1	4.4	25
18						426	143	495	29	5.4	83	35
19						214	109	204	21	4.4	42	17
20						161	89	113	31	4.7	23	9.2
21						1810	75	75	23	3.8	1430	6.2
22						769	70	57	11	47	2110	4.7
23						209	65	42	8.1	30	173	36
24						247	52	36	7.1	9.8	83	24
25						487	47	31	11	6.2	47	8.6
26						173	35	27	8.6	4.4	27	17
27						130	31	24	5.8	54	18	20
28						109	36	24	4.7	199	11	7.6
29						570	35	21	25	99	8.6	4.4
30						302	30	23	17	32	6.6	3.8
31						1220	---	92	---	15	5.4	---
TOTAL						12203	8292	2081	2383.3	731.9	4997.3	518.1
MEAN						394	276	67.1	79.4	23.6	161	17.3
MAX						2400	1730	495	502	199	2110	96
MIN						70	30	20	4.7	3.8	4.4	3.8
CFSM						3.31	2.32	.56	.67	.20	1.35	.15
IN.						3.81	2.59	.65	.75	.23	1.56	.16

04201300 WEST BRANCH ROCKY RIVER NEAR VALLEY CITY, OH--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	13	65	7.6	170	65	65	99	20	163	7.8	8.8
2	7.1	9.8	86	7.4	280	57	52	73	18	70	5.4	75
3	17	7.6	116	7.4	210	47	40	60	16	33	5.4	153
4	10	6.2	81	7.2	170	47	54	52	17	27	10	222
5	5.8	9.8	36	7.2	130	47	227	44	15	33	8.3	78
6	3.3	10	32	7.2	100	47	96	133	18	31	7.2	66
7	2.9	10	35	7.0	74	47	70	86	15	24	6.3	39
8	3.3	10	83	7.0	56	47	60	57	10	14	5.4	46
9	4.4	10	254	7.0	45	44	52	33	1960	12	5.4	55
10	4.1	9.8	173	7.0	40	40	44	31	291	13	6.3	19
11	3.8	9.2	96	7.0	640	42	38	113	123	11	30	11
12	4.1	8.1	64	7.0	435	42	972	120	68	8.8	20	7.3
13	4.1	8.1	52	7.0	150	42	445	54	290	13	7.8	5.4
14	5.1	8.6	42	6.8	110	33	2590	35	2900	30	3.8	4.5
15	8.6	7.1	34	6.8	80	30	345	102	597	13	17	6.3
16	12	5.8	29	6.6	100	30	89	124	169	8.3	64	6.8
17	9.8	5.1	25	6.6	972	29	116	42	176	5.8	23	4.5
18	40	5.4	22	6.6	900	29	181	21	109	6.3	8.8	3.1
19	29	8.1	19	6.6	3140	27	89	36	80	8.3	4.9	3.8
20	12	9.8	14	6.6	2400	32	70	41	66	37	3.5	5.4
21	7.6	8.1	9.5	6.6	722	47	65	31	68	107	4.9	3.8
22	4.4	7.1	8.2	6.8	199	73	57	25	380	41	4.9	3.1
23	3.8	5.1	7.8	7.0	379	102	105	20	190	18	4.9	3.1
24	7.6	5.4	7.8	8.2	426	86	109	19	107	13	4.5	4.5
25	57	35	7.8	40	177	57	81	18	1190	11	3.8	5.4
26	81	38	7.6	200	113	49	68	17	271	12	3.8	5.4
27	42	23	7.6	700	83	1050	60	17	153	17	3.5	5.4
28	23	92	7.6	500	75	143	158	99	99	44	3.8	4.9
29	30	83	7.6	280	---	86	1350	58	73	75	3.8	4.2
30	23	60	7.8	130	---	81	262	33	87	27	6.8	4.2
31	18	---	7.8	86	---	75	---	27	---	11	18	---
TOTAL	486.9	528.2	1445.1	2104.2	12376	2673	8010	1720	9576	937.5	313.0	863.9
MEAN	15.7	17.6	46.6	67.9	442	86.2	267	55.5	319	30.2	10.1	28.8
MAX	81	92	254	700	3140	1050	2590	133	2900	163	64	222
MIN	2.9	5.1	7.6	6.6	40	27	38	17	10	5.8	3.5	3.1
CFSM	.13	.15	.39	.57	3.71	.72	2.24	.47	2.68	.25	.09	.24
IN.	.15	.17	.45	.66	3.87	.84	2.50	.54	2.99	.29	.10	.27

WTR YR 1981 TOTAL 41033.8 MEAN 112 MAX 3140 MIN 2.9 CFSM .94 IN 12.83

04201500 ROCKY RIVER NEAR BEREA, OH

LOCATION.--Lat 41°24'24", long 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 (4.8 km) northwest of Berea.

DRAINAGE AREA.--267 mi² (692 km²).

WATER-DISCHARGE RECORDS

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.

GAGE.--Water-stage recorder. Datum of gage is 649.90 ft (198.089 m) National Geodetic Vertical Datum of 1929 (Cuyahoga County bench mark). Prior to Sept. 30, 1935, nonrecording gage at same site and datum.

REMARKS.--Records good except those for the winter period, which are poor. Some regulation at low flow by small reservoirs on East Branch. Some inter-basin transfer of water from Lake Erie for municipal water supply by Cleveland Metro Water District. Water-quality data collected at this site 1964 to 1977.

AVERAGE DISCHARGE.--50 years, 263 ft³/s (7.448 m³/s), 13.38 in/yr (339 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,400 ft³/s (606 m³/s) Jan. 22, 1959, gage height, 14.10 ft (4.298 m), from rating curve extended above 11,000 ft³/s (312 m³/s) on basis of contracted-opening measurement of peak flow; maximum gage height, 18.6 ft (5.67 m) June 29, 1924 (backwater caused by tornado); minimum daily discharge, 0.2 ft³/s (0.006 m³/s) Sept. 2, 1932, Aug. 22, 27, 30, 1933.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a stage of 20.9 ft (6.37 m).

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 4,000 ft³/s (113 m³/s) and maximums (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 20	0230	*6670	189	*6.27	1.911	June 9	1630	4460	126	5.09	1.551
Apr. 14	1845	5640	160	5.73	1.746	June 14	1400	5920	168	5.87	1.789

Minimum daily discharge, 23 ft³/s (0.65 m³/s) Oct. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	49	164	60	315	241	214	538	73	284	43	52
2	61	44	250	58	800	210	171	331	71	128	35	414
3	52	43	348	58	400	186	147	236	59	76	44	994
4	47	41	190	58	280	168	182	186	59	63	40	1170
5	38	40	140	58	210	171	639	168	58	71	37	414
6	35	41	119	57	170	182	414	482	56	65	35	294
7	33	44	171	57	140	186	245	447	58	56	131	202
8	31	49	304	57	120	171	182	236	49	46	214	241
9	23	49	765	57	115	161	157	175	3240	41	59	232
10	24	44	577	57	115	157	137	164	1180	71	41	122
11	24	43	326	56	1060	157	397	611	403	43	326	78
12	73	43	206	56	805	161	1850	789	198	35	171	59
13	49	41	130	56	310	144	958	397	494	119	73	52
14	37	49	100	56	230	128	4700	259	4920	76	47	125
15	35	52	86	56	210	113	1720	465	1000	61	190	76
16	35	49	74	55	343	119	570	837	414	41	274	52
17	38	44	70	55	1450	122	611	470	360	34	131	56
18	102	52	68	55	1660	116	994	250	198	29	65	63
19	85	59	66	55	4200	116	538	171	131	28	44	78
20	56	54	66	55	5200	131	376	134	100	116	34	63
21	41	52	64	55	2010	168	279	122	85	488	29	50
22	34	49	62	55	829	259	227	102	519	194	27	52
23	30	46	62	55	914	403	507	87	544	78	27	46
24	30	58	62	55	1030	366	618	78	179	52	26	40
25	100	97	62	60	584	250	500	71	1150	41	26	37
26	140	110	61	862	408	227	320	65	976	67	25	38
27	85	131	60	1550	304	1790	245	67	255	54	25	38
28	78	245	60	789	259	696	223	194	131	206	27	35
29	80	236	60	430	---	381	2160	198	89	310	28	33
30	67	179	60	210	---	310	1270	128	69	122	49	78
31	58	---	60	150	---	289	---	92	---	61	44	---
TOTAL	1661	2133	4893	5403	24471	8279	21551	8550	17118	3156	2367	5284
MEAN	53.6	71.1	158	174	874	267	718	276	571	102	76.4	176
MAX	140	245	765	1550	5200	1790	4700	837	4920	488	326	1170
MIN	23	40	60	55	115	113	137	65	49	28	25	33
CFSM	.20	.27	.59	.65	3.27	1.00	2.69	1.03	2.14	.38	.29	.66
IN.	.23	.30	.68	.75	3.41	1.15	3.00	1.19	2.38	.44	.33	.74

CAL YR 1980 TOTAL 89084 MEAN 243 MAX 3310 MIN 23 CFSM .91 IN 12.41
WTR YR 1981 TOTAL 104866 MEAN 287 MAX 5200 MIN 23 CFSM 1.08 IN 14.61

04201500 ROCKY RIVER NEAR BEREA, OH--Continued

SEDIMENT ANALYSES

PERIOD OF RECORD.--1969 to current year (discontinued).

REMARKS.--Sediment sampling site at bridge 2,400 ft (732 m) downstream from discharge station.

PERIOD OF DAILY RECORD.--
SUSPENDED SEDIMENT DISCHARGE: 1978 to current year (discontinued).

EXTREMES FOR PERIOD OF DAILY RECORD.--
SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,080 mg/L Sept. 14, 1979; minimum daily mean, 1 mg/L many days during 1978, 1980, 1981.
SEDIMENT LOADS: Maximum daily, 13,000 tons (11,800 tonnes) Sept. 14, 1979; minimum daily, 0.10 ton (0.09 tonne) Nov. 10, 1978.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATIONS: Maximum daily mean, 994 mg/L June 9; minimum daily mean, 1 mg/L on Nov. 17.
SEDIMENT LOADS: Maximum daily, 10,700 tons (9,710 tonnes) June 14; minimum daily, 0.15 ton (0.14 tonne) Nov. 17.

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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	40	8	.86	49	8	1.1	164	18	8.1
2	61	12	2.1	44	9	1.1	250	47	37
3	52	8	1.0	43	8	.86	348	59	56
4	47	7	.94	41	8	.83	190	30	16
5	38	6	.65	40	3	.38	140	21	8.7
6	35	6	.57	41	4	.44	119	19	6.2
7	33	6	.56	44	5	.55	171	42	13
8	31	7	.62	49	10	1.4	304	35	22
9	23	5	.35	49	9	1.2	765	84	174
10	24	3	.21	44	5	.55	577	45	80
11	24	5	.33	43	5	.57	326	20	22
12	73	14	3.0	43	4	.45	206	13	8.1
13	49	15	2.1	41	4	.49	130	11	5.3
14	37	12	1.2	49	7	.93	100	8	2.2
15	35	13	1.2	52	6	.84	86	6	1.4
16	35	10	.97	49	3	.41	74	6	1.2
17	38	11	1.3	44	1	.15	70	3	.60
18	102	32	9.5	52	2	.30	68	3	.50
19	85	18	4.0	59	4	.68	66	5	.90
20	56	15	2.3	54	3	.48	66	5	.90
21	41	13	1.5	52	2	.28	64	3	.50
22	34	8	.77	49	3	.39	62	4	.70
23	30	6	.53	46	4	.53	62	7	1.2
24	30	8	.64	58	13	2.3	62	6	1.0
25	100	19	5.6	97	13	3.5	62	4	.70
26	140	23	8.9	110	9	2.7	61	5	.80
27	85	15	3.5	131	21	9.5	60	5	.80
28	78	15	3.1	245	33	22	60	6	1.0
29	80	12	2.6	236	25	16	60	6	1.0
30	67	10	1.8	179	20	9.6	60	12	1.9
31	58	10	1.5	---	---	---	60	11	1.8
TOTAL	1661	---	64.20	2133	---	80.51	4893	---	475.50

04201500 ROCKY RIVER NEAR BEREA, OH--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		JANUARY			FEBRUARY			MARCH	
1	60	7	1.3	315	17	14	241	25	17
2	58	7	1.1	800	142	307	210	19	11
3	58	21	3.3	400	48	52	186	15	8.1
4	58	13	2.0	280	25	19	168	14	6.6
5	58	5	.80	210	15	8.5	171	14	6.4
6	57	3	.50	170	18	8.2	182	13	6.4
7	57	4	.60	140	21	7.9	186	11	5.8
8	57	4	.60	120	12	3.9	171	12	5.8
9	57	4	.60	115	15	4.7	161	13	5.6
10	57	4	.60	115	11	3.4	157	12	5.2
11	56	5	.80	1060	160	458	157	12	5.0
12	56	4	.60	805	57	195	161	11	4.9
13	56	3	.50	310	27	34	144	12	5.0
14	56	6	.90	230	20	17	128	13	4.8
15	56	10	1.5	210	15	9.7	113	10	3.0
16	55	10	1.5	343	19	13	119	11	3.5
17	55	12	1.8	1450	123	341	122	10	3.4
18	55	15	2.2	1660	193	910	116	9	3.0
19	55	13	1.9	4200	947	5700	116	8	2.5
20	55	21	3.1	5200	537	9210	131	8	2.6
21	55	26	3.9	2010	210	1820	168	14	5.7
22	55	19	2.8	829	96	276	259	16	10
23	55	16	2.4	914	78	137	403	32	37
24	55	14	2.1	1030	81	281	366	23	27
25	60	16	2.6	584	53	101	250	21	17
26	862	125	291	408	36	44	227	46	25
27	1550	193	832	304	27	25	1790	502	1580
28	789	67	190	259	27	20	696	106	302
29	430	36	52	---	---	---	381	45	55
30	210	24	23	---	---	---	310	37	32
31	150	14	5.7	---	---	---	289	26	23
TOTAL	5403	---	1433.70	24471	---	20020.3	8279	---	2229.3
		APRIL			MAY			JUNE	
1	214	19	12	538	48	90	73	10	2.2
2	171	16	8.2	331	34	36	71	9	1.6
3	147	12	4.9	236	21	15	59	8	1.2
4	182	13	5.0	186	15	7.9	59	7	1.1
5	639	83	96	168	12	5.3	58	6	.92
6	414	37	55	482	70	91	56	6	.91
7	245	17	13	447	39	61	58	10	1.4
8	182	11	5.9	236	16	12	49	14	1.8
9	157	12	5.2	175	14	6.9	3240	994	9690
10	137	13	4.9	164	10	4.2	1180	245	955
11	397	74	25	611	88	70	403	98	113
12	1850	289	1230	789	63	155	198	55	32
13	958	122	416	397	24	32	494	126	396
14	4700	654	5770	259	21	15	4920	777	10700
15	1720	286	2740	465	35	29	1000	195	587
16	570	113	223	837	51	95	414	114	135
17	611	148	187	470	27	46	360	106	107
18	994	169	475	250	11	9.1	198	49	29
19	538	78	149	171	8	4.3	131	38	15
20	376	43	48	134	7	2.7	100	23	7.1
21	279	27	23	122	9	3.2	85	13	3.6
22	227	29	18	102	7	2.1	519	158	355
23	507	60	64	87	6	1.5	544	199	326
24	618	60	102	78	10	2.1	179	79	43
25	500	38	59	71	13	2.5	1150	235	924
26	320	22	22	65	11	2.0	976	175	522
27	245	17	12	67	8	1.4	255	70	53
28	223	21	12	194	18	5.3	131	32	13
29	2160	366	801	198	23	15	89	18	5.0
30	1270	161	873	128	22	7.5	69	12	2.8
31	---	---	---	92	12	3.3	---	---	---
TOTAL	21551	---	13459.1	8550	---	833.3	17118	---	25024.63

04201500 ROCKY RIVER NEAR BEREA, OH--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		JULY			AUGUST			SEPTEMBER	
1	284	79	76	43	26	4.1	52	8	1.6
2	128	167	64	35	12	1.5	414	102	223
3	76	72	18	44	20	3.7	994	178	527
4	63	32	6.8	40	17	2.5	1170	163	544
5	71	23	5.8	37	11	1.6	414	86	99
6	65	9	2.0	35	9	1.1	294	55	44
7	56	10	1.8	131	56	70	202	43	24
8	46	9	1.4	214	142	110	241	58	40
9	41	25	3.5	59	47	10	232	54	35
10	71	22	5.9	41	20	3.2	122	35	13
11	43	9	1.4	326	160	187	78	20	4.5
12	35	11	1.4	171	177	96	59	11	1.9
13	119	31	12	73	44	12	52	6	.97
14	76	23	5.8	47	23	4.0	125	107	66
15	61	17	3.5	190	101	83	76	46	11
16	41	19	2.7	274	124	98	52	17	2.6
17	34	18	2.2	131	39	15	56	12	1.9
18	29	15	1.7	65	32	7.4	63	14	3.4
19	28	22	2.3	44	16	2.6	78	41	9.5
20	116	34	13	34	12	1.5	63	17	3.2
21	488	204	330	29	12	1.3	50	20	2.8
22	194	108	67	27	8	.81	52	13	2.0
23	78	43	11	27	6	.61	46	6	.78
24	52	29	5.2	26	5	.51	40	5	.59
25	41	23	3.3	26	7	.70	37	18	1.9
26	67	20	4.3	25	10	1.0	38	8	.84
27	54	13	2.5	25	8	.75	38	12	1.3
28	206	149	133	27	9	.91	35	10	1.1
29	310	214	192	28	5	.58	33	5	.50
30	122	99	40	49	17	4.2	78	22	9.0
31	61	40	8.8	44	13	2.0	---	---	---
TOTAL	3156	---	1028.3	2367	---	727.57	5284	---	1676.38
YEAR	104866		67052.79						

04202000 CUYAHOGA RIVER AT HIRAM RAPIDS, OH

LOCATION.--Lat 41°20'26", long 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, 0.6 mi (1.0 km) downstream from Black Brook.

DRAINAGE AREA.--151 mi² (391 km²).

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 (331.458 m) National Geodetic Vertical Datum of 1929, unadjusted. Prior to Aug. 26, 1927, nonrecording gage and Aug. 26, 1927, to Dec. 31, 1935, water-stage recorder, at site 2.8 mi (4.5 km) downstream at different datum. Oct. 20, 1944, to Oct. 22, 1946, nonrecording gage at present site and datum.

REMARKS.--Records good. Flow regulated by East Branch Reservoir. usable capacity, 4,140 acre-ft (5.10 hm³), 14.6 mi (23.5 km) upstream since 1939 and by LaDue Reservoir, usable capacity, 18,110 acre-ft (22.3 hm³), 9.8 mi (15.8 km) upstream since 1961. Water-quality data collected at this site 1965 to 1977.

AVERAGE DISCHARGE.--45 years, 205 ft³/s (5.806 m³/s), 18.44 in/yr (468 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,670 ft³/s (104 m³/s) Jan. 23, 1959, gage height, 8.11 ft (2.472 m), from rating curve extended above 2,600 ft³/s (73.6 m³/s); minimum daily, 6.6 ft³/s (0.19 m³/s) Sept. 10, 1933.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,080 ft³/s (87.2 m³/s) Feb. 21, gage height, 7.26 ft (2.213 m); minimum daily, 27 ft³/s (0.76 m³/s) July 3, 4, 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	185	136	117	180	406	342	515	99	34	240	84
2	64	170	160	119	210	318	283	495	84	30	203	82
3	64	156	190	110	260	261	227	410	73	27	152	97
4	66	144	208	95	330	218	196	326	70	27	90	162
5	66	138	208	90	260	186	211	255	61	29	57	235
6	65	130	193	85	220	168	214	255	61	32	42	312
7	65	124	175	80	180	156	220	265	54	30	38	321
8	65	122	165	75	160	147	220	268	44	28	86	302
9	69	122	187	75	140	140	211	257	147	27	117	270
10	62	122	214	70	138	136	172	229	188	38	126	231
11	62	119	244	70	149	138	142	250	219	50	143	198
12	69	120	255	70	272	140	149	264	220	50	170	157
13	90	115	265	70	334	145	163	265	198	48	183	110
14	103	115	234	70	250	140	279	257	193	54	175	81
15	138	117	214	70	200	134	485	252	182	63	155	113
16	140	117	163	70	244	132	730	243	172	103	162	140
17	136	115	136	70	354	130	713	228	158	109	183	147
18	136	112	117	70	560	126	603	214	132	110	187	145
19	136	83	108	70	1450	123	485	194	104	110	172	117
20	132	69	90	75	2720	119	401	168	74	110	141	102
21	128	65	80	75	2970	130	318	141	55	81	97	72
22	124	64	70	80	2460	140	251	113	64	82	64	59
23	119	63	65	82	1910	158	220	89	82	74	48	53
24	115	67	70	85	1530	192	230	74	74	56	39	48
25	124	91	75	90	1210	241	269	66	73	40	36	43
26	156	108	70	96	917	298	290	62	67	46	39	42
27	177	108	75	151	696	457	302	61	53	106	79	56
28	187	108	80	177	523	534	283	98	42	121	84	51
29	196	119	89	208	---	555	342	125	41	200	86	37
30	199	126	102	251	---	497	415	112	39	244	88	31
31	196	---	113	286	---	420	---	109	---	253	88	---
TOTAL	3513	3414	4551	3202	20827	7085	9366	6660	3123	2412	3570	3898
MEAN	113	114	147	103	744	229	312	215	104	77.8	115	130
MAX	199	185	265	286	2970	555	730	515	220	253	240	321
MIN	62	63	65	70	138	119	142	61	39	27	36	31
MEAN+	112	113	148	104	746	229	312	215	104	77.6	115	130
CFSM+	0.74	0.75	0.98	0.69	4.94	1.52	2.07	1.42	0.69	0.51	0.76	0.86
IN.+	0.85	0.83	1.13	0.79	5.14	1.74	2.31	1.64	0.77	0.59	0.88	0.96

CAL YR 1980 TOTAL 75533 MEAN 206 MAX 1170 MIN 26 MEAN+ 207 CFSM+ 1.37 IN+ 18.58
WTR YR 1981 TOTAL 71621 MEAN 196 MAX 2970 MIN 27 MEAN+ 196 CFSM+ 1.30 IN+ 17.62

+ Adjusted for change of contents of East Branch and LaDue Reservoirs.

04206000 CUYAHOGA RIVER AT OLD PORTAGE, OH

LOCATION.--Lat 41°08'08", long 81°32'50", Summit County, Hydrologic Unit 04110002, on right bank 230 ft (70 m) upstream from North Portage Path bridge at Old Portage, 1.2 mi (1.9 km) downstream from Little Cuyahoga River, and 4 mi (6 km) northwest of Akron City Hall.

DRAINAGE AREA.--404 mi² (1,046 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1921 to December 1935, March 1939 to current year.

REVISED RECORDS.--WSP 1307: 1924(M). WSP 1912: Drainage area. WRD OH-79-2: 1974 (M), 1976 (M).

GAGE.--Water-stage recorder. Datum of gage is 740.11 ft (225.586 m) National Geodetic Vertical Datum of 1929, unadjusted. Prior to Dec. 21, 1923, nonrecording gage at same site and datum.

REMARKS.--Records good. Natural flow of stream affected by diversions, storage reservoirs and power plants. At Lake Rockwell, 17.7 mi (28.5 km) upstream from gage, an average of 76 ft³/s (2.15 m³/s) was diverted for municipal supply of city of Akron. Sewage from city enters river 2.9 mi (4.7 km) downstream from station. Some diversion from the Tuscarawas River basin drainage into this basin at Portage Lakes (see REMARKS for station 03116000 in volume 1 of this report).

AVERAGE DISCHARGE.--56 years, 424 ft³/s (12.01 m³/s)

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,500 ft³/s (184 m³/s) Jan. 21, 1959, gage height, 11.54 ft (3.517 m), from rating curve extended above 3,900 ft³/s (110 m³/s) on basis of contracted-opening estimate at gage height 11.54 ft (3.517 m), at site with drainage area of 488 mi² (1,264 km²) adjusted to gaging station by drainage-area relation; maximum gage height, 13.29 ft (4.051 m) Sept. 14, 1979; minimum daily, 26 ft³/s (0.736 m³/s) Sept. 2, 1945, July 5, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,080 ft³/s (116 m³/s) Feb. 21, gage height, 10.21 ft (3.112 m); minimum daily, 106 ft³/s (3.00 m³/s) Oct. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	138	251	239	189	439	990	714	886	421	221	343	217
2	143	246	287	191	778	821	604	861	344	211	329	510
3	141	237	308	179	558	694	561	802	321	197	317	745
4	134	230	308	157	497	604	464	675	308	230	270	488
5	131	210	297	143	452	551	679	586	275	398	216	400
6	139	195	292	159	430	510	608	721	263	368	172	389
7	270	187	313	171	375	455	583	630	235	346	154	399
8	285	183	369	155	324	436	494	565	260	323	146	456
9	275	181	464	138	265	414	442	517	1760	284	148	414
10	270	171	449	141	277	399	396	471	1150	235	177	376
11	260	160	418	143	626	396	408	558	881	203	266	337
12	256	160	411	139	510	384	890	645	969	186	227	302
13	246	162	402	136	439	381	829	593	1540	234	227	271
14	157	160	381	134	446	366	1220	630	1670	189	252	235
15	151	171	327	133	455	358	1350	737	1180	168	284	196
16	129	175	295	134	572	346	1190	667	906	158	328	192
17	125	175	248	138	902	338	1370	572	806	148	292	228
18	141	193	217	143	1120	321	1420	481	660	149	274	230
19	106	181	202	141	2440	316	1170	427	504	145	264	238
20	126	166	153	146	3720	313	969	390	411	222	252	228
21	166	151	136	148	4050	330	802	361	349	252	225	213
22	166	143	141	146	3960	338	667	335	667	196	194	193
23	162	150	150	134	3610	375	671	200	490	170	171	170
24	162	239	155	133	3060	414	630	175	399	169	150	161
25	282	215	143	138	2440	430	608	177	534	156	139	167
26	239	197	143	212	1910	514	593	175	427	182	139	143
27	230	239	139	319	1530	1110	583	242	313	156	138	138
28	295	275	141	341	1230	1020	619	745	275	547	143	141
29	268	253	179	344	---	914	1090	648	246	498	149	147
30	253	244	193	327	---	944	1090	439	232	401	160	162
31	251	---	187	282	---	853	---	452	---	357	179	---
TOTAL	6097	5900	8087	5534	37415	16635	23714	16363	18796	7699	6725	8486
MEAN	197	197	261	179	1336	537	790	528	627	248	217	283
MAX	295	275	464	344	4050	1110	1420	886	1760	547	343	745
MIN	106	143	136	133	265	313	396	175	232	145	138	138

CAL YR 1980 TOTAL 167195 MEAN 457 MAX 1990 MIN 106
WTR YR 1981 TOTAL 161451 MEAN 442 MAX 4050 MIN 106

04206000 CUYAHOGA RIVER AT OLD PORTAGE, OH--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to 1967, 1969 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1970 to current year.
pH: October 1970 to current year.
WATER TEMPERATURES: October 1970 to current year.
DISSOLVED OXYGEN: October 1970 to current year.
SUSPENDED SEDIMENT DISCHARGE: March 1972 to current year (discontinued).

INSTRUMENTATION.--Water-quality monitor.

REMARKS.--Interruptions in the water-quality record were due to malfunction of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 3,000 micromhos Aug. 4, 1977; minimum, 120 micromhos July 20, 1973.
pH: Maximum, 11.4 units Nov. 8, 1974; minimum, 6.2 units July 3, 1973.
WATER TEMPERATURES: Maximum, 34.5°C July 18, 1977; minimum, 0.0°C Jan. 16, 31, Dec. 17, 18, 1972, Jan. 8, 1973, Dec. 10-12, 25-28, 1977, Jan. 3, 9, 10, 16, 22, 23, 26-28, Feb. 6, 19, 20, 1978.
DISSOLVED OXYGEN: Maximum, 15.3 mg/L Feb. 19, 1979; minimum, 0.0 mg/L July 24, 29, 31, Aug. 1, 3-6, 1977.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,060 mg/L July 14, 1978; minimum daily mean, 1 mg/L Sept. 10, 1973, July 31, Aug. 1, 2, 1978.
SEDIMENT LOADS: Maximum daily, 9,340 tons (8,470 tonnes) Sept. 14, 1979; minimum daily, 0.15 ton (0.14 tonne) Sept. 10, 1973.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 1,290 micromhos Dec. 29; minimum, 252 micromhos June 9.
PH: Maximum, 8.6 units Apr. 10; minimum, 6.9 units Dec. 7.
WATER TEMPERATURES: Maximum, 29.0°C July 18; minimum, 0.5°C, on several days during winter period.
DISSOLVED OXYGEN: Maximum, 13.4 mg/L Jan. 24, May 23; minimum, 2.0 mg/L, Sept. 1.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 398 mg/L June 9; minimum daily mean 2 mg/L Jan. 15.
SEDIMENT LOADS: Maximum daily, 3,630 tons (3,290 tonnes) Feb. 20; minimum daily, 0.72 ton (0.65 tonne) Jan. 15.

04206000 CUYAHOGA RIVER AT OLD PORTAGE, OH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	774	693	564	534	699	657	1030	816	891	582	363	339
2	765	699	570	546	669	615	951	855	768	702	393	360
3	768	720	603	549	660	600	882	789	705	612	426	384
4	798	735	603	558	624	588	---	---	618	597	459	420
5	774	711	603	552	618	555	---	---	615	570	471	438
6	774	711	609	570	606	552	---	---	747	570	573	465
7	768	726	612	576	609	552	---	---	897	639	537	477
8	756	615	621	588	618	549	---	---	798	678	531	522
9	645	573	621	582	600	549	---	---	681	645	531	510
10	597	558	630	591	597	555	---	---	948	630	534	519
11	594	546	636	594	600	552	---	---	942	669	558	525
12	594	564	654	612	585	555	---	---	753	660	576	543
13	603	555	651	612	594	546	---	---	693	561	561	537
14	807	603	669	633	564	534	---	---	657	567	561	540
15	807	705	669	621	645	531	---	---	636	588	549	546
16	738	693	663	627	621	564	771	741	774	597	555	534
17	750	699	672	621	597	552	786	741	651	558	813	540
18	741	645	762	657	609	567	792	744	564	486	669	567
19	687	648	705	651	636	579	801	762	516	405	921	555
20	714	657	672	639	645	603	873	762	405	342	810	690
21	780	696	681	648	645	603	897	795	339	285	837	747
22	783	738	705	642	651	570	852	798	282	261	765	699
23	780	711	708	669	630	579	810	774	285	258	702	663
24	759	702	780	642	732	597	828	765	285	276	651	594
25	711	660	723	657	720	630	843	771	303	282	591	561
26	---	---	735	672	660	615	924	813	306	276	669	501
27	---	---	909	663	693	618	831	789	318	300	522	456
28	636	597	753	666	756	633	783	699	348	312	450	411
29	612	570	867	669	1290	669	702	615	---	---	432	420
30	588	552	747	684	1040	825	627	591	---	---	447	423
31	579	540	---	---	879	756	603	585	---	---	447	435
MONTH	807	540	909	534	1290	531	1030	585	948	258	921	339

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	456	438	402	375	489	474	657	609	540	525	831	606
2	462	447	399	381	564	489	672	657	549	516	693	498
3	489	453	384	375	573	462	708	672	582	510	684	297
4	516	462	405	384	576	477	711	468	579	555	552	492
5	513	456	432	408	609	576	666	447	660	582	543	510
6	495	468	450	405	624	579	666	615	666	633	549	519
7	477	468	432	423	660	624	645	558	696	657	528	507
8	501	465	447	417	666	543	579	552	702	690	504	471
9	507	474	450	426	606	252	585	561	720	696	507	486
10	507	459	456	432	384	360	615	588	738	687	525	501
11	543	438	459	417	390	369	654	618	717	471	528	513
12	522	390	450	417	381	345	669	648	720	699	537	525
13	513	408	459	429	369	258	678	447	714	633	552	534
14	456	405	501	375	351	291	738	663	639	621	615	552
15	417	366	444	396	384	336	756	696	624	525	648	597
16	384	369	435	420	417	381	798	705	591	528	639	606
17	393	372	438	414	420	393	813	747	579	561	633	594
18	381	354	459	426	444	417	831	774	579	558	675	633
19	384	357	495	456	489	432	804	780	582	567	666	609
20	387	369	498	474	525	477	801	603	600	573	633	615
21	405	375	519	489	549	501	732	702	618	594	642	630
22	426	399	540	495	516	471	735	696	639	618	669	636
23	450	417	585	531	525	504	732	681	666	639	669	657
24	480	423	606	570	534	513	756	729	720	666	705	669
25	453	435	639	606	525	471	774	747	756	726	735	678
26	453	423	678	621	549	510	783	630	786	753	756	696
27	447	420	654	396	573	528	753	699	804	777	753	741
28	492	387	609	381	570	549	735	276	825	783	795	735
29	423	378	573	489	624	567	696	579	825	798	837	771
30	411	375	525	465	654	618	651	540	831	759	849	660
31	---	---	492	459	---	---	558	519	819	780	---	---
MONTH	543	354	678	375	666	252	831	276	831	471	849	297
YEAR	1290	252										

04206000 CUYAHOGA RIVER AT OLD PORTAGE, OH--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.6	7.4	---	---	7.4	7.2	7.8	7.6	7.6	7.5	---	---
2	7.6	7.4	---	---	7.3	7.1	8.1	7.6	7.7	7.6	---	---
3	7.7	7.5	---	---	7.4	7.1	8.1	7.7	7.7	7.6	---	---
4	7.7	7.5	---	---	7.4	7.1	---	---	7.9	7.6	---	---
5	7.7	7.5	---	---	7.3	7.1	---	---	7.8	7.6	---	---
6	7.7	7.5	---	---	7.2	7.0	---	---	7.7	7.6	---	---
7	7.7	7.5	---	---	7.4	6.9	---	---	7.8	7.5	7.7	7.7
8	7.7	7.5	---	---	7.5	7.1	---	---	7.8	7.5	7.8	7.7
9	7.7	7.5	---	---	7.5	7.2	---	---	7.8	7.5	7.8	7.7
10	7.7	7.5	---	---	7.6	7.2	---	---	7.7	7.4	7.8	7.7
11	7.7	7.5	---	---	7.6	7.4	---	---	7.8	7.4	8.0	7.7
12	7.7	7.5	---	---	7.6	7.3	---	---	7.8	7.6	7.9	7.8
13	7.8	7.6	---	---	7.6	7.3	---	---	7.6	7.5	8.0	7.8
14	7.7	7.5	---	---	7.6	7.3	---	---	7.7	7.5	8.0	7.8
15	7.6	7.5	---	---	7.6	7.3	---	---	7.7	7.5	8.1	7.8
16	7.6	7.4	---	---	7.5	7.3	8.0	7.5	7.8	7.5	8.1	7.8
17	7.6	7.4	---	---	7.5	7.3	8.0	7.5	7.5	7.5	8.1	7.8
18	7.6	7.3	---	---	7.4	7.1	8.0	7.5	7.5	7.5	8.2	7.7
19	7.6	7.3	---	---	7.5	7.1	8.0	7.5	7.6	7.3	8.2	7.7
20	7.9	7.4	---	---	7.5	7.3	7.9	7.4	7.3	7.3	8.3	7.8
21	---	---	---	---	7.6	7.3	8.0	7.5	7.3	7.2	8.3	7.8
22	---	---	---	---	7.6	7.3	7.8	7.5	7.2	7.2	8.5	7.8
23	---	---	---	---	7.5	7.3	8.0	7.5	7.4	7.2	8.4	7.8
24	---	---	---	---	7.5	7.2	8.1	7.5	7.5	7.3	8.5	7.8
25	---	---	---	---	7.5	7.3	8.1	7.4	7.4	7.3	8.5	7.8
26	---	---	---	---	7.6	7.3	7.8	7.4	7.5	7.4	8.5	7.7
27	---	---	---	---	8.2	7.3	7.8	7.5	7.5	7.4	8.1	7.8
28	---	---	---	---	8.0	7.6	7.7	7.6	---	---	8.1	7.9
29	---	---	7.5	7.4	7.7	7.2	7.8	7.6	---	---	8.3	7.9
30	---	---	7.5	7.3	7.7	7.3	7.9	7.6	---	---	8.1	7.9
31	---	---	---	---	7.9	7.4	7.9	7.5	---	---	8.3	7.9
MONTH	7.9	7.3	7.5	7.3	8.2	6.9	8.1	7.4	7.9	7.2	8.5	7.7

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.3	7.8	8.0	7.7	7.7	7.5	7.7	7.4	7.8	7.6	7.9	7.2
2	8.4	7.8	8.0	7.7	7.7	7.5	7.8	7.4	7.9	7.6	7.8	7.2
3	8.4	7.7	8.1	7.7	7.6	7.3	7.9	7.4	7.7	7.5	7.7	7.4
4	8.4	7.6	8.3	7.7	7.6	7.4	8.0	7.3	7.9	7.5	7.7	7.6
5	8.0	7.6	8.1	7.6	7.7	7.4	7.6	7.1	7.9	7.4	7.8	7.6
6	8.2	7.8	8.1	7.6	7.7	7.4	7.9	7.5	7.8	7.4	7.8	7.7
7	8.3	7.8	8.1	7.7	7.7	7.5	7.9	7.5	7.8	7.3	7.9	7.7
8	8.4	7.8	8.2	7.7	7.8	7.2	7.8	7.4	7.8	7.3	7.9	7.7
9	8.5	7.6	8.2	7.7	7.6	7.3	7.7	7.3	8.0	7.3	8.0	7.7
10	8.6	7.6	8.2	7.6	7.6	7.5	7.8	7.3	8.0	7.4	8.0	7.7
11	8.5	7.5	7.8	7.6	7.6	7.5	7.9	7.4	7.9	7.1	8.0	7.7
12	8.0	7.5	7.9	7.6	7.6	7.5	8.0	7.4	7.9	7.4	8.1	7.7
13	8.1	7.7	8.1	7.6	7.5	7.3	7.5	7.0	8.1	7.5	8.3	7.6
14	7.9	7.7	8.0	7.6	7.5	7.4	7.8	7.3	8.0	7.4	8.0	7.5
15	7.9	7.8	7.8	7.6	7.5	7.5	7.9	7.4	7.6	7.2	8.2	7.5
16	7.9	7.8	7.9	7.7	7.6	7.4	7.8	7.4	7.7	7.3	8.2	7.4
17	7.9	7.8	8.0	7.7	7.6	7.5	7.8	7.4	7.7	7.5	7.9	7.4
18	7.9	7.8	8.0	7.6	7.6	7.5	7.9	7.4	7.8	7.4	8.1	7.5
19	7.9	7.8	8.2	7.6	7.6	7.5	7.6	7.3	7.8	7.4	8.0	7.5
20	8.0	7.8	8.2	7.6	7.7	7.5	7.7	7.2	7.9	7.4	7.9	7.5
21	8.1	7.8	8.3	7.6	7.6	7.4	7.8	7.4	8.0	7.4	7.9	7.5
22	8.1	7.7	8.5	7.5	7.6	7.5	8.0	7.5	7.9	7.3	7.7	7.4
23	7.9	7.6	8.5	7.4	7.7	7.6	7.8	7.5	7.9	7.3	7.8	7.4
24	7.9	7.6	8.6	7.4	7.8	7.5	7.7	7.4	7.9	7.4	7.8	7.5
25	8.1	7.7	8.3	7.4	7.6	7.5	7.7	7.4	7.9	7.4	7.9	7.4
26	8.1	7.7	8.2	7.4	7.7	7.6	7.5	7.2	7.9	7.3	8.2	7.3
27	8.3	7.7	7.5	7.3	7.6	7.5	7.5	7.3	7.8	7.3	8.1	7.5
28	8.3	7.4	7.7	7.3	7.7	7.5	7.5	7.2	8.1	7.2	8.1	7.6
29	7.8	7.4	7.7	7.5	8.0	7.5	7.6	7.3	8.1	7.5	8.0	7.6
30	7.8	7.7	7.6	7.5	7.6	7.4	7.6	7.5	7.9	7.5	8.0	7.6
31	---	---	7.7	7.5	---	---	7.7	7.5	7.9	7.5	---	---
MONTH	8.6	7.4	8.6	7.3	8.0	7.2	8.0	7.0	8.1	7.1	8.3	7.2
YEAR	8.6	6.9										

STREAMS TRIBUTARY TO LAKE ERIE

04206000 CUYAHOGA RIVER AT OLD PORTAGE, OH--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	22.0	16.5	9.5	8.0	5.5	4.0	4.0	1.5	3.5	2.5	5.0	4.5
2	22.5	15.0	8.5	7.0	6.0	3.5	2.0	1.0	2.5	1.5	5.0	4.0
3	18.5	16.5	10.5	7.0	5.5	3.5	2.0	.5	2.0	.5	5.5	4.5
4	17.0	14.5	10.5	9.5	6.0	4.5	---	---	2.5	.5	5.5	5.0
5	16.5	13.0	10.5	9.5	5.5	4.5	---	---	3.0	1.0	5.5	4.5
6	16.5	13.0	11.0	9.0	6.5	5.0	---	---	2.5	1.5	6.0	5.0
7	17.0	14.0	12.5	10.5	6.5	5.5	---	---	3.0	1.5	6.0	5.0
8	18.0	13.5	12.0	10.0	8.5	5.5	---	---	2.5	1.5	6.0	5.0
9	18.5	15.0	11.5	9.5	7.5	5.5	---	---	3.0	1.5	7.0	5.0
10	18.5	14.5	10.5	8.5	6.0	5.0	---	---	4.0	2.0	7.5	5.5
11	17.5	15.0	9.0	8.0	5.5	4.0	---	---	4.0	1.5	7.5	6.0
12	15.0	13.0	10.5	8.5	5.0	4.0	---	---	3.0	.5	10.0	7.0
13	14.5	12.5	12.0	9.5	5.0	2.5	---	---	4.0	1.0	8.5	6.5
14	14.5	12.5	11.5	11.0	3.0	1.5	---	---	3.5	1.5	7.5	5.0
15	17.5	14.0	11.0	10.0	4.0	1.5	---	---	3.5	1.5	9.0	6.0
16	18.5	16.0	10.5	8.5	4.0	2.5	4.0	3.0	4.5	2.0	7.0	5.0
17	19.0	16.5	8.0	7.0	3.5	2.0	4.0	3.0	4.0	3.0	8.5	6.5
18	19.0	17.0	9.5	7.5	5.5	3.5	5.0	3.0	4.0	3.0	9.0	7.0
19	17.0	14.5	9.5	7.5	5.5	1.5	5.0	3.0	5.0	3.5	8.0	6.0
20	16.0	13.0	9.5	7.0	3.0	.5	6.0	4.0	4.0	3.0	7.0	6.0
21	18.0	15.0	9.0	7.5	2.5	.5	6.0	4.5	3.5	2.0	9.0	6.5
22	16.0	14.0	10.0	7.5	3.5	.5	4.5	4.0	3.0	2.0	10.5	7.0
23	15.5	13.0	9.5	7.5	5.5	3.0	5.0	4.5	3.5	3.0	11.0	7.5
24	15.5	12.5	9.5	8.0	5.5	.5	6.0	4.0	3.5	3.0	10.0	7.0
25	13.5	13.5	9.0	7.5	2.5	.5	6.5	3.5	4.0	3.0	11.0	8.5
26	---	---	9.0	6.5	2.5	1.0	7.0	5.0	4.0	3.5	10.5	7.5
27	---	---	7.5	5.5	4.5	2.5	5.5	4.0	4.5	3.5	9.0	7.5
28	10.5	9.5	6.5	5.5	6.5	2.5	5.0	3.5	5.0	4.5	8.0	6.5
29	10.0	8.5	5.5	4.5	6.5	5.0	4.5	3.0	---	---	9.5	7.5
30	10.5	8.0	5.5	4.0	5.5	5.0	3.5	2.5	---	---	11.0	9.5
31	11.0	8.0	---	---	5.5	3.5	3.5	2.0	---	---	12.5	10.5
MONTH	22.5	8.0	12.5	4.0	8.5	.5	7.0	.5	5.0	.5	12.5	4.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	13.5	11.5	14.5	12.5	22.0	17.0	26.5	23.5	25.5	22.0	27.0	24.5
2	14.0	11.5	15.0	13.0	23.0	20.0	26.0	23.5	25.5	22.5	26.5	24.0
3	14.5	12.0	15.0	13.0	23.5	21.0	26.0	23.0	25.0	23.0	25.5	22.5
4	14.5	13.5	18.0	14.0	25.5	22.0	25.5	22.5	27.5	24.5	24.0	22.5
5	14.5	11.5	18.5	15.5	26.5	22.0	25.0	23.0	28.0	25.0	23.5	22.0
6	13.5	11.0	18.0	15.5	26.0	23.5	26.5	22.5	26.5	24.5	23.0	21.0
7	14.0	11.0	17.0	14.0	25.5	21.5	27.0	23.0	27.0	24.0	22.0	20.5
8	14.5	11.0	18.0	13.5	25.0	21.0	28.0	24.0	27.0	24.5	23.0	20.5
9	15.5	12.5	16.5	15.0	23.5	20.5	28.5	25.0	27.5	24.0	22.5	20.5
10	16.5	13.5	17.0	15.0	22.5	20.5	28.5	25.5	28.0	25.0	22.5	19.5
11	15.5	13.5	17.0	15.5	22.5	21.0	28.5	23.5	28.5	24.5	23.5	20.0
12	15.5	14.0	17.0	14.5	22.5	21.5	28.5	24.0	27.5	24.5	24.0	21.0
13	14.0	13.5	17.0	14.0	22.5	21.0	27.0	23.5	27.5	24.0	24.0	22.0
14	14.0	13.0	16.5	14.5	23.0	21.0	27.5	24.0	27.5	25.0	23.5	21.5
15	13.0	12.0	16.0	14.5	25.0	22.5	27.5	23.0	26.5	24.5	23.5	22.0
16	13.5	12.0	16.0	14.0	25.0	23.5	27.0	23.5	24.0	21.5	23.0	21.0
17	14.0	13.0	16.5	14.0	24.0	22.5	28.0	22.5	25.0	20.5	22.0	21.5
18	14.0	13.5	17.0	14.5	24.5	21.5	29.0	23.5	25.0	20.5	21.5	20.5
19	13.5	12.5	18.0	14.5	25.0	22.0	26.0	24.5	25.5	21.0	21.5	19.0
20	13.5	12.0	19.0	14.0	24.0	22.0	26.5	24.0	25.0	20.5	20.0	17.0
21	14.0	12.0	20.0	15.0	23.0	22.5	26.5	24.5	25.0	21.0	20.0	16.5
22	15.0	12.0	21.0	17.5	23.5	22.0	26.5	23.0	25.0	22.0	19.0	18.0
23	16.0	14.0	21.5	17.0	24.0	21.0	26.5	21.5	25.5	21.5	19.0	17.0
24	15.0	13.5	23.0	17.5	24.0	21.5	27.0	22.0	23.5	21.0	19.5	15.5
25	13.5	11.5	21.5	18.5	24.0	22.0	28.0	22.5	24.0	20.5	19.0	16.0
26	13.0	11.0	22.0	18.0	23.0	21.0	26.0	24.5	26.0	21.0	21.0	17.0
27	15.0	11.0	21.0	19.5	24.5	20.0	25.5	23.5	25.5	21.5	20.5	17.5
28	16.0	13.0	21.5	19.5	24.5	19.5	25.5	23.5	27.0	24.0	17.5	15.5
29	15.0	13.5	22.0	19.5	26.0	20.5	25.0	23.5	26.5	24.5	17.5	15.0
30	14.0	12.5	21.0	19.0	26.0	23.0	25.0	21.5	25.5	23.5	19.0	16.5
31	---	---	20.0	17.5	---	---	25.5	21.5	25.0	23.0	---	---
MONTH	16.5	11.0	23.0	12.5	26.5	17.0	29.0	21.5	28.5	20.5	27.0	15.0
YEAR	29.0	.5										

04206000 CUYAHOGA RIVER AT OLD PORTAGE, OH--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	9.7	6.7	10.2	8.6	10.6	9.3	10.8	9.1	11.8	10.8	11.5	11.2
2	10.4	6.6	10.4	8.9	9.9	8.7	10.8	9.0	12.0	11.2	11.5	11.2
3	10.8	7.7	10.2	8.3	10.6	9.6	11.6	8.8	12.3	11.7	11.5	11.1
4	11.4	7.5	8.8	7.9	10.8	9.5	---	---	12.5	11.7	11.3	11.0
5	11.8	8.8	9.7	7.8	10.6	9.7	---	---	12.7	11.9	11.2	11.0
6	11.8	8.8	9.8	7.5	10.5	9.1	---	---	12.6	11.8	11.3	11.0
7	11.3	9.4	9.2	6.8	10.3	9.2	---	---	12.8	11.6	11.1	10.8
8	11.2	8.9	8.8	6.9	10.4	8.0	---	---	12.7	11.6	11.2	10.7
9	11.2	8.9	9.5	7.5	10.0	9.0	---	---	13.0	11.6	11.4	10.5
10	11.7	8.9	9.0	7.0	10.5	9.7	---	---	12.1	10.7	11.0	10.2
11	11.2	9.1	9.2	7.6	11.3	10.0	---	---	12.0	11.1	11.0	10.2
12	11.2	9.6	9.8	7.0	11.1	10.1	---	---	12.6	12.0	10.8	10.0
13	12.0	9.4	9.9	6.8	11.3	10.2	---	---	12.8	12.0	10.9	10.0
14	11.2	8.5	8.0	6.9	11.6	10.6	---	---	13.0	11.9	11.6	10.3
15	10.9	7.4	9.3	7.0	11.5	10.2	---	---	12.9	12.0	11.4	10.1
16	10.8	6.8	9.7	7.3	11.6	10.1	12.7	10.1	12.4	11.5	12.0	10.0
17	10.2	6.1	9.1	6.8	11.7	10.0	12.7	10.2	12.0	11.7	11.7	9.9
18	9.4	5.3	9.3	6.5	11.1	9.6	12.8	10.3	12.0	11.7	11.4	9.5
19	10.0	5.7	9.1	6.9	11.7	9.5	13.0	9.8	11.8	9.0	11.9	9.5
20	9.9	6.1	9.5	6.9	11.8	9.9	12.4	9.7	11.6	11.0	12.3	9.4
21	8.8	5.8	8.3	6.2	11.7	10.1	12.8	9.8	12.6	12.4	12.6	9.6
22	9.0	6.2	9.9	6.0	12.8	10.0	11.7	9.9	12.6	12.3	13.0	9.5
23	9.2	6.3	8.8	7.0	12.0	9.6	12.8	9.8	12.3	12.0	12.8	9.5
24	9.3	6.5	7.9	5.9	11.4	9.6	13.4	9.8	12.2	12.1	12.9	9.5
25	---	---	9.8	7.7	12.5	10.5	13.3	9.5	12.3	12.1	12.7	9.4
26	---	---	10.3	8.3	12.2	10.1	11.5	9.5	12.2	12.1	12.3	8.2
27	---	---	9.7	8.5	12.1	9.7	11.4	10.2	12.1	11.6	10.9	8.8
28	9.0	8.5	9.8	8.9	11.6	9.2	11.7	10.5	11.6	11.2	11.5	10.6
29	9.9	8.7	10.2	9.1	9.7	8.6	12.4	10.8	---	---	11.3	9.9
30	10.0	8.7	11.0	9.5	10.5	9.0	12.9	11.2	---	---	10.2	9.5
31	10.0	8.5	---	---	10.9	9.0	13.2	11.2	---	---	10.9	9.2
MONTH	12.0	5.3	11.0	5.9	12.8	8.0	13.4	8.8	13.0	9.0	13.0	8.2

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	10.8	9.2	11.1	10.0	---	---	8.3	6.3	---	---	6.2	2.0
2	11.3	9.0	11.2	9.8	---	---	8.4	6.1	---	---	4.7	2.2
3	11.0	8.3	11.2	9.6	7.8	6.5	8.7	6.0	---	---	7.9	3.1
4	10.8	7.9	10.7	8.9	7.6	6.6	9.1	4.3	11.7	8.7	8.2	7.6
5	9.5	8.1	10.2	8.1	7.9	6.2	7.5	4.1	12.3	8.3	8.3	7.7
6	10.9	9.2	9.7	7.8	8.0	6.4	9.0	6.5	11.7	8.2	8.8	7.8
7	10.9	9.2	10.6	9.0	8.6	6.6	9.1	6.8	12.0	7.7	9.0	8.2
8	11.3	8.8	10.7	8.7	9.0	2.6	8.6	6.3	11.5	7.6	8.6	7.8
9	11.4	8.0	10.9	8.7	8.7	3.9	8.1	6.1	11.4	6.7	9.1	7.8
10	11.8	8.0	11.0	8.6	9.0	8.6	8.4	5.9	10.7	6.4	9.3	7.6
11	11.2	8.0	9.2	8.3	9.2	8.6	8.9	6.0	9.8	5.2	9.3	7.7
12	---	---	9.8	8.6	9.2	7.1	9.1	5.3	9.9	6.8	9.6	7.3
13	---	---	10.2	8.6	9.3	8.7	6.8	3.6	11.9	7.2	9.9	6.9
14	---	---	9.8	7.0	9.6	8.7	8.0	5.2	10.6	6.9	8.9	6.7
15	---	---	9.6	8.8	8.7	7.0	8.9	5.5	8.4	6.7	9.6	6.6
16	---	---	10.3	9.0	8.2	7.1	8.8	5.2	9.2	7.4	9.5	6.0
17	---	---	10.4	9.1	8.5	7.3	8.8	4.9	9.9	8.1	9.2	6.1
18	---	---	10.3	8.6	8.5	7.3	8.7	4.2	10.1	8.1	9.3	7.0
19	---	---	10.9	8.5	8.3	7.0	7.2	4.5	10.2	7.9	9.3	7.3
20	---	---	11.3	8.2	8.3	7.4	6.9	4.0	10.4	7.8	9.8	7.5
21	---	---	11.7	7.6	8.1	7.1	7.6	5.4	11.2	7.5	10.2	7.2
22	---	---	12.1	6.7	7.9	7.0	9.1	5.8	10.8	7.3	8.9	7.2
23	---	---	13.4	6.6	8.3	7.5	7.9	5.8	10.6	7.2	9.6	7.1
24	11.3	9.7	---	---	8.2	7.3	7.7	5.7	10.6	7.3	9.9	7.2
25	11.5	10.1	---	---	8.1	7.3	7.6	5.4	10.9	6.9	10.2	7.1
26	11.7	10.2	---	---	8.4	7.5	6.3	5.2	10.9	6.4	10.5	6.6
27	11.8	9.6	---	---	8.3	7.3	7.0	5.2	10.2	5.7	9.9	6.4
28	11.7	7.4	---	---	8.6	7.3	6.6	5.0	10.3	5.5	9.7	6.7
29	9.9	7.7	---	---	8.3	6.4	7.4	6.2	9.8	5.6	8.0	6.1
30	10.4	9.8	---	---	8.0	6.4	7.6	6.9	7.6	5.0	7.8	5.8
31	---	---	---	---	---	---	7.7	6.9	6.9	4.5	---	---
MONTH	11.8	7.4	13.4	6.6	9.6	2.6	9.1	3.6	12.3	4.5	10.5	2.0
YEAR	13.4	2.0										

04206000 CUYAHOGA RIVER AT OLD PORTAGE, OH--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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	138	6	2.2	251	7	4.7	239	5	3.2
2	143	5	1.9	246	7	4.6	287	33	28
3	141	8	3.0	237	7	4.5	308	27	22
4	134	6	2.2	230	8	5.0	308	12	10
5	131	8	2.8	210	5	2.8	297	12	9.6
6	139	31	14	195	6	3.2	292	12	9.5
7	270	62	44	187	11	5.6	313	17	14
8	285	16	12	183	6	3.0	369	41	53
9	275	15	11	181	8	3.9	464	47	59
10	270	23	17	171	6	2.8	449	18	22
11	260	15	11	160	5	2.2	418	12	14
12	256	10	6.9	160	5	2.2	411	13	14
13	246	11	7.3	162	7	3.1	402	10	11
14	157	9	3.8	160	13	5.6	381	7	7.2
15	151	7	2.9	171	6	2.8	327	8	7.1
16	129	4	1.4	175	5	2.4	295	10	8.0
17	125	6	2.0	175	5	2.4	248	9	6.0
18	141	22	9.0	193	8	4.2	217	8	4.7
19	106	4	1.1	181	7	3.4	202	8	4.4
20	126	5	1.7	166	5	2.2	153	7	2.9
21	166	10	4.5	151	4	1.6	136	7	2.6
22	166	12	5.4	143	4	1.5	141	7	2.7
23	162	11	4.8	150	5	2.0	150	8	3.2
24	162	11	4.8	239	97	76	155	11	4.6
25	282	59	45	215	18	10	143	9	3.5
26	239	21	14	197	9	4.8	143	8	3.1
27	230	9	5.6	239	10	6.5	139	7	2.6
28	295	13	10	275	12	8.9	141	7	2.7
29	268	11	8.0	253	8	5.5	179	33	19
30	253	12	8.2	244	10	6.6	193	14	7.3
31	251	11	7.5	---	---	---	187	8	4.0
TOTAL	6097	---	275.0	5900	---	194.0	8087	---	364.9
		JANUARY			FEBRUARY			MARCH	
1	189	12	6.1	439	131	256	990	39	104
2	191	9	4.6	778	120	277	821	38	84
3	179	12	5.8	558	33	50	694	31	58
4	157	7	3.0	497	17	23	604	23	38
5	143	6	2.3	452	17	21	551	16	24
6	159	6	2.6	430	9	10	510	18	25
7	171	7	3.2	375	8	8.1	455	25	31
8	155	10	4.2	324	11	9.6	436	14	16
9	138	7	2.6	265	8	5.7	414	10	11
10	141	15	5.7	277	10	7.5	399	8	8.6
11	143	7	2.7	626	79	135	396	12	13
12	139	12	4.5	510	50	69	384	13	13
13	136	3	1.1	439	28	33	381	10	10
14	134	3	1.1	446	13	16	366	12	12
15	133	2	.72	455	12	15	358	8	7.7
16	134	4	1.4	572	27	47	346	6	5.6
17	138	6	2.2	902	42	102	338	7	6.4
18	143	7	2.7	1120	157	480	321	10	8.7
19	141	4	1.5	2440	301	2060	316	7	6.0
20	146	5	2.0	3720	355	3630	313	9	7.6
21	148	4	1.6	4050	185	2020	330	7	6.2
22	146	4	1.6	3960	141	1510	338	6	5.5
23	134	4	1.4	3610	124	1210	375	8	8.1
24	133	5	1.8	3060	125	1030	414	9	10
25	138	8	3.0	2440	89	586	430	7	8.1
26	212	17	9.7	1910	67	346	514	96	244
27	319	30	26	1530	58	240	1110	172	539
28	341	21	19	1230	54	179	1020	47	129
29	344	18	17	---	---	---	914	40	99
30	327	14	12	---	---	---	944	22	56
31	282	22	17	---	---	---	853	21	48
TOTAL	5534	---	170.12	37415	---	14375.9	16635	---	1642.5

04206000 CUYAHOGA RIVER AT OLD PORTAGE, OH--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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	714	24	46	886	33	79	421	31	35
2	604	37	60	861	24	56	344	13	12
3	561	16	24	802	40	87	321	42	43
4	464	31	45	675	13	24	308	21	17
5	679	66	124	586	24	38	275	12	8.9
6	608	20	33	721	35	70	263	8	5.7
7	583	16	25	630	12	20	235	15	9.5
8	494	20	27	565	18	27	260	53	46
9	442	10	12	517	25	35	1760	398	2430
10	396	12	13	471	14	18	1150	111	352
11	408	25	41	558	55	85	881	50	119
12	890	125	330	645	20	35	969	47	123
13	829	88	240	593	18	29	1540	287	2130
14	1220	101	332	630	52	116	1670	104	482
15	1350	77	281	737	37	75	1180	58	185
16	1190	40	129	667	22	40	906	67	175
17	1370	58	217	572	27	42	806	41	89
18	1420	49	188	481	10	13	660	27	48
19	1170	34	107	427	10	12	504	24	33
20	969	23	60	390	12	13	411	21	23
21	802	19	41	361	12	12	349	22	21
22	667	16	29	335	11	9.9	667	216	478
23	671	28	51	200	7	3.8	490	62	84
24	630	19	32	175	6	2.8	399	35	38
25	608	17	28	177	8	3.8	534	64	95
26	593	16	26	175	8	3.8	427	30	35
27	583	11	17	242	29	29	313	17	14
28	619	32	60	745	293	802	275	20	15
29	1090	74	220	648	74	142	246	11	7.3
30	1090	53	156	439	27	32	232	15	9.4
31	---	---	---	452	30	37	---	---	---
TOTAL	23714	---	2994	16363	---	1992.1	18796	---	7162.8
		JULY			AUGUST			SEPTEMBER	
1	221	13	7.8	343	15	14	217	22	18
2	211	12	6.8	329	17	15	510	110	156
3	197	9	4.8	317	18	15	745	298	1080
4	230	21	19	270	12	8.7	488	39	51
5	398	51	59	216	20	12	400	28	30
6	368	23	23	172	8	3.7	389	21	22
7	346	16	15	154	7	2.9	399	26	28
8	323	14	12	146	6	2.4	456	34	42
9	284	14	11	148	8	3.2	414	20	22
10	235	11	7.0	177	13	6.2	376	19	19
11	203	8	4.4	266	30	26	337	17	15
12	186	7	3.5	227	12	7.4	302	13	11
13	234	32	23	227	15	9.2	271	11	8.0
14	189	17	8.7	252	27	18	235	9	5.7
15	168	12	5.4	284	42	35	196	10	5.3
16	158	13	5.5	328	34	30	192	18	9.3
17	148	11	4.4	292	17	13	228	13	8.0
18	149	8	3.2	274	15	11	230	6	3.7
19	145	8	3.1	264	15	11	238	6	3.9
20	222	37	24	252	15	10	228	7	4.3
21	252	32	22	225	13	7.9	213	6	3.5
22	196	17	9.0	194	10	5.2	193	7	3.6
23	170	13	6.0	171	7	3.2	170	6	2.8
24	169	10	4.6	150	5	2.0	161	5	2.2
25	156	8	3.4	139	5	1.9	167	4	1.8
26	182	12	5.9	139	5	1.9	143	8	3.1
27	156	10	4.2	138	4	1.5	138	31	12
28	547	355	1200	143	4	1.5	141	13	4.9
29	498	99	133	149	7	2.8	147	9	3.6
30	401	28	30	160	8	3.5	162	20	11
31	357	23	22	179	6	2.9	---	---	---
TOTAL	7699	---	1690.7	6725	---	288.0	8486	---	1590.7
YEAR	161451		32740.72						

04207200 TINKERS CREEK AT BEDFORD, OH

LOCATION.--Lat 41°23'04", long 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, 5.5 mi (8.8 km) upstream from mouth.

DRAINAGE AREA.--83.9 mi² (217 km²).

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 (267.060 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter periods which are fair. Water-quality data collected at this site 1965 to 1977. Sediment data collected at this site 1974 to 1979.

AVERAGE DISCHARGE.--18 years (1963-81), 127 ft³/s (3.597 m³/s), 20.56 in/yr (522 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,220 ft³/s (204 m³/s) July 20, 1969, gage height, 10.10 ft (3.078 m), from rating curve extended above 3,400 ft³/s (96.3 m³/s) on the basis of contracted-opening measurement of peak flow; minimum, 5.2 ft³/s (0.15 m³/s) Aug. 19, 1963.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (42.5 m³/s) and maximums (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 19	0930	*2690	76.2	*7.07	2.155	Aug. 7	2000	2140	60.6	6.62	2.018
Feb. 20	1300	1780	50.4	6.31	1.923	Aug. 11	0930	1580	44.7	6.13	1.868
Apr. 14	0630	1710	48.4	6.25	1.905	Sept. 3	2030	1820	51.5	6.35	1.935
June 9	0300	2160	61.2	6.64	2.024						

Minimum discharge, 14 ft³/s (0.40 m³/s) July 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	75	121	70	194	141	90	225	34	29	42	69
2	46	38	188	55	457	121	70	117	32	34	25	270
3	26	28	140	42	300	111	60	82	31	25	28	866
4	28	34	92	36	217	103	136	68	31	23	25	564
5	21	27	71	30	178	111	245	67	29	52	23	575
6	20	26	65	26	140	109	155	130	29	46	21	334
7	21	25	122	24	90	97	94	122	24	32	500	169
8	20	32	211	24	69	90	74	74	26	26	222	178
9	19	25	264	24	69	87	66	57	768	40	69	111
10	19	27	208	24	86	78	54	62	371	32	92	75
11	19	26	129	24	435	72	169	210	222	22	586	56
12	134	25	97	24	266	64	422	153	74	18	103	48
13	42	23	86	24	225	58	426	99	216	56	60	40
14	29	34	71	24	150	52	1210	84	343	32	46	128
15	37	28	50	24	119	49	807	145	392	21	365	55
16	40	24	57	24	285	58	389	170	226	19	292	34
17	50	25	55	26	591	56	256	101	90	18	136	46
18	83	34	55	32	689	50	337	65	57	17	84	55
19	55	33	62	40	1880	51	215	51	41	16	52	40
20	44	30	53	63	1560	55	141	46	33	72	40	49
21	37	28	36	74	1240	86	106	42	30	157	34	30
22	31	26	24	70	719	134	100	44	124	61	30	29
23	30	25	32	67	531	245	216	39	80	28	27	27
24	29	57	46	66	409	242	278	35	41	21	27	26
25	174	88	36	78	304	171	222	31	83	19	27	25
26	171	63	34	361	215	242	148	31	57	181	26	24
27	86	60	30	334	194	558	113	44	42	34	26	23
28	83	120	44	277	166	431	118	100	33	274	26	23
29	57	106	66	184	---	181	403	80	28	184	26	24
30	55	101	90	130	---	134	408	58	25	143	48	59
31	81	---	81	96	---	117	---	41	---	72	32	---
TOTAL	1610	1293	2716	2397	11778	4154	7528	2673	3612	1804	3140	4052
MEAN	51.9	43.1	87.6	77.3	421	134	251	86.2	120	58.2	101	135
MAX	174	120	264	361	1880	558	1210	225	768	274	586	866
MIN	19	23	24	24	69	49	54	31	24	16	21	23
CFSM	.62	.51	1.04	.92	5.02	1.60	2.99	1.03	1.43	.69	1.20	1.61
IN.	.71	.57	1.20	1.06	5.22	1.84	3.34	1.19	1.60	.80	1.39	1.80

CAL YR 1980 TOTAL 42228 MEAN 115 MAX 913 MIN 16 CFSM 1.37 IN 18.72
WTR YR 1981 TOTAL 46757 MEAN 128 MAX 1880 MIN 16 CFSM 1.53 IN 20.73

04208000 CUYAHOGA RIVER AT INDEPENDENCE, OH
(National stream quality accounting network station)

LOCATION.--Lat 41°23'43", long 81°37'48, in T.6 N., R.12 W., Cuyahoga County, Hydrologic Unit 04110002, on left bank 240 ft (73 m) downstream from bridge on Old Rockside Road, 0.8 mi (1.3 km) northeast of Independence, and 3.0 mi (4.8 km) downstream from Tinkers Creek.

DRAINAGE AREA.--707 mi² (1,831 km²).

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 (177.872 m) National Geodetic Vertical Datum of 1929. Sept. 21, 1903 to July 21, 1906, nonrecording gage at bridge 240 ft (73 m) upstream at present datum. Sept. 28, 1921 to May 30, 1923, nonrecording gage at bridge 240 ft (73 m) upstream at datum 2.42 ft (0.738 m) higher. Sept. 5, to Oct. 8, 1927, nonrecording gage, and Oct. 9, 1927, to Dec. 31, 1935, Mar. 5, 1940, to June 19, 1969, water-stage recorder, at site 100 ft (30 m) upstream at present datum.

REMARKS.--Records good. Natural flow of stream affected by diversion, storage reservoirs and power plants. 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 (10 km) upstream from station, bypasses station. These records do not include flow in canal except above about 15,000 ft³/s (425 m³/s), when channels merge.

AVERAGE DISCHARGE.--50 years (1921-22, 1927-35, 1940-81), 809 ft³/s (22.91 m³/s), not including flow in Ohio Canal.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,800 ft³/s (702 m³/s) Jan. 22, 1959, gage height, 22.41 ft (6.381 m), from rating curve extended above 17,000 ft³/s (481 m³/s) on basis of contracted-opening measurement of peak flow; minimum daily, 21 ft³/s (0.59 m³/s) Aug. 28, 1933; minimum combined daily discharge of river and canal, 55 ft³/s (1.56 m³/s) Aug. 28, 1933.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,600 ft³/s (300 m³/s) Feb. 19, gage height, 17.85 ft (5.441 m); minimum daily, 231 ft³/s (6.54 m³/s) Aug. 26, 27, Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	272	452	654	390	797	1530	1120	1760	635	499	551	334
2	326	419	793	340	2700	1270	930	1360	576	448	495	1480
3	299	400	826	280	1390	1080	873	1220	486	403	474	2790
4	272	390	640	250	1050	939	882	1060	430	382	469	2710
5	253	370	573	240	808	897	1800	928	420	663	382	1530
6	238	346	551	240	730	845	1120	1470	410	667	310	1080
7	334	322	654	240	669	783	1010	1200	380	600	1750	774
8	427	334	835	240	621	730	858	963	430	556	1380	936
9	427	310	1350	240	526	703	756	843	5800	516	403	793
10	419	299	1100	240	510	680	643	783	2700	486	334	640
11	411	283	797	240	2010	665	1110	1240	1820	386	2150	569
12	595	272	701	240	1300	648	2860	1420	1440	342	631	499
13	461	272	670	240	1040	639	1910	1070	1910	704	457	452
14	362	295	603	240	813	601	6810	930	5490	482	436	613
15	330	310	543	240	811	572	3560	1420	2880	346	1370	423
16	299	295	509	240	1190	597	2370	1480	1900	314	1150	334
17	287	291	459	240	2780	566	2300	1080	1580	283	690	415
18	461	334	419	260	3060	545	2720	848	1180	260	534	382
19	310	362	407	300	8090	531	2010	732	946	253	469	407
20	245	314	324	342	9040	556	1590	659	774	478	415	436
21	291	295	296	379	7940	618	1280	605	649	1140	382	350
22	306	268	276	391	6140	744	1080	559	1470	542	338	346
23	295	257	303	372	5670	985	1420	454	1150	350	291	314
24	295	342	321	346	5290	1040	1580	349	783	306	253	291
25	736	631	279	360	3700	902	1360	331	1260	291	238	276
26	807	436	272	1070	2760	898	1100	333	1100	672	231	272
27	525	440	276	1520	2270	3530	1000	386	700	386	231	245
28	508	713	262	1060	1880	2190	954	1130	556	1010	234	231
29	508	640	314	835	---	1550	2930	1240	478	1530	242	242
30	452	591	547	701	---	1460	2520	781	491	869	302	302
31	452	---	459	564	---	1350	---	685	---	622	326	---
TOTAL	12203	11283	17013	12880	75585	30644	52456	29319	40824	16786	17918	20466
MEAN	394	376	549	415	2699	989	1749	946	1361	541	578	682
MAX	807	713	1350	1520	9040	3530	6810	1760	5800	1530	2150	2790
MIN	238	257	262	240	510	531	643	331	380	253	231	231

CAL YR 1980 TOTAL 312912 MEAN 855 MAX 5020 MIN 179
WTR YR 1981 TOTAL 337377 MEAN 924 MAX 9040 MIN 231

04208000 CUYAHOGA RIVER AT INDEPENDENCE, OH--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1948 to September 1949, October 1950 to current year

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1965 to current year.
pH: February 1973 to current year.
WATER TEMPERATURES: October 1948 to September 1949, October 1952 to current year.
DISSOLVED OXYGEN: July 1965 to current year.
SUSPENDED SEDIMENT DISCHARGE: Water years 1950-74, December 1976 to current year.

INSTRUMENTATION.--Alcohol-actuated thermograph October 1956 to June 1965, water-quality monitor since July 1965.

REMARKS.--Interruptions in the water-quality record were due to malfunction of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 3,000 micromhos Feb. 12, 1977; minimum, 149 micromhos Nov. 23, 1974.
pH: Maximum, 8.9 units Aug. 27, 28, 1976; minimum, 5.9 units Jan. 26, 1976.
WATER TEMPERATURES: Maximum, 31.0°C Aug. 18, 1949, July 21, 1980; minimum, 0.0°C on many days during winter periods.
DISSOLVED OXYGEN: Maximum, 14.5 mg/L Feb. 16, 1973; minimum, 0.0 mg/L Oct. 23, 1965, Feb. 10-12, June 23, July 26, 1966.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 4,800 mg/L Aug. 21, 1960; minimum daily mean, 1 mg/L Sept. 4, 10, 1955. Sept. 4, 10, 1955.
SEDIMENT LOADS: Maximum daily, 97,000 tons (88,000 tonnes) Sept. 14, 1979; minimum daily, 0.25 ton (0.23 tonne) Sept. 4, 1955.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 2,000 micromhos Jan. 26; minimum, 372 micromhos Feb. 22.
pH: Maximum, 8.1 March 23, May 25, 26; minimum, 6.9 units July 26.
WATER TEMPERATURES: Maximum, 28.0°C July 9; minimum, 0.0°C on many days during winter period.
DISSOLVED OXYGEN: Maximum recorded, 14.3 mg/L Feb. 21; minimum, 2.1 mg/L June 23.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,950 mg/L June 9; minimum daily mean, 4 mg/L, Nov 7, Aug. 29.
SEDIMENT LOADS: Maximum daily, 39,700 tons (36,100 tonnes) Feb. 19; minimum daily, 2.6 tons (2.4 tonnes) Aug. 29.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT										
15...	1030	342	930	7.8	11.5	2.4	8.2	74	33	11000
DEC										
02...	1430	732	970	7.8	7.0	3.8	10.8	89	51	10000
JAN										
06...	1100	240	1110	7.8	.5	.90	11.9	83	41	14000
FEB										
10...	1130	472	955	7.8	2.5	8.0	12.6	92	31	3200
MAR										
10...	1130	679	820	7.8	6.5	.30	10.6	86	58	21000
APR										
01...	1500	1080	765	7.8	13.5	20	9.7	92	38	4200
MAY										
05...	1015	920	800	7.6	17.0	14	7.5	77	38	17000
JUN										
03...	1030	488	900	7.8	21.0	4.3	7.4	82	<10	1600
JUL										
02...	1130	444	1010	7.6	24.0	7.5	7.3	86	53	5200
AUG										
12...	1030	595	630	7.7	24.0	25	7.2	85	32	4600
SEP										
01...	1130	295	820	7.7	23.0	.90	7.0	80	39	4400

STREAMS TRIBUTARY TO LAKE ERIE

04208000 CUYAHOGA RIVER AT INDEPENDENCE, OH--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT										
15...	620	240	110	71	14	80	5.5	79	140	.4
DEC										
02...	1900	230	96	64	16	98	5.1	91	160	.3
JAN										
06...	2500	250	110	74	17	130	6.1	88	210	.4
FEB										
10...	750	240	120	67	17	100	5.0	84	160	.3
MAR										
10...	2900	180	60	54	11	73	4.2	84	120	.3
APR										
01...	330	180	84	53	12	74	4.2	66	130	.2
MAY										
05...	2600	180	79	52	12	95	3.6	66	140	.2
JUN										
03...	93	220	87	64	14	87	4.9	79	160	.3
JUL										
02...	540	240	110	70	15	120	5.6	82	180	.4
AUG										
12...	950	200	83	60	13	52	4.9	75	80	.4
SEP										
01...	150	250	110	74	17	68	5.3	86	120	.4

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHYTOPLANKTON, TOTAL (CELLS PER ML)
OCT										
15...	9.2	557	492	.76	1.70	4.8	21	.440	--	--
DEC										
02...	7.8	552	530	.91	1.20	3.3	15	.070	8.1	--
JAN										
06...	9.2	662	628	.00	2.40	4.4	19	.450	--	--
FEB										
10...	9.1	560	520	.30	2.80	4.1	18	.330	6.9	--
MAR										
10...	7.7	469	431	1.3	3.70	4.6	20	.620	7.3	2500
APR										
01...	4.8	443	407	.00	1.30	2.1	9.1	.270	--	--
MAY										
05...	3.9	443	438	1.0	1.60	2.7	12	.240	9.0	9000
JUN										
03...	7.3	533	506	.75	.87	3.5	15	.340	10	11000
JUL										
02...	9.1	626	571	1.0	1.10	3.3	15	.330	--	20000
AUG										
12...	8.9	384	373	.64	.76	2.3	10	.310	7.4	8100
SEP										
01...	8.3	524	480	.85	1.10	4.8	21	.040	7.0	7000

04208000 CUYAHOGA RIVER AT INDEPENDENCE, OH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	1400	1180	987	864	1340	945	1490	1360	1350	975	540	507
2	1240	1030	936	759	930	912	1590	1430	1210	813	585	537
3	1340	1170	849	741	957	831	1560	1420	855	768	663	579
4	1330	1030	924	831	948	906	1430	1310	810	768	699	612
5	1280	1070	867	804	1040	942	1430	1180	864	786	792	711
6	1270	963	---	---	930	876	1180	1050	816	741	798	747
7	1430	1050	891	777	990	849	---	---	1050	804	927	795
8	1290	1090	933	915	918	795	1150	1100	1350	978	849	801
9	1160	972	---	---	846	723	1140	1100	1350	987	846	792
10	1040	924	---	---	783	714	1160	960	1240	894	801	768
11	1050	930	---	---	849	732	1040	963	1420	825	807	750
12	897	717	---	---	1060	813	1060	999	819	792	810	783
13	834	771	1140	1070	1140	888	1050	999	903	813	822	774
14	975	783	1150	1150	1020	855	1200	1050	906	837	987	813
15	1090	930	---	---	837	783	1260	1160	984	885	912	840
16	1200	1100	---	---	1010	780	1500	1190	1010	936	894	816
17	1260	1140	936	846	1290	996	1490	1310	876	636	960	852
18	1180	975	993	843	1280	1080	1660	1320	636	576	1190	939
19	960	753	1270	999	1220	1010	1670	1410	606	459	1180	1040
20	957	753	1220	1020	1200	984	1550	1350	486	453	1550	1100
21	1120	864	1040	909	1230	1140	1910	1390	456	414	1700	1370
22	1110	918	1080	933	1190	906	1950	1810	411	372	1760	1490
23	1430	1130	1160	927	1030	918	1780	1570	429	381	1470	1050
24	1550	1100	1300	903	1180	1030	1900	1560	423	402	954	846
25	1080	861	1320	852	1170	1020	1970	1790	450	429	864	789
26	894	783	1080	876	1240	1140	2000	1220	462	441	843	777
27	816	759	1080	918	1180	954	1250	1090	477	441	783	561
28	1100	825	1300	1100	981	903	1120	1060	525	474	600	564
29	1000	744	1160	990	1530	990	1100	975	---	---	639	579
30	915	756	1370	1120	1710	1430	1160	978	---	---	663	633
31	1010	855	---	---	1630	1460	1100	1010	---	---	642	612
MONTH	1550	717	1370	741	1710	714	2000	960	1420	372	1760	507

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	771	663	549	510	882	801	1050	894	717	672	879	804
2	789	726	573	543	885	789	1250	1020	705	672	795	582
3	813	690	642	549	942	837	1210	1030	729	684	582	501
4	828	687	816	660	996	831	1040	960	789	690	678	501
5	774	633	801	678	1070	834	1030	765	798	741	678	540
6	720	639	699	612	1150	1050	858	774	834	762	750	561
7	735	699	648	612	1100	1020	948	774	816	381	687	633
8	786	708	714	639	1110	1050	1190	945	750	399	699	636
9	762	699	756	642	1030	471	1170	975	780	747	696	624
10	783	753	690	636	609	582	1190	1030	804	744	714	672
11	828	546	714	609	654	600	1130	906	726	399	800	714
12	657	534	615	585	672	615	1300	957	765	543	897	800
13	624	582	636	603	636	519	1330	867	969	720	912	879
14	606	387	711	624	510	435	1010	858	990	837	912	843
15	546	477	726	603	597	513	882	840	918	525	957	858
16	573	531	678	618	714	606	966	867	627	534	990	912
17	591	540	699	624	732	639	1020	969	651	567	927	890
18	549	525	681	654	687	666	1090	1030	666	597	882	816
19	561	546	729	654	756	690	1130	1000	768	639	870	795
20	594	564	807	708	876	747	1140	993	771	702	---	---
21	594	573	804	723	945	798	981	621	753	703	---	---
22	636	582	933	789	924	609	966	672	777	726	---	---
23	681	618	906	798	750	651	1020	966	759	723	876	852
24	633	585	1130	882	921	756	1160	987	783	753	888	822
25	648	612	1130	1030	942	735	1230	1020	804	756	840	825
26	693	627	1150	1060	792	705	1240	618	837	777	897	843
27	699	648	1230	1030	912	765	1050	909	1010	771	912	888
28	753	648	1110	642	1030	897	894	606	921	867	915	891
29	735	441	849	621	1010	933	723	486	954	897	900	873
30	564	471	825	750	1020	894	684	645	951	882	921	870
31	---	---	1010	813	---	---	714	678	957	828	---	---
MONTH	828	387	1230	510	1150	435	1330	486	1010	381	990	501
YEAR	2000	372										

04208000 CUYAHOGA RIVER AT INDEPENDENCE, OH--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.6	7.4	7.8	7.7	7.8	7.6	7.9	7.9	---	---	7.9	7.8
2	7.7	7.4	7.7	7.6	---	---	8.0	7.9	---	---	7.9	7.9
3	7.6	7.5	7.8	7.6	---	---	---	---	---	---	7.9	7.9
4	7.6	7.5	7.9	7.6	---	---	---	---	---	---	7.9	7.9
5	7.6	7.5	7.7	7.6	---	---	---	---	---	---	7.9	7.9
6	7.6	7.5	---	---	---	---	---	---	---	---	7.9	7.8
7	7.5	7.5	---	---	---	---	---	---	---	---	7.9	7.8
8	7.5	7.4	---	---	---	---	---	---	---	---	7.9	7.9
9	7.6	7.4	---	---	---	---	---	---	---	---	7.9	7.9
10	7.6	7.4	---	---	---	---	---	---	---	---	7.9	7.8
11	7.6	7.5	---	---	---	---	---	---	---	---	7.9	7.9
12	7.6	7.5	---	---	---	---	---	---	---	---	7.9	7.8
13	7.7	7.5	---	---	---	---	---	---	---	---	7.9	7.8
14	7.6	7.6	---	---	---	---	---	---	---	---	7.9	7.8
15	7.6	7.5	---	---	---	---	---	---	---	---	7.9	7.9
16	7.6	7.5	---	---	---	---	---	---	---	---	8.0	7.9
17	7.5	7.5	7.5	7.4	---	---	---	---	---	---	8.0	7.8
18	7.5	7.3	7.9	7.4	---	---	---	---	---	---	7.9	7.8
19	7.6	7.4	7.8	7.7	8.0	7.7	---	---	---	---	8.0	7.9
20	7.6	7.5	7.9	7.6	8.0	7.8	---	---	7.8	7.8	7.9	7.9
21	7.6	7.6	7.8	7.6	8.0	7.9	---	---	7.8	7.8	8.0	7.9
22	7.6	7.5	7.7	7.5	8.0	7.8	---	---	7.8	7.8	7.9	7.8
23	7.8	7.6	7.7	7.6	7.9	7.6	---	---	7.9	7.8	8.1	7.9
24	7.7	7.6	7.7	7.5	8.0	7.8	---	---	7.8	7.8	8.0	7.9
25	7.6	7.5	7.7	7.5	8.0	7.8	---	---	7.8	7.8	8.0	7.9
26	7.7	7.5	7.9	7.5	8.0	7.8	---	---	7.8	7.8	7.9	7.8
27	7.9	7.7	7.8	7.7	8.0	7.8	---	---	7.8	7.8	7.9	7.7
28	7.8	7.7	7.8	7.7	8.0	7.6	---	---	7.8	7.8	7.8	7.8
29	7.8	7.6	7.8	7.7	7.8	7.8	---	---	---	---	7.9	7.8
30	7.8	7.7	7.8	7.7	7.9	7.7	---	---	---	---	7.9	7.8
31	7.8	7.7	---	---	8.0	7.8	---	---	---	---	7.9	7.7
MONTH	7.9	7.3	7.9	7.4	8.0	7.6	8.0	7.9	7.9	7.8	8.1	7.7
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.9	7.8	7.8	7.6	7.7	7.6	7.6	7.5	7.6	7.4	7.6	7.3
2	7.9	7.8	7.8	7.6	7.7	7.6	7.7	7.5	7.6	7.4	7.3	7.1
3	7.9	7.7	7.8	7.6	7.7	7.6	7.7	7.6	7.7	7.4	7.4	7.1
4	7.8	7.7	7.8	7.6	7.6	7.5	8.0	7.6	7.5	7.3	7.3	7.0
5	7.7	7.6	7.7	7.5	7.6	7.5	7.7	7.5	7.5	7.3	7.4	7.3
6	7.9	7.7	7.7	7.4	7.7	7.5	7.9	7.5	7.6	7.3	7.4	7.3
7	7.8	7.8	7.8	7.5	7.7	7.5	7.8	7.5	7.5	7.2	7.4	7.4
8	7.8	7.7	7.8	7.5	7.8	7.6	7.9	7.6	7.3	7.2	7.5	7.4
9	7.8	7.6	7.7	7.5	7.6	7.4	7.6	7.5	7.5	7.3	7.5	7.3
10	7.8	7.6	7.7	7.5	7.5	7.4	7.5	7.4	7.5	7.3	7.5	7.4
11	7.7	7.5	7.6	7.5	7.5	7.4	7.6	7.4	7.4	7.2	7.5	7.4
12	7.5	7.4	7.7	7.4	7.5	7.4	7.6	7.4	7.7	7.2	7.5	7.4
13	7.6	7.5	7.7	7.5	7.5	7.4	7.5	7.2	7.6	7.5	7.9	7.4
14	7.6	7.5	7.6	7.5	7.5	7.3	7.5	7.3	7.5	7.3	7.6	7.3
15	7.6	7.5	7.6	7.3	7.5	7.4	7.4	7.3	7.4	7.2	7.6	7.4
16	7.6	7.5	7.8	7.5	7.5	7.4	7.5	7.4	7.4	7.3	7.6	7.3
17	7.6	7.5	7.8	7.5	7.5	7.3	7.5	7.3	7.4	7.4	7.5	7.4
18	7.6	7.5	7.8	7.5	7.6	7.3	7.4	7.2	7.7	7.4	7.6	7.1
19	7.6	7.5	7.7	7.5	7.6	7.5	7.3	7.2	7.7	7.6	7.8	7.4
20	7.7	7.5	7.8	7.5	7.6	7.5	7.2	7.1	7.8	7.7	7.7	7.3
21	7.6	7.6	7.8	7.5	7.6	7.5	7.1	7.0	7.8	7.7	7.6	7.4
22	7.6	7.5	7.9	7.5	7.6	7.4	7.4	7.2	7.8	7.6	7.6	7.5
23	7.7	7.5	7.9	7.5	7.6	7.4	7.3	7.1	7.9	7.6	7.5	7.4
24	7.6	7.5	7.8	7.5	7.6	7.5	7.2	7.0	7.9	7.7	7.6	7.4
25	7.7	7.6	8.1	7.5	7.6	7.5	7.1	7.0	8.0	7.7	7.5	7.4
26	7.8	7.6	8.1	7.6	7.7	7.5	7.0	6.9	8.0	7.6	7.6	7.4
27	7.8	7.6	7.9	7.6	7.7	7.5	7.2	7.0	7.9	7.6	7.6	7.4
28	7.7	7.6	7.5	7.3	7.6	7.5	7.3	7.2	7.8	7.4	7.5	7.3
29	7.7	7.5	7.6	7.3	7.6	7.5	7.4	6.9	7.6	7.3	7.5	7.3
30	7.7	7.5	7.6	7.5	7.6	7.5	7.4	7.3	7.7	7.3	7.5	7.3
31	---	---	7.6	7.5	---	---	7.4	7.4	7.6	7.4	---	---
MONTH	7.9	7.4	8.1	7.3	7.8	7.3	8.0	6.9	8.0	7.2	7.9	7.0
YEAR	8.1	6.9										

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

STREAMS TRIBUTARY TO LAKE ERIE

04208000 CUYAHOGA RIVER AT INDEPENDENCE, OH--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	19.5	17.0	8.5	8.0	6.5	5.0	3.5	3.0	2.0	1.0	5.5	5.0
2	19.0	17.5	9.5	8.5	6.5	6.5	2.5	1.5	1.5	.5	5.0	4.5
3	17.5	15.5	10.0	8.0	5.0	2.5	1.5	.0	.5	.0	4.5	3.5
4	15.5	14.0	10.5	10.0	4.0	2.0	.0	.0	.5	.0	5.0	4.0
5	14.0	13.0	10.0	7.5	6.0	3.5	.0	.0	1.0	.0	5.0	4.5
6	14.5	12.5	---	---	6.5	5.0	.0	.0	2.0	1.0	5.0	4.0
7	15.0	13.0	11.0	9.5	8.0	6.5	---	---	2.5	1.0	4.5	3.5
8	16.0	13.5	11.0	11.0	9.5	8.0	---	---	2.5	1.5	5.0	4.5
9	16.0	15.0	---	---	8.5	7.0	---	---	2.0	1.0	7.0	5.0
10	16.0	14.0	---	---	7.0	5.0	---	---	2.5	1.5	6.5	6.0
11	15.5	13.5	---	---	5.0	4.0	.0	.0	2.5	.5	6.5	5.5
12	14.0	11.0	---	---	5.0	3.5	.0	.0	.5	.0	8.0	5.0
13	11.5	11.0	9.0	7.0	5.0	3.5	.0	.0	1.5	.0	8.5	7.0
14	11.0	10.5	9.0	9.0	3.5	2.0	.0	.0	2.5	1.0	7.5	5.0
15	13.0	10.5	---	---	2.5	2.0	1.0	.0	3.5	2.0	8.0	5.0
16	15.0	13.0	---	---	3.5	1.5	2.0	1.5	3.0	2.0	8.0	6.0
17	16.0	14.0	7.0	5.5	3.0	2.5	1.5	.5	3.0	2.0	6.0	4.5
18	16.5	15.5	6.5	5.0	3.5	2.0	1.0	.0	4.0	2.5	5.5	4.0
19	15.5	12.5	7.0	6.0	3.5	1.5	1.5	.5	4.0	3.5	6.0	4.0
20	12.5	11.5	6.0	5.5	2.0	.0	3.0	1.5	4.0	3.5	5.0	4.5
21	13.0	11.0	5.5	5.0	1.0	.0	3.5	2.0	3.5	3.0	7.5	4.5
22	13.0	11.5	6.5	5.0	1.0	.0	4.0	1.5	4.0	3.0	7.5	5.0
23	12.0	10.5	6.5	5.5	3.0	1.0	3.0	.0	5.0	4.0	8.5	5.5
24	12.0	10.0	7.5	7.0	3.5	1.5	3.5	2.5	4.5	3.5	7.5	5.5
25	12.0	10.0	8.0	6.0	1.5	1.0	3.5	2.0	4.0	3.0	9.0	6.0
26	10.0	7.5	6.0	4.5	.5	.0	3.5	1.5	4.0	3.5	8.5	7.0
27	8.5	7.5	5.0	4.0	1.5	.5	2.5	2.0	5.0	3.5	7.5	6.5
28	9.0	8.5	5.5	4.5	2.0	.5	3.5	1.5	5.5	5.0	9.0	6.0
29	9.0	8.0	5.0	4.0	3.0	2.0	2.0	2.0	---	---	11.0	7.5
30	8.5	7.0	5.5	4.0	3.5	3.0	2.5	1.5	---	---	11.0	10.5
31	9.5	7.5	---	---	3.5	3.0	1.5	.0	---	---	13.5	10.5
MONTH	19.5	7.0	11.0	4.0	9.5	.0	4.0	.0	5.5	.0	13.5	3.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	13.5	12.0	14.5	12.0	19.5	17.0	25.0	23.0	24.5	21.5	24.5	22.0
2	13.5	11.5	14.5	12.0	21.5	19.0	25.0	23.5	24.5	23.0	23.0	22.5
3	14.0	12.5	15.5	12.5	22.0	20.5	25.0	23.0	24.0	23.0	23.0	21.5
4	14.0	13.5	17.0	13.5	23.5	21.0	25.0	23.5	25.5	22.5	22.0	21.0
5	13.5	10.0	17.0	16.0	23.5	21.0	25.0	23.0	25.5	24.5	21.0	20.5
6	11.5	9.0	16.5	13.5	24.5	22.5	26.0	23.0	24.5	23.5	21.5	20.5
7	13.0	9.5	15.5	12.5	24.0	21.5	26.5	23.0	24.5	20.5	22.0	20.5
8	14.5	11.5	16.5	13.5	22.5	21.5	27.0	24.5	22.0	20.0	21.0	20.0
9	14.5	13.5	16.0	15.0	22.0	19.0	28.0	26.0	23.5	21.5	20.5	19.0
10	14.0	11.5	16.0	15.5	21.5	20.0	27.0	25.5	24.5	22.0	20.5	18.0
11	16.5	14.0	16.0	14.5	22.0	20.0	26.0	24.0	22.5	20.5	22.5	20.0
12	14.5	13.5	15.0	13.5	22.5	20.5	27.0	24.0	24.0	21.5	22.0	21.5
13	13.5	13.0	15.0	13.0	22.0	20.5	25.5	23.5	25.0	22.5	23.5	21.0
14	12.5	11.0	14.5	14.0	22.0	20.5	25.5	23.5	25.0	23.5	23.0	21.0
15	12.0	10.0	14.0	13.5	24.5	22.0	25.0	23.0	24.5	21.5	21.0	20.0
16	13.0	10.0	16.5	13.0	24.5	23.5	24.5	23.0	22.0	20.5	20.5	19.0
17	14.0	12.5	16.5	14.5	23.5	22.0	25.5	22.0	22.0	19.5	19.5	18.0
18	15.0	13.0	15.5	14.0	23.5	21.0	26.5	23.0	22.0	19.0	18.0	17.5
19	13.5	12.0	15.5	13.0	23.5	22.0	25.5	24.0	22.5	20.0	18.5	16.5
20	13.0	11.5	17.0	13.5	23.5	21.5	24.0	23.0	23.0	20.5	19.0	17.5
21	13.0	10.5	18.5	14.5	23.0	22.0	23.5	22.0	22.5	21.0	18.0	16.5
22	13.0	11.5	20.0	16.5	22.5	21.0	24.0	22.0	23.0	21.0	17.0	16.0
23	15.0	13.0	20.5	18.0	23.0	20.5	23.5	21.0	23.0	20.5	16.5	15.0
24	14.5	11.0	21.0	18.5	22.0	20.5	24.5	21.5	22.5	21.0	16.5	14.0
25	11.0	10.0	21.0	19.5	22.5	21.0	25.5	22.5	22.0	20.0	16.5	14.5
26	12.0	9.5	20.5	19.0	22.0	20.5	25.0	22.0	22.5	19.5	18.5	16.0
27	15.0	11.5	20.0	18.5	22.5	19.0	23.5	22.5	23.0	20.5	20.0	18.5
28	15.5	13.5	18.5	18.0	23.0	20.0	23.0	21.5	24.0	22.0	19.0	16.5
29	15.5	13.5	21.0	18.5	24.5	21.5	22.5	21.5	24.0	22.5	16.0	14.5
30	14.0	12.5	20.5	19.0	25.0	23.0	23.0	20.5	23.5	22.5	14.5	14.0
31	---	---	20.0	17.5	---	---	23.5	20.5	23.0	22.0	---	---
MONTH	16.5	9.0	21.0	12.0	25.0	17.0	28.0	20.5	25.5	19.0	24.5	14.0
YEAR	28.0	.0										

04208000 CUYAHOGA RIVER AT INDEPENDENCE, OH--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.2	5.7	8.6	7.6	11.3	10.1	10.5	10.0	11.0	10.5	12.0	11.7
2	7.0	5.4	8.7	7.5	11.1	10.1	11.4	10.2	11.0	9.0	11.9	11.6
3	7.2	5.7	9.0	7.4	12.2	11.0	11.9	11.4	11.4	11.0	11.9	11.5
4	7.2	5.9	7.8	7.0	12.3	10.9	12.4	11.6	11.4	11.0	11.9	11.4
5	8.2	6.3	8.4	7.2	12.0	10.7	12.4	12.2	11.3	11.0	11.4	10.8
6	7.9	6.8	---	---	11.7	9.9	12.1	10.9	11.1	10.7	11.9	11.1
7	7.6	6.4	8.4	7.3	10.4	9.8	---	---	10.9	10.6	12.6	11.3
8	7.9	6.2	7.0	6.2	9.8	8.5	---	---	10.6	9.9	11.8	11.2
9	8.2	6.0	---	---	10.6	7.4	---	---	10.9	10.6	11.7	11.2
10	8.0	5.6	---	---	11.1	10.1	---	---	10.7	10.5	11.4	10.7
11	7.0	5.6	---	---	12.0	11.2	11.9	11.6	10.9	10.0	11.5	11.2
12	8.7	6.3	---	---	11.9	11.1	11.8	11.6	11.6	11.0	11.7	11.0
13	9.5	7.6	8.5	7.6	11.7	11.1	11.8	11.3	11.8	11.6	11.0	9.1
14	9.5	7.3	7.5	7.5	13.0	11.8	11.2	10.6	11.7	11.2	10.9	9.3
15	8.7	6.8	---	---	13.1	12.8	11.0	11.5	11.2	10.7	10.7	10.4
16	7.6	5.3	---	---	12.7	11.7	11.0	10.5	11.3	10.6	10.5	9.9
17	7.3	5.4	10.7	7.8	12.5	11.8	11.3	10.7	11.3	10.3	10.5	9.2
18	6.9	5.3	12.2	10.0	11.9	10.7	11.4	10.8	11.0	10.6	10.9	9.5
19	7.3	5.4	11.1	9.3	12.0	10.5	11.2	10.7	10.6	10.1	10.8	10.4
20	7.7	6.1	12.2	9.2	13.0	11.8	11.1	10.4	13.8	12.8	10.7	10.4
21	7.7	6.6	11.0	9.6	13.1	12.5	11.1	10.2	14.3	12.0	11.4	10.6
22	7.5	6.0	11.7	9.3	12.8	12.4	10.7	10.0	13.8	11.8	11.4	10.9
23	8.1	6.1	10.6	9.5	12.1	11.0	10.3	10.1	12.3	11.5	11.5	11.0
24	8.1	6.3	10.0	8.9	11.0	10.5	10.4	10.1	12.0	11.7	11.5	10.9
25	7.3	6.4	10.3	7.3	11.8	11.0	10.6	10.0	13.6	12.0	11.2	10.5
26	8.9	7.2	12.2	10.3	12.3	11.7	10.8	10.0	13.6	13.3	10.7	10.0
27	9.6	8.8	10.8	9.9	12.2	11.9	11.1	9.5	13.8	13.0	12.1	10.5
28	8.6	7.7	10.4	9.6	12.0	11.7	11.1	10.7	12.7	11.9	12.8	11.6
29	9.3	7.3	11.7	10.5	11.6	10.9	11.1	10.9	---	---	11.8	10.5
30	9.3	8.3	12.0	10.9	10.7	8.2	11.1	10.9	---	---	10.4	9.6
31	8.8	7.9	---	---	10.8	10.0	11.1	10.9	---	---	10.4	9.1
MONTH	9.6	5.3	12.2	6.2	13.1	7.4	12.4	9.5	14.3	9.0	12.8	9.1

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.9	9.0	9.5	8.5	8.7	7.2	6.1	5.2	8.2	6.7	---	---
2	10.1	9.1	10.0	8.6	7.7	7.2	7.7	5.1	8.0	6.6	---	---
3	9.5	8.7	9.7	8.5	7.8	6.5	8.0	6.1	8.4	6.5	---	---
4	8.7	8.0	9.2	8.1	6.9	5.0	10.4	6.3	7.5	5.9	---	---
5	10.3	7.9	7.9	6.4	7.0	5.2	7.4	6.0	7.6	5.4	---	---
6	11.5	10.5	8.4	6.5	7.1	5.4	8.8	6.0	8.3	5.5	---	---
7	11.0	9.9	9.2	8.0	7.6	5.1	7.8	6.0	7.4	5.1	---	---
8	9.7	8.9	8.6	7.4	7.9	5.7	9.2	5.9	7.5	6.9	---	---
9	8.7	7.6	7.8	7.0	6.9	5.7	6.1	4.7	7.7	6.7	8.3	8.1
10	9.3	8.3	7.6	6.9	7.4	6.3	5.8	4.6	7.6	6.3	8.4	7.6
11	8.2	7.4	7.6	6.6	7.9	6.8	6.7	4.9	8.0	6.7	7.9	6.9
12	9.2	7.6	8.5	6.6	7.8	6.5	6.6	5.0	9.7	6.6	8.3	6.7
13	9.5	8.7	8.6	7.9	7.8	6.1	5.9	4.5	9.0	6.9	9.4	7.1
14	10.2	9.5	8.1	7.4	7.1	5.9	5.3	4.7	7.7	6.3	8.1	6.3
15	11.5	10.1	8.1	6.1	7.1	6.4	5.4	4.7	7.5	6.1	7.9	6.2
16	10.8	9.3	9.2	7.6	6.2	5.4	5.7	4.7	7.8	6.8	8.9	6.2
17	9.0	8.2	9.2	7.4	6.1	4.7	5.8	5.0	8.4	7.8	8.4	6.8
18	9.2	8.1	9.2	7.3	5.9	5.4	5.1	4.3	---	---	8.9	5.9
19	9.7	8.8	8.9	7.6	5.6	4.5	4.5	4.2	---	---	9.3	7.5
20	9.7	9.0	9.3	7.3	5.5	4.5	5.4	4.5	---	---	7.9	6.8
21	9.8	8.8	9.4	7.0	4.9	3.5	5.8	4.7	---	---	9.1	6.5
22	9.1	8.3	10.1	6.6	4.5	2.8	6.4	5.3	---	---	8.9	7.6
23	8.6	7.4	10.3	6.1	5.6	2.1	7.9	5.1	---	---	9.1	7.4
24	9.1	6.7	10.0	5.7	5.8	3.8	6.6	4.5	---	---	8.6	7.5
25	9.7	8.7	11.0	5.6	5.5	3.2	5.2	3.8	---	---	8.8	7.1
26	10.1	9.4	11.4	6.1	5.6	3.1	5.6	3.7	---	---	8.3	6.7
27	9.4	8.4	8.4	5.9	5.5	5.2	5.7	4.4	5.6	5.3	7.3	5.9
28	8.3	7.3	6.7	4.3	5.9	5.0	6.4	4.7	5.6	5.1	6.9	5.4
29	8.2	5.9	6.9	4.6	5.9	4.4	7.0	2.6	5.6	5.3	8.9	5.8
30	9.2	8.2	6.8	5.8	6.7	4.2	7.5	6.9	6.9	5.3	8.4	6.9
31	---	---	7.3	6.2	---	---	7.5	6.8	---	---	---	---
MONTH	11.5	5.9	11.4	4.3	8.7	2.1	10.4	2.6	9.7	5.1	9.4	5.4
YEAR	14.3	2.1										

04208000 CUYAHOGA RIVER AT INDEPENDENCE, OH--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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	272	10	7.3	452	10	12	654	26	46
2	326	10	8.8	419	10	11	793	67	161
3	299	11	8.9	400	13	14	826	93	207
4	272	8	5.9	390	10	11	640	24	41
5	253	7	4.8	370	9	9.0	573	17	26
6	238	6	3.9	346	8	7.5	551	13	19
7	334	8	7.2	322	4	3.5	654	42	77
8	427	16	18	334	8	7.2	835	86	207
9	427	13	15	310	8	6.7	1350	242	947
10	419	13	15	299	7	5.7	1100	70	208
11	411	14	16	283	6	4.6	797	42	90
12	595	33	53	272	6	4.4	701	36	68
13	461	32	40	272	6	4.4	670	28	51
14	362	10	9.8	295	7	5.6	603	25	41
15	330	8	7.1	310	7	5.9	543	34	50
16	299	7	5.7	295	8	6.4	509	30	41
17	287	11	8.5	291	7	5.5	459	30	37
18	461	52	65	334	6	5.4	419	28	32
19	310	13	11	362	8	7.8	407	30	33
20	245	6	4.0	314	8	6.8	324	33	29
21	291	5	3.9	295	9	7.2	296	27	22
22	306	6	5.0	268	7	5.1	276	23	17
23	295	5	4.0	257	8	5.6	303	21	17
24	295	8	6.4	342	30	35	321	20	17
25	736	125	292	631	96	175	279	28	21
26	807	174	379	436	13	15	272	27	20
27	525	29	41	440	14	17	276	16	12
28	508	11	15	713	35	67	262	13	9.2
29	508	10	14	640	23	40	314	21	18
30	452	8	9.8	591	21	34	547	116	172
31	452	7	8.5	---	---	---	459	29	36
TOTAL	12203	---	1093.5	11283	---	545.3	17013	---	2772.2
		JANUARY			FEBRUARY			MARCH	
1	390	16	17	797	113	328	1530	127	525
2	340	22	20	2700	532	4180	1270	90	309
3	280	32	24	1390	164	615	1080	74	216
4	250	28	19	1050	114	323	939	70	177
5	240	18	12	808	78	170	897	58	140
6	240	10	6.5	730	51	101	845	70	160
7	240	15	9.7	669	36	65	783	70	148
8	240	14	9.1	621	36	60	730	57	112
9	240	13	8.4	526	36	51	703	47	89
10	240	11	7.1	510	34	47	680	43	79
11	240	13	8.4	2010	344	1900	665	34	61
12	240	14	9.1	1300	180	632	648	36	63
13	240	22	14	1040	80	225	639	39	67
14	240	25	16	813	35	77	601	37	60
15	240	28	18	811	46	101	572	42	65
16	240	25	16	1190	210	675	597	45	73
17	240	23	15	2780	580	4350	566	47	72
18	260	32	22	3060	370	3060	545	36	53
19	300	44	36	8090	1760	39700	531	23	33
20	342	42	39	9040	490	12000	556	24	36
21	379	33	34	7940	360	7720	618	31	52
22	391	37	39	6140	440	7290	744	61	123
23	372	34	34	5670	370	5660	985	75	199
24	346	23	21	5290	330	4710	1040	55	154
25	360	23	22	3700	360	3600	902	28	68
26	1070	334	1360	2760	285	2120	898	38	95
27	1520	322	1420	2270	205	1260	3530	1210	12000
28	1060	92	263	1880	168	853	2190	370	2190
29	835	63	142	---	---	---	1550	134	561
30	701	47	89	---	---	---	1460	89	351
31	564	33	50	---	---	---	1350	64	233
TOTAL	12880	---	3800.3	75585	---	101873	30644	---	18564

04208000 CUYAHOGA RIVER AT INDEPENDENCE, OH--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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	1120	53	160	1760	97	461	635	28	48
2	930	47	118	1360	99	364	576	24	37
3	873	40	94	1220	165	544	486	20	26
4	882	75	195	1060	93	266	430	17	20
5	1800	308	1540	928	42	105	420	17	19
6	1120	125	378	1470	138	551	410	23	25
7	1010	48	131	1200	76	246	380	15	15
8	858	33	76	963	58	151	430	30	35
9	756	28	57	843	35	80	5800	1950	30500
10	643	18	31	783	30	63	2700	480	3500
11	1110	206	1210	1240	122	508	1820	216	1060
12	2860	1260	10100	1420	94	368	1440	133	517
13	1910	184	987	1070	38	110	1910	190	1260
14	6810	916	17400	930	40	100	5490	594	8890
15	3560	360	3460	1420	133	512	2880	345	2680
16	2370	176	1130	1480	57	228	1900	212	1090
17	2300	203	1310	1080	39	114	1580	193	823
18	2720	174	1280	848	30	69	1180	113	360
19	2010	90	488	732	23	45	946	108	276
20	1590	74	318	659	23	41	774	112	234
21	1280	82	283	605	24	39	649	111	195
22	1080	78	227	559	24	36	1470	279	1210
23	1420	148	567	454	16	20	1150	208	646
24	1580	133	567	349	13	12	783	67	142
25	1360	52	191	331	12	11	1260	230	866
26	1100	36	107	333	13	12	1100	143	448
27	1000	23	62	386	23	24	700	43	81
28	954	28	72	1130	240	850	556	35	53
29	2930	627	5420	1240	245	850	478	30	39
30	2520	193	1380	781	68	143	491	31	41
31	---	---	---	685	42	78	---	---	---
TOTAL	52456	---	49339	29319	---	7001	40824	---	55136
		JULY			AUGUST			SEPTEMBER	
1	499	45	61	551	37	55	334	23	24
2	448	27	33	495	25	33	1480	424	1940
3	403	20	22	474	22	28	2790	673	5550
4	382	21	22	469	26	33	2710	271	2410
5	663	119	398	382	20	21	1530	117	483
6	667	43	77	310	19	16	1080	65	190
7	600	30	49	1750	216	2780	774	37	77
8	556	22	33	1380	372	2100	936	85	236
9	516	24	33	403	53	58	793	30	64
10	486	37	49	334	32	29	640	20	35
11	386	24	25	2150	572	5340	569	17	26
12	342	23	21	631	75	128	499	14	19
13	704	370	842	457	31	38	452	13	16
14	482	105	149	436	26	31	613	91	198
15	346	25	23	1370	183	800	423	48	55
16	314	20	17	1150	107	341	334	12	11
17	283	16	12	690	44	82	415	30	33
18	260	15	11	534	27	39	382	18	19
19	253	13	8.9	469	22	28	407	16	18
20	478	56	89	415	15	17	436	15	18
21	1140	654	2130	382	13	13	350	13	12
22	542	80	117	338	10	9.1	346	13	12
23	350	25	24	291	8	6.3	314	20	17
24	306	17	14	253	6	4.1	291	12	9.4
25	291	16	13	238	8	5.1	276	5	3.7
26	672	484	1020	231	6	3.7	272	5	3.7
27	386	126	136	231	5	3.1	245	5	3.3
28	1010	281	1170	234	5	3.2	231	7	4.4
29	1530	417	1900	242	4	2.6	242	6	3.9
30	869	95	223	302	18	15	302	18	15
31	622	56	94	326	17	15	---	---	---
TOTAL	16786	---	8815.9	17918	---	12077.2	20466	---	11506.4
YEAR	337377		272523.8						

04208000 CUYAHOGA RIVER AT INDEPENDENCE, OH--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT					
15...	1030	342	11.5	6	5.5
NOV					
05...	1000	402	11.0	10	11
DEC					
02...	1430	732	7.0	34	67
JAN					
06...	1100	240	.5	9	5.8
FEB					
10...	1130	472	2.5	31	40
MAR					
10...	1130	679	6.5	44	81
APR					
01...	1500	1080	13.5	60	175
MAY					
05...	1015	920	17.0	39	97
JUN					
03...	1030	488	21.0	18	24
JUL					
02...	1130	444	24.0	26	31
AUG					
12...	1030	595	24.0	62	100
SEP					
01...	1130	295	23.0	4	3.2

04208502 BIG CREEK AT CLEVELAND, OH

LOCATION.--Lat 41°27'01", long 81°43'18", Cuyahoga County, Hydrologic Unit 04110002, on right bank 8 ft (2 m) downstream from footbridge in Brookside Park, 0.2 mi (0.3 km) upstream from bridge on Fulton Road and 2.5 mi (4.0 km) upstream from mouth.

DRAINAGE AREA.--35.3 mi² (91.4 km²).

PERIOD OF RECORD.--October 1972 to current year.

GAGE.--Water-stage recorder. Datum of gage is 620.7 ft (189.19 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records good. Flow slightly regulated by industry upstream from station. Water-quality data collected at this site 1972 to 1977.

AVERAGE DISCHARGE.--9 years, 50.7 ft³/s (1.436 m³/s), 19.50 in/yr (495 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,100 ft³/s (258 m³/s) Aug. 24, 1975, gage height, 16.20 ft (4.938 m) (from floodmarks), from rating curve extended above 500 ft³/s (14.2 m³/s) on basis of slope-area measurements of peak flow; minimum daily, 2.3 ft³/s (0.065 m³/s) Sept. 16-17, 1973.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 1,200 ft³/s (34.0 m³/s) and maximums (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Apr. 11	1900	1690	47.9	9.23	2.813	Aug. 7	1745	1860	52.7	9.75	2.972
June 9	0345	*2500	70.8	*11.50	3.505	Sept. 2	1630	2450	69.4	11.39	3.472
June 16	1800	1270	36.0	7.88	2.402	Sept. 3	2115	1680	47.6	9.21	2.807
July 13	0845	1980	56.1	10.12	3.085						

Minimum daily discharge, 7.3 ft³/s (0.21 m³/s) July 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	11	30	17	126	20	19	25	12	11	9.9	11
2	53	12	84	14	123	20	16	19	12	9.9	8.3	384
3	13	10	39	12	25	19	16	16	20	9.1	33	501
4	11	12	26	11	20	17	52	17	30	11	12	254
5	12	12	21	10	17	19	42	32	11	14	9.1	112
6	11	9.1	19	9.5	16	18	19	80	11	9.5	8.7	48
7	8.3	8.7	65	9.5	15	17	16	26	9.9	8.7	362	27
8	12	21	100	9.5	14	14	16	19	34	8.7	147	123
9	10	12	67	9.5	14	15	18	16	555	9.1	27	22
10	12	12	34	9.5	64	16	14	37	43	14	25	13
11	17	11	20	9.5	141	18	301	157	22	8.0	188	11
12	84	11	17	9.5	36	14	257	47	17	7.3	25	11
13	23	9.1	17	9.5	32	14	120	24	203	321	14	9.5
14	16	35	13	9.5	25	13	374	33	95	24	12	195
15	22	18	16	9.5	29	14	50	36	27	14	177	51
16	13	15	15	9.5	71	28	30	56	135	12	48	31
17	36	12	13	11	90	21	71	21	34	12	17	60
18	57	30	15	13	69	16	72	17	16	9.9	12	69
19	17	17	14	17	472	20	28	15	14	9.5	10	42
20	14	12	12	22	296	25	24	14	13	160	9.1	47
21	12	11	11	25	82	44	20	13	12	80	8.3	12
22	11	13	9.0	21	42	29	33	13	150	16	9.1	39
23	11	10	11	18	102	37	93	13	16	10	7.6	12
24	11	47	14	21	52	33	60	12	13	8.7	8.3	8.7
25	96	36	13	40	33	25	33	12	184	8.7	8.3	8.0
26	57	17	12	215	25	90	24	12	19	56	8.7	8.3
27	17	75	11	69	24	138	21	25	13	12	7.6	12
28	47	47	13	39	26	31	43	59	9.9	235	7.6	7.6
29	17	43	42	27	---	24	157	14	9.9	64	7.6	7.6
30	13	25	30	20	---	34	39	33	10	16	42	129
31	9.5	---	20	19	---	24	---	14	---	11	11	---
TOTAL	757.8	613.9	823.0	745.5	2081	867	2078	927	1750.7	1200.1	1280.2	2265.7
MEAN	24.4	20.5	26.5	24.0	74.3	28.0	69.3	29.9	58.4	38.7	41.3	75.5
MAX	96	75	100	215	472	138	374	157	555	321	362	501
MIN	8.3	8.7	9.0	9.5	14	13	14	12	9.9	7.3	7.6	7.6
CFSM	.69	.58	.75	.68	2.11	.79	1.96	.85	1.65	1.10	1.17	2.14
IN.	.80	.65	.87	.79	2.19	.91	2.19	.98	1.84	1.26	1.35	2.39

CAL YR 1980 TOTAL 18182.7 MEAN 49.7 MAX 390 MIN 8.3 CFSM 1.41 IN 19.16
WTR YR 1981 TOTAL 15389.9 MEAN 42.2 MAX 555 MIN 7.3 CFSM 1.20 IN 16.22

04208506 CUYAHOGA RIVER AT WEST THIRD STREET BRIDGE, IN CLEVELAND, OH

LOCATION.--Lat 41°29'17", long 81°41'07", in T.7 N., R.12 W., Cuyahoga County, Hydrologic Unit 04110002, on left bank just upstream from bridge on West Third Street in Cleveland, 3.0 mi (4.8 km) upstream from mouth, and 1.2 mi (1.9 km) downstream from turning basin.

DRAINAGE AREA.--798 mi² (2,067 km²).

PERIOD OF RECORD.--November 1966 to current year.

PERIOD OF RECORD.--
SPECIFIC CONDUCTANCE: November 1966 tc current year.
pH: November 1966 to current year.
WATER TEMPERATURES: November 1966 to current year.
DISSOLVED OXYGEN: November 1966 to current year.

INSTRUMENTATION.--Water-quality monitor.

REMARKS.--Interruptions in the water-quality record were due to malfunction of the instrument. No discharge records available.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 3,000 micromhos July 16, 17, 1977; minimum, 318 micromhos July 12, 1976.
pH: Maximum, 9.3 units Sept. 14, 1969; minimum, 4.3 units May 16, 1969.
WATER TEMPERATURES: Maximum, 35.0°C July 24, 1967; minimum, 1.0°C Jan. 1, 1969.
DISSOLVED OXYGEN: Maximum, 15.0 mg/L on several days during 1968, 1970; minimum, 0.0 mg/L on many days during 1967, 1968, 1971 to 1974, 1977 to 1981.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 2,080 micromhos Jan. 26; minimum, 372 micromhos Aug. 7.
pH: Maximum, 7.8 units Aug. 7; minimum, 6.7 units Feb. 14.
WATER TEMPERATURES: Maximum, 29.0°C July 9, 10, 12, 13; minimum, 2.0°C Feb. 3, 4.
DISSOLVED OXYGEN: Maximum, 12.8 mg/L Feb. 13; minimum, 0.0 mg/L on several days during year.

04208506 CUYAHOGA RIVER AT WEST THIRD STREET BRIDGE, IN CLEVELAND, OH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	1070	978	969	930	1150	933	1820	1670	1260	1170	615	579
2	1150	1070	1010	954	1140	918	1650	1590	1560	996	633	609
3	1170	1050	1010	966	918	861	1670	1590	1010	969	690	636
4	1040	1010	972	897	954	870	1680	1640	993	921	741	684
5	1130	1040	939	885	---	---	1640	1480	945	921	786	720
6	1140	1090	975	915	---	---	1480	1380	996	936	873	792
7	1100	1070	975	933	---	---	1380	1280	1200	999	912	861
8	1110	1070	972	894	---	---	1270	1200	1330	1190	981	906
9	1190	1080	948	894	---	---	1220	1200	1370	1290	966	900
10	1160	1020	966	915	---	---	1240	1210	1350	1290	924	903
11	1120	1040	981	933	---	---	1230	1140	1700	1070	921	891
12	1040	918	966	933	---	---	1140	1080	1060	936	909	882
13	885	738	972	936	---	---	1100	1070	1040	942	918	885
14	855	750	978	933	---	---	1160	1100	1150	1050	900	876
15	924	855	1070	972	---	---	1220	1160	1220	1150	960	894
16	954	927	1060	987	---	---	1350	1220	1230	1170	984	942
17	1010	960	1060	1000	858	846	1400	1370	1330	879	1080	954
18	1100	1010	1050	960	975	864	1550	1400	873	801	1190	1050
19	1060	933	1020	969	1090	993	1580	1520	849	546	1210	1160
20	1030	963	1060	993	1090	1080	1660	1520	570	519	1400	1210
21	1020	957	1100	1010	---	---	1730	1670	522	480	1700	1370
22	---	---	1100	1010	---	---	1800	1720	477	420	1900	1730
23	1040	999	---	---	1230	1190	2000	1800	504	420	1850	1600
24	1070	1010	---	---	1210	1120	1990	1750	489	450	1280	1040
25	1200	1030	---	---	1240	1110	1740	1620	504	450	999	936
26	1080	822	---	---	1260	1240	2080	1640	531	504	939	864
27	876	825	---	---	1250	1180	1870	1310	537	522	939	615
28	894	858	---	---	1210	1180	1300	1230	576	540	651	642
29	951	879	---	---	1210	1130	1280	1240	---	---	657	636
30	1030	933	---	---	1660	1150	1240	1190	---	---	747	660
31	969	918	---	---	1780	1700	1260	1180	---	---	735	702
MONTH	1200	738	1100	885	1780	846	2080	1070	1700	420	1900	579

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	765	690	603	555	---	---	963	936	801	789	912	888
2	801	771	636	606	---	---	948	942	801	789	930	417
3	831	786	648	630	---	---	1010	951	813	801	519	426
4	852	789	747	657	936	906	1090	1010	810	789	540	420
5	825	738	849	771	960	939	1080	999	807	789	612	543
6	735	690	834	672	960	936	996	918	840	807	624	591
7	792	729	702	675	1010	939	903	852	867	372	696	624
8	804	789	711	690	1020	990	855	840	534	387	711	690
9	849	789	771	717	990	390	999	849	678	537	699	672
10	858	807	798	759	549	453	1030	996	885	645	726	690
11	882	573	753	666	573	546	1030	1030	891	450	762	720
12	654	543	660	636	624	579	1070	1030	591	462	789	750
13	672	606	675	654	645	549	1070	657	786	600	780	657
14	645	429	717	681	513	486	762	666	879	766	795	666
15	579	477	783	717	---	---	909	750	987	585	627	528
16	621	576	765	669	---	---	918	912	660	558	765	636
17	666	624	702	672	657	588	927	912	675	651	858	756
18	618	567	750	693	654	630	939	921	765	678	891	849
19	618	576	756	753	693	645	969	939	828	780	894	837
20	660	618	810	753	747	690	1000	921	858	825	855	822
21	678	654	849	798	834	747	942	672	861	861	864	852
22	699	678	864	834	831	669	720	657	---	---	873	852
23	711	684	915	861	711	609	801	693	---	---	888	876
24	702	672	933	897	711	627	957	804	---	---	891	885
25	690	648	---	---	804	645	1030	963	---	---	927	894
26	720	684	---	---	771	693	1040	954	933	927	951	927
27	753	720	---	---	747	690	957	738	960	933	969	945
28	765	720	---	---	834	750	819	741	981	960	969	960
29	795	498	---	---	942	831	840	585	990	978	975	957
30	555	486	---	---	972	942	720	576	1010	981	975	957
31	---	---	---	---	---	---	786	720	999	921	---	---
MONTH	882	429	933	555	1020	390	1090	576	1010	372	975	417
YEAR	2080	372										

STREAMS TRIBUTARY TO LAKE ERIE

04208506 CUYAHOGA RIVER AT WEST THIRD STREET BRIDGE, IN CLEVELAND, OH--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.4	7.2	7.5	7.3	7.6	7.2	7.3	7.2	7.3	7.2	7.3	7.2
2	7.4	7.3	7.5	7.3	7.4	7.0	7.4	7.3	7.4	7.2	7.3	7.2
3	7.4	7.3	7.5	7.3	7.3	7.0	7.5	7.4	7.3	7.2	7.3	7.3
4	7.4	7.3	7.5	7.3	7.3	7.0	7.5	7.3	7.3	7.3	7.3	7.2
5	7.4	7.2	7.4	7.2	---	---	7.3	7.1	7.3	7.3	7.3	7.2
6	7.4	7.3	7.4	7.2	---	---	7.3	7.3	7.4	7.3	7.3	7.2
7	7.4	7.3	7.5	7.2	---	---	7.3	7.1	7.5	6.9	7.4	7.3
8	7.4	7.3	7.5	7.2	---	---	7.2	7.1	7.3	7.0	7.4	7.3
9	7.5	7.4	7.5	7.3	---	---	7.3	7.1	7.2	7.1	7.4	7.4
10	7.6	7.3	7.4	7.2	---	---	7.3	7.2	7.3	7.1	7.4	7.3
11	7.5	7.3	7.4	7.2	---	---	7.2	7.1	7.4	7.1	7.4	7.3
12	7.5	7.3	7.4	7.2	---	---	7.2	7.2	7.2	6.8	7.3	7.2
13	7.2	7.1	7.3	7.2	---	---	7.4	7.2	7.2	7.1	7.3	7.2
14	7.2	7.0	7.4	7.2	---	---	7.3	7.2	7.2	6.7	7.3	7.3
15	7.2	6.9	7.4	7.2	---	---	7.3	6.9	7.2	7.1	7.3	7.3
16	7.3	7.1	7.4	7.2	---	---	7.2	7.1	7.3	7.1	7.3	7.3
17	7.3	7.1	7.4	7.1	7.5	7.5	7.2	7.2	7.3	7.1	7.3	7.3
18	7.3	7.1	7.4	7.1	7.6	7.5	7.2	7.1	7.2	6.7	7.3	7.3
19	7.3	7.0	7.4	7.2	7.6	7.5	7.3	7.0	7.3	7.0	7.3	7.3
20	7.3	7.1	7.5	7.2	7.6	7.5	7.2	7.0	7.3	7.1	7.4	7.3
21	7.3	7.2	7.4	7.2	---	---	7.2	7.2	7.3	7.2	7.4	7.3
22	---	---	7.4	7.0	---	---	7.2	7.1	7.2	7.1	7.4	7.3
23	7.1	7.0	---	---	7.3	7.2	7.2	7.1	7.2	7.1	7.5	7.3
24	7.3	7.0	---	---	7.3	7.2	7.2	7.1	7.3	7.2	7.4	7.2
25	7.4	7.3	---	---	7.3	7.2	7.2	6.9	7.3	7.2	7.5	7.3
26	7.4	7.1	---	---	7.3	7.3	7.2	6.9	7.3	7.2	7.6	7.3
27	7.3	6.9	---	---	7.4	7.3	7.2	7.2	7.3	7.2	7.6	7.4
28	7.3	6.9	---	---	7.3	7.3	7.3	7.2	7.3	7.2	7.4	7.0
29	7.3	7.0	---	---	7.3	7.3	7.3	7.2	---	---	7.3	7.0
30	7.3	6.9	---	---	7.3	7.3	7.4	7.2	---	---	7.2	7.2
31	7.4	7.2	---	---	7.3	7.2	7.3	7.2	---	---	7.2	7.2
MONTH	7.6	6.9	7.5	7.0	7.6	7.0	7.5	6.9	7.5	6.7	7.6	7.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.2	7.1	7.2	7.1	7.2	7.0	7.1	7.1	7.4	7.3	7.4	7.3
2	7.2	6.9	7.2	7.1	7.2	7.1	7.2	7.1	7.3	7.3	7.5	7.3
3	7.2	7.1	7.2	7.1	7.1	6.9	7.2	7.1	7.4	7.3	7.6	7.4
4	7.2	7.1	7.2	7.1	7.1	7.0	7.2	7.1	7.4	7.3	7.6	7.5
5	7.2	7.1	7.1	7.0	7.0	7.0	7.2	7.1	7.4	7.3	7.6	7.5
6	7.4	7.2	7.2	7.0	7.0	6.9	7.4	7.2	7.3	7.3	7.6	7.5
7	7.4	6.8	7.2	7.1	7.0	7.0	7.2	7.2	7.8	7.2	7.5	7.5
8	7.2	7.0	7.2	7.1	7.1	7.0	7.2	7.2	7.7	7.5	7.6	7.4
9	7.2	7.1	7.2	7.1	7.4	7.0	7.2	7.1	7.4	7.3	---	---
10	7.2	7.1	7.1	7.1	7.2	7.2	7.2	7.1	7.4	7.3	---	---
11	7.2	7.1	7.1	7.1	7.2	7.2	7.2	7.1	7.6	7.3	---	---
12	7.2	7.1	7.2	7.0	7.2	7.2	7.2	7.1	7.5	7.3	---	---
13	7.3	7.1	7.2	7.1	7.2	7.1	7.3	7.1	7.4	7.3	---	---
14	7.3	7.2	7.2	7.2	7.3	7.2	7.2	7.1	7.4	7.3	---	---
15	7.2	7.1	7.2	7.2	---	---	7.2	7.1	7.5	7.3	---	---
16	7.2	7.1	7.3	7.1	---	---	7.2	7.2	7.4	7.3	---	---
17	7.1	7.0	7.3	7.2	7.2	7.1	7.2	7.2	7.5	7.4	---	---
18	7.0	7.0	7.3	7.2	7.2	7.0	7.2	7.1	7.4	7.4	---	---
19	7.0	7.0	7.3	7.2	7.2	7.1	7.2	7.2	7.5	7.4	---	---
20	7.0	6.8	7.3	7.2	7.2	7.1	7.3	7.2	7.5	7.4	---	---
21	7.2	6.8	7.2	7.2	7.2	7.1	7.4	7.1	7.4	7.4	---	---
22	7.2	7.0	7.2	7.1	7.2	7.1	7.3	7.2	---	---	---	---
23	7.0	6.9	7.1	6.8	7.3	7.2	7.2	7.2	---	---	---	---
24	7.1	7.0	7.0	6.9	7.3	7.2	7.2	7.2	---	---	7.2	7.2
25	7.2	7.1	7.0	6.9	7.3	7.2	7.2	7.2	---	---	7.3	7.2
26	7.3	7.1	7.0	6.9	7.3	7.2	7.3	7.1	7.3	7.3	7.3	7.1
27	7.2	7.2	7.0	7.0	7.2	7.1	7.2	7.2	7.3	7.3	7.3	7.2
28	7.2	7.0	7.1	7.0	7.2	7.2	7.2	7.1	7.3	7.3	7.2	7.1
29	7.1	7.0	7.1	7.0	7.3	7.1	7.3	7.3	7.4	7.3	7.2	7.2
30	7.2	7.1	7.1	7.0	7.2	7.0	7.4	7.3	7.3	7.3	7.3	7.2
31	---	---	7.0	7.0	---	---	7.5	7.3	7.4	7.3	---	---
MONTH	7.4	6.8	7.3	6.8	7.4	6.9	7.5	7.1	7.8	7.2	7.6	7.1
YEAR	7.8	6.7										

STREAMS TRIBUTARY TO LAKE ERIE

04208506 CUYAHOGA RIVER AT WEST THIRD STREET BRIDGE, IN CLEVELAND, OH--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	22.5	21.5	12.5	12.0	9.5	8.5	8.0	7.5	6.0	5.5	7.5	7.0
2	22.5	22.0	13.0	12.0	9.5	8.5	7.5	7.0	5.5	3.5	7.5	7.0
3	22.0	21.5	13.0	12.0	9.0	7.0	7.5	6.5	3.5	2.0	7.0	6.5
4	21.5	20.5	14.0	12.5	6.5	5.5	6.5	5.5	3.0	2.0	7.0	6.5
5	20.5	19.5	14.5	13.5	5.5	4.5	5.5	5.0	4.0	2.5	7.5	7.0
6	19.5	19.0	14.5	13.5	---	---	---	---	4.5	4.0	8.0	7.5
7	19.0	18.5	14.0	13.5	---	---	---	---	6.0	4.5	8.0	7.5
8	19.0	18.5	14.0	13.5	---	---	---	---	6.5	5.5	8.0	7.5
9	19.0	18.5	15.0	13.5	---	---	---	---	6.5	6.0	9.0	7.5
10	19.5	18.5	15.0	14.0	---	---	---	---	7.0	6.0	10.0	8.5
11	19.5	18.5	14.5	13.5	---	---	---	---	6.5	3.5	10.0	9.5
12	18.5	16.0	13.5	12.5	---	---	---	---	3.5	2.5	10.0	9.5
13	15.5	13.5	12.5	11.5	---	---	---	---	3.5	3.0	10.5	9.5
14	14.5	13.5	12.5	12.0	---	---	---	---	5.5	3.5	11.0	10.5
15	15.0	14.0	13.0	12.0	---	---	7.0	6.5	6.5	5.0	10.5	10.0
16	16.0	15.0	13.5	12.5	---	---	7.5	7.0	7.0	6.0	10.5	10.0
17	18.0	16.0	13.0	11.5	7.5	7.0	7.5	7.0	6.0	4.5	10.5	9.5
18	19.0	18.0	12.5	11.0	8.5	7.5	7.5	7.0	6.0	5.0	9.5	9.0
19	19.0	18.0	11.0	10.0	8.5	8.0	7.5	7.0	6.5	5.5	9.5	9.0
20	18.0	17.5	10.5	10.0	8.0	8.0	8.0	7.0	6.0	5.0	9.0	9.0
21	18.0	17.0	10.5	10.0	---	---	8.5	8.0	5.0	4.5	9.5	8.5
22	---	---	10.5	9.5	---	---	8.5	8.5	5.0	4.0	10.0	8.5
23	17.0	16.5	---	---	7.0	7.0	9.0	8.5	6.0	5.0	10.5	9.0
24	17.0	16.5	---	---	7.0	7.0	9.0	8.5	6.0	5.5	10.0	9.0
25	16.5	14.5	---	---	8.0	7.0	9.5	9.0	5.5	5.0	10.5	9.0
26	14.5	10.5	---	---	7.5	6.5	9.5	6.5	6.0	5.5	11.0	10.0
27	11.0	10.5	---	---	7.0	6.5	6.0	5.0	6.5	6.0	10.5	7.5
28	12.0	10.5	---	---	7.5	6.5	6.0	5.5	7.5	6.5	9.0	8.5
29	12.0	11.0	---	---	8.0	7.0	6.5	6.0	---	---	10.5	9.0
30	12.5	11.0	---	---	8.0	7.0	6.0	6.0	---	---	12.5	11.0
31	12.5	12.0	---	---	7.5	6.5	6.0	6.0	---	---	13.0	12.5
MONTH	22.5	10.5	15.0	9.5	9.5	4.5	9.5	5.0	7.5	2.0	13.0	6.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	15.0	13.5	15.0	14.0	22.0	20.5	27.0	26.0	26.0	24.5	27.5	26.5
2	15.5	14.5	15.5	14.0	21.5	20.5	27.5	26.5	27.0	25.5	27.0	23.0
3	16.0	14.5	16.5	14.5	23.0	21.0	28.0	26.5	27.5	26.5	23.5	21.5
4	16.5	15.5	17.5	15.0	23.5	22.5	27.5	26.5	27.0	26.5	22.5	21.5
5	16.0	13.0	18.5	16.5	25.0	23.5	28.0	26.5	27.5	26.5	22.5	22.0
6	13.0	11.5	18.0	15.5	25.5	25.0	27.5	26.5	28.0	27.0	22.5	22.0
7	13.5	12.0	15.5	14.5	26.5	25.0	27.5	26.5	28.5	21.0	23.5	22.5
8	15.0	12.0	17.0	15.0	26.0	26.0	28.0	26.5	22.0	21.0	23.5	22.0
9	16.0	14.5	17.5	16.0	26.0	19.5	29.0	27.5	24.0	22.0	22.0	21.5
10	17.0	16.0	18.0	17.5	21.5	20.5	29.0	28.5	25.5	23.5	22.5	21.5
11	17.5	16.0	18.0	16.0	21.5	21.5	28.5	28.0	25.5	21.5	23.0	22.0
12	16.5	14.5	16.0	15.0	23.0	21.5	29.0	28.0	24.0	21.5	24.5	23.5
13	14.5	14.0	16.5	15.0	23.0	21.5	29.0	24.5	26.0	24.0	25.0	24.5
14	14.0	11.5	16.5	16.0	21.5	21.0	25.5	25.0	26.5	25.5	25.0	25.0
15	12.5	11.5	16.5	15.0	---	---	26.5	25.5	27.0	22.5	23.0	22.0
16	12.5	12.0	15.5	15.0	---	---	27.0	26.5	23.0	22.5	23.5	22.5
17	14.5	12.5	17.5	15.5	24.0	23.5	28.5	27.0	23.0	22.0	23.5	23.0
18	15.0	14.5	17.5	16.5	24.5	23.5	28.0	27.5	23.5	22.5	23.0	21.5
19	15.0	13.5	17.0	16.5	24.5	23.5	28.5	28.0	24.0	23.0	21.5	21.0
20	14.0	12.5	17.5	16.0	24.5	24.0	28.5	26.5	25.0	24.0	21.0	20.5
21	13.5	12.5	18.5	17.0	25.0	24.0	26.5	23.0	25.0	25.0	21.5	21.0
22	14.0	12.5	20.0	18.5	24.5	22.0	24.5	23.0	---	---	21.5	21.0
23	15.0	14.0	21.0	19.5	22.5	22.0	25.5	24.0	---	---	21.0	20.0
24	15.5	13.5	22.5	21.0	24.0	22.0	25.5	25.0	---	---	20.0	20.0
25	13.5	12.0	23.5	22.0	23.5	22.0	26.5	25.5	---	---	21.0	20.5
26	13.0	12.0	23.5	22.5	23.0	22.5	27.0	25.5	26.5	26.0	22.0	21.0
27	14.5	12.5	23.0	22.5	23.5	22.5	25.5	24.5	27.0	26.0	22.5	21.5
28	16.5	14.0	23.0	19.5	24.5	22.5	25.5	25.0	27.5	26.5	22.0	22.0
29	17.0	14.0	20.5	19.0	25.0	23.5	23.5	22.5	28.0	27.0	22.5	22.0
30	14.5	14.0	21.5	20.5	26.0	25.0	23.5	23.0	28.5	27.5	22.0	21.0
31	---	---	21.5	20.5	---	---	24.5	23.0	28.0	27.5	---	---
MONTH	17.5	11.5	23.5	14.0	26.5	19.5	29.0	22.5	28.5	21.0	27.5	20.0
YEAR	29.0	2.0										

STREAMS TRIBUTARY TO LAKE ERIE

04208506 CUYAHOGA RIVER AT WEST THIRD STREET BRIDGE, IN CLEVELAND, OH--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	1.4	.2	5.6	5.1	8.9	6.4	9.8	8.8	11.4	11.0	11.3	10.8
2	.9	.0	5.3	4.4	8.3	7.2	9.9	9.5	11.6	10.8	11.2	10.8
3	.9	.0	5.2	4.6	7.8	6.9	10.4	9.8	12.6	11.5	11.3	11.0
4	.1	.0	5.1	4.6	8.7	8.0	10.9	10.4	12.7	12.4	11.3	10.8
5	.9	.0	4.8	3.8	---	---	11.4	10.8	12.5	12.1	11.0	10.5
6	1.3	.8	4.0	3.5	---	---	11.4	11.1	12.3	11.8	10.5	10.2
7	1.5	1.0	5.5	3.6	---	---	11.2	10.5	11.9	11.1	10.7	10.0
8	2.7	1.5	5.5	5.2	---	---	10.6	10.3	11.4	10.9	10.6	9.9
9	3.2	2.5	5.4	4.3	---	---	10.6	10.1	10.9	10.4	10.6	10.1
10	6.2	3.1	4.3	3.9	---	---	10.7	10.2	10.9	10.5	10.3	9.7
11	4.5	2.4	4.6	4.0	---	---	10.3	9.8	11.7	10.4	9.9	9.3
12	3.9	2.3	5.1	4.3	---	---	10.4	9.7	12.7	11.5	9.4	9.0
13	3.8	2.3	5.6	5.0	---	---	10.6	10.2	12.8	12.3	9.5	8.8
14	4.5	3.7	6.0	5.1	---	---	10.6	9.9	12.6	11.6	8.8	8.2
15	4.5	3.7	5.8	4.6	---	---	10.3	9.7	11.7	10.8	8.9	8.3
16	4.4	3.6	4.8	3.1	---	---	10.0	9.1	11.4	10.4	8.8	8.0
17	3.7	3.0	4.8	3.9	---	---	9.5	9.1	12.0	10.8	8.4	7.9
18	3.3	2.1	5.8	4.7	9.1	8.6	9.4	9.1	12.0	11.7	8.7	8.1
19	2.4	.2	6.5	5.9	8.9	8.5	9.9	9.1	11.7	10.5	8.7	7.9
20	2.1	1.0	6.7	6.2	8.8	8.6	9.8	9.2	11.8	10.8	9.2	8.6
21	2.6	2.0	7.0	6.2	---	---	9.6	9.3	12.4	11.8	9.4	8.6
22	---	---	6.5	5.9	---	---	9.2	8.5	12.5	12.2	9.4	8.4
23	3.3	3.0	---	---	10.6	10.3	8.6	7.9	12.3	11.7	9.8	8.8
24	3.5	2.8	---	---	10.6	10.2	8.9	8.3	12.0	11.6	10.2	9.8
25	4.2	3.1	---	---	10.4	9.5	8.7	8.0	12.3	12.1	10.4	9.6
26	4.8	3.8	---	---	10.0	9.4	9.8	7.7	12.3	12.2	9.8	8.6
27	5.7	4.8	---	---	10.4	10.0	10.7	9.5	12.2	11.9	10.4	7.6
28	6.2	5.4	---	---	10.5	10.0	11.1	10.5	12.0	11.3	11.2	10.5
29	6.0	5.6	---	---	10.2	9.8	11.2	10.9	---	---	11.1	10.0
30	6.0	5.6	---	---	10.0	9.1	11.3	11.1	---	---	10.0	8.4
31	5.8	5.5	---	---	9.9	9.1	11.3	10.8	---	---	9.0	8.5
MONTH	6.2	.0	7.0	3.1	10.6	6.4	11.4	7.7	12.8	10.4	11.3	7.6

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.7	7.8	8.3	7.4	3.9	2.0	2.2	.6	3.4	1.9	2.0	.2
2	8.2	7.9	8.1	7.2	3.7	2.2	1.7	.2	3.1	1.2	4.5	.4
3	8.0	7.3	8.0	7.2	4.2	2.0	2.7	.1	1.9	.7	6.3	3.8
4	7.5	6.7	8.0	6.8	3.2	1.2	1.8	.1	1.6	.6	5.9	4.6
5	8.1	6.0	7.2	6.4	2.2	.8	3.6	.0	1.9	.4	5.7	4.0
6	9.4	8.0	6.9	5.5	2.1	.1	4.9	1.3	1.0	.0	5.6	4.6
7	9.4	8.5	7.1	6.7	2.2	.0	2.6	1.4	5.0	.0	5.3	4.3
8	8.9	7.4	7.0	5.9	2.7	1.8	2.4	1.1	5.1	3.8	5.5	3.6
9	7.7	6.4	6.5	5.0	5.6	.0	2.2	.4	3.6	.9	5.1	4.3
10	6.9	5.9	5.9	5.0	5.7	5.3	.9	.0	2.1	.8	5.2	4.1
11	6.5	5.6	6.0	5.0	5.8	5.0	.8	.0	5.6	.6	5.1	3.8
12	8.6	6.6	6.7	5.9	5.3	4.5	.7	.0	5.4	2.6	4.1	2.6
13	8.5	7.6	7.0	6.1	5.4	4.3	1.6	.0	3.2	1.8	3.2	1.3
14	9.2	7.9	7.0	5.6	6.0	4.8	1.5	.2	3.2	.7	2.3	.8
15	9.8	9.0	6.4	5.7	---	---	1.1	.0	4.6	.6	1.9	.6
16	9.8	8.9	6.8	5.7	---	---	.8	.0	4.8	3.7	2.0	.6
17	9.1	7.5	6.9	5.9	5.0	4.1	.6	.0	5.3	3.4	2.2	1.0
18	8.2	7.3	6.3	5.9	4.8	3.7	.2	.0	4.3	2.2	3.8	1.7
19	8.0	7.7	6.2	5.3	4.7	3.5	.3	.0	4.1	2.2	4.1	1.9
20	8.0	7.8	5.9	4.7	3.9	2.4	.6	.0	3.1	1.1	3.7	1.8
21	9.2	7.6	5.1	4.5	2.9	1.7	3.1	.5	1.9	1.7	4.1	2.9
22	8.9	8.0	5.0	4.1	3.1	1.8	2.9	1.7	---	---	3.1	1.8
23	7.9	5.8	4.4	2.7	4.7	2.5	1.9	.5	---	---	2.8	1.9
24	7.5	6.7	3.4	1.9	4.6	3.0	1.2	.0	---	---	2.4	1.5
25	8.7	7.5	2.7	.6	4.7	2.9	.8	.0	---	---	4.1	1.7
26	8.7	8.2	2.9	.5	4.4	2.9	1.3	.0	1.0	.4	2.4	.8
27	8.8	7.9	1.5	.2	3.3	1.8	1.4	.0	.6	.0	2.1	1.1
28	7.9	6.5	2.3	.2	3.3	1.2	.9	.4	1.0	.0	1.9	.7
29	7.5	6.1	4.5	2.4	3.9	.8	3.0	2.2	1.6	.3	1.8	1.0
30	8.2	7.5	3.7	1.7	3.1	.8	4.0	2.2	1.2	.0	2.2	.6
31	---	---	2.2	1.5	---	---	4.4	2.4	2.6	.6	---	---
MONTH	9.8	5.6	8.3	.2	6.0	.0	4.9	.0	5.6	.0	6.3	.2
YEAR	12.8	.0										

04209000 CHAGRIN RIVER AT WILLOUGHBY, OH

LOCATION.--Lat 41°37'51", long 81°24'13", in T.9 N., R.10 W., Lake County, Hydrologic Unit 04110003, on left bank, 150 ft (46 m) downstream from city waterworks dam, 800 ft (244 m) downstream from East Branch, 1.0 mi (1.6 km) southeast of Willoughby, and 5.0 mi (8.0 km) upstream from mouth.

DRAINAGE AREA.--246 mi² (637 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1925 to November 1935, October 1939 to current year (July 1925 to September 1932 monthly run-off in inches, adjusted for diversion, published in WSP 1307; previously published run-off was unadjusted and should not be used).

REVISED RECORDS.--WSP 1084: 1929(M), 1931(M). WSP 1307: 1926-28(M), 1930(M), 1932-35(M), 1942(M). WSP 1912: Drainage area. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 594.57 ft (181.225 m) National Geodetic Vertical Datum of 1929. Prior to Dec. 20, 1939, nonrecording gage at site 150 ft (46 m) upstream at datum 7 ft (2 m) higher.

REMARKS.--Records fair except those for winter periods, which are poor. Water diverted 200 ft (61 m) upstream from station for municipal supply of city of Willoughby. Water-quality data collected at this site 1965 to 1977.

AVERAGE DISCHARGE.--52 years, 330 ft³/s (9.346 m³/s), 18.22 in/yr (463 mm/yr), adjusted for diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,000 ft³/s (793 m³/s) Mar. 22, 1948, gage height, 17.95 ft (5.471 m) (from high-water mark in well), from rating curve extended above 14,000 ft³/s (393 m³/s) on basis of contracted-opening measurements of peak flow; minimum daily, 3.0 ft³/s (0.085 m³/s) July 25, 1934.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a stage of 10.3 ft (3.14 m), from floodmark, former site and datum, discharge, 24,500 ft³/s (694 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,000 ft³/s (113 m³/s) and maximums (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 19	1300	*9350	265	*11.30	3.444	Aug. 7	2330	4050	115	6.88	2.097
Apr. 14	1200	5870	166	8.48	2.585	Sept. 3	2330	5700	164	8.34	2.542

Minimum daily discharge, 55 ft³/s (1.56 m³/s) Oct. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	83	119	357	260	350	375	299	521	108	105	111	102
2	95	101	521	230	1670	322	252	357	101	98	95	604
3	89	85	573	210	660	288	227	267	101	98	91	1800
4	126	92	288	200	340	262	278	217	141	95	88	2610
5	108	98	203	190	280	283	810	198	108	498	79	818
6	84	89	177	180	280	283	471	305	98	198	70	566
7	65	75	227	180	260	262	305	333	89	128	295	330
8	65	92	490	170	198	241	257	217	83	108	1340	341
9	60	75	1220	170	153	241	246	168	1680	98	433	286
10	55	80	567	160	153	262	227	194	516	120	226	147
11	92	80	310	160	1110	272	212	735	231	108	826	114
12	222	75	212	160	660	257	858	727	161	98	504	102
13	217	70	198	160	340	257	547	351	150	159	235	108
14	108	92	157	150	240	236	3400	232	535	143	154	212
15	92	108	126	150	210	227	1520	278	286	105	704	330
16	86	89	153	150	528	262	663	425	276	95	842	147
17	86	80	126	140	2720	252	594	327	291	91	416	117
18	122	75	115	140	2940	232	698	212	147	88	179	105
19	92	95	119	140	7270	236	458	185	124	85	132	102
20	95	92	126	140	4890	236	327	173	108	189	108	98
21	86	85	110	140	2380	257	252	153	102	803	95	98
22	345	80	85	140	1190	305	212	145	528	272	88	91
23	86	75	120	140	1360	580	764	130	253	120	82	85
24	86	108	173	250	1200	908	858	119	147	85	79	76
25	160	236	150	400	691	787	842	111	168	70	76	70
26	642	194	120	959	502	621	496	105	147	272	73	70
27	432	164	100	1190	400	1930	357	111	114	217	73	73
28	502	257	140	635	412	780	393	173	105	684	73	70
29	357	288	185	471	---	465	1610	168	102	942	73	65
30	194	257	316	330	---	400	959	145	98	281	102	79
31	141	---	387	230	---	400	---	119	---	154	114	---
TOTAL	5073	3506	8151	8325	33387	12719	19392	7901	7098	6607	7856	9816
MEAN	164	117	263	269	1192	410	646	255	237	213	253	327
MAX	642	288	1220	1190	7270	1930	3400	735	1680	942	1340	2610
MIN	55	70	85	140	153	227	212	105	83	70	70	65
MEAN+	168	121	267	273	1196	414	650	259	241	218	258	332
CFSM+	0.68	0.49	1.09	1.11	4.86	1.68	2.64	1.05	0.98	0.88	1.05	1.35
IN.+	0.79	0.55	1.25	1.28	5.07	1.94	2.95	1.21	1.09	1.02	1.21	1.50

CAL YR 1980 TOTAL 117247 MEAN 320 MAX 2790 MIN 55 MEAN+ 325 CFSM+ 1.32 IN.+ 17.99
WTR YR 1981 TOTAL 129831 MEAN 356 MAX 7270 MIN 55 MEAN+ 360 CFSM+ 1.46 IN.+ 19.87

\+ Adjusted for municipal supply diversion of city of Willoughby.

04209000 CHAGRIN RIVER AT WILLOUGHBY, OH--Continued

WATER-QUALITY RECORDS

SEDIMENT ANALYSES

PERIOD OF RECORD.--July 1969 to current year.

PERIOD OF DAILY RECORD.--
SUSPENDED SEDIMENT DISCHARGE: October 1978 to current year (discontinued).

EXTREMES FOR PERIOD OF DAILY RECORD.--
SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,260 mg/L Feb. 19, 1981; minimum daily mean, 1 mg/L Nov. 23, 25, 1978, Jan. 13, 1981. Nov. 23, 25, 1978, Jan. 13, 1981.
SEDIMENT LOADS: Maximum daily, 46,100 tons (41,800 tonnes) Feb. 19, 1981; minimum daily, 0.29 ton (0.26 tonne) Nov. 23, 1978.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,260 mg/L Feb. 19; minimum daily mean, 1 mg/L Jan. 13.
SEDIMENT LOADS: Maximum daily, 46,100 tons (41,800 tonnes) Feb. 19; minimum daily, 0.38 ton (0.34 tonne) Feb. 13.

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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	83	15	3.4	119	5	1.6	357	25	24
2	95	15	3.8	101	3	.82	521	65	91
3	89	23	5.5	85	3	.69	573	57	88
4	126	82	28	92	5	1.2	288	21	16
5	108	36	10	98	4	1.1	203	8	4.4
6	84	37	8.4	89	3	.72	177	7	3.3
7	65	34	6.0	75	5	1.0	227	22	13
8	65	16	2.8	92	12	3.0	490	40	76
9	60	15	2.4	75	2	.41	1220	257	907
10	55	12	1.8	80	2	.43	567	62	95
11	92	14	3.5	80	2	.43	310	32	27
12	222	89	53	75	2	.41	212	15	8.6
13	217	82	48	70	2	.38	198	11	5.9
14	108	13	3.8	92	5	1.2	157	8	3.4
15	92	11	2.7	108	8	2.3	126	7	2.4
16	86	10	2.3	89	4	.96	153	5	2.1
17	86	10	2.3	80	4	.86	126	5	1.7
18	122	64	21	75	5	1.0	115	3	.93
19	92	14	3.5	95	5	1.3	119	2	.64
20	95	33	8.5	92	3	.75	126	2	.68
21	86	33	7.7	85	4	.92	110	3	.89
22	345	32	30	80	4	.86	85	3	.69
23	86	24	5.6	75	5	1.0	120	2	.65
24	86	4	.93	108	13	3.8	173	2	.93
25	160	26	11	236	22	14	150	3	1.2
26	642	94	163	194	8	4.2	120	3	.97
27	432	47	55	164	6	2.7	100	4	1.1
28	502	36	49	257	14	9.7	140	3	1.1
29	357	20	19	288	12	9.3	185	3	1.5
30	194	8	4.2	257	11	7.6	316	6	5.1
31	141	6	2.3	---	---	---	387	5	5.2
TOTAL	5073	---	568.43	3506	---	74.64	8151	---	1390.38

STREAMS TRIBUTARY TO LAKE ERIE

04209000 CHAGRIN RIVER AT WILLOUGHBY, OH--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		JANUARY			FEBRUARY			MARCH	
1	260	4	2.8	350	65	121	375	24	24
2	230	4	2.5	1670	291	1330	322	15	13
3	210	4	2.3	660	71	153	288	11	8.6
4	200	3	1.6	340	10	9.2	262	10	7.1
5	190	3	1.5	280	4	3.0	283	11	8.4
6	180	2	.97	280	4	3.0	283	12	9.2
7	180	2	.97	260	3	2.1	262	10	7.1
8	170	3	1.4	198	3	1.6	241	11	7.2
9	170	2	.92	153	3	1.2	241	15	9.8
10	160	2	.86	153	3	1.2	262	18	13
11	160	2	.86	1110	315	1220	272	13	9.5
12	160	2	.86	660	50	117	257	9	6.2
13	160	1	.43	340	18	17	257	9	6.2
14	150	4	1.6	240	8	5.2	236	5	3.2
15	150	4	1.6	210	7	4.0	227	10	6.1
16	150	5	2.0	528	105	392	262	28	20
17	140	5	1.9	2720	775	5760	252	14	9.5
18	140	4	1.5	2940	440	3400	232	7	4.4
19	140	5	1.9	7270	2260	46100	236	5	3.2
20	140	5	1.9	4890	749	9740	236	5	3.2
21	140	5	1.9	2380	310	1990	257	5	3.5
22	140	5	1.9	1190	175	562	305	8	6.6
23	140	5	1.9	1360	258	1020	580	62	121
24	250	4	2.7	1200	70	227	908	129	316
25	400	7	7.6	691	49	91	787	79	168
26	959	266	924	502	26	35	621	183	608
27	1190	243	837	400	28	30	1930	467	2720
28	635	40	69	412	35	39	780	26	55
29	471	22	28	---	---	---	465	20	25
30	330	26	23	---	---	---	400	17	18
31	230	12	7.5	---	---	---	400	18	19
TOTAL	8325	---	1934.87	33387	---	72374.5	12719	---	4239.0
		APRIL			MAY			JUNE	
1	299	12	9.7	521	30	42	108	6	1.7
2	252	7	4.8	357	9	8.7	101	8	2.2
3	227	6	3.7	267	9	6.5	101	11	3.0
4	278	14	14	217	14	8.2	141	22	8.4
5	810	101	234	198	11	5.9	108	10	2.9
6	471	16	20	305	14	12	98	9	2.4
7	305	5	4.1	333	15	13	89	7	1.7
8	257	7	4.9	217	7	4.1	83	9	2.0
9	246	14	9.3	168	7	3.2	1680	852	5070
10	227	7	4.3	194	8	4.2	516	132	184
11	212	5	2.9	735	257	646	231	55	34
12	858	223	663	727	112	256	161	47	20
13	547	31	51	351	17	16	150	29	12
14	3400	1560	17200	232	10	6.3	535	175	271
15	1520	191	838	278	10	7.5	286	90	69
16	663	36	64	425	22	25	276	65	72
17	594	19	30	327	13	11	291	102	95
18	698	35	66	212	9	5.2	147	61	24
19	458	16	20	185	7	3.5	124	30	10
20	327	10	8.8	173	6	2.8	108	25	7.3
21	252	8	5.4	153	11	4.5	102	21	5.8
22	212	12	6.9	145	6	2.3	528	947	2060
23	764	170	413	130	6	2.1	253	13	8.9
24	858	75	179	119	6	1.9	147	53	21
25	842	46	105	111	6	1.8	168	38	17
26	496	12	16	105	6	1.7	147	28	11
27	357	11	11	111	10	3.0	114	24	7.4
28	393	225	353	173	10	4.7	105	28	7.9
29	1610	409	1630	168	5	2.3	102	32	8.8
30	959	88	228	145	4	1.6	98	20	5.3
31	---	---	---	119	5	1.6	---	---	---
TOTAL	19392	---	22199.8	7901	---	1114.6	7098	---	8045.7

04209000 CHAGRIN RIVER AT WILLOUGHBY, OH--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		JULY			AUGUST			SEPTEMBER	
1	105	26	7.4	111	64	19	102	12	3.3
2	98	28	7.4	95	41	11	604	864	2020
3	98	25	6.6	91	30	7.4	1800	487	2830
4	95	37	9.5	88	26	6.2	2610	817	8030
5	498	182	310	79	26	5.5	818	105	232
6	198	121	73	70	28	5.3	566	89	136
7	128	38	13	295	162	1240	330	59	53
8	108	29	8.5	1340	815	3680	341	86	91
9	98	23	6.1	433	179	250	286	51	45
10	120	26	8.4	226	50	31	147	19	7.5
11	108	23	6.7	826	442	1490	114	20	6.2
12	98	24	6.4	504	110	170	102	16	4.4
13	159	57	31	235	43	27	108	17	5.7
14	143	45	17	154	32	13	212	60	35
15	105	43	12	704	567	1760	330	84	90
16	95	48	12	842	390	938	147	21	8.3
17	91	44	11	416	59	28	117	15	4.7
18	88	36	8.6	179	26	13	105	9	2.6
19	85	28	6.4	132	22	7.8	102	8	2.2
20	189	58	30	108	11	3.2	98	10	2.6
21	803	434	1440	95	7	1.8	98	10	2.6
22	272	162	143	88	9	2.1	91	11	2.7
23	120	51	17	82	17	3.8	85	12	2.8
24	85	42	9.6	79	26	5.5	76	14	2.9
25	70	34	6.4	76	23	4.7	70	14	2.6
26	272	95	93	73	20	3.9	70	14	2.6
27	217	107	63	73	16	3.2	73	20	3.9
28	684	419	1390	73	11	2.2	70	29	5.5
29	942	382	1320	73	11	2.2	65	18	3.2
30	281	103	78	102	19	5.2	79	15	3.2
31	154	67	28	114	26	8.0	---	---	---
TOTAL	6607	---	5179.0	7856	---	9748.0	9816	---	13641.5
YEAR	129831		140510.42						

04212100 GRAND RIVER NEAR PAINESVILLE, OH

LOCATION.--Lat 41°43'08", long 81°13'41", Lake County, Hydrologic Unit 04110004, on downstream left abutment of bridge on State Highway 84 (Walnut Avenue), 0.9 mi (1.4 km) downstream from Big Creek in Painesville.

DRAINAGE AREA.--685 mi² (1,774 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is 620.37 ft (189.089 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those for winter periods, which are poor.

AVERAGE DISCHARGE.--7 years, 1,030 ft³/s (29.17 m³/s), 20.41 in/yr (518 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,900 ft³/s (479 m³/s) Dec. 25, 1979, gage height, 13.16 ft (4.011 m); minimum, 11 ft³/s (0.31 m³/s) Sept. 14, 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 6,500 ft³/s (184 m³/s) and maximums (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 4	----	8000	227	ice	jam	Apr. 29	1600	8480	240	8.31	2.533
Feb. 11	----	8600	244	ice	jam	June 10	0530	7070	200	7.58	2.310
Feb. 19	1400	*16300	462	*12.01	3.661						

Minimum discharge, 29 ft³/s (0.821 m³/s) July 17-20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	340	1680	450	500	1160	1000	2810	280	79	850	180
2	60	259	1890	400	1500	930	793	1890	243	121	376	1310
3	64	210	2190	360	4000	756	621	1490	201	132	204	1280
4	109	186	1590	350	6200	598	517	994	323	94	143	2290
5	119	165	1100	330	1500	500	951	598	580	247	115	2410
6	81	146	802	310	1000	451	1230	491	302	267	96	2570
7	69	141	774	300	700	413	1140	712	186	160	98	1940
8	61	153	1020	290	450	407	940	920	139	111	590	1600
9	53	165	2220	280	430	420	686	830	3450	79	2610	1090
10	49	160	2130	270	1800	605	475	629	5740	69	1760	729
11	61	160	1520	270	6000	1350	363	859	1990	57	1160	483
12	201	160	1110	260	2000	645	435	1110	951	50	774	297
13	263	153	859	260	1000	562	483	930	475	44	605	210
14	231	146	661	250	700	467	3010	765	553	40	394	183
15	170	165	508	250	640	413	4920	653	783	35	346	363
16	134	163	394	250	1500	413	2930	940	879	32	1130	850
17	115	150	346	250	3000	407	1980	1140	1060	31	1350	534
18	109	148	307	260	6000	382	1770	972	580	29	703	289
19	94	148	270	270	13600	346	1330	703	297	29	358	204
20	117	153	220	280	15200	329	983	451	204	42	217	163
21	148	160	200	290	12200	376	712	318	160	143	150	143
22	153	163	190	270	8910	420	500	255	830	100	115	165
23	136	163	180	250	7320	774	1070	213	961	82	91	168
24	107	174	180	240	6430	2190	1860	186	435	109	76	150
25	121	590	180	230	4320	2610	1800	171	276	94	66	130
26	774	930	180	1700	2790	1970	1430	148	231	96	57	115
27	961	811	180	4500	2030	2570	1130	134	158	117	52	103
28	889	899	180	3500	1520	1980	1570	136	123	183	49	92
29	821	1140	220	2000	---	1450	7700	168	105	920	49	82
30	653	1230	610	1200	---	1250	5810	227	91	1900	45	73
31	475	---	510	800	---	1150	---	318	---	1520	132	---
TOTAL	7449	9731	24401	20920	113240	28294	50139	22161	22586	7012	14761	20196
MEAN	240	324	787	675	4044	913	1671	715	753	226	476	673
MAX	961	1230	2220	4500	15200	2610	7700	2810	5740	1900	2610	2570
MIN	49	141	180	230	430	329	363	134	91	29	45	73
CFSM	.35	.47	1.15	.99	5.90	1.33	2.44	1.04	1.10	.33	.70	.98
IN.	.40	.53	1.33	1.14	6.15	1.54	2.72	1.20	1.23	.38	.80	1.10

CAL YR 1980 TOTAL 291859 MEAN 797 MAX 10000 MIN 49 CFSM 1.16 IN 15.85
WTR YR 1981 TOTAL 340890 MEAN 934 MAX 15200 MIN 29 CFSM 1.36 IN 18.51

SEDIMENT ANALYSIS

PERIOD OF RECORD.--November 1978 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,350 mg/L Jan. 1, 1979; minimum daily mean, 3 mg/L Oct. 31, Nov. 1, 1979, Apr. 27, 28, 1980.
SEDIMENT LOADS: Maximum daily, 38,800 tons (35,200 tonnes) Dec. 25, 1979; minimum daily, 0.45 ton (0.41 tonne) Nov. 17, 1978.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATIONS: Maximum daily mean, 641 mg/L Sept. 2; minimum daily mean, 4 mg/L Nov. 6, 7, 23, 24, May 15.
SEDIMENT LOADS: Maximum daily, 17,300 tons (15,700 tonnes) Feb. 19; minimum daily, 0.79 ton (0.72 tonne) Aug. 28, 29.

04212100 GRAND RIVER NEAR PAINESVILLE, OH--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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	51	8	1.1	340	11	10	1680	66	299
2	60	11	1.8	259	7	4.9	1890	52	265
3	64	20	3.5	210	6	3.4	2190	57	337
4	109	37	11	186	7	3.5	1590	39	167
5	119	20	6.4	165	6	2.7	1100	22	65
6	81	9	2.0	146	4	1.6	802	14	30
7	69	8	1.5	141	4	1.5	774	14	29
8	61	9	1.5	153	5	2.1	1020	38	148
9	53	10	1.4	165	5	2.2	2220	99	677
10	49	8	1.1	160	5	2.2	2130	52	299
11	61	16	2.6	160	7	3.0	1520	32	131
12	201	45	24	160	6	2.6	1110	20	60
13	263	28	20	153	5	2.1	859	17	39
14	231	16	10	146	7	2.8	661	15	27
15	170	12	5.5	165	9	4.0	508	14	19
16	134	17	6.2	163	6	2.6	394	12	13
17	115	22	6.8	150	5	2.0	346	10	9.3
18	109	21	6.2	148	8	3.2	307	7	5.8
19	94	13	3.3	148	7	2.8	270	8	5.8
20	117	11	3.5	153	7	2.9	220	9	5.3
21	148	11	4.4	160	8	3.5	200	9	4.9
22	153	13	5.4	163	7	3.1	190	9	4.6
23	136	12	4.4	163	4	1.8	180	10	4.9
24	107	11	3.2	174	4	1.9	180	9	4.4
25	121	10	3.3	590	28	45	180	5	2.4
26	774	71	148	930	42	105	180	5	2.4
27	961	61	158	811	26	57	180	5	2.4
28	889	28	67	899	19	46	180	5	2.4
29	821	22	49	1140	33	102	220	5	3.0
30	653	19	33	1230	28	93	610	5	8.2
31	475	18	23	---	---	---	510	5	6.9
TOTAL	7449	---	618.1	9731	---	520.4	24401	---	2677.7
		JANUARY			FEBRUARY			MARCH	
1	450	5	6.1	500	28	38	1160	28	88
2	400	5	5.4	1500	73	296	930	23	58
3	360	5	4.9	4000	200	2160	756	17	35
4	350	5	4.7	6200	400	6700	598	18	29
5	330	5	4.5	1500	100	405	500	14	19
6	310	5	4.2	1000	50	135	451	12	15
7	300	5	4.1	700	30	57	413	11	12
8	290	5	3.9	450	10	12	407	10	11
9	280	5	3.8	430	10	12	420	13	15
10	270	5	3.6	1800	100	486	605	14	23
11	270	5	3.6	6000	300	4860	1350	13	47
12	260	5	3.5	2000	100	540	645	13	23
13	260	5	3.5	1000	50	135	562	12	18
14	250	5	3.4	700	30	57	467	7	8.8
15	250	5	3.4	640	7	12	413	13	14
16	250	5	3.4	1500	8	32	413	10	11
17	250	5	3.4	3000	48	389	407	8	8.8
18	260	5	3.5	6000	270	4370	382	7	7.2
19	270	5	3.6	13600	470	17300	346	10	9.3
20	280	5	3.8	15200	390	16000	329	7	6.2
21	290	5	3.9	12200	196	6460	376	13	13
22	270	5	3.6	8910	140	3370	420	11	12
23	250	5	3.4	7320	143	2830	774	23	48
24	240	5	3.2	6430	101	1750	2190	93	550
25	230	5	3.1	4320	78	910	2610	70	493
26	1700	20	92	2790	61	460	1970	63	367
27	4500	100	1220	2030	47	258	2570	134	980
28	3500	80	756	1520	37	152	1980	55	294
29	2000	66	356	---	---	---	1450	33	129
30	1200	61	198	---	---	---	1250	28	94
31	800	41	89	---	---	---	1150	27	84
TOTAL	20920	---	2808.5	113240	---	70186	28294	---	3522.3

04212100 GRAND RIVER NEAR PAINESVILLE, OH--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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	1000	22	59	2810	72	546	280	21	16
2	793	17	36	1890	45	230	243	18	12
3	621	14	23	1490	30	121	201	13	7.1
4	517	14	20	994	21	56	323	80	69
5	951	34	87	598	9	15	580	41	64
6	1230	25	83	491	7	9.3	302	26	21
7	1140	16	49	712	7	13	186	17	8.5
8	940	14	36	920	12	30	139	17	6.4
9	686	14	26	830	6	13	3450	479	5370
10	475	12	15	629	6	10	5740	173	2810
11	363	7	6.9	859	24	56	1990	72	387
12	435	10	12	1110	22	66	951	46	118
13	483	12	16	930	13	33	475	28	36
14	3010	485	4290	765	9	19	553	135	242
15	4920	278	3690	653	4	7.1	783	83	175
16	2930	92	728	940	13	33	879	66	157
17	1980	53	283	1140	18	55	1060	104	310
18	1770	42	201	972	12	31	580	45	70
19	1330	30	108	703	8	15	297	27	22
20	983	17	45	451	12	15	204	18	9.9
21	712	11	21	318	12	10	160	14	6.0
22	500	9	12	255	8	5.5	830	429	1250
23	1070	74	214	213	10	5.8	961	142	387
24	1860	69	347	186	9	4.5	435	61	72
25	1800	41	199	171	9	4.2	276	32	24
26	1430	19	73	148	8	3.2	231	24	15
27	1130	16	49	134	8	2.9	158	22	9.4
28	1570	80	484	136	8	2.9	123	22	7.3
29	7700	379	7800	168	11	5.0	105	18	5.1
30	5810	152	2410	227	12	7.4	91	13	3.2
31	---	---	---	318	18	15	---	---	---
TOTAL	50139	---	21422.9	22161	---	1439.8	22586	---	11689.9
		JULY			AUGUST			SEPTEMBER	
1	79	12	2.6	850	77	177	180	20	9.7
2	121	11	3.6	376	48	49	1310	641	3670
3	132	15	5.3	204	34	19	1280	349	1150
4	94	8	2.0	143	27	10	2290	151	991
5	247	76	78	115	22	6.8	2410	105	680
6	267	64	46	96	20	5.2	2570	197	1460
7	160	26	11	98	34	9.8	1940	85	474
8	111	17	5.1	590	153	222	1600	67	292
9	79	17	3.6	2610	330	2330	1090	40	118
10	69	16	3.0	1760	132	610	729	25	49
11	57	16	2.5	1160	137	428	483	20	26
12	50	16	2.2	774	69	144	297	15	12
13	44	13	1.5	605	50	82	210	13	7.4
14	40	13	1.4	394	40	43	183	12	5.9
15	35	14	1.3	346	60	62	363	27	26
16	32	19	1.6	1130	105	320	850	70	161
17	31	17	1.4	1350	76	277	534	32	46
18	29	15	1.2	703	46	87	289	22	17
19	29	12	.94	358	30	29	204	18	9.9
20	42	17	1.9	217	22	13	163	14	6.2
21	143	82	38	150	18	7.3	143	10	3.9
22	100	47	13	115	14	4.3	165	11	4.9
23	82	29	6.4	91	10	2.5	168	7	3.2
24	109	34	10	76	7	1.4	150	9	3.6
25	94	32	8.1	66	6	1.1	130	10	3.5
26	96	44	11	57	6	.92	115	10	3.1
27	117	41	13	52	6	.84	103	9	2.5
28	183	127	87	49	6	.79	92	7	1.7
29	920	199	441	49	6	.79	82	6	1.3
30	1900	222	1100	45	9	1.1	73	5	.99
31	1520	114	468	132	13	4.6	---	---	---
TOTAL	7012	---	2371.64	14761	---	4949.44	20196	---	9239.79
YEAR	340890		131446.47						

STREAMS TRIBUTARY TO LAKE ERIE
04212200 GRAND RIVER AT PAINESVILLE, OH
(National stream-quality accounting network station)

LOCATION.--Lat 41°44'09", long 81°15'59", in T.11 N., R.8 W., Lake County, Hydrologic Unit 04110004, at bridge on State Highway 535 in Painesville, 2.2 mi (3.5 km) upstream from mouth, and 8.0 mi (12.9 km) downstream from Kellogg Creek.

DRAINAGE AREA.--701 mi² (1,816 km²).

PERIOD OF RECORD.--March 1950 to February 1952, October 1962 to current year.

PERIOD OF RECORD.--
SPECIFIC CONDUCTANCE: December 1966 to current year.
pH: December 1966 to current year.
WATER TEMPERATURES: March 1950 to February 1952, October 1962 to current year.
DISSOLVED OXYGEN: December 1966 to current year.

INSTRUMENTATION.--Water-quality monitor.

REMARKS.--Interruptions in the water-quality record were due to malfunction of the instrument. See records of daily discharge for station near Painesville (station 04212100).

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 30,300 micromhos July 14, 1964; minimum, 130 micromhos Dec. 24.
pH: Maximum, 12.0 units Nov. 9, 1971, Jan. 18, 1975; minimum, 4.5 units Sept. 28, 1972.
WATER TEMPERATURES: Maximum, 33.5°C June 28, 1971; minimum, 0.0°C on many days during winter periods.
DISSOLVED OXYGEN: Maximum, 16.2 mg/L May 1, 1980; minimum, 0.0 mg/L on several days in 1968, 1977, and July 2, Aug. 30, 1978.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 6,000 micromhos July 21; minimum, 210 micromhos Feb. 21, June 9, 10.
pH: Maximum, 8.6 units Aug. 6; minimum, 6.7 units June 10.
WATER TEMPERATURES: Maximum, 29.0°C July 8, 11; minimum, 0.0°C on many days during winter periods.
DISSOLVED OXYGEN: Maximum, 14.5 mg/L March 21; minimum, 5.8 mg/L July 4, 14.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT										
15...	1500	176	1530	8.1	11.0	1.0	10.2	92	33	1200
DEC										
02...	1130	1690	425	7.6	5.5	4.9	11.8	94	39	1100
FEB										
10...	1430	1800	963	7.3	.5	5.0	12.6	88	20	900
APR										
01...	1700	961	600	7.8	13.0	19	11.0	100	34	100
JUN										
04...	1030	302	1400	7.8	22.0	19	7.1	81	<10	1500
AUG										
12...	1700	738	640	7.7	23.0	28	8.2	94	40	1400

04212200 GRAND RIVER AT PAINESVILLE, OH--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT										
15...	120	440	350	160	8.8	120	4.3	33	400	.2
DEC										
02...	1300	130	84	38	7.9	29	3.8	44	69	.1
FEB										
10...	800	270	220	88	11	77	4.9	52	220	.1
APR										
01...	38	170	130	55	7.5	42	3.1	41	130	.1
JUN										
04...	1100	390	310	140	10	120	3.7	49	390	.2
AUG										
12...	290	190	140	63	6.7	51	3.8	37	140	.1

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHYTOPLANKTON, TOTAL (CELLS PER ML)
OCT										
15...	3.9	1130	783	.35	.55	1.3	5.5	.070	--	6000
DEC										
02...	6.1	287	226	.45	.50	1.1	4.8	.520	8.7	--
FEB										
10...	7.1	593	494	.36	.57	1.7	7.4	.060	6.1	--
APR										
01...	3.0	405	308	.49	.55	.98	4.3	.060	--	1000
JUN										
04...	1.5	998	767	.51	.70	1.1	4.9	.110	--	6700
AUG										
12...	6.6	453	341	.66	.73	1.3	5.7	.070	--	16000

STREAMS TRIBUTARY TO LAKE ERIE

04212200 GRAND RIVER AT PAINESVILLE, OH--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)
OCT 15...	1500	1	1	100	70	0	0	40	30
APR 01...	1700	0	0	<50	40	2	2	10	<10
JUN 04...	1030	2	2	100	60	2	<1	40	20
AUG 12...	1700	2	2	100	40	5	5	20	10

DATE	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)
OCT 15...	0	0	12	4	860	20	4	1	80
APR 01...	0	0	5	4	990	30	8	0	60
JUN 04...	3	0	8	7	1700	<10	4	2	110
AUG 12...	4	4	15	6	1500	60	13	1	80

DATE	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY DIS-SOLVED (UG/L AS HG)	SELE-NIUM, TOTAL (UG/L AS SE)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT 15...	60	.1	.1	0	0	0	0	30	30
APR 01...	20	.2	<.1	0	0	0	0	30	5
JUN 04...	60	.1	<.1	0	0	0	0	30	<4
AUG 12...	30	.1	.1	<1	<1	<1	<1	20	6

04212200 GRAND RIVER AT PAINESVILLE, OH--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT 15...	1500	176	11.0	14	6.7
DEC 02...	1130	1690	5.5	48	219
FEB 10...	1430	1800	.5	7	34
APR 01...	1700	961	13.0	28	73
JUN 04...	1030	302	22.0	39	32
AUG 12...	1700	738	23.0	50	100

04212200 GRAND RIVER AT PAINESVILLE, OH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	3620	1920	1040	920	590	490	1210	1060	640	550	720	630
2	3790	2240	1160	1040	520	490	1060	980	640	430	800	720
3	4460	3710	1390	1170	490	460	990	950	440	380	880	790
4	4050	2460	1690	1380	530	480	1040	950	420	380	1130	880
5	2320	1740	1670	1450	640	540	1120	1040	490	420	1090	970
6	1770	1740	1680	1480	750	650	1200	1110	570	470	1100	1030
7	3250	1780	2110	1760	770	720	1180	1110	710	560	1130	1020
8	3380	2250	2210	1880	720	600	1260	1190	810	670	1140	1050
9	3540	1770	2050	1710	560	450	1280	1220	1210	810	1150	1090
10	3580	2270	1960	1640	470	440	1290	1210	1320	1040	1170	910
11	4670	2380	1840	1510	540	470	1320	1240	1280	500	920	840
12	5400	1730	1510	1410	660	550	1380	1290	490	380	970	830
13	1660	1110	1950	1510	730	640	1430	1360	380	360	1020	910
14	1310	1140	1900	1690	840	740	1450	1350	430	370	1160	970
15	1520	1160	1750	1430	1030	820	1450	1360	460	390	1210	1090
16	2060	1550	1500	1400	1080	890	1470	1360	590	470	1210	1070
17	2150	2030	1620	1460	1230	1050	1430	1340	580	330	1310	1120
18	2560	1950	1770	1580	1230	1070	1410	1340	---	---	1250	1070
19	2530	2210	2030	1540	1260	1070	1390	1310	---	---	1320	1090
20	2740	2300	2030	1770	1590	1200	1390	1300	---	---	1290	1170
21	2630	2030	2060	1820	2040	1640	1350	1250	220	210	1440	1190
22	2070	1560	2190	1700	1960	1460	1380	1270	260	220	1360	1170
23	1700	1540	1960	1620	1520	1400	1300	1240	280	260	1220	970
24	2050	1720	2090	1670	1530	1290	1260	1180	280	260	920	420
25	2990	1910	1870	1090	2160	1480	1230	1150	350	280	420	380
26	3790	580	1080	680	2300	1670	1400	880	420	350	520	410
27	630	550	760	690	1600	1370	890	530	510	430	460	380
28	630	600	760	650	1600	1380	540	410	630	520	460	390
29	670	600	650	600	1540	1450	470	420	---	---	560	470
30	780	670	620	590	1560	1410	480	470	---	---	620	570
31	920	790	---	---	1510	1200	570	480	---	---	670	620
MONTH	5400	550	2210	590	2300	440	1470	410	1320	210	1440	380

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	720	660	420	320	1360	1170	2850	2720	640	440	4130	1580
2	820	720	480	430	1440	1330	3310	2850	960	650	2010	270
3	970	820	580	480	1690	1410	3140	2020	1310	980	570	270
4	1130	960	780	590	2800	1280	2010	1810	1760	1370	400	320
5	1070	680	1010	810	1330	850	2770	1620	2390	1720	410	370
6	680	570	1240	1010	1280	960	1530	750	2410	2200	390	320
7	640	580	1010	750	1450	1270	1240	900	2600	2260	470	360
8	770	650	750	660	1880	1460	1550	1270	3070	790	510	450
9	940	760	750	680	2910	210	1760	1560	750	260	660	490
10	1140	930	930	750	300	210	3420	1730	420	290	780	670
11	1310	1150	980	700	480	310	3830	3330	580	400	980	770
12	1340	1060	640	590	700	480	3540	3300	690	550	1240	980
13	1110	1030	710	650	1050	710	3410	3210	880	690	1350	1220
14	1020	330	810	710	1140	700	3860	3350	1040	860	2190	1350
15	360	300	950	820	790	620	4150	3390	1350	1030	2020	920
16	390	320	870	610	700	540	4160	3020	1090	450	870	600
17	460	390	610	580	680	510	3790	2040	530	430	850	620
18	500	450	720	610	900	650	3730	2150	760	540	1130	860
19	600	500	870	720	1170	900	4300	2900	1030	770	1460	1120
20	740	610	1080	890	1580	1180	5110	3770	1250	1050	1810	1450
21	860	730	1280	1060	1860	1650	6000	3640	1500	1240	1800	1650
22	1040	870	1410	1260	2120	450	3900	1760	1850	1500	3190	1780
23	1140	480	1530	1410	700	440	2030	1670	2170	1830	1810	1460
24	490	420	1900	1500	850	700	2280	2030	2470	2260	1740	1590
25	460	420	2610	1910	1200	840	2250	2100	3420	2480	2010	1750
26	560	460	2500	2200	1200	1130	3350	1730	3580	2590	3210	2020
27	670	560	2490	2190	1310	1170	3250	1750	3310	2650	3140	2630
28	790	430	2720	2120	1750	1280	2370	1870	4380	2550	2890	2720
29	390	240	2380	2090	2160	1700	1800	550	4930	2610	3010	2890
30	310	240	2360	1750	2740	2240	540	380	4460	3940	2890	2790
31	---	---	1780	1160	---	---	440	380	4780	3240	---	---
MONTH	1340	240	2720	320	2910	210	6000	380	4930	260	4130	270
YEAR	6000	210										

STREAMS TRIBUTARY TO LAKE ERIE

04212200 GRAND RIVER AT PAINESVILLE, OH--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.0	7.8	7.9	7.7	7.6	7.5	7.6	7.5	7.4	7.3	7.4	7.4
2	7.9	7.6	7.9	7.7	7.6	7.5	7.5	7.5	7.4	7.2	7.5	7.4
3	7.8	7.6	8.0	7.7	7.6	7.5	7.5	7.5	7.2	7.1	7.6	7.5
4	7.8	7.6	8.1	7.7	7.5	7.5	7.5	7.5	7.1	7.1	7.6	7.5
5	7.7	7.6	7.8	7.7	7.6	7.5	7.5	7.4	7.2	7.1	7.6	7.6
6	7.7	7.7	8.1	7.8	7.6	7.5	7.5	7.4	7.2	7.1	7.7	7.6
7	7.7	7.7	8.1	7.8	7.6	7.5	7.4	7.4	7.2	7.2	7.7	7.6
8	7.8	7.7	8.1	7.7	7.6	7.5	7.4	7.4	7.2	7.2	7.7	7.7
9	7.9	7.7	8.1	7.7	7.5	7.4	7.4	7.4	7.3	7.2	7.7	7.6
10	8.0	7.8	8.2	7.7	7.5	7.4	7.4	7.4	7.3	7.2	7.7	7.6
11	7.9	7.7	8.0	7.8	7.5	7.5	7.4	7.3	7.3	7.2	7.7	7.6
12	7.9	7.8	8.0	7.8	7.6	7.5	7.3	7.3	7.2	7.0	7.7	7.6
13	7.8	7.8	8.2	7.9	7.6	7.5	7.3	7.3	7.0	6.9	7.7	7.6
14	7.9	7.8	8.2	7.8	7.7	7.5	7.3	7.3	7.0	6.9	7.7	7.7
15	8.0	7.8	7.8	7.8	7.7	7.6	7.3	7.2	7.0	6.9	7.8	7.7
16	8.1	7.9	8.2	7.9	7.7	7.6	7.3	7.3	7.1	7.0	7.8	7.7
17	8.1	7.8	8.4	7.9	7.7	7.6	7.3	7.3	7.1	7.0	7.8	7.7
18	8.0	7.8	8.2	7.9	7.7	7.7	7.3	7.3	---	---	7.8	7.7
19	8.1	7.7	8.6	8.0	7.7	7.7	7.3	7.3	---	---	7.8	7.8
20	8.1	7.8	8.4	8.0	7.7	7.6	7.3	7.3	---	---	7.8	7.8
21	7.9	7.8	8.4	8.0	7.6	7.6	7.3	7.3	6.9	6.8	7.8	7.7
22	8.2	7.8	8.1	7.9	7.6	7.6	7.3	7.3	6.9	6.8	7.8	7.7
23	8.2	7.8	8.3	8.0	7.6	7.6	7.4	7.3	7.0	6.9	7.8	7.7
24	8.2	7.8	8.2	7.8	7.7	7.6	7.4	7.3	7.0	7.0	7.7	7.4
25	8.1	7.8	8.0	7.8	7.7	7.6	7.4	7.3	7.1	7.0	7.4	7.4
26	7.9	7.7	7.8	7.7	7.6	7.6	7.5	7.3	7.2	7.1	7.6	7.4
27	7.7	7.6	7.7	7.7	7.6	7.6	7.4	7.3	7.2	7.2	7.5	7.3
28	7.6	7.5	7.7	7.6	7.6	7.6	7.3	7.1	7.4	7.2	7.4	7.3
29	7.7	7.6	7.7	7.6	7.6	7.5	7.3	7.1	---	---	7.5	7.4
30	7.8	7.7	7.7	7.6	7.6	7.5	7.3	7.3	---	---	7.6	7.4
31	7.9	7.7	---	---	7.6	7.6	7.3	7.3	---	---	7.6	7.5
MONTH	8.2	7.5	8.6	7.6	7.7	7.4	7.6	7.1	7.4	6.8	7.8	7.3

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.8	7.4	7.3	7.1	8.0	7.7	8.2	7.6	7.5	7.3	7.9	7.2
2	8.1	7.5	7.4	7.3	8.0	7.7	8.3	7.7	7.7	7.4	7.9	7.1
3	8.2	7.6	7.5	7.3	7.9	7.7	7.9	7.7	7.7	7.4	7.4	7.1
4	8.1	7.6	7.8	7.4	7.8	7.4	7.9	7.3	8.1	7.6	7.4	7.3
5	7.8	7.6	7.9	7.4	7.9	7.5	7.8	7.3	8.5	7.8	7.4	7.3
6	8.1	7.6	8.2	7.5	7.8	7.4	7.7	7.2	8.6	8.1	7.4	7.2
7	8.1	7.6	8.5	7.7	7.8	7.5	7.8	7.3	8.5	7.8	7.4	7.3
8	8.2	7.6	8.4	7.6	7.8	7.5	8.3	7.4	8.3	7.5	7.5	7.3
9	8.3	7.6	8.2	7.6	7.5	6.9	8.0	7.5	7.7	7.1	8.0	7.4
10	8.5	7.6	8.0	7.6	7.0	6.7	8.0	7.5	7.4	7.1	7.7	7.5
11	8.5	7.7	7.9	7.5	7.2	7.0	8.4	7.7	7.5	7.2	7.8	7.5
12	8.5	7.7	8.1	7.5	7.3	7.3	8.1	7.6	7.7	7.3	7.8	7.5
13	8.3	7.6	8.3	7.6	7.4	7.3	7.9	7.6	7.7	7.4	7.9	7.6
14	7.9	7.3	8.1	7.6	7.5	7.4	8.2	7.5	7.9	7.4	8.0	7.6
15	7.3	7.2	8.0	7.6	7.5	7.2	8.1	7.7	7.8	7.5	8.2	7.6
16	7.3	7.2	8.2	7.6	7.4	7.2	7.8	7.6	7.8	7.6	7.9	7.6
17	7.3	7.3	8.2	7.6	7.4	7.3	7.8	7.6	7.6	7.5	7.7	7.6
18	7.4	7.3	8.3	7.6	7.6	7.4	7.9	7.6	7.8	7.4	8.0	7.6
19	7.5	7.3	8.4	7.7	7.6	7.4	7.8	7.6	7.8	7.5	8.1	7.8
20	7.8	7.5	8.5	7.8	7.6	7.6	7.7	7.5	7.9	7.6	8.2	7.8
21	8.1	7.6	8.5	7.9	7.8	7.6	7.7	7.5	8.0	7.7	8.4	7.8
22	8.2	7.7	8.5	7.9	7.8	7.3	7.7	7.5	8.4	7.6	8.1	7.8
23	7.9	7.6	8.4	7.8	7.5	7.3	7.9	7.5	8.4	7.9	8.1	7.8
24	7.5	7.5	8.2	7.7	7.5	7.4	8.0	7.7	8.3	8.1	8.5	7.9
25	7.6	7.5	7.9	7.7	7.6	7.4	8.2	7.7	8.2	8.1	8.5	8.0
26	7.8	7.5	8.0	7.6	7.6	7.6	7.9	7.6	8.3	8.0	8.2	7.9
27	8.1	7.5	8.0	7.6	7.7	7.5	7.7	7.4	8.2	8.0	8.2	7.9
28	7.9	7.5	7.8	7.6	7.8	7.5	7.9	7.5	8.1	7.3	8.2	7.9
29	7.4	7.0	7.9	7.6	7.9	7.5	7.8	7.6	7.9	7.6	8.1	8.0
30	7.1	7.0	7.9	7.5	8.1	7.6	7.6	7.3	7.9	7.6	8.3	7.1
31	---	---	8.0	7.6	---	---	7.4	7.3	7.9	7.5	---	---
MONTH	8.5	7.0	8.5	7.1	8.1	6.7	8.4	7.2	8.6	7.1	8.5	7.1
YEAR	8.6	6.7										

STREAMS TRIBUTARY TO LAKE ERIE

04212200 GRAND RIVER AT PAINESVILLE, OH--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	19.5	18.0	8.0	6.5	5.0	3.5	1.0	1.0	.5	.0	3.5	3.0
2	19.5	19.0	7.0	6.5	5.5	4.5	1.0	1.0	.0	.0	3.5	2.5
3	19.5	18.0	8.0	6.5	4.5	2.5	1.0	1.0	.0	.0	2.5	1.5
4	18.0	14.0	9.5	8.0	3.0	2.5	1.0	1.0	.0	.0	2.0	1.0
5	13.5	12.0	9.5	8.5	3.0	2.5	1.0	1.0	.0	.0	2.0	2.0
6	12.0	12.0	8.5	7.5	4.0	3.0	1.0	1.0	.0	.0	3.0	1.5
7	13.5	12.0	9.0	7.5	6.0	4.0	1.0	1.0	.0	.0	2.0	1.0
8	15.0	13.0	9.5	9.0	8.0	6.0	1.0	1.0	.0	.0	2.0	1.0
9	15.5	14.5	11.0	9.0	7.5	6.0	1.0	1.0	.5	.0	4.0	2.0
10	16.0	15.0	11.0	8.0	6.0	4.5	1.0	1.0	.5	.0	4.5	3.5
11	15.5	14.0	7.5	5.0	4.5	3.0	1.0	1.0	.5	.0	3.5	2.5
12	14.0	10.5	5.5	4.5	3.5	3.0	1.0	1.0	.0	.0	5.0	2.0
13	10.5	9.5	6.0	5.5	3.5	2.5	1.0	1.0	.0	.0	4.5	3.5
14	9.5	9.0	7.5	6.5	2.5	1.0	1.0	1.0	.0	.0	3.5	2.0
15	10.5	9.0	7.0	6.5	1.0	1.0	1.0	1.0	.0	.0	5.0	2.5
16	12.0	10.5	6.5	6.0	1.0	1.0	1.0	1.0	.5	.0	5.0	4.0
17	14.0	12.0	6.0	4.0	1.0	1.0	1.0	1.0	.5	.0	4.0	2.5
18	15.5	14.0	4.0	3.5	1.0	1.0	1.0	1.0	---	---	3.0	1.5
19	15.5	13.5	4.0	3.5	1.0	1.0	1.0	1.0	---	---	3.0	2.0
20	13.5	11.0	4.0	3.5	1.0	1.0	1.0	.5	---	---	2.5	1.0
21	11.0	11.0	4.0	3.5	1.0	1.0	.5	.5	1.5	1.0	4.0	.5
22	11.5	11.0	4.0	3.5	1.0	1.0	.5	.5	2.5	1.0	4.5	2.0
23	11.0	10.5	4.5	3.5	1.0	1.0	.5	.5	3.5	2.5	5.0	3.5
24	10.5	10.0	5.0	4.5	1.0	1.0	.5	.0	3.5	3.0	5.0	3.0
25	10.5	10.0	5.5	4.0	1.0	1.0	.5	.0	3.5	3.0	6.0	3.0
26	10.0	6.5	4.0	2.5	1.0	1.0	.5	.5	3.5	2.5	6.0	4.0
27	7.5	6.5	3.0	3.0	1.0	1.0	.5	.0	3.5	2.0	6.5	5.0
28	7.5	6.5	3.5	3.0	1.0	1.0	.0	.0	3.5	3.5	8.0	5.0
29	7.0	6.0	3.0	2.5	1.0	1.0	.0	.0	---	---	9.5	7.0
30	7.5	6.0	3.5	3.0	1.0	1.0	.0	.0	---	---	9.5	9.0
31	8.0	6.0	---	---	1.0	1.0	.0	.0	---	---	11.5	9.0
MONTH	19.5	6.0	11.0	2.5	8.0	1.0	1.0	.0	3.5	.0	11.5	.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	12.5	11.0	13.5	11.0	19.5	17.5	25.5	24.0	23.5	22.0	25.0	24.5
2	13.0	10.5	13.5	11.0	21.5	19.5	26.0	24.5	24.5	22.0	25.0	22.0
3	13.0	11.5	13.5	11.5	22.0	21.0	25.0	24.5	24.5	23.5	22.5	22.0
4	13.5	12.5	15.5	13.5	22.5	21.0	26.0	24.0	24.5	23.5	22.0	21.5
5	13.0	9.0	16.5	15.0	23.5	21.5	26.5	24.5	26.5	24.5	22.0	21.5
6	10.5	7.5	16.5	13.5	23.5	22.0	26.5	24.0	26.0	24.5	21.5	21.0
7	10.5	8.5	14.5	12.0	23.5	22.5	27.0	24.5	25.5	24.5	21.5	20.5
8	13.0	10.5	15.0	13.0	23.0	22.0	29.0	26.0	24.5	22.0	21.0	20.0
9	14.0	12.5	15.0	13.5	21.5	19.0	28.5	27.5	23.0	20.5	20.5	19.0
10	13.5	11.0	14.0	13.5	20.0	18.5	28.0	27.5	22.0	20.5	20.5	18.0
11	15.5	13.0	14.0	13.5	21.0	19.0	29.0	27.0	23.0	21.5	23.0	19.5
12	15.5	12.0	13.5	12.0	21.5	20.0	28.0	27.0	24.0	21.5	22.5	21.5
13	12.0	11.5	15.0	12.0	21.0	20.0	27.5	27.0	25.0	22.5	22.5	21.0
14	11.5	11.0	14.5	13.0	22.5	20.5	28.0	26.5	25.0	23.5	23.0	22.0
15	11.0	9.5	13.0	12.5	25.0	22.0	28.0	26.0	25.0	22.5	22.0	20.5
16	11.5	8.5	14.5	12.0	24.5	23.0	26.5	25.5	22.5	21.0	20.5	19.0
17	12.0	10.5	15.0	13.5	23.5	21.5	26.5	25.0	21.5	20.0	19.0	18.0
18	13.0	11.5	14.5	13.5	23.5	21.0	27.0	25.0	22.0	20.0	18.0	16.5
19	11.5	10.5	14.5	12.5	23.5	22.0	26.5	26.0	22.5	20.0	17.5	16.0
20	11.5	10.0	16.0	13.0	23.0	21.5	26.0	25.5	22.5	21.5	17.5	17.0
21	11.5	9.5	17.0	14.5	23.0	21.5	25.5	24.5	23.0	22.0	17.5	16.5
22	12.0	10.0	18.5	16.5	23.0	20.5	24.5	23.5	24.0	22.0	16.5	15.0
23	13.5	12.0	19.5	18.5	22.0	19.0	24.0	22.5	24.5	22.5	15.0	14.0
24	12.5	9.5	21.0	20.0	21.5	20.0	24.5	23.0	24.0	23.5	15.0	14.0
25	9.5	9.0	21.5	20.5	21.5	20.5	26.5	23.5	24.0	23.0	16.0	14.5
26	10.5	8.0	21.5	20.5	21.5	20.5	25.5	24.5	24.5	22.5	17.0	15.0
27	12.5	10.0	20.5	20.0	22.0	21.0	25.0	23.5	24.5	23.0	19.0	17.0
28	13.0	11.5	20.0	19.0	22.5	20.5	24.5	23.5	24.5	23.5	18.5	17.0
29	13.0	12.0	20.5	18.5	23.5	22.0	24.0	21.5	25.0	24.0	17.0	15.0
30	13.0	11.5	21.0	19.5	25.5	23.0	23.0	20.5	25.0	24.0	15.0	14.5
31	---	---	19.5	18.0	---	---	23.0	21.0	25.0	24.0	---	---
MONTH	15.5	7.5	21.5	11.0	25.5	17.5	29.0	20.5	26.5	20.0	25.0	14.0
YEAR	29.0	.0										

STREAMS TRIBUTARY TO LAKE ERIE

04212200 GRAND RIVER AT PAINESVILLE, OH--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	10.2	8.6	11.8	10.8	12.2	11.8	13.4	13.1	13.4	13.1	13.4	13.2
2	9.3	8.0	11.8	11.1	11.8	11.6	13.3	13.1	13.1	13.1	13.5	13.3
3	8.5	7.9	12.5	11.1	13.6	11.8	13.3	13.0	13.1	13.0	13.8	13.4
4	9.0	7.9	12.0	10.1	13.8	13.3	13.4	13.1	13.8	13.0	13.8	13.6
5	9.2	8.6	10.5	10.0	13.8	13.6	13.3	13.1	13.7	13.7	13.6	13.5
6	9.1	8.9	11.9	10.7	13.7	13.4	13.2	12.9	13.7	13.4	13.8	13.5
7	9.8	9.3	11.8	10.7	13.4	12.9	13.0	12.8	13.4	13.2	14.1	13.6
8	9.9	9.2	11.8	9.8	12.8	12.2	12.9	12.7	13.2	12.9	14.2	14.0
9	9.7	9.0	12.0	10.1	12.4	12.0	12.9	12.8	12.9	12.6	14.0	13.6
10	10.4	9.3	11.1	9.7	12.7	12.2	12.9	12.7	12.8	12.6	13.5	13.3
11	9.7	9.3	11.4	10.3	13.1	12.7	12.7	12.5	13.6	12.7	13.5	13.3
12	9.7	8.8	12.0	11.5	13.4	13.1	12.5	12.4	13.6	13.5	13.8	13.1
13	10.9	9.0	13.4	11.6	13.4	13.0	12.4	12.2	13.6	13.5	13.1	12.7
14	11.1	9.7	12.6	10.8	14.0	13.3	12.2	12.0	13.4	13.3	13.8	13.0
15	10.7	9.7	11.3	10.7	14.0	13.6	12.2	12.0	13.3	13.2	13.6	12.9
16	11.3	9.9	12.5	11.2	14.1	13.7	12.3	12.1	13.3	13.1	13.2	12.7
17	11.2	9.8	13.4	11.5	14.3	13.9	12.3	12.2	13.7	13.3	13.6	12.9
18	9.8	8.8	12.8	11.8	14.1	13.7	12.3	12.2	---	---	13.9	13.2
19	9.7	8.4	13.6	12.4	14.2	13.8	12.3	12.1	---	---	13.8	13.2
20	9.4	8.8	14.3	12.6	14.3	13.9	12.4	12.2	---	---	13.8	13.4
21	10.2	9.1	14.2	12.4	14.0	13.7	12.5	12.2	13.7	12.1	14.5	13.7
22	11.5	9.8	13.3	12.4	14.0	13.8	12.5	12.3	13.6	12.5	14.4	13.4
23	11.8	10.0	14.3	12.3	14.1	13.7	12.4	12.3	13.0	12.1	14.0	13.0
24	12.0	10.2	13.6	11.8	13.8	13.3	12.6	12.3	12.9	12.1	13.5	12.7
25	10.8	9.5	12.4	11.6	13.6	13.3	12.9	12.4	13.3	12.5	13.4	12.5
26	11.1	9.0	12.8	12.0	13.6	13.2	12.8	12.4	13.6	13.3	13.1	11.5
27	11.3	10.9	12.4	12.2	13.7	13.4	13.0	12.4	13.8	13.4	12.6	12.0
28	11.1	10.7	12.3	12.0	13.8	13.4	13.1	12.3	13.4	13.2	12.5	11.6
29	11.6	11.1	12.3	11.1	13.7	13.3	13.3	12.9	---	---	11.9	11.1
30	11.7	11.3	12.6	11.1	13.4	13.2	13.5	13.3	---	---	11.3	10.3
31	11.7	11.0	---	---	13.5	13.2	13.5	13.4	---	---	11.5	10.6
MONTH	12.0	7.9	14.3	9.7	14.3	11.6	13.5	12.0	13.8	12.1	14.5	10.3

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	11.2	10.4	10.2	9.7	10.3	8.5	10.4	7.2	8.4	7.7	8.5	7.1
2	12.0	10.4	10.4	9.7	10.1	8.4	11.5	7.5	8.6	7.6	8.0	6.5
3	11.8	10.3	10.6	9.7	9.7	7.7	8.6	7.4	8.4	7.1	7.8	7.6
4	11.3	10.0	10.7	9.5	8.8	7.1	9.1	5.8	9.7	8.0	7.9	7.5
5	11.2	9.9	10.8	8.8	9.7	7.2	8.5	6.0	12.3	8.7	8.1	7.6
6	12.5	11.1	11.8	8.2	8.6	7.0	7.9	6.4	12.5	9.5	8.2	7.3
7	12.6	10.5	12.3	10.2	8.7	6.9	8.5	6.8	11.6	9.9	8.3	7.8
8	12.2	10.6	12.2	9.8	8.4	7.5	10.9	6.8	9.7	6.7	8.3	7.8
9	12.4	9.8	11.4	9.6	8.0	7.1	9.2	6.4	8.0	7.6	8.8	7.4
10	13.4	10.2	10.8	9.5	8.2	8.0	8.7	6.5	8.1	7.7	9.0	8.0
11	12.4	9.9	9.2	8.1	8.4	8.1	13.7	7.5	7.9	7.7	9.0	8.0
12	11.6	9.2	11.4	8.6	8.4	8.0	10.5	7.2	8.3	7.1	8.7	7.4
13	12.5	9.9	12.2	10.0	8.3	7.9	8.7	6.6	8.7	7.3	9.1	7.9
14	10.7	10.1	11.5	9.7	8.5	7.8	10.0	5.8	9.0	7.4	9.5	7.7
15	11.0	10.4	11.1	9.9	8.2	7.7	9.2	6.7	8.7	7.1	10.4	8.0
16	11.3	10.5	11.8	9.4	7.8	7.4	7.6	5.9	8.5	7.7	8.9	8.1
17	10.6	10.2	11.6	9.6	8.1	7.4	7.3	5.9	8.6	8.0	8.8	8.2
18	10.7	10.0	11.8	9.6	8.6	7.7	7.9	6.3	8.9	7.3	9.8	8.4
19	11.1	10.2	12.4	10.0	8.2	7.5	7.8	6.4	9.1	7.8	10.1	7.9
20	11.5	10.5	13.0	9.8	8.2	7.4	6.8	6.0	9.2	7.5	9.8	8.6
21	12.1	10.7	12.8	9.5	8.8	8.0	7.7	5.9	9.3	7.8	10.6	8.8
22	12.2	10.7	12.0	8.8	8.5	7.8	7.4	6.6	10.9	7.8	10.1	8.7
23	11.0	9.9	11.2	8.5	8.6	8.0	8.9	6.3	11.3	8.1	10.0	8.8
24	10.6	9.9	10.4	7.9	8.4	7.9	9.4	7.5	10.5	9.0	11.3	9.8
25	11.2	10.6	9.4	7.8	8.3	6.9	10.3	7.8	9.7	8.6	11.8	9.7
26	12.0	10.8	9.4	7.8	8.4	7.8	8.5	7.3	10.3	8.2	10.6	9.1
27	12.3	10.5	9.7	7.9	8.7	7.9	7.3	6.1	10.1	7.9	9.6	8.8
28	11.0	9.8	9.0	7.5	9.0	7.6	8.3	6.3	9.2	7.7	8.9	8.2
29	9.9	9.5	9.5	7.9	9.0	7.6	8.6	7.3	8.7	7.1	9.1	8.5
30	10.0	9.8	9.4	7.3	10.4	7.7	8.2	7.4	8.8	6.4	9.7	8.4
31	---	---	10.4	7.8	---	---	8.3	7.4	8.4	6.2	---	---
MONTH	13.4	9.2	13.0	7.3	10.4	6.9	13.7	5.8	12.5	6.2	11.8	6.5
YEAR	14.5	5.8										

04213000 CONNEAUT CREEK AT CONNEAUT, OH

LOCATION.--Lat 41°55'37", long 80°36'15", Ashtabula County, Hydrologic Unit 04120101, on right bank at downstream side of Keefus Road bridge at Conneaut, and 6.4 mi (10.3 km) upstream from mouth.

DRAINAGE AREA.--175 mi² (453 km²).

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 (186.019 m) National Geodetic Vertical Datum of 1929, unadjusted. Prior to Aug. 17, 1924, nonrecording gage at same site and datum.

REMARKS.--Records good except those for the winter periods, which are fair. Water-quality data collected at this site 1965 to 1977. Sediment data collected 1970 to 1974.

AVERAGE DISCHARGE.--44 years, 265 ft³/s (7.505 m³/s), 20.57 in/yr (522 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,000 ft³/s (481 m³/s) Jan. 22, 1959, gage height, 11.70 ft (3.566 m); maximum gage height, 12.94 ft (3.944 m) Mar. 4, 1934 (backwater from ice); minimum discharge, 0.2 ft³/s (0.006 m³/s) July 31, Aug. 1, 1933, Aug. 1, 2, 1934.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,900 ft³/s (82.1 m³/s) and maximums (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 3	---	3100	87.8	ice	jam	Apr. 29	2100	*9540	270	9.55	2.911
Feb. 18	1700	ice	jam	*11.87	3.618	June 10	1500	3320	94.0	6.41	1.954
Feb. 20	1300	8160	231	8.86	2.701						

Minimum daily discharge, 32 ft³/s (0.91 m³/s) June 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	110	521	225	130	258	365	599	35	44	81	42
2	44	89	992	202	600	241	231	299	33	44	52	51
3	44	76	1280	177	2500	207	188	222	32	43	40	800
4	62	71	595	160	900	181	148	183	91	43	38	985
5	68	68	299	150	270	167	395	153	225	43	38	688
6	47	77	229	130	220	177	702	155	132	43	39	323
7	42	76	266	120	170	171	318	222	63	44	217	286
8	38	89	425	110	150	157	207	204	41	44	894	196
9	38	118	1040	100	120	148	174	132	612	43	683	168
10	38	125	832	100	100	155	150	94	2590	43	510	148
11	40	177	419	95	450	171	134	102	498	43	330	92
12	43	151	268	90	1900	181	164	123	175	42	396	67
13	211	113	232	90	800	169	277	148	116	42	184	54
14	258	97	256	90	350	175	833	128	99	42	97	46
15	130	111	171	90	150	149	1880	113	126	43	138	47
16	86	137	150	90	400	142	573	248	175	43	686	85
17	67	111	120	95	800	220	290	357	118	43	432	65
18	59	96	116	100	2000	183	424	225	89	43	168	49
19	55	89	94	100	4000	166	400	125	66	42	92	43
20	118	96	64	110	7370	158	243	100	53	45	64	39
21	291	105	58	110	2720	155	195	80	46	46	49	37
22	198	116	56	120	938	153	158	66	220	45	41	54
23	120	153	54	100	800	196	308	52	289	44	39	50
24	83	144	54	95	1660	613	1190	47	150	44	39	57
25	121	689	52	85	795	924	784	44	84	44	40	48
26	1040	671	52	80	406	576	440	38	62	57	42	41
27	992	366	52	80	281	682	265	36	51	43	43	38
28	354	360	52	300	232	715	716	46	43	74	43	37
29	273	517	52	700	---	310	5580	48	41	837	43	38
30	202	473	100	300	---	231	4460	47	42	546	43	37
31	142	---	207	190	---	395	---	41	---	163	43	---
TOTAL	5347	5671	9158	4584	31212	8526	22192	4477	6397	2805	5644	4711
MEAN	172	189	295	148	1115	275	740	144	213	90.5	182	157
MAX	1040	689	1280	700	7370	924	5580	599	2590	837	894	985
MIN	38	68	52	80	100	142	134	36	32	42	38	37
CFSM	.98	1.08	1.69	.85	6.37	1.57	4.23	.82	1.22	.52	1.04	.90
IN.	1.14	1.21	1.95	.97	6.63	1.81	4.72	.95	1.36	.60	1.20	1.00

CAL YR 1980 TOTAL 97138 MEAN 265 MAX 2660 MIN 32 CFSM 1.51 IN 20.65
WTR YR 1981 TOTAL 110724 MEAN 303 MAX 7370 MIN 32 CFSM 1.73 IN 23.54

CREST-STAGE PARTIAL-RECORD STATIONS

The following table contains annual maximum discharge for crest-stage stations. A crest-stage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained, and discharge measurements may have been made for purposes of establishing the stage-discharge relation, but these are not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Annual maximum discharge at crest-stage partial-record stations during water year 1981

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum: Date	Annual maximum: Gage height (feet)	Annual maximum: Discharge (ft^3/s)
		Streams tributary to Lake Erie					
04176870 (c)	Ketcham Ditch at Rowland Road at Toledo, OH	Lat 41°42'39", long 83°35'45", Lucas County, Hydrologic Unit 04100001, at culvert on Rowland Road, 0.3 mi (0.48 km) north of Laskey Road at Toledo.	0.84	1980-81	9- 4-81	---	66.3
04176880 (c)	Silver Creek on Jackman Road at Toledo, OH	Lat 41°42'58", long 83°35'08", Lucas County, Hydrologic Unit 04100001, at culvert on Jackman Road, 0.3 mi (0.48 km) south of Alexis Road, at Toledo.	3.96	1980-81	9- 3-81	---	215
04176890 (c)	Tifft Ditch on Foxglove Road at Toledo, OH	Lat 41°41'55", long 83°37'53", Lucas County, Hydrologic Unit 04100001, at culvert on Foxglove Road, 150 ft (46 m) south of Quintin Avenue at Toledo.	0.80	1980-81	9- 3-81	---	144
04176900	Hill Ditch near Richards, OH	Lat 41°39'54", long 83°40'05", Lucas County, Hydrologic Unit 04100001, at culvert on U.S. Highway 20, 1.4 mi (2.3 km) west of Richards, 0.8 mi (1.3 km) north of intersection of U.S. Highway 20 and State Highway 246.	3.52	1947-81 (Discontinued)	9- 3-81	14.89	331
04183750	Middle Fork Gordon Creek tributary at Hicksville, OH	Lat 41°18'58", long 84°46'00", Defiance County, Hydrologic Unit 04100005, at culvert on Hicksville-Edgerton Road, 0.2 mi (0.3 km) south of Middle Fork Gordon Creek, 0.9 mi (1.4 km) north of Hicksville.	0.34	1978-81	6-22-81	101.36	173
04184750	Spring Creek at Fayette, OH	Lat 41°40'32", long 84°19'47", Fulton County, Hydrologic Unit 04100006, at culvert on Gorham Street, 800 ft (240 km) north of U.S. Highway 20 in Fayette.	2.58	1978-81	6-14-80	96.23	179
04184760	Bean Creek tributary near Fayette, OH	Lat 41°39'08", long 84°17'34", Fulton County, Hydrologic Unit 04100006, at culvert on Fulton County Highway N, 1.5 mi (2.4 km) south of U.S. Highway 20, and 2.3 mi (3.7 km) southeast of Fayette.	0.56	1978-81	6-22-81	101.14	67
04185150	Beaver Creek tributary near Montpelier, OH	Lat 41°34'19", long 84°31'03", Williams County, Hydrologic Unit 04100006 on Williams County Road K, 2.0 mi (3.2 km) east of State Highway 15, and 4.7 mi (7.6 km) east of Montpelier.	0.40	1978-81	6-14-81	99.11	140
04185945	Auglaize River tributary near Spencerville, OH	Lat 40°42'27", long 84°19'06", Allen County, Hydrologic Unit 04100007, at culvert on State Highway 117, 1.8 mi (2.9 km) east of Spencerville.	0.51	1978-81	6-13-81	101.19	169
04186800	King Run near Harrod, OH	Lat 40°43'57", long 83°53'47", Allen County, Hydrologic Unit 04100007, at culvert on State Route 309, 0.9 mi (1.4 km) west of Allen-Hardin County line, 2.2 mi (3.5 km) northeast of Harrod.	0.53	1966-81	6-14-81	21.53	130

CREST-STAGE PARTIAL-RECORD STATIONS--Continued

Station No.	Station name	Location	Drainage area (mi²)	Period of record	Annual maximum Date	Gage height (feet)	Annual maximum Discharge (ft³/s)
04187700 (c)	Pike Run at Lima, OH	Lat 40°46'06", long 84°06'57", Allen County, Hydrologic Unit 04100007, at culvert on Metcalf Road between Burch Avenue and Brower Road at Lima.	1.18	1980-81	6-13-81	16.95	493
04187945	Rattlesnake Creek near Cairo, OH	Lat 40°49'20", long 84°04'16", Allen County, Hydrologic Unit 04100007, at culvert on Stewart Road, 1.2 mi southeast of Cairo.	1.45	1978-81	No valid peak this year		
04190350	Little Auglaize River tributary at Ottoville, OH	Lat 40°55'05", long 84°20'47", Putnam County, Hydrologic Unit 04100007, at culvert on State Highway 66, 1.0 mi (1.6 km) south of Ottoville.	1.04	1978-81	No valid peak this year		
04191480	Beetree Run near Junction, OH	Lat 41°13'26", long 84°24'33, Defiance County, Hydrologic Unit 04100007, at culvert on private drive from Bowman Road 12, near Sponseller Road 158, 3.2 mi (5.1 km) northeast of Junction.	1.66	1978-81	6-14-81	101.74	139
04192900	Reitz Run at Waterville, OH	Lat 41°29'50", long 83°42'35", Wood County, Hydrologic Unit 04100009, at culvert on State Highways 64 and 65, 0.1 mi (0.2 km) upstream from mouth, 0.5 mi (0.8 km) southeast of Waterville.	1.06	1966-81 (Discontinued)	6-22-81	18.01	23
04193900 (c)	Grassy Creek at Perrysburg, OH	Lat 41°33'20", long 83°36'45", Wood County, Hydrologic Unit 04100009, at culvert on East Boundry Street, 1/2 block northwest of Sandusky Street at Perrysburg.	1.83	1980-81	9- 3-81	---	180
04198100	Norwalk Creek near Norwalk, OH	Lat 41°13'58", long 82°32'28", Huron County, Hydrologic Unit 04100012, at bridge on county road, 300 ft (91 m) south of junction of State Highways 601 and 18, 4.0 mi (6.4 km) southeast of Norwalk, 6.0 mi (9.7 km) upstream from mouth.	4.92	1947-81	6- 9-81	14.37	620
04199800	Neff Run near Litchfield, OH	Lat 41°12'33", long 82°01'26", Lorain County, Hydrologic Unit 041100001, at culvert on State Highway 83, 0.7 mi (1.1 km) north of county line, 2.8 mi (4.5 km) north of Litchfield.	0.76	1966-81	6- 9-81	18.95	66
04200800 (c)	Glen Park Creek at Bay Village, OH	Lat 41°29'09", long 81°54'46", Cuyahoga County, Hydrologic Unit 04110001, at culvert on Short Street, 350 ft (107 m) north of Wolf Road, 150 ft (46 m) west of Glen Park Road, at Bay Village.	1.60	1980-81	6- 9-81	12.93	92
04207110 (c)	Tinkers Creek tributary at Twinsburg, OH	Lat 41°19'30", long 81°28'47", Summit County, Hydrologic Unit 04110002, at culvert on Chamberlin Road about 1.5 mi (2.4 km) north of Rt. 82 at Twinsburg.	0.07	1980-81	6- 9-81	11.21	33
04208580 (c)	North Fork Doan Brook at Shaker Heights, OH	Lat 41°28'57", long 81°32'34", Cuyahoga County, Hydrologic Unit 04110003, at culvert on Courtland Boulevard between Fairmount Boulevard and South Woodland Road at Shaker Heights.	1.10	1980-81	6-16-81	16.71	426

CREST-STAGE PARTIAL-RECORD STATIONS

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Date	Gage height (feet) Annual	Discharge (ft^3/s) maximum
04208640 (c)	Dugway Brook at Cleveland Heights, OH	Lat 41°30'35", long 81°34'06", Cuyahoga County, Hydrologic Unit 04110003, at culvert on Euclid Heights Boulevard, between Superior Road and Lee Road at Cleveland Heights.	2.20	1980-81	6-16-81	16.42	373
04208680 (c)	Euclid Creek tributary at Lyndhurst, OH	Lat 41°31'52", long 81°30'14", Cuyahoga County, Hydrologic Unit 04110003, at culvert on Ridgebury Boulevard between Richmond Road and Anderson Road at Lyndhurst.	1.70	1980-81	6- 9-81	13.49	516
04208685 (c)	Mall Run at Richmond Heights, OH	Lat 41°32'35", long 81°29'54", Cuyahoga County, Hydrologic Unit 04110003, at culvert behind St. Gregory of Narek Armenian Church, 666 Richmond Road, Richmond Heights.	0.11	1980-81	7-13-81	15.04	140
04212600	Hubbard Run tributary at Ashtabula, OH	Lat 41°50'38", long 80°46'42", Ashtabula County, Hydrologic Unit 04110003, at culvert on Seven Hills Road, 0.5 mi (0.8 km) upstream from mouth, 1.6 mi (2.6 km) south of center of Ashtabula.	0.88	1966-81	No valid peak this year		

c Operated as an urban hydrology site where additional data may be available.

As the number of streams on which discharge and chemical quality data information is likely to be desired far exceeds the number of stations feasible to operate at one time, the Geological Survey collects limited data at sites other than regular stations. When limited data are collected on a systematic basin over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are useable in low-flow or floodflow analyses, depending on the type data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations are presented in two parts. Given first are records of discharge measurements and chemical-quality data made at low flow sites followed by a table of annual maximum stage and discharge at crest-stage stations. Discharge measurements made at miscellaneous sites for both low flow and high flow are given in a second table.

LOW-FLOW PARTIAL-RECORD STATIONS

Measurements of streamflow and chemical quality data in the area covered by this report made at low-flow partial-record stations are given in the following section. These measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements, when correlated with the simultaneous discharge of a nearby stream where continuous records are available, will give a picture of the low-flow potentiality of a stream. The "PERIOD OF RECORD" paragraph shows the water years in which measurements were made at the same, or practically the same, site.

STREAMS TRIBUTARY TO LAKE ERIE

04180935 ST. MARYS RIVER AT ST. MARYS, OH

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE FET-FLD (MG/L AS HCO3)	CAR-BONATE FET-FLD (MG/L AS CO3)
AUG 20...	1530	7.3	640	7.8	22.0	230	52	24	40	5.3	171	0

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
AUG 20...	100	59	.5	3.2	.30	.160	1.2	1.40	.380	.260	30	80

STREAMS TRIBUTARY TO LAKE ERIE

04181045 BLACK CREEK NEAR ROCKFORD, OH

LOCATION.--Lat 40°43'36", long 84°44'16", Mercer County, Hydrologic Unit 04100004, at bridge on State Route 33, 0.9 mi (1.4 km) upstream from mouth 5.4 mi (8.7 km) northwest of Rockford.
DRAINAGE AREA.--53.9 mi² (139.6 km²).
PERIOD OF RECORD.--Discharge, water years 1980 to current year; chemical analyses, water years 1980 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE FET-FLD (MG/L AS HCO3)	CAR-BONATE FET-FLD (MG/L AS CO3)
AUG 20...	1420	.09	770	8.2	23.0	350	86	32	31	2.7	242	0

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN+AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
AUG 20...	140	51	.4	2.7	.21	.080	.53	.61	.060	.050	40	20

04185200 BEAVER CREEK NEAR STRYKER, OH

LOCATION.--Lat 41°27'23", long 84°26'09", Williams County, Hydrologic Unit 04100006, at bridge on township road, 0.3 mi (0.5 km) upstream from mouth, 3.1 mi (5.0 km) southwest of Stryker.
DRAINAGE AREA.--44.8 mi² (116.0 km²).
PERIOD OF RECORD.--Discharge, water years 1980 to current year; chemical analyses, water years 1980 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE FET-FLD (MG/L AS HCO3)	CAR-BONATE FET-FLD (MG/L AS CO3)
NOV 13...	1140	5.0	--	--	--	--	--	--	--	--	--	--
AUG 19...	1140	2.8	660	8.1	18.0	280	68	26	31	3.6	336	0

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN+AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
NOV 13...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 19...	54	33	.7	8.4	.46	.060	.52	.58	.140	.090	40	20

STREAMS TRIBUTARY TO LAKE ERIE

04185410 LICK CREEK NEAR BRUNERSBURG, OH

LOCATION.--Lat 41°22'08", long 84°26'17", Defiance County, Hydrologic Unit 04100006, at bridge on Trinity Road, 1.2 mi (1.9 km) upstream from mouth, 5.0 mi (8.0 km) northwest of Brunersburg.
DRAINAGE AREA.--105 mi² (272 km²).
PERIOD OF RECORD.--Discharge, water years 1980 to current year; chemical analyses, water years 1980 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE FET-FLD (MG/L AS HCO3)	CAR-BONATE FET-FLD (MG/L AS CO3)
AUG 18...	1720	4.9	900	8.7	20.0	310	73	32	79	5.4	290	31

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
AUG 18...	72	97	.7	7.6	.46	.050	2.1	2.10	.800	.610	40	20

04185498 MUD CREEK NEAR BRUNERSBURG, OH

LOCATION.--Lat 41°20'34", long 84°26'51", Defiance County, Hydrologic Unit 04100006, at bridge on State Route 15, 2.4 mi (3.9 km) upstream from mouth, 4.0 mi (6.4 km) northwest of Brunersburg.
DRAINAGE AREA.--58.0 mi² (150.2 km²).
PERIOD OF RECORD.--Discharge, water years 1980 to current year; chemical analyses, water years 1980 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE FET-FLD (MG/L AS HCO3)	CAR-BONATE FET-FLD (MG/L AS CO3)
NOV 13...	1415	4.2	--	--	--	--	--	--	--	--	--	--
AUG 18...	1620	2.8	670	8.2	19.0	350	86	33	17	2.8	384	0

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
NOV 13...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 18...	86	12	.6	7.6	.23	.030	.44	.47	.100	.070	20	<10

STREAMS TRIBUTARY TO LAKE ERIE

04185750 AUGLAIZE RIVER NEAR LIMA, OH,

LOCATION.--Lat 40°39'22", long 84°03'13", Allen County, Hydrologic Unit 04100007, at bridge on Amherst Road, 1.0 mi (1.6 km) upstream from Wrestle Creek, 1.1 mi (1.8 km) east of South Warsaw, 6.5 mi (10.5 km) southeast of courthouse in Lima.
DRAINAGE AREA.--41.8 mi² (108.3 km²).
PERIOD OF RECORD.--Discharge, water year 1981; chemical analyses, water year 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE FET-FLD (MG/L AS HCO3)	CAR-BONATE FET-FLD (MG/L AS CO3)
JUL 30...	1015	18	--	--	--	--	--	--	--	--	--	--
AUG 21...	0915	2.2	790	7.8	17.5	360	83	38	24	2.9	332	0

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
JUL 30...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 21...	100	43	.6	3.8	.61	.050	.74	.79	.090	.050	50	60

04185795 AUGLAIZE RIVER NEAR UNIOPOLIS, OH

LOCATION.--Lat 40°37'11", long 84°07'19", in SW 1/4 sec. 12, T.5 S., R.6 E., Auglaize County, Hydrologic Unit 04100007, at bridge on Mud Sock Road, 0.4 mi (0.6 km) upstream from Blackhorse Creek, 2.2 mi (3.5 km) northwest of Uniopolis.
DRAINAGE AREA.--89.3 mi² (231.3 km²).
PERIOD OF RECORD.--Discharge, water years 1979 to current year; chemical analyses, water years 1980 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE FET-FLD (MG/L AS HCO3)	CAR-BONATE FET-FLD (MG/L AS CO3)
OCT 21...	1200	3.3	--	--	--	--	--	--	--	--	--	--
AUG 21...	1015	2.1	770	8.0	18.5	370	90	35	19	2.6	348	0

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT 21...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 21...	98	36	.6	4.8	.28	.040	.45	.49	.080	.050	40	40

STREAMS TRIBUTARY TO LAKE ERIE

04185998 JENNINGS CREEK AT DELPHOS, OH

LOCATION.--Lat 40°51'08", long 84°20'58", Van Wert County, Hydrologic Unit 0410007, at bridge on street south of sewage treatment plant, Delphos, 2.0 mi (3.2 km) upstream from West Jennings Creek.
DRAINAGE AREA.--41.8 mi² (108.3 km²).
PERIOD OF RECORD.--Discharge, water year 1981; chemical analyses, water year 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE FET-FLD (MG/L AS HCO3)	CAR-BONATE FET-FLD (MG/L AS CO3)
AUG 20...	1100	2.6	1100	8.2	18.0	580	130	63	41	5.0	336	0

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
AUG 20...	340	34	1.3	5.4	.12	.020	.70	.72	.200	.140	60	130

04186760 HOG CREEK NEAR LAFAYETTE, OH

LOCATION.--Lat 40°46'15", long 83°57'06", Allen County, Hydrologic Unit 04100007, at bridge on Swaney Road, 0.2 mi (0.3 km) upstream from Little Hog Creek, 0.8 mi (1.3 km) north of Lafayette.
DRAINAGE AREA.--67.7 mi² (175.3 km²).
PERIOD OF RECORD.--Discharge, water year 1981; chemical analyses, water year 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE FET-FLD (MG/L AS HCO3)	CAR-BONATE FET-FLD (MG/L AS CO3)
AUG 21...	1130	1.6	980	8.2	19.5	470	110	47	41	4.0	350	0

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
AUG 21...	190	47	.8	2.9	.06	.020	1.1	1.10	.330	.220	40	80

STREAMS TRIBUTARY TO LAKE ERIE

04187030 OTTAWA RIVER AT D.T. & I. RAILWAY BRIDGE, LIMA, OH

LOCATION.--40°44'53", long. 84°05'22", in SE 1/4 sec. 30, T.3 S., R.7 E., Allen County, Hydrologic Unit 04100007, at bridge on the Detroit, Toledo, and Ironton Railway just upstream from Sugar Street in Lima, 1.7 mi (2.7 km) downstream from Lost Creek.
DRAINAGE AREA.--124 mi² (321 km²).
PERIOD OF RECORD.--Discharge, water years 1980 to current year; chemical analyses, water years 1980 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE FET-FLD (MG/L AS HCO3)	CAR-BONATE FET-FLD (MG/L AS CO3)
OCT 21...	1315	6.0	--	--	--	--	--	--	--	--	--	--
AUG 21...	0800	3.1	1050	8.1	18.0	530	120	55	38	4.9	328	0

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT 21...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 21...	280	45	1.2	6.3	.11	.030	.62	.65	.160	.080	30	10

04187995 SUGAR CREEK NEAR KALIDA, OH

LOCATION.--Lat 40°57'16", long 84°10'45", Putnam County, Hydrologic Unit 04100007, at bridge on Putnam County Road 16P, 0.6 mi (1.0 km) upstream from mouth, 2.2 mi (3.5 km) southeast from Kalida.
DRAINAGE AREA.--64.2 mi² (166.3 km²).
PERIOD OF RECORD.--Discharge, water year 1981; chemical analyses, water year 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE FET-FLD (MG/L AS HCO3)	CAR-BONATE FET-FLD (MG/L AS CO3)
AUG 20...	0830	.86	970	7.5	17.0	270	62	29	94	6.5	256	0

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
AUG 20...	150	120	.4	2.4	.44	.210	1.1	1.30	.160	.090	20	140

STREAMS TRIBUTARY TO LAKE ERIE

04188392 BLANCHARD RIVER ABOVE THE OUTLET (2) NEAR FINDLAY, OH

LOCATION.--Lat 41°01'17", long 83°33'25", Hancock County, Hydrologic Unit 04100008, at bridge on Township Road 207, 0.2 mi (0.3 km) east of Findlay Reservoir, 4.0 mi (6.4 km) southeast of Findlay.
DRAINAGE AREA.--188 mi² (487 km²).
PERIOD OF RECORD.--Discharge, water year 1981; chemical analyses, water year 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE FET-FLD (MG/L AS HCO3)	CAR-BONATE FET-FLD (MG/L AS CO3)
AUG 18...	1020	6.2	620	8.0	17.0	260	65	24	16	3.8	236	0

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
AUG 18...	100	29	.5	5.3	1.5	.040	.79	.83	.110	.060	20	20

04189110 OTTAWA CREEK NEAR BENTON RIDGE, OH

LOCATION.--Lat 41°01'47", long 83°47'42", Hancock County, Hydrologic Unit 04100008, at bridge on Hancock County Road 86, 0.9 mi (1.4 km) upstream from mouth, 1.7 mi (2.7 km) north of Benton Ridge.
DRAINAGE AREA.--63.1 mi² (163.4 km²).
PERIOD OF RECORD.--Discharge, water year 1981; chemical analyses, water year 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE FET-FLD (MG/L AS HCO3)	CAR-BONATE FET-FLD (MG/L AS CO3)
AUG 18...	1340	1.8	860	8.1	21.0	390	90	40	22	7.6	364	0

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
AUG 18...	150	36	.9	3.9	1.2	.050	.85	.90	.360	.300	60	50

STREAMS TRIBUTARY TO LAKE ERIE

04191018 MIDDLE CREEK NEAR MELROSE, OH

LOCATION.--Lat 41°02'55", long 84°24'34", Paulding County, Hydrologic Unit 04100007, at bridge on Township Road 60, 1.0 mi (1.6 km) upstream from mouth, 2.9 mi (4.7 km) south of Melrose.
DRAINAGE AREA.--102 mi² (264 km²).
PERIOD OF RECORD.--Discharge, water years 1980 to current year; chemical analysis, water years 1980 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE FET-FLD (MG/L AS HCO3)	CAR-BONATE FET-FLD (MG/L AS CO3)
OCT 21...	1900	2.6	--	--	--	--	--	--	--	--	--	--
AUG 19...	1450	4.1	1050	8.9	28.0	350	85	33	88	10	106	10

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT 21...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 19...	272	110	.6	1.6	1.5	.050	1.2	1.20	.190	.100	30	40

04191042 PRAIRIE CREEK NEAR MELROSE, OH

LOCATION.--Lat 41°03'18", long 84°26'18", Paulding County, Hydrologic Unit 04100007, at bridge on Township Road 165, 0.2 mi (0.3 km) downstream from West Branch, 2.7 mi (4.3 km) southwest of Melrose, 3.6 mi (5.8 km) upstream from mouth.
DRAINAGE AREA.--105 mi² (272 km²).
PERIOD OF RECORD.--Discharge, water years 1980 to current year; chemical analyses, water years 1980 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE FET-FLD (MG/L AS HCO3)	CAR-BONATE FET-FLD (MG/L AS CO3)
OCT 21...	1845	.94	--	--	--	--	--	--	--	--	--	--
AUG 19...	1410	E.05	885	8.2	24.5	350	76	39	50	4.3	192	0

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT 21...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 19...	190	75	.5	1.1	.07	.060	.61	.67	.100	.060	20	<10

STREAMS TRIBUTARY TO LAKE ERIE

04192650 NORTH TURKEYFOOT CREEK NEAR LIBERTY CENTER, OH

LOCATION.--Lat 41°24'50", long 84°00'34", in sec. 12, T.5 N., R.7 E., Henry County, Hydrologic Unit 04100009, at bridge on State Route 109, 2.0 mi (3.2 km) south of Liberty Center, 2.2 mi (3.5 km) upstream from mouth.
DRAINAGE AREA.--74.2 mi² (192.2 km²).
PERIOD OF RECORD.--Discharge, water years 1979 to current year; chemical analyses, water years 1980 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE FET-FLD (MG/L AS HCO3)	CAR-BONATE FET-FLD (MG/L AS CO3)
NOV 14...	1300	3.7	--	--	--	--	--	--	--	--	--	--
AUG 19...	0830	.81	1100	8.8	17.5	280	78	21	120	12	192	20

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
NOV 14...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 19...	110	170	.7	.2	2.3	.040	1.5	1.50	.870	.760	20	30

04194114 CEDAR CREEK AT CURTICE, OH

LOCATION.--Lat 41°37'27", long 83°21'04", Lucas County, Hydrologic Unit 04100010, at bridge on Brown Road, 1.0 mi (1.6 km) northeast of Curtice, 6.9 mi (11.1 km) upstream from mouth.
DRAINAGE AREA.--48.5 mi² (125.6 km²).
PERIOD OF RECORD.--Discharge, water years 1980 to current year; chemical analyses, water years 1980 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE FET-FLD (MG/L AS HCO3)	CAR-BONATE FET-FLD (MG/L AS CO3)
AUG 12...	1700	4.8	1000	7.8	21.5	290	73	25	64	6.0	248	0

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
AUG 12...	130	99	.6	7.1	1.6	3.60	.70	4.30	1.70	1.40	70	100

STREAMS TRIBUTARY TO LAKE ERIE

04194122 CRANE CREEK NEAR CURTICE, OH

LOCATION.--Lat 41°37'04", long 83°19'48", Ottawa County, Hydrologic Unit, 04100010, at bridge on Curtice Road, 2.0 mi (3.2 km) east of Curtice.
DRAINAGE AREA.--39.2 mi² (101.5 km²).
PERIOD OF RECORD.--Discharge, water years 1980 to current year; chemical analayses, water years 1980 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE FET-FLD (MG/L AS HCO3)	CAR-BONATE FET-FLD (MG/L AS CO3)
JUL 29...	1640	8.8	--	--	--	--	--	--	--	--	--	--
AUG 12...	1600	1.9	1450	8.4	24.0	350	94	29	130	5.1	280	4

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
JUL 29...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 12...	170	220	.8	3.2	.81	.180	.75	.93	.650	.610	30	60

04195870 MUDDY CREEK AT LINDSEY, OH

LOCATION.--Lat 41°24'50", long 80°13'12", Sandusky County, Hydrologic Unit 04100011, at bridge on Kingsway Road, 0.4 mi (0.6 km) south of Lindsey.
DRAINAGE AREA.--68.1 mi² (176.4 km²).
PERIOD OF RECORD.--Discharge, water years 1980 to current year; chemical analyses, water years 1980 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE FET-FLD (MG/L AS HCO3)	CAR-BONATE FET-FLD (MG/L AS CO3)
JUL 29...	1515	12	--	--	--	--	--	--	--	--	--	--
AUG 12...	1350	2.5	940	8.6	25.5	380	84	42	31	17	200	10

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
JUL 29...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 12...	190	80	.4	1.5	.10	.030	.69	.72	.080	.020	30	20

STREAMS TRIBUTARY TO LAKE ERIE

04195950 PARAMOUR CREEK NEAR LEESVILLE, OH

LOCATION.--Lat 40°48'07", long 82°46'03", Crawford County, Hydrologic Unit 04100011, at bridge on U.S. Highway 30 N, 1.1 mi (1.8 km) northeast of Leesville, 1.2 mi (1.9 km) upstream from mouth.
DRAINAGE AREA.--27.2 mi² (70.4 km²).
PERIOD OF RECORD.--Discharge, water years 1979 to current year; chemical analyses, water years 1980 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE FET-FLD (MG/L AS HCO3)	CAR-BONATE FET-FLD (MG/L AS CO3)
OCT 16...	1315	1.1	--	--	--	--	--	--	--	--	--	--
JUL 28...	1635	3.0	--	--	--	--	--	--	--	--	--	--
AUG 18...	1330	1.4	1100	7.8	17.0	320	83	28	80	7.9	356	0

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN+AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT 16...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 28...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 18...	120	89	.3	13	1.2	4.90	4.2	9.10	3.40	2.60	80	160

04195970 SANDUSKY RIVER NEAR NORTH ROBINSON, OH

LOCATION.--Lat 40°50'10", long 82°49'39", in T.2 S., R.21 W., Crawford County, Hydrologic Unit 04100011, at bridge on Cox Road, 0.3 mi (0.5 km) upstream from Loss Creek, 3.3 mi (5.3 km) northeast of North Robinson.
DRAINAGE AREA.--39.7 mi² (102.8 km²).
PERIOD OF RECORD.--Discharge, water years 1978, 1980 to current year; chemical analyses, water years 1980 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE FET-FLD (MG/L AS HCO3)	CAR-BONATE FET-FLD (MG/L AS CO3)
OCT 16...	1500	E.10	--	--	--	--	--	--	--	--	--	--
JUL 28...	1800	5.7	--	--	--	--	--	--	--	--	--	--
AUG 11...	1630	7.4	765	8.9	26.5	270	73	22	44	5.3	228	18

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN+AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT 16...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 28...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 11...	86	58	.3	4.5	1.5	.040	.63	.67	.490	.450	20	30

STREAMS TRIBUTARY TO LAKE ERIE

04196415 LITTLE SANDUSKY RIVER AT LITTLE SANDUSKY, OH

LOCATION.--40°44'18", long 83°12'50", Wyandot County, Hydrologic Unit 04100011, at bridge on State Route 294 at Little Sandusky, 0.7 mi (1.1 km) downstream from Honey Run.
DRAINAGE AREA.--37.8 mi² (97.9 km²).
PERIOD OF RECORD.--Discharge, water years 1980 to current year; chemical analyses, water years 1980 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE FET-FLD (MG/L AS HCO3)	CAR-BONATE FET-FLD (MG/L AS CO3)
OCT 16...	1045	1.1	--	--	--	--	--	--	--	--	--	--
JUL 28...	1345	6.5	--	--	--	--	--	--	--	--	--	--
AUG 11...	1415	1.6	895	8.2	21.5	410	110	32	20	2.7	324	0

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT 16...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 28...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 11...	160	29	.6	9.3	.14	.030	.83	.86	.150	.060	10	40

04196540 SANDUSKY RIVER NEAR MC CUTCHENVILLE, OH

LOCATION.--lat 40°56'56", long 83°15'24", in T.1 S., R.14 E., Wyandot County, Hydrologic Unit 04100011, at bridge on State Route 103, 1.2 mi (1.9 km) upstream from Tymochtee Creek, 3.0 mi (4.8 km) south of McCutchenville.
DRAINAGE AREA.--352 mi² (912 km²).
PERIOD OF RECORD.--Discharge, water years 1980 to current year; chemical analyses, water years 1980 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE FET-FLD (MG/L AS HCO3)	CAR-BONATE FET-FLD (MG/L AS CO3)
OCT 16...	1620	16	--	--	--	--	--	--	--	--	--	--
JUL 29...	0950	73	--	--	--	--	--	--	--	--	--	--
AUG 11...	1855	18	875	8.6	24.5	370	93	33	23	3.5	200	8

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT 16...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 29...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 11...	210	35	.5	.7	.04	.040	1.2	1.20	.220	.060	20	50

STREAMS TRIBUTARY TO LAKE ERIE

04196580 LITTLE TYMOCHTEE CREEK NEAR MARSEILLES, OH

LOCATION.--Lat 40°41'13", long 83°24'44", in NW 1/4 sec. 19, T.4 S., R.13 E., Marion County, Hydrologic Unit 04100011, at bridge on County Road 22, 1.3 mi (2.1 km) upstream from mouth, 1.4 mi (2.2 km) southwest of Marseilles.
DRAINAGE AREA.--43.7 mi² (113.2 km²).
PERIOD OF RECORD.--Discharge, water years 1978, 1980 to current year; chemical analyses, water years 1980 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE FET-FLD (MG/L AS HCO3)	CAR-BONATE FET-FLD (MG/L AS CO3)
AUG 18...	1545	.59	680	8.4	24.5	260	66	24	18	2.8	248	4

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
AUG 18...	78	32	.4	3.4	.27	.020	.94	.96	.090	.040	40	60

04196970 SYCAMORE CREEK AT MEXICO, OH

LOCATION.--Lat 40°58'59", long 83°11'43", Wyandot County, Hydrologic Unit 04100011, at bridge on County Road 37, 0.4 mi (0.6 km) southwest of Mexico, 0.4 mi (0.6 km) upstream from mouth.
DRAINAGE AREA.--64.0 mi² (165.8 km²).
PERIOD OF RECORD.--Discharge, water years 1980 to current year; chemical analyses, water years 1980 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE FET-FLD (MG/L AS HCO3)	CAR-BONATE FET-FLD (MG/L AS CO3)
OCT 17...	1030	2.0	--	--	--	--	--	--	--	--	--	--
JUL 29...	1145	4.4	--	--	--	--	--	--	--	--	--	--
AUG 12...	0815	2.4	820	7.8	20.0	360	90	34	15	3.4	308	0

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT 17...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 29...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 12...	160	27	.5	5.6	1.3	.050	.42	.47	.040	.020	50	50

STREAMS TRIBUTARY TO LAKE ERIE

04198007 MUSKELLUNGE CREEK NEAR FREMONT, OH

LOCATION.--Lat 41°22'21", long 83°08'46", Sandusky County, Hydrologic Unit 04100011, at bridge on Christy Road, 1.8 mi (2.9 km) northwest of Fremont, 1.8 mi (2.9 km) upstream from mouth.
DRAINAGE AREA.--41.8 mi² (108.3 km²).
PERIOD OF RECORD.--Discharge, water years 1980 to current year; chemical analyses, water years 1980 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE FET-FLD (MG/L AS HCO3)	CAR-BONATE FET-FLD (MG/L AS CO3)
OCT 17...	1150	.85	--	--	--	--	--	--	--	--	--	--
JUL 29...	1310	2.8	--	--	--	--	--	--	--	--	--	--
AUG 12...	1030	1.1	800	8.4	21.0	290	63	32	33	3.8	256	6

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT 17...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 29...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 12...	98	57	.8	2.4	.22	.050	.55	.60	.120	.080	40	20

04198014 PICKEREL CREEK NEAR VICKERY, OH

LOCATION.--Lat 41°23'13", long 82°57'31", Sandusky County, Hydrologic Unit 04100011, at bridge on Township Road 247, 1.2 mi (1.9 km) northwest of Vickery, 3.4 mi (5.5 km) upstream from mouth.
DRAINAGE AREA.--44.3 mi² (114.7 km²).
PERIOD OF RECORD.--Discharge, water years 1980 to current year; chemical analyses, water years 1980 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE FET-FLD (MG/L AS HCO3)	CAR-BONATE FET-FLD (MG/L AS CO3)
OCT 17...	1240	2.0	--	--	--	--	--	--	--	--	--	--
JUL 29...	1410	3.0	--	--	--	--	--	--	--	--	--	--
AUG 12...	1200	2.3	2400	7.9	16.5	1400	500	46	33	3.5	338	0

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT 17...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 29...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 12...	1100	54	1.1	9.7	.58	.200	.46	.66	.130	.060	70	70

STREAMS TRIBUTARY TO LAKE ERIE

04199465 EAST FORK VERMILION RIVER NEAR BIRMINGHAM, OH

LOCATION.--Lat 41°18'14", long 82°20'40", Erie County, Hydrologic Unit 04100012, at bridge on Green Road, 1.9 mi (3.1 km) south of Birmingham, 2.3 mi (3.7 km) upstream from mouth.
DRAINAGE AREA.--32.8 mi² (85.0 km²).
PERIOD OF RECORD.--Discharge, water year 1981; chemical analyses, water year 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE FET-FLD (MG/L AS HCO3)	CAR-BONATE FET-FLD (MG/L AS CO3)
JUL 17...	0950	1.1	--	--	--	--	--	--	--	--	--	--
AUG 14...	1100	1.2	785	8.0	21.5	330	84	28	26	4.7	296	0

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
JUL 17...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 14...	110	31	.3	4.1	.38	.020	.46	.48	.060	.040	30	20

04199550 BEAVER CREEK AT AMHERST, OH

LOCATION.--Lat 41°25'35", long 82°13'58", Lorain County, Hydrologic Unit 04110001, at bridge on Longbrook Road, 0.2 mi (0.3 km) west of northern city limits of Amherst, 0.3 mi (0.5 km) downstream from unnamed creek "A", 1.8 mi (2.9 km) upstream from mouth.
DRAINAGE AREA.--43.4 mi² (112.4 km²).
PERIOD OF RECORD.--Discharge, water years 1980 to current year; chemical analyses, water years 1980 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE FET-FLD (MG/L AS HCO3)	CAR-BONATE FET-FLD (MG/L AS CO3)
OCT 08...	1830	2.6	--	--	--	--	--	--	--	--	--	--
JUL 30...	1150	11	--	--	--	--	--	--	--	--	--	--
AUG 13...	0830	4.3	845	7.3	20.5	190	56	13	67	8.5	200	0

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT 08...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 30...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 13...	74	99	.5	6.9	1.8	3.20	1.8	5.00	2.20	1.80	160	80

STREAMS TRIBUTARY TO LAKE ERIE

04199600 WEST FORK EAST BRANCH BLACK RIVER NEAR LODI, OH

LOCATION.--Lat 41°01'10", long 82°03'07", Medina County, Hydrologic Unit 04110001, at bridge on U.S. Highway 42, 0.3 mi (0.5 km) upstream from Clear Creek, 0.4 mi (0.6 km) south of U.S. Highway 224, 2.3 mi (3.7 km) southwest of Lodi.
DRAINAGE AREA.--28.0 mi² (72.5 km²).
PERIOD OF RECORD.--Discharge, water year 1981; chemical analyses, water year 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE FET-FLD (MG/L AS HCO3)	CAR-BONATE FET-FLD (MG/L AS CO3)
JUL 16...	1015	.44	--	--	--	--	--	--	--	--	--	--
AUG 13...	1037	.43	680	7.8	20.5	270	70	22	30	4.8	204	0

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
JUL 16...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 13...	120	33	.2	4.3	.10	.030	.32	.35	.030	<.010	70	40

04201498 EAST BRANCH ROCKY RIVER NEAR BEREA, OH

LOCATION.--Lat 41°24'21", long 81°53'10", Cuyahoga County, Hydrologic Unit 04110001, at bridge on park road in Rocky River Reservation, 0.1 mi (0.2 km) upstream from mouth 3.0 mi (4.8 km) northwest of Berea.
DRAINAGE AREA.--76.9 mi² (199.2 km²).
PERIOD OF RECORD.--Discharge, water years 1980 to current year; chemical analyses, water years 1980 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE FET-FLD (MG/L AS HCO3)	CAR-BONATE FET-FLD (MG/L AS CO3)
OCT 09...	1200	14	--	--	--	--	--	--	--	--	--	--
AUG 06...	1240	16	--	--	--	--	--	--	--	--	--	--
14...	1300	29	660	7.9	25.5	180	52	12	41	5.9	140	0

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT 09...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 06...	--	--	--	--	--	--	--	--	--	--	--	--
14...	74	67	.4	7.5	2.0	.150	.77	.92	.630	.590	70	30

STREAMS TRIBUTARY TO LAKE ERIE

04208815 CHAGRIN RIVER AT CHAGRIN FALLS, OH

LOCATION.--Lat 41°25'33", long 81°23'52", Geauga County, Hydrologic Unit 04110003, at bridge on Miles road, at west city limits of Chagrin Falls.
DRAINAGE AREA.--57.3 mi² (148.4 km²).
PERIOD OF RECORD.--Discharge, water year 1981; chemical analyses, water year 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE FET-FLD (MG/L AS HCO3)	CAR-BONATE FET-FLD (MG/L AS CO3)
JUN 29...	1515	18	--	--	--	--	--	--	--	--	--	--
AUG 20...	1245	60	576	7.8	19.5	280	77	22	19	3.3	148	0

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
JUN 29...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 20...	110	21	.3	4.2	.74	.060	.52	.58	.180	.130	40	400

04208990 EAST BRANCH CHAGRIN RIVER AT KIRTLAND, OH

LOCATION.--Lat 41°37'50", long 81°21'50", Lake County, Hydrologic Unit 04110003, at bridge on SR 306 in Kirtland.
DRAINAGE AREA.--45.6 mi² (118.1 km²).
PERIOD OF RECORD.--Discharge, water year 1981; chemical analyses, water year 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE FET-FLD (MG/L AS HCO3)	CAR-BONATE FET-FLD (MG/L AS CO3)
JUN 20...	1340	14	--	--	--	--	--	--	--	--	--	--
AUG 19...	1530	18	510	8.4	25.5	220	65	15	17	2.2	180	8

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
JUN 20...	--	--	--	--	--	--	--	--	--	--	--
AUG 19...	59	25	.2	5.0	.01	<.010	.52	.010	<.010	40	<10

STREAMS TRIBUTARY TO LAKE ERIE

04212085 BIG CREEK AT PAINESVILLE, OH

LOCATION.--Lat 41°41'50", long 81°13'47", Lake County, Hydrologic Unit 04110004, at bridge on Fry Road, 1.1 mi (1.8 km) upstream from mouth, 0.5 mi (0.8 km) south of south city limits of Painesville.
DRAINAGE AREA.--36.4 mi² (94.3 km²).
PERIOD OF RECORD.--Discharge, water year 1981; chemical analyses, water year 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE FET-FLD (MG/L AS HCO3)	CAR-BONATE FET-FLD (MG/L AS CO3)
JUN 30...	1600	7.1	--	--	--	--	--	--	--	--	--	--
AUG 19...	1405	11	530	7.4	22.0	210	60	14	50	2.7	168	0

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
JUN 30...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 19...	86	76	.2	5.0	.07	.020	.41	.43	.060	.050	50	20

410308082393700 WEST BRANCH HURON RIVER NEAR NEW HAVEN, OH

LOCATION.--Lat 41°03'08", long 82°39'37", Huron County, Hydrologic Unit 04100012, at bridge on Boughtonville Road, 0.5 mi (0.8 km) downstream from Marsh Run, 1.7 mi (2.7 km) northeast of New Haven, 3.3 mi (5.3 km) east of Willard.
DRAINAGE AREA.--69.4 mi² (179.7 km²).
PERIOD OF RECORD.--Discharge, water year 1981; chemical analyses, water year 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE FET-FLD (MG/L AS HCO3)	CAR-BONATE FET-FLD (MG/L AS CO3)
AUG 13...	1730	16	650	8.1	21.0	280	79	20	15	4.8	208	0

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
AUG 13...	110	22	.3	8.1	2.4	.060	1.3	1.40	3.90	.330	100	70

STREAMS TRIBUTARY TO LAKE ERIE

412602082435400 MILLS CREEK AT SANDUSKY, OH

LOCATION.--Lat 41°26'02", long 82°43'54", Erie County, Hydrologic Unit 04100011, at bridge on Perkins Avenue in Sandusky, 1.3 mi (2.1 km) upstream from mouth
DRAINAGE AREA.--40.3 mi² (104.4 km²).
PERIOD OF RECORD.--Discharge, water year 1981; chemical analyses, water year 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE FET-FLD (MG/L AS HCO3)	CAR-BONATE FET-FLD (MG/L AS CO3)
AUG 13...	1545	4.3	1200	8.2	25.0	350	88	31	78	12	200	0

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
AUG 13...	230	90	.9	3.5	4.9	.750	1.2	1.90	.940	.700	50	50

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Measurements at miscellaneous sites

Measurements of streamflow at points other than gaging stations or partial-record stations are given in the following table. Those that are measurements of base flow are designated by an asterisk (*); measurement of peak flow by a square (+).

Discharge measurements made at miscellaneous sites during water years 1980-81

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		Streams tributary to Lake Erie				
Miami and Erie Canal	Jennings Creek	Lat 40°51'35", long 84°20'25", on Van Wert-Putnam County Line, Hydrologic Unit 0410007, at bridge on Pohlman Road, 0.9 mi (1.5 km) north of Delphos.	--	1928-33,≠ 1934-35, 1945-74 1945-74	7-29-81	*3.9
The Outlet (2)	Blanchard River	Lat 41°02'09", long 83°31'13", Hancock County, Hydrologic Unit 04100008, at bridge on Township Road 251, 2 mi (3.2 km) upstream from mouth, 5.5 mi (8.8 km) east of Findlay.	36.3	---	7-14-81	+2,160
Eagle Creek	Blanchard River	Lat 41°01'20", long 83°38'08", Hancock County, Hydrologic Unit 0410008, at bridge on 6th Street at southeast edge of Findlay.	60.6	1959	6-14-81	+6,990
Tiderishi Creek	Ottawa Creek	Lat 40°55'53", long 83°43'39", Hancock County, Hydrologic Unit 04100008, at culvert on State Highway 698, 2.2 mi (3.5 km) north of Jenera. a/	4.65	1947-77	6-13-81	+984
Little Auglaize River	Auglaize River	Lat 41°03'35", long 84°24'00", Paulding County, Hydrologic Unit 04100007, at bridge on Township Road 187, 2.2 mi (3.5 km) southeast of Melrose.	186	b/1955-56, 1961-74	7-27-81	*8.5
West Branch Huron River	Huron River	Lat 41°16'40", long 82°40'30", Huron County, Hydrologic unit 04100012, at bridge on Lamoreaux Road, 2.5 mi (4.0 km) northeast of Monroeville.b/	220	1960-1979	5-7-80	*43.7
East Fork	East Branch Black River	Lat 41°02'11", long 82°00'43", Medina County, Hydrologic Unit 04110001, at ford in Woodlawn Park, Lodi.	12.7	---	7-16-81	*0.58
Chagrin River	Lake Erie	Lat 41°37'22", long 81°24'06", Hydrologic Unit 04110003, at bridge on Waite Hill Road, at south corporation boundary of Willoughby, 0.5 mi (0.8 km) upstream from East Branch.	119	---	6-30-81	*55

Discharge measurements made at low-flow partial-record stations during water year 1981

Station no	Station name	Location	Drainage area (mi^2)	Period of Record	Measurements Date	Measurements Discharge (cfs)
04191600	Powell Creek Defiance, OH	Lat 41°14'19", long 84°21'55", Defiance County, Hydrologic Unit 04100007, at bridge on Watson Road, 2.8 mi (4.5 km) downstream from Wagner Run, 3.1 mi (5.0 km) south of Defiance.	95.6	1979-81	11-14-80 8-19-81	*0 *0

* Base flow
\+ Peak flow

≠ Operated as a continuous-record gaging station.
a/ Operated as a crest-stage partial-record station.
b/ Discontinued low-flow partial-record site.

04199750 East Branch Black River near Lagrange, OH

LOCATION.--Lat 41°11'22", long 82°05'22", Lorain County, Hydrologic Unit 04110001, at bridge on Foster Road, 0.25 mi (0.5 km) south of intersection of Foster Road and Indian Hollow Road, and 1.5 mi (2.4 km) north of intersection of Foster Road and State Route 18, and 3.5 mi (5.7 km) southeast of Lagrange.
DRAINAGE AREA.--136 mi² (352 km²).
PERIOD OF RECORD.--June 1980 to June 1981.

Date	Time	Streamflow instantaneous (ft^3/s)	Sediment concentration (mg/L)	Sediment discharge (tons/day)
July 11, 1980	1200	73	324	64
July 23, 1980	1500	16	81	3.5
July 30, 1980	1900	43	126	15
Aug. 04, 1980	1315	112	177	54
Aug. 19, 1980	1415	359	158	153
Aug. 20, 1980	1145	109	112	33
Aug. 22, 1980	1405	1260	230	782
Oct. 22, 1981	1200	6.8	15	.28
Mar. 18, 1981	0945	38	10	1.0
May 29, 1981	1330	46	41	5.1
June 30, 1981	1130	38	62	6.4

04200050 West Branch Black River near Oberlin, OH

LOCATION.--Lat 41°15'55", long 82°10'50", Lorain County, Hydrologic Unit 04110001, at highway bridge at corner of Kipton Nickle Plate Road and West Road, 2 1/2 mi (4 km) southeast of Oberlin.
DRAINAGE AREA 81.9 mi² (212 km²).
PERIOD OF RECORD.--Low-flow partial-record, 1960 to 1974. Sediment partial record, June 1980 to June 1981.

Date	Time	Streamflow instantaneous (ft^3/s)	Sediment concentration (mg/L)	Sediment discharge (tons/day)
July 11, 1980	0945	24	143	9.3
July 23, 1980	1400	5.3	71	1.0
July 31, 1980	1147	25	204	14
Aug. 04, 1980	1245	199	278	149
Aug. 19, 1980	1640	185	211	105
Aug. 20, 1980	1330	90	155	38
Aug. 22, 1980	1630	415	287	322
Oct. 22, 1981	1315	2.0	10	.05
Feb. 04, 1981	1145	63	38	6.5
Mar. 18, 1981	0900	19	14	.72
May 29, 1981	1200	15	29	1.2
June 30, 1981	1315	20	62	3.3

CRAWFORD COUNTY

404838082563100. Local number, CR-1.
LOCATION.--Lat 40°48'38", long 82°56'31", Hydrologic Unit 04100011, Timken Roller Bearing Co., U.S. 30 in Bucyrus. Owner: Timken Roller Bearing Co.
AQUIFER.--Sand and gravel of Pleistocene Age.
WELL CHARACTERISTICS.--Drilled test water-table well, diameter 6 in (0.15 m), depth 54 ft (15.5 m), cased.
DATUM.--Altitude of land-surface datum is 1039.13 ft (316.727 m). Measuring point: Floor of instrument shelter 3.50 ft (1.067 m) above land-surface datum.
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of water.
PERIOD OF RECORD.--April 1962 to current year.
EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 37.64 ft (11.473 m) Dec. 11, 1962; minimum daily low, 17.31 ft (5.276 m) May 21, 1969.
EXTREMES FOR CURRENT YEAR.--Maximum daily low, 22.24 ft (6.779 m) Jan. 14; minimum daily low, 18.38 ft (5.602 m) June 15.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.76	21.14	21.32	21.32	21.49	20.44	20.77	19.95	19.87	18.70	19.73	19.52
2	20.77	21.21	21.47	21.48	21.62	20.46	20.85	20.00	19.80	18.75	19.65	19.46
3	20.76	21.10	21.57	21.47	21.65	20.54	20.70	20.01	19.74	18.77	19.65	19.27
4	20.93	21.15	21.48	21.63	21.69	20.41	20.64	19.96	19.83	18.72	19.71	19.10
5	21.00	21.12	21.37	21.61	21.70	20.44	20.79	19.89	19.83	18.75	19.77	19.03
6	20.99	21.11	21.36	21.38	21.54	20.57	20.90	19.91	19.78	18.87	19.70	19.07
7	20.85	20.97	21.34	22.08	21.50	20.67	20.84	19.87	19.85	18.94	19.65	19.05
8	20.77	21.17	21.30	22.05	21.54	20.70	20.69	19.79	19.78	18.99	19.75	19.06
9	20.89	21.10	21.31	21.78	21.59	20.69	20.86	19.75	19.52	18.95	19.87	19.12
10	20.87	21.32	21.33	21.85	21.59	20.60	20.85	19.68	19.35	19.02	19.89	19.13
11	20.86	21.35	21.36	21.71	21.74	20.60	20.69	19.62	19.39	19.06	20.41	19.19
12	20.96	21.34	21.27	21.68	21.77	20.56	20.54	19.63	19.33	19.05	20.20	19.22
13	21.01	21.23	21.36	21.52	21.66	20.58	20.36	19.56	19.31	19.06	20.06	19.24
14	21.23	21.23	21.31	22.24	21.54	20.69	20.40	19.42	18.65	19.13	20.05	19.22
15	21.15	21.28	21.27	22.13	21.43	20.52	20.44	19.36	18.38	19.81	19.91	19.20
16	21.10	21.37	21.31	22.00	21.39	20.59	20.14	19.40	18.44	20.42	20.04	19.19
17	21.01	21.31	21.33	21.99	21.28	20.49	19.92	19.37	18.53	20.13	20.09	19.28
18	20.97	21.32	21.26	21.84	21.17	20.51	20.09	19.32	18.55	19.83	20.10	19.90
19	20.99	21.34	21.54	21.80	21.00	20.49	20.05	19.25	18.59	19.73	20.07	19.82
20	20.98	21.33	21.57	21.80	20.74	20.62	20.10	19.31	18.61	19.57	20.11	19.30
21	21.08	21.37	21.56	21.81	20.72	20.80	20.11	20.04	18.61	19.60	20.15	19.30
22	21.20	21.39	21.46	21.75	20.61	20.80	19.94	20.86	18.42	19.64	20.14	19.48
23	21.24	21.31	21.28	21.74	20.38	20.76	19.74	20.70	18.45	19.62	20.13	19.50
24	21.08	21.41	21.51	21.76	20.51	20.78	19.95	20.05	18.43	19.57	20.52	19.49
25	20.91	21.51	21.52	21.75	20.58	20.84	20.10	19.90	18.45	19.59	20.43	19.45
26	21.13	21.49	21.43	21.69	20.65	20.78	20.10	19.87	18.55	19.62	20.31	19.33
27	21.13	21.29	21.52	21.68	20.62	20.89	20.11	19.77	18.62	19.66	20.28	19.37
28	21.14	21.15	21.47	21.69	20.40	20.87	19.99	19.76	18.63	19.56	20.33	19.51
29	21.18	21.30	21.36	21.85	---	20.71	19.96	19.79	18.64	19.68	20.31	19.50
30	21.17	21.36	21.40	21.86	---	20.73	19.91	19.77	18.66	19.72	20.29	19.47
31	21.05	---	21.28	21.80	---	20.79	---	19.89	---	19.75	20.28	---
MAX	21.24	21.51	21.57	22.24	21.77	20.89	20.90	20.86	19.87	20.42	20.52	19.90

WTR YR 1981 MEAN 20.43 HIGH 18.38 LOW 22.24

GEAUGA COUNTY

412518081221500. Local number, GE-3A.
LOCATION.--Lat 41°25'18", long 81°22'15", Hydrologic Unit 04110003, 1.2 mi (1.9 km) southeast of Chagrin Falls. Owner: City of Chagrin Falls.
AQUIFER.--Sandstone of Pennsylvanian Age.
WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in (0.15 m), depth drilled 120 ft (36.6 m), present depth 89 ft (27.1 m), cased.
DATUM.--Altitude of land-surface datum is 1130 ft (344 m), from topographic map. Measuring point: Floor of instrument shelter 3.00 ft (0.914 m) above land-surface datum.
PERIOD OF RECORD.--September 1951 to current year.
REMARKS.--Water level affected by pumping wells nearby for Chagrin Falls municipal supply.
EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 52.85 ft (16.109 m) Oct. 2, 1965; minimum daily low, 8.70 ft (2.652 m) May 17, 1973.
EXTREMES FOR CURRENT YEAR.--Maximum daily low low, 21.99 ft (6.703 m) Oct. 16; minimum daily low, 15.95 ft (4.862 m) Sept. 27.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.33	20.95	20.38	18.89	18.93	17.97	18.13	16.25	19.91	17.50	17.33	17.25
2	21.18	21.03	20.01	19.13	18.73	18.47	18.08	16.30	20.19	17.52	17.09	16.85
3	21.64	20.81	20.29	19.03	18.86	18.23	17.98	16.27	20.27	17.44	16.87	17.55
4	21.47	20.43	20.16	19.37	19.63	17.99	17.51	16.57	20.54	17.25	16.86	17.78
5	21.53	20.44	19.88	19.38	19.32	17.54	18.49	16.70	20.74	17.03	16.93	17.45
6	21.50	20.39	19.74	18.93	18.85	17.72	19.07	16.84	19.86	17.71	16.82	17.18
7	21.14	20.06	19.61	19.43	18.79	17.94	18.53	17.30	19.50	18.02	16.58	16.94
8	20.94	20.27	19.40	19.24	18.43	17.97	17.97	17.23	19.86	18.19	16.52	17.25
9	21.84	20.02	19.32	19.14	20.18	18.47	17.89	16.81	19.98	18.12	16.76	16.89
10	21.32	20.44	19.36	19.35	20.47	18.52	18.41	16.57	19.37	17.79	17.69	16.67
11	20.96	20.49	19.72	19.10	19.88	18.04	17.76	16.85	19.30	17.70	18.28	16.47
12	21.09	20.49	19.39	19.03	20.20	18.20	17.61	17.46	19.17	17.56	18.59	16.40
13	21.99	20.25	19.35	19.47	20.07	19.27	18.25	17.01	18.92	17.87	17.95	16.33
14	21.55	20.11	19.29	19.89	---	19.51	18.51	17.23	18.63	17.58	17.70	16.11
15	21.21	20.15	19.19	19.43	---	18.60	19.07	17.46	19.35	17.52	17.28	16.07
16	21.99	20.28	19.07	19.46	---	18.27	18.25	17.22	18.74	17.35	17.05	16.07
17	21.41	20.81	19.08	19.49	---	17.95	17.35	17.20	18.60	17.35	17.06	16.13
18	21.03	20.37	19.73	19.10	---	18.17	17.27	17.91	18.49	17.30	16.96	16.14
19	20.93	20.40	19.82	19.36	---	17.85	17.11	17.60	18.92	17.22	16.80	15.98
20	20.86	20.32	19.90	19.91	---	17.87	17.56	17.75	18.51	17.71	16.68	16.34
21	20.90	20.22	19.88	19.46	---	18.26	17.25	18.32	18.12	18.30	16.69	16.33
22	21.15	20.28	19.70	19.18	---	18.27	17.27	18.59	17.96	18.05	16.62	16.36
23	21.21	20.12	19.77	18.96	---	18.75	16.93	18.04	18.07	18.03	16.44	16.48
24	21.55	19.93	19.55	18.96	---	18.38	16.47	19.07	18.04	17.86	16.37	16.48
25	20.78	20.16	19.62	18.93	18.98	18.35	16.63	19.36	17.78	17.70	16.45	16.41
26	20.94	20.19	19.40	19.18	19.00	18.20	16.59	19.44	17.86	17.53	16.37	16.21
27	21.62	19.67	19.51	19.60	18.87	18.70	17.35	19.56	17.92	17.61	16.22	15.95
28	21.02	19.32	19.37	19.28	18.07	18.37	17.26	20.14	17.86	17.40	17.02	16.26
29	21.88	19.46	19.82	19.65	---	17.73	16.58	20.23	17.70	17.35	16.68	16.20
30	21.43	19.60	19.43	19.66	---	17.86	16.49	19.51	17.52	17.40	16.42	16.17
31	20.99	---	19.16	19.61	---	17.79	---	19.23	---	17.41	17.17	---
MAX	21.99	21.03	20.38	19.91	20.47	19.51	19.07	20.23	20.74	18.30	18.59	17.78

WTR YR 1981 MEAN 18.60 HIGH 15.95 LOW 21.99

HANCOCK COUNTY

405332083421700. Local number, HA-15.
LOCATION.--Lat 40°53'32", long 83°42'17", Hydrologic Unit 04100008, 1.3 mi (2.1 km) southeast of Jenera.
Owner: Edgar Wilson.
AQUIFER.--Limestone of Silurian Age.
WELL CHARACTERISTICS.--Drilled test artesian well, diameter 12 in (0.3 m), depth drilled 280 ft (85.3 m), present depth 278 ft (84.7 m), cased to 7 ft (2.1 m).
DATUM.--Altitude of land-surface datum is 850 ft (259 m), from topographic map. Measuring point: Floor of instrument shelter 3.00 ft (0.914 m) above land-surface datum.
PERIOD OF RECORD.--October 1975 to current year.
EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 3.47 ft (1.058 m) Jan. 12, 1977; minimum daily low, 0.82 ft (0.250 m) above land-surface datum Mar. 15, 1978.
EXTREMES FOR CURRENT YEAR.--Maximum recorded daily low, 1.79 ft (0.546 m) Nov. 26; minimum recorded daily low, 0.59 ft (0.180 m) Apr. 23.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.33	1.64	1.67			---	---					
2	1.35	1.67	1.75			---	---					
3	1.36	1.63	1.78			---	---					
4	1.43	1.61	1.75			---	---					
5	1.48	1.64	1.70			---	---					
6	1.48	1.64	1.70			---	---					
7	1.44	1.58	1.70			---	---					
8	1.42	1.64	1.65			---	---					
9	1.47	1.64	1.59			---	---					
10	1.47	1.73	1.52			---	---					
11	1.48	1.74	1.54			---	---					
12	1.53	1.75	1.50			---	---					
13	1.55	1.71	1.54			---	---					
14	1.56	1.69	1.52			---	---					
15	1.53	1.72	1.50			---	---					
16	1.55	1.75	1.51			---	---					
17	1.53	1.73	1.52			---	---					
18	1.52	1.73	---			---	---					
19	1.55	1.73	---			---	---					
20	1.56	1.73	---			---	---					
21	1.61	1.76	---			---	---					
22	1.67	1.76	---			---	---					
23	1.68	1.74	---			---	.59					
24	1.65	1.74	---			1.14	.68					
25	1.54	1.78	---			1.15	.75					
26	1.64	1.79	---			1.13	.75					
27	1.65	1.71	---			---	---					
28	1.60	1.61	---			---	---					
29	1.62	1.66	---			---	---					
30	1.63	1.68	---			---	---					
31	1.59	---	---			---	---					
MAX	1.68	1.79	1.78			1.15	.75					

WTR YR 1981 MEAN 1.55 HIGH .59 LOW 1.79

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

HARDIN COUNTY

404648083412600. Local number, HN-2A.
LOCATION.--Lat 40°46'48", long 83°41'26", Hydrologic Unit 04100007, at southeast edge of Dola.
Owner: Ohio Power Company
AQUIFER.--Limestone of Silurian Age.
WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in (0.15 m), depth 51 ft (15.5 m) cased.
DATUM.--Altitude of land-surface datum is 945 ft (288 m), from topographic map. Measuring point: Floor of instrument shelter 2.88 ft (0.878 m) above land-surface datum.
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.
PERIOD OF RECORD.--December 1954 to current year.
EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 15.86 ft (4.834 m) Jan. 20, 21, 1965; minimum daily low, 5.66 ft (1.725 m) Apr. 11, 1978.
EXTREMES FOR CURRENT YEAR.--Maximum daily low, 8.51 ft (2.594 m) Dec. 3; minimum daily low, 5.96 ft (1.817 m) June 15, 16.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.81	7.70	7.96	---	7.87	6.62	6.86	6.36	6.38	6.26	6.69	7.32
2	6.81	7.82	8.27	7.83	7.43	6.57	7.01	6.45	6.29	6.23	6.59	7.35
3	6.81	7.73	8.51	7.84	7.81	6.72	6.87	6.42	6.23	6.21	6.46	7.36
4	7.10	7.51	8.47	8.15	7.79	6.69	6.73	6.35	6.31	6.14	6.52	7.38
5	7.31	7.60	8.20	8.17	7.96	6.39	6.90	6.31	6.34	6.04	6.65	7.45
6	7.32	7.60	8.13	7.93	7.89	6.59	7.08	6.38	6.33	6.17	6.60	7.50
7	7.10	7.39	8.12	7.75	7.68	6.87	7.08	6.44	6.36	6.32	6.47	---
8	6.96	7.60	8.07	7.91	7.41	6.96	7.08	6.41	6.36	6.37	6.43	---
9	7.12	7.55	7.94	7.90	7.66	6.97	6.92	6.29	6.21	6.37	6.69	---
10	7.09	8.03	7.98	8.23	7.73	6.89	7.09	6.29	6.24	6.36	6.82	---
11	7.08	8.14	8.08	8.18	7.46	6.73	7.09	6.17	6.38	6.38	6.82	---
12	7.34	8.17	8.04	8.05	8.33	6.69	6.94	6.33	6.38	6.37	6.82	---
13	7.40	8.03	7.92	7.87	8.33	6.47	6.90	6.33	6.32	6.33	6.88	---
14	7.40	7.90	8.01	7.61	8.24	6.76	6.94	6.32	6.25	6.35	6.93	---
15	7.32	7.99	7.95	7.82	7.99	6.67	7.07	6.06	5.96	6.38	6.92	---
16	7.37	8.16	7.73	7.97	7.73	6.60	7.09	6.30	5.96	6.38	6.84	---
17	7.25	8.16	7.86	8.10	7.46	6.56	6.82	6.31	6.11	6.44	7.02	---
18	7.21	7.95	7.87	8.04	7.37	6.45	6.53	6.30	6.12	6.47	7.05	---
19	7.29	8.13	8.07	7.89	7.21	6.43	6.58	6.15	6.08	6.47	7.04	---
20	7.28	8.11	8.36	7.85	6.89	6.56	6.50	6.23	6.04	6.44	7.10	---
21	7.57	8.06	8.41	7.90	7.05	6.91	6.53	6.28	6.04	6.33	7.20	---
22	7.80	8.21	8.41	7.90	7.03	6.98	6.52	6.27	6.03	6.55	7.22	---
23	7.83	8.20	8.13	7.75	6.52	6.94	6.24	6.27	6.33	6.63	7.19	---
24	7.57	7.98	7.78	7.78	6.74	6.99	6.00	6.23	6.34	6.60	7.24	---
25	7.51	8.33	8.12	7.79	7.00	7.11	6.00	6.25	6.25	6.53	7.36	---
26	7.67	8.38	8.14	7.66	7.13	7.06	6.41	6.29	6.34	6.51	7.33	---
27	7.63	8.30	8.04	7.69	7.13	7.21	6.48	6.26	6.44	6.63	7.32	---
28	7.78	7.69	8.09	7.77	6.73	7.22	6.46	6.22	6.44	6.57	7.43	---
29	7.79	7.85	8.03	8.15	---	6.92	6.46	6.22	6.38	6.57	7.40	---
30	7.73	7.99	7.75	8.24	---	6.71	6.27	6.22	6.28	6.67	7.34	7.42
31	7.62	---	---	8.23	---	6.88	---	6.38	---	6.73	7.37	---
MAX	7.83	8.38	8.51	8.24	8.33	7.22	7.09	6.45	6.44	6.73	7.43	7.50

WTR YR 1981 MEAN 7.11 HIGH 5.96 LOW 8.51

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE (DEG C)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM
AUG 28...	1045	955	7.0	24.5	12.5	.0	470	76	120	42	14	6

DATE	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
AUG 28...	.3	2.3	480	0	394	77	170	12	1.0	14	675	612

DATE	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS TOTAL (MG/L AS PO4)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)	CARBON, ORGANIC DISSOLVED (MG/L AS C)
AUG 28...	.16	.080	.12	.20	.36	1.6	.010	.03	540	80	2.1

HENRY COUNTY

412123083574000. Local number, HY-2.
LOCATION.--Lat 41°21'23", long 83°57'40", Hydrologic Unit 04100009, 1.4 mi (2.3 km) southwest of McClure.
Owner: State of Ohio.
AQUIFER.--Limestone of Silurian Age.
WELL CHARACTERISTICS.--Drilled test artesian well, diameter 12 in (0.3 m), depth 300 ft (91.4 m), cased to 43 ft (13.1 m).
DATUM.--Altitude of land-surface datum is 680 ft (207 m), from topographic map. Measuring point: Floor of instrument shelter 3.00 ft (0.914 m) above land-surface datum.
PERIOD OF RECORD.--June 1971 to current year.
EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 22.76 ft (6.937 m) May 30, 1977; minimum daily low, 14.55 ft (4.435 m) Mar. 22, 1978.
EXTREMES FOR CURRENT YEAR.--Maximum daily low, 21.19 ft (6.459 m) Jan. 30; minimum daily low, 18.00 ft (5.486 m) Nov. 28.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.48	20.62	18.86	19.17	20.87	18.42	19.72	19.66	19.69	18.70	20.37	20.58
2	18.36	20.65	19.18	19.61	20.65	18.41	19.74	19.75	19.65	18.85	20.42	20.39
3	18.23	20.52	19.37	20.01	20.58	18.41	19.60	19.78	19.58	18.93	20.29	20.29
4	19.13	20.56	19.29	20.34	20.34	18.34	19.42	19.76	19.64	18.93	20.15	20.09
5	19.49	20.60	19.29	20.34	20.32	18.22	19.49	19.59	19.60	18.97	20.08	20.11
6	19.63	20.52	19.35	20.27	20.02	18.27	19.62	19.52	19.51	19.25	19.98	20.10
7	19.76	20.50	19.37	20.57	19.89	18.41	19.56	19.63	19.56	19.62	19.83	20.01
8	19.99	20.56	19.37	20.64	19.69	18.44	19.42	19.71	19.48	19.88	19.76	19.94
9	20.16	20.58	19.39	20.74	19.73	18.52	19.58	19.98	19.32	20.03	19.85	19.97
10	20.11	20.72	19.48	20.83	19.73	19.01	19.58	19.95	19.26	20.20	19.88	19.89
11	20.27	20.68	19.48	20.83	19.75	19.43	19.48	19.61	19.32	20.32	19.83	19.91
12	20.45	20.41	19.39	20.81	19.89	19.58	19.56	19.32	19.23	20.34	19.83	19.93
13	20.49	19.83	19.42	20.67	19.89	19.92	19.57	19.31	18.94	20.34	19.85	19.91
14	20.49	19.46	19.37	20.73	19.85	20.08	19.72	19.28	18.46	20.59	19.86	19.85
15	20.45	19.27	19.28	20.82	19.80	20.06	19.80	19.26	18.24	20.59	19.71	19.88
16	20.47	19.18	19.04	20.91	19.64	19.97	19.72	19.16	18.10	20.68	19.76	19.90
17	20.42	18.99	18.87	20.87	19.54	19.75	19.46	19.02	18.14	20.67	19.89	19.89
18	20.40	18.77	18.64	20.78	19.40	19.72	19.36	18.85	18.35	20.74	20.15	19.90
19	20.43	18.70	18.81	20.78	19.29	19.54	19.26	18.83	18.60	20.69	20.32	19.80
20	20.42	18.58	18.75	20.84	19.05	19.48	19.09	19.15	18.73	20.56	20.26	19.75
21	20.51	18.55	18.68	20.83	19.09	19.59	19.03	19.53	18.79	20.36	20.17	19.77
22	20.70	18.51	18.52	20.84	19.12	19.61	18.75	19.81	18.78	20.30	20.14	19.92
23	20.72	18.41	18.55	20.83	18.91	19.51	18.65	19.82	18.96	20.25	20.05	19.98
24	20.59	18.40	18.89	20.88	18.88	19.84	18.99	19.77	18.93	20.20	20.04	20.10
25	20.46	18.47	18.91	20.88	18.87	20.11	19.31	19.54	18.77	20.37	20.16	20.14
26	20.64	18.47	18.96	20.83	18.85	20.17	19.40	19.29	18.53	20.52	20.40	20.08
27	20.62	18.22	19.08	20.90	18.80	20.47	19.53	19.15	18.45	20.63	20.58	20.13
28	20.63	18.00	19.09	20.97	18.47	20.41	19.43	19.28	18.64	20.39	20.75	20.28
29	20.65	18.51	19.04	21.17	---	20.03	19.53	19.38	18.68	20.24	20.81	20.30
30	20.66	18.69	18.90	21.19	---	19.75	19.57	19.55	18.62	20.20	20.83	20.29
31	20.54	---	18.63	21.14	---	19.76	---	19.69	---	20.20	20.78	---
MAX	20.72	20.72	19.48	21.19	20.87	20.47	19.80	19.98	19.69	20.74	20.83	20.58

WTR YR 1981 MEAN 19.71 HIGH 18.00 LOW 21.19

LORAIN COUNTY

411545082072400. Local number, LN-1.
LOCATION.--Lat 41°15'45", long 82°07'24", Hydrologic Unit 04110001, 1.7 mi (2.7 km) north of LaGrange.
Owner: LaGrange Water Department.
AQUIFER.--Sandstone of Mississippian Age.
WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in (0.15 m), depth 47 ft (14.3 m), cased.
DATUM.--Altitude of land-surface datum is 795 ft (242 m), from topographic map. Measuring point: Floor of instrument shelter 1.50 ft (0.457 m) above land-surface datum.
PERIOD OF RECORD.--September 1946 to current year.
EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 35.60 ft (10.851 m) Oct. 25, 1952; minimum daily low, 0.13 ft (0.040 m) Jan. 8, 1975.
EXTREMES FOR CURRENT YEAR.--Maximum daily low, 4.66 ft (1.420 m) Sept. 29-30; minimum daily low, 0.65 ft (0.198 m) Feb. 23.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.67	3.79	3.97	2.99	1.73	.88			---	1.44	3.03	3.87
2	2.69	3.92	4.06	3.25	1.63	.96			1.94	1.51	2.91	4.00
3	2.68	3.81	4.37	3.25	1.75	1.12			1.87	1.54	2.89	4.01
4	2.99	3.64	4.28	3.52	1.84	1.01			2.02	1.50	2.95	3.95
5	3.23	3.73	4.05	3.54	1.92	.91			2.05	1.51	3.08	3.99
6	3.24	3.74	3.95	3.18	1.77	1.15			1.98	1.70	3.03	4.00
7	3.04	3.55	3.90	3.15	1.76	1.37			2.12	1.86	2.93	3.92
8	2.92	3.77	3.80	3.27	1.80	1.41			2.08	1.93	3.05	3.73
9	3.12	3.72	3.68	3.25	2.03	1.41			1.96	1.90	3.31	3.81
10	3.10	4.16	3.46	3.46	2.05	1.28			1.91	2.03	3.37	3.77
11	3.05	4.27	3.41	3.34	2.25	1.18			1.99	2.11	3.37	3.84
12	3.29	4.30	3.16	3.31	2.53	1.14			1.92	2.12	3.39	3.91
13	3.41	4.14	3.08	3.08	2.45	1.14			1.84	2.07	3.47	3.92
14	3.45	4.10	3.02	3.04	2.22	1.35			1.62	2.22	3.50	3.89
15	3.35	4.18	2.95	3.20	2.04	1.19			---	2.26	3.32	4.00
16	3.41	4.33	2.90	3.37	1.81	1.27			---	2.30	3.48	4.05
17	3.35	4.29	2.96	3.43	1.70	1.23			---	2.39	3.55	4.20
18	3.26	4.22	2.85	3.21	1.57	1.24			---	2.45	3.58	4.20
19	3.34	4.28	3.37	3.18	1.31	---			---	2.47	3.56	4.12
20	3.35	4.29	3.49	3.20	1.00	---			---	2.35	3.62	4.17
21	3.51	4.34	3.54	3.20	1.11	---			---	2.52	3.71	4.22
22	3.80	4.40	3.42	3.09	1.02	---			---	2.66	3.71	4.47
23	3.89	4.31	3.07	2.99	.65	---			---	2.70	3.67	4.59
24	3.75	4.28	3.31	2.99	.88	---			---	2.66	3.78	4.61
25	3.39	4.53	3.42	2.96	.97	---			---	2.69	3.84	4.56
26	3.67	4.57	3.32	2.61	.97	---			1.43	2.74	3.80	4.39
27	3.72	4.29	3.47	2.51	.97	---			1.47	2.86	3.82	4.38
28	3.69	3.93	3.43	2.27	.84	---			1.42	2.73	3.93	4.64
29	3.81	3.93	3.26	2.34	---	---			1.36	2.86	3.93	4.66
30	3.83	4.04	3.26	2.34	---	---			1.36	2.97	3.89	4.66
31	3.67	---	3.10	2.25	---	---			---	3.03	3.93	---
MAX	3.89	4.57	4.37	3.54	2.53	1.41			2.12	3.03	3.93	4.66

WTR YR 1981 MEAN 2.97 HIGH .65 LOW 4.66

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

LUCAS COUNTY

413704083362200. Local number, LU-1.
LOCATION.--Lat 41°37'04", long 83°36'22", Hydrologic Unit 04100001, at Toledo State Hospital.
Owner: State of Ohio.
AQUIFER.--Limestone of Silurian Age.
WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 12 in (0.3 m), depth drilled 525 ft (160.0 m), present depth 523.0 ft (159.4 m), cased to 93 ft (28.3 m).
DATUM.--Altitude of land-surface datum is 624 ft (190 m), from topographic map. Measuring point: Floor of instrument shelter 2.98 ft (0.908 m) above land-surface datum (Revised from 1978 and 1979).
REMARKS.--Prior to Aug. 23, 1978, measuring point was 3.10 ft (0.945 m) above land-surface datum. Reported in 1979 as 3.00 ft (0.914 m) above land-surface datum.
PERIOD OF RECORD.--March 1946 to current year.
EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 117.25 ft (35.738 m) Sept. 18, 1957; minimum daily low, 66.88 ft (20.385 m) Apr. 23, 1981.
EXTREMES FOR CURRENT YEAR.--Maximum daily low, 71.39 ft (21.760 m) Oct. 5; minimum recorded daily low, 66.88 ft (20.385 m) Apr. 23.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71.17	70.31	69.38	68.79	68.15	67.86	67.56	67.34	---			---
2	71.01	70.42	69.66	69.02	68.48	67.90	67.71	67.33	---			70.39
3	70.96	70.20	69.96	69.09	68.60	67.97	67.40	67.20	---			70.39
4	71.22	69.92	69.87	69.37	68.78	67.68	67.27	67.22	---			70.30
5	71.39	69.98	69.62	69.37	68.80	67.64	67.65	67.14	---			70.34
6	71.37	69.97	69.53	68.81	68.48	67.89	67.86	67.10	---			70.32
7	71.05	69.59	69.46	68.92	68.40	68.10	67.81	67.18	---			70.14
8	70.79	69.84	69.34	69.01	68.33	68.17	67.48	67.32	---			69.70
9	70.91	69.64	69.32	69.09	68.50	68.17	67.78	67.38	---			69.77
10	70.87	70.18	69.43	69.27	68.42	68.00	67.78	67.38	---			69.70
11	70.65	70.28	69.52	69.08	68.91	67.93	67.46	67.32	---			69.75
12	70.86	70.29	69.31	69.00	69.15	67.80	67.62	66.88	---			69.76
13	70.92	70.02	69.41	68.61	69.19	67.79	67.65	67.09	---			69.75
14	70.91	69.96	69.35	68.61	69.04	67.92	68.01	67.14	---			69.84
15	70.70	70.04	69.25	68.74	68.81	67.59	68.19	---	---			69.90
16	70.70	70.18	69.27	69.00	68.50	67.64	67.91	---	---			69.86
17	70.53	70.07	69.27	69.02	68.43	67.41	67.35	---	---			69.80
18	70.36	69.96	69.06	68.71	68.36	67.39	67.64	---	---			69.79
19	70.37	69.97	69.68	68.61	68.14	67.30	67.61	---	---			69.55
20	70.35	69.93	69.80	68.68	68.10	67.45	67.68	---	---			69.28
21	70.49	69.95	69.85	68.70	68.17	67.85	67.71	---	---			69.28
22	70.76	69.97	69.64	68.48	67.99	67.86	67.39	---	---			69.43
23	70.85	69.85	69.16	68.45	67.57	67.79	66.88	---	68.52			69.48
24	70.62	69.80	69.50	68.45	67.93	67.85	67.02	---	68.51			69.39
25	70.13	70.02	69.53	68.40	68.23	67.93	67.29	---	---			69.25
26	70.41	70.06	69.35	68.21	68.39	67.80	67.34	---	---			68.96
27	70.45	69.70	69.49	68.32	68.33	68.02	67.35	---	---			68.79
28	70.37	69.25	69.37	68.49	67.86	67.99	67.28	---	---			68.98
29	70.47	69.31	69.12	68.95	---	67.55	67.01	---	---			68.91
30	70.47	69.44	69.12	69.06	---	67.40	67.09	---	---			68.79
31	70.19	---	68.77	69.01	---	67.56	---	---	---			---
MAX	71.39	70.42	69.96	69.37	69.19	68.17	68.19	67.38	68.52			70.39

WTR YR 1981 MEAN 68.94 HIGH 66.88 LOW 71.39

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

MEDINA COUNTY

410142082005900. Local number, MD-1.
LOCATION.--Lat 41°01'42", long 82°00'59", Hydrologic Unit 04110001. Waterworks plant at Lodi.
Owner: Lodi Water Dept.
AQUIFER.--Sand and gravel of Pleistocene Age.
WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in (0.15 m), depth 65 ft (19.9 m), cased.
DATUM.--Altitude of land-surface datum is 910 ft (277 m), from topographic map. Measuring point: Floor of instrument shelter 1.90 ft (0.579 m) above land-surface datum.
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.
PERIOD OF RECORD.--September 1946 to current year.
EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 31.50 ft (9.601 m) July 16, 1971; minimum daily low, 7.60 ft (2.316 m) July 6, 1969.
EXTREMES FOR CURRENT YEAR.--Maximum daily low, 29.26 ft (8.918 m) Mar. 3; minimum daily low, 18.73 ft (5.709 m) May 10.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.15	22.07	21.79	22.03	21.97	20.40	21.09	19.73	20.68	24.41	21.71	22.79
2	22.19	21.38	24.42	22.07	22.47	27.85	21.18	19.91	20.68	21.12	20.94	22.58
3	21.14	22.30	26.59	21.98	22.47	29.26	21.15	19.60	20.83	20.76	21.49	22.51
4	21.90	22.37	26.97	21.65	22.46	26.01	20.49	20.31	20.96	20.02	21.68	22.56
5	20.27	22.43	23.38	22.34	22.50	20.93	19.53	20.47	20.84	19.62	21.82	22.13
6	21.93	22.47	21.95	22.68	22.63	20.83	20.58	20.50	20.38	19.90	21.87	20.90
7	21.90	22.30	20.75	22.52	22.71	20.72	20.78	20.19	20.06	20.15	21.83	21.17
8	22.14	22.05	21.61	22.48	23.09	19.64	20.72	19.82	20.54	20.42	21.62	21.65
9	22.36	21.31	21.53	22.56	23.51	21.08	20.57	19.52	20.76	20.50	21.22	21.81
10	22.20	22.26	21.26	22.73	23.53	21.19	21.04	18.73	20.74	20.52	21.70	21.81
11	21.94	22.35	21.56	22.21	22.84	21.01	20.30	19.63	20.90	20.16	21.90	21.76
12	21.59	22.40	21.59	22.79	22.91	21.18	19.79	20.00	20.86	19.92	22.07	21.51
13	22.17	22.40	21.07	23.08	22.81	21.06	20.26	20.12	20.38	20.58	22.05	20.80
14	22.37	22.38	20.46	23.11	22.55	20.94	21.05	22.43	19.78	20.89	23.51	21.61
15	22.53	22.27	21.09	23.13	21.79	20.05	21.09	22.24	20.30	21.16	21.64	21.63
16	25.85	21.70	21.56	22.95	22.34	21.12	20.76	22.11	22.17	21.08	21.07	21.88
17	22.63	22.29	21.70	22.82	22.40	21.12	20.42	21.59	20.68	21.11	21.69	21.88
18	22.09	22.32	21.91	22.45	22.26	21.16	20.03	22.08	20.49	21.16	21.90	21.47
19	21.09	22.87	22.36	22.90	21.78	21.36	19.73	22.09	20.53	19.66	22.17	21.78
20	22.08	22.71	21.87	23.10	21.53	21.50	20.45	22.40	20.13	20.76	22.25	21.81
21	22.15	25.16	20.10	23.05	20.80	21.41	20.63	20.67	19.87	21.16	22.36	21.67
22	22.36	22.53	21.76	23.02	19.95	20.95	20.28	20.70	22.05	21.07	22.47	21.87
23	22.22	20.99	22.17	22.99	21.01	21.61	20.23	20.55	23.36	21.18	22.35	22.43
24	25.22	25.30	22.63	22.59	20.96	21.76	23.45	19.83	21.40	22.69	22.58	22.51
25	24.55	22.08	21.75	22.12	21.12	21.79	19.47	19.81	20.55	20.94	26.32	22.15
26	23.59	25.42	22.17	22.99	21.23	21.77	19.53	20.33	20.56	20.49	23.51	22.19
27	25.45	24.33	22.27	23.01	24.47	21.54	19.92	20.36	20.46	21.10	23.25	21.61
28	25.61	26.05	21.77	23.00	20.53	21.21	19.93	20.30	19.76	21.45	24.87	22.11
29	24.95	21.08	22.17	23.12	---	20.31	19.83	20.34	20.61	21.49	22.95	22.17
30	22.56	20.57	22.17	23.15	---	20.94	19.38	20.20	20.70	21.53	22.25	22.17
31	22.41	---	22.27	22.75	---	21.13	---	19.76	---	21.67	22.60	---
MAX	25.85	26.05	26.97	23.15	24.47	29.26	23.45	22.43	23.36	24.41	26.32	22.79

WTR YR 1981 MEAN 21.74 HIGH 18.73 LOW 29.26

PORTAGE COUNTY

410920081192000. Local number, PO-6.
LOCATION.--Lat 41°09'20", long 81°19'20", Hydrologic Unit 04110002, State Rt 59, east of Kent.
Owner: Brown Derby Restaurant.
AQUIFER.--Sand and gravel of Pleistocene Age.
WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in (0.2 m), depth 72 ft (21.9 m), cased.
DATUM.--Altitude of land-surface datum is 1040 ft (317 m), from topographic Map. Measuring point: Top of platform 4.50 ft (1.372 m) below land-surface datum.
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.
PERIOD OF RECORD.--April 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 25.37 ft (7.733 m) Feb. 22, 1977; minimum daily low, 14.28 ft (4.352 m) May 5, 1980.
EXTREMES FOR CURRENT YEAR.--Maximum daily low, 21.05 ft (6.416 m) Feb. 11, 12; minimum recorded daily low, 16.99 ft (5.179 m) July 14.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.85	19.08			---	20.67	---	19.12	18.80	17.29	17.38	18.54
2	17.90	19.11			---	20.68	---	19.11	18.75	17.27	17.38	18.60
3	17.93	19.11			---	20.68	---	19.08	18.71	17.24	17.41	18.64
4	18.02	19.16			20.91	20.68	---	19.03	18.67	17.19	17.46	18.69
5	18.05	19.20			20.92	20.67	---	18.99	18.67	17.15	17.49	18.73
6	18.07	19.21			20.92	20.67	---	18.95	18.64	17.11	17.51	18.76
7	18.08	19.25			20.92	20.67	---	18.94	18.64	17.11	17.53	18.77
8	18.10	19.30			20.95	20.66	---	18.92	18.62	17.10	17.59	18.84
9	18.16	19.33			20.97	20.65	---	18.87	18.61	17.07	17.65	18.88
10	18.17	19.40			20.97	20.60	---	18.84	18.59	17.04	17.67	18.91
11	18.19	19.43			21.05	19.16	---	18.78	18.59	17.04	17.71	18.96
12	18.25	19.45			21.05	---	---	18.78	18.56	17.03	17.75	18.99
13	18.32	19.46			21.04	---	---	18.78	18.50	17.01	17.79	19.02
14	18.36	19.52			21.04	---	---	18.76	18.43	16.99	17.82	19.07
15	18.37	19.57			21.02	---	---	18.72	18.37	17.00	17.85	19.12
16	18.42	19.59			21.01	---	---	18.75	18.28	17.00	17.91	19.15
17	18.44	19.59			21.02	---	---	18.75	18.21	17.00	17.95	19.21
18	18.48	19.58			21.02	---	---	18.74	18.14	17.02	17.98	19.24
19	18.51	19.66			21.00	---	---	18.71	18.05	17.02	18.02	19.27
20	18.56	19.68			20.95	---	---	18.72	17.98	17.01	18.06	19.32
21	18.60	19.70			20.95	---	---	18.72	17.89	17.08	18.10	19.33
22	18.67	19.70			20.87	---	---	18.72	17.79	17.14	18.12	19.41
23	18.77	19.75			20.75	---	---	18.72	17.76	17.17	18.17	19.44
24	18.77	19.77			20.72	---	---	18.72	17.72	17.17	18.23	19.48
25	18.79	19.78			20.71	---	---	18.74	17.63	17.19	18.26	19.51
26	18.87	19.78			20.68	---	---	18.76	17.57	17.23	18.29	19.53
27	18.89	19.79			20.68	---	---	18.76	17.53	17.26	18.35	19.57
28	18.94	19.89			20.67	---	---	18.78	17.47	17.25	18.39	19.64
29	18.97	19.88			---	---	19.16	18.80	17.40	17.31	18.42	19.68
30	19.00	20.90			---	---	19.16	18.79	17.35	17.34	18.46	19.70
31	19.02	---			---	---	---	18.80	---	17.36	18.50	---
MAX	19.02	20.90			21.05	20.68	19.16	19.12	18.80	17.36	18.50	19.70

WTR YR 1981 MEAN 18.79 HIGH 16.99 LOW 21.05

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

PUTNAM COUNTY

405505084032900. Local number, PU-1.
LOCATION.--Lat 40°55'05", long 84°03'29", Hydrologic Unit 04100007, Center and Broadway Streets, Columbus Grove.
Owner: Columbus Grove Water Department.
AQUIFER.--Limestone of Silurian Age.
WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in (0.15 m), depth 110 ft (33.5 m), cased.
DATUM.--Altitude of land-surface datum is 770 ft (235 m), from topographic map. Measuring point: Floor of instrument shelter 3.00 ft (0.914 m) above land-surface datum.
REMARKS.--Station operated by Ohio Department of Natural Resource, Division of Water.
PERIOD OF RECORD.--July 1946 to current year.
EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 24.30 ft (7.407 m) Aug. 24, 1962; minimum daily low, 9.50 ft (2.896 m) Jan. 5, 1950.
EXTREMES FOR CURRENT YEAR.--Maximum daily low, 15.40 ft (4.694 m) Jan. 14; minimum daily low, 9.90 ft (3.018 m) June 13.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.22	13.52	13.71	13.18	14.46	12.36	12.04	10.71	10.62	10.14	13.28	13.98
2	14.01	13.63	13.41	14.87	13.57	11.09	13.44	12.79	12.19	11.72	12.47	13.10
3	12.38	14.27	14.99	14.89	12.63	12.72	12.50	11.71	11.45	11.36	12.45	12.71
4	14.05	14.29	13.92	13.55	14.31	11.91	12.15	11.00	10.83	10.59	13.86	13.11
5	13.74	12.82	13.60	15.11	13.31	10.98	12.91	13.39	12.56	11.52	12.87	12.39
6	12.57	14.52	14.82	14.25	13.29	12.85	12.31	12.44	11.82	11.46	12.23	11.96
7	13.96	13.53	13.82	14.00	14.29	12.20	12.08	12.88	10.79	10.75	13.40	12.85
8	13.90	13.44	13.34	15.19	13.22	11.30	12.72	11.64	12.55	12.48	12.84	12.27
9	13.15	14.45	14.35	14.42	13.05	13.07	11.80	12.80	11.92	11.80	11.61	11.55
10	15.08	13.81	13.72	13.76	13.78	12.09	12.04	11.63	10.29	11.03	14.21	12.69
11	13.85	13.63	13.64	15.35	13.08	12.06	12.70	10.78	12.08	12.88	13.06	12.25
12	13.46	14.82	14.58	14.56	13.13	12.89	11.80	12.24	11.63	11.76	12.35	12.25
13	14.53	13.76	13.67	13.37	14.05	11.96	10.86	11.49	9.90	11.65	13.80	13.26
14	13.74	13.40	13.67	15.40	13.51	11.88	12.20	10.45	10.39	13.62	12.96	12.24
15	12.87	14.41	14.35	14.22	12.62	13.02	12.10	12.00	10.30	12.30	12.60	12.23
16	14.54	14.37	14.36	14.14	13.93	12.64	10.42	11.51	10.20	11.42	13.62	13.17
17	13.51	13.35	13.07	15.30	13.76	11.54	11.88	10.49	11.42	13.32	13.21	12.18
18	13.16	14.42	14.32	14.44	12.59	12.95	11.72	12.19	11.47	12.60	12.32	11.53
19	14.38	13.76	14.36	13.50	13.16	12.18	10.38	11.86	11.81	11.52	14.08	12.96
20	13.95	13.69	13.35	15.06	12.99	11.79	12.27	10.57	11.95	13.07	13.35	12.23
21	12.83	14.56	14.83	14.24	11.56	13.10	11.35	12.36	11.08	12.92	12.38	11.78
22	14.57	14.07	14.55	14.10	12.73	13.20	10.50	11.55	10.41	11.40	14.35	13.11
23	13.91	13.36	13.69	14.85	12.46	11.62	12.09	11.14	12.09	13.12	13.50	12.82
24	13.05	13.93	14.93	14.43	11.31	13.03	11.14	12.34	12.13	12.38	13.05	11.80
25	14.12	13.89	14.96	13.30	12.73	12.88	10.86	11.90	10.44	11.82	14.71	13.31
26	13.93	14.06	13.82	14.79	12.52	11.43	12.24	11.05	12.02	13.00	14.52	12.61
27	12.88	14.41	15.15	14.48	11.20	13.01	11.78	12.10	11.67	12.12	13.37	11.76
28	14.50	14.18	14.37	14.07	12.97	12.45	10.83	11.89	10.21	11.46	13.16	13.29
29	13.54	13.01	13.78	14.54	---	11.52	12.55	10.70	12.24	12.83	14.43	13.37
30	13.30	14.39	15.10	13.76	---	13.44	11.55	12.00	11.20	12.07	13.17	11.21
31	14.46	---	14.68	13.66	---	12.60	---	11.65	---	12.23	12.82	---
MAX	15.08	14.82	15.15	15.40	14.46	13.44	13.44	13.39	12.56	13.62	14.71	13.98

WTR YR 1981 MEAN 12.85 HIGH 9.90 LOW 15.40

RICHLAND COUNTY

405753082360800. Local number, R-3.
LOCATION.--Lat 40°57'53", long 82°36'08", Hydrologic Unit 04100012, Voisard plant in Shiloh.
Owner: Voisard Corp.
AQUIFER.--Sand and gravel of Pleistocene Age.
WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in (0.2 m), depth 150 ft (45.7 m), cased.
DATUM.--Altitude of land-surface datum is 1080 ft (329 m), from topographic map. Measuring point: Floor of instrument shelter 3.17 ft (0.966 m) above land-surface datum.
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.
PERIOD OF RECORD.--April 1946 to current year.
EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 35.90 ft (10,942 m) Feb. 12, 1981; minimum daily low, 23.68 ft (7.218 m) June 15, 23, 1947.
EXTREMES FOR CURRENT YEAR.--Maximum daily low, 35.90 ft (10.942 m) Feb. 12; minimum daily low, 31.66 ft (9.650 m) May 28.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32.01	32.61	32.72	33.31	34.50	34.44	33.47	32.61	31.82	---	32.03	32.41
2	31.95	32.69	32.96	33.62	34.65	34.50	33.73	32.68	31.91	---	31.92	32.51
3	31.89	32.62	33.27	33.69	34.82	34.51	33.36	32.54	---	---	31.92	32.46
4	32.16	32.52	33.18	33.96	34.95	34.30	33.18	32.53	---	---	31.96	32.52
5	32.38	32.53	33.00	33.96	35.01	34.10	33.51	32.38	---	---	32.08	32.50
6	32.37	32.57	33.02	33.64	34.93	34.28	33.73	32.46	---	---	31.95	32.43
7	32.00	32.36	32.99	33.79	34.81	34.45	33.50	32.52	---	---	31.79	32.32
8	32.03	32.50	32.89	33.89	34.93	34.49	33.26	32.35	---	---	31.88	32.22
9	32.24	32.31	32.87	33.90	35.17	34.47	33.35	32.24	---	---	32.13	32.32
10	32.28	32.90	33.07	34.11	35.19	34.32	33.32	32.11	---	---	32.21	32.20
11	32.16	33.09	33.10	34.00	35.54	34.14	33.14	32.04	---	---	32.03	32.30
12	32.36	33.06	32.94	33.93	35.90	34.02	33.08	32.32	---	---	32.04	32.29
13	32.45	32.78	33.13	33.67	35.89	33.90	33.14	32.30	---	---	32.15	32.20
14	32.51	32.72	33.07	33.80	35.77	34.07	33.29	32.10	---	---	32.19	32.16
15	32.38	32.82	33.01	34.07	35.59	33.78	33.50	31.96	---	---	31.95	32.23
16	32.43	32.96	33.02	34.27	35.37	33.77	33.21	32.13	---	---	32.10	32.21
17	32.38	32.88	33.03	34.31	35.33	33.59	32.71	32.16	---	---	32.19	32.28
18	32.23	32.79	33.08	34.16	35.31	33.56	32.95	32.14	---	---	32.29	32.28
19	32.30	32.87	33.67	34.09	35.10	33.55	32.80	32.00	---	---	32.18	32.13
20	32.33	32.83	33.70	34.24	34.92	33.70	32.85	32.06	---	---	32.34	32.06
21	32.32	32.85	33.68	34.26	34.97	34.01	32.83	31.97	---	---	32.42	32.10
22	32.60	32.89	33.52	34.14	34.84	33.99	32.54	31.99	---	32.04	32.32	32.28
23	32.71	32.74	33.20	34.21	34.47	34.02	32.12	31.83	---	32.02	32.33	32.53
24	32.56	32.66	33.41	34.27	34.79	34.02	32.26	31.83	---	31.97	32.54	32.61
25	32.12	32.95	33.52	34.27	34.98	33.99	32.58	31.91	---	32.00	32.55	32.38
26	32.42	33.00	33.40	34.20	35.04	33.74	32.55	31.82	---	31.98	32.50	32.14
27	32.46	32.67	33.68	34.41	34.96	33.95	32.60	31.72	---	32.16	32.54	32.11
28	32.42	32.25	33.47	34.52	34.48	33.85	32.49	31.66	---	31.84	32.63	32.34
29	32.66	32.56	33.32	34.89	---	33.38	32.55	31.67	---	31.98	32.56	32.29
30	32.70	32.69	33.34	35.14	---	33.46	32.53	31.72	---	32.04	32.44	32.17
31	32.56	---	33.28	35.07	---	33.56	---	31.92	---	32.07	32.48	---
MAX	32.71	33.09	33.70	35.14	35.90	34.51	33.73	32.68	31.91	32.16	32.63	32.61

WTR YR 1981 MEAN 33.05 HIGH 31.66 LOW 35.90

SANDUSKY COUNTY

411914083045300. Local number, S-3.
LOCATION.--Lat 41°19'14", long 83°04'53", Hydrologic Unit 04100011, 2.6 mi (4.2 km) southeast of Fremont Post Office.
Owner: State of Ohio.
AQUIFER.--Limestone of Silurian Age.
WELL CHARACTERISTICS.--Drilled test artesian well, diameter 12 in (0.30 m), depth 121 ft (36.9 m), cased to 93 ft (28.3 m).
DATUM.--Altitude of land-surface datum is 627 ft (191 m), from topographic map. Measuring point: Floor of instrument shelter 3.00 ft (0.914 m) above land-surface datum.
PERIOD OF RECORD.--December 1974 to current year.
EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 24.18 ft (7.370 m) Aug. 2, 1975; minimum daily low, 14.02 ft (4.273 m) Mar. 24, 1975.
EXTREMES FOR CURRENT YEAR.--Maximum daily low, 22.86 ft (6.968 m) July 17; minimum daily low, 15.74 ft (4.798 m) June 25.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.35	16.12	16.02	16.11	16.29	16.07	16.11	15.89	16.27	15.77	17.77	18.64
2	16.28	16.19	16.17	16.25	16.43	16.13	17.42	16.02	16.18	15.77	17.59	18.40
3	16.25	16.07	16.34	16.18	16.49	16.16	18.35	16.03	16.08	16.83	18.99	18.24
4	16.42	15.94	16.25	16.50	16.59	16.05	17.60	16.04	16.15	18.33	19.93	18.01
5	16.54	16.00	16.13	16.48	16.64	15.98	17.00	15.95	16.15	18.70	19.13	17.96
6	16.58	15.98	16.11	16.25	16.50	16.09	16.88	16.03	16.05	17.56	18.45	17.87
7	16.41	15.78	16.10	16.11	16.53	16.23	16.68	16.03	16.17	17.05	17.98	17.73
8	16.27	15.94	16.06	16.25	16.40	16.29	17.67	15.97	16.07	18.44	17.67	17.54
9	16.38	15.90	16.06	16.26	16.52	16.34	19.03	15.98	15.94	20.03	19.54	17.58
10	16.38	16.19	16.08	16.24	16.53	16.23	18.29	15.89	16.05	21.04	21.07	17.43
11	16.27	16.25	16.15	16.41	16.66	16.12	17.31	15.87	16.37	21.66	21.31	17.44
12	16.38	16.29	16.06	16.38	16.86	16.04	17.00	15.97	16.45	21.00	19.97	17.41
13	16.45	16.15	16.16	16.16	16.87	16.00	16.93	16.01	16.25	19.84	19.16	17.31
14	16.46	16.08	16.18	16.19	16.75	16.11	16.85	15.92	16.00	20.39	18.75	17.22
15	16.35	16.16	16.12	16.29	16.67	15.99	16.92	15.80	16.08	21.73	18.34	17.22
16	16.34	16.25	16.20	16.39	16.53	16.00	16.65	15.98	16.04	22.61	18.14	17.21
17	16.22	16.18	16.22	16.38	16.49	15.89	16.29	16.09	16.13	22.86	18.06	17.14
18	16.18	16.15	15.99	16.27	16.44	15.87	16.44	16.09	16.06	21.54	17.98	17.06
19	16.21	16.16	16.51	16.23	16.37	15.84	16.40	15.95	16.01	20.66	17.89	16.84
20	16.23	16.15	16.68	16.26	16.21	15.90	16.39	16.02	15.97	19.95	17.95	16.78
21	16.30	16.18	16.67	16.29	16.30	16.15	16.36	16.03	15.88	19.42	18.14	16.86
22	16.46	16.18	16.60	16.22	16.27	16.19	16.13	16.03	15.79	19.26	18.30	16.87
23	16.49	16.18	16.35	16.17	16.04	16.16	15.79	16.08	15.92	19.12	18.44	16.97
24	16.28	16.14	16.26	16.22	16.14	16.16	15.86	16.02	15.86	18.82	19.03	16.93
25	16.09	16.24	16.49	16.24	16.31	16.24	16.02	16.09	15.74	18.61	18.94	16.86
26	16.20	16.30	16.26	16.19	16.38	16.15	16.03	16.17	15.83	18.40	21.05	16.67
27	16.24	16.09	16.49	16.27	16.35	16.26	16.04	16.11	15.91	18.38	21.69	16.64
28	16.12	15.86	16.43	16.34	16.07	16.23	15.91	16.08	15.88	18.08	20.82	16.78
29	16.21	15.95	16.29	16.61	---	16.04	15.84	16.13	15.83	17.98	20.10	16.74
30	16.21	16.02	16.28	16.64	---	16.00	15.84	16.09	15.81	17.91	19.39	16.66
31	16.02	---	16.15	16.60	---	16.12	---	16.27	---	17.82	18.99	---
MAX	16.58	16.30	16.68	16.64	16.87	16.34	19.03	16.27	16.45	22.86	21.69	18.64

WTR YR 1981 MEAN 16.83 HIGH 15.74 LOW 22.86

SANDUSKY COUNTY--Continued

412703083213600. Local number, S-2.
LOCATION.--Lat 41°27'03", long 83°21'36", Hydrologic Unit 04100010, at water works in Woodville.
Owner: Woodville Water department.
AQUIFER.--Limestone of Silurian Age.
WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in (0.2 m) depth 198 ft (60.4 m) cased.
DATUM.--Altitude of land-surface datum is 635 ft (194 m) from topographic map. Measuring point: Top of casing at land-surface datum.
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.
PERIOD OF RECORD.--June 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 62.20 ft (18.959 m) Oct. 8, 1980; minimum daily low, 18.60 ft (5.669 m) May 6, 1977.
EXTREMES FOR CURRENT YEAR.--Maximum daily low, 62.20 ft (18.959 m) Oct. 8; minimum daily low, 26.52 ft (8.083 m) Sept. 6.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52.12	39.15	38.64	36.57	44.42	37.10	51.13	37.50	53.22	42.25	61.57	58.92
2	59.34	38.88	38.89	38.30	53.68	41.19	56.23	41.29	50.06	43.31	61.58	44.08
3	58.44	38.29	39.30	36.75	49.75	38.77	51.29	42.70	48.13	45.28	61.58	27.10
4	51.43	38.42	38.41	38.75	43.51	48.34	51.75	43.53	56.93	48.89	57.42	27.63
5	51.63	39.86	39.18	38.08	47.83	41.54	54.56	43.81	49.85	49.84	61.52	27.80
6	47.41	37.16	38.81	36.21	48.32	38.70	57.37	43.05	51.40	43.25	61.58	26.52
7	49.24	36.91	38.76	35.26	46.46	38.54	60.38	40.62	47.29	51.56	60.68	26.73
8	62.20	39.01	37.64	37.63	47.69	28.05	55.17	43.95	48.79	57.49	61.58	34.07
9	44.99	38.09	39.36	38.91	53.77	41.61	59.76	43.47	52.08	49.66	55.54	26.55
10	53.64	39.42	37.95	37.50	55.19	39.65	55.30	39.61	38.64	42.30	56.70	37.61
11	35.14	39.16	38.56	38.21	55.27	46.27	54.93	43.57	31.80	49.12	58.56	33.82
12	51.21	38.81	36.91	39.17	54.98	41.58	51.62	41.86	30.32	47.87	58.67	38.82
13	50.10	37.65	36.16	38.30	49.33	50.39	53.31	41.90	29.91	52.21	61.58	27.17
14	56.73	37.95	37.86	38.01	50.39	43.08	53.26	39.51	31.53	46.32	61.58	40.60
15	53.04	38.13	34.53	39.26	40.51	43.56	51.98	38.80	31.18	53.90	61.58	36.57
16	38.17	37.64	34.23	39.35	48.13	49.57	29.99	34.20	30.73	57.12	60.02	40.28
17	37.02	35.95	35.35	39.27	46.46	46.30	28.88	48.25	29.48	58.83	61.58	53.47
18	40.57	37.04	34.98	38.38	41.96	53.59	39.32	46.23	28.07	58.03	55.77	51.80
19	38.85	37.01	35.63	40.27	42.54	53.20	41.10	38.49	29.43	54.39	59.02	44.45
20	37.82	37.65	35.55	39.80	37.41	50.80	42.28	40.46	31.60	59.30	61.11	46.27
21	38.77	37.45	41.61	41.66	28.25	33.06	46.08	43.43	46.42	56.13	57.06	48.90
22	40.97	37.40	36.18	39.96	28.21	36.33	42.02	39.67	43.04	59.31	51.40	51.36
23	39.36	37.04	37.17	38.05	28.62	48.30	38.58	40.81	40.07	61.98	37.70	52.90
24	38.57	39.82	36.33	38.34	31.85	58.32	46.68	44.64	30.20	55.90	60.08	56.93
25	38.22	39.05	36.29	39.21	34.80	50.90	28.69	40.82	31.25	56.49	60.92	35.60
26	38.61	39.23	35.53	39.75	38.51	48.13	40.24	44.92	34.23	57.91	61.58	49.11
27	39.25	37.23	39.17	39.88	34.18	55.18	44.49	43.83	33.27	53.17	61.58	51.83
28	38.39	37.25	37.37	39.33	36.78	49.90	44.90	39.69	32.42	61.58	42.36	55.52
29	38.97	43.15	38.55	37.62	---	46.48	41.62	47.63	39.67	61.58	59.39	54.51
30	37.75	38.79	37.16	52.36	---	55.57	40.82	39.14	44.49	54.30	57.19	58.84
31	36.52	---	38.98	55.61	---	55.12	---	43.03	---	60.41	60.03	---
MAX	62.20	43.15	41.61	55.61	55.27	58.32	60.38	48.25	56.93	61.98	61.58	58.92

WTR YR 1981 MEAN 44.31 HIGH 26.52 LOW 62.20

SENECA COUNTY

410802083093900. Local number, SE-2.
LOCATION.--Lat 41°08'02", long 83°09'39", Hydrologic Unit 04100011, Tiffin State Hospital, Tiffin.
Owner: State of Ohio.
AQUIFER.--Limestone of Silurian Age.
WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 12 in (0.3 m) depth 250 ft (76.2 m), cased.
DATUM.--Altitude of land-surface datum is 740 ft (226 m), from topographic map. Measuring point: Floor of instrument shelter 0.50 ft (0.152 m) above land-surface datum.
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.
PERIOD OF RECORD.--July 1962 to current year.
EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 23.76 ft (7.242 m) Nov. 22, 1965; minimum daily low, 14.78 ft (4.505 m) June 16, 1981.
EXTREMES FOR CURRENT YEAR.--Maximum daily low, 21.26 ft (6.480 m) Dec. 3; minimum daily low, 14.78 ft (4.505 m) June 16.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.87	20.71	20.75	20.44	19.85	18.24	19.52	18.12	18.24	16.37	19.76	19.12
2	19.94	20.83	21.03	20.64	19.98	18.40	19.67	18.25	18.18	16.67	19.62	18.34
3	19.97	20.67	21.26	20.68	20.02	18.50	19.43	18.27	18.12	16.83	19.63	17.67
4	20.28	20.53	21.17	20.90	19.97	18.42	19.31	18.24	18.33	16.84	19.72	16.69
5	20.47	20.63	20.87	20.90	19.97	18.45	19.67	18.21	18.38	17.05	19.83	16.24
6	20.47	20.63	20.80	20.50	19.95	18.71	19.92	18.39	18.31	17.44	19.76	16.26
7	20.20	20.37	20.78	20.61	19.79	18.93	19.81	18.43	18.50	17.72	19.65	16.30
8	20.09	20.65	20.72	20.63	19.73	19.00	19.49	18.32	18.44	17.87	19.78	16.44
9	20.32	20.60	20.70	20.63	19.92	19.01	19.76	18.25	17.70	17.97	20.02	16.69
10	20.32	21.04	20.66	20.77	19.93	18.88	19.78	18.19	16.70	18.19	20.11	16.87
11	20.28	21.10	20.75	20.72	20.01	18.88	19.51	17.93	16.35	18.35	20.07	17.14
12	20.50	21.07	20.54	20.67	20.16	18.82	19.63	17.96	16.23	18.40	20.05	17.32
13	20.56	20.84	20.64	20.49	19.94	18.90	19.60	17.84	16.24	18.43	20.11	17.41
14	20.58	20.78	20.59	20.43	19.62	19.07	19.18	17.64	15.32	18.67	20.11	17.46
15	20.42	20.87	20.51	20.62	19.36	18.89	19.20	17.25	14.82	18.77	19.88	17.56
16	20.49	21.02	20.60	20.82	19.10	18.98	18.75	17.34	14.78	18.79	20.09	17.62
17	20.39	20.93	20.59	20.82	19.01	18.93	18.10	17.28	15.06	18.95	20.21	17.72
18	20.37	20.92	20.54	20.62	18.86	18.91	18.30	17.20	15.32	19.04	20.20	17.69
19	20.47	20.93	21.03	20.58	18.60	18.98	18.30	17.09	15.67	19.10	20.18	16.43
20	20.48	20.91	21.07	20.59	18.27	19.10	18.29	17.28	15.91	18.93	20.21	15.63
21	20.65	20.99	21.05	20.60	18.37	19.48	18.31	17.38	16.13	19.12	20.31	15.82
22	20.91	21.00	20.89	20.53	18.27	19.49	18.05	17.43	15.86	19.32	20.34	16.41
23	20.92	20.90	20.48	20.44	17.84	19.48	17.69	17.51	15.64	19.38	20.31	16.63
24	20.77	20.87	20.85	20.48	18.17	19.52	17.99	17.49	15.67	19.32	20.38	16.80
25	20.36	21.06	20.87	20.50	18.42	19.64	18.32	17.65	15.55	19.39	20.50	16.87
26	20.72	21.12	20.75	20.35	18.50	19.54	18.34	17.75	15.04	19.47	20.43	16.73
27	20.76	20.82	20.78	20.33	18.50	19.74	18.39	17.78	15.20	19.66	20.40	16.70
28	20.68	20.44	20.73	20.23	18.09	19.73	18.27	17.78	15.40	19.47	20.56	17.05
29	20.78	20.71	20.52	20.46	---	19.31	18.19	17.86	15.69	19.64	20.49	17.07
30	20.81	20.84	20.54	20.44	---	19.29	18.14	17.93	16.08	19.75	20.07	17.09
31	20.56	---	20.32	20.41	---	19.46	---	18.22	---	19.80	20.08	---
MAX	20.92	21.12	21.26	20.90	20.16	19.74	19.92	18.43	18.50	19.80	20.56	19.12

WTR YR 1981 MEAN 19.15 HIGH 14.78 LOW 21.26

SUMMIT COUNTY

410330081282000. Local number, SU-6.
LOCATION.--Lat 41°03'30", long 81°28'20", Hydrologic Unit 04110002, Seiberling St, Akron.
Owner: Goodyear Tire and Rubber Co.
AQUIFER.--Sand and gravel of Pleistocene Age.
WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 24 in (0.6 m), depth 89 ft (27.1 m), cased.
DATUM.--Altitude of land-surface datum is 1000 ft (305 m) from topographic map. Measuring point: Floor of instrument shelter 2.63 ft (0.802 m) above land-surface datum.
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.
PERIOD OF RECORD.--March 1944 to current year. Records for May 14-Sept. 30, 1980, published in USGS-WRD-OH-80-1, are unreliable and should not be used.
EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 59.47 ft (18.126 m) Oct. 18, 1947; minimum daily low, 11.95 ft (3.642 m) April 9, 1980.
EXTREMES FOR CURRENT YEAR.--Maximum daily low, 27.19 ft (8.288 m) Sept. 3; minimum daily low, 12.22 ft (3.725 m) Feb. 20.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	25.44	19.55	14.59	13.47	12.55	12.69	12.55	18.63	20.70	23.06	27.12
2	---	25.21	19.19	14.49	13.29	12.59	12.71	12.55	18.70	20.81	23.45	27.15
3	---	25.38	18.90	14.44	13.34	12.66	12.71	12.51	18.74	20.85	23.70	27.19
4	---	25.48	18.69	14.35	13.38	12.65	12.69	12.49	18.81	20.87	23.87	25.78
5	---	25.53	18.45	14.33	13.38	12.69	12.58	15.20	18.86	20.87	24.03	21.91
6	---	25.56	18.24	14.31	13.35	12.76	12.69	16.27	18.89	20.95	24.17	20.83
7	---	25.60	18.00	14.31	13.34	12.76	12.69	16.71	18.92	21.04	24.29	20.17
8	---	25.60	17.74	14.20	13.23	12.74	12.67	16.83	19.03	21.12	24.40	23.47
9	---	25.08	17.56	14.19	13.32	12.74	12.74	16.94	18.93	21.19	24.53	24.94
10	---	24.94	17.41	14.17	13.32	12.75	12.73	17.03	17.84	21.27	24.67	25.56
11	---	24.95	17.27	14.11	13.30	12.78	12.66	17.19	18.40	21.31	24.82	---
12	---	24.97	17.10	14.06	13.34	12.77	12.53	17.32	18.71	21.34	24.94	---
13	---	24.99	16.90	14.01	13.33	12.80	12.44	17.40	18.93	21.41	25.07	---
14	---	25.02	16.72	13.96	13.27	12.80	12.44	17.46	19.05	21.49	25.19	---
15	---	25.02	16.55	13.90	13.19	12.72	12.45	17.52	19.24	21.58	25.38	---
16	---	25.01	16.35	13.90	13.10	12.74	12.45	17.87	19.40	21.69	25.54	---
17	---	24.94	16.24	13.89	13.06	12.78	12.42	18.02	19.51	21.81	25.67	---
18	---	24.95	16.11	13.84	13.00	12.78	12.42	18.15	19.66	21.83	25.80	---
19	---	24.97	16.02	13.74	12.95	12.80	12.39	18.28	19.78	21.81	25.94	---
20	---	24.99	15.96	13.75	12.22	12.85	12.35	18.41	19.86	21.87	26.05	---
21	---	25.03	15.89	13.74	12.24	12.85	12.39	18.48	19.93	21.96	26.16	---
22	---	25.15	15.79	13.72	12.24	12.83	12.40	18.57	19.93	22.05	26.21	---
23	25.23	25.17	15.77	13.69	12.28	12.80	12.40	18.59	20.01	22.14	26.26	---
24	25.26	25.32	15.37	13.69	12.45	12.84	12.49	17.98	20.12	22.33	26.36	---
25	25.26	25.44	15.27	13.65	12.52	12.87	12.53	18.28	20.18	22.40	26.49	---
26	25.24	25.50	15.20	13.53	12.60	12.87	12.52	18.44	20.23	21.98	26.59	---
27	25.26	25.52	15.12	13.50	12.60	12.64	12.52	18.54	20.32	22.07	26.69	---
28	25.32	22.05	15.01	13.50	12.58	12.65	12.48	18.45	20.40	22.09	26.80	---
29	25.36	20.67	14.78	13.59	---	12.58	12.46	18.40	20.50	22.04	26.92	---
30	25.40	20.02	14.71	13.60	---	12.64	12.49	18.47	20.60	22.15	26.96	---
31	25.43	---	14.67	13.60	---	12.66	---	18.55	---	22.28	27.04	---
MAX	25.43	25.60	19.55	14.59	13.47	12.87	12.74	18.59	20.60	22.40	27.04	27.19

WTR YR 1981 MEAN 18.16 HIGH 12.22 LOW 27.19

SUMMIT COUNTY--Continued

410846081271600. Local number, SU-7.
LOCATION.--Lat 41°08'46", long 81°27'16", Hydrologic Unit 04110002, Monroe Falls Road, Cuyahoga Falls.
Owner: Cuyahoga Falls Water Dept.
AQUIFER.--Sand and gravel of Pleistocene Age.
WELL CHARACTERISTICS.--Drilled unused water-table, diameter 6 in (0.15 m), depth 100 ft (30.5 m), cased.
DATUM.--Altitude of land-surface datum is 994 ft (303 m), from topographic map. Measuring point: Floor of instrument shelter 5.00 ft (1.524 m) above land-surface datum.
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.
PERIOD OF RECORD.--August 1968 to current year.
EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 44.19 ft (13.469 m) Sept. 7, 1971; minimum daily low, 0.92 ft (0.280 m) Feb. 24, 1981.
EXTREMES FOR CURRENT YEAR.--Maximum daily low, 30.01 ft (9.147 m) Jan. 29; minimum daily low, 0.92 ft (0.280 m) Feb. 24.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.64	21.79	25.28	26.94	29.72	5.07	13.75	12.55	18.03	17.54	23.12	26.03
2	17.91	21.87	25.38	26.97	29.74	6.23	14.18	12.48	18.15	18.04	23.14	26.07
3	17.97	21.96	25.41	26.98	29.35	7.36	14.28	12.10	18.39	18.27	23.20	25.92
4	18.11	22.07	25.40	27.01	28.92	8.08	15.18	12.75	18.42	18.60	23.18	25.73
5	18.25	22.18	25.33	27.11	28.38	9.17	15.50	13.26	18.77	18.71	23.24	25.26
6	18.62	22.29	25.26	27.26	27.87	9.93	15.72	13.75	18.99	18.80	23.31	25.08
7	18.68	22.39	25.28	27.38	27.82	10.57	15.77	14.02	19.10	19.22	23.48	24.80
8	18.58	22.43	25.26	27.48	27.88	11.16	16.08	14.21	19.26	19.40	23.58	24.47
9	18.39	22.49	25.29	27.59	28.00	11.69	16.33	14.52	19.16	19.88	23.61	24.01
10	18.42	22.67	25.23	27.66	28.19	12.16	16.58	14.63	18.77	20.15	23.67	24.01
11	18.55	22.78	25.04	27.71	28.32	12.58	16.78	14.81	17.47	20.70	23.65	23.93
12	18.58	22.90	24.88	27.90	28.43	12.98	16.84	14.81	16.57	21.15	23.63	24.03
13	18.78	23.06	24.81	28.02	28.14	13.35	16.83	14.95	15.45	21.56	23.64	24.15
14	19.26	23.33	24.76	28.15	27.92	13.62	16.60	14.95	14.46	21.86	23.58	24.30
15	19.59	23.25	24.68	28.19	27.86	13.94	15.80	15.06	12.16	22.09	23.55	24.29
16	19.87	23.36	24.77	28.43	27.73	14.31	13.54	15.06	11.91	22.32	23.60	24.53
17	20.11	23.47	24.90	28.50	27.68	14.69	12.36	15.16	12.21	22.61	23.60	24.58
18	20.34	23.66	25.06	28.59	26.97	14.97	10.95	15.27	12.70	22.91	23.72	24.57
19	20.55	23.77	25.22	28.91	25.11	15.35	10.02	15.55	13.38	23.18	23.77	24.47
20	20.70	23.87	25.36	29.00	19.24	15.97	10.37	15.94	13.86	23.45	24.01	24.63
21	20.84	23.99	25.47	29.33	7.12	16.20	11.06	16.24	14.32	23.38	24.18	24.67
22	20.95	24.14	25.62	29.48	2.23	16.69	11.73	16.52	14.75	22.99	24.37	24.87
23	21.14	24.27	25.78	29.60	1.27	16.83	12.38	16.63	14.99	23.04	24.60	24.96
24	21.15	24.55	25.93	29.69	.92	17.24	12.83	16.64	15.30	23.20	24.85	25.10
25	21.22	24.56	26.06	29.78	1.25	17.31	13.03	16.92	15.60	23.45	25.08	25.39
26	21.29	24.75	26.13	29.84	1.71	17.49	13.41	17.26	15.92	23.58	25.28	25.55
27	21.44	24.83	26.23	29.88	2.23	17.27	13.56	17.48	16.18	23.67	25.47	25.79
28	21.52	24.94	26.36	29.90	3.74	16.61	13.73	17.74	16.36	23.75	25.60	25.94
29	21.59	25.02	26.49	30.01	---	15.25	13.75	17.87	16.77	23.73	25.71	26.11
30	21.66	25.12	26.64	29.79	---	14.17	13.03	17.90	17.19	23.33	25.85	26.12
31	21.71	---	26.91	29.73	---	13.85	---	17.96	---	23.06	25.95	---
MAX	21.71	25.12	26.91	30.01	29.74	17.49	16.84	17.96	19.26	23.75	25.95	26.12

WTR YR 1981 MEAN 20.60 HIGH .92 LOW 30.01

VAN WERT COUNTY

405215084335400. Local number, VW-1.
LOCATION.--Lat 40°52'15", long 84°33'54", Hydrologic Unit 04100007, Ridge Road near Van Wert.
Owner: Marsh Foundation.
AQUIFER.--Limestone of Silurian Age.
WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in (0.2 m), depth 340 ft (103.6 m), cased.
DATUM.--Altitude of land-surface datum is 790.37 ft (240.905 m). Measuring point: Floor of instrument shelter 6.15 ft (1.874 m) above land-surface datum.
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.
PERIOD OF RECORD.--August 1957 to current year.
EXTREMES FOR PERIOD OF RECORD.--Maximum daily low 32.81 ft (10.00 m) Mar. 2, 1977; minimum daily low, 18.85 ft (5.745 m) Mar. 6, 1959.
EXTREMES FOR CURRENT YEAR.--Maximum daily low 29.35 ft (8.946 m) Feb. 12, 13; minimum daily low 26.55 ft (8.092 m) Sept. 8, 10, 14, 20, 21.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27.10	27.65	27.75	---	28.55	28.65	28.50	28.20	27.65	27.15	27.10	26.65
2	27.10	27.75	27.95	---	28.60	28.65	28.60	28.35	27.55	27.15	26.95	26.65
3	27.10	27.65	28.30	---	28.75	28.70	28.35	28.30	27.40	27.10	26.85	26.70
4	27.35	27.45	28.25	---	28.85	28.60	28.25	28.20	27.50	26.95	26.85	26.65
5	27.50	27.55	28.05	---	28.95	28.45	28.55	28.15	27.45	26.90	26.95	26.75
6	27.55	27.55	28.00	---	28.70	28.65	28.80	28.25	27.35	26.90	26.85	26.80
7	27.30	27.30	28.00	---	28.70	28.85	28.70	28.25	27.40	27.00	26.70	26.70
8	27.20	27.45	28.00	---	28.55	28.95	28.45	28.20	27.30	27.05	26.60	26.55
9	27.30	27.40	27.95	---	28.75	28.95	28.70	28.05	27.20	27.05	26.85	26.65
10	27.30	27.85	27.95	---	28.80	28.80	28.70	28.05	27.30	27.05	26.90	26.55
11	27.20	27.95	28.05	---	28.75	28.70	28.50	27.85	27.40	27.05	26.90	26.65
12	27.40	27.95	28.00	---	29.35	28.50	28.55	28.00	27.40	27.00	26.85	26.65
13	27.50	27.80	28.05	---	29.35	28.65	28.55	28.05	27.35	26.95	26.90	26.65
14	27.50	27.75	28.10	---	29.30	28.55	28.75	28.00	27.15	27.00	26.95	26.55
15	27.35	27.85	28.10	---	29.25	28.45	29.00	27.75	27.15	27.00	26.70	26.60
16	27.40	28.00	27.90	---	29.05	28.40	28.85	28.00	27.15	26.95	26.80	26.65
17	27.35	27.95	28.05	---	28.85	28.40	28.50	28.05	27.30	27.00	26.90	26.75
18	27.25	27.90	28.05	---	28.80	28.25	28.55	28.10	27.25	27.05	26.90	26.80
19	27.30	27.90	28.25	---	28.75	28.20	28.55	28.00	27.20	27.00	26.85	26.70
20	27.30	27.90	28.55	28.45	28.55	28.25	28.55	28.00	27.15	26.85	26.90	26.55
21	27.45	27.95	28.70	28.50	28.65	28.50	28.60	27.95	27.10	26.90	26.95	26.55
22	27.65	28.00	28.70	28.45	28.70	28.65	28.40	27.90	27.05	27.05	27.00	26.75
23	27.75	27.90	28.50	28.35	28.50	28.60	28.15	27.85	27.20	27.15	26.90	26.95
24	27.65	27.95	28.15	28.35	28.30	28.65	28.05	27.80	27.20	27.10	26.95	26.95
25	27.30	28.10	28.50	28.35	28.60	28.70	28.25	27.70	27.05	27.10	27.00	26.90
26	27.55	28.20	28.50	28.25	28.85	28.65	28.35	27.70	27.15	27.05	26.95	26.75
27	27.60	27.95	28.35	28.30	29.00	28.75	28.35	27.70	27.30	27.15	26.85	26.65
28	27.55	27.50	28.50	28.45	28.95	28.80	28.25	27.60	27.35	27.00	26.95	26.85
29	27.70	27.60	28.45	28.85	---	28.60	28.15	27.60	27.15	27.05	26.90	26.85
30	27.75	27.80	28.25	29.00	---	28.25	28.15	27.50	27.10	27.10	26.80	26.75
31	27.55	---	---	28.95	---	28.40	---	27.65	---	27.15	26.75	---
MAX	27.75	28.20	28.70	29.00	29.35	28.95	29.00	28.35	27.65	27.15	27.10	26.95

WTR YR 1981 MEAN 27.76 HIGH 26.55 LOW 29.35

WILLIAMS COUNTY

413108084415300. Local number, WM-12.
LOCATION.--Lat 41°31'08", long 84°41'53", Hydrologic Unit 04100003, 1.7 mi (2.7 km) east of Blakeslee.
Owner: State of Ohio.
AQUIFER.--Sand and gravel of Pleistocene Age.
WELL CHARACTERISTICS.--Drilled test artesian well, diameter 10 in (0.25 m), depth 115 ft (35.1 m), cased to 115 ft (35.1 m), screened 85 ft to 115 ft (25.9 m to 35.1 m).
DATUM.--Altitude of land-surface datum is 830 ft (253 m), from topographic map. Measuring point: Floor of instrument shelter 1.50 ft (0.457 m) above land-surface datum.
PERIOD OF RECORD.--1974 to current year.
EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 10.56 ft (3.219 m) Feb. 6-7, 1977; minimum daily low, 4.94 ft (1.506 m) Mar. 24, 1978.
EXTREMES FOR CURRENT YEAR.--Maximum daily low, 9.79 ft (2.984 m) Nov. 25; minimum daily low, 5.36 ft (1.634 m) June 17.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.31	9.55	9.64	9.20	9.27	6.61	8.86	6.69	8.25	7.64	6.88	8.91
2	9.39	9.59	9.67	9.29	9.46	6.84	8.92	6.55	8.24	7.74	7.08	8.98
3	9.42	9.49	9.69	9.30	9.50	6.98	8.80	6.63	8.24	7.79	7.31	8.97
4	9.55	9.50	9.54	9.42	9.54	7.03	8.83	6.82	8.31	7.82	7.52	8.31
5	9.61	9.55	9.41	9.41	9.54	7.30	8.99	7.02	8.31	7.90	7.67	8.07
6	9.60	9.53	9.40	9.20	9.42	7.53	9.06	7.32	8.08	8.05	7.77	8.03
7	9.51	9.45	9.39	9.32	9.41	7.74	9.01	7.50	8.16	8.17	7.87	7.96
8	9.48	9.58	9.31	9.35	9.45	7.84	8.89	7.59	8.15	8.24	8.08	8.15
9	9.59	9.56	9.00	9.38	9.52	7.88	9.06	7.73	8.02	8.32	8.25	8.24
10	9.58	9.74	8.75	9.46	9.50	7.90	9.06	7.73	7.63	8.42	8.31	8.36
11	9.57	9.75	8.67	9.40	9.51	7.98	8.93	7.55	7.43	8.49	8.37	8.47
12	9.66	9.71	8.42	9.38	9.56	7.95	9.00	7.57	7.38	8.54	8.44	8.55
13	9.67	9.60	8.50	9.28	9.45	8.14	9.00	7.59	7.39	8.59	8.51	8.59
14	9.66	9.63	8.57	9.32	9.30	8.23	8.78	7.57	6.54	8.69	8.54	8.70
15	9.64	9.67	8.56	9.37	9.20	8.13	7.82	7.25	6.02	8.73	8.52	8.75
16	9.65	9.71	8.75	9.47	9.09	8.28	7.19	7.08	5.55	8.80	8.66	8.77
17	9.59	9.66	8.77	9.49	8.92	8.30	6.65	7.08	5.36	8.85	8.72	8.83
18	9.60	9.67	8.84	9.40	8.37	8.34	6.84	7.10	5.56	8.90	8.75	8.83
19	9.62	9.67	9.09	9.38	7.53	8.40	6.92	7.27	5.87	8.91	8.81	8.77
20	9.62	9.66	9.11	9.45	6.66	8.52	7.14	7.50	6.07	8.85	8.89	8.88
21	9.69	9.72	9.08	9.46	5.99	8.69	7.26	7.64	6.27	8.59	8.95	8.91
22	9.76	9.71	9.02	9.40	5.63	8.70	7.31	7.76	6.33	8.18	8.97	9.08
23	9.76	9.68	8.93	9.41	5.57	8.70	7.25	7.86	6.54	7.69	8.99	9.11
24	9.66	9.73	9.17	9.42	5.87	8.73	7.37	7.93	6.59	7.92	9.07	9.06
25	9.51	9.79	9.18	9.42	6.10	8.78	7.47	8.06	6.59	8.09	9.12	9.03
26	9.65	9.78	9.16	9.40	6.28	8.74	7.50	8.14	6.84	8.08	9.12	8.97
27	9.65	9.62	9.23	9.43	6.31	8.87	7.68	8.12	7.01	7.87	9.11	9.00
28	9.59	9.50	9.20	9.47	6.43	8.84	7.67	8.17	7.14	7.60	9.14	9.05
29	9.60	9.64	9.18	9.60	---	8.69	7.32	8.21	7.32	7.34	9.07	9.02
30	9.58	9.67	9.20	9.62	---	8.73	6.94	8.18	7.51	7.20	8.99	8.95
31	9.46	---	9.10	9.56	---	8.80	---	8.25	---	6.99	8.95	---
MAX	9.76	9.79	9.69	9.62	9.56	8.87	9.06	8.25	8.31	8.91	9.14	9.11

WTR YR 1981 MEAN 8.51 HIGH 5.36 LOW 9.79

WYANDOT COUNTY

405009083172600. Local number, WY-1.
LOCATION.--Lat 40°50'09", long 83°17'26", Hydrologic Unit 04100011, State Rt 199, Upper Sandusky.
Owner: Karg Supply Co.
AQUIFER.--Limestone of Silurian Age.
WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 5 in (0.13 m), depth 90 ft (27.4 m), cased.
DATUM.--Altitude of land-surface datum is 850 ft (259 m), from topographic map. Measuring point: Floor of instrument shelter 3.00 ft (0.914 m) above land-surface datum.
REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.
PERIOD OF RECORD.--September 1951 to current year.
EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 40.90 ft (12.466 m) July 12, 15, 17, 21, Aug. 26, 1961; minimum daily low, 25.75 ft (8.123 m) Apr. 16, 1980.
EXTREMES FOR CURRENT YEAR.--Maximum daily low, 28.55 ft (8.702 m) Jan. 10, 11; minimum daily low, 26.55 ft (8.092 m) June 22.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27.85	28.15	27.90	28.15	28.30	27.55	27.75	27.50	27.30	26.85	27.50	27.80
2	27.85	28.10	28.00	28.00	27.90	27.45	27.85	27.55	27.40	26.90	27.50	27.75
3	27.85	27.95	28.30	28.00	28.00	27.45	27.85	27.55	27.50	26.90	27.35	27.50
4	27.85	27.95	28.35	28.00	28.05	27.45	27.90	27.40	27.55	26.90	27.35	27.45
5	27.90	28.05	28.35	28.20	28.10	27.45	27.80	27.45	27.55	26.75	27.50	27.45
6	27.90	28.10	28.35	28.20	28.10	27.45	27.80	27.50	27.55	26.75	27.50	27.40
7	27.90	28.10	28.30	28.15	28.10	27.50	27.90	27.55	27.45	26.95	27.50	27.30
8	27.90	28.05	28.10	28.25	27.95	27.50	27.95	27.60	27.40	27.05	27.50	27.10
9	27.90	28.00	28.15	28.35	27.90	27.50	28.00	27.60	27.30	27.10	27.55	27.20
10	27.90	28.05	28.25	28.55	27.90	27.50	28.05	27.55	27.15	27.10	27.60	27.20
11	27.85	28.25	28.30	28.55	27.90	27.55	28.10	27.30	27.05	27.15	27.75	27.30
12	27.80	28.30	28.30	28.25	28.10	27.55	28.00	27.25	27.05	27.10	27.85	27.30
13	27.85	28.30	28.25	28.15	28.15	27.50	27.65	27.35	27.05	27.05	27.90	27.30
14	27.95	28.25	28.25	28.05	28.15	27.50	27.65	27.40	26.95	27.15	28.00	27.15
15	28.00	28.25	28.15	28.05	28.10	27.50	27.85	27.35	26.70	27.20	28.00	27.15
16	28.05	28.25	28.20	28.15	27.90	27.30	27.90	27.30	26.60	27.25	27.95	27.15
17	28.05	28.15	28.25	28.20	27.80	27.35	27.90	27.25	26.60	27.30	27.90	27.20
18	28.05	28.15	28.25	28.15	27.80	27.45	27.70	27.10	26.65	27.30	28.00	27.20
19	27.90	28.25	28.45	28.05	27.80	27.50	27.55	27.20	26.70	27.30	28.00	27.15
20	27.80	28.25	28.50	28.05	27.75	27.65	27.45	27.20	26.70	27.25	28.10	26.90
21	27.95	28.25	28.45	28.15	27.70	27.70	27.60	27.15	26.70	27.10	28.15	26.75
22	28.15	28.30	28.35	28.15	27.65	27.70	27.65	27.20	26.55	27.25	28.15	26.80
23	28.20	28.30	28.25	28.15	27.45	27.65	27.65	27.30	26.60	27.30	28.15	26.90
24	28.20	28.15	28.25	28.15	27.40	27.75	27.50	27.25	26.65	27.35	28.00	27.00
25	28.20	28.35	28.20	28.15	27.55	27.90	27.55	27.10	26.65	27.35	28.15	27.00
26	28.00	28.40	28.15	28.05	27.65	27.90	27.60	27.15	26.75	27.35	28.20	27.00
27	27.90	28.40	28.10	28.00	27.70	27.95	27.45	27.25	26.75	27.25	28.25	26.95
28	27.95	28.05	28.15	28.05	27.70	27.95	27.50	27.35	26.75	27.25	28.25	26.80
29	28.15	27.90	28.10	28.15	---	27.85	27.55	27.40	26.70	27.35	28.30	26.95
30	28.20	27.85	28.15	28.30	---	27.55	27.50	27.40	26.75	27.40	28.20	27.00
31	28.20	---	28.20	28.30	---	27.70	---	27.35	---	27.50	28.00	---
MAX	28.20	28.40	28.50	28.55	28.30	27.95	28.10	27.60	27.55	27.50	28.30	27.80

WTR YR 1981 MEAN 27.69 HIGH 26.55 LOW 28.55

The following tables contain ground-water levels and low-flow measurements in Geauga County. The data was collected as part of a cooperative study with the Geauga County Sanitary Engineering Department for evaluating ground-water resources.

412555081095000. Local number, GE-97.
LOCATION.--Lat 41°25'55", long 81°09'50", Hydrologic Unit 04110002, 2.5 mi (4.0 km) south of Burton, on Rapids Road.
AQUIFER.--Sandstone of Pennsylvanian Age.
WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in (0.15 m), depth 87 ft (26.5 m), cased.
DATUM.--Altitude of land-surface datum is 1,150 ft (351 m), from topographic map. Measuring point: Floor of instrument shelter 0.80 ft (0.24 m), above land-surface datum.
PERIOD OF RECORD.--April 1980 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 9.25 ft (2.82 m) below land-surface datum, Apr. 15, 1980; lowest, 17.43 ft (5.31 m) below land-surface datum, Nov. 26, 1980.
EXTREMES FOR CURRENT YEAR.--Highest water level, 9.69 ft (2.95 m) below land-surface datum, Feb. 20, 1981; lowest, 17.43 ft (5.31 m) below land-surface datum, Nov. 26, 1980.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.50	17.14	17.32	16.17	15.47	11.17	12.20	11.65	13.34	14.78	15.55	15.11
2	16.56	17.18	17.26	16.30	15.21	11.44	12.34	11.75	13.37	14.83	15.53	15.19
3	16.56	17.14	17.36	16.27	14.79	11.64	12.19	11.83	13.40	14.85	15.49	15.21
4	16.73	17.07	17.23	16.35	14.52	11.60	12.30	12.07	13.57	14.85	15.48	14.99
5	16.79	17.13	17.07	16.35	14.43	11.80	12.38	12.11	13.60	14.90	15.50	14.69
6	16.79	17.13	17.03	16.21	14.23	12.07	12.49	12.17	13.64	14.99	15.50	14.61
7	16.68	17.05	16.98	16.28	14.18	12.26	12.47	12.19	13.76	15.07	15.50	14.51
8	16.68	17.17	16.92	16.30	14.07	12.34	12.36	12.20	13.76	15.11	15.48	14.33
9	16.81	17.12	16.86	16.30	14.19	12.37	12.65	12.17	13.76	15.11	15.48	14.30
10	16.81	17.27	16.73	16.35	14.15	12.39	12.67	12.17	13.98	15.18	15.48	14.27
11	16.80	17.27	16.69	16.30	13.89	12.48	12.64	12.08	14.08	15.23	15.48	14.24
12	16.90	17.26	16.44	16.28	13.85	12.48	12.70	12.05	14.08	15.24	15.43	14.23
13	16.92	17.20	16.55	16.23	13.63	12.62	12.79	11.96	14.09	15.25	15.37	14.23
14	16.93	17.21	16.49	16.23	13.50	12.76	12.66	11.87	14.07	15.33	15.35	14.23
15	16.91	17.25	16.46	16.32	13.43	12.66	11.73	11.80	14.03	15.35	15.34	14.27
16	16.94	17.30	16.41	16.36	13.33	12.83	11.56	11.92	14.03	15.37	15.32	14.30
17	16.93	17.28	16.41	16.36	12.89	12.92	11.35	11.96	14.11	15.39	15.30	14.38
18	16.92	17.29	16.33	16.29	12.20	12.94	11.68	11.94	14.11	15.43	15.23	14.39
19	16.97	17.32	16.49	16.29	11.58	13.07	11.67	11.94	14.12	15.48	15.17	14.39
20	17.00	17.32	16.48	16.34	9.69	13.17	11.74	12.08	14.17	15.48	15.07	14.46
21	17.07	17.36	16.46	16.34	10.27	13.40	11.82	12.19	14.33	15.60	15.01	14.50
22	17.18	17.38	16.41	16.30	10.27	13.44	11.71	12.32	14.39	15.71	14.97	14.68
23	17.20	17.34	16.26	16.30	10.31	13.43	11.59	12.42	14.45	15.73	14.91	14.75
24	17.12	17.35	16.38	16.33	10.21	13.31	11.83	12.51	14.48	15.73	14.91	14.81
25	16.99	17.42	16.39	16.33	10.63	13.04	11.94	12.64	14.48	15.75	14.94	14.83
26	17.17	17.43	16.35	16.21	10.93	12.92	11.97	12.74	14.56	15.78	14.91	14.82
27	17.18	17.32	16.38	16.12	10.98	12.41	11.93	12.79	14.60	15.85	14.93	14.88
28	17.13	17.19	16.37	15.89	10.99	12.21	11.86	12.90	14.65	15.83	14.98	15.01
29	17.15	17.32	16.29	15.78	---	11.93	11.71	12.97	14.67	15.64	15.00	15.06
30	17.14	17.38	16.29	15.75	---	12.10	11.70	13.16	14.71	15.61	15.03	15.08
31	17.04	---	16.24	15.64	---	12.24	---	13.32	---	15.56	15.07	---
MAX	17.20	17.43	17.36	16.36	15.47	13.44	12.79	13.32	14.71	15.85	15.55	15.21

WTR YR 1981 MEAN 14.68 HIGH 9.69 LOW 17.43

412718081102400. Local number, GE-98.
LOCATION.--Lat 41°27'18", long 81°10'24", Hydrologic Unit 04110002, 1.3 mi (2.1 km) southwest of Burton, on Hotchkiss Road.
AQUIFER.--Sand and gravel of Pleistocene Age.
WELL CHARACTERISTICS.--Drilled test water-table well, diameter 6 in (0.15 m), depth 108 ft (32.9 m), cased.
DATUM.--Altitude of land-surface datum is 1,120 ft (341 m), from topographic map. Measuring point: Floor of instrument shelter 1.40 ft (0.427 m), above land-surface datum.
REMARKS.--Interruptions in the water-level record were due to malfunction of the instrument.
PERIOD OF RECORD.--April 1980 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.30 ft (1.92 m) below land-surface datum, Apr. 28, 29, 1980; lowest, 8.81 ft (2.69 m) below land-surface datum, Jan. 20, 24, 25, 1981.
EXTREMES FOR CURRENT YEAR.--Highest water level, 6.92 ft (2.11 m) below land-surface datum, May 1, 1981; lowest, 8.81 ft (2.69 m) below land-surface datum, Jan. 20, 24, 25, 1981.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	8.70	8.71	8.67	8.64	7.15	7.29	6.92	7.45			
2	8.66	8.72	8.67	8.70	8.58	7.17	7.32	6.95	7.47			
3	8.67	8.71	8.68	8.70	8.57	7.20	7.31	6.98	7.49			
4	8.70	8.71	8.64	8.73	8.52	7.19	7.32	7.01	7.52			
5	8.71	8.73	8.62	8.73	8.50	7.22	7.32	7.03	7.54			
6	8.71	8.73	8.62	8.72	8.49	7.27	7.32	7.03	7.56			
7	8.71	8.72	8.61	8.72	8.49	7.33	7.32	7.03	7.61			
8	8.72	8.73	8.59	8.73	8.51	7.35	7.28	7.01	7.61			
9	8.74	8.72	8.57	8.73	8.53	7.37	7.37	7.02	7.58			
10	8.74	8.75	8.52	8.73	8.54	7.37	7.38	7.03	---			
11	8.75	8.75	8.51	8.74	8.52	7.38	7.38	7.02	---			
12	8.74	8.75	8.49	8.74	8.52	7.39	7.38	7.01	---			
13	8.74	8.75	8.51	8.74	8.47	7.41	7.39	7.01	---			
14	8.74	8.75	8.52	8.76	8.41	7.45	7.34	7.01	---			
15	8.74	8.76	8.51	8.78	8.40	7.44	7.22	6.98	---			
16	8.75	8.77	8.54	8.78	8.38	7.47	7.09	7.03	---			
17	8.75	8.76	8.54	8.78	8.37	7.48	7.03	7.05	---			
18	8.75	8.78	8.55	8.78	8.23	7.49	7.05	7.06	---			
19	8.76	8.78	8.62	8.79	8.04	7.51	7.05	7.08	---			
20	8.76	8.78	8.63	8.81	7.66	7.53	7.05	7.13	---			
21	8.78	8.80	8.64	8.80	7.48	7.59	7.07	7.16	---			
22	8.80	8.80	8.64	8.79	7.38	7.60	7.06	7.19	---			
23	8.80	8.79	8.63	8.80	7.26	7.58	7.04	7.23	---			
24	8.79	8.79	8.67	8.81	7.20	7.58	7.04	7.26	---			
25	8.77	8.79	8.68	8.81	7.17	7.54	7.05	7.31	---			
26	8.75	8.78	8.69	8.78	7.17	7.49	7.06	7.33	---			
27	8.75	8.72	8.70	8.76	7.17	7.39	7.06	7.34	---			
28	8.70	8.71	8.70	8.71	7.14	7.35	7.06	7.35	---			
29	8.70	8.72	8.70	8.70	---	7.24	7.03	7.37	---			
30	8.69	8.73	8.70	8.70	---	7.25	6.98	7.39	---			
31	8.67	---	8.68	8.68	---	7.29	---	7.44	---			
MAX	8.80	8.80	8.71	8.81	8.64	7.60	7.39	7.44	7.61			

WTR YR 1981 MEAN 8.06 HIGH 6.92 LOW 8.81

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

413445081131300. Local number, GE-100.
LOCATION.--Lat 41°34'45", long 81°13'13", Hydrologic unit 04110003, on Kirtland Road in Chardon.
AQUIFER.--Sandstone of Pennsylvanian Age.
WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in (0.15 m), depth 82 ft (25.0 m), cased.
DATUM.--Altitude of land-surface datum is 1,320 ft (402 m), from topographic map. Measuring point: Floor of instrument shelter 2.00 ft (0.61 m), above land-surface datum.
PERIOD OF RECORD.--May 1980 to January 1981.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 34.82 ft (10.61 m) below land-surface datum, June 8, 1980; lowest, 42.14 ft (15.11 m) below land-surface datum, Jan. 27, 28, 1981.
EXTREMES FOR CURRENT YEAR.--Highest water level, 36.18 ft (11.02 m) below land-surface datum, Dec. 21, 1980; lowest, 42.14 ft (5.11 m) below land-surface datum, Jan. 27, 28, 1981.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38.56	38.90	36.24	37.73								
2	38.58	39.47	---	37.39								
3	38.55	38.85	---	37.19								
4	38.67	39.08	---	36.93								
5	38.87	38.71	---	36.82								
6	38.86	38.66	---	37.47								
7	38.61	38.47	---	37.60								
8	38.44	38.54	---	36.88								
9	39.06	38.41	---	36.75								
10	39.06	38.74	---	36.60								
11	38.93	38.97	37.79	36.60								
12	39.18	39.05	38.33	36.74								
13	39.23	38.96	37.75	36.94								
14	39.32	38.98	37.37	37.35								
15	39.20	38.65	37.19	36.94								
16	39.27	38.94	36.98	36.85								
17	39.19	39.10	36.95	36.72								
18	38.86	38.97	36.95	37.00								
19	38.81	39.09	36.76	37.07								
20	38.81	39.24	36.19	37.04								
21	39.01	39.52	36.18	37.30								
22	39.31	39.62	36.64	37.34								
23	39.43	39.51	36.83	37.34								
24	39.23	39.13	37.10	37.28								
25	38.74	38.16	36.54	37.74								
26	38.93	38.31	36.67	42.06								
27	38.97	38.15	36.49	42.14								
28	38.97	37.19	36.58	42.14								
29	39.09	37.46	37.76	---								
30	39.06	37.74	37.77	---								
31	38.59	---	37.84	---								
MAX	39.43	39.62	38.33	42.14								

WTR YR 1981 MEAN 38.19 HIGH 36.18 LOW 42.14

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

GROUND-WATER LEVELS AT MISCELLANEOUS SITES

Site No.	Local No.	Location		Date	Water[1] level
412225081205200	GE-15	Lat 41°22'25"	long 81°20'52"	Nov. 6, 1980	12.67
412218081205000	GE-16	Lat 41°22'18"	long 81°20'50"	Nov. 6, 1980	6.65
412313081231500	GE-17	Lat 41°23'13"	long 81°23'15"	Nov. 6, 1980	6.49
412512081221500	GE-18	Lat 41°25'12"	long 81°22'15"	Nov. 6, 1980	24.96
412514081221500	GE-19	Lat 41°25'14"	long 81°22'15"	Nov. 6, 1980	24.98
412339081192500	GE-20	Lat 41°23'39"	long 81°19'25"	Nov. 6, 1980	12.63
412346081192500	GE-21	Lat 41°23'46"	long 81°19'25"	Nov. 6, 1980	27.58
412331081123000	GE-22	Lat 41°23'31"	long 81°12'30"	Nov. 12, 1980	14.34
412309081202400	GE-23	Lat 41°23'09"	long 81°20'24"	Nov. 6, 1980	13.22
412250081112300	GE-27	Lat 41°22'50"	long 81°11'23"	Nov. 17, 1980	14.75
412246081201600	GE-28	Lat 41°22'46"	long 81°20'16"	Nov. 6, 1980 June 25, 1981	5.40 4.30
412449081232700	GE-29	Lat 41°24'49"	long 81°23'27"	Nov. 6, 1980 June 25, 1980	40.89 39.70
412655081205600	GE-31	Lat 41°26'55"	long 81°20'56"	Nov. 5, 1980	0.39
412803081210000	GE-32	Lat 41°28'03"	long 81°21'00"	Nov. 5, 1980	0.04
413207081192000	GE-33	Lat 41°32'07"	long 81°19'20"	Nov. 5, 1980	102.04
413100081195900	GE-34	Lat 41°31'00"	long 81°19'59"	Nov. 5, 1980	5.14
412439081183000	GE-36	Lat 41°24'39"	long 81°18'30"	Nov. 6, 1980	64.99
413336081202000	GE-37	Lat 41°33'36"	long 81°20'20"	Nov. 5, 1980	90.08
412440081201500	GE-38	Lat 41°24'40"	long 81°20'15"	Nov. 5, 1980	28.07
412514081202200	GE-39	Lat 41°25'14"	long 81°20'22"	Nov. 5, 1980	37.22
412425081162700	GE-40	Lat 41°24'25"	long 81°16'27"	Nov. 6, 1980	16.49
412459081203000	GE-41	Lat 41°24'59"	long 81°20'30"	Nov. 12, 1980	39.04
412905081045500	GE-42	Lat 41°29'05"	long 81°04'55"	Nov. 2, 1980	38.99
414220081045500	GE-43	Lat 41°42'20"	long 81°04'55"	Nov. 13, 1980	10.06
414124081010100	GE-44	Lat 41°41'24"	long 81°01'01"	Nov. 13, 1980	1.88
414026081024400	GE-45	Lat 41°40'26"	long 81°02'44"	Nov. 13, 1980 June 25, 1981	42.80 39.60
413640081030100	GE-46	Lat 41°36'40"	long 81°03'01"	Oct. 2, 1980 Nov. 13, 1980 June 25, 1981	16.79 16.67 16.18
413627081025700	GE-47	Lat 41°36'27"	long 81°02'57"	Nov. 13, 1980	19.64
413202081015700	GE-48	Lat 41°32'02"	long 81°01'57"	Nov. 13, 1980 June 25, 1981	5.33 5.08
412620081032400	GE-49	Lat 41°26'20"	long 81°03'24"	Nov. 7, 1980	13.99
412233081031300	GE-50	Lat 41°22'33"	long 81°03'13"	Nov. 7, 1980	98.62
413426081121900	GE-51	Lat 41°34'26"	long 81°12'19"	Nov. 13, 1980	21.72
413449081121600	GE-52	Lat 41°34'49"	long 81°12'16"	Nov. 13, 1980 June 25, 1981	35.43 34.95
413346081122300	GE-53	Lat 41°33'46"	long 81°12'23"	Nov. 13, 1980	29.50
413346081122301	GE-53A	Lat 41°33'46"	long 81°12'23"	Nov. 13, 1980	27.40
413343081132800	GE-54	Lat 41°33'43"	long 81°13'28"	Nov. 13, 1980 Nov. 14, 1980	54.18 55.66
413258081100900	GE-55	Lat 41°32'58"	long 81°10'09"	Nov. 13, 1980	0.07
413156081065600	GE-56	Lat 41°31'56"	long 81°06'56"	Nov. 13, 1980	26.40
412051081165700	GE-60	Lat 41°20'51"	long 81°16'57"	Nov. 6, 1980	61.35
413243081215000	GE-61	Lat 41°32'43"	long 81°21'50"	Nov. 5, 1980	21.66
412857081172300	GE-62	Lat 41°28'57"	long 81°17'23"	Nov. 6, 1980	14.09

1/ Depth of water level below land surface, in feet.

GROUND-WATER LEVELS AT MISCELLANEOUS SITES--Continued

Site No.	Local No.	Location		Date	Water level[1]
412751081171900	GE-63	Lat 41°27'51"	long 81°17'19"	Nov. 6, 1980	77.88
412749081145200	GE-64	Lat 41°27'49"	long 81°14'52"	Nov. 6, 1980	27.04
412622081162500	GE-65	Lat 41°26'22"	long 81°16'25"	Nov. 6, 1980	7.06
412645081182400	GE-66	Lat 41°26'45"	long 81°82'24"	Nov. 5, 1980	24.58
				June 25, 1981	23.33
412522081092800	GE-67	Lat 41°25'22"	long 81°09'28"	Nov. 6, 1980	2.10
412949081104600	GE-68	Lat 41°29'49"	long 81°10'46"	Nov. 13, 1980	21.06
				June 25, 1981	19.65
413151081125800	GE-69	Lat 41°31'51"	long 81°12'58"	Nov. 13, 1980	23.55
412801081091800	GE-71	Lat 41°28'01"	long 81°09'18"	Nov. 12, 1980	55.25
413433081075500	GE-72	Lat 41°34'33"	long 81°07'55"	Nov. 14, 1980	14.32
413629081082800	GE-73	Lat 41°36'29"	long 81°08'28"	Nov. 13, 1980	45.16
				June 25, 1981	44.92
413857081051000	GE-75	Lat 41 38'57"	long 81°05'10"	Nov. 13, 1980	8.08
				June 25, 1981	11.06
413138081152000	GE-76	Lat 41°31'38"	long 81°15'20"	Nov. 6, 1980	22.47
				June 25, 1981	21.33
413028081221000	GE-77	Lat 41°30'28"	long 81°22'10"	Nov. 5, 1980	37.12
413656081153600	GE-80	Lat 41°36'56"	long 81°15'36"	Nov. 13, 1980	47.31
				June 25, 1981	46.85
413532081161702	GE-81A	Lat 41°35'32"	long 81°16'17"	Nov. 13, 1980	32.84
413735081131200	GE-82	Lat 41°37'35"	long 81°13'12"	Nov. 13, 1980	64.50
				June 25, 1981	66.92
412627081075400	GE-83	Lat 41°26'27"	long 81°07'54"	Nov. 12, 1980	33.95
412745081202400	GE-84	Lat 41°27'45"	long 81°20'24"	Nov. 5, 1980	58.16
				June 25, 1981	57.73
412716081125400	GE-85	Lat 41°27'16"	long 81°12'54"	Nov. 6, 1980	49.43
				June 25, 1981	49.03
412749081171500	GE-89	Lat 41°27'49"	long 81°17'15"	Nov. 6, 1980	82.77
412748081143900	GE-91	Lat 41°27'48"	long 81°14'39"	Nov. 6, 1980	40.98
412713081123200	GE-92	Lat 41°27'13"	long 81°12'32"	Nov. 6, 1980	33.92
412354081010400	GE-93	Lat 41°23'54"	long 81°01'04"	Nov. 12, 1980	11.90
412547081211500	GE-94	Lat 41°25'47"	long 81°21'15"	Nov. 5, 1980	12.20
412547081211501	GE-94A	Lat 41°25'47"	long 81°21'15"	Nov. 5, 1980	48.65
412559081095200	GE-96	Lat 41°25'59"	long 81°09'52"	Nov. 6, 1980	21.76
412225081035600	GE-99	Lat 41°22'25"	long 81°03'56"	Nov. 7, 1980	31.34
				June 25, 1981	30.30
413755081101200	GE-103	Lat 41°37'55"	long 81°10'12"	Nov. 14, 1980	79.81
413606081102100	GE-104	Lat 41°36'06"	long 81°10'21"	Nov. 14, 1980	90.98
413544081060500	GE-105	Lat 41°35'44"	long 81°06'05"	Nov. 14, 1980	37.34
413456081035600	GE-106	Lat 41°34'56"	long 81°03'56"	Nov. 13, 1980	31.16
413249081173800	GE-107	Lat 41°32'49"	long 81°17'38"	Nov. 13, 1980	61.14
413117081171900	GE-108	Lat 41°31'17"	long 81°17'19"	Nov. 6, 1980	49.47
413005081130000	GE-109	Lat 41°30'05"	long 81°13'00"	Nov. 7, 1980	72.85
413049081090900	GE-110	Lat 41°30'49"	long 81°09'09"	Nov. 13, 1980	37.76
413346081064000	GE-111	Lat 41°33'46"	long 81°06'40"	Nov. 14, 1980	26.28
413207081044400	GE-112	Lat 41°32'07"	long 81°04'44"	Nov. 14, 1980	43.98
413633081051800	GE-113	Lat 41°36'33"	long 81°05'18"	Nov. 13, 1980	19.38

1/ Depth of water level below land surface, in feet.

GROUND-WATER LEVELS AT MISCELLANEOUS SITES--Continued

Site No.	Local No.	Location		Date	Water[1] level
412746081202000	GE-121	Lat 41°27'46"	long 81°20'20"	Nov. 5, 1980	68.53
412410081223900	GE-122	Lat 41°24'10"	long 81°22'39"	Nov. 6, 1980	59.85
412703081181600	GE-123	Lat 41°27'03"	long 81°18'16"	Nov. 6, 1980	95.62
413052081153100	GE-124	Lat 41°30'52"	long 81°15'31"	Nov. 6, 1980	24.98
413100081105500	GE-125	Lat 41°31'00"	long 81°10'55"	Nov. 7, 1980	71.26
				Dec. 12, 1980	70.99
413100081105501	GE-125A	Lat 41°31'00"	long 81°10'55"	Dec. 12, 1980	50.20
412212081230100	GE-126	Lat 41°22'12"	long 81°23'01"	Nov. 6, 1980	116.55
412638081031100	GE-127	Lat 41°26'38"	long 81°03'11"	Nov. 7, 1980	160.10
413623081101000	GE-130	Lat 41°36'23"	long 81°10'10"	Nov. 14, 1980	83.74
412901081070200	GE-114	Lat 41°29'01"	long 81°07'02"	Nov. 12, 1980	42.43
412737081063300	GE-115	Lat 41°27'37"	long 81°06'33"	Nov. 12, 1980	24.32
412926081144300	GE-116	Lat 41°29'26"	long 81°14'43"	Nov. 6, 1980	42.21
412600081145800	GE-117	Lat 41°26'00"	long 81°14'58"	Nov. 6, 1980	16.91
412915081045900	GE-118	Lat 41°29'15"	long 81°04'59"	June 12, 1980	24.95
				Dec. 12, 1980	24.05
				June 25, 1981	23.85
412657081040500	GE-119	Lat 41°26'57"	long 81°04'05"	Nov. 12, 1980	8.77

1/ Depth of water level below land surface, in feet.

LOW-FLOW MEASUREMENTS AT MISCELLANEOUS SITES FOR GEAUGA COUNTY PROJECT

Site No.	Station Name	County	Drainage area (mi²)	Discharge (cfs)
412036081203300	Aurora Branch Chagrin River near Aurora	Portage	14.6	3.92
412038081203000	Unnamed tributary Aurora Branch Chagrin River near Aurora	Portage	11.6	4.09
412125081012000	Grand River near Parkman	Geauga	17.0	4.13
412238081555000	Bridge Creek near Auburn Center	Geauga	14.1	3.14
412311081231800	Aurora Branch Chagrin River near Solon	Geauga	36.2	10.1
412313081092900	Cuyahoa River near Welshfield	Geauga	137.0	61.4
412313081231300	McFarland Creek near Bainbridge	Geauga	11.1	2.19
412354081210700	Unnamed tributary McFarland Creek near Solon	Geauga	5.21	1.05
412401081211600	McFarland Creek near Bainbridge	Geauga	4.09	.82
412506081100200	Bridge Creek below Rapids Road near Welshfield	Geauga	46.5	33.5
412507081100600	Bridge Creek above Rapids Road near Welshfield	Geauga	38.2	31.0
412517081002000	Swine Creek at Bundysburg	Geauga	10.6	.99
412600081231900	Chagrin River at Chagrin Falls	Geauga	55.0	16.0
412644081191200	Unnamed tributary Silver Creek near Russell Center	Geauga	3.87	1.82
412647081171500	Silver Creek near Yates Corners	Geauga	2.56	1.23
412701081093100	West Branch Cuyahoga River near Rapids Road near Burton	Geauga	35.3	9.26
412733081233100	Griswold Creek near Chagrin Falls	Cuyahoga	6.66	1.16
412753081073800	East Branch Cuyahoga River near Burton	Geauga	37.3	16.0
412811081202400	Silver Creek near Russell Center	Geauga	12.8	5.30
412814081095000	Unnamed tributary West Branch Cuyahoga River near Burton	Geauga	5.12	1.01
412900081204300	Chagrin River near Novelty	Geauga	37.0	8.27
412910081062600	East Branch Cuyahoga River near Burton Station	Geauga	19.7	14.9
412916081102800	West Branch Cuyahoga River near Aquilla Road near Burton	Geauga	24.4	5.78
412927081174300	Chagrin River near Fullertown	Geauga	28.2	7.22
413004081041300	Tare Creek near Burton Station	Geauga	3.83	.54
413004081163000	Unnamed tributary Chagrin River above Fullertown	Geauga	12.4	2.61
413014081183200	Unnamed tributary Chagrin River below Fullertown	Geauga	2.14	.28
413034081163000	Chagrin River near Fowlers Mill	Geauga	13.0	3.46
413148081152200	Chagrin River at Fowlers Mill	Geagua	9.86	2.56
413153081113800	Butternut Creek near Aquilla	Geauga	2.89	.92
413205081011500	South Branch Phelps Creek near Huntsburg	Geauga	11.9	.09
413212081135000	Beaver Creek near Fowlers Mill	Geauga	2.81	.66
413235081061200	East Branch Cuyahoga River near E. Claridon	Geauga	9.12	.72
413250081180900	Unnamed tributary East Branch Chagrin River near Chester Center	Geauga	4.44	2.00
413252081180500	East Branch Chagrin River near Chester Center	Geauga	5.11	1.35
413351081083600	West Branch Cuyahoga River near Aquilla	Geauga	5.73	.88
413412081181900	East Branch Chagrin River near Mulberry Corners	Geauga	18.7	5.56
413534081001700	Montville Ditch near Montville	Geauga	3.34	.27
413638081171100	East Branch Chagrin River near Mitchells Mill	Geauga	24.0	7.35
413645081170600	Unnamed tributary East Branch Chagrin River near Mitchells Mill	Geauga	2.09	.30
413807081000800	Spring Creek near Montville	Geauga	7.11	.98
413829081071500	Bates Creek near Hambden	Geauga	9.04	.82
413857081111600	Big Creek near Hambden	Lake	17.0	4.28
414107081070500	Pine Creek near Thompson	Lake	18.6	2.44
414321081050000	Talcott Creek near Thompson	Lake	5.43	.26
414327081000800	Mill Creek near Thompson	Lake	16.5	.85

The following table contains water level measurements and chemical analyses from observation wells located in five small watersheds associated with different coal seams. The data will be used to document ground-water flow and water quality during pre- and post- mining conditions.

COSHOCTON COUNTY

0944081444700. Local number, C06 W10-3.
LOCATION.--Lat 40°09'44", long 81°44'47", Hydrologic Unit 05040005, near Plainfield.
AQUIFER.--Sand, shales and coals of Middle Pennsylvanian Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in (0.15 m), depth 62 ft (18.9 m), cased to 19 ft (5.8 m).
DATUM.--Altitude of land-surface datum is 820.47 ft (250.079 m). Measuring point: Top of casing, 2.0 ft (0.61 m) above land-surface datum.
PERIOD OF RECORD.--February 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water-level, 9.61 ft (2.93 m) below land-surface datum, Aug. 26, 1980; lowest, 18.16 ft (5.54 m) below land-surface datum, Oct. 29, 1977.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1980	11.59	NOV 20, 1980	11.87	DEC 16, 1980	10.72	SEP 17, 1981	10.50

COSHOCTON COUNTY--Continued

400951081450203. Local number, C06 P2-2.
LOCATION.--Lat 40°09'51", long 81°45'02", Hydrologic Unit 05040005, near Plainfield.
AQUIFER.--Sand, shales and coals of Middle Pennsylvanian Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in (0.15 m), depth 166 ft (50.6 m), cased to 69.2 ft (21.1 m).
DATUM.--Altitude of land-surface datum is 977.06 ft (297.808 m) (revised). Measuring point: Top of casing, 2.5 ft (0.76 m) above land-surface datum.
PERIOD OF RECORD.--September 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 111.83 ft (34.09 m) below land-surface datum, Dec. 20, 1978; lowest measured, 121.50 ft (37.03 m) below land-surface datum, Sept. 20, 1978.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1980	112.42	NOV 20, 1980	112.68	DEC 16, 1980	112.51	SEP 17, 1981	112.69

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	NITROGEN, DISSOLV (MG/L AS N)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
OCT 21...	0930	469	6.7	11.0	5	.23	.2	180	9	43

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)
OCT 21...	17	16	16	.5	2.5	208	0	171	66	55

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ANTIMONY, DISSOLVED (UG/L AS SB)
OCT 21...	1.7	.3	12	253	.01	.140	.08	.000	0	0

DATE	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT 21...	2	100	1	10	1	82000	1100	0	1500	1100

DATE	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)
OCT 21...	.2	5	0	0	360	100	8.1	.00	0

COSHOCTON COUNTY--Continued

400952081445701. Local number, C06 P4-2.
LOCATION.--Lat 40°09'52", long 81°44'57", Hydrologic Unit 05040005, near Plainfield.
AQUIFER.--Sand, shales and coals of Middle Pennsylvanian Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in (0.15 m), depth 99 ft (30.2 m), cased to 55.0 ft (16.8 m).
DATUM.--Altitude of land-surface datum is 915.26 ft (278.971 m). Measuring point: Top of casing, 2.0 ft (0.61 m) above land-surface datum.
PERIOD OF RECORD.--September 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 59.73 ft (18.21 m) below land-surface datum, Sept. 17, 1981; lowest measured, 61.93 ft (18.88 m) below land-surface datum, July 25, 1979.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1980	60.49	NOV 20, 1980	60.78	DEC 16, 1980	60.51	SEP 17, 1981	59.73

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	NITROGEN, DISSOLV (MG/L AS N)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
OCT 21...	1115	608	6.9	11.5	3	.45	.0	270	0	72

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)
OCT 21...	21	15	11	.4	2.9	380	0	312	77	21

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ANTIMONY, DISSOLVED (UG/L AS SB)
OCT 21...	2.4	.3	16	340	.04	.140	.27	.010	10	0

DATE	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT 21...	1	100	1	10	1	1100	680	0	250	230

DATE	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)
OCT 21...	.3	0	0	0	650	0	.6	.00	2

COSHOCTON COUNTY--Continued

400952081445901. Local number, C06 P3-2.
LOCATION.--Lat 40°09'52", long 81°44'59", Hydrologic Unit 05040005, near Plainfield.
AQUIFER.--Sand, shales and coals of Middle Pennsylvanian Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 8 in (0.20 m), depth 60 ft (18.3 m), cased to 60 ft (18.3 m), bottom 10 ft (3.0 m) slotted.
DATUM.--Altitude of land-surface datum is 943.10 ft (287.456 m). Measuring point: Top of casing, 1.5 ft (0.46 m) above land-surface datum.
PERIOD OF RECORD.--September 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 45.74 ft (13.94 m) below land-surface datum, Aug. 26, 1980; lowest measured, 54.28 ft (16.54 m) below land-surface datum, Sept. 20, 1978.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1980	46.11	NOV 20, 1980	51.89	DEC 16, 1980	49.90	SEP 17, 1981	46.47
OCT 28	53.54						

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	NITROGEN, DISSOLV (MG/L AS N)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
OCT 28...	1120	1920	6.4	10.5	80	10	170	750	0	150	91	12

DATE	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)
OCT 28...	3	.2	19	1270	0	1040	809	97	12	.0	13

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS (UG/L)
OCT 28...	1100	.09	6.40	3.6	.010	700000	59000	19000	11000	126	190

COSHOCTON COUNTY--Continued

400958081444903. Local number, C06 P6-1.
LOCATION.--Lat 40°09'58", long 81°44'49", Hydrologic Unit 05040005, near Plainfield.
AQUIFER.--Overburden spoils, replaced after mining.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in (0.15 m), depth 56 ft (17.1 m), cased to 56.0 ft (17.1 m), bottom 10 ft (3.0 m) slotted.
DATUM.--Altitude of land-surface datum is 959.10 ft (292.334 m). Measuring point: Top of casing. 3.0 ft (0.91 m) above land-surface datum.
PERIOD OF RECORD.--October 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 50.17 ft (15.29 m) below land-surface datum, May 21, 1980; lowest, intermittently dry.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1980	54.88	DEC 16, 1980	53.59	MAR 24, 1981	53.53	SEP 17, 1981	53.21
NOV 20	55.61						

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	54.28	55.40	54.84	54.86	52.64	52.71						
10	54.48	55.46	53.07	55.06	53.19	52.24						
15	54.74	55.55	53.53	55.21	52.92	52.75						
20	54.86	55.61	53.99	55.36	51.81	53.22						
25	55.25	55.68	54.31	55.41	51.97	---						
EOM	55.37	54.64	54.64	55.51	52.36	---						

WTR YR 1981 HIGH 51.81 FEB 20 LOW 55.69 NOV 26 AND OTHERS

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	NITROGEN, DISSOLV (MG/L AS N)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
MAR 24...	1515	1600	6.4	11.0	300	.30	.8	590	0	130	65	9.5

DATE	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
MAR 24...	3	.2	4.3	1300	0	1070	828	14	8.7	.2	26	1040

DATE	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	STRONTIUM, DISSOLVED (UG/L AS SR)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS (UG/L)
MAR 24...	.01	.160	.13	.070	200000	140000	3600	3200	530	14	2

COSHOCTON COUNTY--Continued

400958081444904. Local number, C06 P7-2
LOCATION.--Lat 40°09'58", long 81°44'49", Hydrologic Unit 05040005, near Plainfield.
AQUIFER.--Sand, shales and coals of Middle Pennsylvanian Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in (0.15 m), depth 142 ft (43.3 m), cased to 142 ft (43.3 m), bottom 10 ft (3.0 m) slotted.
DATUM.--Altitude of land-surface datum is 957.98 ft (291.992 m). Measuring point: Top of casing, 2.5 ft (0.76 m) above land-surface datum.
PERIOD OF RECORD.--March 1979 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 88.90 ft (27.10 m) below land-surface datum, Sept. 17, 1981; lowest measured, 116.08 ft (35.38 m) below land-surface datum, Aug. 9, 1979. Aug. 9, 1979.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1980	90.69	NOV 20, 1980	93.47	DEC 16, 1980	92.22	SEP 17, 1981	88.90

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	NITROGEN, DISSOLV (MG/L AS N)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
OCT 21...	1515	534	6.7	11.5	30	.59	.0	170	0	41

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)
OCT 21...	16	39	33	1.3	4.4	333	0	273	106	14

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ANTIMONY, DISSOLVED (UG/L AS SB)
OCT 21...	1.1	.3	7.0	298	.01	.580	.00	.000	0	0

DATE	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT 21...	1	800	1	10	1	11000	6700	8	2100	2100

DATE	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)
OCT 21...	<.1	8	0	0	1100	2	1.6	.00	2

COSHOCTON COUNTY--Continued

400958081444905. Local number, C06 P7-2a.
LOCATION.--Lat 40°09'58", long 81°44'49", Hydrologic Unit 05040005, near Plainfield.
AQUIFER.--Sand, shales and coals of Middle Pennsylvanian Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in (0.15 m), depth 144 ft (43.9 m), cased to 67.3 ft (20.5 m).
DATUM.--Altitude of land-surface datum is 957.99 ft (291.995 m). Measuring point: Top of casing, 2.5 ft (0.76 m) above land-surface datum.
PERIOD OF RECORD.--September 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 88.90 ft (27.10 m) below land-surface datum, Sept. 17, 1981; lowest measured, 125.61 ft (38.29 m) below land-surface datum, Aug. 9, 1979.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1980	89.39	NOV 20, 1980	108.48	DEC 16, 1980	107.83	SEP 17, 1981	88.90

COSHOCTON COUNTY--Continued

400958081444906. Local number, C06 P7-2b.
LOCATION.--Lat 40°09'58", long 81°44'49", Hydrologic Unit 05040005, near Plainfield.
AQUIFER.--Sand, shales and coals of Middle Pennsylvanian Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 8 in (0.20 m), depth 144 ft (43.9 m) cased to 70.0 ft (21.3 m).
DATUM.--Altitude of land-surface datum is 957.76 ft (291.925 m). Measuring point: Top of casing, 2.0 ft (0.61 m) above land-surface datum.
PERIOD OF RECORD.--September 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 117.52 ft (35.82 m) below land-surface datum, Sept. 17, 1981, lowest measured, 123.86 ft (37.75 m) below land-surface, Nov. 16, 1978.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1980	118.68	NOV 20, 1980	119.62	DEC 16, 1980	118.87	SEP 17, 1981	117.52

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	NITROGEN, DISSOLV (MG/L AS N)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
OCT 21...	1445	903	7.6	15.0	5	.47	.0	43	0	13

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)
OCT 21...	2.5	200	90	13	2.9	610	0	500	25	16

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ANTIMONY, DISSOLVED (UG/L AS SB)
OCT 21...	3.1	.9	8.3	548	.02	.410	.04	.010	20	0

DATE	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT 21...	1	200	0	0	0	7900	10	1	180	60

DATE	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)
OCT 21...	.2	1	0	0	350	0	2.1	.00	7

COSHOCTON COUNTY--Continued

400958081444907. Local number, C06 P8-3.
LOCATION.--Lat 40°09'58", long 81°44'49", Hydrologic Unit 05040005, near Plainfield.
AQUIFER..--Sand, shales and coals of Middle Pennsylvanian Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in (0.15 m), depth 205 ft (62.5 m), cased to 144.0 ft (43.9 m).
DATUM.--Altitude of land-surface datum is 958.42 ft (292.126 m). Measuring point: Top of casing, 3.0 ft (0.91 m) above land-surface datum.
PERIOD OF RECORD.--September 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 153.47 ft (46.78 m) below land-surface datum, Aug. 26, 1980; lowest measured, 162.66 ft (49.58 m) below land-surface datum, Nov. 16, 1978.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1980	156.01	NOV 20, 1980	156.54	DEC 16, 1980	154.82	SEP 17, 1981	154.79

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	NITROGEN, DISSOLV (MG/L AS N)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
OCT 21...	1420	1280	8.5	13.0	4	.37	.0	6	0	1.7

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)
OCT 21...	.5	390	99	68	1.9	896	0	735	4.5	4.0

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ANTIMONY, DISSOLVED (UG/L AS SB)
OCT 21...	25	2.9	6.8	875	.02	.050	.30	.130	20	0

DATE	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT 21...	1	40	0	30	1	6800	40	1	110	9

DATE	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)
OCT 21...	.3,	0	0	0	40	10	2.3	.00	3

COSHOCTON COUNTY--Continued

401000081444801. Local number, C06 P5-1.
LOCATION.--Lat 40°10'00", long 81°44'48", Hydrologic Unit 05040005, near Plainfield.
AQUIFER.--Overburden spoils, replaced after mining.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in (0.15 m), depth 73 ft (22.2 m), cased to 73.0 ft (22.2 m), bottom 10 ft (3.0 m) slotted.
DATUM.--Altitude of land-surface datum is 979.56 ft (298.570 m). Measuring point: Top of casing, 2.5 ft (0.76 m) above land-surface datum.
REMARKS.--Dry since construction.
PERIOD OF RECORD.--September 1978 to current year.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1980	DRY	NOV 20, 1980	DRY	DEC 16, 1980	DRY	SEP 17, 1981	DRY

COSHOCTON COUNTY--Continued

402156081481300. Local number, A06 W10-3.
LOCATION.--Lat 40°21'56", long 81°48'13", Hydrologic Unit 05040003, near Coshocton.
AQUIFER.--Sand, shale, and coals of Middle Pennsylvanian Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in (0.15 m), depth 66 ft (20.1 m), cased to 17.4 ft (5.3 m).
DATUM.--Altitude of land-surface datum is 1,011.87 ft (308.418 m). Measuring point: Top of casing, 2.58 ft (0.786 m) above land-surface datum.
PERIOD OF RECORD.--May 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 10.43 ft (3.18 m) below land-surface datum, June 15, 1981; lowest measured, 11.56 ft (3.52 m) below land-surface datum, Jan. 18, 1977.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1980	11.05	JAN 15, 1981	10.97	APR 16, 1981	10.65	JUL 16, 1981	10.66
NOV 20	11.12	FEB 16	10.87	MAY 14	10.53	AUG 17	10.70
DEC 16	10.85	MAR 16	10.65	JUN 15	10.43	SEP 18	10.89

COSHOCTON COUNTY--Continued

402208081481000. Local number, A06 W5-1.
LOCATION.--Lat 40° 22'08", long 81°48'10", Hydrologic Unit 05040003, near Coshocton.
AQUIFER.--Sand, shales and coals of Middle Pennsylvanian Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in (0.15 m), depth 10 ft (3.0 m), cased to 9.3 ft (2.8 m).
DATUM.--Altitude of land-surface datum is 1,136.82 ft (346.503 m). Measuring point: Top of casing, 1.7 ft (0.52 m) above land-surface datum.
PERIOD OF RECORD.--May 1976 to current year.
REMARKS.--Dry since construction.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1980	DRY	JAN 15, 1981	DRY	APR 16, 1981	DRY	JUL 16, 1981	DRY
NOV 20	DRY	FEB 16	DRY	MAY 14	DRY	AUG 17	DRY
DEC 16	DRY	MAR 16	DRY	JUN 15	DRY	SEP 18	DRY

COSHOCTON COUNTY--Continued

402208081481001. Local number, A06 W6-2.
LOCATION.--Lat 40°22'08", long 81°48'10", Hydrologic Unit 05040003, near Coshocton.
AQUIFER.--Sand, shales and coals of Middle Pennsylvanian Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in (0.15 m), depth 98 ft (29.9 m), cased to 18.7 ft (5.7 m).
DATUM.--Altitude of land-surface datum is 1,136.32 ft (346.350 m). Measuring point: Top of casing, 2.3 ft (0.70 m) above land-surface datum.
PERIOD OF RECORD.--May 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 24.41 ft (7.44 m) below land-surface datum, Apr. 21, 1980; lowest measured, 29.80 ft (9.08 m) below land-surface datum, Sept. 14, 1977.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1980	27.31	JAN 15, 1981	27.22	APR 16, 1981	25.36	JUL 16, 1981	27.14
NOV 20	27.99	FEB 16	26.09	MAY 14	27.00	AUG 17	27.34
DEC 16	26.68	MAR 16	25.85	JUN 15	26.13	SEP 18	28.54

COSHOCTON COUNTY--Continued

402208081481200. Local number, A06 W157.
LOCATION.--Lat 40°22'08", long 81°48'12", Hydrologic Unit 05040003, near Coshocton.
AQUIFER.--Sand, shales and coals of Middle Pennsylvanian Age.
WELL CHARACTERISTICS.--Hand-dug well, diameter 3 ft (0.9 m), depth 13.9 ft (4.2 m).
DATUM.--Altitude of land-surface datum is 1,115.45 ft (339.989 m). Measuring point: Top of casing, at land-surface datum.
PERIOD OF RECORD.--August 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 5.93 ft (1.81 m) below land-surface datum, June 15, 1981; lowest measured, 11.16 ft (3.40 m) below land-surface datum, Jan. 18, 1977.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1980	7.91	JAN 15, 1981	8.30	APR 16, 1981	6.15	JUL 16, 1981	7.41
NOV 20	8.59	FEB 16	7.07	MAY 14	6.69	AUG 17	7.49
DEC 16	7.69	MAR 16	6.93	JUN 15	5.93	SEP 18	7.95

COSHOCTON COUNTY--Continued

402208081481300. Local number, A06 W11-2.
LOCATION.--Lat 40°22'08", long 81°48'13", Hydrologic Unit 05040003, near Coshocton.
AQUIFER.--Sand, shales and coals of Middle Pennsylvanian Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in (0.15 m), depth 56 ft (17.1 m), cased to 18.4 ft (5.6 m).
DATUM.--Altitude of land-surface datum is 1092.35 ft (332.948 m). Measuring point: Top of casing, 1.6 ft (0.49 m) above land-surface datum.
PERIOD OF RECORD.--May 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 14.52 ft (4.43 m) below land-surface datum, May 25, 1976; lowest measured, 18.46 ft (5.63 m) below land-surface datum, Nov. 20, 1980.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1980	18.40	JAN 15, 1981	18.43	APR 16, 1981	16.37	JUL 16, 1981	17.09
NOV 20	18.46	FEB 16	17.77	MAY 14	16.11	AUG 17	17.23
DEC 16	17.29	MAR 16	17.01	JUN 15	15.47	SEP 18	17.93

COSHOCTON COUNTY--Continued

400951081450202. Local number, C06 P1-1.
LOCATION.--Lat 40°09'51", long 81°45'02", Hydrologic Unit 05040005, near Plainfield.
AQUIFER.--Overburden spoils, replaced after mining.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in (0.15 m), depth 60 ft (18.3 m), cased to 60 ft (18.3 m), bottom 10 ft (3.0 m) slotted.
DATUM.--Altitude of land-surface datum is 977.49 ft (297.939 m) (revised). Measuring point: Top of casing, 1.0 ft (0.30 m) above land-surface datum.
PERIOD OF RECORD.--September 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 54.26 ft (16.54 m) below land-surface datum, Aug. 26, 1980; lowest measured, 56.31 ft (17.16 m) below land-surface datum, Aug. 22, 1979.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1980	54.94	DEC 16, 1980	54.98	MAR 24, 1981	54.97	SEP 17, 1981	54.46
NOV 20	55.14						

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	54.97	54.92	55.23	55.40								
10	54.82	55.18	55.12	---								
15	55.01	55.05	55.15	---								
20	54.91	55.14	55.49	---								
25	54.86	55.21	55.26	---								
EOM	54.99	55.09	55.06	---								

WTR YR 1981 HIGH 54.63 OCT 2 LOW 55.49 DEC 20 AND OTHERS

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	NITROGEN, DISSOLV (MG/L AS N)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
OCT 21...	1330	2020	6.4	11.5	3	.55	1.4	1100	870	240
MAR 24...	1345	1560	6.5	11.0	<5	.16	.3	850	630	110

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)
OCT 21...	110	14	3	.2	5.2	280	0	230	178	940
MAR 24...	140	16	4	.2	5.9	266	0	218	135	800

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ANTIMONY, DISSOLVED (UG/L AS SB)
OCT 21...	9.4	.1	9.0	1510	.01	.540	.00	.010	10	0
MAR 24...	5.5	<.1	2.7	1250	.02	.140	.00	.010	--	--

COSHOCTON COUNTY--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981--Continued

Local number, C06 P1-1

DATE	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT 21...	2	50	1	10	2	520000	37000	5	13000	7700
MAR 24...	--	--	--	--	--	75000	32000	--	2300	1800

DATE	MERCURY DIS-SOLVED (UG/L AS HG)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)
OCT 21...	.2	16	0	0	700	170	12	.00	4
MAR 24...	--	--	--	--	180	--	4.0	--	0

COSHOCTON COUNTY--Continued

402210081480700. Local number, A06 W3-1.
LOCATION.--Lat 40°22'10", long 81°48'07", Hydrologic Unit 05040003, near Coshocton.
AQUIFER.--Sand, shales and coals of Middle Pennsylvanian Age.
WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in (0.15 m), depth 75 ft (22.9 m), cased to 18.5 ft (5.6 m).
DATUM.--Altitude of land-surface datum is 1,206.26 ft (367.688 m). Measuring point: Top of casing, 1.5 ft (0.46 m) above land-surface datum.
PERIOD OF RECORD.--May 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 54.48 ft (16.61 m) below land-surface datum, Feb. 27, 1979; lowest measured, 67.49 ft (20.57 m) below land-surface datum, June 25, 1976.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1980	63.06	JAN 15, 1981	63.98	APR 16, 1981	63.09	JUL 16, 1981	62.53
NOV 20	63.68	FEB 16	63.14	MAY 14	61.39	AUG 17	62.84
DEC 16	63.44	MAR 16	62.59	JUN 15	58.92	SEP 18	63.55

COSHOCTON COUNTY--Continued

402210081480701. Local number, A06 W4-2.
LOCATION.--Lat 40°22'10", long 81°48'07", Hydrologic Unit 05040003, near Coshocton.
AQUIFER.--Shales and sands of Middle Pennsylvanian Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in (0.15 m), depth 170 ft (51.8 m) cased to 78.9 ft (24.0 m). After Oct. 18, 1976, 4 in (0.10 m) slotted casing to bottom of well.
DATUM.--Altitude of land-surface datum is 1,206.07 ft (367.610 m). Measuring point: Top of casing, 2.1 ft (0.64 m) above land-surface datum.
REMARKS.--Well redrilled Oct. 18, 1976 after cave-in.
PERIOD OF RECORD.--May 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 87.12 ft (26.55 m) below land-surface datum, May 14, 1981; lowest measured, 93.31 ft (28.44 m) below land-surface datum, Feb. 17, 1977.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1980	87.81	JAN 15, 1981	87.90	APR 16, 1981	87.26	JUL 16, 1981	87.44
NOV 20	87.98	FEB 16	87.69	MAY 14	87.12	AUG 17	87.54
DEC 16	87.85	MAR 16	87.45	JUN 15	87.21	SEP 18	87.71

COSHOCTON COUNTY--Continued

402210081481600. Local number, A06 W7-1.
LOCATION.--Lat 40°22'10", long 81°48'16", Hydrologic Unit 05040003, near Coshocton.
AQUIFER.--Sand, shales and coals of Middle Pennsylvanian Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in (0.15 m), depth 12 ft (3.6 m), cased to 9.7 ft (3.0 m).
DATUM.--Altitude of land-surface datum is 1,138.28 ft (346.948 m). Measuring point: Top of casing, 2.3 ft (0.70 m) above land-surface datum.
PERIOD OF RECORD.--May 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 0.05 ft (0.02 m) above land-surface datum, Apr. 4, 1979; lowest measured, 11.26 ft (3.43 m) below land-surface datum, Feb. 17, 1977.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1980	7.76	JAN 15, 1981	5.04	APR 16, 1981	0.63	JUL 16, 1981	5.95
NOV 20	8.12	FEB 16	1.38	MAY 14	0.58	AUG 17	4.32
DEC 16	1.16	MAR 16	2.11	JUN 15	0.28	SEP 18	7.68

COSHOCTON COUNTY--Continued

402210081481601. Local number, A06 W8-2.
LOCATION.--Lat 40°22'10", long 81°48'16", Hydrologic Unit 05040003, near Coshocton.
AQUIFER.--Sand, shales and coals of Middle Pennsylvanian Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in (0.15 m), depth 101 ft (30.8 m), cased to 18.6 ft (5.7 m).
DATUM.--Altitude of land-surface datum is 1,138.64 ft (347.057 m). Measuring point: Top of casing, 1.4 ft (0.43 m) above land-surface datum.
PERIOD OF RECORD.--May 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 26.68 ft (8.13 m) below land-surface datum, June 15, 1981; lowest measured, 40.11 ft (12.23 m) below land-surface datum, Mar. 17, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1980	29.59	JAN 15, 1981	31.33	APR 16, 1981	29.32	JUL 16, 1981	28.29
NOV 20	30.35	FEB 16	31.03	MAY 14	27.86	AUG 17	28.99
DEC 16	31.16	MAR 16	29.93	JUN 15	26.68	SEP 18	29.74

COSHOCTON COUNTY--Continued

402210081481602. Local number, A06 W9-3.
LOCATION.--Lat 40°22'10", long 81°48'16", Hydrologic Unit 05040003, near Coshocton.
AQUIFER.--Sand, shales and coals of Middle Pennsylvanian Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in (0.15 m), depth 183 ft (55.8 m), cased to 114.5 ft (34.9 m). After Oct. 18, 1976, 4 in (0.10 m) slotted casing to bottom of well.
DATUM.--Altitude of land-surface datum is 1,138.35 ft (346.969 m). Measuring point: Top of casing, 1.5 ft (0.46 m) above land-surface datum.
REMARKS.--Well redrilled October 18, 1976 after cave-in.
PERIOD OF RECORD.--May 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 107.58 ft (32.79 m) below land-surface datum; May 13, 1980; lowest measured, 112.39 ft (34.26 m) below land-surface datum, May 25, 1976.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1980	107.98	JAN 15, 1981	107.94	APR 16, 1981	108.25	JUL 16, 1981	108.31
NOV 20	108.26	FEB 16	108.24	MAY 14	108.15	AUG 17	108.34
DEC 16	107.94	MAR 16	107.74	JUN 15	108.29	SEP 18	108.43

COSHOCTON COUNTY--Continued

402213081481700. Local number, A06 W1-1.
LOCATION.--Lat 40°22'13", long 81°48'17", Hydrologic Unit 05040003, near Coshocton.
AQUIFER.--Shales of Middle Pennsylvanian Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in (0.15 m), depth 90 ft (27.4 m) cased to 18.8 ft (5.7 m).
DATUM.--Altitude of land-surface datum is 1,207.84 ft (368.150 m). Measuring point: Top of casing, 1.2 ft (0.37 m) above land-surface datum.
PERIOD OF RECORD.--May 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 30.85 ft (9.40 m) below land-surface datum, Apr. 4, 1979; lowest measured, 85.04 ft (25.92 m) below land-surface datum, Oct. 20, 1976.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1980	56.94	JAN 15, 1981	48.14	APR 16, 1981	34.42	JUL 16, 1981	52.48
NOV 20	57.06	FEB 16	38.16	MAY 14	36.59	AUG 17	53.45
DEC 16	40.13	MAR 16	43.67	JUN 15	32.53	SEP 18	56.79

COSHOCTON COUNTY--Continued

402213081481701. Local number, A06 W2-2.
LOCATION.--Lat 40°22'13", long 81°48'17", Hydrologic Unit 05040003, near Coshocton.
AQUIFER.--Sand, shales and coals of Middle Pennsylvanian Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in (0.15 m), depth 169 ft (51.5 m), cased to 98.8 ft (30.1 m).
DATUM.--Altitude of land-surface datum is 1,207.29 ft (367.982 m). Measuring point: Top of casing, 2.2 ft (0.67 m) above land-surface datum.
PERIOD OF RECORD.--May 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 118.43 ft (36.10 m) below land-surface datum, Sept. 18, 1981; lowest measured, 162.76 ft (49.61 m) below land-surface datum, Feb. 17, 1977.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1980	141.10	JAN 15, 1981	135.85	APR 16, 1981	129.67	JUL 16, 1981	122.00
NOV 20	139.22	FEB 16	133.96	MAY 14	127.08	AUG 17	120.07
DEC 16	137.64	MAR 16	130.98	JUN 15	124.41	SEP 18	118.43

JEFFERSON COUNTY

401002080521800. Local number, J11 W4-1.
LOCATION.--Lat 40°10'02", long 80°52'18", Hydrologic Unit 05030106, near Harrisville.
AQUIFER.--Sand, shales and coals of Middle Pennsylvanian Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in (0.15 m), depth 60 ft (18.3 m), cased to 18.80 ft (5.73 m).
DATUM.--Altitude of land-surface datum is 1251.37 ft (381.418 m). Measuring point: Top of casing, 1.2 ft (0.37 m) above land-surface datum.
PERIOD OF RECORD.--May 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 42.88 ft (13.07 m) below land-surface datum, May 29, 1979; lowest, 56.51 ft (17.22 m) below land-surface datum, Nov. 18, 1980.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17, 1980	55.82	JAN 30, 1981	54.75	MAY 21, 1981	53.53	AUG 13, 1981	53.94
NOV 19	56.47	FEB 27	50.37	27	54.01	SEP 18	54.25
DEC 15	54.23	MAR 11	52.41	JUN 25	52.14		
JAN 14, 1981	56.02	APR 23	49.96	JUL 29	52.68		

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	55.50	56.22	54.90	55.54	53.65	52.25	53.85	51.72	53.76	52.96	53.24	53.78
10	55.74	56.33	54.32	55.83	54.36	52.38	53.01	52.88	51.68	53.69	53.79	54.03
15	55.93	56.46	54.26	56.08	53.81	52.97	46.93	52.93	50.04	53.86	54.10	54.30
20	56.00	56.46	54.67	56.28	51.26	53.24	48.96	53.48	51.61	54.14	54.27	54.34
25	56.17	55.57	55.10	56.19	49.49	53.74	50.66	---	52.20	54.15	54.44	54.53
EOM	55.91	54.77	55.32	54.79	50.82	53.65	51.10	54.05	52.24	52.68	54.55	54.66

WTR YR 1981 HIGH 46.93 APR 15 LOW 56.51 NOV 18

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	NITROGEN, DISSOLV (MG/L AS N)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
OCT 17...	1515	644	6.7	14.5	0	.17	.2	280	120	84
MAY 28...	1230	624	6.7	12.5	2	.33	.0	260	92	80

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)
OCT 17...	16	13	9	.3	1.5	190	0	156	61	98
MAY 28...	15	12	9	.3	1.5	205	0	168	65	95

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ANTIMONY, DISSOLVED (UG/L AS SB)
OCT 17...	41	.0	14	363	.03	.060	.08	.010	20	0
MAY 28...	37	.1	14	356	.08	.030	.22	<.010	--	--

JEFFERSON COUNTY--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981--Continued

Local number, J11 W4-1

DATE	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT 17...	2	90	2	<10	3	2800	730	0	90	70
MAY 28...	--	--	--	--	--	1900	80	--	160	90

DATE	MERCURY DIS-SOLVED (UG/L AS HG)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)
OCT 17...	.2	8	0	0	330	30	2.2	.00	0
MAY 28...	--	--	--	--	250	--	1.2	--	0

JEFFERSON COUNTY--Continued

401002080521801. Local number, J11 W5-3.
LOCATION.--Lat 40°10'02", long 80°52'18", Hydrologic Unit 05030106, near Harrisville.
AQUIFER.--Sand, shales and coals of Middle Pennsylvanian Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in (0.15 m), depth 280 ft (85.3 m), cased to 218 ft (66.4 m).
DATUM.--Altitude of land-surface datum is 1,251.74 ft (381.530 m). Measuring point: Top of casing, 1.76 ft (0.54 m) above land-surface datum.
REMARKS.--Dry since construction.
PERIOD OF RECORD.--June 1976 to current year.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17, 1980	DRY	FEB 27, 1981	DRY	MAY 21, 1981	DRY	AUG 13, 1981	DRY
DEC 15	DRY	MAR 11	DRY	28	DRY	SEP 18	DRY
JAN 14, 1981	DRY	25	DRY	JUN 25	DRY		
30	DRY	APR 23	DRY	JUL 29	DRY		

JEFFERSON COUNTY--Continued

401004080521900. Local number, J11 W6-1.
LOCATION.--Lat 40°10'04", long 80°52'19", Hydrologic Unit 05030106, near Harrisville.
AQUIFER.--Sand, shales and coals of Middle Pennsylvanian Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in (0.15 m), depth 46 ft (14.0 m), cased to 17.8 ft (5.4 m).
DATUM.--Altitude of land-surface datum is 1237.36 ft (377.147 m). Measuring point: Top of casing, 3.2 ft (0.98 m) above land-surface datum.
PERIOD OF RECORD.--May 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 28.60 ft (8.72 m) below land-surface datum, Feb. 26, 1979; lowest, 45.61 ft (13.90 m) below land-surface datum, Jan. 19-28, 1981.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17, 1980	43.36	JAN 30, 1981	45.18	APR 23, 1981	44.17	JUL 29, 1981	41.93
NOV 19	44.37	FEB 27	44.60	MAY 21	43.75	AUG 13	41.76
DEC 15	44.94	MAR 11	44.69	27	43.71	SEP 18	41.83
JAN 14, 1981	45.53	25	44.79	JUN 25	42.73		

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	43.09	---	44.79	45.41	44.79	44.76	44.81	43.98	43.59	42.37	41.85	41.79
10	43.22	---	44.88	45.48	45.11	44.74	44.63	43.98	43.30	42.28	41.79	41.80
15	43.38	---	44.96	45.56	44.93	---	44.20	43.87	43.07	42.19	41.75	41.82
20	---	44.41	45.06	45.61	44.56	---	44.20	43.76	42.98	42.12	41.76	41.84
25	---	44.55	45.19	45.61	44.56	44.79	44.22	43.72	42.78	42.08	41.77	41.87
EOM	---	44.66	45.33	45.13	44.63	44.78	44.12	43.68	42.48	41.92	41.80	41.89

WTR YR 1981 HIGH 41.75 AUG 15 AND OTHERS LOW 45.61 JAN 19 AND OTHERS

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	NITROGEN, DISSOLV (MG/L AS N)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
OCT 17...	1400	650	6.7	14.5	2	.18	.3	280	200	89
MAY 28...	1045	374	6.8	13.0	3	.35	.0	170	70	53

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)
OCT 17...	14	9.1	7	.2	1.8	102	0	84	33	200
MAY 28...	8.9	8.0	9	.3	1.4	122	0	100	33	71

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ANTIMONY, DISSOLVED (UG/L AS SB)
OCT 17...	19	.0	20	405	.01	.030	.14	.010	10	0
MAY 28...	12	.1	20	236	.10	.170	.08	.010	--	--

DATE	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT 17...	3	100	1	<10	1	3600	410	0	550	500
MAY 28...	--	--	--	--	--	5400	40	--	520	400

DATE	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)
OCT 17...	<.1	2	0	0	470	80	1.5	.00	0
MAY 28...	--	--	--	--	300	--	4.8	--	0

JEFFERSON COUNTY--Continued

401004080521901. Local number, J11 W7-2.
LOCATION.--Lat 40°10'04", long 80°52'19", Hydrologic Unit 05030106, near Harrisville.
AQUIFER.--Sand, shales and coals of Middle Pennsylvanian Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in (0.15 m), depth 192 ft (58.5 m), cased to 53.8 ft (16.4 m).
DATUM.--Altitude of land-surface datum is 1,237.25 ft (377.114 m). Measuring point: Top of casing, 3.0 ft (0.91 m) above land-surface datum.
PERIOD OF RECORD.--May 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 60.45 ft (18.43 m) below land-surface datum, Jan. 16, 1980; lowest measured, 170.11 ft (51.85 m) below land-surface datum, Nov. 19, 1979.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17, 1980	145.91	JAN 30, 1981	154.43	APR 23, 1981	149.96	JUL 29, 1981	145.86
NOV 19	162.69	FEB 27	161.47	MAY 21	162.39	AUG 13	145.23
DEC 15	153.84	MAR 11	158.06	27	145.60	SEP 18	146.72
JAN 14, 1981	154.91	25	164.14	JUN 25	145.28		

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	NITROGEN, DISSOLV (MG/L AS N)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
MAY 28...	0830	959	7.4	13.0	0	.41	.0	42	0	11	3.5	250

DATE	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
MAY 28...	93	17	1.5	570	0	468	36	21	45	3.0	9.6	626

DATE	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	STRONTIUM, DISSOLVED (UG/L AS SR)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS (UG/L)
MAY 28...	.02	.030	.36	.020	3200	<10	220	10	520	2.5	0

JEFFERSON COUNTY--Continued

401007080522400. Local number J11 W8-2.
LOCATION.--Lat 40°10'07", long 80°52'24", Hydrologic Unit 05030106, near Harrisville.
AQUIFER.--Sand, shales and coals of Middle Pennsylvanian Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in (0.15 m), depth 105 ft (32.0 m), cased to 20.43 ft (6.23 m).
DATUM.--Altitude of land-surface datum is 1,156.67 ft (352.553 m). Measuring point: Top of casing, 0.57 ft (0.174 m) above land-surface datum.
PERIOD OF RECORD.--May 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 29.21 ft (8.90 m) below land-surface datum, Apr. 20, 1981; lowest measured, 37.23 ft (11.35 m) below land-surface datum, June 18, 1976.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17, 1980	30.94	JAN 30, 1981	30.44	APR 20, 1981	29.21	JUL 20, 1981	29.64
NOV 19	32.03	FEB 27	29.94	MAY 21	29.52	AUG 13	29.84
DEC 15	30.56	MAR 11	29.86	28	29.44	SEP 18	29.78
JAN 14, 1981	30.96	25	30.04	JUN 29	29.47		

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	NITROGEN, DISSOLV (MG/L AS N)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
OCT 17...	1230	702	7.8	11.5	1	.20	.0	120	0	29
MAY 28...	1425	1090	7.1	13.0	5	--	.0	620	80	160

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)
OCT 17...	11	110	67	4.4	1.8	413	0	339	10	25
MAY 28...	52	14	5	.2	2.2	658	0	540	84	160

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ANTIMONY, DISSOLVED (UG/L AS SB)
OCT 17...	12	1.3	9.3	404	.01	.060	.13	.010	20	0
MAY 28...	15	.1	15	744	<.01	.040	.21	<.010	--	--

DATE	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT 17...	1	100	0	<10	1	2400	20	0	70	5
MAY 28...	--	--	--	--	--	2300	<10	--	100	50

DATE	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)
OCT 17...	<.1	0	0	0	990	0	1.0	.00	0
MAY 28...	--	--	--	--	1400	--	2.0	--	0

JEFFERSON COUNTY--Continued

401009080521500. Local number, J11 P10-1.
LOCATION.--Lat 40°10'09", long 80°52'15", Hydrologic Unit 05010306, near Harrisville.
AQUIFER.--Overburden spoils, replaced after mining.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 5 in (0.13 m), depth 39.3 ft (12.0 m), cased to 39.0 ft (11.9 m).
DATUM.--Altitude of land-surface datum is 1236.1 ft (376.76 m). Measuring point: Top of casing, 3.0 ft (0.91 m) above land-surface datum.
REMARKS.--Dry since construction.
PERIOD OF RECORD.--March 1981 to current year.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 18, 1981	DRY	MAY 21, 1981	DRY	JUN 29, 1981	DRY	AUG 13, 1981	DRY
25	DRY	27	DRY	JUL 29	DRY	SEP 18	DRY
APR 27	DRY						

JEFFERSON COUNTY--Continued

401010080521801. Local number, J11 P3-1.
LOCATION.--Lat 40°10'10", long 80°52'18", Hydrologic Unit 05030106, near Harrisville.
AQUIFER.--Overburden spoils, replaced after mining.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 5 in (0.13 m), depth 35.6 ft (10.9 m), cased to 38.0 ft (11.6 m).
DATUM.--Altitude of land-surface datum is 1,236.7 ft (376.95 m). Measuring point: Top of casing, 3.0 ft (0.91 m) above land-surface datum.
REMARKS.--Dry since construction.
PERIOD OF RECORD.--March 1981 to current year.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 16, 1981	DRY	APR 27, 1981	DRY	JUN 29, 1981	DRY	SEP 18, 1981	DRY
18	DRY	MAY 21	DRY	JUL 29	DRY		
25	DRY	27	DRY	AUG 13	DRY		

JEFFERSON COUNTY--Continued

401011080521602. Local number, J11 P1-1.
LOCATION.--Lat 40°10'11", long 80°52'16", Hydrologic unit 05030106, near Harrisville.
AQUIFER.--Overburden spoils, replaced after mining.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 5 in (0.13 m), depth 39 ft (11.9 m), cased to 39 ft (11.9 m), bottom 10 ft (3.0 m) slotted.
DATUM.--Altitude of land-surface datum is 1,236.2 ft (376.79 m). Measuring point: Top of casing, 3.0 ft (0.91 m) above land-surface datum.
PERIOD OF RECORD.--March 1981 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 36.37 ft (11.09 m) below land-surface datum, Aug. 8, 1981; lowest measured, dry, Mar. 13, 1981 and Mar. 16, 1981.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 13, 1981	DRY	MAR 25, 1981	38.67	MAY 27, 1981	37.46	AUG 13, 1981	36.40
16	DRY	APR 27	38.03	JUN 29	36.55	SEP 18	36.63
18	38.43	MAY 21	37.52	JUL 29	36.48		

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5						---	38.28	37.75	37.29	36.46	36.39	36.62
10						---	38.48	37.65	37.17	36.44	36.39	36.60
15						---	38.33	37.57	37.04	36.46	36.41	36.61
20						---	38.25	37.52	36.87	36.50	36.46	36.64
25						38.68	38.14	37.48	36.75	36.55	36.51	36.68
EOM						38.71	37.92	37.30	36.56	36.48	36.58	36.72

WTR YR 1981 HIGH 36.37 AUG 8 LOW 38.71 MAR 31 AND OTHERS

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	NITROGEN, DISSOLV (MG/L AS N)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
MAY 27...	1500	1310	6.9	17.0	0	1.9	.0	690	340	180

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
MAY 27...	57	32	.5	426	0	349	86	80	.1

DATE	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	STRONTIUM, DISSOLVED (UG/L AS SR)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS (UG/L)
MAY 27...	1.0	.360	.57	<.010	3400	670	930	8.8	0

JEFFERSON COUNTY--Continued

401011080521603. Local number, J11 P2-2.
LOCATION.--Lat 40°10'11", long 80°52'16", Hydrologic unit 05030106, near Harrisville.
AQUIFER.--Sand, shales and coals of Middle Pennsylvanian Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in (0.15 m), depth 187 ft (57.0 m), cased to 46 ft (14.0 m).
DATUM.--Altitude of land-surface datum is 1,236.2 ft (376.79 m). Measuring point: Top of casing, 2.7 ft (0.82 m) above land-surface datum.
PERIOD OF RECORD.--March 1981 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 36.58 ft (11.15 m) below land-surface datum, August 8, 1981; lowest measured, 40.40 ft (12.31 m) below land-surface datum, Mar. 13, 1981.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 13, 1981	40.40	MAR 18, 1981	39.71	MAY 21, 1981	37.48	JUL 29, 1981	36.66
16	40.13	25	39.36	27	37.48	AUG 13	36.60
17	39.93	APR 23	38.13	JUN 29	36.72	SEP 18	36.82

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5						---	38.99	37.70	37.43	36.64	36.60	36.81
10						---	38.89	37.61	37.31	36.62	36.59	36.80
15						---	38.61	37.55	37.18	36.64	36.61	36.81
20						---	38.34	37.50	37.02	36.68	36.66	36.85
25						39.36	38.06	37.46	36.91	36.73	36.71	36.90
EOM						39.17	37.86	37.44	36.73	36.67	36.78	36.94

WTR YR 1981 HIGH 36.58 AUG 8 LOW 39.36 MAR 25

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	NITROGEN, DISSOLV (MG/L AS N)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
MAY 27...	1530	1410	7.0	14.0	3	2.2	.0	690	360	180	58	40

DATE	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
MAY 27...	11	.7	3.5	406	0	333	65	390	65	.2	13	959

DATE	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	STRONTIUM, DISSOLVED (UG/L AS SR)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS (UG/L)
MAY 27...	1.5	.340	.36	<.010	2000	40	240	200	1900	1.8	0

JEFFERSON COUNTY--Continued

401119080480700. Local number, JO8 W5-1.
LOCATION.--Lat 40°11'19", long 80°48'07", Hydrologic Unit 05030106, near Mt. Pleasant.
AQUIFER.--Limestones and shales of Upper Pennsylvanian Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in (0.15 m), depth 125 ft (38.1 m) cased to 19.7 ft (6.0 m).
DATUM.--Altitude of land-surface datum is 1100 ft (335 m), from topographic map. Measuring point: Top of casing, 1.3 ft (0.40 m) above land-surface datum.
PERIOD OF RECORD.--May 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 56.30 ft (17.16 m) below land-surface datum, May 29, 1979; lowest measured, 59.24 ft (18.06 m) below land-surface datum, Sept. 14, 1976 and Oct. 19, 1976.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17, 1980	58.84	NOV 19, 1980	58.86	DEC 15, 1980	58.11

JEFFERSON COUNTY--Continued

401119080480701. Local number, J08 W2-2.
LOCATION.--Lat 40°11'19", long 80°48'07", Hydrologic Unit 05030106, near Mt. Pleasant.
AQUIFER.--Shales and limestones of Upper Pennsylvanian Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in (0.15 m), depth 220 ft (67.1 m) cased to 137.6 ft (41.9 m).
DATUM.--Altitude of land-surface datum is 1100 ft (335 m), from topographic map. Measuring point: Top of casing 2.2 ft (0.67 m) above land-surface datum.
PERIOD OF RECORD.--May 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 181.30 ft (55.26 m) below land-surface datum, May 18, 1976; lowest measured, 205.00 ft (62.48 m) below land-surface datum, Nov. 22, 1977.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17, 1980	202.60	NOV 19, 1980	203.00	DEC 15, 1980	202.46

JEFFERSON COUNTY--Continued

401120080480900. Local number, J08 W4-3.
LOCATION.--Lat 40°11'20", long 80°48'09", Hydrologic Unit 05030106, near Mt. Pleasant.
AQUIFER.--Shales of Upper Pennsylvanian Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in (0.15 m), depth 360 ft (109.7 m) cased to 232.0 ft (70.7 m).
DATUM.--Altitude of land-surface datum is 1100 ft (335 m) from topographic map. Measuring point: Top of casing, 1.9 ft (0.58 m) above land-surface datum.
PERIOD OF RECORD.--July 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 273.10 ft (83.24 m) below land-surface datum, July 29, 1976; lowest measured, 290.50 ft (88.54 m) below land-surface datum, Oct. 5, 1978.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17, 1980	287.90	NOV 19, 1980	287.90	DEC 15, 1980	287.49

MUSKINGUM COUNTY

394841081463200. Local number, M09 W10-3.
LOCATION.--Lat 39°48'41", long 81°46'32", Hydrologic Unit 05040004, near Chandlersville.
AQUIFER.--Sand, shales and coals of Middle Pennsylvanian Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in (0.15 m), depth 190 ft (57.9 m), cased to 41 ft (12.5 m). After Sept. 29, 1976, slotted casing from 140 ft (42.7 m) to bottom of well.
DATUM.--Altitude of land-surface datum is 941.51 ft (286.972 m). Measuring point: Top of casing, 0.98 ft (0.30 m) above land-surface datum. Prior to September 29, 1976, top of casing 2.8 ft (0.84 m) above land-surface datum.
REMARKS.--Well redrilled September 29, 1976 because well collapsed.
PERIOD OF RECORD.--March 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 33.26 ft (10.14 m) below land-surface datum, Apr, 13, 1976; lowest measured, 37.55 ft (11.45 m) below land-surface datum, Dec. 21, 1976.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16, 1980	35.80	JAN 28, 1981	35.11	APR 15, 1981	34.21	AUG 11, 1981	35.88
27	36.05	FEB 25	33.86	MAY 19	33.54	SEP 17	36.37
NOV 19	36.08	MAR 03	34.18	JUN 24	33.67	25	36.51
DEC 15	34.99	20	34.10	JUL 16	35.07		

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	NITROGEN, DISSOLV (MG/L AS N)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
OCT 23...	1530	1690	9.5	13.5	170	.71	.7	7	0	2.1	.5	450

DATE	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)
OCT 23...	99	72	1.2	408	159	599	.4	47	140	6.8	1.6

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS (UG/L)
OCT 23...	1010	.10	.210	.40	.010	23000	80	100	6	5.4	5

MUSKINGUM COUNTY--Continued

394845081462600. Local number, M09 W5-2.
LOCATION.--Lat 39°48'45", long 81°46'26", Hydrologic Unit 05040004, near Chandlersville.
AQUIFER.--Sand, shales and coals of Middle Pennsylvanian Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in (0.15 m), depth 49 ft (14.9 m), cased to 17.3 ft (5.3 m).
DATUM.--Altitude of land-surface datum is 973.03 ft (296.580 m). Measuring point: Top of casing, 3.7 ft (1.13 m) above land-surface datum.
PERIOD OF RECORD.--March 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 13.64 ft (4.16 m) below land-surface datum, June 7, 1981; lowest measured, 21.70 ft (6.61 m) below land-surface datum, Jan. 4, 1977.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16, 1980	16.98	FEB 25, 1981	14.17	MAY 19, 1981	14.02	SEP 17, 1981	15.75
NOV 19	16.73	MAR 03	14.48	JUN 24	14.23	25	15.83
DEC 15	15.37	20	14.31	JUL 16	15.30		
JAN 28, 1981	15.32	APR 15	14.10	AUG 11	15.72		

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	16.84	16.93	15.99	15.97	15.34	14.39	14.35	14.37	13.79	14.95	15.65	15.51
10	16.86	17.04	15.45	16.07	15.35	14.43	14.34	14.34	13.72	15.23	15.74	15.72
15	16.96	17.00	15.53	16.03	15.14	14.57	14.11	13.99	13.73	15.31	15.79	15.71
20	16.94	16.78	15.67	15.98	14.21	14.35	13.94	14.15	14.31	15.39	15.92	---
25	16.91	16.63	15.85	15.90	14.26	14.59	13.90	14.65	14.26	15.58	15.99	---
EOM	16.94	16.12	15.85	15.56	14.36	14.38	14.21	13.99	14.72	15.56	15.88	---

WTR YR 1981 HIGH 13.64 JUN 7 LOW 17.06 OCT 23 AND OTHERS

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	NITROGEN, DISSOLV (MG/L AS N)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
OCT 16...	1300	661	8.0	13.5	5	1.7	.0	42	0	11

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)
OCT 16...	3.3	150	88	10	1.9	396	0	325	6.3	23

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ANTIMONY, DISSOLVED (UG/L AS SB)
OCT 16...	7.6	1.1	6.3	400	.03	.210	1.5	.010	20	0

MUSKINGUM COUNTY--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981--Continued

Local number, M09 W5-2

DATE	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT 16...	2	200	0	10	2	9600	30	0	130	50

DATE	MERCURY DIS-SOLVED (UG/L AS HG)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)
OCT 16...	<.1	3	0	0	330	6	8.5	.00	0

MUSKINGUM COUNTY--Continued

394845081462601. Local number, M09 P5-2a.
LOCATION.--Lat 39°48'45", long 81°46'26", Hydrologic Unit 05040004, near Chandlersville.
AQUIFER.--Sand, shales and coals of Middle Pennsylvanian Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in (0.15 m), depth 50 ft (15.2 m), cased to 16.5 ft (5.0 m).
DATUM.--Altitude of land-surface datum is 974.17 ft (296.927 m). Measuring point: Top of casing, 3.0 ft (0.91 m) above land-surface datum.
PERIOD OF RECORD.--September 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 3.91 ft (1.19 m) below land-surface datum, Aug. 19, 1980; lowest measured, 9.48 ft (2.89 m) below land-surface datum, Sept. 26, 1978.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16, 1980	7.22	DEC 15, 1980	4.63	MAR 20, 1981	4.77	JUL 16, 1981	5.67
27	7.36	JAN 28, 1981	5.27	APR 15	4.59	AUG 11	6.87
30	7.43	FEB 25	4.67	MAY 19	4.20	SEP 17	7.11
NOV 19	7.57	MAR 03	4.90	JUN 24	4.24	25	7.31

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	NITROGEN, DISSOLV (MG/L AS N)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
OCT 16...	1200	447	7.6	13.5	0	.62	.0	140	0	41

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)
OCT 16...	9.5	19	23	.7	.6	248	0	203	10	27

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ANTIMONY, DISSOLVED (UG/L AS SB)
OCT 16...	6.0	.2	5.5	233	.42	.010	.19	.000	20	0

DATE	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT 16...	1	100	1	<10	1	51000	10	1	980	90

DATE	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)
OCT 16...	<.1	0	0	0	390	20	4.5	.00	0

MUSKINGUM COUNTY--Continued

394845081462602. Local number, M09 P5-2b.
LOCATION.--Lat 39°48'45", long 81°46'26", Hydrologic Unit 05040004, near Chandlersville.
AQUIFER.--Sand, shales and coals of Middle Pennsylvanian Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in (0.15 m), depth 50 ft (15.2 m), cased to 17.5 ft (5.3 m).
DATUM.--Altitude of land-surface datum is 973.98 ft (296.869 m). Measuring point: Top of casing, 2.0 ft (0.61 m) above land-surface datum.
PERIOD OF RECORD.--September 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 14.69 ft (4.48 m) below land-surface datum, May 19, 1981; lowest measured, 18.68 ft (5.69 m) below land-surface datum, Sept. 26, 1978.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16, 1980	17.62	DEC 15, 1980	16.20	MAR 20, 1981	15.02	JUL 16, 1981	15.99
27	17.61	JAN 28, 1981	16.18	APR 15	14.73	AUG 11	16.51
30	17.78	FEB 25	14.92	MAY 19	14.69	SEP 17	16.62
NOV 19	17.62	MAR 03	15.20	JUN 24	14.79	25	16.70

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	NITROGEN, DISSOLV (MG/L AS N)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L, CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
OCT 16...	1600	619	7.6	13.5	2	1.6	.0	230	0	67

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)
OCT 16...	15	34	24	1.0	1.2	344	0	282	14	49

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ANTIMONY, DISSOLVED (UG/L AS SB)
OCT 16...	7.0	.2	11	361	1.3	.000	.27	.000	20	0

DATE	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT 16...	1	300	3	<10	1	6100	10	0	580	40

DATE	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)
OCT 16...	.1	1	0	0	950	40	3.2	.00	0

MUSKINGUM COUNTY--Continued

394851081462803. Local number. M09 P14-1.
LOCATION.--Lat 39°48'51", long 81°46'28", Hydrologic Unit 05040004, near Chandlersville.
AQUIFER.--Overburden spoils, replaced after mining.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in (0.10 m), depth 56.0 ft (17.1 m), cased to 56.0 ft (17.1 m), bottom 10 ft (3.0 m) slotted.
DATUM.--Altitude of land-surface datum is 1,046.03 ft (318.830 m). Measuring point: Top of casing, 3.0 ft (0.91 m) above land-surface datum.
PERIOD OF RECORD.--August 1980 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 19.87 ft (6.06 m) below land-surface datum, Feb. 25, 1981; lowest measured, 54.44 ft (16.59 m) below land-surface datum, Aug. 30, 1980.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14, 1980	25.83	JAN 28, 1981	25.54	APR 01, 1981	26.58	JUL 16, 1981	26.25
27	30.81	FEB 25	19.87	15	26.53	AUG 11	26.62
NOV 19	26.08	MAR 02	21.85	MAY 19	25.88	SEP 17	26.68
DEC 15	23.48	20	27.53	JUN 24	25.92	25	26.81

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	27.73	24.75	25.58		---	26.44	26.03	25.10	26.10	26.53	26.64
10	---	26.84	23.73	25.40		---	26.48	26.09	25.64	26.32	26.68	26.64
15	---	26.42	23.54	25.95		---	26.52	25.78	25.15	26.34	26.64	26.61
20	---	26.16	23.51	26.20		27.53	26.15	25.91	25.87	26.38	26.66	---
25	---	25.90	23.76	26.29		27.16	25.92	26.01	25.85	26.59	26.75	---
EOM	29.18	25.40	24.84	---		26.65	25.92	25.71	26.09	26.71	26.60	---

WTR YR 1981 HIGH 23.33 DEC 18+19 LOW 29.36 OCT 30

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	NITROGEN, DISSOLV (MG/L AS N)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
OCT 15...	0830	1640	6.4	13.0	130	.42	2.2	790	0	230
MAR 03...	1230	1700	6.6	12.5	5	.22	1.0	710	0	200

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)
OCT 15...	53	15	4	.2	1.5	1300	0	1070	828	170
MAR 03...	50	12	4	.2	1.8	1160	0	951	466	210

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ANTIMONY, DISSOLVED (UG/L AS SB)
OCT 15...	6.6	.1	18	1160	.01	.090	.32	.010	10	0
MAR 03...	5.3	.1	13	1080	.01	.110	.10	.010	--	--

MUSKINGUM COUNTY--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981--Continued

Local number, M09 P14-1

DATE	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT 15...	8	300	3	20	1	40000	9300	3	21000	19000
MAR 03...	--	--	--	--	--	22000	6300	--	8700	7600

DATE	MERCURY DIS-SOLVED (UG/L AS HG)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)
OCT 15...	.1	27	0	0	910	90	33	.00	290
MAR 03...	--	--	--	--	870	--	11	--	71

MUSKINGUM COUNTY--Continued

394852081462002. Local number. M09 P8-1.
LOCATION.--Lat 39°48'52", long 81°46'20", Hydrologic Unit 05040004, near Chandlersville.
AQUIFER.--Overburden spoils, replaced after mining.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in (0.15 m), depth 37 ft (11.3 m), cased to 37.0 ft (11.3 m), bottom 10 ft (3.0 m) slotted.
DATUM.--Altitude of land-surface datum is 1039.42 ft (316.815 m). Measuring point: Top of casing, 2.5 ft (0.76 m) above land-surface datum.
PERIOD OF RECORD.--September 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 30.11 ft (9.18 m) below land-surface datum, Sept. 11, 1981; lowest measured, intermittently dry.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16, 1980	35.03	JAN 28, 1981	34.04	APR 15, 1981	32.67	SEP 17, 1981	30.18
27	DRY	FEB 25	31.50	MAY 19	32.75	25	30.11
30	DRY	MAR 02	32.92	JUN 24	31.99		
NOV 19	DRY	20	33.00	JUL 16	31.86		
DEC 15	33.00	APR 01	33.22	AUG 11	31.15		

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	NITROGEN, DISSOLV (MG/L AS N)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
MAR 03...	1600	1100	7.1	10.0	<5	1.1	.0	610	240	185	35	7.3

DATE	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
MAR 03...	3	.1	3.8	445	0	365	57	290	1.7	<.1	4.5	753

DATE	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	STRONTIUM, DISSOLVED (UG/L AS SR)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS (UG/L)
MAR 03...	.01	.820	.28	<.010	33000	4000	970	820	490	1.8	0

MUSKINGUM COUNTY--Continued

394852081462003. Local number, M09 P9-2.
LOCATION.--Lat 39°48'52", long 81°46'20", Hydrologic Unit 05040004, near Chandlersville.
AQUIFER.--Sand, shales and coals of Middle Pennsylvanian Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in (0.15 m), depth 119 ft (36.3 m), cased to 60.0 ft (18.3 m).
DATUM.--Altitude of land-surface datum is 1039.24 ft (316.760 m). Measuring point: Top of casing, 3.0 ft (0.91 m) above land-surface datum.
PERIOD OF RECORD.--October 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 54.62 ft (16.65 m) below land-surface datum, April 15, 1980; lowest measured, 67.45 ft (20.56 m) below land-surface datum, Aug. 2, 1979.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16, 1980	60.96	JAN 28, 1981	62.06	APR 01, 1981	59.40	JUL 16, 1981	61.98
		FEB 25	56.37	15	58.56	AUG 11	64.17
NOV 19	63.45	MAR 03	56.99	MAY 19	59.25	SEP 17	64.98
DEC 15	57.91	20	58.01	JUN 24	59.01	25	65.39

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	NITROGEN, DISSOLV (MG/L AS N)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
OCT 27...	1310	813	7.0	10.0	0	1.7	.0	210	0	50	20	97

DATE	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)
OCT 27...	50	2.9	2.5	424	0	348	68	110	4.7	.5	7.4

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS (UG/L)
OCT 27...	507	1.3	.150	.29	.010	5200	20	120	40	5.5	0

MUSKINGUM COUNTY--Continued

394853081462803. Local number, M09 P11-2.
LOCATION.--Lat 39°48'53", long 81°46'28", Hydrologic Unit 05040004, near Chandlersville.
AQUIFER.--Sand, shales and coals of Middle Pennsylvanian Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in (0.15 m), depth 97 ft (29.6 m) cased to 26.8 ft (8.2 m).
DATUM.--Altitude of land-surface datum is 1022.15 ft (311.551 m). Measuring point: Top of casing, 2.5 ft (0.76 m) above land-surface datum.
PERIOD OF RECORD.--September 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 24.53 ft (7.48 m) below land-surface datum, June 24, 1981; lowest measured, 28.97 ft (8.83 m) below land-surface datum, Sept. 27. 1978.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 1980	26.56	JAN 28, 1981	26.22	MAR 31, 1981	25.48	JUL 16, 1981	25.21
27	26.55	FEB 25	25.49	APR 15	25.43	AUG 11	25.52
NOV 19	26.67	MAR 03	25.43	MAY 19	24.74	SEP 17	25.81
DEC 15	25.96	20	25.28	JUN 24	24.53	25	25.66

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	NITROGEN, DISSOLV (MG/L AS N)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
OCT 15...	1130	1460	7.4	13.5	2	.09	.0	750	510	200

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)
OCT 15...	60	24	7	.4	.7	298	0	244	19	620

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ANTIMONY, DISSOLVED (UG/L AS SB)
OCT 15...	2.9	.2	12	1070	.00	.000	.09	.010	10	0

DATE	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT 15...	1	80	3	<10	1	1300	570	0	4100	4100

DATE	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)
OCT 15...	<.1	6	0	0	1300	30	1.2	.00	0

MUSKINGUM COUNTY--Continued

394855081461603. Local number, M09 P6-1.
LOCATION.--Lat 39°48'55", long 81°46'16", Hydrologic Unit 05040004, near Chandlersville.
AQUIFER.--Overburden spoils, replaced after mining.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in (0.15 m), depth 56 ft (17.1 m) cased to 56.0 ft (17.1 m), bottom 10 ft (3.0 m) slotted.
DATUM.--Altitude of land-surface datum is 1059.91 ft (323.061 m). Measuring point: Top of casing, 3.0 ft (0.91 m) above land-surface datum.
PERIOD OF RECORD.--October 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 48.16 ft (14.68 m) below land-surface datum, Aug. 11, 1981; lowest measured, dry, Oct. 24, 1978 to Apr. 23, 1980.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 1980	49.06	JAN 28, 1981	49.82	APR 15, 1981	49.94	SEP 17, 1981	48.70
27	49.08	FEB 25	49.92	MAY 19	49.59	25	48.81
30	49.05	MAR 02	49.87	JUN 24	49.17		
NOV 19	49.08	20	49.76	JUL 16	48.39		
DEC 15	49.36	APR 01	49.77	AUG 11	48.16		

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	NITROGEN, DISSOLV (MG/L AS N)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
MAR 03...	1500	3000	6.7	12.0	<5	.40	.3	2000	1600	610	120	42

DATE	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
MAR 03...	4	.4	3.5	516	0	423	165	1500	7.1	<.1	8.5	2580

DATE	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	STRONTIUM, DISSOLVED (UG/L AS SR)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS (UG/L)
MAR 03...	.02	.330	.05	<.010	77000	25000	6500	4400	1200	5.5	0

MUSKINGUM COUNTY--Continued

394855081461604. Local number, M09 P7-2.
LOCATION.--Lat 39°48'55", long 81°46'16", Hydrologic Unit 05040004, near Chandlersville.
AQUIFER.--Sand, shales and coals of Middle Pennsylvanian Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in (0.15 m), depth 170 ft (51.8 m), cased to 72.0 ft (21.9 m) (revised)
DATUM.--Altitude of land-surface datum is 1060.54 ft (323.253 m). Measuring point: Top of casing, 2.5 ft (0.76 m) above land-surface datum.
PERIOD OF RECORD.--November 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 94.80 ft (28.90 m) below land-surface datum, Sept. 25, 1980; lowest measured, 105.71 ft (32.22 m) below land-surface datum, May 20, 1980.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 1980	96.79	FEB 25, 1981	98.07	APR 15, 1981	97.81	AUG 11, 1981	99.03
NOV 19	101.69	MAR 03	97.81	MAY 19	97.94	SEP 25	99.10
DEC 15	98.71	20	97.78	JUN 24	97.82		
JAN 28, 1981	98.76	APR 01	97.99	JUL 16	98.57		

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	NITROGEN, DISSOLV (MG/L AS N)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
OCT 16...	0830	1460	8.3	13.0	100	.68	.0	12	0	3.2

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)
OCT 16...	.9	340	98	43	1.5	688	0	564	5.5	64

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ANTIMONY, DISSOLVED (UG/L AS SB)
OCT 16...	130	3.9	5.3	890	.33	.090	.26	.010	70	2

DATE	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT 16...	8	90	0	<10	3	21000	20	0	380	10

DATE	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)
OCT 16...	<.1	0	1	0	160	0	3.4	.00	6

MUSKINGUM COUNTY--Continued

394855081462702. Local number, M09 P3-1.
LOCATION.--Lat 39°48'55", long 81°46'27", Hydrologic Unit 05040004, near Chandlersville.
AQUIFER.--Overburden spoils, replaced after mining.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 7 in (0.18 m), depth 24 ft (7.3 m), cased to 24.0 ft (7.3 m), bottom 10 ft (3.0 m) slotted.
DATUM.--Altitude of land-surface datum is 1023.06 ft (311.829 m). Measuring point: Top of casing, 2.5 ft (0.76 m) above land-surface datum.
PERIOD OF RECORD.--September 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water-level, 16.29 ft (4.97 m) below land-surface datum, Feb. 20, 1981; lowest measured, dry, Sept. 26, 1978 to Nov. 15, 1978.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 1980	18.68	FEB 25, 1981	16.45	APR 15, 1981	17.07	AUG 11, 1981	17.94
NOV 19	19.02	MAR 02	16.68	MAY 19	17.12	SEP 17	17.50
DEC 15	16.82	20	17.08	JUN 24	16.92	25	17.74
JAN 28, 1981	16.54	31	17.42	JUL 16	17.62		

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	18.92	16.96	17.89	17.04	---	17.43	17.26	16.71	17.42	17.88	17.30
10	---	18.94	16.36	18.08	16.97	17.07	17.37	17.17	16.74	17.50	---	17.36
15	18.68	18.99	16.86	18.24	16.84	17.38	17.14	16.83	16.78	17.55	17.97	17.48
20	18.76	18.98	17.34	18.33	16.29	17.12	17.08	17.25	17.24	17.69	18.01	---
25	18.84	17.77	17.55	18.40	16.56	17.40	16.85	17.47	17.05	17.78	18.06	---
EOM	18.89	16.47	17.73	17.03	16.71	17.40	17.36	16.64	17.31	17.84	18.11	---

WTR YR 1981 HIGH 16.29 FEB 20 LOW 19.02 NOV 18 AND OTHERS

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	NITROGEN, DISSOLV (MG/L AS N)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
MAR 03...	1330	1150	7.1	10.0	<5	9.2	.7	510	220	130	46	6.4

DATE	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
MAR 03...	3	.1	5.9	349	0	286	44	440	3.8	.1	2.5	817

DATE	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	STRONTIUM, DISSOLVED (UG/L AS SR)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS (UG/L)
MAR 03...	.08	6.90	2.2	<.010	75000	60	1300	280	660	15	0

MUSKINGUM COUNTY-Continued

394855081462802. Local number, M09 P13-1.
LOCATION.--Lat 39°48'55", long 81°46'28", Hydrologic Unit 05040004, near Chandlersville.
AQUIFER.--Overburden spoils, replaced after mining.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in (0.10 m), depth 53.2 ft (16.2 m), cased to 53.2 ft (16.2 m), bottom 10 ft (3.0 m) slotted.
DATUM.--Altitude of land-surface datum is 1,059.98 ft (323.082 m). Measuring point: Top of casing, 3.0 ft (.91 m) above land-surface datum.
PERIOD OF RECORD.--August 1980 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 45.50 ft (13.87 m) below land-surface datum, July 16, 1981; lowest measured, 48.05 ft (14.65 m) below land-surface datum, Jan. 28, 1981.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14, 1980	45.98	FEB 25, 1981	48.02	APR 15, 1981	47.79	AUG 11, 1981	46.01
NOV 19	46.78	MAR 02	47.88	MAY 19	47.46	SEP 17	46.85
DEC 15	47.21	20	47.62	JUN 24	46.37	25	47.23
JAN 28, 1981	48.05	31	47.70	JUL 16	45.50		

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	NITROGEN, DISSOLV (MG/L AS N)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
OCT 27...	1430	3000	6.8	13.0	0	.65	.0	2200	1700	610
MAR 03...	1100	2950	6.8	12.0	<5	.49	.0	2000	1500	530

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)
OCT 27...	170	40	4	.4	3.3	572	0	469	145	1900
MAR 03...	160	36	4	.4	3.2	576	0	472	146	1600

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ANTIMONY, DISSOLVED (UG/L AS SB)
OCT 27...	13	.1	16	3040	.08	.310	.26	.010	0	0
MAR 03...	8.9	.1	13	2640	.02	.210	.26	.020	--	--

DATE	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT 27...	3	100	1	20	0	32000	140	0	3200	2400
MAR 03...	--	--	--	--	--	11000	60	--	2200	1700

DATE	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)
OCT 27...	<.1	34	0	0	2600	30	11	.00	1
MAR 03...	--	--	--	--	2400	--	8.2	--	0

MUSKINGUM COUNTY-Continued

394858081462801. Local number, M09 P12-1.
LOCATION.--Lat 39°48'58", long 81°46'28", Hydrologic Unit 05040004, near Chandlersville.
AQUIFER.--Overburden spoils, replaced after mining.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in (0.10 m), depth 62.2 ft (19.0 m) cased to 62.0 ft (18.9 m), bottom 10 ft (3.0 m) slotted.
DATUM.--Altitude of land-surface datum is 1,071.07 ft (326.462 m). Measuring point: Top of casing, 2.2 ft (0.67 m) above land-surface datum.
PERIOD OF RECORD.--Aug. 1980 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 56.38 ft (17.18 m) below land-surface datum, July 16, 1981; lowest measured, 59.35 ft (18.09 m) below land-surface datum, Feb. 12-15, 1981.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14, 1980	56.90	JAN 28, 1981	59.12	APR 15, 1981	58.78	AUG 14, 1981	57.05
27	57.26	FEB 25	59.03	MAY 19	58.47	18	57.19
30	57.23	MAR 02	58.90	JUN 24	57.20	SEP 25	58.30
NOV 19	57.73	20	58.60	JUL 16	56.38		
DEC 15	58.23	APR 01	58.73	AUG 11	56.99		

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	57.32	58.06	58.57	59.23	58.83	---					
10	---	57.46	58.14	58.57	59.23	58.82	---					
15	---	57.58	58.24	58.88	59.35	58.72	---					
20	---	57.72	58.43	59.01	59.17	58.65	---					
25	---	57.88	58.50	59.09	59.05	58.72	---					
EOM	57.22	57.95	58.55	59.23	59.00	58.72	---					

WTR YR 1981 HIGH 57.22 OCT 30 AND OTHERS LOW 59.35 FEB 12 AND OTHERS

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	NITROGEN, DISSOLV (MG/L AS N)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
OCT 14...	1640	5050	6.9	13.5	3	2.1	.0	4200	3600	450
MAR 03...	0915	5150	6.9	12.5	<5	.46	.0	3500	2900	490

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)
OCT 14...	740	150	7	1.0	12	755	0	619	152	3300
MAR 03...	560	150	8	1.1	12	826	0	677	166	3000

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ANTIMONY, DISSOLVED (UG/L AS SB)
OCT 14...	23	.2	13	5090	1.6	.160	.34	.010	10	0
MAR 03...	33	.1	16	4680	.03	.250	.18	.020	--	--

MUSKINGUM COUNTY--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981--Continued

Local number, M09 P12-1

DATE	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT 14...	3	0	1	10	1	3900	3400	2	2300	2300
MAR 03...	--	--	--	--	--	38000	700	--	3700	2000

DATE	MERCURY DIS-SOLVED (UG/L AS HG)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)
OCT 14...	<.1	72	0	0	12000	90	1.6	.00	0
MAR 03...	--	--	--	--	9500	--	14	--	0

MUSKINGUM COUNTY--Continued

394859081462803. Local number, M09 P2-2.
LOCATION.--Lat 39°48'59", long 81°46'28", Hydrologic Unit 05040004, near Chandlersville.
AQUIFER.--Sand, shales and coals of Middle Pennsylvanian Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 7 in (0.18 m), depth 117 ft (35.7 m) cased to 40.0 ft (12.2 m).
DATUM.--Altitude of land-surface datum is 1,038.56 ft (316.553 m). Measuring point: Top of casing, 3.0 ft (0.91 m) above land-surface datum.
PERIOD OF RECORD.--September 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 37.09 ft (11.31 m) below land-surface datum, June 24, 1981; lowest measured, 42.75 ft (13.03 m) below land-surface datum, September 27, 1978.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 1980	38.78	JAN 28, 1981	38.37	APR 15, 1981	37.95	AUG 11, 1981	37.51
27	38.93	FEB 25	38.08	MAY 19	37.39	SEP 17	37.64
30	39.00	MAR 03	37.96	JUN 24	37.09	25	37.58
DEC 15	38.34	20	37.80	JUL 16	37.35		

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	NITROGEN, DISSOLV (MG/L AS N)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
OCT 15...	1000	1690	7.0	14.0	4	.41	.0	330	0	71

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)
OCT 15...	36	320	68	7.7	3.3	514	0	422	82	580

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ANTIMONY, DISSOLVED (UG/L AS SB)
OCT 15...	2.9	.5	15	1290	.02	.340	.05	.000	20	0

DATE	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT 15...	2	70	5	<10	1	27000	170	0	980	160

DATE	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)
OCT 15...	<.1	1	0	0	2600	20	2.6	.00	20

The following tables contain discharge, water-quality, bottom-material, sediment and biological data collected from streams in the coal area of eastern Ohio.

ANALYSES OF MISCELLANEOUS STATIONS

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	ACIDITY (MG/L AS H)	ACIDITY (MG/L AS CACO3)	BICAR-BONATE FET-FLD (MG/L AS HCO3)	CAR-BONATE FET-FLD (MG/L AS CO3)	ALKA-LINITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)
382958082372400 - 041 L ICE C NR COAL GROVE OH (LAT 38 29 58 LONG 082 37 24)											
MAY , 1981											
12...	0900	8.8	380	7.5	11.5	--	--	116	0	95	5.9
JUL											
14...	1410	2.1	467	7.7	26.5	--	--	138	0	113	4.4
384452082181400 - 041 CLAYLICK RN NR NORTHUP OH (LAT 38 44 52 LONG 082 18 14)											
APR , 1981											
23...	1400	3.2	550	7.7	17.0	--	--	96	0	79	3.1
JUL											
15...	1115	.79	662	7.9	26.0	--	--	280	0	230	5.6
384817082391600 - 041 BRADY RN NR S WEBSTER OH (LAT 38 48 17 LONG 082 39 16)											
MAY , 1981											
07...	1100	9.4	230	7.4	10.0	--	--	44	0	36	2.8
JUL											
15...	0820	.72	332	7.2	20.5	--	--	68	0	56	6.9
385916082090200 - 041 JESSIE C NR RUTLAND OH (LAT 38 59 16 LONG 082 09 02)											
MAY , 1981											
12...	1400	4.1	490	7.3	12.5	--	--	16	0	13	1.3
JUL											
15...	1440	.06	619	6.1	32.0	.4	20	4	0	3	5.1
390024082281200 - 041 DICKASON RN NR THURMAN OH (LAT 39 00 24 LONG 082 28 12)											
MAY , 1981											
06...	1400	38	320	6.5	14.0	--	--	8	0	7	4.0
SEP											
03...	1300	2.5	765	4.4	21.5	1.7	84	0	0	0	.0
390346081540100 - 041 HORSE CAVE C NR CHESTER OH (LAT 39 03 46 LONG 081 54 01)											
MAY , 1981											
11...	1730	24	250	6.9	15.5	--	--	109	0	89	22
JUL											
31...	0945	.96	481	6.5	20.5	.4	20	108	0	89	55
390828082224900 - 041 PIERCE RN NR RADCLIFF OH (LAT 39 08 28 LONG 082 22 49)											
MAY , 1981											
06...	1720	16	450	6.4	14.0	1.0	50	16	0	13	10
JUL											
30...	1850	1.2	450	6.9	22.5	.3	15	24	0	20	4.8
391604082022300 - 041 LONG RN NR ATHENS OH (LAT 39 16 04 LONG 082 02 23)											
MAY , 1981											
19...	1700	24	450	6.9	11.0	--	--	140	0	115	28
JUL											
16...	1120	2.4	571	7.6	21.0	--	--	130	0	107	5.2

ANALYSES OF MISCELLANEOUS STATIONS

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	ARSENIC TOTAL IN BOT-TOM MA-TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD)	CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	COBALT, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB)
382958082372400 - 041 L ICE C NR COAL GROVE OH (LAT 38 29 58 LONG 082 37 24)											
MAY , 1981											
12...	96	--	--	--	--	--	750	640	110	--	--
JUL											
14...	93	4	<2	<10	33	7	740	700	40	5400	30
384452082181400 - 041 CLAYLICK RN NR NORTHUP OH (LAT 38 44 52 LONG 082 18 14)											
APR , 1981											
23...	200	--	--	--	--	--	180	160	20	--	--
JUL											
15...	190	4	<6	30	93	29	250	200	50	11000	<60
384817082391600 - 041 BRADY RN NR S WEBSTER OH (LAT 38 48 17 LONG 082 39 16)											
MAY , 1981											
07...	66	--	--	--	--	--	610	360	250	--	--
JUL											
15...	80	0	<3	<10	43	20	1800	1700	130	9500	<30
385916082090200 - 041 JESSIE C NR RUTLAND OH (LAT 38 59 16 LONG 082 09 02)											
MAY , 1981											
12...	210	--	--	--	--	--	2800	2600	200	--	--
JUL											
15...	280	5	<6	20	56	6	1100	620	480	6100	<60
390024082281200 - 041 DICKASON RN NR THURMAN OH (LAT 39 00 24 LONG 082 28 12)											
MAY , 1981											
06...	130	--	--	--	--	--	1500	1100	400	--	--
SEP											
03...	190	0	<1	<1	<10	1	1800	700	1100	600	<1
390346081540100 - 041 HORSE CAVE C NR CHESTER OH (LAT 39 03 46 LONG 081 54 01)											
MAY , 1981											
11...	38	--	--	--	--	--	1200	1200	50	--	--
JUL											
31...	24	11	<2	10	20	9	1200	1000	160	9900	<20
390828082224900 - 041 PIERCE RN NR RADCLIFF OH (LAT 39 08 28 LONG 082 22 49)											
MAY , 1981											
06...	150	--	--	--	--	--	840	440	400	--	--
JUL											
30...	180	13	<2	<10	<10	3	1100	890	210	9100	<20
391604082022300 - 041 LONG RN NR ATHENS OH (LAT 39 16 04 LONG 082 02 23)											
MAY , 1981											
19...	97	--	--	--	--	--	2800	2800	10	--	--
JUL											
16...	160	5	<4	10	62	12	230	140	90	10000	<40

ANALYSES OF MISCELLANEOUS STATIONS

DATE	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	COAL IN BOTTOM MATERIAL (GM/KG)
382958082372400 - 041 L ICE C NR COAL GROVE OH (LAT 38 29 58 LONG 082 37 24)											
MAY , 1981											
12...	160	40	120	--	--	--	--	--	30	.71	--
JUL											
14...	170	30	140	940	.00	0	59	3.2	--	--	4.00
384452082181400 - 041 CLAYLICK RN NR NORTHUP OH (LAT 38 44 52 LONG 082 18 14)											
APR , 1981											
23...	80	0	80	--	--	--	--	--	8	.07	--
JUL											
15...	70	0	70	4300	.00	0	100	3.1	--	--	3.00
384817082391600 - 041 BRADY RN NR S WEBSTER OH (LAT 38 48 17 LONG 082 39 16)											
MAY , 1981											
07...	400	30	370	--	--	--	--	--	8	.20	--
JUL											
15...	820	70	750	890	.00	0	55	4.2	--	--	5.00
385916082090200 - 041 JESSIE C NR RUTLAND OH (LAT 38 59 16 LONG 082 09 02)											
MAY , 1981											
12...	3200	0	3200	--	--	--	--	--	176	1.9	--
JUL											
15...	5600	300	5300	31	.00	0	72	3.1	--	--	5.00
390024082281200 - 041 DICKASON RN NR THURMAN OH (LAT 39 00 24 LONG 082 28 12)											
MAY , 1981											
06...	1700	0	1700	--	--	--	--	--	18	1.8	--
SEP											
03...	6500	0	6500	900	<.01	<1	12	16	--	--	7.00
390346081540100 - 041 HORSE CAVE C NR CHESTER OH (LAT 39 03 46 LONG 081 54 01)											
MAY , 1981											
11...	380	110	270	--	--	--	--	--	--	--	--
JUL											
31...	730	60	670	1100	<.01	<1	30	11	--	--	6.00
390828082224900 - 041 PIERCE RN NR RADCLIFF OH (LAT 39 08 28 LONG 082 22 49)											
MAY , 1981											
06...	1900	0	1900	--	--	--	--	--	--	--	--
JUL											
30...	3800	0	3800	290	<.01	<1	30	6.4	--	--	5.00
391604082022300 - 041 LONG RN NR ATHENS OH (LAT 39 16 04 LONG 082 02 23)											
MAY , 1981											
19...	410	270	140	--	--	--	--	--	129	8.4	--
JUL											
16...	120	0	120	2800	.00	0	82	8.3	--	--	2.00

ANALYSES OF MISCELLANEOUS STATIONS

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	ACIDITY (MG/L AS H)	ACIDITY (MG/L AS CACO3)	BICAR-BONATE FET-FLD (MG/L AS HCO3)	CAR-BONATE FET-FLD (MG/L AS CO3)	ALKA-LINITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)
391915082274600 - 041 BRUSHY F NR CREOLA OH (LAT 39 19 15 LONG 082 27 46)											
MAY , 1981											
12...	1025	77	195	6.1	10.0	.3	15	8	0	7	10
JUL											
30...	1325	.24	1240	3.3	23.0	5.2	258	0	0	0	.0
392001082195601 - 041 SANDY RN NR ZALESKI OH (LAT 39 20 01 LONG 082 19 56)											
APR , 1981											
23...	1300	30	170	6.6	13.0	.2	10	4	0	3	1.6
JUL											
30...	1630	.20	585	5.1	20.5	.6	30	8	0	7	102
392348082220200 - 041 E B RACCOON C NR NEW PLYMOUTH OH (LAT 39 23 48 LONG 082 22 02)											
MAY , 1981											
27...	1700	11	900	3.6	19.0	2.8	139	0	0	0	.0
JUL											
30...	0945	2.4	1670	3.6	17.0	6.2	308	0	0	0	.0
393112081245600 - 041 WHIPPLE RN AT WHIPPLE OH (LAT 39 31 12 LONG 081 24 56)											
MAY , 1981											
11...	1330	8.4	484	8.3	16.0	--	--	182	2	153	1.5
AUG											
06...	1410	1.5	1300	7.5	24.0	--	--	226	0	185	11
393720081212100 - 041 M F DUCK C NR GERMANTOWN OH (LAT 39 37 20 LONG 081 21 21)											
APR , 1981											
23...	1630	115	710	7.5	14.5	--	--	80	0	66	4.0
AUG											
06...	1350	12	655	4.8	23.5	.6	30	4	0	3	101
394311081425700 - 041 HORSE RN NR MCCONNELSVILLE OH (LAT 39 43 11 LONG 081 42 57)											
APR , 1981											
14...	1300	23	1080	8.2	16.0	--	--	206	0	169	2.1
AUG											
06...	1025	1.9	1180	7.4	24.0	--	--	186	0	153	12
394508082092800 - 041 MC LUNEY C NR NEW LEXINGTON OH (LAT 39 45 08 LONG 082 09 28)											
MAY , 1981											
06...	1600	6.1	1640	3.3	11.5	.8	40	0	0	0	.0
JUL											
17...	1310	2.0	2040	3.1	23.5	4.3	214	0	0	0	.0
394836082081600 - 041 BUCKEYE FK NR FULTONHAM OH (LAT 39 48 36 LONG 082 08 16)											
MAY , 1981											
06...	1430	25	1260	3.6	11.0	1.0	50	0	0	0	.0
JUL											
17...	1055	4.2	2150	3.0	20.5	5.0	248	0	0	0	.0

ANALYSES OF MISCELLANEOUS STATIONS

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	ARSENIC TOTAL IN BOT-TOM MA-TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD)	CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	COBALT, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB)
391915082274600 - 041 BRUSHY F NR CREOLA OH (LAT 39 19 15 LONG 082 27 46)											
MAY , 1981											
12...	68	--	--	--	--	--	2000	1000	1000	--	--
JUL											
30...	510	4	<2	<10	<10	8	20000	0	20000	14000	<20
392001082195601 - 041 SANDY RN NR ZALESKI OH (LAT 39 20 01 LONG 082 19 56)											
APR , 1981											
23...	73	--	--	--	--	--	5000	4700	300	--	--
JUL											
30...	230	10	<2	<10	10	4	1800	1400	430	7300	<20
392348082220200 - 041 E B RACCOON C NR NEW PLYMOUTH OH (LAT 39 23 48 LONG 082 22 02)											
MAY , 1981											
27...	480	--	--	--	--	--	5500	3700	1800	--	--
JUL											
30...	950	3	<2	<10	<10	13	9800	0	9800	29000	<20
393112081245600 - 041 WHIPPLE RN AT WHIPPLE OH (LAT 39 31 12 LONG 081 24 56)											
MAY , 1981											
11...	79	--	--	--	--	--	530	520	10	--	--
AUG											
06...	94	6	<1	10	20	<10	790	780	10	15000	20
393720081212100 - 041 M F DUCK C NR GERMANTOWN OH (LAT 39 37 20 LONG 081 21 21)											
APR , 1981											
23...	280	--	--	--	--	--	39000	39000	240	--	--
AUG											
06...	560	7	<1	<10	30	10	6000	5900	100	10000	<10
394311081425700 - 041 HORSE RN NR MCCONNELSVILLE OH (LAT 39 43 11 LONG 081 42 57)											
APR , 1981											
14...	440	--	--	--	--	--	520	490	30	--	--
AUG											
06...	490	12	<1	<10	10	10	760	710	50	13000	20
394508082092800 - 041 MC LUNEY C NR NEW LEXINGTON OH (LAT 39 45 08 LONG 082 09 28)											
MAY , 1981											
06...	910	--	--	--	--	--	4800	0	4800	--	--
JUL											
17...	1100	11	<4	<10	94	11	4400	0	4400	14000	<30
394836082081600 - 041 BUCKEYE FK NR FULTONHAM OH (LAT 39 48 36 LONG 082 08 16)											
MAY , 1981											
06...	600	--	--	--	--	--	5300	500	4800	--	--
JUL											
17...	1200	6	<4	<10	48	8	5900	500	5400	17000	<40

ANALYSES OF MISCELLANEOUS STATIONS

DATE	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	COAL IN BOTTOM MATERIAL (GM/KG)
391915082274600 - 041 BRUSHY F NR CREOLA OH (LAT 39 19 15 LONG 082 27 46)											
MAY , 1981											
12...	1700	600	1100	--	--	--	--	--	31	6.4	--
JUL											
30...	12000	11000	1500	59	<.01	<1	30	13	--	--	3.00
392001082195601 - 041 SANDY RN NR ZALESKI OH (LAT 39 20 01 LONG 082 19 56)											
APR , 1981											
23...	500	30	470	--	--	--	--	--	107	8.7	--
JUL											
30...	5700	0	5700	240	<.01	<1	20	4.1	--	--	4.00
392348082220200 - 041 E B RACCOON C NR NEW PLYMOUTH OH (LAT 39 23 48 LONG 082 22 02)											
MAY , 1981											
27...	10000	0	10000	--	--	--	--	--	110	3.3	--
JUL											
30...	22000	0	22000	130	<.01	<1	30	17	--	--	4.00
393112081245600 - 041 WHIPPLE RN AT WHIPPLE OH (LAT 39 31 12 LONG 081 24 56)											
MAY , 1981											
11...	110	30	80	--	--	--	--	--	35	.79	--
AUG											
06...	340	70	270	1400	<.01	<1	30	3.6	--	--	9.00
393720081212100 - 041 M F DUCK C NR GERMANTOWN OH (LAT 39 37 20 LONG 081 21 21)											
APR , 1981											
23...	2300	1100	1200	--	--	--	--	--	1270	394	--
AUG											
06...	3500	200	3300	420	<.01	<1	90	13	--	--	6.00
394311081425700 - 041 HORSE RN NR MCCONNELSVILLE OH (LAT 39 43 11 LONG 081 42 57)											
APR , 1981											
14...	2900	2700	180	--	--	--	--	--	46	2.9	--
AUG											
06...	510	120	390	1600	<.01	<1	20	8.1	--	--	8.00
394508082092800 - 041 MC LUNEY C NR NEW LEXINGTON OH (LAT 39 45 08 LONG 082 09 28)											
MAY , 1981											
06...	5800	200	5600	--	--	--	--	--	14	.23	--
JUL											
17...	7500	100	7400	3600	.00	0	61	7.0	--	--	8.00
394836082081600 - 041 BUCKEYE FK NR FULTONHAM OH (LAT 39 48 36 LONG 082 08 16)											
MAY , 1981											
06...	12000	0	12000	--	--	--	--	--	37	2.5	--
JUL											
17...	27000	0	27000	210	.00	0	52	19	--	--	15.0

ANALYSES OF MISCELLANEOUS STATIONS

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	ACIDITY (MG/L AS H)	ACIDITY (MG/L AS CACO3)	BICAR-BONATE FET-FLD (MG/L AS HCO3)	CAR-BONATE FET-FLD (MG/L AS CO3)	ALKA-LINITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)
394953081182800 - 041 SKIN C NR SUMMERFIELD OH (LAT 39 49 53 LONG 081 18 28)											
JUN , 1981											
03...	1700	25	370	6.9	21.0	--	--	192	0	157	39
JUL											
17...	0830	1.1	480	8.4	20.5	--	--	260	12	233	1.8
395029081590700 - 041 BRUSH C NR PHILO OH (LAT 39 50 29 LONG 081 59 07)											
MAY , 1981											
11...	1800	99	548	5.4	14.0	--	--	28	0	23	178
JUL											
17...	1600	5.3	1410	3.3	25.5	2.6	129	0	0	0	.0
395320081401200 - 041 YOKER C NR CUMBERLAND OH (LAT 39 53 20 LONG 081 40 12)											
APR , 1981											
06...	1430	26	830	7.0	11.0	--	--	160	0	131	26
JUL											
17...	1120	2.9	2100	8.1	23.0	--	--	124	0	102	1.6
395522081514100 - 041 WHITE EYES C NR CHANDLERSVILLE OH (LAT 39 55 22 LONG 081 51 41)											
MAY , 1981											
11...	1330	132	225	7.7	14.0	--	--	96	0	79	3.1
JUL											
17...	1415	2.1	399	8.5	24.5	--	--	164	12	154	1.0
395550080505900 - 041 PIPE C NR JACOBSBURG OH (LAT 39 55 50 LONG 080 50 59)											
MAY , 1981											
28...	0815	17	500	8.1	16.5	--	--	224	0	184	2.8
395709081062900 - 041 LONG RN NR BARNESVILLE OH (LAT 39 57 09 LONG 081 06 29)											
MAY , 1981											
27...	1615	5.6	526	8.0	21.5	--	--	176	0	144	2.8
JUL											
16...	1530	2.3	604	8.3	24.5	--	--	180	--	148	1.4
400224081093300 - 041 SPENCER C NR HENDRYSBURG OH (LAT 40 02 24 LONG 081 09 33)											
MAY , 1981											
28...	1115	8.4	701	8.1	17.5	--	--	192	0	157	2.4
JUL											
16...	1350	4.6	1080	8.3	21.0	--	--	232	--	190	1.8
400710080430900 - 041 GLENNS RN NR MARTINS FERRY OH (LAT 40 07 10 LONG 080 43 09)											
MAY , 1981											
06...	1120	14	1200	7.7	12.0	--	--	184	0	151	5.9
AUG											
05...	1100	6.5	1700	7.8	21.5	--	--	194	0	159	4.9

ANALYSES OF MISCELLANEOUS STATIONS

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	ARSENIC TOTAL IN BOT-TOM MA-TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD)	CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	COBALT, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB)
394953081182800 - 041 SKIN C NR SUMMERFIELD OH (LAT 39 49 53 LONG 081 18 28)											
JUN , 1981											
03...	39	--	--	--	--	--	3500	3400	70	--	--
JUL											
17...	32	5	5	20	71	26	950	940	10	14000	130
395029081590700 - 041 BRUSH C NR PHILO OH (LAT 39 50 29 LONG 081 59 07)											
MAY , 1981											
11...	100	--	--	--	--	--	16000	16000	430	--	--
JUL											
17...	620	10	<3	<10	40	10	11000	3800	7200	11000	<30
395320081401200 - 041 YOKER C NR CUMBERLAND OH (LAT 39 53 20 LONG 081 40 12)											
APR , 1981											
06...	280	--	--	--	--	--	1400	1400	20	--	--
JUL											
17...	1200	4	<10	10	120	31	250	210	40	13000	<100
395522081514100 - 041 WHITE EYES C NR CHANDLERSVILLE OH (LAT 39 55 22 LONG 081 51 41)											
MAY , 1981											
11...	32	--	--	--	--	--	7900	7700	240	--	--
JUL											
17...	45	6	<5	<10	27	18	190	130	60	8100	<40
395550080505900 - 041 PIPE C NR JACOBSBURG OH (LAT 39 55 50 LONG 080 50 59)											
MAY , 1981											
28...	80	--	--	--	--	--	1900	1900	30	--	--
395709081062900 - 041 LONG RN NR BARNESVILLE OH (LAT 39 57 09 LONG 081 06 29)											
MAY , 1981											
27...	140	--	--	--	--	--	3300	3300	30	--	--
JUL											
16...	160	5	5	10	72	24	420	390	30	11000	<50
400224081093300 - 041 SPENCER C NR HENDRYSBURG OH (LAT 40 02 24 LONG 081 09 33)											
MAY , 1981											
28...	190	--	--	--	--	--	3100	3100	30	--	--
JUL											
16...	370	3	<5	<10	59	28	250	230	20	6800	<50
400710080430900 - 041 GLENNS RN NR MARTINS FERRY OH (LAT 40 07 10 LONG 080 43 09)											
MAY , 1981											
06...	420	--	--	--	--	--	26000	26000	30	--	--
AUG											
05...	620	7	2	<10	10	10	29000	29000	20	8400	20

ANALYSES OF MISCELLANEOUS STATIONS

DATE	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	COAL IN BOTTOM MATERIAL (GM/KG)
394953081182800 - 041 SKIN C NR SUMMERFIELD OH (LAT 39 49 53 LONG 081 18 28)											
JUN , 1981											
03...	230	180	50	--	--	--	--	--	149	10	--
JUL											
17...	130	70	60	4400	.00	0	76	6.5	--	--	5.00
395029081590700 - 041 BRUSH C NR PHILO OH (LAT 39 50 29 LONG 081 59 07)											
MAY , 1981											
11...	1100	390	710	--	--	--	--	--	--	--	--
JUL											
17...	6900	200	6700	280	.00	0	50	10	--	--	7.00
395320081401200 - 041 YOKER C NR CUMBERLAND OH (LAT 39 53 20 LONG 081 40 12)											
APR , 1981											
06...	1300	200	1100	--	--	--	--	--	53	3.7	--
JUL											
17...	3200	300	2900	6300	.00	0	180	3.2	--	--	2.00
395522081514100 - 041 WHITE EYES C NR CHANDLERSVILLE OH (LAT 39 55 22 LONG 081 51 41)											
MAY , 1981											
11...	410	380	30	--	--	--	--	--	283	101	--
JUL											
17...	50	0	50	1500	.00	0	54	4.1	--	--	3.00
395550080505900 - 041 PIPE C NR JACOBSBURG OH (LAT 39 55 50 LONG 080 50 59)											
MAY , 1981											
28...	150	50	100	--	--	--	--	--	147	6.7	--
395709081062900 - 041 LONG RN NR BARNESVILLE OH (LAT 39 57 09 LONG 081 06 29)											
MAY , 1981											
27...	620	240	380	--	--	--	--	--	112	1.7	--
JUL											
16...	260	30	230	2000	.00	1	44	21	--	--	1.00
400224081093300 - 041 SPENCER C NR HENDRYSBURG OH (LAT 40 02 24 LONG 081 09 33)											
MAY , 1981											
28...	330	170	160	--	--	--	--	--	124	2.8	--
JUL											
16...	60	10	50	2300	.00	0	91	16	--	--	10.0
400710080430900 - 041 GLENNS RN NR MARTINS FERRY OH (LAT 40 07 10 LONG 080 43 09)											
MAY , 1981											
06...	330	70	260	--	--	--	--	--	112	4.2	--
AUG											
05...	420	60	360	730	<.01	<1	28	44	--	--	4.00

ANALYSES OF MISCELLANEOUS STATIONS

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	ACIDITY (MG/L AS H)	ACIDITY (MG/L AS CACO3)	BICAR-BONATE FET-FLD (MG/L AS HCO3)	CAR-BONATE FET-FLD (MG/L AS CO3)	ALKA-LINITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)
400932081265100 - 041 CLEAR F NR BIRMINGHAM OH (LAT 40 09 32 LONG 081 26 51)											
APR , 1981											
23...	1230	32	240	6.8	12.0	--	--	63	0	52	16
JUL											
16...	1055	3.0	288	7.6	20.5	--	--	116	0	95	4.7
401005082001700 - 041 MILL F WAKATOMIKA C NR TRINWAY OH (LAT 40 10 05 LONG 082 00 17)											
APR , 1981											
07...	1400	47	1100	6.4	12.5	.4	20	64	0	52	41
JUL											
14...	1040	15	1740	7.6	23.0	--	--	60	0	49	2.4
401012081222900 - 041 SUGARTREE F NR BIRMINGHAM OH (LAT 40 10 12 LONG 081 22 29)											
JUN , 1981											
09...	1045	9.8	230	7.8	19.0	--	--	98	0	80	2.5
401104080423000 - 041 L SHORT C NR TILTONSVILLE OH (LAT 40 11 04 LONG 080 42 30)											
APR , 1981											
16...	0830	91	790	7.8	9.0	--	--	212	0	174	5.4
AUG											
27...	1030	3.2	1650	7.6	18.5	--	--	196	0	161	7.9
401106081500500 - 041 NO NAME TR WILLS C NR CONESVILLE OH (LAT 40 11 06 LONG 081 50 05)											
APR , 1981											
23...	1630	10	1070	6.4	15.0	.8	40	32	0	26	20
JUL											
14...	1235	2.8	1370	7.2	24.5	--	--	54	0	44	5.5
401211080462100 - 041 PINEY F AT DILLONVALE OH (LAT 40 12 11 LONG 080 46 21)											
APR , 1981											
14...	1415	98	860	7.7	14.0	--	--	190	0	156	6.1
AUG											
18...	1315	11	830	8.0	18.0	--	--	253	0	208	4.0
401227080551201 - 041 S F SHORT C AT GEORGETOWN OH (LAT 40 12 27 LONG 080 55 12)											
JUN , 1981											
06...	1315	36	2450	7.6	20.0	--	--	314	0	258	13
JUL											
15...	0930	9.9	2940	8.3	18.5	--	--	252	12	227	2.2
401247080532800 - 041 M F SHORT C NR ADENA OH (LAT 40 12 47 LONG 080 53 28)											
APR , 1981											
13...	1600	213	1470	7.9	16.0	--	--	190	0	156	3.8
JUL											
15...	1130	14	2110	8.4	20.5	--	--	192	24	197	1.2

ANALYSES OF MISCELLANEOUS STATIONS

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	ARSENIC TOTAL IN BOT-TOM MA-TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD)	CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	COBALT, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB)
400932081265100 - 041 CLEAR F NR BIRMINGHAM OH (LAT 40 09 32 LONG 081 26 51)											
APR , 1981											
23...	34	--	--	--	--	--	1300	1300	20	--	--
JUL											
16...	34	6	<3	<10	37	3	650	580	70	5800	<30
401005082001700 - 041 MILL F WAKATOMIKA C NR TRINWAY OH (LAT 40 10 05 LONG 082 00 17)											
APR , 1981											
07...	570	--	--	--	--	--	14000	14000	20	--	--
JUL											
14...	960	0	<3	<10	42	21	560	530	30	10000	70
401012081222900 - 041 SUGARTREE F NR BIRMINGHAM OH (LAT 40 10 12 LONG 081 22 29)											
JUN , 1981											
09...	23	--	--	--	--	--	1200	1100	60	--	--
401104080423000 - 041 L SHORT C NR TILTONSVILLE OH (LAT 40 11 04 LONG 080 42 30)											
APR , 1981											
16...	240	--	--	--	--	--	4800	4800	30	--	--
AUG											
27...	700	<1	1	10	30	26	1000	950	50	23000	26
401106081500500 - 041 NO NAME TR WILLS C NR CONESVILLE OH (LAT 40 11 06 LONG 081 50 05)											
APR , 1981											
23...	550	--	--	--	--	--	13000	3000	10000	--	--
JUL											
14...	700	34	<5	10	35	35	3400	2500	870	30000	<60
401211080462100 - 041 PINEY F AT DILLONVALE OH (LAT 40 12 11 LONG 080 46 21)											
APR , 1981											
14...	300	--	--	--	--	--	7300	7300	20	--	--
AUG											
18...	640	<1	1	6	20	12	390	320	70	13000	16
401227080551201 - 041 S F SHORT C AT GEORGETOWN OH (LAT 40 12 27 LONG 080 55 12)											
JUN , 1981											
06...	640	--	--	--	--	--	1300	1000	290	--	--
JUL											
15...	2000	5	8	<10	84	40	330	230	100	12000	70
401247080532800 - 041 M F SHORT C NR ADENA OH (LAT 40 12 47 LONG 080 53 28)											
APR , 1981											
13...	750	--	--	--	--	--	4700	4700	30	--	--
JUL											
15...	1100	4	<2	30	34	5	540	490	50	6600	<20

ANALYSES OF MISCELLANEOUS STATIONS

DATE	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	COAL IN BOTTOM MATERIAL (GM/KG)
400932081265100 - 041 CLEAR F NR BIRMINGHAM OH (LAT 40 09 32 LONG 081 26 51)											
APR , 1981											
23...	100	30	70	--	--	--	--	--	46	4.0	--
JUL											
16...	150	20	130	680	.00	0	31	4.7	--	--	7.00
401005082001700 - 041 MILL F WAKATOMIKA C NR TRINWAY OH (LAT 40 10 05 LONG 082 00 17)											
APR , 1981											
07...	3600	100	3500	--	--	--	--	--	443	56	--
JUL											
14...	6700	0	6700	4400	.00	1	110	3.0	--	--	1.00
401012081222900 - 041 SUGARTREE F NR BIRMINGHAM OH (LAT 40 10 12 LONG 081 22 29)											
JUN , 1981											
09...	120	40	80	--	--	--	--	--	--	--	--
401104080423000 - 041 L SHORT C NR TILTONSVILLE OH (LAT 40 11 04 LONG 080 42 30)											
APR , 1981											
16...	150	40	110	--	--	--	--	--	67	16	--
AUG											
27...	90	0	90	940	<.01	<1	73	24	--	--	7.00
401106081500500 - 041 NO NAME TR WILLS C NR CONESVILLE OH (LAT 40 11 06 LONG 081 50 05)											
APR , 1981											
23...	2300	0	2300	--	--	--	--	--	74	2.0	--
JUL											
14...	2800	200	2600	980	.00	0	130	55	--	--	5.00
401211080462100 - 041 PINEY F AT DILLONVALE OH (LAT 40 12 11 LONG 080 46 21)											
APR , 1981											
14...	310	240	70	--	--	--	--	--	269	71	--
AUG											
18...	40	0	40	980	<.01	<1	59	27	--	--	26.0
401227080551201 - 041 S F SHORT C AT GEORGETOWN OH (LAT 40 12 27 LONG 080 55 12)											
JUN , 1981											
06...	320	100	220	--	--	--	--	--	65	6.3	--
JUL											
15...	210	20	190	4100	.00	0	170	74	--	--	54.0
401247080532800 - 041 M F SHORT C NR ADENA OH (LAT 40 12 47 LONG 080 53 28)											
APR , 1981											
13...	640	520	120	--	--	--	--	--	120	69	--
JUL											
15...	90	30	60	2100	.00	0	61	8.3	--	--	9.00

ANALYSES OF MISCELLANEOUS STATIONS

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	ACIDITY (MG/L AS H)	ACIDITY (MG/L AS CACO3)	BICAR-BONATE FET-FLD (MG/L AS HCO3)	CAR-BONATE FET-FLD (MG/L AS CO3)	ALKA-LINITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)
401313080401800 - 041 RUSH RN NR TILTONSVILLE OH (LAT 40 13 13 LONG 080 40 18)											
APR , 1981											
15...	1345	55	960	8.2	14.0	--	--	236	0	194	2.4
AUG											
05...	1255	7.3	1380	8.1	23.5	--	--	218	0	179	2.8
401314080522300 - 041 N F SHORT C AT ADENA OH (LAT 40 13 14 LONG 080 52 23)											
APR , 1981											
07...	1130	41	1370	7.8	9.0	--	--	178	0	146	4.5
JUL											
15...	1330	30	1780	8.3	22.0	--	--	168	16	164	1.6
401505081061800 - 041 BRUSHY F NR CADIZ OH (LAT 40 15 05 LONG 081 06 18)											
APR , 1981											
06...	1530	38	1630	8.0	13.0	--	--	236	0	194	3.8
JUL											
16...	0840	17	2480	8.1	19.5	--	--	304	0	249	3.9
401756081050800 - 041 STANDING STONE F NR CADIZ OH (LAT 40 17 56 LONG 081 05 08)											
APR , 1981											
06...	1300	26	1360	8.0	12.0	--	--	194	0	159	3.1
JUL											
15...	1600	4.0	2200	8.4	22.0	--	--	260	24	253	2.0
401803080410400 - 041 MC INTYRE C NR MINGO JUNCTION OH (LAT 40 18 03 LONG 080 41 04)											
APR , 1981											
16...	1130	74	1600	7.9	12.0	--	--	212	0	174	4.3
AUG											
27...	1215	11	2020	7.8	19.0	--	--	226	0	185	5.7
401812081362400 - 041 LICK RN AT NEWCOMERSTOWN OH (LAT 40 18 12 LONG 081 36 24)											
APR , 1981											
23...	1030	3.3	340	5.1	13.0	.4	20	4	0	3	51
JUL											
14...	1700	.60	491	5.0	24.0	.7	35	2	0	2	32
402012081051200 - 041 CLEAR F NR JEWETT OH (LAT 40 20 12 LONG 081 05 12)											
APR , 1981											
06...	1800	75	680	7.6	12.0	--	--	92	0	75	3.7
JUL											
15...	1740	8.0	1100	8.2	22.0	--	--	176	0	144	1.8
402023081553800 - 041 BUCKLEW RN NR COSHOCTON OH (LAT 40 20 23 LONG 081 55 38)											
MAY , 1981											
12...	1200	36	510	5.5	10.5	.3	15	17	0	14	86
JUL											
14...	1530	3.2	911	7.4	23.0	--	--	32	0	26	2.0

ANALYSES OF MISCELLANEOUS STATIONS

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	ARSENIC TOTAL IN BOT-TOM MA-TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD)	CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	COBALT, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB)
401313080401800 - 041 RUSH RN NR TILTONSVILLE OH (LAT 40 13 13 LONG 080 40 18)											
APR , 1981											
15...	320	--	--	--	--	--	4100	4100	30	--	--
AUG											
05...	610	9	1	<10	30	20	3700	3700	30	12000	20
401314080522300 - 041 N F SHORT C AT ADENA OH (LAT 40 13 14 LONG 080 52 23)											
APR , 1981											
07...	630	--	--	--	--	--	1700	1700	40	--	--
JUL											
15...	900	5	4	10	63	29	320	270	50	11000	40
401505081061800 - 041 BRUSHY F NR CADIZ OH (LAT 40 15 05 LONG 081 06 18)											
APR , 1981											
06...	830	--	--	--	--	--	640	600	40	--	--
JUL											
16...	1330	10	<5	<10	54	15	460	390	70	9900	<50
401756081050800 - 041 STANDING STONE F NR CADIZ OH (LAT 40 17 56 LONG 081 05 08)											
APR , 1981											
06...	200	--	--	--	--	--	1200	1200	40	--	--
JUL											
15...	1300	4	<5	20	39	22	720	640	80	13000	<60
401803080410400 - 041 MC INTYRE C NR MINGO JUNCTION OH (LAT 40 18 03 LONG 080 41 04)											
APR , 1981											
16...	880	--	--	--	--	--	790	750	40	--	--
AUG											
27...	1000	<1	2	6	30	10	330	280	50	11000	23
401812081362400 - 041 LICK RN AT NEWCOMERSTOWN OH (LAT 40 18 12 LONG 081 36 24)											
APR , 1981											
23...	150	--	--	--	--	--	3000	1500	1500	--	--
JUL											
14...	200	6	<4	10	44	7	290	190	100	8900	<40
402012081051200 - 041 CLEAR F NR JEWETT OH (LAT 40 20 12 LONG 081 05 12)											
APR , 1981											
06...	260	--	--	--	--	--	1900	1900	20	--	--
JUL											
15...	520	5	<6	<10	48	12	670	570	100	15000	<60
402023081553800 - 041 BUCKLEW RN NR COSHOCTON OH (LAT 40 20 23 LONG 081 55 38)											
MAY , 1981											
12...	210	--	--	--	--	--	3700	3600	80	--	--
JUL											
14...	540	0	<5	<10	24	10	2500	2500	20	4900	<50

ANALYSES OF MISCELLANEOUS STATIONS

DATE	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	COAL IN BOTTOM MATERIAL (GM/KG)
401313080401800 - 041 RUSH RN NR TILTONSVILLE OH (LAT 40 13 13 LONG 080 40 18)											
APR , 1981											
15...	210	100	110	--	--	--	--	--	126	19	--
AUG											
05...	190	10	180	1200	<.01	1	80	45	--	--	13.0
401314080522300 - 041 N F SHORT C AT ADENA OH (LAT 40 13 14 LONG 080 52 23)											
APR , 1981											
07...	290	10	280	--	--	--	--	--	23	2.5	--
JUL											
15...	190	10	180	3200	.00	0	130	18	--	--	7.00
401505081061800 - 041 BRUSHY F NR CADIZ OH (LAT 40 15 05 LONG 081 06 18)											
APR , 1981											
06...	170	50	120	--	--	--	--	--	52	5.3	--
JUL											
16...	110	40	70	3300	.00	0	79	6.9	--	--	3.00
401756081050800 - 041 STANDING STONE F NR CADIZ OH (LAT 40 17 56 LONG 081 05 08)											
APR , 1981											
06...	170	70	100	--	--	--	--	--	66	4.6	--
JUL											
15...	150	40	110	3700	.00	0	61	16	--	--	8.00
401803080410400 - 041 MC INTYRE C NR MINGO JUNCTION OH (LAT 40 18 03 LONG 080 41 04)											
APR , 1981											
16...	140	70	70	--	--	--	--	--	31	6.2	--
AUG											
27...	30	0	30	1700	<.01	<1	51	19	--	--	7.00
401812081362400 - 041 LICK RN AT NEWCOMERSTOWN OH (LAT 40 18 12 LONG 081 36 24)											
APR , 1981											
23...	3500	0	3500	--	--	--	--	--	31	.28	--
JUL											
14...	5000	0	5000	630	.00	0	59	3.9	--	--	16.0
402012081051200 - 041 CLEAR F NR JEWETT OH (LAT 40 20 12 LONG 081 05 12)											
APR , 1981											
06...	130	90	40	--	--	--	--	--	106	21	--
JUL											
15...	160	40	120	2800	.00	0	90	5.4	--	--	3.00
402023081553800 - 041 BUCKLEW RN NR COSHOCTON OH (LAT 40 20 23 LONG 081 55 38)											
MAY , 1981											
12...	1700	100	1600	--	--	--	--	--	132	13	--
JUL											
14...	3900	600	3300	540	.00	0	44	9.7	--	--	30.0

ANALYSES OF MISCELLANEOUS STATIONS

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	ACIDITY (MG/L AS H)	ACIDITY (MG/L AS CACO3)	BICAR-BONATE FET-FLD (MG/L AS HCO3)	CAR-BONATE FET-FLD (MG/L AS CO3)	ALKA-LINITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)
402245080532300 - 041 N B CROSS C NR HOPEDALE OH (LAT 40 22 45 LONG 080 53 23)											
APR , 1981											
24...	1230	18	1180	8.0	10.0	--	--	124	0	102	2.0
AUG											
31...	1100	4.6	1100	7.9	19.0	--	--	154	0	126	3.1
402258080455800 - 041 CEDAR LICK C NR RICHMOND OH (LAT 40 22 58 LONG 080 45 58)											
APR , 1981											
23...	1600	16	650	8.3	14.0	--	--	132	4	115	1.1
AUG											
27...	1415	.43	730	7.9	20.0	--	--	166	0	136	3.3
402738081262300 - 041 OLD TOWN C AT NEW PHILADELPHIA OH (LAT 40 27 38 LONG 081 26 23)											
APR , 1981											
29...	1420	174	490	6.3	13.0	1.0	50	43	0	35	34
JUL											
30...	1200	6.4	1050	7.2	17.0	--	--	61	0	50	6.2
402859081290700 - 041 CROOKED RN AT NEW PHILADELPHIA OH (LAT 40 28 59 LONG 081 29 07)											
APR , 1981											
28...	1000	21	615	6.3	12.0	.7	35	48	0	39	39
JUL											
30...	1530	3.0	1150	7.2	24.0	--	--	54	0	44	5.5
403440081113400 - 041 WILLOW RN NR DELLROY OH (LAT 40 34 40 LONG 081 11 34)											
AUG , 1981											
03...	0930	1.4	335	7.5	19.5	--	--	85	0	70	4.3
403550081213400 - 041 HUFF RN AT MINERAL CITY OH (LAT 40 35 50 LONG 081 21 34)											
APR , 1981											
13...	1600	66	610	5.4	11.5	.6	30	0	0	0	.0
AUG											
06...	0950	4.7	1850	3.8	18.5	2.3	114	0	0	0	.0
404023081161200 - 041 INDIAN RN NR WAYNESBURG OH (LAT 40 40 23 LONG 081 16 12)											
JUN , 1981											
03...	1515	73	860	6.7	18.5	.8	40	28	0	23	8.9
JUL											
31...	1145	5.2	1220	6.8	16.5	.2	10	54	0	44	14
404026081174100 - 041 PLEASANT VALLEY RN NR WAYNESBURG OH (LAT 40 40 26 LONG 081 17 41)											
JUN , 1981											
03...	1715	98	530	6.7	21.0	.7	35	31	0	25	9.9
JUL											
31...	0930	6.6	1200	7.0	16.5	--	--	52	0	43	8.3

ANALYSES OF MISCELLANEOUS STATIONS

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	ARSENIC TOTAL IN BOT-TOM MA-TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD)	CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	COBALT, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB)
402245080532300 - 041 N B CROSS C NR HOPEDALE OH (LAT 40 22 45 LONG 080 53 23)											
APR , 1981											
24...	580	--	--	--	--	--	500	480	20	--	--
AUG											
31...	560	<1	<1	6	<10	5	4800	4800	40	11000	8
402258080455800 - 041 CEDAR LICK C NR RICHMOND OH (LAT 40 22 58 LONG 080 45 58)											
APR , 1981											
23...	210	--	--	--	--	--	290	270	20	--	--
AUG											
27...	200	<1	1	8	20	8	1600	1600	30	11000	20
402738081262300 - 041 OLD TOWN C AT NEW PHILADELPHIA OH (LAT 40 27 38 LONG 081 26 23)											
APR , 1981											
29...	160	--	--	--	--	--	31000	31000	80	--	--
JUL											
30...	490	33	<3	10	<10	7	410	220	190	21000	33
402859081290700 - 041 CROOKED RN AT NEW PHILADELPHIA OH (LAT 40 28 59 LONG 081 29 07)											
APR , 1981											
28...	210	--	--	--	--	--	7100	7000	60	--	--
JUL											
30...	450	45	<8	10	<10	69	1400	1400	40	21000	<80
403440081113400 - 041 WILLOW RN NR DELLROY OH (LAT 40 34 40 LONG 081 11 34)											
AUG , 1981											
03...	25	8	<2	<10	<10	5	--	--	180	10000	14
403550081213400 - 041 HUFF RN AT MINERAL CITY OH (LAT 40 35 50 LONG 081 21 34)											
APR , 1981											
13...	210	--	--	--	--	--	10000	7300	2700	--	--
AUG											
06...	870	46	1	10	10	70	27000	8000	19000	72000	50
404023081161200 - 041 INDIAN RN NR WAYNESBURG OH (LAT 40 40 23 LONG 081 16 12)											
JUN , 1981											
03...	280	--	--	--	--	--	17000	16000	820	--	--
JUL											
31...	440	8	<2	30	10	10	4200	900	3300	21000	16
404026081174100 - 041 PLEASANT VALLEY RN NR WAYNESBURG OH (LAT 40 40 26 LONG 081 17 41)											
JUN , 1981											
03...	140	--	--	--	--	--	27000	27000	90	--	--
JUL											
31...	410	43	3	20	20	47	1200	0	1200	35000	38

ANALYSES OF MISCELLANEOUS STATIONS

DATE	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	COAL IN BOTTOM MATERIAL (GM/KG)
402245080532300 - 041 N B CROSS C NR HOPEDALE OH (LAT 40 22 45 LONG 080 53 23)											
APR , 1981,											
24...	190	10	180	--	--	--	--	--	13	.63	--
AUG											
31...	410	120	290	680	<.01	<1	31	10	--	--	6.00
402258080455800 - 041 CEDAR LICK C NR RICHMOND OH (LAT 40 22 58 LONG 080 45 58)											
APR , 1981											
23...	50	10	40	--	--	--	--	--	10	.43	--
AUG											
27...	30	--	<10	1700	<.01	<1	36	5.9	--	--	8.00
402738081262300 - 041 OLD TOWN C AT NEW PHILADELPHIA OH (LAT 40 27 38 LONG 081 26 23)											
APR , 1981											
29...	1700	920	780	--	--	--	--	--	1885	886	--
JUL											
30...	3000	0	3000	700	<.01	<1	170	15	--	--	11.0
402859081290700 - 041 CROOKED RN AT NEW PHILADELPHIA OH (LAT 40 28 59 LONG 081 29 07)											
APR , 1981											
28...	1400	400	1000	--	--	--	--	--	255	14	--
JUL											
30...	3100	0	3100	530	<.01	<1	180	13	--	--	3.00
403440081113400 - 041 WILLOW RN NR DELLROY OH (LAT 40 34 40 LONG 081 11 34)											
AUG , 1981											
03...	--	--	200	450	<.01	<1	40	9.3	--	--	2.00
403550081213400 - 041 HUFF RN AT MINERAL CITY OH (LAT 40 35 50 LONG 081 21 34)											
APR , 1981											
13...	4800	0	4800	--	--	--	--	--	--	--	--
AUG											
06...	24000	0	24000	230	<.01	2	58	23	--	--	7.00
404023081161200 - 041 INDIAN RN NR WAYNESBURG OH (LAT 40 40 23 LONG 081 16 12)											
JUN , 1981											
03...	3600	400	3200	--	--	--	--	--	378	75	--
JUL											
31...	5900	0	5900	710	.01	<1	80	5.4	--	--	16.0
404026081174100 - 041 PLEASANT VALLEY RN NR WAYNESBURG OH (LAT 40 40 26 LONG 081 17 41)											
JUN , 1981											
03...	2300	700	1600	--	--	--	--	--	456	121	--
JUL											
31...	5700	0	5700	1200	<.01	<1	170	23	--	--	19.0

ANALYSES OF MISCELLANEOUS STATIONS

DATE	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (G/KG AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	COAL IN BOTTOM MATERIAL (GM/KG)
404206080520000 - 041 WILLIARD RN NR LISBON OH (LAT 40 42 06 LONG 080 52 00)											
FEB , 1981											
24...	190	70	120	--	--	--	--	--	65	8.1	--
AUG											
14...	190	70	120	800	<.01	<1	25	--	--	--	2.00
404507081022000 - 041 CONSER RN NR MINERVA OH (LAT 40 45 07 LONG 081 02 20)											
FEB , 1981											
24...	180	100	80	--	--	--	--	--	75	16	--
AUG											
12...	210	20	190	920	<.01	<1	21	--	--	--	4.00
410001080580701 - 041 MILL C NR BERLIN CENTER OH (LAT 41 00 01 LONG 080 58 07)											
FEB , 1981											
24...	110	30	80	--	--	--	--	--	21	4.6	--
AUG											
03...	330	80	250	1200	<.01	<1	40	6.8	--	--	5.00
410823080594301 - 041 KALE C NR NEWTON FALLS OH (LAT 41 08 23 LONG 080 59 43)											
JUN , 1981											
10...	150	30	120	--	--	--	--	--	60	12	--
AUG											
03...	--	--	250	960	<.01	<1	70	22	--	--	4.00

ANALYSES OF MISCELLANEOUS STATIONS

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	ACIDITY (MG/L AS H)	ACIDITY (MG/L AS CACO3)	BICAR-BONATE FET-FLD (MG/L AS HCO3)	CAR-BONATE FET-FLD (MG/L AS CO3)	ALKA-LINITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)
404206080520000 - 041 WILLIARD RN NR LISBON OH (LAT 40 42 06 LONG 080 52 00)											
FEB , 1981											
24...	1300	46	280	6.7	6.5	.2	10	39	0	32	12
AUG											
14...	1430	1.0	500	7.7	23.0	--	--	152	0	125	4.9
404507081022000 - 041 CONSER RN NR MINERVA OH (LAT 40 45 07 LONG 081 02 20)											
FEB , 1981											
24...	1430	81	250	7.3	3.0	--	--	48	0	39	3.9
AUG											
12...	1400	4.0	375	8.4	21.5	--	--	170	4	146	1.1
410001080580701 - 041 MILL C NR BERLIN CENTER OH (LAT 41 00 01 LONG 080 58 07)											
FEB , 1981											
24...	1745	81	430	7.6	3.0	--	--	64	0	52	2.6
AUG											
03...	1200	.79	880	7.8	21.5	--	--	268	0	220	6.8
410823080594301 - 041 KALE C NR NEWTON FALLS OH (LAT 41 08 23 LONG 080 59 43)											
JUN , 1981											
10...	1200	71	275	6.6	19.5	.2	10	56	0	46	23
AUG											
03...	1400	6.0	1000	7.6	21.5	--	--	206	0	169	8.3

ANALYSES OF MISCELLANEOUS STATIONS

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	ARSENIC TOTAL IN BOT-TOM MA-TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD)	CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	COBALT, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB)
404206080520000 - 041 WILLIARD RN NR LISBON OH (LAT 40 42 06 LONG 080 52 00)											
FEB , 1981											
24...	64	--	--	--	--	--	2700	2600	80	--	--
AUG											
14...	97	3	<1	<10	10	<10	880	770	110	12000	10
404507081022000 - 041 CONSER RN NR MINERVA OH (LAT 40 45 07 LONG 081 02 20)											
FEB , 1981											
24...	36	--	--	--	--	--	2100	2000	100	--	--
AUG											
12...	35	5	<1	<10	10	<10	440	300	140	9600	10
410001080580701 - 041 MILL C NR BERLIN CENTER OH (LAT 41 00 01 LONG 080 58 07)											
FEB , 1981											
24...	59	--	--	--	--	--	760	730	30	--	--
AUG											
03...	130	6	<1	<10	10	5	1700	1700	20	12000	11
410823080594301 - 041 KALE C NR NEWTON FALLS OH (LAT 41 08 23 LONG 080 59 43)											
JUN , 1981											
10...	40	--	--	--	--	--	2900	2800	80	--	--
AUG											
03...	290	44	<3	20	<10	14	--	--	20	16000	93

The following table contains discharge and water-quality measurements collected from streams draining abandoned surface mines in southeastern Ohio. Chemical analyses were performed by a private laboratory with the exception of several quality-control samples which were analyzed by the U.S. Geological Survey Central Laboratory.

ANALYSES OF MISCELLANEOUS STATIONS

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	ACIDITY (MG/L AS H)	ALKA-LINITY FIELD (MG/L AS CACO3)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SULFATE DIS-SOLVED (MG/L AS SO4)
383317082405100 - 051 L STORMS C (1-2) NR TRENTON OH (LAT 38 33 17 LONG 082 40 51)											
MAY , 1981											
11...	1500	8.3	15.0	4.5	500	--	380	1.1	--	7.0	212
JUL											
15...	1900	.86	24.0	5.3	610	320	447	.7	20	6.5	375
383337082430500 - 051 OSBORNE RN (1-1) NR IRONTON OH (LAT 38 33 37 LONG 082 43 05)											
MAY , 1981											
11...	1400	5.6	16.0	4.5	785	--	625	2.0	--	12	415
JUL											
15...	1230	.70	29.0	4.3	1025	--	812	1.4	--	10	550
383711082443900 - 051 SPERRY F (4-3) NR PINE GROVE OH (LAT 38 37 11 LONG 082 44 39)											
MAY , 1981											
11...	1130	10	15.5	4.7	640	280	498	1.0	13	10	282
JUL											
14...	1800	2.7	25.0	3.8	950	--	701	1.2	--	7.5	510
383735082445700 - 051 SPERRY F (4-2) NR PINE GROVE OH (LAT 38 37 35 LONG 082 44 57)											
MAY , 1981											
11...	1230	18	15.0	5.8	550	250	418	.2	7	7.0	236
JUL											
15...	0900	2.1	21.0	4.9	740	390	514	.2	3	8.0	385
383750082435400 - 041 L PINE C NR PEDRO OH (LAT 38 37 50 LONG 082 43 54)											
APR , 1981											
24...	0845	31	11.5	7.8	500	240	396	--	39	6.0	200
JUL											
21...	1430	4.3	24.0	7.4	770	380	620	--	36	6.0	315
383753082265500 - 051 BUCKEYE F (2-6) AT WILGUS OH (LAT 38 37 53 LONG 082 26 55)											
MAY , 1981											
12...	1030	5.0	11.0	7.1	275	58	195	--	62	5.0	81
JUL											
22...	0930	.14	22.5	7.7	320	100	212	--	69	8.0	73
383805082405400 - 051 ELLISONVILLE C (4-5) AT PEDRO OH (LAT 38 38 05 LONG 082 40 54)											
MAY , 1981											
11...	1630	22	15.0	6.8	500	210	399	--	21	7.0	206
JUL											
14...	1445	4.5	25.0	4.4	680	--	578	1.0	--	3.0	405
383806082464100 - 051 PINE C (4-1) NR POWELLSVILLE OH (LAT 38 38 06 LONG 082 46 41)											
MAY , 1981											
07...	1330	213	13.0	6.9	340	120	256	--	36	5.0	114
JUL											
21...	1515	14	24.0	7.5	548	210	415	--	62	9.0	163
383833082402800 - 051 L PINE C (4-6) AT PEDRO OH (LAT 38 38 33 LONG 082 40 28)											
MAY , 1981											
11...	1700	12	15.0	7.6	510	150	375	--	95	8.0	159
JUL											
15...	1600	1.6	25.0	7.8	735	250	525	--	120	6.0	245

ANALYSES OF MISCELLANEOUS STATIONS

DATE	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ALUMINUM, DISSOLVED (UG/L AS AL)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	ARSENIC DISSOLVED (UG/L AS AS)	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, DISSOLVED (UG/L AS ZN)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
383317082405100 - 051 L STORMS C (1-2) NR TRENTON OH (LAT 38 33 17 LONG 082 40 51)											
MAY , 1981											
11...	5400	4200	4000	710	3010	2890	<10	.5	100	<30	188
JUL											
15...	6160	5249	2102	1240	5831	5275	<10	<.5	132	296	56
383337082430500 - 051 OSBORNE RN (1-1) NR IRONTON OH (LAT 38 33 37 LONG 082 43 05)											
MAY , 1981											
11...	16000	11000	13300	1690	5300	5100	<10	<.5	200	400	439
JUL											
15...	11360	9803	3646	1867	7539	6726	<10	<.5	251	409	52
383711082443900 - 051 SPERRY F (4-3) NR PINE GROVE OH (LAT 38 37 11 LONG 082 44 39)											
MAY , 1981											
11...	4600	3400	2520	400	3140	2890	<10	<.5	100	130	77
JUL											
14...	8377	7116	760	560	5347	4573	<10	<.5	135	210	88
383735082445700 - 051 SPERRY F (4-2) NR PINE GROVE OH (LAT 38 37 35 LONG 082 44 57)											
MAY , 1981											
11...	3100	600	2060	220	2090	1960	<10	.9	100	90	88
JUL											
15...	3346	856	834	228	3134	2676	<10	<.5	99	132	58
383750082435400 - 041 L PINE C NR PEDRO OH (LAT 38 37 50 LONG 082 43 54)											
APR , 1981											
24...	1400	<200	1110	100	1390	1330	<10	5.2	100	50	444
JUL											
21...	219	214	149	41	2609	2723	<10	<.5	162	51	5
383753082265500 - 051 BUCKEYE F (2-6) AT WILGUS OH (LAT 38 37 53 LONG 082 26 55)											
MAY , 1981											
12...	300	<200	400	30	160	130	<10	7.5	<100	<30	17
JUL											
22...	<75	<75	<10	<10	123	74	<10	<.5	<20	<20	5
383805082405400 - 051 ELLISONVILLE C (4-5) AT PEDRO OH (LAT 38 38 05 LONG 082 40 54)											
MAY , 1981											
11...	3400	<200	3500	470	1540	1460	<10	<.5	100	80	77
JUL											
14...	6718	5296	2325	1261	5732	4755	<10	<.5	236	353	35
383806082464100 - 051 PINE C (4-1) NR POWELLSVILLE OH (LAT 38 38 06 LONG 082 46 41)											
MAY , 1981											
07...	800	<200	1740	60	660	570	<10	.6	<100	<30	49
JUL											
21...	1849	726	324	213	1167	1024	<10	<.5	156	16	12
383833082402800 - 051 L PINE C (4-6) AT PEDRO OH (LAT 38 38 33 LONG 082 40 28)											
MAY , 1981											
11...	400	<200	890	90	290	240	<10	.9	<100	<30	31
JUL											
15...	314	285	2940	55	1324	320	<10	<.5	53	<10	9

ANALYSES OF MISCELLANEOUS STATIONS

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	ACIDITY (MG/L AS H)	ALKA-LINITY FIELD (MG/L AS CACO3)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SULFATE DIS-SOLVED (MG/L AS SO4)
384839082403100 - 051 HALES C (4-10) NR EIFORT OH (LAT 38 48 39 LONG 082 40 31)											
APR , 1981											
24...	1600	13	10.0	6.9	230	77	165	--	23	5.0	85
JUL											
16...	1200	1.4	22.0	7.6	295	170	125	--	52	5.5	80
385029082311900 - 051 BLACK F (2-5) AT GALLIA OH (LAT 38 50 29 LONG 082 31 19)											
FEB , 1981											
24...	1430	155	5.0	4.1	180	--	131	1.0	--	7.0	61
JUL											
23...	1120	2.3	21.0	7.6	390	110	287	--	77	8.5	97
385124082321400 - 051 BLACK F (2-4) NR GALLIA OH (LAT 38 51 24 LONG 082 32 14)											
FEB , 1981											
24...	1630	135	5.5	7.4	180	55	127	--	20	8.0	60
JUL											
23...	1245	1.8	21.5	7.7	360	110	267	--	75	75	85
385343082293600 - 051 SYMMES C (2-3) NR THURMAN OH (LAT 38 53 43 LONG 082 29 36)											
APR , 1981											
24...	1700	31	12.0	7.6	370	120	261	--	52	6.0	114
AUG											
21...	0830	.34	17.0	6.5	570	220	460	--	75	7.6	195
385349082113100 - 051 CAMPAIGN C (7-1) NR ADDISON OH (LAT 38 53 49 LONG 082 11 31)											
MAY , 1981											
12...	1000	61	12.0	7.6	375	92	237	--	50	<5.0	104
JUL											
28...	0830	.90	24.5	7.2	445	65	307	--	105	9.0	115
385404082204200 - 051 RACCOON C (5-5) NR RIO GRANDE OH (LAT 38 54 04 LONG 082 20 42)											
FEB , 1981											
25...	1440	2350	6.5	7.2	220	79	155	--	11	11	84
AUG											
20...	0900	38	19.5	6.2	390	190	390	.3	7	21	175
385423082100000 - 051 L CAMPAIGN C (7-4) NR ADDISON OH (LAT 38 54 23 LONG 082 10 00)											
MAY , 1981											
01...	1545	2.0	14.0	4.9	780	--	741	1.0	--	8.0	530
JUL											
22...	0830	.55	24.5	4.6	1100	600	980	1.0	2	8.5	500
385442082080800 - 051 KYGER C (7-11) NR ADDISON OH (LAT 38 54 42 LONG 082 08 08)											
MAY , 1981											
02...	0900	89	13.0	7.3	940	410	750	--	26	27	480
AUG											
19...	1630	55	25.5	6.6	1300	590	1082	--	39	42	540
385504082105400 - 051 L CAMPAIGN C (7-3) NR ADDISON OH (LAT 38 55 04 LONG 082 10 54)											
MAY , 1981											
01...	1700	1.1	12.5	4.7	1100	--	995	2.2	--	6.0	690
JUL											
22...	0930	.28	20.5	4.3	1135	--	1367	2.5	--	8.0	850

ANALYSES OF MISCELLANEOUS STATIONS

DATE	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	ARSENIC DIS-SOLVED (UG/L AS AS)	MERCURY DIS-SOLVED (UG/L AS HG)	NICKEL, DIS-SOLVED (UG/L AS NI)	ZINC, DIS-SOLVED (UG/L AS ZN)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
384839082403100 - 051 HALES C (4-10) NR EIFORT OH (LAT 38 48 39 LONG 082 40 31)											
APR , 1981											
24...	400	<200	710	100	610	590	<10	8.0	<100	<30	24
JUL											
16...	674	239	1563	222	477	422	<10	<.5	59	<10	24
385029082311900 - 051 BLACK F (2-5) AT GALLIA OH (LAT 38 50 29 LONG 082 31 19)											
FEB , 1981											
24...	300	<200	950	100	390	310	<10	.5	<100	50	20
JUL											
23...	<75	<75	427	162	1273	816	<10	<.5	<20	20	488
385124082321400 - 051 BLACK F (2-4) NR GALLIA OH (LAT 38 51 24 LONG 082 32 14)											
FEB , 1981											
24...	300	<200	780	160	270	240	<10	<.5	<100	50	16
JUL											
23...	<75	<75	219	210	1323	1016	<10	<.5	<20	<20	36
385343082293600 - 051 SYMMES C (2-3) NR THURMAN OH (LAT 38 53 43 LONG 082 29 36)											
APR , 1981											
24...	400	<200	1100	90	510	470	<10	3.8	<100	50	27
AUG											
21...	442	<75	551	67	707	704	<10	<.5	<20	<10	20
385349082113100 - 051 CAMPAIGN C (7-1) NR ADDISON OH (LAT 38 53 49 LONG 082 11 31)											
MAY , 1981											
12...	2100	<200	2110	90	860	720	<10	<.5	<100	<30	50
JUL											
28...	23	103	293	284	1012	--	<10	<.5	92	57	19
385404082204200 - 051 RACCOON C (5-5) NR RIO GRANDE OH (LAT 38 54 04 LONG 082 20 42)											
FEB , 1981											
25...	1100	<200	2820	230	980	940	<10	<.5	<100	30	56
AUG											
20...	441	<75	622	255	2429	2326	<10	<.5	<20	20	4
385423082100000 - 051 L CAMPAIGN C (7-4) NR ADDISON OH (LAT 38 54 23 LONG 082 10 00)											
MAY , 1981											
01...	4200	2300	690	240	9650	9600	<10	3.6	100	220	21
JUL											
22...	<75	<75	127	54	<50	<50	<10	<.5	349	<10	82
385442082080800 - 051 KYGER C (7-11) NR ADDISON OH (LAT 38 54 42 LONG 082 08 08)											
MAY , 1981											
02...	1100	<200	580	30	1610	1550	13	.6	<100	<30	20
AUG											
19...	1380	475	479	22	<50	<50	<10	<.5	<20	<10	52
385504082105400 - 051 L CAMPAIGN C (7-3) NR ADDISON OH (LAT 38 55 04 LONG 082 10 54)											
MAY , 1981											
01...	14000	13000	550	210	14000	13300	<10	<.5	300	430	31
JUL											
22...	<75	<75	<10	<10	<50	<50	<10	<.5	<20	<10	72

ANALYSES OF MISCELLANEOUS STATIONS

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	ACIDITY (MG/L AS H)	ALKA-LINITY FIELD (MG/L AS CACO3)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SULFATE DIS-SOLVED (MG/L AS SO4)
383918082224600 - 051 SAND F (2-7) NR WILGUS OH (LAT 38 39 18 LONG 082 22 46)											
MAY , 1981											
12...	1130	22	14.0	6.8	245	100	206	--	20	<5.0	106
JUL											
22...	1035	.67	24.0	7.1	760	400	652	--	16	1.5	355
384034082422100 - 051 PINE C (4-7) NR PEDRO OH (LAT 38 40 34 LONG 082 42 21)											
APR , 1981											
24...	1005	162	13.0	7.7	240	72	171	--	36	6.0	82
JUL											
21...	1630	6.4	25.0	7.6	508	46	357	--	79	8.5	135
384146082424600 - 051 PINE C (4-8) NR BARTLES OH (LAT 38 41 46 LONG 082 42 46)											
APR , 1981											
24...	1200	146	12.5	7.0	220	68	153	--	26	5.0	70
JUL											
21...	1740	4.5	25.0	7.5	345	25	240	--	65	8.5	85
384206082161600 - 051 BULLSKIN C (5-6) NR MERCERVILLE OH (LAT 38 42 06 LONG 082 16 16)											
APR , 1981											
23...	1500	5.8	17.0	8.0	600	230	447	--	66	5.0	230
JUL											
22...	1145	.38	22.5	7.7	970	420	817	--	102	4.0	385
384333082150500 - 051 BULLSKIN C (5-2) NR MERCERVILLE OH (LAT 38 43 33 LONG 082 15 05)											
APR , 1981											
23...	1145	12	15.0	7.4	730	280	514	--	56	8.0	284
JUL											
22...	1650	.71	23.5	--	870	400	690	--	64	7.0	340
384347082164400 - 051 L BULLSKIN C (5-7) NR MERCERVILLE OH (LAT 38 43 47 LONG 082 16 44)											
APR , 1981											
23...	1300	3.2	15.5	8.1	560	200	392	--	69	5.0	205
JUL											
22...	1750	.06	27.0	7.9	615	230	642	--	97	7.0	210
384412082144600 - 051 RACCOON C (5-1) NR EUREKA OH (LAT 38 44 12 LONG 082 14 46)											
FEB , 1981											
26...	0930	2620	5.0	7.4	220	74	160	--	20	10	87
JUL											
22...	1515	215	26.5	7.3	400	170	310	--	25	1.5	118
384657082421300 - 051 HALES C (4-9) NR S WEBSTER OH (LAT 38 46 57 LONG 082 42 13)											
APR , 1981											
24...	1445	54	10.5	7.7	215	62	148	--	26	5.0	66
AUG											
20...	1800	.11	25.0	6.5	315	60	220	--	75	8.0	70
384821082221900 - 051 RACCOON C (5-4) NR PATRIOT OH (LAT 38 48 21 LONG 082 22 19)											
FEB , 1981											
26...	1200	2030	6.0	7.1	190	80	157	--	10	11	83
JUL											
23...	0850	167	22.0	7.2	395	160	310	--	16	13	120

ANALYSES OF MISCELLANEOUS STATIONS

DATE	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ALUMINUM, DISSOLVED (UG/L AS AL)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	ARSENIC DISSOLVED (UG/L AS AS)	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, DISSOLVED (UG/L AS ZN)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
383918082224600 - 051 SAND F (2-7) NR WILGUS OH (LAT 38 39 18 LONG 082 22 46)											
MAY , 1981											
12...	1400	<200	1500	40	1750	1640	<10	<.5	100	30	75
JUL											
22...	1021	7	421	589	7006	6935	<10	<.5	172	136	12
384034082422100 - 051 PINE C (4-7) NR PEDRO OH (LAT 38 40 34 LONG 082 42 21)											
APR , 1981											
24...	400	<200	1340	50	340	280	<10	.6	<100	<30	59
JUL											
21...	81	20	180	151	927	644	<10	<.5	173	13	13
384146082424600 - 051 PINE C (4-8) NR BARTLES OH (LAT 38 41 46 LONG 082 42 46)											
APR , 1981											
24...	600	<200	1410	60	340	300	<10	4.6	<100	<30	35
JUL											
21...	82	20	214	117	952	640	<10	<.5	82	1041	9
384206082161600 - 051 BULLSKIN C (5-6) NR MERCERVILLE OH (LAT 38 42 06 LONG 082 16 16)											
APR , 1981											
23...	500	200	430	<30	930	840	<10	.6	<100	40	19
JUL											
22...	12880	11220	595	584	23740	21260	<10	<.5	341	429	2
384333082150500 - 051 BULLSKIN C (5-2) NR MERCERVILLE OH (LAT 38 43 33 LONG 082 15 05)											
APR , 1981											
23...	500	200	330	30	1100	1060	<10	<.5	<100	30	12
JUL											
22...	249	203	73	60	893	624	<10	<.5	108	151	22
384347082164400 - 051 L BULLSKIN C (5-7) NR MERCERVILLE OH (LAT 38 43 47 LONG 082 16 44)											
APR , 1981											
23...	600	200	260	<30	720	670	<10	<.5	<100	<30	12
JUL											
22...	<75	<75	<10	<10	<5	<5	<10	<.5	<20	<10	20
384412082144600 - 051 RACCOON C (5-1) NR EUREKA OH (LAT 38 44 12 LONG 082 14 46)											
FEB , 1981											
26...	1200	<200	3300	80	910	840	<10	<.5	<100	40	73
JUL											
22...	93	98	59	126	1410	1204	<10	<.5	86	66	28
384657082421300 - 051 HALES C (4-9) NR S WEBSTER OH (LAT 38 46 57 LONG 082 42 13)											
APR , 1981											
24...	400	<200	1150	80	430	380	<10	2.8	<100	<30	33
AUG											
20...	413	<75	1208	259	1590	1120	<10	<.5	10	<10	18
384821082221900 - 051 RACCOON C (5-4) NR PATRIOT OH (LAT 38 48 21 LONG 082 22 19)											
FEB , 1981											
26...	1200	<200	2840	150	1030	960	<10	<.5	<100	30	73
JUL											
23...	104	91	240	158	2072	2021	<10	<.5	86	42	30

ANALYSES OF MISCELLANEOUS STATIONS

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	ACIDITY (MG/L AS H)	ALKA-LINITY FIELD (MG/L AS CACO3)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SULFATE DIS-SOLVED (MG/L AS SO4)
385513082081400 - 051 L KYGER C (7-5) NR ADDISON OH (LAT 38 55 13 LONG 082 08 14)											
MAY , 1981											
02...	1100	2.5	13.5	4.0	1400	--	1420	2.6	--	13	930
JUL											
21...	1700	2.4	29.0	4.3	1150	--	1627	2.0	--	9.5	890
385520082322000 - 051 UNAM TR TO SYMMES C (2-2) AT PYRO OH (LAT 38 55 20 LONG 082 32 20)											
MAY , 1981											
07...	0930	25	9.0	7.0	410	140	284	--	39	5.0	138
AUG											
21...	0930	--	20.5	6.3	1250	570	1107	.2	102	7.8	570
385543082140600 - 051 L WHITE OAK C (7-2) NR PORTER OH (LAT 38 55 43 LONG 082 14 06)											
MAY , 1981											
12...	0915	8.4	11.0	4.7	850	--	698	55	--	<5.0	500
JUL											
22...	1030	1.1	23.0	4.0	1145	--	1487	3.4	--	4.5	870
385612082095900 - 051 L KYGER C (7-6) NR KYGER OH (LAT 38 56 12 LONG 082 09 59)											
MAY , 1981											
01...	1815	1.2	13.0	4.2	1550	--	1540	3.2	--	11	1000
JUL											
22...	1245	.61	25.5	3.8	1185	--	1907	3.5	--	7.0	990
385711082215600 - 051 L RACCOON C (10-1) NR VINTON OH (LAT 38 57 11 LONG 082 21 56)											
FEB , 1981											
24...	1130	673	6.0	3.9	250	--	184	.2	--	6.0	110
AUG											
20...	1100	19	18.5	5.3	620	260	520	.9	5	7.0	275
385735082315700 - 051 SYMMES C (2-1) NR PYRO OH (LAT 38 57 35 LONG 082 31 57)											
MAY , 1981											
07...	0820	24	10.5	7.4	260	66	191	--	46	7.0	81
AUG											
21...	1015	.06	18.0	6.6	570	180	437	--	89	12	136
385804082095000 - 051 KYGER C (7-10) AT KYGER OH (LAT 38 58 04 LONG 082 09 50)											
MAY , 1981											
12...	1600	19	13.5	7.4	400	97	232	--	41	<5.0	104
JUL											
22...	1130	.54	23.0	7.0	795	410	647	--	43	6.9	522
385848082082900 - 051 JESSIE C (7-9) AT KYGER OH (LAT 38 58 48 LONG 082 08 29)											
MAY , 1981											
12...	1400	5.6	13.0	5.4	580	250	421	.4	3	<5.0	258
JUL											
21...	1600	.56	28.0	3.6	1100	--	842	1.6	--	3.7	360
385900082051900 - 051 STORYS RN (7-12) NR MIDDLEPORT OH (LAT 38 59 00 LONG 082 05 19)											
MAY , 1981											
12...	1245	2.7	11.5	4.4	835	--	659	1.4	--	<5.0	470
JUL											
28...	0945	.50	23.5	3.5	1130	--	1267	4.3	--	4.0	415

ANALYSES OF MISCELLANEOUS STATIONS

DATE	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ALUMINUM, DISSOLVED (UG/L AS AL)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	ARSENIC DISSOLVED (UG/L AS AS)	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, DISSOLVED (UG/L AS ZN)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
385513082081400 - 051 L KYGER C (7-5) NR ADDISON OH (LAT 38 55 13 LONG 082 08 14)											
MAY , 1981											
02...	12500	11000	850	480	17500	17500	<10	<.5	200	380	21
JUL											
21...	12880	11240	1725	1094	23740	21260	<10	<.5	341	429	122
385520082322000 - 051 UNAM TR TO SYMMES C (2-2) AT PYRO OH (LAT 38 55 20 LONG 082 32 20)											
MAY , 1981											
07...	400	<200	1300	250	430	400	<10	1.2	<100	<30	19
AUG											
21...	14720	<75	871	95	1648	1547	<10	<.5	<20	11	27
385543082140600 - 051 L WHITE OAK C (7-2) NR PORTER OH (LAT 38 55 43 LONG 082 14 06)											
MAY , 1981											
12...	7100	5100	1960	160	9100	8950	<10	<.5	200	290	59
JUL											
22...	415	<75	<10	<10	25460	15870	<10	<.5	508	876	101
385612082095900 - 051 L KYGER C (7-6) NR KYGER OH (LAT 38 56 12 LONG 082 09 59)											
MAY , 1981											
01...	17000	16500	1390	760	21500	21300	<10	.5	300	460	33
JUL											
22...	20380	16670	1123	1094	26910	26230	<10	<.5	391	558	14
385711082215600 - 051 L RACCOON C (10-1) NR VINTON OH (LAT 38 57 11 LONG 082 21 56)											
FEB , 1981											
24...	2000	300	4800	800	1480	1430	<10	<.5	<100	80	92
AUG											
20...	3092	3076	417	192	3490	3221	<10	<.5	<20	117	3
385735082315700 - 051 SYMMES C (2-1) NR PYRO OH (LAT 38 57 35 LONG 082 31 57)											
MAY , 1981											
07...	300	<200	1490	450	480	430	<10	1.0	<100	30	59
AUG											
21...	474	<75	1008	122	910	859	<10	<.5	<20	14	23
385804082095000 - 051 KYGER C (7-10) AT KYGER OH (LAT 38 58 04 LONG 082 09 50)											
MAY , 1981											
12...	1100	<200	1440	120	1690	1150	<10	.6	<100	<30	31
JUL											
22...	521	490	1849	1211	8823	8615	<10	<.5	176	23	54
385848082082900 - 051 JESSIE C (7-9) AT KYGER OH (LAT 38 58 48 LONG 082 08 29)											
MAY , 1981											
12...	8000	800	3500	360	4100	3950	<10	<.5	<100	60	145
JUL											
21...	8821	7411	2148	1366	10852	9807	<10	<.5	203	236	48
385900082051900 - 051 STORYS RN (7-12) NR MIDDLEPORT OH (LAT 38 59 00 LONG 082 05 19)											
MAY , 1981											
12...	7700	6300	2990	1640	5100	5050	<10	<.5	100	240	--
JUL											
28...	36890	27330	4733	4083	14720	11590	<10	<.5	320	651	37

ANALYSES OF MISCELLANEOUS STATIONS

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	ACIDITY (MG/L AS H)	ALKA-LINITY FIELD (MG/L AS CACO3)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SULFATE DIS-SOLVED (MG/L AS SO4)
385924082295300 - 051 DIXON RN (10-2) NR WINCHESTER OH (LAT 38 59 24 LONG 082 29 53)											
MAY , 1981											
06...	1215	5.9	13.0	7.9	360	150	295	--	20	<5.0	154
AUG											
19...	1600	.14	19.5	6.0	770	390	630	.6	10	3.4	365
385933082042800 - 051 LEADING C (12-1) AT MIDDLEPORT OH (LAT 38 59 33 LONG 082 04 28)											
APR , 1981											
08...	1105	150	15.0	7.5	490	220	356	--	55	5.0	134
JUL											
28...	1145	28	25.0	6.5	1275	350	930	--	13	110	285
390012082283000 - 051 DIXON RN (10-3) NR EWINGTON OH (LAT 39 00 12 LONG 082 28 30)											
MAY , 1981											
06...	1300	11	13.5	7.2	450	200	352	--	13	<5.0	199
AUG											
19...	1400	.31	21.0	4.3	800	--	795	1.3	--	1.5	430
390021082071700 - 051 LEADING C (12-2) NR RUTLAND OH (LAT 39 00 21 LONG 082 07 17)											
APR , 1981											
08...	1400	113	15.1	7.7	468	33	952	--	59	12	85
AUG											
20...	1530	3.1	23.0	6.5	1000	200	615	--	79	91	220
390031082271900 - 051 DICKASON RN (10-4) NR EWINGTON OH (LAT 39 00 31 LONG 082 27 19)											
MAY , 1981											
06...	1530	42	13.5	7.7	300	120	226	--	13	<5.0	121
AUG											
09...	1200	.91	19.5	6.1	460	190	375	.4	16	4.8	185
390038082270800 - 051 L RACCOON C (10-5) NR EWINGTON OH (LAT 39 00 38 LONG 082 27 08)											
FEB , 1981											
25...	0930	325	4.5	5.4	270	110	195	.3	3	7.0	117
AUG											
19...	1500	14	20.0	4.2	730	--	580	1.0	--	6.8	315
390052082210900 - 051 RACCOON C (11-1) AT EWINGTON OH (LAT 39 00 52 LONG 082 21 09)											
FEB , 1981											
25...	1200	1640	6.5	6.6	230	70	157	.1	20	14	83
AUG											
20...	1230	12	22.0	6.5	435	180	355	--	21	31	125
390110082050700 - 051 THOMAS F (12-5) NR MIDDLEPORT OH (LAT 39 01 10 LONG 082 05 07)											
MAY , 1981											
08...	1015	24	11.0	6.2	925	290	599	.3	14	101	258
JUL											
22...	1515	4.5	25.5	3.9	1235	--	1725	1.7	--	145	520
390201082034300 - 051 THOMAS F (12-7) NR POMEROY OH (LAT 39 02 01 LONG 082 03 43)											
MAY , 1981											
08...	0915	18	10.0	7.0	665	220	463	--	33	47	211
JUL											
22...	1430	3.2	24.5	4.1	1160	--	1252	1.7	--	65	415

ANALYSES OF MISCELLANEOUS STATIONS

DATE	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ALUMINUM, DISSOLVED (UG/L AS AL)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	ARSENIC DISSOLVED (UG/L AS AS)	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, DISSOLVED (UG/L AS ZN)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
385924082295300 - 051 DIXON RN (10-2) NR WINCHESTER OH (LAT 38 59 24 LONG 082 29 53)											
MAY , 1981											
06...	1500	<200	2680	550	1710	1640	<10	.6	100	70	52
AUG											
19...	776	<75	850	727	2959	2950	<10	<.5	<20	88	18
385933082042800 - 051 LEADING C (12-1) AT MIDDLEPORT OH (LAT 38 59 33 LONG 082 04 28)											
APR , 1981											
08...	1100	700	1440	610	380	380	<10	<.5	<100	40	32
JUL											
28...	16	<75	173	155	3357	2586	<10	<.5	4	131	15
390012082283000 - 051 DIXON RN (10-3) NR EWINGTON OH (LAT 39 00 12 LONG 082 28 30)											
MAY , 1981											
06...	1400	<200	2970	890	2540	2380	<10	<.5	<100	60	26
AUG											
19...	3607	3599	1976	1578	5224	5211	<10	<.5	<20	146	5
390021082071700 - 051 LEADING C (12-2) NR RUTLAND OH (LAT 39 00 21 LONG 082 07 17)											
APR , 1981											
08...	1200	700	2100	1320	1040	1010	<10	<.5	<100	50	102
AUG											
20...	457	<75	458	59	569	566	<10	<.5	<20	<10	17
390031082271900 - 051 DICKASON RN (10-4) NR EWINGTON OH (LAT 39 00 31 LONG 082 27 19)											
MAY , 1981											
06...	1000	200	2360	390	1870	1720	<10	<.5	<100	50	36
AUG											
09...	393	<75	706	226	2572	2070	<10	<.5	<20	25	6
390038082270800 - 051 L RACCOON C (10-5) NR EWINGTON OH (LAT 39 00 38 LONG 082 27 08)											
FEB , 1981											
25...	2000	700	4800	1770	1910	860	<10	<.5	<100	60	69
AUG											
19...	2503	2467	820	689	3485	3269	<10	<.5	<20	144	3
390052082210900 - 051 RACCOON C (11-1) AT EWINGTON OH (LAT 39 00 52 LONG 082 21 09)											
FEB , 1981											
25...	1200	<200	3030	150	960	910	<10	<.5	<100	50	56
AUG											
20...	317	<75	635	255	982	880	<10	<.5	<20	17	7
390110082050700 - 051 THOMAS F (12-5) NR MIDDLEPORT OH (LAT 39 01 10 LONG 082 05 07)											
MAY , 1981											
08...	5100	200	7200	2090	2170	2110	<10	<.5	100	120	40
JUL											
22...	10960	10550	1578	2011	5577	5076	<10	<.5	190	226	9
390201082034300 - 051 THOMAS F (12-7) NR POMEROY OH (LAT 39 02 01 LONG 082 03 43)											
MAY , 1981											
08...	4300	<200	9300	2510	1520	1500	<10	<.5	100	110	42
JUL											
22...	12720	11530	2003	2101	3715	2004	<10	<.5	207	351	19

ANALYSES OF MISCELLANEOUS STATIONS

DATE	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ALUMINUM, DISSOLVED (UG/L AS AL)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	ARSENIC DISSOLVED (UG/L AS AS)	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, DISSOLVED (UG/L AS ZN)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
390222082092200 - 051 LEADING C (12-3) NR LANGSVILLE OH (LAT 39 02 22 LONG 082 09 22)											
MAY , 1981											
08...	1000	<200	1960	60	210	150	<10	<.5	<100	<30	38
AUG											
20...	407	<75	575	144	476	420	<10	<.5	<20	21	12
390224082282300 - 051 TARCAMP RN (10-7) NR ROADS OH (LAT 39 02 24 LONG 082 28 23)											
MAY , 1981											
06...	2000	<200	4600	120	1160	1000	<10	<.5	<100	30	161
AUG											
19...	6515	<75	1557	179	503	420	<10	<.5	<20	32	29
390238082093200 - 051 UNAM TR TO LEADING C (12-4) NR RUTLAND OH (LAT 39 02 38 LONG 082 09 32)											
MAY , 1981											
11...	3400	1000	4350	1440	360	170	<10	<.5	<100	30	178
JUL											
22...	--	--	--	--	--	--	--	--	--	--	--
390240082075000 - 051 L LEADING C (12-6) AT RUTLAND OH (LAT 39 02 40 LONG 082 07 50)											
MAY , 1981											
08...	500	200	800	50	210	120	<10	.5	<100	<30	19
JUL											
22...	777	413	3142	2101	170	141	<10	<.5	72	50	19
390341082270700 - 051 BUFFER RN (10-9) NR ROADS OH (LAT 39 03 41 LONG 082 27 07)											
MAY , 1981											
06...	14000	12500	68000	54000	5300	5050	<10	<.5	200	310	121
AUG											
19...	29010	28040	89960	88390	12820	11710	<10	<.5	<20	637	78
390452082292800 - 051 UNAM TR TO RACCOON C (10-10) NR ROADS OH (LAT 39 04 52 LONG 082 29 28)											
MAY , 1981											
11...	26000	25000	23500	20000	10700	10400	12	<.5	300	530	122
JUL											
21...	34620	33110	11730	12970	13850	13140	<10	<.5	402	676	54
390509082281900 - 051 L RACCOON C (10-11) NR ROADS OH (LAT 39 05 09 LONG 082 28 19)											
MAY , 1981											
11...	3200	300	6100	700	2800	2660	<10	<.5	100	110	51
JUL											
27...	22	3	681	653	4570	4413	<10	<.5	56	91	8
390539082083000 - 051 L LEADING C (12-8) NR HARRISONVILLE OH (LAT 39 05 39 LONG 082 08 30)											
MAY , 1981											
07...	1000	<200	2500	50	650	100	<10	<.5	<100	<30	196
JUL											
23...	<75	<75	127	89	323	262	<10	<.5	91	<10	2
390622082230400 - 051 RACCOON C (11-2) NR WILKESVILLE OH (LAT 39 06 22 LONG 082 23 04)											
APR , 1981											
08...	1000	600	1700	720	300	290	<10	<.5	<100	110	74
390733082080300 - 051 UNAM TR TO L LEADING C (12-9) AT HARRISON OH (LAT 39 07 33 LONG 082 08 03)											
MAY , 1981											
07...	500	<200	1070	50	1020	950	<10	1.1	<100	<30	27
JUL											
23...	<75	<75	92	46	689	524	<10	<.5	103	<10	8

DATA COLLECTED AT OHIO ABANDONED MINE LAND SITES PROJECT--Continued
ANALYSES OF MISCELLANEOUS STATIONS

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	ACIDITY (MG/L AS H)	ALKA-LINITY FIELD (MG/L AS CACO3)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SULFATE DIS-SOLVED (MG/L AS SO4)
390222082092200 - 051 LEADING C (12-3) NR LANGSVILLE OH (LAT 39 02 22 LONG 082 09 22)											
MAY , 1981											
08...	1315	65	13.5	7.6	420	76	273	--	76	17	97
AUG											
20...	1430	1.9	18.0	6.6	910	170	710	--	82	78	315
390224082282300 - 051 TARCAMP RN (10-7) NR ROADS OH (LAT 39 02 24 LONG 082 28 23)											
MAY , 1981											
06...	1630	7.3	12.0	7.5	140	47	107	--	13	<5.0	57
AUG											
19...	1100	.26	19.5	6.5	210	54	135	--	16	1.2	52
390238082093200 - 051 UNAM TR TO LEADING C (12-4) NR RUTLAND OH (LAT 39 02 38 LONG 082 09 32)											
MAY , 1981											
11...	1345	6.3	14.5	7.2	250	65	204	--	43	<5.0	88
JUL											
22...	1700	.00	--	--	--	--	--	--	--	--	--
390240082075000 - 051 L LEADING C (12-6) AT RUTLAND OH (LAT 39 02 40 LONG 082 07 50)											
MAY , 1981											
08...	1125	17	11.5	7.7	505	150	332	--	52	23	158
JUL											
22...	1600	1.6	26.0	7.6	745	240	510	--	74	65	435
390341082270700 - 051 BUFFER RN (10-9) NR ROADS OH (LAT 39 03 41 LONG 082 27 07)											
MAY , 1981											
06...	1720	3.3	12.0	3.4	1120	--	1030	3.1	--	<5.0	630
AUG											
19...	1030	.30	17.5	3.0	2000	--	2465	11	--	2.5	1340
390452082292800 - 051 UNAM TR TO RACCOON C (10-10) NR ROADS OH (LAT 39 04 52 LONG 082 29 28)											
MAY , 1981											
11...	1145	4.5	13.5	2.8	1050	--	791	6.4	--	5.0	550
JUL											
21...	1200	.92	21.5	3.0	1200	--	1127	5.8	--	2.0	530
390509082281900 - 051 L RACCOON C (10-11) NR ROADS OH (LAT 39 05 09 LONG 082 28 19)											
MAY , 1981											
11...	1300	119	15.5	5.8	540	160	308	.3	17	7.0	181
JUL											
27...	1400	17	24.0	6.3	560	180	417	.2	43	8.0	235
390539082083000 - 051 L LEADING C (12-8) NR HARRISONVILLE OH (LAT 39 05 39 LONG 082 08 30)											
MAY , 1981											
07...	1500	12	17.5	7.7	420	97	257	--	59	6.0	115
JUL											
23...	0900	.15	17.0	6.9	400	140	270	--	87	3.0	112
390622082230400 - 051 RACCOON C (11-2) NR WILKESVILLE OH (LAT 39 06 22 LONG 082 23 04)											
APR , 1981											
08...	1735	1356	15.0	6.6	283	150	258	.2	7	25	105
390733082080300 - 051 UNAM TR TO L LEADING C (12-9) AT HARRISON OH (LAT 39 07 33 LONG 082 08 03)											
MAY , 1981											
07...	1330	2.0	17.5	7.6	480	130	287	--	59	5.0	134
JUL											
23...	1000	.09	20.0	6.9	550	200	385	--	125	7.5	290

ANALYSES OF MISCELLANEOUS STATIONS

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	ACIDITY (MG/L AS H)	ALKA-LINITY FIELD (MG/L AS CACO3)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SULFATE DIS-SOLVED (MG/L AS SO4)
390748082213100 - 051 RACCOON C (11-3) NR RADCLIFF OH (LAT 39 07 48 LONG 082 21 31)											
FEB , 1981											
23...	1605	1580	5.0	6.4	220	74	149	.2	12	14	73
SEP											
02...	1400	.00	25.5	7.8	590	110	398	--	66	59	150
390801082302800 - 051 L RACCOON C (10-12) NR WELLSTON OH (LAT 39 08 01 LONG 082 30 28)											
MAY , 1981											
06...	1400	43	16.0	6.4	320	98	188	.4	16	7.0	99
JUL											
27...	1130	1.7	24.5	6.3	360	120	287	--	28	5.0	135
390900082100900 - 051 MUD F (12-10) NR HARRISONVILLE OH (LAT 39 09 00 LONG 082 10 09)											
MAY , 1981											
07...	1200	6.0	14.0	7.4	510	160	334	--	48	5.0	181
JUL											
23...	1100	.29	21.5	6.5	650	330	502	--	30	5.5	210
390924082303100 - 051 SUGAR RN (10-13) AT HAMDEN OH (LAT 39 09 24 LONG 082 30 31)											
MAY , 1981											
06...	1130	6.3	11.1	3.3	895	--	683	2.0	--	5.0	430
JUL											
21...	1030	3.4	22.5	3.4	1100	--	922	3.3	--	3.5	425
390936082011400 - 051 W B SHADE R (14-3) AT BURLINGHAM OH (LAT 39 09 36 LONG 082 01 14)											
MAY , 1981											
07...	1745	40	15.0	7.8	390	110	252	--	49	<5.0	112
JUL											
23...	1245	4.5	21.5	6.5	445	230	302	--	39	4.8	170
390940082243000 - 051 PIERCE RN (11-5) NR RADCLIFF OH (LAT 39 09 40 LONG 082 24 30)											
MAY , 1981											
06...	1610	9.4	11.6	6.0	490	190	354	.3	10	8.0	195
JUL											
15...	1600	.97	24.0	6.7	595	360	472	--	13	5.0	290
15...	1601	.97	24.0	6.7	595	360	450	--	13	9.0	320
15...	1602	.97	24.0	6.7	595	240	469	--	13	8.9	230
15...	1603	.97	24.0	6.7	595	260	464	--	13	8.9	260
390941082212200 - 051 ELK F (11-4) NR RADCLIFF OH (LAT 39 09 41 LONG 082 21 22)											
MAY , 1981											
07...	0845	93	12.0	6.8	345	96	210	--	16	8.0	104
JUL											
27...	1600	3.3	25.5	6.8	410	100	370	--	46	8.5	160
391009082053600 - 051 W B SHADE R (14-2) NR BURLINGHAM OH (LAT 39 10 09 LONG 082 05 36)											
MAY , 1981											
07...	1630	12	19.0	7.5	430	160	299	--	19	<5.0	160
JUL											
23...	1200	1.2	25.0	6.2	455	250	325	.0	7	3.5	170
391403082261600 - 051 ELK F (11-7) NR MCARTHUR OH (LAT 39 14 03 LONG 082 26 16)											
MAY , 1981											
12...	1505	45	12.0	7.0	315	110	228	--	20	8.0	108
AUG											
26...	1230	.04	19.0	7.2	1100	290	745	--	44	61	345

ANALYSES OF MISCELLANEOUS STATIONS

DATE	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ALUMINUM, DISSOLVED (UG/L AS AL)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	ARSENIC DISSOLVED (UG/L AS AS)	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, DISSOLVED (UG/L AS ZN)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
390748082213100 - 051 RACCOON C (11-3) NR RADCLIFF OH (LAT 39 07 48 LONG 082 21 31)											
FEB , 1981											
23...	2200	<200	4800	170	940	810	<10	<.5	<100	40	99
SEP											
02...	196	<75	608	20	295	270	<10	<.5	<20	53	3
390801082302800 - 051 L RACCOON C (10-12) NR WELLSTON OH (LAT 39 08 01 LONG 082 30 28)											
MAY , 1981											
06...	400	<200	650	280	1680	1670	<10	<.5	100	70	12
JUL											
27...	<75	<75	127	114	3364	2589	<10	<.5	45	33	4
390900082100900 - 051 MUD F (12-10) NR HARRISONVILLE OH (LAT 39 09 00 LONG 082 10 09)											
MAY , 1981											
07...	1100	<200	1670	50	1740	1640	<10	<.5	<100	<30	61
JUL											
23...	81	<75	173	24	2797	2090	<10	<.5	117	<10	32
390924082303100 - 051 SUGAR RN (10-13) AT HAMDEN OH (LAT 39 09 24 LONG 082 30 31)											
MAY , 1981											
06...	6100	5800	7900	6900	7100	6950	<10	2.6	200	270	136
JUL											
21...	13920	13890	13820	13390	12150	11440	<10	<.5	727	589	34
390936082011400 - 051 W B SHADE R (14-3) AT BURLINGHAM OH (LAT 39 09 36 LONG 082 01 14)											
MAY , 1981											
07...	1100	<200	2080	30	1240	1170	<10	.8	<100	<30	58
JUL											
23...	82	70	322	254	2783	2027	<10	<.5	96	<10	22
390940082243000 - 051 PIERCE RN (11-5) NR RADCLIFF OH (LAT 39 09 40 LONG 082 24 30)											
MAY , 1981											
06...	2000	<200	3060	1290	2310	2190	<10	<.5	100	70	25
JUL											
15...	403	248	1832	1531	2353	2410	<10	<.5	64	17	9
15...	569	732	2162	1522	2625	2298	<10	<.5	82	44	--
15...	370	40	2300	1600	2500	2700	1	.2	--	50	--
15...	590	30	2100	50	2500	2700	1	.3	--	50	--
390941082212200 - 051 ELK F (11-4) NR RADCLIFF OH (LAT 39 09 41 LONG 082 21 22)											
MAY , 1981											
07...	600	<200	820	80	1060	990	<10	1.1	<100	<30	14
JUL											
27...	<75	<75	391	348	1041	--	<10	<.5	<20	<20	2
391009082053600 - 051 W B SHADE R (14-2) NR BURLINGHAM OH (LAT 39 10 09 LONG 082 05 36)											
MAY , 1981											
07...	1800	<200	2640	70	2060	2000	<10	<.5	<100	30	103
JUL											
23...	<75	<75	128	41	4077	3115	<10	<.5	117	<10	25
391403082261600 - 051 ELK F (11-7) NR MCARTHUR OH (LAT 39 14 03 LONG 082 26 16)											
MAY , 1981											
12...	1400	200	2220	350	1170	1120	<10	<.5	<100	30	60
AUG											
26...	812	118	2350	1993	3144	3077	<10	.5	<20	174	7

ANALYSES OF MISCELLANEOUS STATIONS

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	ACIDITY (MG/L AS H)	ALKA-LINITY FIELD (MG/L AS CACO3)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SULFATE DIS-SOLVED (MG/L AS SO4)
391416082255500 - 051 UNAM TR TO ELK F (11-8) NR PRATTSVILLE OH (LAT 39 14 16 LONG 082 25 55)											
MAY , 1981											
19...	1330	8.2	11.0	6.5	510	120	351	.1	23	18	160
JUL											
15...	1830	.38	23.5	7.4	1275	16	880	--	184	20	215
391430082284600 - 051 PUNCHEON F (11-10) AT MCARTHUR OH (LAT 39 14 30 LONG 082 28 46)											
MAY , 1981											
19...	1600	53	11.5	6.5	240	79	172	--	23	9.0	91
AUG											
26...	1000	.00	--	--	--	--	--	--	--	--	--
391552082171900 - 051 RACCOON C (16-1) NR MINERAL OH (LAT 39 15 52 LONG 082 17 19)											
APR , 1981											
23...	1600	822	11.5	6.7	240	100	191	.3	7	10	101
JUL											
15...	1600	87	24.0	5.3	495	260	304	.8	3	11	185
391637082291400 - 051 ELK F (11-9) NR MCARTHUR OH (LAT 39 16 37 LONG 082 29 14)											
MAY , 1981											
12...	1315	19	11.5	7.4	190	54	143	--	20	<5.0	57
AUG											
26...	1125	--	19.0	5.8	910	330	945	.2	8	358	30
391642082232700 - 051 RACCOON C (16-3) NR ZALESKI OH (LAT 39 16 42 LONG 082 23 27)											
MAY , 1981											
13...	1100	267	11.5	5.6	299	110	207	.4	5	12	106
JUL											
16...	1100	16	23.5	4.6	6400	--	435	1.0	--	13	315
391830082262300 - 051 BRUSHY C (16-4) NR CREOLA OH (LAT 39 18 30 LONG 082 26 23)											
MAY , 1981											
15...	1200	129	12.5	6.2	215	65	151	.1	5	14	71
AUG											
26...	1330	.13	27.5	3.5	1900	--	1427	3.2	--	315	410
391901082210400 - 051 RACCOON C (16-2) NR ZALESKI OH (LAT 39 19 01 LONG 082 21 04)											
APR , 1981											
24...	1200	641	12.5	5.8	265	100	190	.3	4	11	99
SEP											
02...	1030	3.2	23.0	5.2	830	290	583	1.6	10	55	310
02...	1031	3.2	23.0	5.2	830	290	580	1.6	10	54	311
02...	1032	3.2	23.0	5.2	830	280	564	1.6	10	59	290
02...	1033	3.2	23.0	5.2	830	280	563	1.6	10	60	290
391913082250500 - 051 RACCOON C (16-5) NR ZALESKI OH (LAT 39 19 13 LONG 082 25 05)											
MAY , 1981											
12...	1700	246	12.0	5.3	310	120	214	.2	3	8.0	111
AUG											
26...	1445	.14	23.5	4.1	1350	--	990	1.6	--	99	400
392201081524600 - 051 FEDERAL C (22-1) AT BROADWELL OH (LAT 39 22 01 LONG 081 52 46)											
APR , 1981											
06...	1530	249	11.0	7.5	420	78	271	--	125	12	85
JUL											
16...	1100	20	22.0	6.9	715	220	474	--	157	14	165

ANALYSES OF MISCELLANEOUS STATIONS

DATE	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ALUMINUM, DISSOLVED (UG/L AS AL)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	ARSENIC DISSOLVED (UG/L AS AS)	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, DISSOLVED (UG/L AS ZN)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
391416082255500 - 051 UNAM TR TO ELK F (11-8) NR PRATTSVILLE OH (LAT 39 14 16 LONG 082 25 55)											
MAY , 1981											
19...	4800	<200	4700	430	2570	2400	<20	1.5	100	90	407
JUL											
15...	251	320	483	143	1401	1078	<10	<.5	34	<10	22
391430082284600 - 051 PUNCHEON F (11-10) AT MCARTHUR OH (LAT 39 14 30 LONG 082 28 46)											
MAY , 1981											
19...	3900	<200	3900	70	1720	1460	<20	<.5	<100	40	250
AUG											
26...	--	--	--	--	--	--	--	--	--	--	--
391552082171900 - 051 RACCOON C (16-1) NR MINERAL OH (LAT 39 15 52 LONG 082 17 19)											
APR , 1981											
23...	5300	<200	6500	80	1800	1650	<10	6.0	<100	40	325
JUL											
15...	1457	1180	286	303	4166	3212	<10	<.5	62	58	0
391637082291400 - 051 ELK F (11-9) NR MCARTHUR OH (LAT 39 16 37 LONG 082 29 14)											
MAY , 1981											
12...	200	<200	510	90	290	270	<10	<.5	<100	<30	8
AUG											
26...	458	<75	526	460	527	514	<10	<.5	<20	16	9
391642082232700 - 051 RACCOON C (16-3) NR ZALESKI OH (LAT 39 16 42 LONG 082 23 27)											
MAY , 1981											
13...	2000	600	2530	400	1960	1860	<10	<.5	<100	70	28
JUL											
16...	5475	4156	566	314	6843	5257	<10	<.5	245	185	1
391830082262300 - 051 BRUSHY C (16-4) NR CREOLA OH (LAT 39 18 30 LONG 082 26 23)											
MAY , 1981											
15...	1400	200	2090	510	1000	950	<10	<.5	<100	40	51
AUG											
26...	13300	12070	3263	2873	8563	8231	<10	<.5	<20	561	15
391901082210400 - 051 RACCOON C (16-2) NR ZALESKI OH (LAT 39 19 01 LONG 082 21 04)											
APR , 1981											
24...	3100	300	4200	130	1780	1680	<10	3.2	<100	60	251
SEP											
02...	4580	4467	332	120	5864	5727	<10	<.5	<20	194	1
02...	4574	4370	330	127	5855	5683	<10	<.5	<20	189	--
02...	--	--	670	340	8200	8900	1	<.1	83	160	--
02...	--	--	780	280	8200	8800	1	<.1	84	150	--
391913082250500 - 051 RACCOON C (16-5) NR ZALESKI OH (LAT 39 19 13 LONG 082 25 05)											
MAY , 1981											
12...	2300	900	2510	310	2040	1910	<10	<.5	100	80	64
AUG											
26...	6843	6069	928	510	8036	7769	<10	<.5	<20	236	3
392201081524600 - 051 FEDERAL C (22-1) AT BROADWELL OH (LAT 39 22 01 LONG 081 52 46)											
APR , 1981											
06...	2200	500	3700	860	250	230	<10	<.5	<100	30	82
JUL											
16...	372	346	999	458	414	380	<10	<.5	<20	<10	40

ANALYSES OF MISCELLANEOUS STATIONS

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	ACIDITY (MG/L AS H)	ALKA-LINITY FIELD (MG/L AS CACO3)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SULFATE DIS-SOLVED (MG/L AS SO4)
392216082160800 - 051 HEWETT F (16-6) NR MINERAL OH (LAT 39 22 16 LONG 082 16 08)											
MAY , 1981											
07...	0830	16	9.0	4.4	420	--	326	.7	--	5.0	202
SEP											
02...	0800	1.4	22.0	3.1	1800	--	1395	9.9	--	4.5	890
392240082275000 - 051 BRUSHY F (16-8) NR MT PLEASANT OH (LAT 39 22 40 LONG 082 27 50)											
MAY , 1981											
12...	1810	24	13.0	6.2	178	67	142	.1	3	<5.0	71
AUG											
26...	1000	.00	--	--	--	--	--	--	--	--	--
392325082150300 - 051 HEWETT F (16-7) NR KIMBERLY OH (LAT 39 23 25 LONG 082 15 03)											
MAY , 1981											
28...	1100	24	17.0	7.2	290	94	205	--	30	<5.0	115
SEP											
02...	0900	.57	22.0	4.5	850	--	630	1.5	--	2.5	405
392342082072000 - 051SUNDAY C (21-1) AT CHAUNCEY OH (LAT 39 23 42 LONG 082 07 20)											
MAY , 1981											
19...	1400	255	11.0	5.9	505	130	331	.2	34	21	184
AUG											
27...	0900	11	19.0	3.2	2600	--	1885	5.3	--	39	1140
392349082214000 - 051 E B RACCOON C (16-9) AT STARR OH (LAT 39 23 49 LONG 082 21 40)											
MAY , 1981											
19...	1900	24	11.5	3.9	760	--	594	1.9	--	5.0	400
AUG											
26...	1630	.08	22.0	3.7	1650	--	1425	4.2	--	3.7	860
392407081554700 - 051 SHARPS F (22-2) NR AMESVILLE OH (LAT 39 24 07 LONG 081 55 47)											
APR , 1981											
07...	0915	61	8.0	8.1	625	370	728	--	157	12	425
JUL											
16...	0900	7.4	21.5	7.3	795	230	568	--	177	13	260
392427082200300 - 051 E B RACCOON C (16-10) NR STARR OH (LAT 39 24 27 LONG 082 20 03)											
MAY , 1981											
27...	2030	64	18.5	6.2	680	--	513	1.3	--	<5.0	350
JUL											
15...	1200	2.9	20.0	3.8	1300	--	1148	4.3	--	4.5	780
392504082195100 - 051 UNAM TR TO E B RACCOON C (16-11) NR STARR OH (LAT 39 25 04 LONG 082 19 51)											
MAY , 1981											
27...	1900	34	18.0	5.8	900	--	749	2.0	--	<5.0	510
JUL											
15...	0830	.89	18.0	3.6	1500	--	1382	6.6	--	2.5	930
392535081251800 - 051 DUCK C (25-1) AT MARIETTA OH (LAT 39 25 35 LONG 081 25 18)											
OCT , 1980											
21...	1245	60	12.0	7.4	995	370	743	--	130	50	370
MAY , 1981											
08...	0815	170	13.0	8.0	728	240	508	--	112	15	233
AUG											
12...	0905	E5.0	22.0	7.4	770	270	568	--	104	7.5	325

ANALYSES OF MISCELLANEOUS STATIONS

DATE	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ALUMINUM, DISSOLVED (UG/L AS AL)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	ARSENIC DISSOLVED (UG/L AS AS)	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, DISSOLVED (UG/L AS ZN)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
392216082160800 - 051 HEWETT F (16-6) NR MINERAL OH (LAT 39 22 16 LONG 082 16 08)											
MAY , 1981											
07...	2500	2400	5700	3400	1460	1420	<10	.5	<100	70	13
SEP											
02...	31810	29560	20600	19180	4786	4480	<10	<.5	<20	535	6
392240082275000 - 051 BRUSHY F (16-8) NR MT PLEASANT OH (LAT 39 22 40 LONG 082 27 50)											
MAY , 1981											
12...	1400	200	790	190	1290	1260	<10	<.5	<100	60	83
AUG											
26...	--	--	--	--	--	--	--	--	--	--	--
392325082150300 - 051 HEWETT F (16-7) NR KIMBERLY OH (LAT 39 23 25 LONG 082 15 03)											
MAY , 1981											
28...	1500	<200	3500	680	1500	1340	<10	<.5	100	30	49
SEP											
02...	4188	3994	391	308	2911	2782	<10	<.5	<20	146	2
392342082072000 - 051SUNDAY C (21-1) AT CHAUNCEY OH (LAT 39 23 42 LONG 082 07 20)											
MAY , 1981											
19...	600	<200	10800	4100	900	830	<10	2.5	100	30	41
AUG											
27...	3450	3429	43040	42070	6263	6204	<10	<.5	<20	240	39
392349082214000 - 051 E B RACCOON C (16-9) AT STARR OH (LAT 39 23 49 LONG 082 21 40)											
MAY , 1981											
19...	12000	11500	5000	2560	8200	7850	<10	1.8	200	270	73
AUG											
26...	24380	23450	1842	1706	15430	--	<10	<.5	<20	584	2
392407081554700 - 051 SHARPS F (22-2) NR AMESVILLE OH (LAT 39 24 07 LONG 081 55 47)											
APR , 1981											
07...	1700	200	2020	<30	2470	2410	<10	<.5	<100	30	81
JUL											
16...	150	332	548	90	291	242	<10	<.5	<20	<10	25
392427082200300 - 051 E B RACCOON C (16-10) NR STARR OH (LAT 39 24 27 LONG 082 20 03)											
MAY , 1981											
27...	134000	6100	138000	210	9200	7050	<10	.5	100	290	17700
JUL											
15...	23420	21250	1677	1492	19470	16190	<10	<.5	307	520	2
392504082195100 - 051 UNAM TR TO E B RACCOON C (16-11) NR STARR OH (LAT 39 25 04 LONG 082 19 51)											
MAY , 1981											
27...	135000	9800	210000	220	15300	10400	<10	.7	200	380	17900
JUL											
15...	1684	28010	637	1506	21050	19030	<10	<.5	342	733	7
392535081251800 - 051 DUCK C (25-1) AT MARIETTA OH (LAT 39 25 35 LONG 081 25 18)											
OCT , 1980											
21...	750	<200	590	50	430	380	<10	<.5	<100	<30	--
MAY , 1981											
08...	600	400	650	490	270	260	<10	<.5	<100	<30	16
AUG											
12...	529	220	487	486	263	160	<10	<.5	<20	34	29

ANALYSES OF MISCELLANEOUS STATIONS

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	ACIDITY (MG/L AS H)	ALKA-LINITY FIELD (MG/L AS CACO3)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SULFATE DIS-SOLVED (MG/L AS SO4)
392606082112800 - 051 MONDAY C (20-1) AT DOANVILLE OH (LAT 39 26 06 LONG 082 11 28)											
MAY , 1981											
28...	1230	538	17.0	5.1	610	230	430	--	20	42	218
AUG											
28...	0900	8.1	17.5	3.3	1600	--	1175	4.1	--	37	740
392612081545700 - 051 SHARPS F (22-4) AT SHARPSBURG OH (LAT 39 26 12 LONG 081 54 57)											
APR , 1981											
07...	1100	34	9.0	8.0	600	27	278	--	135	27	114
JUL											
15...	1215	3.5	21.5	6.8	700	360	508	--	149	7.5	235
392733082120700 - 051 MONDAY C (20-2) NR BUCHTEL OH (LAT 39 27 33 LONG 082 12 07)											
MAY , 1981											
13...	1500	292	13.1	5.2	539	210	427	.3	3	42	190
AUG											
28...	1030	2.0	18.0	4.1	1250	--	927	.9	--	88	500
392802081562100 - 051 SHARPS F (22-5) NR SHARPSBURG OH (LAT 39 28 02 LONG 081 56 21)											
APR , 1981											
07...	1340	18	10.4	8.2	440	220	493	--	149	12	223
JUL											
15...	1100	1.4	21.0	6.9	410	99	276	--	176	9.0	52
15...	1110	1.4	21.0	6.9	410	100	260	--	176	6.5	55
392853081594300 - 051 MINERS F (22-6) NR SHARPSBURG OH (LAT 39 28 53 LONG 081 59 43)											
APR , 1981											
13...	1230	25	18.5	7.6	465	100	271	--	88	<5.0	122
JUL											
15...	0945	.73	18.5	6.6	590	330	470	--	89	4.5	260
392909081593600 - 051 MINERS F (22-7) NR SHARPSBURG OH (LAT 39 29 09 LONG 081 59 36)											
APR , 1981											
13...	1445	12	19.2	7.7	455	91	262	--	97	<5.0	111
JUL											
14...	1130	1.4	24.0	6.7	535	230	426	--	98	5.5	190
392944082100100 - 051 BRUSH F (20-3) AT ORBISTON OH (LAT 39 29 44 LONG 082 10 01)											
MAY , 1981											
06...	1500	12	11.5	3.1	1175	--	1060	5.2	--	18	565
AUG											
28...	1130	.24	13.0	3.1	1550	--	892	3.4	--	24	580
393004082050900 - 051 SUNDAY C (21-3) AT GLOUSTER OH (LAT 39 30 04 LONG 082 05 09)											
MAY , 1981											
28...	1700	E817	16.5	7.0	320	72	192	--	36	18	94
AUG											
27...	0945	8.6	18.5	4.2	2400	--	1887	7.1	--	38	1140
393004082052300 - 051 MUD F (21-4) AT GLOUSTER OH (LAT 39 30 04 LONG 082 05 23)											
MAY , 1981											
28...	1600	19	17.0	7.0	1100	230	796	--	82	6.0	630
AUG											
27...	1200	1.6	18.5	4.3	5400	--	6692	34	--	140	4250

ANALYSES OF MISCELLANEOUS STATIONS

DATE	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ALUMINUM, DISSOLVED (UG/L AS AL)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	ARSENIC DISSOLVED (UG/L AS AS)	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, DISSOLVED (UG/L AS ZN)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
392606082112800 - 051 MONDAY C (20-1) AT DOANVILLE OH (LAT 39 26 06 LONG 082 11 28)											
MAY , 1981											
28...	5800	700	8300	380	2300	2070	<20	.5	<100	110	200
AUG											
28...	17550	17280	6395	6355	4356	4137	<10	<.5	<20	413	1
392612081545700 - 051 SHARPS F (22-4) AT SHARPSBURG OH (LAT 39 26 12 LONG 081 54 57)											
APR , 1981											
07...	900	400	1700	830	250	240	<10	<.5	<100	40	30
JUL											
15...	246	269	635	69	423	269	<10	<.5	34	<10	21
392733082120700 - 051 MONDAY C (20-2) NR BUCHTEL OH (LAT 39 27 33 LONG 082 12 07)											
MAY , 1981											
13...	2800	900	3110	500	1780	1650	<10	<.5	100	80	68
AUG											
28...	4693	4199	1053	500	3601	3134	<10	<.5	<20	183	5
392802081562100 - 051 SHARPS F (22-5) NR SHARPSBURG OH (LAT 39 28 02 LONG 081 56 21)											
APR , 1981											
07...	1300	<200	1840	30	930	830	<10	<.5	<100	<30	16
JUL											
15...	378	202	580	27	81	30	<10	<.5	21	<10	22
15...	178	219	373	16	64	31	<10	<.5	36	<10	--
392853081594300 - 051 MINERS F (22-6) NR SHARPSBURG OH (LAT 39 28 53 LONG 081 59 43)											
APR , 1981											
13...	1200	200	1220	80	320	280	<10	2.5	<100	60	25
JUL											
15...	150	195	99	18	98	84	<10	<.5	<20	<10	3
392909081593600 - 051 MINERS F (22-7) NR SHARPSBURG OH (LAT 39 29 09 LONG 081 59 36)											
APR , 1981											
13...	1500	200	1350	40	500	440	<10	1.3	<100	70	37
JUL											
14...	282	223	334	15	404	289	<10	<.5	<20	<10	9
392944082100100 - 051 BRUSH F (20-3) AT ORBISTON OH (LAT 39 29 44 LONG 082 10 01)											
MAY , 1981											
06...	4900	4800	17500	16500	5300	5200	12	<.5	200	440	20
AUG											
28...	12240	11430	5551	5200	949	<5	<10	<.5	27	141	1
393004082050900 - 051 SUNDAY C (21-3) AT GLOUSTER OH (LAT 39 30 04 LONG 082 05 09)											
MAY , 1981											
28...	3000	<200	9800	3030	590	470	<10	4.3	<100	30	156
AUG											
27...	3404	3397	146200	140000	6374	6203	<10	<.5	<20	220	214
393004082052300 - 051 MUD F (21-4) AT GLOUSTER OH (LAT 39 30 04 LONG 082 05 23)											
MAY , 1981											
28...	4100	<200	116000	110000	2700	2480	<10	2.2	100	140	212
AUG											
27...	17690	16870	960000	927000	15810	15210	<10	<.5	23	868	329

DATA COLLECTED AT OHIO ABANDONED MINE LAND SITES PROJECT--Continued

ANALYSES OF MISCELLANEOUS STATIONS

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	ACIDITY (MG/L AS H)	ALKA-LINITY FIELD (MG/L AS CACO3)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SULFATE DIS-SOLVED (MG/L AS SO4)
393051082095500 - 051 SNOW F (20-4) AT MURRAY CITY OH (LAT 39 30 51 LONG 082 09 55)											
MAY , 1981											
28...	1730	60	16.0	5.1	410	170	287	.0	8	12	173
AUG											
27...	1330	1.7	22.0	3.5	1500	--	1215	3.8	--	13	700
393237082061300 - 051 JOHNSON RN (21-6) NR GLOUSTER OH (LAT 39 32 37 LONG 082 06 13)											
MAY , 1981											
28...	1500	19	16.0	7.5	270	57	167	--	39	24	52
393241082034300 - 051 SUNDAY C (21-5) NR OAKDALE OH (LAT 39 32 41 LONG 082 03 43)											
MAY , 1981											
13...	0900	54	11.4	7.4	363	97	253	--	39	23	107
AUG											
05...	1300	3.5	24.0	3.3	1582	--	1022	1.7	--	11	710
393339081234500 - 051 E F DUCK C (33-1) AT LOWER SALEM OH (LAT 39 33 39 LONG 081 23 45)											
MAY , 1981											
07...	1500	101	15.0	8.0	679	230	485	--	107	7.0	212
AUG											
12...	1040	8.0	22.5	6.9	850	330	680	--	119	2.0	405
393344081243400 - 051 W F DUCK C (25-2) AT WARNER OH (LAT 39 33 44 LONG 081 24 34)											
MAY , 1981											
07...	1345	108	14.0	8.0	724	210	519	--	131	24	206
AUG											
12...	1140	6.5	24.0	7.5	928	350	723	--	108	5.0	395
393453082162800 - 051 MONDAY C (20-5) AT OREVILLE OH (LAT 39 34 53 LONG 082 16 28)											
MAY , 1981											
07...	1230	45	10.0	5.0	720	340	594	.7	3	52	330
SEP											
01...	1700	2.9	24.5	3.8	1600	--	1155	2.2	--	132	600
393528081222600 - 051 E F DUCK C (33-2) NR LOWER SALEM OH (LAT 39 35 28 LONG 081 22 26)											
MAY , 1981											
07...	1750	84	17.0	8.0	678	240	503	--	110	6.0	227
SEP											
09...	1330	18	21.0	7.5	810	320	665	--	87	8.0	350
09...	1331	--	--	--	--	--	650	--	--	8.0	360
393528081251000 - 051 W F DUCK C (25-3) NR ELBA OH (LAT 39 35 28 LONG 081 25 10)											
MAY , 1981											
07...	1210	100	13.0	7.9	718	200	487	--	135	24	202
AUG											
12...	1240	4.8	25.0	7.5	925	340	698	--	115	4.0	375
393532082073200 - 051 W B SUNDAY C (21-9) NR HEMLOCK OH (LAT 39 35 32 LONG 082 07 32)											
MAY , 1981											
13...	1030	32	12.2	6.9	539	190	390	--	25	39	187
JUL											
14...	1230	6.9	22.3	6.1	560	390	601	.3	10	13	370
393546082095600 - 051 PINE RN (21-10) AT HEMLOCK OH (LAT 39 35 46 LONG 082 09 56)											
MAY , 1981											
15...	1415	12	12.3	6.5	453	160	377	--	16	47	151
JUL											
14...	1500	2.4	24.0	4.4	890	--	692	1.0	--	20	405

DATA COLLECTED AT OHIO ABANDONED MINE LAND SITES PROJECT--Continued
ANALYSES OF MISCELLANEOUS STATIONS

DATE	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ALUMINUM, DISSOLVED (UG/L AS AL)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	ARSENIC DISSOLVED (UG/L AS AS)	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, DISSOLVED (UG/L AS ZN)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
393051082095500 - 051 SNOW F (20-4) AT MURRAY CITY OH (LAT 39 30 51 LONG 082 09 55)											
MAY , 1981											
28...	2800	200	4400	1130	1250	1110	<10	<.5	<100	50	84
AUG											
27...	17650	15490	14610	13410	5202	5030	<10	<.5	<20	352	17
393237082061300 - 051 JOHNSON RN (21-6) NR GLOUSTER OH (LAT 39 32 37 LONG 082 06 13)											
MAY , 1981											
28...	1000	<200	1770	80	190	60	<20	<.5	<100	<30	70
393241082034300 - 051 SUNDAY C (21-5) NR OAKDALE OH (LAT 39 32 41 LONG 082 03 43)											
MAY , 1981											
13...	1000	<200	5100	2080	700	630	<10	<.5	<100	<30	42
AUG											
05...	3365	3114	22810	8708	6285	6214	<10	<.5	87	280	15
393339081234500 - 051 E F DUCK C (33-1) AT LOWER SALEM OH (LAT 39 33 39 LONG 081 23 45)											
MAY , 1981											
07...	1500	200	1030	<30	560	480	<10	<.5	<100	<30	99
AUG											
12...	366	148	210	17	826	751	<10	<.5	<20	24	5
393344081243400 - 051 W F DUCK C (25-2) AT WARNER OH (LAT 39 33 44 LONG 081 24 34)											
MAY , 1981											
07...	1100	200	840	<30	630	500	<10	<.5	<100	90	28
AUG											
12...	384	232	227	19	621	532	<10	<.5	<20	26	5
393453082162800 - 051 MONDAY C (20-5) AT OREVILLE OH (LAT 39 34 53 LONG 082 16 28)											
MAY , 1981											
07...	3800	3400	2070	1100	2730	2640	<10	<.5	100	140	11
SEP											
01...	9505	8287	2121	1026	3790	3556	<10	<.5	<20	272	8
393528081222600 - 051 E F DUCK C (33-2) NR LOWER SALEM OH (LAT 39 35 28 LONG 081 22 26)											
MAY , 1981											
07...	1500	200	980	<30	850	770	<10	<.5	<100	<30	23
SEP											
09...	455	<75	284	86	2296	2086	<10	<.5	<20	<10	8
09...	385	133	281	35	2169	2027	<10	<.5	<20	28	--
393528081251000 - 051 W F DUCK C (25-3) NR ELBA OH (LAT 39 35 28 LONG 081 25 10)											
MAY , 1981											
07...	1000	200	860	50	550	460	<10	<.5	<100	120	22
AUG											
12...	531	253	508	16	451	353	<10	<.5	<20	30	18
393532082073200 - 051 W B SUNDAY C (21-9) NR HEMLOCK OH (LAT 39 35 32 LONG 082 07 32)											
MAY , 1981											
13...	700	<200	2110	1310	980	910	<10	1.0	<100	40	16
JUL											
14...	357	242	4308	2280	3162	2118	<10	<.5	77	88	10
393546082095600 - 051 PINE RN (21-10) AT HEMLOCK OH (LAT 39 35 46 LONG 082 09 56)											
MAY , 1981											
15...	1100	<200	2430	1400	880	840	<10	<.5	<100	50	20
JUL											
14...	2989	2615	8055	5046	3771	3358	<10	<.5	56	128	25

ANALYSES OF MISCELLANEOUS STATIONS

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	ACIDITY (MG/L AS H)	ALKA-LINITY FIELD (MG/L AS CACO3)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SULFATE DIS-SOLVED (MG/L AS SO4)
393604081424300 - 051 MEIGS C (31-1) NR NEELYSVILLE OH (LAT 39 36 04 LONG 081 42 43)											
MAY , 1981											
08...	1215	149	13.5	8.3	941	300	683	--	189	25	280
AUG											
26...	0930	5.4	20.0	7.4	1500	670	1342	--	177	7.8	760
26...	0935	5.4	20.0	7.4	1500	650	1353	--	177	23	690
26...	0936	5.4	20.0	7.4	1500	640	1300	--	177	39	690
26...	0937	5.4	20.0	7.4	1500	640	1300	--	177	34	680
393609082051900 - 051 SUNDAY C (21-7) AT CORNING OH (LAT 39 36 09 LONG 082 05 19)											
MAY , 1981											
15...	1315	38	12.4	6.4	417	110	273	.1	39	8.0	127
JUL											
14...	1700	5.8	22.0	6.0	1075	500	878	2.0	23	10	580
393610082124400 - 051 SHAWNEE C (20-8) AT SHAWNEE OH (LAT 39 36 10 LONG 082 12 44)											
JUN , 1981											
06...	1415	6.3	19.0	5.8	600	180	401	.5	77	30	161
AUG											
27...	1500	.20	24.0	8.3	1000	450	877	--	92	48	420
393622082150500 - 051 MONDAY C (20-6) NR SHAWNEE OH (LAT 39 36 22 LONG 082 15 05)											
JUN , 1981											
09...	1000	86	19.0	5.7	520	250	440	.6	3	31	233
SEP											
01...	1200	2.3	23.0	3.7	4100	--	2903	2.7	--	1014	660
393627082145700 - 051 UNAM TR TO MONDAY C (20-7) NR SHAWNEE OH (LAT 39 36 27 LONG 082 14 57)											
MAY , 1981											
06...	1700	8.4	12.0	5.1	910	430	842	.5	3	102	370
AUG											
26...	1000	.00	--	--	--	--	--	--	--	--	--
393632081245600 - 051 UNAM TR TO WF DUCK C (25-4) AT ELBA OH (LAT 39 36 32 LONG 081 24 56)											
APR , 1981											
23...	1115	7.5	13.5	6.8	694	340	550	.1	16	10	355
AUG											
12...	1400	.23	24.5	6.2	835	460	693	--	5	3.0	435
393640081223400 - 051 UNAM TR (33-3) TO E F DUCK C NR ELBA OH (LAT 39 36 40 LONG 081 22 34)											
APR , 1981											
23...	1330	7.6	15.4	4.9	940	440	722	1.0	3	<5.0	480
SEP											
09...	1500	.48	25.0	4.0	1100	--	1040	1.7	--	2.0	670
393646081222000 - 051 E F DUCK C (33-4) NR HARRIETSVILLE OH (LAT 39 36 46 LONG 081 22 20)											
MAY , 1981											
07...	1635	81	16.5	8.0	671	220	482	--	118	6.0	220
AUG											
25...	1015	1.6	20.5	6.5	1050	530	948	--	90	8.0	520
393649082135300 - 051 MONDAY C (20-12) NR SHAWNEE OH (LAT 39 36 49 LONG 082 13 53)											
JUN , 1981											
09...	1100	16	20.0	3.8	780	--	569	1.2	--	48	335
SEP											
01...	1630	.99	26.0	3.8	1650	--	1383	5.7	--	149	570

ANALYSES OF MISCELLANEOUS STATIONS

DATE	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	ARSENIC DIS-SOLVED (UG/L AS AS)	MERCURY DIS-SOLVED (UG/L AS HG)	NICKEL, DIS-SOLVED (UG/L AS NI)	ZINC, DIS-SOLVED (UG/L AS ZN)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
393604081424300 - 051 MEIGS C (31-1) NR NEELYSVILLE OH (LAT 39 36 04 LONG 081 42 43)											
MAY , 1981											
08...	300	<200	570	30	120	80	<10	<.5	<100	<30	51
AUG											
26...	269	141	429	368	31	<5	<10	<.5	<20	<10	42
26...	421	149	306	<10	18	5	<10	<.5	<20	33	--
26...	330	50	1400	90	90	10	2	.2	--	20	--
26...	380	50	870	80	80	10	1	.1	--	10	--
393609082051900 - 051 SUNDAY C (21-7) AT CORNING OH (LAT 39 36 09 LONG 082 05 19)											
MAY , 1981											
15...	1600	200	9900	7100	760	710	<10	<.5	<100	<30	39
JUL											
14...	1848	150	52270	33250	3985	2339	<10	<.5	38	87	80
393610082124400 - 051 SHAWNEE C (20-8) AT SHAWNEE OH (LAT 39 36 10 LONG 082 12 44)											
JUN , 1981											
06...	1100	<200	2030	60	490	410	<10	2.1	100	40	89
AUG											
27...	173	170	51	22	175	<5	<10	<.5	<20	<10	14
393622082150500 - 051 MONDAY C (20-6) NR SHAWNEE OH (LAT 39 36 22 LONG 082 15 05)											
JUN , 1981											
09...	6900	200	11000	940	1960	1680	<10	1.2	100	90	501
SEP											
01...	10510	10040	2654	2516	3439	3333	<10	<.5	<20	265	2
393627082145700 - 051 UNAM TR TO MONDAY C (20-7) NR SHAWNEE OH (LAT 39 36 27 LONG 082 14 57)											
MAY , 1981											
06...	3000	2400	1790	600	3750	3650	<10	<.5	100	120	22
AUG											
26...	--	--	--	--	--	--	--	--	--	--	--
393632081245600 - 051 UNAM TR TO WF DUCK C (25-4) AT ELBA OH (LAT 39 36 32 LONG 081 24 56)											
APR , 1981											
23...	6700	<200	5000	60	2240	2060	<10	<.5	100	90	101
AUG											
12...	418	214	241	42	1152	1046	<10	<.5	<20	46	21
393640081223400 - 051 UNAM TR (33-3) TO E F DUCK C NR ELBA OH (LAT 39 36 40 LONG 081 22 34)											
APR , 1981											
23...	19500	4300	27500	680	6250	5950	<10	<.5	200	220	811
SEP											
09...	8310	6135	684	451	10210	9334	<10	<.5	150	204	3
393646081222000 - 051 E F DUCK C (33-4) NR HARRIETSVILLE OH (LAT 39 36 46 LONG 081 22 20)											
MAY , 1981											
07...	1500	200	970	<30	800	710	<10	<.5	<100	<30	31
AUG											
25...	322	<75	221	22	4810	3588	<10	<.5	<20	75	7
393649082135300 - 051 MONDAY C (20-12) NR SHAWNEE OH (LAT 39 36 49 LONG 082 13 53)											
JUN , 1981											
09...	6200	5700	3300	2140	3030	2870	<10	1.7	100	160	23
SEP											
01...	10340	10120	54970	54440	5537	5399	<10	<.5	<20	263	43

ANALYSES OF MISCELLANEOUS STATIONS

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	ACIDITY (MG/L AS H)	ALKA-LINITY FIELD (MG/L AS CACO3)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SULFATE DIS-SOLVED (MG/L AS SO4)
393720081212100 - 041 M F DUCK C NR GERMANTOWN OH (LAT 39 37 20 LONG 081 21 21)											
APR , 1981											
23...	1645	115	14.4	7.5	710	290	528	--	66	17	280
AUG											
11...	1440	2.1	26.1	4.7	1254	--	1160	.9	--	3.0	740
393739082140600 - 051 UNAM TR TO MONDAY C (20-9) AT MCCUNEVILLE OH (LAT 39 37 39 LONG 082 14 06)											
JUN , 1981											
06...	1400	24	17.5	3.4	680	--	415	1.6	--	18	247
AUG											
06...	1145	1.0	21.0	3.4	1278	--	--	2.5	--	--	--
393742082135800 - 051 MONDAY C (20-10) AT MCCUNEVILLE OH (LAT 39 37 42 LONG 082 13 58)											
JUN , 1981											
06...	1300	41	18.5	3.7	480	--	315	1.1	--	28	160
AUG											
06...	0945	1.5	21.0	3.0	1669	--	1158	4.3	--	18	670
393743082183600 - 051 L MONDAY C (20-11) NR MAXVILLE OH (LAT 39 37 43 LONG 082 18 36)											
MAY , 1981											
28...	1045	3.6	16.5	4.4	1200	--	922	1.2	--	120	520
SEP											
01...	1030	.40	21.0	4.7	1650	760	1380	1.2	3	187	650
393745081431000 - 051 DYES F (31-2) NR HACKNEY OH (LAT 39 37 45 LONG 081 43 10)											
APR , 1981											
15...	1415	107	16.0	8.2	1125	470	876	--	159	9.0	490
AUG											
26...	1030	2.0	20.5	6.9	2100	930	1835	--	141	70	1300
393754081274000 - 051 W F DUCK C (25-6) AT MACKSBURG OH (LAT 39 37 54 LONG 081 27 40)											
MAY , 1981											
07...	1000	81	12.0	8.0	660	180	446	--	130	23	178
AUG											
11...	1445	E3.0	26.5	7.7	920	300	718	--	148	4.5	360
393906081215800 - 051 M F DUCK C (33-6) NR HARRIETSVILLE OH (LAT 39 39 06 LONG 081 21 58)											
APR , 1981											
24...	0845	80	9.8	7.7	635	260	471	--	66	5.0	253
AUG											
25...	1130	.32	23.5	7.9	1050	560	940	--	43	9.0	540
25...	1131	.32	23.5	7.9	1050	540	973	--	43	10	530
25...	1132	.32	23.5	7.9	1050	550	927	--	43	12	510
25...	1133	.32	23.5	7.9	1050	550	892	--	43	12	520
393943082080800 - 051 MOXAHALA C (29-11) AT MOXAHALA OH (LAT 39 39 43 LONG 082 08 08)											
APR , 1981											
24...	1300	30	11.4	5.3	918	430	702	.6	3	30	445
JUL											
22...	1500	2.8	24.3	4.0	1415	--	1322	2.5	--	7.0	770
393946081282300 - 051 W F DUCK C (25-7) AT DEXTER CITY OH (LAT 39 39 46 LONG 081 28 23)											
MAY , 1981											
07...	0815	78	11.0	8.1	610	120	402	--	161	22	123
AUG											
12...	1515	--	28.0	8.0	790	200	580	--	162	5.5	265

DATA COLLECTED AT OHIO ABANDONED MINE LAND SITES PROJECT--Continued

ANALYSES OF MISCELLANEOUS STATIONS

DATE	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ALUMINUM, DISSOLVED (UG/L AS AL)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	ARSENIC DISSOLVED (UG/L AS AS)	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, DISSOLVED (UG/L AS ZN)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
393720081212100 - 041 M F DUCK C NR GERMANTOWN OH (LAT 39 37 20 LONG 081 21 21)											
APR , 1981											
23...	17500	300	26000	300	2890	1360	<10	<.5	<100	<30	1220
AUG											
11...	6731	1652	2039	347	5360	5068	<10	<.5	<20	180	49
393739082140600 - 051 UNAM TR TO MONDAY C (20-9) AT MCCUNEVILLE OH (LAT 39 37 39 LONG 082 14 06)											
JUN , 1981											
06...	5200	4300	6100	2830	2080	1930	<10	<.5	100	110	57
AUG											
06...	12960	12570	1042	802	5590	5561	<10	<.5	130	232	9
393742082135800 - 051 MONDAY C (20-10) AT MCCUNEVILLE OH (LAT 39 37 42 LONG 082 13 58)											
JUN , 1981											
06...	2800	1800	6900	910	1790	1610	<10	<.5	100	90	154
AUG											
06...	18960	18320	5294	4709	7722	7308	<10	<.5	208	412	2
393743082183600 - 051 L MONDAY C (20-11) NR MAXVILLE OH (LAT 39 37 43 LONG 082 18 36)											
MAY , 1981											
28...	4400	3900	400	260	8400	8300	<10	<.5	200	230	8
SEP											
01...	3312	2846	89	69	8981	8514	<10	<.5	<20	242	1
393745081431000 - 051 DYES F (31-2) NR HACKNEY OH (LAT 39 37 45 LONG 081 43 10)											
APR , 1981											
15...	1500	<200	2900	<30	410	210	<10	.8	<100	50	102
AUG											
26...	313	201	604	500	78	<5	<10	<.5	<20	<10	42
393754081274000 - 051 W F DUCK C (25-6) AT MACKSBURG OH (LAT 39 37 54 LONG 081 27 40)											
MAY , 1981											
07...	900	<200	1250	30	440	340	<10	--	<100	<30	43
AUG											
11...	474	236	439	<10	501	154	<10	<.5	<20	72	19
393906081215800 - 051 M F DUCK C (33-6) NR HARRIETSVILLE OH (LAT 39 39 06 LONG 081 21 58)											
APR , 1981											
24...	7700	<200	11100	70	1510	1170	<10	1.1	<100	30	339
AUG											
25...	143	<75	1063	51	872	579	<10	<.5	<20	15	6
25...	222	165	43	<10	744	719	<10	<.5	<20	<10	--
25...	90	60	900	220	960	39	1	.1	--	20	--
25...	70	40	400	70	940	1000	1	.3	12	30	--
393943082080800 - 051 MOXAHALA C (29-11) AT MOXAHALA OH (LAT 39 39 43 LONG 082 08 08)											
APR , 1981											
24...	3500	2300	3500	920	6700	6250	<10	.8	100	170	40
JUL											
22...	7246	6389	914	902	12210	8368	<10	<.5	105	202	3
393946081282300 - 051 W F DUCK C (25-7) AT DEXTER CITY OH (LAT 39 39 46 LONG 081 28 23)											
MAY , 1981											
07...	1200	200	1420	<30	270	150	<10	<.5	<100	<30	51
AUG											
12...	509	289	487	23	230	416	<10	<.5	<20	72	30

ANALYSES OF MISCELLANEOUS STATIONS

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	ACIDITY (MG/L AS H)	ALKA-LINITY FIELD (MG/L AS CACO3)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SULFATE DIS-SOLVED (MG/L AS SO4)
393947081182500 - 051 E F DUCK C (33-10) NR HARRIETSVILLE OH (LAT 39 39 47 LONG 081 18 25)											
MAY , 1981											
06...	1600	69	14.0	8.2	544	120	355	--	148	5.0	125
AUG											
11...	1340	4.3	24.5	7.2	650	170	483	--	152	5.0	235
394006082080400 - 051 UNAM TR TO MOXAHALA C (29-10) AT MOXAHALA OH (LAT 39 40 06 LONG 082 08 04)											
APR , 1981											
24...	1030	16	9.6	3.3	207	--	1700	5.9	--	62	1110
AUG											
05...	1600	5.6	33.0	2.7	2770	--	2575	13	--	60	1660
394007081285800 - 051 WARREN RN (25-8) AT SOUTH OLIVE OH (LAT 39 40 07 LONG 081 28 58)											
APR , 1981											
23...	0915	10	13.5	7.9	1010	460	802	--	66	19	485
AUG											
12...	1605	.16	29.5	7.4	1530	700	1353	--	102	4.5	750
394014081232100 - 051 M F DUCK C (33-7) AT MIDDLEBURG OH (LAT 39 40 14 LONG 081 23 21)											
APR , 1981											
24...	0945	68	9.5	7.6	644	190	476	--	141	5.0	257
AUG											
25...	1230	.32	19.5	7.3	1100	530	983	--	105	11	550
394053081415500 - 051 DYES F (31-6) NR REINERSVILLE OH (LAT 39 40 53 LONG 081 41 55)											
APR , 1981											
15...	0855	97	12.5	8.3	1110	460	825	--	158	9.0	475
AUG											
27...	1045	2.6	20.5	6.7	1700	870	1510	--	154	5.0	880
394110081245700 - 051 M F DUCK C (33-8) NR MIDDLEBURG OH (LAT 39 41 10 LONG 081 24 57)											
APR , 1981											
24...	1100	47	9.5	7.5	634	250	476	--	69	9.0	254
AUG											
25...	1430	.16	26.5	6.5	1450	790	1280	--	30	26	820
394117081452200 - 051 MANS F (31-3) NR MEIGS OH (LAT 39 41 17 LONG 081 45 22)											
APR , 1981											
14...	1530	36	15.5	8.3	680	150	436	--	187	23	140
AUG											
26...	1330	1.6	22.5	7.1	1850	1100	1995	--	177	9.0	1040
394129082065100 - 051 MOXAHALA C (29-9) NR MOXAHALA OH (LAT 39 41 29 LONG 082 06 51)											
APR , 1981											
14...	1515	40	16.9	3.5	1216	--	960	3.2	--	35	610
JUL											
23...	1240	8.1	20.0	3.3	2310	--	2057	6.5	--	9.5	1180
394130081450700 - 051 MEIGS C (31-4) NR MEIGS OH (LAT 39 41 30 LONG 081 45 07)											
APR , 1981											
15...	1015	48	12.0	8.2	680	170	442	--	169	16	164
AUG											
26...	1130	.60	21.5	7.1	1100	390	885	--	226	14	420

ANALYSES OF MISCELLANEOUS STATIONS

DATE	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ALUMINUM, DISSOLVED (UG/L AS AL)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	ARSENIC DISSOLVED (UG/L AS AS)	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, DISSOLVED (UG/L AS ZN)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
393947081182500 - 051 E F DUCK C (33-10) NR HARRIETSVILLE OH (LAT 39 39 47 LONG 081 18 25)											
MAY , 1981											
06...	600	200	640	<30	270	220	<10	<.5	<100	<30	36
AUG											
11...	349	186	382	87	187	113	<10	<.5	<20	30	25
394006082080400 - 051 UNAM TR TO MOXAHALA C (29-10) AT MOXAHALA OH (LAT 39 40 06 LONG 082 08 04)											
APR , 1981											
24...	18500	18000	72000	58000	25500	24400	<10	1.1	300	550	203
AUG											
05...	26620	26540	75980	72920	38320	38270	10	<.5	396	960	81
394007081285800 - 051 WARREN RN (25-8) AT SOUTH OLIVE OH (LAT 39 40 07 LONG 081 28 58)											
APR , 1981											
23...	12500	<200	10900	30	3150	2660	<10	<.5	100	<30	440
AUG											
12...	363	180	124	38	454	218	<10	<.5	<20	37	1
394014081232100 - 051 M F DUCK C (33-7) AT MIDDLEBURG OH (LAT 39 40 14 LONG 081 23 21)											
APR , 1981											
24...	6300	<200	8000	30	1870	1510	<10	.5	<100	30	291
AUG											
25...	200	<75	672	27	9255	468	<10	<.5	<20	23	21
394053081415500 - 051 DYES F (31-6) NR REINERSVILLE OH (LAT 39 40 53 LONG 081 41 55)											
APR , 1981											
15...	900	<200	1460	60	440	250	<10	.6	100	<30	59
AUG											
27...	731	133	439	327	204	<5	<10	<.5	<20	<10	58
394110081245700 - 051 M F DUCK C (33-8) NR MIDDLEBURG OH (LAT 39 41 10 LONG 081 24 57)											
APR , 1981											
24...	7700	300	11300	240	2460	1960	<10	<.5	100	50	597
AUG											
25...	<75	<75	45	<10	3675	3023	<10	<.5	50	96	6
394117081452200 - 051 MANS F (31-3) NR MEIGS OH (LAT 39 41 17 LONG 081 45 22)											
APR , 1981											
14...	800	<200	1130	<30	100	60	<10	.7	<100	50	56
AUG											
26...	262	202	203	308	217	<5	<10	<.5	<20	<10	35
394129082065100 - 051 MOXAHALA C (29-9) NR MOXAHALA OH (LAT 39 41 29 LONG 082 06 51)											
APR , 1981											
14...	6100	5600	16000	10200	11750	11350	<10	<.5	200	250	48
JUL											
23...	16970	15400	39060	48220	21190	17630	<10	<.5	191	493	58
394130081450700 - 051 MEIGS C (31-4) NR MEIGS OH (LAT 39 41 30 LONG 081 45 07)											
APR , 1981											
15...	1000	<200	1460	<30	160	110	<10	<.5	<100	40	58
AUG											
26...	228	94	107	297	122	<5	<10	<.5	<20	<10	56

ANALYSES OF MISCELLANEOUS STATIONS

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	ACIDITY (MG/L AS H)	ALKA-LINITY FIELD (MG/L AS CACO3)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SULFATE DIS-SOLVED (MG/L AS SO4)
394140081211000 - 051 E F DUCK C (33-11) NR MIDDLEBURG OH (LAT 39 41 40 LONG 081 21 10)											
MAY , 1981											
06...	1430	53	14.0	8.2	504	110	350	--	148	<5.0	103
AUG											
11...	1230	3.2	24.1	7.1	560	110	438	--	185	2.0	175
394153082180700 - 051 DRY RN (28-2) NR JUNCTION CITY OH (LAT 39 41 53 LONG 082 18 07)											
APR , 1981											
23...	1500	18	15.1	7.3	356	130	271	--	13	26	113
JUL											
24...	1315	.30	24.2	6.4	838	360	695	.7	10	90	305
394214081270500 - 051 M F DUCK C (33-9) NR SOUTH OLIVE OH (LAT 39 42 14 LONG 081 27 05)											
APR , 1981											
24...	1545	26	8.1	8.0	474	120	313	--	108	7.0	118
AUG											
25...	1500	E5.0	25.0	6.5	810	250	595	--	180	12	230
394214082160900 - 051 TURKEY RN (28-3) NR JUNCTION CITY OH (LAT 39 42 14 LONG 082 16 09)											
APR , 1981											
13...	1620	15	18.9	4.8	562	--	408	1.4	--	39	210
JUL											
24...	1115	1.4	20.5	4.3	1297	--	1280	2.4	--	110	490
394306082121900 - 051 RUSH C (28-5) AT NEW LEXINGTON OH (LAT 39 43 06 LONG 082 12 19)											
APR , 1981											
23...	1300	46	14.8	3.3	1330	--	924	4.2	--	47	690
JUL											
17...	0730	5.9	20.0	2.9	2840	--	2518	11	--	7.1	1760
394311081425700 - 041 HORSE RN NR MCCONNELSVILLE OH (LAT 39 43 11 LONG 081 42 57)											
APR , 1981											
14...	1215	23	16.0	8.2	1080	440	834	--	169	15	455
AUG											
26...	1500	.49	28.0	7.3	1250	630	1092	--	161	6.0	600
394313082130600 - 051 UNAM TR TO RUSH C (28-4) AT NEW LEXINGTON OH (LAT 39 43 13 LONG 082 13 06)											
APR , 1981											
23...	0915	25	13.0	7.6	440	140	289	--	28	69	95
JUL											
17...	0845	1.9	20.0	6.9	766	340	492	--	36	20	205
394317081401300 - 051 DYES C (31-8) NR REINERSVILLE OH (LAT 39 43 17 LONG 081 40 13)											
APR , 1981											
14...	0850	61	16.0	7.9	850	320	622	--	136	7.0	350
AUG											
27...	1130	.37	21.5	6.7	1250	560	1037	--	169	5.0	570
394317082164300 - 051 RUSH C (28-1) NR JUNCTION CITY OH (LAT 39 43 17 LONG 082 16 43)											
APR , 1981											
13...	1400	94	16.1	3.8	750	--	497	.8	--	45	284
AUG											
05...	1100	8.3	22.2	3.1	2270	--	1718	6.3	--	16	1100

ANALYSES OF MISCELLANEOUS STATIONS

DATE	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ALUMINUM, DISSOLVED (UG/L AS AL)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	ARSENIC DISSOLVED (UG/L AS AS)	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, DISSOLVED (UG/L AS ZN)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
394140081211000 - 051 E F DUCK C (33-11) NR MIDDLEBURG OH (LAT 39 41 40 LONG 081 21 10)											
MAY , 1981											
06...	500	<200	710	<30	170	130	<10	<.5	<100	<30	32
AUG											
11...	384	90	613	37	211	--	<10	<.5	<20	<10	28
394153082180700 - 051 DRY RN (28-2) NR JUNCTION CITY OH (LAT 39 41 53 LONG 082 18 07)											
APR , 1981											
23...	1900	<200	2670	200	1950	1780	<10	<.5	<100	40	126
JUL											
24...	152	13	420	311	5942	--	<10	<.5	<20	207	23
394214081270500 - 051 M F DUCK C (33-9) NR SOUTH OLIVE OH (LAT 39 42 14 LONG 081 27 05)											
APR , 1981											
24...	2400	<200	2810	40	630	460	<10	8.5	<100	<30	99
AUG											
25...	338	<75	587	<10	838	509	<10	<.5	<20	17	46
394214082160900 - 051 TURKEY RN (28-3) NR JUNCTION CITY OH (LAT 39 42 14 LONG 082 16 09)											
APR , 1981											
13...	3500	1700	3900	810	4150	4150	<10	<.5	100	120	181
JUL											
24...	11220	10130	766	517	12440	11960	<10	<.5	308	415	13
394306082121900 - 051 RUSH C (28-5) AT NEW LEXINGTON OH (LAT 39 43 06 LONG 082 12 19)											
APR , 1981											
23...	13000	9100	55000	39500	11400	11200	<10	1.3	200	280	279
JUL											
17...	31200	26790	128500	105500	45130	35340	<10	<.5	394	620	76
394311081425700 - 041 HORSE RN NR MCCONNELSVILLE OH (LAT 39 43 11 LONG 081 42 57)											
APR , 1981											
14...	600	<200	750	40	370	250	<10	<.5	<100	60	44
AUG											
26...	233	<75	479	303	453	25	<10	<.5	<20	10	34
394313082130600 - 051 UNAM TR TO RUSH C (28-4) AT NEW LEXINGTON OH (LAT 39 43 13 LONG 082 13 06)											
APR , 1981											
23...	6600	<200	10100	70	1670	1420	<10	1.2	<100	<30	341
JUL											
17...	161	338	768	331	3832	3322	<10	<.5	201	34	10
394317081401300 - 051 DYES C (31-8) NR REINERSVILLE OH (LAT 39 43 17 LONG 081 40 13)											
APR , 1981											
14...	1200	<200	1520	<30	360	200	<10	<.5	<100	70	51
AUG											
27...	228	221	394	375	245	223	<10	<.5	<20	20	47
394317082164300 - 051 RUSH C (28-1) NR JUNCTION CITY OH (LAT 39 43 17 LONG 082 16 43)											
APR , 1981											
13...	5100	4200	13800	7300	6150	6050	<10	<.5	100	190	120
AUG											
05...	19710	19590	34120	32000	27850	27830	<10	<.5	270	682	40

ANALYSES OF MISCELLANEOUS STATIONS

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	ACIDITY (MG/L AS H)	ALKA-LINITY FIELD (MG/L AS CACO3)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SULFATE DIS-SOLVED (MG/L AS SO4)
394327081452200 - 051 MEIGS C (31-5) NR MEIGS OH (LAT 39 43 27 LONG 081 45 22)											
APR , 1981											
14...	1715	61	15.0	8.3	615	120	364	--	169	18	115
AUG											
26...	1415	.29	21.5	--	900	240	640	--	230	14	250
394338081305400 - 051 W F DUCK C (25-9) NR CALDWELL OH (LAT 39 43 38 LONG 081 30 54)											
APR , 1981											
24...	1345	E220	10.4	8.1	450	72	286	--	128	14	94
AUG											
25...	1630	E.50	26.5	7.3	800	210	535	--	177	10	185
394426082113600 - 051 UNAM TR TO RUSH C (28-6) AT REHOBOTH OH (LAT 39 44 26 LONG 082 11 36)											
APR , 1981											
23...	1045	11	12.9	3.4	1570	--	1330	3.9	--	40	910
JUL											
15...	1630	1.8	25.0	2.9	2830	--	2796	9.5	--	18	1720
394430082070900 - 051 MCLUNEY C (29-7) NR ROSE FARM OH (LAT 39 44 30 LONG 082 07 09)											
APR , 1981											
14...	1400	17	15.8	3.1	1770	--	1430	3.9	--	29	980
JUL											
15...	1400	4.9	24.4	3.0	2420	--	2330	5.9	--	7.0	1640
394439081413500 - 051 BRANNONS F (31-9) NR REINERSVILLE OH (LAT 39 44 39 LONG 081 41 35)											
APR , 1981											
14...	1045	21	16.5	8.2	1380	640	1120	--	162	11	690
AUG											
26...	1600	1.4	24.5	7.4	1700	870	1578	--	154	10	960
394443081215300 - 051 E F DUCK C (33-12) AT CARLISLE OH (LAT 39 44 43 LONG 081 21 53)											
MAY , 1981											
06...	1230	56	13.0	8.2	460	76	291	--	164	5.0	88
AUG											
11...	1045	2.2	23.5	6.5	539	72	365	--	198	2.0	110
394451082074200 - 051 UNAM TR TO MCLUNEY C (29-8) NR ROSE FARM OH (LAT 39 44 51 LONG 082 07 42)											
MAY , 1981											
12...	1230	2.9	13.1	3.0	228	--	2200	7.6	--	13	1330
JUL											
15...	1515	.57	28.4	2.8	3060	--	3422	12	--	18	2080
394519082051600 - 051 BLACK F (29-6) NR CROOKSVILLE OH (LAT 39 45 19 LONG 082 05 16)											
MAY , 1981											
12...	1600	135	13.2	6.2	303	95	203	.2	13	15	107
JUL											
23...	1530	3.6	22.6	3.1	2208	--	1025	5.5	--	35	575
394547081393700 - 051 DYES F (31-10) NR ZENO OH (LAT 39 45 47 LONG 081 39 37)											
JUN , 1981											
04...	1000	7.6	21.5	7.1	1120	550	942	--	166	6.0	515
AUG											
11...	1300	.81	20.0	7.0	1100	580	1140	--	161	2.0	595

ANALYSES OF MISCELLANEOUS STATIONS

DATE	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ALUMINUM, DISSOLVED (UG/L AS AL)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	ARSENIC DISSOLVED (UG/L AS AS)	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, DISSOLVED (UG/L AS ZN)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
394327081452200 - 051 MEIGS C (31-5) NR MEIGS OH (LAT 39 43 27 LONG 081 45 22)											
APR , 1981											
14...	1100	<200	1380	<30	100	60	<10	1.5	<100	<30	54
AUG											
26...	151	103	172	143	187	<5	<10	<.5	<20	26	38
394338081305400 - 051 W F DUCK C (25-9) NR CALDWELL OH (LAT 39 43 38 LONG 081 30 54)											
APR , 1981											
24...	2100	200	2430	50	190	60	<10	<.5	<100	<30	93
AUG											
25...	222	103	466	427	176	<5	<10	<.5	<20	<10	37
394426082113600 - 051 UNAM TR TO RUSH C (28-6) AT REHOBOTH OH (LAT 39 44 26 LONG 082 11 36)											
APR , 1981											
23...	14500	14000	17500	13500	24200	22800	<20	50	400	480	99
JUL											
15...	30640	26800	26730	24210	49740	41850	<10	<.5	567	982	14
394430082070900 - 051 MCLUNEY C (29-7) NR ROSE FARM OH (LAT 39 44 30 LONG 082 07 09)											
APR , 1981											
14...	10100	9300	13000	10600	13100	12900	<10	1.7	300	310	68
JUL											
15...	18030	18160	20420	20270	18030	17000	<10	<.5	305	437	14
394439081413500 - 051 BRANNONS F (31-9) NR REINERSVILLE OH (LAT 39 44 39 LONG 081 41 35)											
APR , 1981											
14...	500	<200	620	40	350	250	<10	.8	<100	50	49
AUG											
26...	286	<75	614	<10	334	322	<10	<.5	<20	<10	38
394443081215300 - 051 E F DUCK C (33-12) AT CARLISLE OH (LAT 39 44 43 LONG 081 21 53)											
MAY , 1981											
06...	600	<200	780	40	210	150	<10	<.5	<100	<30	44
AUG											
11...	263	<75	397	28	357	327	<10	<.5	21	<10	41
394451082074200 - 051 UNAM TR TO MCLUNEY C (29-8) NR ROSE FARM OH (LAT 39 44 51 LONG 082 07 42)											
MAY , 1981											
12...	5900	5600	50000	46000	21900	21100	<10	<.5	500	620	12
JUL											
15...	48110	34480	48560	35180	32210	23320	<10	<.5	528	679	2
394519082051600 - 051 BLACK F (29-6) NR CROOKSVILLE OH (LAT 39 45 19 LONG 082 05 16)											
MAY , 1981											
12...	3400	<200	12900	6400	380	340	<10	<.5	<100	<30	71
JUL											
23...	18810	17940	22180	26490	4181	2990	<10	<.5	120	246	2
394547081393700 - 051 DYES F (31-10) NR ZENO OH (LAT 39 45 47 LONG 081 39 37)											
JUN , 1981											
04...	400	<200	510	60	320	240	<10	<.5	<100	<30	39
AUG											
11...	334	213	332	324	295	223	<10	<.5	<20	31	349

ANALYSES OF MISCELLANEOUS STATIONS

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	ACIDITY (MG/L AS H)	ALKA-LINITY FIELD (MG/L AS CACO3)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SULFATE DIS-SOLVED (MG/L AS SO4)
394611082054700 - 051 MOXAHALA C (29-5) AT CROOKSVILLE OH (LAT 39 46 11 LONG 082 05 47)											
MAY , 1981											
12...	1430	346	12.6	4.5	749	--	620	.8	--	25	375
JUL											
16...	1400	34	23.0	3.0	2040	--	1461	4.7	--	25	1100
394614082163000 - 051 CTR B RUSH C (28-7) NR SOMERSET OH (LAT 39 46 14 LONG 082 16 30)											
APR , 1981											
13...	1000	18	12.6	6.7	470	120	307	--	46	76	69
JUL											
17...	1000	2.0	20.8	6.7	1221	420	950	--	75	23	130
394641081342500 - 051 UNAM TR TO W F DUCK C (25-10) NR BELLEVLY OH (LAT 39 46 41 LONG 081 34 25)											
APR , 1981											
13...	1545	20	18.5	8.3	608	140	395	--	177	8.0	150
AUG											
27...	0915	.06	18.0	6.6	1100	470	887	--	167	7.1	440
394712082101700 - 051 UNAM TR TO BUCKEYE (35-8) AT REDFIELD OH (LAT 39 47 12 LONG 082 10 17)											
MAY , 1981											
06...	1010	3.7	11.5	3.4	1320	--	1070	3.3	--	19	685
JUL											
15...	1745	.77	22.7	3.0	2050	--	1810	6.5	--	9.0	1280
394739082084900 - 051 BUCKEYE F (35-7) AT SALTILLO OH (LAT 39 47 39 LONG 082 08 49)											
APR , 1981											
23...	1700	26	15.1	3.7	1180	--	746	1.9	--	22	640
JUL											
16...	1830	3.7	23.3	3.1	2190	--	2030	5.7	--	9.5	1420
394751082050000 - 051 UNAM TR TO MOXAHALA C (29-4) AT ROSEVILLE OH (LAT 39 47 51 LONG 082 05 00)											
APR , 1981											
14...	1110	10	14.8	4.5	1171	--	1050	1.7	--	16	750
JUL											
15...	1200	3.1	19.7	4.5	1669	--	1660	1.0	--	10	1090
394837081361300 - 051 COAL RN (25-11) NR COAL RIDGE OH (LAT 39 48 37 LONG 081 36 13)											
APR , 1981											
13...	1340	12	17.5	8.2	1205	540	964	--	157	8.0	530
AUG											
27...	0945	.11	17.5	6.6	1600	780	1417	--	171	32	820
394856082092200 - 051 UNAM TR TO BUTCHERKNIFE (35-6) NR SALTILO OH (LAT 39 48 56 LONG 082 09 22)											
MAY , 1981											
06...	1200	5.9	11.0	4.2	830	--	712	.8	--	34	450
JUL											
16...	1015	1.1	19.0	3.5	1543	--	1470	2.8	--	9.0	870
394901082043800 - 051 PORTER RN (29-3) AT ROSEVILLE OH (LAT 39 49 01 LONG 082 04 38)											
JUL , 1981											
16...	1700	.91	23.8	6.3	1015	690	908	--	10	7.0	530
394905081591600 - 051 BRUSH C (30-5) AT CHANNELVILLE OH (LAT 39 49 05 LONG 081 59 16)											
MAY , 1981											
11...	1540	232	14.1	6.9	209	76	176	--	30	8.0	85
JUL											
23...	1000	2.3	17.0	4.6	974	--	795	1.5	--	7.0	522

ANALYSES OF MISCELLANEOUS STATIONS

DATE	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	ARSENIC DIS-SOLVED (UG/L AS AS)	MERCURY DIS-SOLVED (UG/L AS HG)	NICKEL, DIS-SOLVED (UG/L AS NI)	ZINC, DIS-SOLVED (UG/L AS ZN)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
394611082054700 - 051 MOXAHALA C (29-5) AT CROOKSVILLE OH (LAT 39 46 11 LONG 082 05 47)											
MAY , 1981											
12...	4400	2800	16500	4600	5600	5350	<10	<.5	100	120	138
JUL											
16...	14350	13760	17410	16430	18060	16620	<10	<.5	270	337	--
394614082163000 - 051 CTR B RUSH C (28-7) NR SOMERSET OH (LAT 39 46 14 LONG 082 16 30)											
APR , 1981											
13...	700	<200	1150	60	790	740	<10	<.5	<100	50	25
JUL											
17...	150	150	646	79	2260	1342	<10	<.5	21	<10	7
394641081342500 - 051 UNAM TR TO W F DUCK C (25-10) NR BELLEVLY OH (LAT 39 46 41 LONG 081 34 25)											
APR , 1981											
13...	1500	<200	1960	40	150	50	<10	<.5	<100	30	74
AUG											
27...	564	160	1005	1000	467	<5	<10	<.5	<20	<10	104
394712082101700 - 051 UNAM TR TO BUCKEYE (35-8) AT REDFIELD OH (LAT 39 47 12 LONG 082 10 17)											
MAY , 1981											
06...	13000	13000	12400	11200	13500	13200	<10	7.5	300	520	30
JUL											
15...	23110	22190	17270	16820	26060	24850	<10	<.5	562	785	17
394739082084900 - 051 BUCKEYE F (35-7) AT SALTILLO OH (LAT 39 47 39 LONG 082 08 49)											
APR , 1981											
23...	10000	8400	6500	3300	11000	10900	<10	<.5	300	390	89
JUL											
16...	23210	19800	8624	6992	30070	24400	<10	<.5	500	711	5
394751082050000 - 051 UNAM TR TO MOXAHALA C (29-4) AT ROSEVILLE OH (LAT 39 47 51 LONG 082 05 00)											
APR , 1981											
14...	2900	2400	2180	660	3700	3450	<10	.7	100	150	34
JUL											
15...	4776	3905	1384	971	6040	4700	<10	<.5	95	130	7
394837081361300 - 051 COAL RN (25-11) NR COAL RIDGE OH (LAT 39 48 37 LONG 081 36 13)											
APR , 1981											
13...	1200	200	1410	30	550	400	<10	.7	<100	80	27
AUG											
27...	283	170	328	274	287	<5	<10	<.5	17	17	44
394856082092200 - 051 UNAM TR TO BUTCHERKNIFE (35-6) NR SALTILO OH (LAT 39 48 56 LONG 082 09 22)											
MAY , 1981											
06...	4300	4000	2840	900	7050	6850	<10	<.5	200	240	26
JUL											
16...	10770	9443	3981	2654	17090	14530	<10	<.5	317	461	9
394901082043800 - 051 PORTER RN (29-3) AT ROSEVILLE OH (LAT 39 49 01 LONG 082 04 38)											
JUL , 1981											
16...	430	150	458	90	2385	1592	<10	<.5	<20	12	11
394905081591600 - 051 BRUSH C (30-5) AT CHANNELVILLE OH (LAT 39 49 05 LONG 081 59 16)											
MAY , 1981											
11...	5800	<200	12900	200	910	460	<10	<.5	<100	<30	445
JUL											
23...	7354	7071	9953	9808	3718	3081	<10	<.5	<20	149	28

ANALYSES OF MISCELLANEOUS STATIONS

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	ACIDITY (MG/L AS H)	ALKA-LINITY FIELD (MG/L AS CACO3)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SULFATE DIS-SOLVED (MG/L AS SO4)
394919082082000 - 051 BUTCHERKNIFE C (35-5) NR FULTONHAM OH (LAT 39 49 19 LONG 082 08 20)											
APR , 1981											
23...	1815	26	14.4	4.8	617	290	478	.5	8	12	280
JUL											
16...	1200	3.4	19.5	3.3	1538	--	1398	3.1	--	8.0	190
394947081421200 - 051 COLLINS F (37-6) NR CUMBERLAND OH (LAT 39 49 47 LONG 081 42 12)											
MAY , 1981											
11...	1530	7.5	16.5	5.8	1500	660	1310	.3	123	10	750
AUG											
06...	1045	2.4	22.5	7.3	1750	790	1548	--	223	3.5	940
06...	1046	2.4	22.5	7.3	1750	770	1558	--	223	3.0	980
394951081591200 - 051 TURKEY RN (30-4) AT STOVERTOWN OH (LAT 39 49 51 LONG 081 59 12)											
MAY , 1981											
11...	1445	26	16.0	4.3	780	--	629	1.5	--	5.0	420
JUL											
22...	1215	1.1	21.0	3.8	2200	--	2120	9.8	--	5.5	1220
395018082035800 - 051 UNAM TR TO MOXAHALA C (29-2) NR ROSEVILLE OH (LAT 39 50 18 LONG 082 03 58)											
APR , 1981											
14...	0745	6.1	14.3	6.4	819	480	715	--	33	7.0	500
JUL											
15...	1030	1.7	20.0	6.7	1049	720	1116	--	20	35	685
395029081590700 - 041 BRUSH C NR PHILO OH (LAT 39 50 29 LONG 081 59 07)											
MAY , 1981											
11...	1200	99	13.9	5.6	548	240	452	.4	16	12	237
JUL											
23...	0815	5.1	16.2	3.5	1304	--	1022	2.7	--	7.5	640
395049082122600 - 051 TURKEY RN (35-9) NR MT PERRY OH (LAT 39 50 49 LONG 082 12 26)											
MAY , 1981											
12...	1100	53	10.1	6.9	445	160	303	--	16	40	126
JUL											
16...	0730	3.2	19.5	6.3	820	370	510	.4	33	19	355
395052081401500 - 051 MILLER C (37-5) AT CUMBERLAND OH (LAT 39 50 52 LONG 081 40 15)											
MAY , 1981											
06...	1230	24	12.0	7.3	2000	1100	1870	--	151	14	1090
AUG											
06...	1130	9.9	24.0	7.2	1700	950	1672	--	151	5.5	1040
395059081392500 - 051 BUFFALO F (37-4) AT CUMBERLAND OH (LAT 39 50 59 LONG 081 39 25)											
MAY , 1981											
06...	1400	47	11.0	7.4	1800	860	1500	--	164	12	930
AUG											
11...	1400	11	24.0	7.1	1850	880	1725	--	171	2.0	980
395109082063700 - 051 BUCKEYE F (35-3) NR WHITE COTTAGE OH (LAT 39 51 09 LONG 082 06 37)											
APR , 1981											
24...	0800	61	9.5	5.3	760	390	638	.5	3	23	410
JUL											
24...	0815	8.7	19.3	4.5	1521	--	1472	2.4	--	10	910

ANALYSES OF MISCELLANEOUS STATIONS

DATE	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ALUMINUM, DISSOLVED (UG/L AS AL)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	ARSENIC DISSOLVED (UG/L AS AS)	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, DISSOLVED (UG/L AS ZN)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
394919082082000 - 051 BUTCHERKNIFE C (35-5) NR FULTONHAM OH (LAT 39 49 19 LONG 082 08 20)											
APR , 1981											
23...	3500	2700	2470	660	4100	4050	<10	1.3	100	160	30
JUL											
16...	12490	9973	5265	3984	15540	11820	<10	<.5	317	407	7
394947081421200 - 051 COLLINS F (37-6) NR CUMBERLAND OH (LAT 39 49 47 LONG 081 42 12)											
MAY , 1981											
11...	1200	300	1820	220	930	780	<10	<.5	<100	<30	108
AUG											
06...	636	140	1171	41	1267	1104	<10	<.5	<20	<10	103
06...	<75	<75	793	624	1011	724	<10	<.5	<20	<10	--
394951081591200 - 051 TURKEY RN (30-4) AT STOVERTOWN OH (LAT 39 49 51 LONG 081 59 12)											
MAY , 1981											
11...	8900	3500	38800	2900	4880	4600	<10	<.5	100	160	634
JUL											
22...	30730	29160	83960	77610	17290	15130	<10	<.5	156	432	84
395018082035800 - 051 UNAM TR TO MOXAHALA C (29-2) NR ROSEVILLE OH (LAT 39 50 18 LONG 082 03 58)											
APR , 1981											
14...	900	<200	850	70	2600	2550	<10	<.5	100	80	24
JUL											
15...	424	237	490	77	5405	3482	<10	<.5	60	20	10
395029081590700 - 041 BRUSH C NR PHILO OH (LAT 39 50 29 LONG 081 59 07)											
MAY , 1981											
11...	17500	200	35000	1630	3050	2370	<10	<.5	<100	130	1170
JUL											
23...	10860	11370	15690	14120	7230	6847	<10	<.5	66	240	23
395049082122600 - 051 TURKEY RN (35-9) NR MT PERRY OH (LAT 39 50 49 LONG 082 12 26)											
MAY , 1981											
12...	1500	<200	2310	240	2510	2340	<10	<.5	100	40	83
JUL											
16...	624	204	483	196	6532	6526	<10	<.5	231	89	10
395052081401500 - 051 MILLER C (37-5) AT CUMBERLAND OH (LAT 39 50 52 LONG 081 40 15)											
MAY , 1981											
06...	3700	300	2700	80	2780	2390	<10	<.5	100	<30	111
AUG											
06...	502	167	612	28	1655	1440	<10	<.5	<20	<10	32
395059081392500 - 051 BUFFALO F (37-4) AT CUMBERLAND OH (LAT 39 50 59 LONG 081 39 25)											
MAY , 1981											
06...	2400	200	2530	40	1720	1390	<10	<.5	100	<30	92
AUG											
11...	<75	<75	<10	<10	<5	<5	<10	<.5	<20	<10	31
395109082063700 - 051 BUCKEYE F (35-3) NR WHITE COTTAGE OH (LAT 39 51 09 LONG 082 06 37)											
APR , 1981											
24...	4700	1800	2860	720	5800	5450	<10	4.8	100	190	35
JUL											
24...	11980	10500	409	342	17250	16300	<10	<.5	118	464	13

ANALYSES OF MISCELLANEOUS STATIONS

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	ACIDITY (MG/L AS H)	ALKA-LINITY FIELD (MG/L AS CACO3)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SULFATE DIS-SOLVED (MG/L AS SO4)
395111081542300 - 051 DUNCAN RN (30-6) AT PHILO OH (LAT 39 51 11 LONG 081 54 23)											
MAY , 1981											
11...	1100	34	14.0	5.6	300	71	200	.7	52	13	60
AUG											
11...	1000	.43	21.5	6.9	460	85	345	--	125	4.0	135
395117081413700 - 051 MAYS F (37-8) NR CUMBERLAND OH (LAT 39 51 17 LONG 081 41 37)											
MAY , 1981											
07...	1330	3.4	17.5	7.4	2300	1400	2290	--	131	21	1360
AUG											
11...	1130	.78	22.5	7.0	2675	1800	2993	--	138	4.0	1960
395117082032400 - 051 MOXAHALA C (29-1) NR AVONDALE OH (LAT 39 51 17 LONG 082 03 24)											
APR , 1981											
15...	0815	217	10.0	3.3	815	--	741	1.5	--	27	490
JUL											
23...	1745	40	21.7	3.3	1892	--	1612	3.9	--	4.5	980
395120082073400 - 051 JONATHAN C (35-4) AT FULTONHAM OH (LAT 39 51 20 LONG 082 07 34)											
MAY , 1981											
13...	1100	428	12.5	6.1	330	66	235	.1	74	20	51
AUG											
05...	0900	47	22.6	8.1	443	63	320	--	167	8.5	50
395144081591500 - 051 UNAM TR TO BRUSH C (30-2) NR STOVERTOWN OH (LAT 39 51 44 LONG 081 59 15)											
MAY , 1981											
11...	1030	5.9	13.8	3.4	945	--	663	1.7	--	<5.0	445
JUL											
21...	1215	1.2	22.4	3.0	1733	--	1365	4.5	--	2.5	590
395155081374200 - 051 BUFFALO F (37-3) NR CUMBERLAND OH (LAT 39 51 55 LONG 081 37 42)											
MAY , 1981											
06...	1530	55	11.5	7.5	1600	800	1500	--	164	13	870
AUG											
13...	0900	10	20.5	5.3	1800	890	1703	3.6	144	2.5	930
395204081190400 - 051 UNAM TR SENECA F WILLS C (38-2) NR CALAIS OH (LAT 39 52 04 LONG 081 19 04)											
OCT , 1980											
07...	0950	.17	11.0	7.6	665	95	398	--	254	8.0	104
JUN , 1981											
03...	1500	48	22.0	6.9	310	82	248	--	102	<5.0	74
AUG											
05...	1530	.06	29.0	7.1	570	100	370	--	220	3.0	90
395211081543200 - 051 MUSKINGUM R (30-7) AT DUNCAN FALLS OH (LAT 39 52 11 LONG 081 54 32)											
FEB , 1981											
25...	1030	31900	5.0	6.3	380	77	231	--	59	36	67
AUG											
04...	1300	6050	25.0	7.9	650	190	442	--	131	11	151
395214082054700 - 051 JONATHAN C (35-2) AT WHITE COTTAGE OH (LAT 39 52 14 LONG 082 05 47)											
MAY , 1981											
13...	0830	619	11.5	6.0	380	110	298	.4	66	20	90
AUG											
04...	1645	87	25.0	7.3	688	230	508	--	125	6.5	188

ANALYSES OF MISCELLANEOUS STATIONS

DATE	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ALUMINUM, DISSOLVED (UG/L AS AL)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	ARSENIC DISSOLVED (UG/L AS AS)	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, DISSOLVED (UG/L AS ZN)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
395111081542300 - 051 DUNCAN RN (30-6) AT PHILO OH (LAT 39 51 11 LONG 081 54 23)											
MAY , 1981											
11...	3100	200	5000	60	270	100	<10	.9	<100	<30	164
AUG											
11...	203	200	109	137	228	229	<10	<.5	<20	35	2
395117081413700 - 051 MAYS F (37-8) NR CUMBERLAND OH (LAT 39 51 17 LONG 081 41 37)											
MAY , 1981											
07...	3900	400	1840	50	5050	4550	<10	.5	100	30	370
AUG											
11...	<75	<75	<10	<10	<5	<5	<10	<.5	<20	<10	5
395117082032400 - 051 MOXAHALA C (29-1) NR AVONDALE OH (LAT 39 51 17 LONG 082 03 24)											
APR , 1981											
15...	6200	5600	10000	3900	6400	6300	<10	<.5	100	180	73
JUL											
23...	13150	12040	15420	11010	14060	--	<10	<.5	161	285	30
395120082073400 - 051 JONATHAN C (35-4) AT FULTONHAM OH (LAT 39 51 20 LONG 082 07 34)											
MAY , 1981											
13...	1100	<200	1950	90	320	200	<10	<.5	<100	<30	93
AUG											
05...	398	154	588	298	172	147	<10	<.5	<20	13	18
395144081591500 - 051 UNAM TR TO BRUSH C (30-2) NR STOVERTOWN OH (LAT 39 51 44 LONG 081 59 15)											
MAY , 1981											
11...	4300	4000	14600	9800	3700	3500	<10	<.5	100	140	41
JUL											
21...	12230	11740	21740	19070	7860	6705	<10	<.5	237	276	14
395155081374200 - 051 BUFFALO F (37-3) NR CUMBERLAND OH (LAT 39 51 55 LONG 081 37 42)											
MAY , 1981											
06...	1700	<200	2180	40	1410	1120	<10	.6	100	<30	127
AUG											
13...	418	375	562	131	509	413	<10	<.5	<20	<10	64
395204081190400 - 051 UNAM TR SENECA F WILLS C (38-2) NR CALAIS OH (LAT 39 52 04 LONG 081 19 04)											
OCT , 1980											
07...	230	<200	70	<30	<30	<30	<10	<.5	<100	<30	--
JUN , 1981											
03...	27500	<200	30500	80	3040	70	<10	<.5	<100	30	2260
AUG											
05...	235	<75	211	94	56	25	<10	<.5	<20	13	11
395211081543200 - 051 MUSKINGUM R (30-7) AT DUNCAN FALLS OH (LAT 39 52 11 LONG 081 54 32)											
FEB , 1981											
25...	1600	<200	1900	100	420	160	<10	<.5	<100	30	124
AUG											
04...	651	153	1415	79	377	137	<10	<.5	<20	20	69
395214082054700 - 051 JONATHAN C (35-2) AT WHITE COTTAGE OH (LAT 39 52 14 LONG 082 05 47)											
MAY , 1981											
13...	1800	600	3090	810	980	860	<10	<.5	<100	30	110
AUG											
04...	518	232	379	50	2718	2711	<10	<.5	36	18	16

ANALYSES OF MISCELLANEOUS STATIONS

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	ACIDITY (MG/L AS H)	ALKA-LINITY FIELD (MG/L AS CACO3)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SULFATE DIS-SOLVED (MG/L AS SO4)
395216081373100 - 051 YOKER C (37-2) NR CUMBERLAND OH (LAT 39 52 16 LONG 081 37 31)											
MAY , 1981											
07...	1100	20	12.0	7.2	1080	320	649	--	131	18	287
AUG											
13...	0800	1.4	19.0	6.3	1800	1200	2003	--	105	3.0	140
395312081391600 - 051 YOKER C (37-9) NR CUMBERLAND OH (LAT 39 53 12 LONG 081 39 16)											
APR , 1981											
06...	1540	33	12.0	7.1	740	67	228	--	125	5.0	58
AUG											
06...	0945	2.2	23.0	7.0	1950	1300	1895	--	108	2.5	1180
395328081415000 - 051 YOKER C (37-10) NR CUMBERLAND OH (LAT 39 53 28 LONG 081 41 50)											
APR , 1981											
06...	1230	15	10.0	6.9	930	150	362	--	120	18	114
AUG											
06...	0845	3.0	22.5	6.9	2400	1800	2640	--	80	1.5	1680
395337082011100 - 051 MOXAHALA C (35-1) NR DARLINGTON OH (LAT 39 53 37 LONG 082 01 11)											
MAY , 1981											
12...	0730	3320	12.4	6.6	271	120	257	--	36	16	101
SEP											
01...	1400	51	24.0	4.6	1600	810	1323	1.1	3	56	650
395404081191000 - 051 BEAVER C (38-3) NR BATESVILLE OH (LAT 39 54 04 LONG 081 19 10)											
FEB , 1981											
24...	1500	77	4.5	6.7	520	340	347	--	128	7.0	134
AUG											
05...	1230	2.5	26.0	7.0	700	170	468	--	190	2.5	182
395410081330200 - 051 BUFFALO C (37-1) AT PLEASANT CITY OH (LAT 39 54 10 LONG 081 33 02)											
MAY , 1981											
07...	0830	45	10.0	7.3	1040	83	313	--	135	15	99
AUG											
05...	1400	6.8	26.0	6.9	520	150	340	--	128	8.0	100
395507081200200 - 051 YOKER C (38-4) NR BATESVILLE OH (LAT 39 55 07 LONG 081 20 02)											
FEB , 1981											
24...	1630	8.6	4.5	6.5	280	59	210	.3	112	25	57
AUG											
05...	1145	.39	24.0	6.7	730	270	528	--	167	1.5	210
395508081315200 - 051 WILLS C (38-1) AT BUFFALO OH (LAT 39 55 08 LONG 081 31 52)											
MAY , 1981											
07...	1000	1737	12.0	7.3	1080	270	598	--	138	16	267
15...	0900	--	15.4	7.9	502	--	354	--	--	11	130
AUG											
11...	1630	E10	26.0	6.6	1100	470	983	--	135	2.5	495
395527081261700 - 051 SENECA F WILLS C (38-5) NR SENECAVILLE OH (LAT 39 55 27 LONG 081 26 17)											
OCT , 1980											
07...	0800	5.4	16.0	7.2	330	36	177	--	116	<5.0	48
FEB , 1981											
23...	1415	412	3.5	7.2	270	57	228	--	131	7.0	61
AUG											
04...	1745	2.9	27.0	6.9	320	32	200	--	138	2.5	40
04...	1746	2.9	27.0	6.9	320	20	215	--	138	1.5	42

ANALYSES OF MISCELLANEOUS STATIONS

DATE	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ALUMINUM, DISSOLVED (UG/L AS AL)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	ARSENIC DISSOLVED (UG/L AS AS)	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, DISSOLVED (UG/L AS ZN)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
395216081373100 - 051 YOKER C (37-2) NR CUMBERLAND OH (LAT 39 52 16 LONG 081 37 31)											
MAY , 1981											
07...	300	<200	430	30	1060	1000	<10	.9	<100	<30	10
AUG											
13...	275	173	534	139	570	484	<10	<.5	<20	<10	12
395312081391600 - 051 YOKER C (37-9) NR CUMBERLAND OH (LAT 39 53 12 LONG 081 39 16)											
APR , 1981											
06...	700	400	1020	280	110	110	<10	<.5	<100	<30	60
AUG											
06...	469	120	472	43	1318	1095	<10	<.5	<20	<10	25
395328081415000 - 051 YOKER C (37-10) NR CUMBERLAND OH (LAT 39 53 28 LONG 081 41 50)											
APR , 1981											
06...	1400	500	2540	790	390	330	<10	<.5	<100	<30	53
AUG											
06...	1109	322	416	97	8753	8001	<10	<.5	55	54	22
395337082011100 - 051 MOXAHALA C (35-1) NR DARLINGTON OH (LAT 39 53 37 LONG 082 01 11)											
MAY , 1981											
12...	5100	200	12000	130	1590	1170	<10	<.5	<100	<30	473
SEP											
01...	5272	4535	632	110	7784	7293	<10	<.5	<20	218	8
395404081191000 - 051 BEAVER C (38-3) NR BATESVILLE OH (LAT 39 54 04 LONG 081 19 10)											
FEB , 1981											
24...	2100	<200	3100	<30	750	590	<10	<.5	<100	<30	100
AUG											
05...	505	<75	763	46	144	73	<10	<.5	23	<10	52
395410081330200 - 051 BUFFALO C (37-1) AT PLEASANT CITY OH (LAT 39 54 10 LONG 081 33 02)											
MAY , 1981											
07...	800	<200	1620	80	220	130	<10	<.5	<100	<30	55
AUG											
05...	402	<75	694	<50	300	190	<10	<.5	<20	<10	40
395507081200200 - 051 YOKER C (38-4) NR BATESVILLE OH (LAT 39 55 07 LONG 081 20 02)											
FEB , 1981											
24...	600	<200	1040	60	80	50	<10	<.5	<100	<30	23
AUG											
05...	349	<75	226	210	72	46	<10	<.5	<20	<10	14
395508081315200 - 051 WILLS C (38-1) AT BUFFALO OH (LAT 39 55 08 LONG 081 31 52)											
MAY , 1981											
07...	1400	<200	1970	40	670	490	<10	1.0	<100	<30	50
15...	6100	<200	10300	110	1210	130	<10	<.5	<100	<30	232
AUG											
11...	<75	<75	341	335	82	81	<10	<.5	<20	<10	90
395527081261700 - 051 SENECA F WILLS C (38-5) NR SENECAVILLE OH (LAT 39 55 27 LONG 081 26 17)											
OCT , 1980											
07...	<200	<200	140	<30	30	<30	<10	<.5	<100	<30	--
FEB , 1981											
23...	200	<200	370	60	160	70	<10	.7	<100	<30	13
AUG											
04...	265	<75	572	78	3390	3088	<10	<.5	<20	<10	20
04...	<75	<75	505	54	2918	2721	<10	<.5	<20	<10	--

ANALYSES OF MISCELLANEOUS STATIONS

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	ACIDITY (MG/L AS H)	ALKA-LINITY FIELD (MG/L AS CACO3)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SULFATE DIS-SOLVED (MG/L AS SO4)
395738081133500 - 051 LEATHERWOOD C (43-1) AT BAILEYS MILLS OH (LAT 39 57 38 LONG 081 13 35)											
MAY , 1981											
27...	1430	8.1	21.0	7.8	728	270	553	--	118	6.0	242
AUG											
27...	1130	.64	19.0	7.3	1035	440	853	--	115	4.2	480
395748081162000 - 051 LEATHERWOOD C (43-2) AT SPENCER STATION OH (LAT 39 57 48 LONG 081 16 20)											
FEB , 1981											
24...	1330	94	4.0	6.9	510	180	344	--	77	6.0	170
AUG											
05...	0830	7.2	22.0	6.6	735	260	545	--	125	3.0	--
395805081184800 - 051 LEATHERWOOD C (43-3) AT QUAKER CITY OH (LAT 39 58 05 LONG 081 18 48)											
FEB , 1981											
24...	1100	244	3.5	6.2	550	210	387	--	69	7.0	199
AUG											
05...	0930	10	22.0	7.3	880	--	--	--	118	--	350
395840081215900 - 051 LEATHERWOOD C (43-4) NR SALESVILLE OH (LAT 39 58 40 LONG 081 21 59)											
FEB , 1981											
24...	0900	187	3.0	6.1	480	190	365	.2	66	7.0	182
AUG											
05...	1045	12	24.0	7.0	840	330	392	--	98	3.0	340
05...	1046	12	24.0	7.0	840	390	630	--	98	3.0	385
400023080532000 - 051 MCMAHON C (50-7) AT GLENCOE OH (LAT 40 00 23 LONG 080 53 20)											
OCT , 1980											
08...	1300	16	13.0	7.6	770	170	498	--	178	15	210
MAY , 1981											
11...	1340	102	16.0	8.1	470	92	307	--	118	16	99
AUG											
13...	0850	6.5	19.5	7.5	580	73	405	--	167	8.0	150
400039080454600 - 051 MCMAHON C (50-1) AT BELLAIRE OH (LAT 40 00 39 LONG 080 45 46)											
OCT , 1980											
08...	1530	18	7.5	7.5	1020	300	758	--	146	22	360
MAY , 1981											
12...	1200	167	13.0	8.1	620	120	412	--	150	19	142
AUG											
13...	1240	20	22.5	7.8	910	220	685	--	157	6.0	365
400056081151200 - 051 SALT F (48-2) NR BARNESVILLE OH (LAT 40 00 56 LONG 081 15 12)											
MAY , 1981											
28...	1500	3.3	18.8	7.8	1048	520	870	--	89	<5.0	500
AUG											
27...	1310	.30	24.0	7.4	1200	660	1095	--	95	2.6	640
400123080594500 - 051 MCMAHON C (50-10) NR WARNOCK OH (LAT 40 01 23 LONG 080 59 45)											
MAY , 1981											
11...	1120	35	15.5	7.7	405	70	262	--	102	21	79
AUG											
12...	1130	2.2	20.0	7.7	455	44	308	--	141	9.5	115
400124080473700 - 051 MCMAHON C (50-2) NR BELLAIRE OH (LAT 40 01 24 LONG 080 47 37)											
OCT , 1980											
08...	1630	15	16.0	7.6	1020	270	123	--	148	22	360
MAY , 1981											
11...	1720	198	16.0	7.7	580	110	395	--	136	20	129
AUG											
13...	1130	20	21.0	8.1	900	200	705	--	161	7.5	365

ANALYSES OF MISCELLANEOUS STATIONS

DATE	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ALUMINUM, DISSOLVED (UG/L AS AL)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	ARSENIC DISSOLVED (UG/L AS AS)	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, DISSOLVED (UG/L AS ZN)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
395738081133500 - 051 LEATHERWOOD C (43-1) AT BAILEYS MILLS OH (LAT 39 57 38 LONG 081 13 35)											
MAY , 1981											
27...	700	<200	1400	60	810	660	<10	2.8	<100	<30	29
AUG											
27...	58260	<75	23870	12	1536	834	<10	<.5	124	226	23
395748081162000 - 051 LEATHERWOOD C (43-2) AT SPENCER STATION OH (LAT 39 57 48 LONG 081 16 20)											
FEB , 1981											
24...	1300	<200	2900	40	610	440	<10	<.5	<100	<30	88
AUG											
05...	433	--	703	--	364	--	--	--	--	--	21
395805081184800 - 051 LEATHERWOOD C (43-3) AT QUAKER CITY OH (LAT 39 58 05 LONG 081 18 48)											
FEB , 1981											
24...	1800	<200	3900	40	860	600	<10	<.5	<100	<30	120
AUG											
05...	--	84	--	47	--	353	<10	<.5	<20	14	52
395840081215900 - 051 LEATHERWOOD C (43-4) NR SALESVILLE OH (LAT 39 58 40 LONG 081 21 59)											
FEB , 1981											
24...	2200	<200	5200	60	770	470	<10	<.5	<100	30	184
AUG											
05...	494	<75	775	53	321	200	<10	<.5	<20	<10	41
05...	<75	<75	654	433	238	203	<10	<.5	<20	<10	--
400023080532000 - 051 MCMAHON C (50-7) AT GLENCOE OH (LAT 40 00 23 LONG 080 53 20)											
OCT , 1980											
08...	240	<200	240	<30	<30	<30	<10	<.5	<100	<30	--
MAY , 1981											
11...	2100	600	3000	80	220	<30	<10	<.5	<100	<30	115
AUG											
13...	110	<75	310	86	30	20	<10	<.5	20	14	10
400039080454600 - 051 MCMAHON C (50-1) AT BELLAIRE OH (LAT 40 00 39 LONG 080 45 46)											
OCT , 1980											
08...	680	<200	1310	<30	290	190	<10	<.5	<100	<30	--
MAY , 1981											
12...	1700	200	4600	50	230	120	<10	<.5	<100	40	70
AUG											
13...	280	263	1220	1103	63	60	<10	<.5	<20	<10	30
400056081151200 - 051 SALT F (48-2) NR BARNESVILLE OH (LAT 40 00 56 LONG 081 15 12)											
MAY , 1981											
28...	1300	300	1060	100	2280	2120	<10	.9	100	280	36
AUG											
27...	360	<75	572	<10	853	416	<10	<.5	<20	14	17
400123080594500 - 051 MCMAHON C (50-10) NR WARNOCK OH (LAT 40 01 23 LONG 080 59 45)											
MAY , 1981											
11...	1200	400	1400	190	170	80	<10	.7	<100	<30	55
AUG											
12...	<75	<75	231	52	38	23	<10	<.5	<20	<10	6
400124080473700 - 051 MCMAHON C (50-2) NR BELLAIRE OH (LAT 40 01 24 LONG 080 47 37)											
OCT , 1980											
08...	1250	280	4240	<30	440	220	<10	<.5	<100	<30	--
MAY , 1981											
11...	2500	200	5200	40	230	80	<10	<.5	<100	30	87
AUG											
13...	340	202	516	49	102	87	<10	<.5	<20	<10	7

ANALYSES OF MISCELLANEOUS STATIONS

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	ACIDITY (MG/L AS H)	ALKA-LINITY FIELD (MG/L AS CACO3)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SULFATE DIS-SOLVED (MG/L AS SO4)
400129080492400 - 051 MCMAHON C (50-4) AT NEFFS OH (LAT 40 01 29 LONG 080 49 24)											
OCT , 1980											
08...	1400	11	15.5	7.1	815	180	519	--	154	14	240
MAY , 1981											
11...	1530	160	16.5	7.9	405	92	322	--	130	14	105
AUG											
13...	1030	13	20.0	7.6	710	140	515	--	154	4.0	240
400138080490900 - 051 L MCMAHON C (50-3) AT NEFFS OH (LAT 40 01 38 LONG 080 49 09)											
APR , 1981											
13...	1330	132	15.0	8.2	650	150	419	--	131	23	188
AUG											
12...	1740	5.2	24.0	7.2	1270	410	1058	--	120	7.0	535
400155080571100 - 051 BRUSH RN (50-9) NR WARNOCK OH (LAT 40 01 55 LONG 080 57 11)											
APR , 1981											
13...	1640	44	16.0	8.3	340	58	221	--	82	18	76
AUG											
12...	1230	1.2	21.0	7.8	965	--	752	--	--	9.0	375
400219080501700 - 051 L MCMAHON C (50-5) NR NEFFS OH (LAT 40 02 19 LONG 080 50 17)											
APR , 1981											
13...	1450	102	16.0	8.2	730	150	427	--	133	25	188
AUG											
12...	1630	4.7	24.5	6.5	1390	400	1040	--	125	12	550
400238081212200 - 051 SALT F (48-1) NR MIDDLEBOURNE OH (LAT 40 02 38 LONG 081 21 22)											
OCT , 1980											
07...	1115	2.7	12.0	7.5	950	380	708	--	140	7.0	400
MAY , 1981											
28...	1845	19	19.0	7.4	688	240	496	--	118	12	242
AUG											
27...	1410	.86	22.0	7.6	805	280	63	--	148	10	290
400308080540600 - 051 L MCMAHON C (50-8) NR ST CLAIRSVILLE OH (LAT 40 03 08 LONG 080 54 06)											
APR , 1981											
13...	1045	40	13.0	7.6	420	110	255	--	59	25	114
AUG											
12...	1500	.60	22.5	6.2	2140	910	1910	2.8	27	40	1150
400400080483100 - 051 WHEELING C (55-2) AT BLAINE OH (LAT 40 04 00 LONG 080 48 31)											
OCT , 1980											
09...	1100	52	13.5	7.7	2250	830	1940	--	233	11	1140
APR , 1981											
24...	0850	247	11.0	8.3	1500	380	1260	--	439	12	780
AUG											
25...	1800	43	21.0	7.5	2070	760	1865	--	217	10	1080
400506081073900 - 051 STILLWATER C (49-5) NR HENDRYSBURG OH (LAT 40 05 06 LONG 081 07 39)											
OCT , 1980											
07...	1515	14	15.0	7.7	1975	770	1405	--	228	9.0	930
MAY , 1981											
07...	1015	74	10.5	7.6	1350	560	1160	--	210	12	580
AUG											
26...	1520	7.4	21.0	7.3	1690	810	1530	--	230	5.8	940

ANALYSES OF MISCELLANEOUS STATIONS

DATE	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ALUMINUM, DISSOLVED (UG/L AS AL)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	ARSENIC DISSOLVED (UG/L AS AS)	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, DISSOLVED (UG/L AS ZN)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
400129080492400 - 051 MCMAHON C (50-4) AT NEFFS OH (LAT 40 01 29 LONG 080 49 24)											
OCT , 1980											
08...	450	<200	4750	210	130	130	<10	<.5	<100	<30	--
MAY , 1981											
11...	1700	200	3700	90	160	30	<10	<.5	<100	<30	92
AUG											
13...	164	106	1878	88	93	80	<10	<.5	<20	<10	20
400138080490900 - 051 L MCMAHON C (50-3) AT NEFFS OH (LAT 40 01 38 LONG 080 49 09)											
APR , 1981											
13...	8500	200	15500	30	630	380	<10	<.5	<100	30	391
AUG											
12...	5024	141	14830	54	428	385	<10	<.5	<20	<10	80
400155080571100 - 051 BRUSH RN (50-9) NR WARNOCK OH (LAT 40 01 55 LONG 080 57 11)											
APR , 1981											
13...	5100	<200	8400	110	470	180	<10	<.5	<100	40	208
AUG											
12...	<75	<75	272	60	72	13	<10	<.5	<20	13	13
400219080501700 - 051 L MCMAHON C (50-5) NR NEFFS OH (LAT 40 02 19 LONG 080 50 17)											
APR , 1981											
13...	7200	200	13100	70	570	370	<10	<.5	<100	<30	309
AUG											
12...	6353	76	21060	6218	468	453	<10	<.5	<20	36	75
400238081212200 - 051 SALT F (48-1) NR MIDDLEBOURNE OH (LAT 40 02 38 LONG 081 21 22)											
OCT , 1980											
07...	980	<200	980	<30	220	<30	<10	<.5	<100	<30	--
MAY , 1981											
28...	5000	600	7100	640	1150	580	<10	1.1	<100	<30	316
AUG											
27...	357	<75	586	50	293	74	<10	<.5	<20	35	60
400308080540600 - 051 L MCMAHON C (50-8) NR ST CLAIRSVILLE OH (LAT 40 03 08 LONG 080 54 06)											
APR , 1981											
13...	9100	<200	16000	150	830	650	<10	<.5	<100	50	312
AUG											
12...	5026	<75	68230	51000	9572	8942	<10	<.5	<20	206	123
400400080483100 - 051 WHEELING C (55-2) AT BLAINE OH (LAT 40 04 00 LONG 080 48 31)											
OCT , 1980											
09...	1550	330	4190	<30	360	280	<10	<.5	<100	<30	--
APR , 1981											
24...	1900	200	3600	50	450	350	<10	1.1	<100	50	104
AUG											
25...	886	135	2098	<10	<5	94	<10	<.5	<20	20	49
400506081073900 - 051 STILLWATER C (49-5) NR HENDRYSBURG OH (LAT 40 05 06 LONG 081 07 39)											
OCT , 1980											
07...	670	<200	830	<30	660	530	<10	<.5	<100	<30	--
MAY , 1981											
07...	500	<200	1080	30	570	50	<10	<.5	<100	<30	83
AUG											
26...	6223	<75	6637	<10	255	1506	<10	<.5	<20	28	72

DATA COLLECTED AT OHIO ABANDONED MINE LAND SITES PROJECT--Continued

ANALYSES OF MISCELLANEOUS STATIONS

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	ACIDITY (MG/L AS H)	ALKA-LINITY FIELD (MG/L AS CACO3)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SULFATE DIS-SOLVED (MG/L AS SO4)
400547080501700 - 051 WHEELING C (55-3) AT BARTON OH (LAT 40 05 47 LONG 080 50 17)											
OCT , 1980											
09...	1030	49	12.5	8.0	2300	810	1923	--	253	10	1060
APR , 1981											
24...	1115	225	10.5	8.6	1550	580	1280	--	243	11	790
AUG											
25...	1645	42	21.0	7.8	1993	700	1885	--	239	6.6	1160
400620081163000 - 051 SKULL F (49-4) NR ANTRIM OH (LAT 40 06 20 LONG 081 16 30)											
OCT , 1980											
07...	1645	2.3	15.0	4.5	2050	--	1887	2.7	--	7.0	1370
MAY , 1981											
07...	1215	19	10.0	4.7	1000	740	1160	.7	3	9.0	670
AUG											
26...	1840	2.0	22.0	3.8	2140	--	2355	3.4	--	8.0	1420
400634080581100 - 051 WHEELING C (55-12) AT BANNOCK OH (LAT 40 06 34 LONG 080 58 11)											
OCT , 1980											
08...	0900	11	10.0	7.3	1900	760	2514	--	259	12	940
MAY , 1981											
12...	0925	52	12.0	8.0	1300	490	1040	--	197	12	565
AUG											
14...	1010	14	20.0	7.8	1630	570	1395	--	239	5.8	790
400635081011000 - 051 WHEELING C (55-14) AT LAFFERTY OH (LAT 40 06 35 LONG 081 01 10)											
JUN , 1981											
06...	1730	93	20.0	7.1	820	320	612	--	100	<5.0	320
AUG											
14...	1110	7.0	20.0	7.9	1590	680	1460	--	205	9.0	870
400644080513200 - 051 WHEELING C (55-4) NR BARTON OH (LAT 40 06 44 LONG 080 51 32)											
OCT , 1980											
09...	0930	47	12.5	7.9	2350	820	1887	--	262	9.0	1210
APR , 1981											
24...	1245	214	10.0	8.5	1500	380	1350	--	455	10	820
AUG											
25...	1540	40	20.0	7.9	2080	720	190	--	248	8.4	1000
400656080441100 - 051 GLENNS RN (55-1) NR FLORENCE OH (LAT 40 06 56 LONG 080 44 11)											
MAY , 1981											
06...	1245	15	11.5	7.2	1110	170	733	--	185	38	370
AUG											
14...	1340	3.3	23.0	6.7	2060	360	1567	--	141	82	930
400700080572000 - 051 CRABAPPLE C (55-11) NR FAIRPOINT OH (LAT 40 07 00 LONG 080 57 20)											
OCT , 1980											
08...	1000	17	12.0	6.8	2600	1200	2299	.2	249	11	1360
MAY , 1981											
06...	1530	47	13.5	7.8	1220	1000	2100	--	230	<5.0	1055
AUG											
14...	0900	19	19.0	7.8	2210	920	2000	--	259	3.5	1420
400716080530900 - 051 COX RN (55-8) AT MAYNARD OH (LAT 40 07 16 LONG 080 53 09)											
APR , 1981											
23...	1345	29	13.0	8.3	1500	510	1100	--	228	7.0	670
AUG											
13...	1540	5.0	20.5	8.0	1615	360	1312	--	290	5.8	770

ANALYSES OF MISCELLANEOUS STATIONS

DATE	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ALUMINUM, DISSOLVED (UG/L AS AL)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	ARSENIC DISSOLVED (UG/L AS AS)	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, DISSOLVED (UG/L AS ZN)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
400547080501700 - 051 WHEELING C (55-3) AT BARTON OH (LAT 40 05 47 LONG 080 50 17)											
OCT , 1980											
09...	560	290	1630	<30	310	110	<10	<.5	<100	<30	--
APR , 1981											
24...	1100	<200	2980	30	450	380	<10	5.0	<100	110	81
AUG											
25...	292	<75	1788	<10	85	62	<10	<.5	<20	24	10
400620081163000 - 051 SKULL F (49-4) NR ANTRIM OH (LAT 40 06 20 LONG 081 16 30)											
OCT , 1980											
07...	16700	12700	500	30	14500	14000	<10	<.5	240	300	--
MAY , 1981											
07...	13000	1900	1160	100	7300	6900	<10	<.5	200	270	61
AUG											
26...	17790	13040	619	211	10450	9920	<10	<.5	308	361	137
400634080581100 - 051 WHEELING C (55-12) AT BANNOCK OH (LAT 40 06 34 LONG 080 58 11)											
OCT , 1980											
08...	320	320	2490	380	790	780	<10	<.5	<100	<30	--
MAY , 1981											
12...	900	<200	2220	60	900	780	<10	<.5	<100	30	83
AUG											
14...	241	239	1566	89	171	155	<10	<.5	572	39	46
400635081011000 - 051 WHEELING C (55-14) AT LAFFERTY OH (LAT 40 06 35 LONG 081 01 10)											
JUN , 1981											
06...	2700	<200	3800	50	880	630	<10	.7	<100	30	99
AUG											
14...	217	206	272	135	907	898	<10	<.5	516	55	19
400644080513200 - 051 WHEELING C (55-4) NR BARTON OH (LAT 40 06 44 LONG 080 51 32)											
OCT , 1980											
09...	570	<200	2880	<30	330	230	<10	<.5	<100	<30	--
APR , 1981											
24...	1100	200	2550	40	460	400	<10	16	<100	120	70
AUG											
25...	246	81	983	<10	71	<5	<10	<.5	<20	16	11
400656080441100 - 051 GLENNS RN (55-1) NR FLORENCE OH (LAT 40 06 56 LONG 080 44 11)											
MAY , 1981											
06...	2700	<200	22500	2610	200	180	<10	<.5	<100	140	90
AUG											
14...	5612	222	48040	5320	345	344	<10	<.5	547	71	134
400700080572000 - 051 CRABAPPLE C (55-11) NR FAIRPOINT OH (LAT 40 07 00 LONG 080 57 20)											
OCT , 1980											
08...	1190	<200	5260	390	500	460	16	<.5	<100	<30	--
MAY , 1981											
06...	<200	200	<30	50	<30	470	<10	<.5	<100	110	85
AUG											
14...	536	397	3406	69	316	246	<10	<.5	650	42	81
400716080530900 - 051 COX RN (55-8) AT MAYNARD OH (LAT 40 07 16 LONG 080 53 09)											
APR , 1981											
23...	1400	200	1870	30	180	130	<10	.8	<100	30	156
AUG											
13...	270	201	382	36	70	70	<10	<.5	569	57	57

DATA COLLECTED AT OHIO ABANDONED MINE LAND SITES PROJECT--Continued

ANALYSES OF MISCELLANEOUS STATIONS

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	ACIDITY (MG/L AS H)	ALKA-LINITY FIELD (MG/L AS CACO3)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SULFATE DIS-SOLVED (MG/L AS SO4)
400716080560400 - 051 WHEELING C (55-10) AT FAIRPOINT OH (LAT 40 07 16 LONG 080 56 04)											
OCT , 1980											
08...	1100	35	12.0	7.4	2450	1000	2157	--	258	9.0	1230
APR , 1981											
23...	1530	164	14.0	8.4	1800	490	1440	--	453	9.0	870
AUG											
25...	1125	28	18.0	7.5	2230	860	2083	--	266	7.8	1200
400719080514400 - 051 FALL RN (55-5) NR BARTON OH (LAT 40 07 19 LONG 080 51 44)											
APR , 1981											
24...	1350	7.7	9.5	7.0	1100	290	836	--	198	10	410
AUG											
13...	1645	1.4	25.0	7.5	1630	420	1360	--	181	8.8	820
400728080524300 - 051 WHEELING C (55-7) AT MAYNARD OH (LAT 40 07 28 LONG 080 52 43)											
OCT , 1980											
09...	0800	43	12.5	8.1	2350	870	2055	--	267	8.0	1110
APR , 1981											
23...	1145	244	12.5	8.1	1600	660	1340	--	221	9.0	810
AUG											
25...	1405	36	19.0	7.7	2150	750	1968	--	264	8.2	1080
400815080592700 - 051 CRABAPPLE C (55-15) AT UNIONTOWN OH (LAT 40 08 15 LONG 080 59 27)											
MAY , 1981											
06...	1701	22	13.5	8.1	1190	1000	1770	--	207	8.0	1040
AUG											
13...	1800	8.6	24.0	7.9	1820	890	1722	--	226	3.8	1140
400835080540900 - 051 COX RN (55-9) NR MAYNARD OH (LAT 40 08 35 LONG 080 54 09)											
JUN , 1981											
06...	1600	20	20.5	8.0	1200	480	935	--	169	<5.0	508
AUG											
13...	1445	3.7	21.5	8.0	1520	550	2164	--	243	3.4	790
400915080581900 - 051 CAMPBELL RN (55-13) NR UNIONTOWN OH (LAT 40 09 15 LONG 080 58 19)											
JUN , 1981											
06...	1430	15	20.0	7.2	1400	800	1180	--	1	7.0	660
AUG											
13...	1840	3.4	23.0	7.8	2400	1300	2422	--	249	6.7	1850
400943081081500 - 051 TRAIL RN (49-3) AT HOLLOWAY OH (LAT 40 09 43 LONG 081 08 15)											
OCT , 1980											
07...	1330	4.7	14.0	8.1	2000	930	1727	--	226	11	1150
MAY , 1981											
27...	1415	9.9	19.0	8.0	1730	840	1580	--	212	11	920
AUG											
26...	1150	3.1	18.5	7.8	1940	970	1813	--	225	12	1120
400944080442900 - 051 L SHORT C (56-9) NR TILTONSVILLE OH (LAT 40 09 44 LONG 080 44 29)											
APR , 1981											
14...	0830	150	14.0	7.4	550	130	364	--	125	10	143
AUG											
28...	1115	2.6	20.5	7.1	1700	420	1335	--	144	29	740
401021081075500 - 051 BOGGS F (49-2) AT HOLLOWAY OH (LAT 40 10 21 LONG 081 07 55)											
OCT , 1980											
07...	1400	9.0	13.0	7.7	1900	1000	1645	--	208	<5.0	1010
MAY , 1981											
27...	1615	18	19.0	8.0	1800	950	1600	--	195	<5.0	970
AUG											
26...	1240	6.4	19.0	8.2	1710	950	1618	--	197	4.0	940

ANALYSES OF MISCELLANEOUS STATIONS

DATE	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	ARSENIC DIS-SOLVED (UG/L AS AS)	MERCURY DIS-SOLVED (UG/L AS HG)	NICKEL, DIS-SOLVED (UG/L AS NI)	ZINC, DIS-SOLVED (UG/L AS ZN)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
400716080560400 - 051 WHEELING C (55-10) AT FAIRPOINT OH (LAT 40 07 16 LONG 080 56 04)											
OCT , 1980											
08...	370	<200	5450	50	580	520	<10	<.5	120	<30	--
APR , 1981											
23...	1200	200	2590	60	660	560	<10	3.2	<100	90	79
AUG											
25...	<75	<75	64	<10	85	59	<10	<.5	<20	<10	126
400719080514400 - 051 FALL RN (55-5) NR BARTON OH (LAT 40 07 19 LONG 080 51 44)											
APR , 1981											
24...	1300	<200	6300	30	210	100	<10	.5	<100	110	87
AUG											
13...	2057	277	32520	30	522	354	<10	<.5	275	52	99
400728080524300 - 051 WHEELING C (55-7) AT MAYNARD OH (LAT 40 07 28 LONG 080 52 43)											
OCT , 1980											
09...	700	230	2840	50	410	230	<10	<.5	<100	<30	--
APR , 1981											
23...	1600	200	3400	50	580	470	<10	.9	<100	30	83
AUG											
25...	360	120	552	<10	110	<5	<10	<.5	<20	11	31
400815080592700 - 051 CRABAPPLE C (55-15) AT UNIONTOWN OH (LAT 40 08 15 LONG 080 59 27)											
MAY , 1981											
06...	700	<200	1010	<30	650	510	<10	<.5	<100	30	69
AUG											
13...	182	248	283	128	82	47	<10	<.5	620	49	20
400835080540900 - 051 COX RN (55-9) NR MAYNARD OH (LAT 40 08 35 LONG 080 54 09)											
JUN , 1981											
06...	1300	<200	2260	60	250	130	<10	<.5	100	30	80
AUG											
13...	275	174	392	54	115	100	<10	<.5	290	45	57
400915080581900 - 051 CAMPBELL RN (55-13) NR UNIONTOWN OH (LAT 40 09 15 LONG 080 58 19)											
JUN , 1981											
06...	900	<200	1420	40	580	450	<10	1.5	<100	30	39
AUG											
13...	281	358	389	99	403	261	<10	<.5	607	45	55
400943081081500 - 051 TRAIL RN (49-3) AT HOLLOWAY OH (LAT 40 09 43 LONG 081 08 15)											
OCT , 1980											
07...	360	<200	220	<30	740	710	<10	<.5	<100	<30	--
MAY , 1981											
27...	1300	200	3800	210	1390	1120	<10	.6	<100	<30	171
AUG											
26...	502	<75	221	19	4810	220	<10	<.5	308	361	116
400944080442900 - 051 L SHORT C (56-9) NR TILTONSVILLE OH (LAT 40 09 44 LONG 080 44 29)											
APR , 1981											
14...	9900	300	13750	350	390	150	<10	<.5	<100	<30	486
AUG											
28...	12360	148	32020	1124	699	603	<10	<.5	34	37	--
401021081075500 - 051 BOGGS F (49-2) AT HOLLOWAY OH (LAT 40 10 21 LONG 081 07 55)											
OCT , 1980											
07...	520	<200	500	<30	690	600	<10	<.5	<100	<30	--
MAY , 1981											
27...	900	<200	2100	60	970	680	<10	<.5	<100	<30	136
AUG											
26...	297	90	539	<10	293	149	<10	<.5	<20	13	127

ANALYSES OF MISCELLANEOUS STATIONS

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	ACIDITY (MG/L AS H)	ALKA-LINITY FIELD (MG/L AS CACO3)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SULFATE DIS-SOLVED (MG/L AS SO4)
401038081510300 - 051 WILLS C (47-3) NR CONESVILLE OH (LAT 40 10 38 LONG 081 51 03)											
OCT , 1980											
22...	0800	534	10.5	7.6	895	260	597	--	125	36	300
APR , 1981											
24...	0900	4865	13.0	6.2	340	89	208	.1	49	9.0	87
AUG											
12...	1100	183	23.5	6.5	670	230	513	--	77	4.0	275
401120080425100 - 051 SHORT C (56-8) NR RAYLAND OH (LAT 40 11 20 LONG 080 42 51)											
OCT , 1980											
14...	1700	65	9.0	7.9	2500	1100	2124	--	230	16	1350
APR , 1981											
15...	1445	610	12.5	8.0	1350	560	1090	--	190	15	595
AUG											
18...	1430	72	19.0	8.2	2250	970	2020	--	197	10	1160
401122081585400 - 051 MOSCOW BK (46-3) NR NEW MOSCOW OH (LAT 40 11 22 LONG 081 58 54)											
MAY , 1981											
12...	0930	37	10.5	5.8	1050	530	877	.3	38	6.0	580
AUG											
12...	1500	3.1	24.5	6.2	2100	1300	2105	.1	59	2.0	1460
401126081121400 - 051 BOGGS F (49-1) AT PIEDMONT OH (LAT 40 11 26 LONG 081 12 14)											
MAY , 1981											
27...	1230	34	19.5	7.9	1170	770	1360	--	177	8.0	870
AUG											
26...	1705	9.6	--	7.2	--	930	1663	--	185	2.6	900
26...	1706	--	--	--	--	--	1855	--	--	88	1060
401144080472700 - 051 SHORT C (56-7) AT DILLONVALE OH (LAT 40 11 44 LONG 080 47 27)											
OCT , 1980											
14...	1600	47	9.5	7.5	2500	1300	2374	--	243	13	1480
APR , 1981											
14...	1030	557	15.0	7.3	1320	600	1140	--	164	16	700
AUG											
18...	1100	50	16.0	7.2	2500	1100	2383	--	180	14	1420
401201081573500 - 051 MILL F (46-2) NR NEW MOSCOW OH (LAT 40 12 01 LONG 081 57 35)											
APR , 1981											
24...	1430	24	9.5	5.9	1510	870	1330	--	25	9.0	900
AUG											
12...	1400	4.4	21.5	6.6	1900	1200	1927	--	38	3.0	1180
401211080462100 - 041 PINEY F AT DILLONVALE OH (LAT 40 12 11 LONG 080 46 21)											
APR , 1981											
14...	1400	98	14.0	7.7	860	310	662	--	156	11	350
AUG											
26...	0930	11	15.5	7.4	1470	600	1338	--	210	9.5	680
26...	0931	11	15.5	7.4	1470	600	1308	--	210	9.5	640
401216081425200 - 051 WILLS C (47-2) AT PLAINFIELD OH (LAT 40 12 16 LONG 081 42 52)											
OCT , 1980											
16...	1130	97	13.0	7.4	840	220	514	--	131	31	240
APR , 1981											
07...	1030	4152	10.5	6.6	290	66	188	--	54	13	69
SEP											
10...	1100	512	22.0	7.7	350	92	335	--	98	14	110
10...	1101	512	22.0	7.7	350	92	340	--	98	14	105

ANALYSES OF MISCELLANEOUS STATIONS

DATE	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ALUMINUM, DISSOLVED (UG/L AS AL)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	ARSENIC DISSOLVED (UG/L AS AS)	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, DISSOLVED (UG/L AS ZN)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
401038081510300 - 051 WILLS C (47-3) NR CONESVILLE OH (LAT 40 10 38 LONG 081 51 03)											
OCT , 1980											
22...	1340	240	1930	40	1210	1050	<10	<.5	<100	<30	--
APR , 1981											
24...	500	400	1060	770	160	150	<10	1.7	<100	<30	24
AUG											
12...	448	<75	1327	70	1230	1020	<10	<.5	<20	<10	64
401120080425100 - 051 SHORT C (56-8) NR RAYLAND OH (LAT 40 11 20 LONG 080 42 51)											
OCT , 1980											
14...	880	<200	3200	<30	200	210	<10	<.5	<100	<30	--
APR , 1981											
15...	1600	<200	5300	40	340	170	<10	<.5	<100	<30	169
AUG											
18...	<75	<75	1634	29	33	15	<10	<.5	<20	<10	--
401122081585400 - 051 MOSCOW BK (46-3) NR NEW MOSCOW OH (LAT 40 11 22 LONG 081 58 54)											
MAY , 1981											
12...	1800	200	3110	140	3900	3650	<10	<.5	100	40	66
AUG											
12...	293	214	324	74	8036	7831	<10	<.5	<20	43	13
401126081121400 - 051 BOGGS F (49-1) AT PIEDMONT OH (LAT 40 11 26 LONG 081 12 14)											
MAY , 1981											
27...	900	<200	2170	60	1310	830	<10	.5	<100	<30	80
AUG											
26...	667	<75	294	45	245	72	<10	<.5	<20	44	74
26...	392	261	5795	<10	191	125	<10	<.5	<20	37	--
401144080472700 - 051 SHORT C (56-7) AT DILLONVALE OH (LAT 40 11 44 LONG 080 47 27)											
OCT , 1980											
14...	1590	230	4560	230	250	250	<10	<.5	<100	<30	--
APR , 1981											
14...	2700	<200	7900	40	390	170	<10	<.5	100	30	227
AUG											
18...	<75	<75	5436	736	202	125	<10	<.5	<20	<10	--
401201081573500 - 051 MILL F (46-2) NR NEW MOSCOW OH (LAT 40 12 01 LONG 081 57 35)											
APR , 1981											
24...	1200	<200	1960	640	4550	4400	<10	2.8	100	40	24
AUG											
12...	3476	1950	18520	12450	7184	6906	<10	<.5	<20	104	16
401211080462100 - 041 PINEY F AT DILLONVALE OH (LAT 40 12 11 LONG 080 46 21)											
APR , 1981											
14...	3000	<200	7200	40	360	110	<10	<.5	<100	<30	270
AUG											
26...	2667	<75	922	<10	40	--	<10	<.5	<20	17	10
26...	520	204	170	<10	<5	5	<10	<.5	<20	<10	--
401216081425200 - 051 WILLS C (47-2) AT PLAINFIELD OH (LAT 40 12 16 LONG 081 42 52)											
OCT , 1980											
16...	980	230	<30	<30	1130	830	<10	<.5	<100	<30	--
APR , 1981											
07...	10100	200	15000	80	670	170	<10	<.5	<100	<30	519
SEP											
10...	1866	25	3189	<10	356	226	<10	<.5	35	<10	90
10...	1872	<75	3312	<10	361	234	<10	<.5	25	<10	--

ANALYSES OF MISCELLANEOUS STATIONS

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	ACIDITY (MG/L AS H)	ALKA-LINITY FIELD (MG/L AS CACO3)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SULFATE DIS-SOLVED (MG/L AS SO4)
401247081512900 - 051 ROBINSON RN (41-1) NR TYNDALL OH (LAT 40 12 47 LONG 081 51 29)											
JUN , 1981											
03...	1130	10	19.5	5.0	810	360	633	1.2	1.6	20	390
AUG											
12...	1000	2.2	16.0	5.2	1200	560	1050	1.5	8	5.0	570
401253081564300 - 051 MILL F (46-1) NR NEW MOSCOW OH (LAT 40 12 53 LONG 081 56 43)											
APR , 1981											
24...	1330	11	9.0	6.4	1380	800	1220	--	43	7.0	840
AUG											
12...	1330	2.4	18.5	6.3	1700	1000	1685	.2	44	2.0	1020
401311081463100 - 051 BACON RN (47-1) NR PLAINFIELD OH (LAT 40 13 11 LONG 081 46 31)											
OCT , 1980											
22...	1100	1.1	8.0	5.9	1550	940	1403	.4	8	8.0	950
APR , 1981											
24...	1140	8.4	9.5	5.8	1100	580	900	.5	16	8.0	640
AUG											
12...	0900	1.1	17.0	5.4	1500	890	1490	.7	7	1.5	890
401348080413700 - 051 RUSH RN (61-6) AT RUSH RN OH (LAT 40 13 48 LONG 080 41 37)											
APR , 1981											
15...	1115	43	13.0	8.2	935	320	715	--	205	10	299
AUG											
25...	1240	3.2	17.5	7.7	1800	670	1390	--	189	10	790
401430080534300 - 051 N F SHORT C (56-3) NR ROBYVILLE OH (LAT 40 14 30 LONG 080 53 43)											
APR , 1981											
13...	1730	99	16.0	7.6	920	450	748	--	82	9.0	450
JUL											
31...	1115	18	17.5	7.9	1750	820	1498	--	177	4.5	900
401437080580700 - 051 SALLY BUFFALO C (56-1) NR CADIZ OH (LAT 40 14 37 LONG 080 58 07)											
APR , 1981											
13...	1415	99	15.0	7.9	1970	970	1880	--	187	54	1070
JUL											
31...	1000	5.0	18.5	7.8	1700	720	1380	--	177	6.5	750
401444080433000 - 051 RUSH RN (61-5) NR RUSH RN OH (LAT 40 14 44 LONG 080 43 30)											
APR , 1981											
15...	1000	25	9.0	8.2	1040	360	792	--	239	12	415
AUG											
25...	1345	2.2	18.0	7.9	1690	580	1307	--	247	9.0	680
401445080393000 - 051 SALT RN (61-7) NR RUSH RN OH (LAT 40 14 45 LONG 080 39 30)											
APR , 1981											
15...	0830	37	5.0	8.1	920	290	675	--	210	10	285
AUG											
25...	1115	1.5	18.0	8.0	1120	320	837	--	195	10	405
401619080510000 - 051 PINEY F (56-4) NR PINEY FORK OH (LAT 40 16 19 LONG 080 51 00)											
MAY , 1981											
06...	1315	22	10.5	8.1	1130	630	1150	--	187	11	605
JUL											
31...	1300	11	19.0	8.0	1400	640	1115	--	198	5.5	580

ANALYSES OF MISCELLANEOUS STATIONS

DATE	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ALUMINUM, DISSOLVED (UG/L AS AL)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	ARSENIC DISSOLVED (UG/L AS AS)	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, DISSOLVED (UG/L AS ZN)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
401247081512900 - 051 ROBINSON RN (41-1) NR TYNDALL OH (LAT 40 12 47 LONG 081 51 29)											
JUN , 1981											
03...	2700	400	14700	11500	4500	4250	<10	.5	100	110	48
AUG											
12...	<75	<75	335	36	80	21	<10	<.5	<20	<10	40
401253081564300 - 051 MILL F (46-1) NR NEW MOSCOW OH (LAT 40 12 53 LONG 081 56 43)											
APR , 1981											
24...	1300	<200	1860	170	1770	1730	<10	4.2	<100	30	47
AUG											
12...	848	<75	1390	47	238	204	<10	<.5	<20	19	7
401311081463100 - 051 BACON RN (47-1) NR PLAINFIELD OH (LAT 40 13 11 LONG 081 46 31)											
OCT , 1980											
22...	4740	1520	3140	1620	3850	3650	<10	<.5	<100	<30	--
APR , 1981											
24...	3100	200	6500	3500	1660	1580	<10	2.6	<100	50	52
AUG											
12...	5420	2123	3066	1500	2795	2692	<10	<.5	<20	132	21
401348080413700 - 051 RUSH RN (61-6) AT RUSH RN OH (LAT 40 13 48 LONG 080 41 37)											
APR , 1981											
15...	1700	<200	3800	<30	230	120	<10	<.5	<100	30	151
AUG											
25...	1043	229	1190	36	219	138	<10	<.5	<20	11	--
401430080534300 - 051 N F SHORT C (56-3) NR ROBYVILLE OH (LAT 40 14 30 LONG 080 53 43)											
APR , 1981											
13...	2200	300	5000	520	450	340	<10	<.5	<100	40	113
JUL											
31...	737	521	1394	1381	477	328	<10	<.5	30	39	--
401437080580700 - 051 SALLY BUFFALO C (56-1) NR CADIZ OH (LAT 40 14 37 LONG 080 58 07)											
APR , 1981											
13...	1200	<200	4300	80	570	380	<10	<.5	100	<30	132
JUL											
31...	389	186	462	66	279	222	<10	<.5	<20	<10	--
401444080433000 - 051 RUSH RN (61-5) NR RUSH RN OH (LAT 40 14 44 LONG 080 43 30)											
APR , 1981											
15...	500	<200	1610	150	240	180	<10	<.5	<100	<30	69
AUG											
25...	141	86	127	15	81	73	<10	<.5	<20	10	--
401445080393000 - 051 SALT RN (61-7) NR RUSH RN OH (LAT 40 14 45 LONG 080 39 30)											
APR , 1981											
15...	2100	<200	3600	<30	210	50	<10	<.5	<100	<30	137
AUG											
25...	<75	<75	83	25	7	6	<10	<.5	<20	<10	--
401619080510000 - 051 PINEY F (56-4) NR PINEY FORK OH (LAT 40 16 19 LONG 080 51 00)											
MAY , 1981											
06...	300	<200	720	50	290	210	<10	<.5	<100	<30	36
JUL											
31...	454	326	893	724	301	284	<10	<.5	45	29	--

DATA COLLECTED AT OHIO ABANDONED MINE LAND SITES PROJECT--Continued

ANALYSES OF MISCELLANEOUS STATIONS

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	ACIDITY (MG/L AS H)	ALKA-LINITY FIELD (MG/L AS CACO3)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SULFATE DIS-SOLVED (MG/L AS SO4)
401621080553600 - 051 N F SHORT C (56-2) AT UNIONVALE OH (LAT 40 16 21 LONG 080 55 36)											
APR , 1981											
07...	0915	20	11.0	7.5	1140	560	944	--	116	15	545
AUG											
17...	1115	4.3	15.0	7.6	1850	990	1698	--	132	22	980
401716080451300 - 051 MCINTYRE C (61-4) NR SMITHFIELD OH (LAT 40 17 16 LONG 080 45 13)											
MAY , 1981											
06...	1500	37	13.0	8.0	2000	1100	1810	--	210	7.0	1030
JUL											
31...	1400	14	23.0	7.9	1200	960	1543	--	208	4.0	940
401801080373200 - 051 GEORGES RN (61-9) NR MINGO JUNCTION OH (LAT 40 18 01 LONG 080 37 32)											
APR , 1981											
16...	1000	9.6	10.0	8.1	1310	530	1050	--	248	21	525
AUG											
17...	1445	.90	19.5	8.2	340	550	1210	--	236	15	600
401817080404800 - 051 CROSS C (61-3) NR NEW ALEXANDER OH (LAT 40 18 17 LONG 080 40 48)											
OCT , 1980											
15...	1700	16	13.0	8.7	1100	470	850	--	138	18	470
APR , 1981											
16...	1215	272	12.5	7.7	590	200	388	--	84	11	195
AUG											
28...	1300	9.0	25.0	7.5	980	340	727	--	131	20	350
401857080391700 - 051 CROSS C (61-2) NR MINGO JUNCTION OH (LAT 40 18 57 LONG 080 39 17)											
OCT , 1980											
15...	1630	42	12.5	7.3	1700	910	1467	--	128	14	950
APR , 1981											
24...	0830	341	11.0	7.9	1100	460	825	--	115	74	465
AUG											
28...	1415	25	22.0	7.1	1750	880	1482	--	102	10	840
402140080444900 - 051 CROSS C (61-8) NR WINTERSVILLE OH (LAT 40 21 40 LONG 080 44 49)											
OCT , 1980											
16...	0900	10	10.0	7.9	1050	420	791	--	151	19	420
APR , 1981											
23...	1430	129	14.0	8.2	640	240	498	--	105	11	219
AUG											
17...	1300	15	19.0	7.9	990	340	703	--	144	18	315
402430081310400 - 051 OLDTOWN C (59-15) NR STONE CREEK OH (LAT 40 24 30 LONG 081 31 04)											
OCT , 1980											
06...	1600	.79	12.5	6.8	590	170	330	--	87	10	168
JUN , 1981											
06...	1600	30	18.0	7.4	210	20	132	--	32	<5.0	52
JUL											
30...	1340	1.6	20.0	7.4	330	160	198	--	92	4.0	70
402535081215700 - 051 STILLWATER C (59-1) NR UHRICHSVILLE OH (LAT 40 25 35 LONG 081 21 57)											
OCT , 1980											
06...	1330	140	14.0	6.9	1050	340	705	--	120	45	360
JUN , 1981											
04...	1500	804	18.5	7.9	600	120	434	--	171	12	212
AUG											
12...	1400	264	23.5	7.4	870	290	685	--	115	16	315

ANALYSES OF MISCELLANEOUS STATIONS

DATE	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	ARSENIC DIS-SOLVED (UG/L AS AS)	MERCURY DIS-SOLVED (UG/L AS HG)	NICKEL, DIS-SOLVED (UG/L AS NI)	ZINC, DIS-SOLVED (UG/L AS ZN)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
401621080553600 - 051 N F SHORT C (56-2) AT UNIONVALE OH (LAT 40 16 21 LONG 080 55 36)											
APR , 1981											
07...	1100	200	4100	2130	490	480	<10	<.5	<100	30	23
AUG											
17...	809	<75	9359	417	881	552	<10	<.5	<20	29	--
401716080451300 - 051 MCINTYRE C (61-4) NR SMITHFIELD OH (LAT 40 17 16 LONG 080 45 13)											
MAY , 1981											
06...	500	<200	700	40	220	170	<10	<.5	<100	<30	32
JUL											
31...	<75	<75	314	312	29	16	<10	<.5	<20	20	--
401801080373200 - 051 GEORGES RN (61-9) NR MINGO JUNCTION OH (LAT 40 18 01 LONG 080 37 32)											
APR , 1981											
16...	600	<200	1630	<30	90	30	<10	<.5	<100	<30	75
AUG											
17...	1731	<75	14690	610	<5	<5	<10	<.5	<20	114	--
401817080404800 - 051 CROSS C (61-3) NR NEW ALEXANDER OH (LAT 40 18 17 LONG 080 40 48)											
OCT , 1980											
15...	250	<200	170	<30	40	30	<10	<.5	<100	<30	--
APR , 1981											
16...	600	<200	930	50	190	150	<10	<.5	<100	<30	56
AUG											
28...	233	118	276	23	86	40	<10	<.5	<20	12	--
401857080391700 - 051 CROSS C (61-2) NR MINGO JUNCTION OH (LAT 40 18 57 LONG 080 39 17)											
OCT , 1980											
15...	2140	320	3480	40	980	850	<10	<.5	<100	<30	--
APR , 1981											
24...	600	200	660	30	280	250	<10	13	<100	<30	15
AUG											
28...	1631	219	2441	29	716	--	<10	<.5	<20	28	--
402140080444900 - 051 CROSS C (61-8) NR WINTERSVILLE OH (LAT 40 21 40 LONG 080 44 49)											
OCT , 1980											
16...	<200	<200	80	<30	<30	<30	<10	<.5	<100	<30	--
APR , 1981											
23...	300	<200	390	30	60	30	<10	2.0	<100	<30	13
AUG											
17...	<75	<75	592	<10	<5	<5	<10	<.5	<20	<10	--
402430081310400 - 051 OLDTOWN C (59-15) NR STONE CREEK OH (LAT 40 24 30 LONG 081 31 04)											
OCT , 1980											
06...	1120	<200	1430	90	790	730	<10	<.5	<100	<30	--
JUN , 1981											
06...	2000	<200	3700	70	350	150	<10	<.5	100	<30	162
JUL											
30...	<75	<75	504	313	72	<5	<10	<.5	<20	41	--
402535081215700 - 051 STILLWATER C (59-1) NR UHRICHSVILLE OH (LAT 40 25 35 LONG 081 21 57)											
OCT , 1980											
06...	700	<200	1010	<30	700	650	<10	<.5	<100	<30	--
JUN , 1981											
04...	1300	<200	2760	30	460	310	<10	2.5	100	30	90
AUG											
12...	<75	<75	1540	13	724	596	<10	<.5	<20	<10	--

ANALYSES OF MISCELLANEOUS STATIONS

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	ACIDITY (MG/L AS H)	ALKA-LINITY FIELD (MG/L AS CACO3)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SULFATE DIS-SOLVED (MG/L AS SO4)
402552081281100 - 051 OLDTOWN C (59-16) NR WAINWRIGHT OH (LAT 40 25 52 LONG 081 28 11)											
OCT , 1980											
03...	1330	2.7	13.5	7.2	1310	660	1092	--	104	19	690
APR , 1981											
29...	1310	104	11.5	7.1	500	190	351	--	34	9.0	192
JUL											
30...	1440	3.3	22.0	7.6	1100	500	870	--	107	7.5	510
402602081224100 - 051 PIKE RN (59-2) AT MIDVALE OH (LAT 40 26 02 LONG 081 22 41)											
APR , 1981											
29...	1015	27	13.0	3.4	810	--	535	8.3	--	10	395
JUL											
30...	1000	3.2	14.0	3.4	1600	--	1338	10	--	6.5	870
402715081300800 - 051 STONE C (59-13) NR NEW PHILADELPHIA OH (LAT 40 27 15 LONG 081 30 08)											
OCT , 1980											
03...	1215	6.6	13.5	6.6	660	240	449	--	52	16	260
JUN , 1981											
11...	1200	138	16.0	6.0	250	110	244	.4	38	8.0	121
JUL											
30...	1110	10	18.0	6.2	650	300	405	--	44	9.0	235
402815080532100 - 051 WOLF RN (66-7) NR AMSTERDAM OH (LAT 40 28 15 LONG 080 53 21)											
MAY , 1981											
06...	1700	2.8	11.0	3.1	1400	--	1050	7.6	--	20	675
AUG											
14...	1115	.47	21.5	2.7	2500	--	3163	29	--	41	1780
402823080552300 - 051 YELLOW C (66-8) AT AMSTERDAM OH (LAT 40 28 23 LONG 080 55 23)											
MAY , 1981											
12...	1200	54	10.0	7.6	370	110	241	--	48	11	101
AUG											
14...	1010	2.4	20.5	7.2	620	170	45	--	100	23	165
402841081285900 - 051 STONE C (59-14) NR NEW PHILADELPHIA OH (LAT 40 28 41 LONG 081 28 59)											
OCT , 1980											
03...	1115	7.6	12.5	6.7	660	250	463	--	56	16	265
APR , 1981											
28...	1130	77	9.0	6.8	440	120	300	.0	32	20	136
JUL											
31...	1430	9.1	21.0	7.1	680	330	453	--	36	8.0	280
402857081220300 - 051 BEAVERDAM C (59-17) NR MIDVALE OH (LAT 40 28 57 LONG 081 22 03)											
OCT , 1980											
02...	0945	.90	17.5	3.1	980	430	834	--	74	21	500
JUN , 1981											
09...	1015	42	16.0	6.4	285	39	192	.3	34	6.0	89
AUG											
13...	1300	.70	22.0	8.0	920	350	750	--	85	22	350
402950080493400 - 051 LONG RN (66-3) NR E SPRINGFIELD OH (LAT 40 29 50 LONG 080 49 34)											
APR , 1981											
23...	1700	8.2	14.0	7.6	280	77	193	--	49	6.0	74
AUG											
14...	1245	.20	23.0	7.6	400	70	248	--	100	5.0	70

ANALYSES OF MISCELLANEOUS STATIONS

DATE	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ALUMINUM, DISSOLVED (UG/L AS AL)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	ARSENIC DISSOLVED (UG/L AS AS)	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, DISSOLVED (UG/L AS ZN)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
402552081281100 - 051 OLDTOWN C (59-16) NR WAINWRIGHT OH (LAT 40 25 52 LONG 081 28 11)											
OCT , 1980											
03...	<200	<200	320	30	2570	2520	<10	<.5	<100	<30	--
APR , 1981											
29...	9500	<200	11300	50	1180	760	<10	<.5	<100	<30	71
JUL											
30...	<75	<75	299	287	422	418	<10	<.5	<20	31	--
402602081224100 - 051 PIKE RN (59-2) AT MIDVALE OH (LAT 40 26 02 LONG 081 22 41)											
APR , 1981											
29...	12000	500	75000	60500	1760	1580	<10	<.5	100	220	229
JUL											
30...	22100	20740	167300	165400	4984	4206	<10	<.5	109	401	--
402715081300800 - 051 STONE C (59-13) NR NEW PHILADELPHIA OH (LAT 40 27 15 LONG 081 30 08)											
OCT , 1980											
03...	1880	<200	4700	230	2600	2560	<10	<.5	<100	<30	--
JUN , 1981											
11...	2500	<200	5400	370	1090	910	<10	<.5	100	50	274
JUL											
30...	692	387	4975	3241	725	63	<10	<.5	79	20	--
402815080532100 - 051 WOLF RN (66-7) NR AMSTERDAM OH (LAT 40 28 15 LONG 080 53 21)											
MAY , 1981											
06...	38000	37000	63000	44000	4300	4150	26	.5	200	460	106
AUG											
14...	92360	91300	99190	90800	9684	9616	<10	<.5	<20	765	--
402823080552300 - 051 YELLOW C (66-8) AT AMSTERDAM OH (LAT 40 28 23 LONG 080 55 23)											
MAY , 1981											
12...	300	<200	520	40	120	100	<10	<.5	<100	<30	24
AUG											
14...	<75	<75	756	162	226	203	<10	<.5	<20	<10	--
402841081285900 - 051 STONE C (59-14) NR NEW PHILADELPHIA OH (LAT 40 28 41 LONG 081 28 59)											
OCT , 1980											
03...	320	<200	890	210	2470	2210	<10	<.5	140	<30	--
APR , 1981											
28...	3300	<200	7300	50	1070	920	<10	<.5	<100	<30	358
JUL											
31...	407	242	3334	3212	770	672	<10	<.5	<20	143	--
402857081220300 - 051 BEAVERDAM C (59-17) NR MIDVALE OH (LAT 40 28 57 LONG 081 22 03)											
OCT , 1980											
02...	<200	<200	1300	490	1930	1800	<10	<.5	<100	40	--
JUN , 1981											
09...	1700	<200	3500	130	550	410	<10	.6	100	60	310
AUG											
13...	<75	<75	488	<20	1062	932	<10	<.5	<20	10	--
402950080493400 - 051 LONG RN (66-3) NR E SPRINGFIELD OH (LAT 40 29 50 LONG 080 49 34)											
APR , 1981											
23...	700	<200	1060	50	260	190	<10	3.8	<100	<30	27
AUG											
14...	<75	<75	603	606	139	33	<10	<.5	<20	<10	--

ANALYSES OF MISCELLANEOUS STATIONS

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	ACIDITY (MG/L AS H)	ALKA-LINITY FIELD (MG/L AS CACO3)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SULFATE DIS-SOLVED (MG/L AS SO4)
403003081250600 - 051 BEAVERDAM C (59-12) NR NEW PHILADELPHIA OH (LAT 40 30 03 LONG 081 25 06)											
OCT , 1980											
02...	1045	3.5	15.0	6.8	1110	520	899	--	60	16	57
APR , 1981											
28...	1045	42	12.0	6.9	650	250	466	--	31	14	244
JUL											
24...	0920	3.4	17.5	7.5	1050	510	888	--	70	6.5	560
403045081291900 - 051 SUGAR C (59-3) AT DOVER OH (LAT 40 30 45 LONG 081 29 19)											
OCT , 1980											
03...	1000	86	14.5	7.7	965	300	625	--	138	32	310
FEB , 1981											
25...	1230	1890	4.5	7.7	440	110	251	--	47	20	95
AUG											
11...	0915	99	21.5	7.6	1000	320	752	--	106	25	395
403049081163000 - 051 CONOTTON C (64-9) NR NEW CUMBERLAND OH (LAT 40 30 49 LONG 081 16 30)											
OCT , 1980											
02...	0800	32	15.0	7.1	510	100	290	--	93	23	108
APR , 1981											
13...	1230	1880	12.0	7.5	190	33	184	--	21	12	48
AUG											
06...	1145	50	20.0	7.3	410	65	227	--	85	16	86
403103080453400 - 051 YELLOW C (66-4) NR NEW SOMERSET OH (LAT 40 31 03 LONG 080 45 34)											
OCT , 1980											
15...	1430	17	12.5	7.0	605	170	371	--	75	15	192
MAY , 1981											
07...	1030	172	10.0	7.3	320	92	213	--	48	10	94
AUG											
28...	1600	6.4	25.0	7.8	740	210	487	--	82	22	260
403112081282400 - 051 TUSCARAWAS R (59-4) AT DOVER OH (LAT 40 31 12 LONG 081 28 24)											
FEB , 1981											
25...	1600	5400	5.0	7.6	625	76	334	--	64	85	78
AUG											
11...	1015	568	22.0	7.6	1100	210	742	--	157	253	190
403114080513900 - 051 YELLOW C (66-5) NR BERGHOLZ OH (LAT 40 31 14 LONG 080 51 39)											
OCT , 1980											
15...	1345	13	12.0	7.0	515	120	292	--	72	16	138
MAY , 1981											
07...	0900	120	8.0	7.2	290	78	195	--	46	11	84
AUG											
05...	1145	19	24.0	7.6	470	86	292	--	74	13	138
403124081272600 - 051 UNAM TR (59-5) TO TUSCARAWAS R AT DOVER OH (LAT 40 31 24 LONG 081 27 26)											
APR , 1981											
29...	1315	13	15.0	7.1	510	180	367	--	46	15	188
JUL											
24...	1130	1.3	18.0	7.3	765	410	675	--	46	8.5	385
403128080402700 - 051 HOLLOW ROCK RN (66-2) NR NEW SOMERSET OH (LAT 40 31 28 LONG 080 40 27)											
MAY , 1981											
07...	1230	6.7	120	8.2	1000	380	815	--	180	20	435
AUG											
13...	1130	2.2	19.0	8.1	1500	610	1341	--	191	17	620

ANALYSES OF MISCELLANEOUS STATIONS

DATE	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	ARSENIC DIS-SOLVED (UG/L AS AS)	MERCURY DIS-SOLVED (UG/L AS HG)	NICKEL, DIS-SOLVED (UG/L AS NI)	ZINC, DIS-SOLVED (UG/L AS ZN)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
403003081250600 - 051 BEAVERDAM C (59-12) NR NEW PHILADELPHIA OH (LAT 40 30 03 LONG 081 25 06)											
OCT , 1980											
02...	<200	<200	470	<30	2710	2760	<10	<.5	<100	<30	--
APR , 1981											
28...	2200	<200	4100	40	1680	1500	<10	<.5	<100	30	120
JUL											
24...	<75	<75	541	530	2177	780	<10	<.5	<20	25	60
403045081291900 - 051 SUGAR C (59-3) AT DOVER OH (LAT 40 30 45 LONG 081 29 19)											
OCT , 1980											
03...	290	<200	340	<30	1800	1750	<10	<.5	<100	<30	--
FEB , 1981											
25...	1000	<200	2610	100	910	710	<10	<.5	<100	30	61
AUG											
11...	301	234	693	125	633	532	<10	<.5	351	63	--
403049081163000 - 051 CONOTTON C (64-9) NR NEW CUMBERLAND OH (LAT 40 30 49 LONG 081 16 30)											
OCT , 1980											
02...	<200	<200	1370	<30	690	660	<10	<.5	<100	<30	--
APR , 1981											
13...	2700	<200	4700	70	290	200	<10	<.5	<100	80	351
AUG											
06...	103	154	987	168	201	104	<10	<.5	351	47	--
403103080453400 - 051 YELLOW C (66-4) NR NEW SOMERSET OH (LAT 40 31 03 LONG 080 45 34)											
OCT , 1980											
15...	450	<200	1340	50	250	240	<10	<.5	<100	<30	--
MAY , 1981											
07...	800	<200	1550	180	220	190	<10	<.5	<100	<30	16
AUG											
28...	281	196	412	216	112	86	<10	<.5	<20	52	--
403112081282400 - 051 TUSCARAWAS R (59-4) AT DOVER OH (LAT 40 31 12 LONG 081 28 24)											
FEB , 1981											
25...	1000	1200	3050	120	520	410	<10	<.5	<100	30	71
AUG											
11...	282	244	909	238	300	649	<10	<.5	367	66	--
403114080513900 - 051 YELLOW C (66-5) NR BERGHOLZ OH (LAT 40 31 14 LONG 080 51 39)											
OCT , 1980											
15...	400	<200	450	430	490	510	<10	<.5	<100	<30	--
MAY , 1981											
07...	900	<200	1260	50	220	210	<10	<.5	<100	<30	13
AUG											
05...	166	203	327	126	66	21	<10	<.5	321	86	--
403124081272600 - 051 UNAM TR (59-5) TO TUSCARAWAS R AT DOVER OH (LAT 40 31 24 LONG 081 27 26)											
APR , 1981											
29...	3600	<200	7100	110	2650	2250	<10	<.5	<100	70	328
JUL											
24...	<75	<75	<10	<10	<5	<5	<10	<.5	<20	30	10
403128080402700 - 051 HOLLOW ROCK RN (66-2) NR NEW SOMERSET OH (LAT 40 31 28 LONG 080 40 27)											
MAY , 1981											
07...	200	<200	260	40	110	80	<10	<.5	<100	<30	14
AUG											
13...	<75	<75	744	20	<5	<5	<10	<.5	<20	<10	--

ANALYSES OF MISCELLANEOUS STATIONS

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	ACIDITY (MG/L AS H)	ALKA-LINITY FIELD (MG/L AS CACO3)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SULFATE DIS-SOLVED (MG/L AS SO4)
403229081290600 - 051 GOETTGE RN (59-11) AT DOVER OH (LAT 40 32 29 LONG 081 29 06)											
APR , 1981											
29...	0900	22	13.0	5.1	780	--	587	.5	--	14	380
AUG											
11...	1145	1.3	21.0	3.5	2280	--	1922	2.5	--	69	1260
403230081182701 - 051 CONOTTON C (64-4) AT NEW CUMBERLAND OH (LAT 40 32 30 LONG 081 18 27)											
OCT , 1980											
01...	1745	49	17.5	7.0	440	88	256	--	84	25	93
APR , 1981											
14...	1400	2170	12.5	7.2	210	36	149	--	24	13	57
AUG											
06...	1415	76	21.0	7.8	500	96	302	--	84	16	120
403237081185200 - 051 DOG RN (64-7) AT NEW CUMBERLAND OH (LAT 40 32 37 LONG 081 18 52)											
APR , 1981											
14...	1100	19	12.0	7.3	590	180	384	--	34	11	201
JUL											
23...	1100	1.5	18.5	7.5	830	380	633	--	104	3.0	375
403304081191600 - 051 UNAM TR (64-6) CONOTTON C NR NW CUMBRLND OH (LAT 40 33 04 LONG 081 19 16)											
OCT , 1980											
01...	1630	1.5	20.0	7.2	1000	500	852	--	62	22	560
MAY , 1981											
28...	1445	36	17.5	6.2	520	160	324	.1	21	8.0	188
JUL											
23...	1215	3.0	18.5	7.1	1000	470	735	--	69	3.5	460
403312080412900 - 051 YELLOW C (66-9) AT HAMMONDSVILLE OH (LAT 40 33 12 LONG 080 41 29)											
OCT , 1980											
15...	0900	28	9.5	7.0	605	170	440	--	62	18	215
MAY , 1981											
12...	0900	488	11.0	7.5	310	43	191	--	79	9.0	86
AUG											
13...	1530	23	25.0	7.8	680	200	445	--	70	2.0	175
403316080403100 - 051 HOLLOW ROCK RN (66-10) NR HAMMONDSVILLE OH (LAT 40 33 16 LONG 080 40 31)											
MAY , 1981											
07...	1330	12	14.5	8.0	880	320	652	--	131	15	293
AUG											
13...	1330	2.9	19.5	8.1	1350	540	1070	--	130	14	510
403345080423300 - 051 N F YELLOW C (66-1) AT HAMMONDSVILLE OH (LAT 40 33 45 LONG 080 42 33)											
OCT , 1980											
15...	1000	4.7	9.5	6.5	610	150	407	.1	46	20	196
MAY , 1981											
11...	1430	83	10.0	7.5	325	81	211	--	39	11	94
AUG											
05...	1630	8.6	25.0	8.4	590	160	372	--	50	21	186
403420081181000 - 051 BEGGAR RN (64-5) NR NEW CUMBERLAND OH (LAT 40 34 20 LONG 081 18 10)											
OCT , 1980											
01...	1845	.44	17.0	7.2	2400	1700	2595	--	138	59	1600
JUN , 1981											
03...	1130	5.9	17.5	7.1	1500	760	1190	--	51	28	730
JUL											
24...	1210	.70	18.0	7.6	710	1500	2418	--	182	4.0	1450

ANALYSES OF MISCELLANEOUS STATIONS

DATE	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ALUMINUM, DISSOLVED (UG/L AS AL)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	ARSENIC DISSOLVED (UG/L AS AS)	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, DISSOLVED (UG/L AS ZN)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
403229081290600 - 051 GOETTGE RN (59-11) AT DOVER OH (LAT 40 32 29 LONG 081 29 06)											
APR , 1981											
29...	300	<200	9300	1950	9450	9200	<10	.5	100	180	216
AUG											
11...	3959	3600	1755	1132	11660	11030	<10	<.5	723	422	--
403230081182701 - 051 CONOTTON C (64-4) AT NEW CUMBERLAND OH (LAT 40 32 30 LONG 081 18 27)											
OCT , 1980											
01...	310	<200	1570	50	890	880	<10	.6	<100	<30	--
APR , 1981											
14...	1400	<200	2680	30	260	210	<10	<.5	<100	60	60
AUG											
06...	135	183	1288	199	314	259	<10	.5	397	56	--
403237081185200 - 051 DOG RN (64-7) AT NEW CUMBERLAND OH (LAT 40 32 37 LONG 081 18 52)											
APR , 1981											
14...	500	<200	2130	220	1230	1170	<10	<.5	<100	50	72
JUL											
23...	<75	<75	428	517	1167	1024	<10	<.5	<20	<10	--
403304081191600 - 051 UNAM TR (64-6) CONOTTON C NR NW CUMBRLND OH (LAT 40 33 04 LONG 081 19 16)											
OCT , 1980											
01...	430	220	2090	30	3250	3200	<10	<.5	<100	<30	--
MAY , 1981											
28...	1200	<200	4300	630	610	550	<10	<.5	<100	40	--
JUL											
23...	<75	<75	1333	1214	2752	2303	<10	<.5	<20	222	--
403312080412900 - 051 YELLOW C (66-9) AT HAMMONDSVILLE OH (LAT 40 33 12 LONG 080 41 29)											
OCT , 1980											
15...	225	<200	130	<30	40	<30	<10	<.5	<100	<30	--
MAY , 1981											
12...	1000	200	2070	<30	140	90	<10	<.5	<100	<30	43
AUG											
13...	<75	<75	243	<10	<5	<5	<10	<.5	<20	<10	--
403316080403100 - 051 HOLLOW ROCK RN (66-10) NR HAMMONDSVILLE OH (LAT 40 33 16 LONG 080 40 31)											
MAY , 1981											
07...	600	300	150	<30	170	150	<10	<.5	<100	<30	12
AUG											
13...	<75	<75	1106	70	92	76	<10	<.5	<20	<10	--
403345080423300 - 051 N F YELLOW C (66-1) AT HAMMONDSVILLE OH (LAT 40 33 45 LONG 080 42 33)											
OCT , 1980											
15...	240	<200	390	130	260	250	<10	<.5	<100	<30	--
MAY , 1981											
11...	300	<200	940	60	110	90	<10	<.5	<100	<30	10
AUG											
05...	86	176	488	117	25	21	<10	<.5	550	63	--
403420081181000 - 051 BEGGAR RN (64-5) NR NEW CUMBERLAND OH (LAT 40 34 20 LONG 081 18 10)											
OCT , 1980											
01...	240	220	1260	<30	22500	22100	<10	<.5	190	<30	--
JUN , 1981											
03...	1700	<200	2840	60	18400	15300	<10	<.5	100	70	56
JUL											
24...	<75	<75	1034	1020	4240	4113	<10	<.5	<20	37	--

ANALYSES OF MISCELLANEOUS STATIONS

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	ACIDITY (MG/L AS H)	ALKA-LINITY FIELD (MG/L AS CACO3)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SULFATE DIS-SOLVED (MG/L AS SO4)
403437081234300 - 051 TUSCARAWAS R (59-6) AT ZOARVILLE OH (LAT 40 34 37 LONG 081 23 43)											
OCT , 1980											
02...	1250	516	16.0	7.6	120	230	786	--	171	227	145
APR , 1981											
06...	1500	3180	10.5	8.0	530	32	338	--	146	61	86
AUG											
11...	1430	728	23.0	7.6	1200	210	812	--	174	202	185
403446081194800 - 051 UNAM TR (64-3) TO CONOTTON C NR SOMERDALE OH (LAT 40 34 46 LONG 081 19 48)											
MAY , 1981											
28...	1700	15	17.0	5.5	1750	640	1155	.7	13	205	485
JUL											
24...	1020	.70	17.5	6.5	4700	2600	4445	.3	20	50	2050
403457081231200 - 051 CONOTTON C (64-1) AT ZOARVILLE OH (LAT 40 34 57 LONG 081 23 12)											
OCT , 1980											
02...	1430	64	16.0	6.6	705	230	446	--	67	30	220
JUN , 1981											
06...	1200	1080	18.0	7.2	250	33	177	--	36	16	63
AUG											
11...	1315	64	22.0	7.1	650	170	425	--	69	27	215
403458081254900 - 051 UNAM TR (59-10) TO SM MIDDLE RN NR ZOAR OH (LAT 40 34 58 LONG 081 25 49)											
OCT , 1980											
03...	0900	.55	12.0	6.6	1790	1100	1663	--	10	8.0	1110
MAY , 1981											
27...	0945	3.4	15.5	5.4	1300	730	1110	1.4	7	9.0	700
JUL											
23...	1030	.90	18.5	5.9	1700	980	1558	1.9	2	4.0	980
403600081244900 - 051 UNAM TR (59-7) TO TUSCARAWAS R NR ZOAR OH (LAT 40 36 00 LONG 081 24 49)											
OCT , 1980											
02...	1645	.63	15.0	3.9	1200	--	1169	1.9	--	6.0	790
APR , 1981											
29...	1515	9.8	14.0	4.8	640	--	435	.5	--	12	243
JUL											
23...	1515	1.2	20.0	3.7	1250	--	1018	2.4	--	4.0	650
403614081180700 - 051 HUFF RN (64-8) NR MINERAL CITY OH (LAT 40 36 14 LONG 081 18 07)											
MAY , 1981											
28...	1100	24	15.5	6.5	520	130	319	.2	32	33	149
JUL											
24...	1405	3.6	20.0	6.8	800	300	598	.5	53	8.0	270
403614081202100 - 051 HUFF RN (64-2) NR MINERAL CITY OH (LAT 40 36 14 LONG 081 20 21)											
MAY , 1981											
15...	1030	22	13.0	5.2	1000	450	740	2.0	5	54	470
JUL											
30...	0930	4.0	14.5	4.2	1700	--	1358	2.1	--	5.0	875
403619081254300 - 051 MIDDLE RN (59-8) AT ZOAR OH (LAT 40 36 19 LONG 081 25 43)											
OCT , 1980											
02...	1800	.76	15.5	3.7	1150	--	962	1.4	--	32	630
JUN , 1981											
09...	1245	22	18.5	4.3	530	--	342	1.4	--	6.0	205
JUL											
23...	1300	.90	19.0	3.8	1100	--	833	1.4	--	7.5	530

ANALYSES OF MISCELLANEOUS STATIONS

DATE	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ALUMINUM, DISSOLVED (UG/L AS AL)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	ARSENIC DISSOLVED (UG/L AS AS)	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, DISSOLVED (UG/L AS ZN)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
403437081234300 - 051 TUSCARAWAS R (59-6) AT ZOARVILLE OH (LAT 40 34 37 LONG 081 23 43)											
OCT , 1980											
02...	240	<200	1090	<30	820	750	<10	<.5	<100	40	--
APR , 1981											
06...	2000	600	6100	1330	1020	540	<10	<.5	100	70	386
AUG											
11...	347	184	1503	121	277	118	<10	<.5	481	74	--
403446081194800 - 051 UNAM TR (64-3) TO CONOTTON C NR SOMERDALE OH (LAT 40 34 46 LONG 081 19 48)											
MAY , 1981											
28...	7000	<200	12400	680	11350	10400	<10	.9	100	110	--
JUL											
24...	169	25	4843	4614	6820	6717	<10	<.5	<20	67	--
403457081231200 - 051 CONOTTON C (64-1) AT ZOARVILLE OH (LAT 40 34 57 LONG 081 23 12)											
OCT , 1980											
02...	370	<200	2520	620	3700	3700	<10	<.5	<100	<30	--
JUN , 1981											
06...	4800	<200	8500	40	1050	540	<10	<.5	<100	30	1610
AUG											
11...	205	200	1463	397	1062	1008	<10	<.5	536	65	--
403458081254900 - 051 UNAM TR (59-10) TO SM MIDDLE RN NR ZOAR OH (LAT 40 34 58 LONG 081 25 49)											
OCT , 1980											
03...	1160	<200	15200	13500	38000	37000	<10	<.5	430	210	--
MAY , 1981											
27...	3900	300	15000	7100	23600	22500	<10	<.5	300	210	991
JUL											
23...	2175	1927	11220	11010	30130	29290	<10	<.5	75	295	10
403600081244900 - 051 UNAM TR (59-7) TO TUSCARAWAS R NR ZOAR OH (LAT 40 36 00 LONG 081 24 49)											
OCT , 1980											
02...	4750	4670	1260	1030	23900	23900	<10	<.5	180	170	--
APR , 1981											
29...	2500	1000	5400	900	6750	6700	<10	<.5	100	140	153
JUL											
23...	5296	4787	1205	1013	20890	18630	<10	<.5	153	280	3
403614081180700 - 051 HUFF RN (64-8) NR MINERAL CITY OH (LAT 40 36 14 LONG 081 18 07)											
MAY , 1981											
28...	2400	<200	7200	1230	3500	3070	<10	<.5	100	50	--
JUL											
24...	<75	<75	2931	2874	4955	3726	<10	<.5	<20	<10	--
403614081202100 - 051 HUFF RN (64-2) NR MINERAL CITY OH (LAT 40 36 14 LONG 081 20 21)											
MAY , 1981											
15...	3000	<200	9400	3600	10200	9900	<20	.9	100	170	71
JUL											
30...	342	214	<10	<10	<5	<5	<10	<.5	<20	36	--
403619081254300 - 051 MIDDLE RN (59-8) AT ZOAR OH (LAT 40 36 19 LONG 081 25 43)											
OCT , 1980											
02...	1940	1810	1830	1580	21300	20400	<10	<.5	230	130	--
JUN , 1981											
09...	4200	900	11900	1650	8150	7650	<10	<.5	100	160	956
JUL											
23...	2681	1930	1985	1994	17830	17030	<10	<.5	64	204	7

ANALYSES OF MISCELLANEOUS STATIONS

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	PH (UNITS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	ACIDITY (MG/L AS H)	ALKA-LINITY FIELD (MG/L AS CACO3)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SULFATE DIS-SOLVED (MG/L AS SO4)
403639080472200 - 051 N F YELLOW C (66-6) NR SALINEVILLE OH (LAT 40 36 39 LONG 080 47 22)											
OCT , 1980											
15...	1100	5.0	10.0	7.4	565	110	328	--	86	14	171
MAY , 1981											
11...	1615	64	15.0	7.6	300	67	191	--	41	10	85
AUG											
05...	1415	5.6	25.5	8.7	540	88	327	--	82	17	146
403706081262900 - 051 WOLF RN (59-9) NR ZOAR OH (LAT 40 37 06 LONG 081 26 29)											
OCT , 1980											
03...	0730	1.7	11.0	3.4	1700	--	2094	3.9	--	14	1370
MAY , 1981											
15...	1020	16	13.0	3.7	850	--	666	1.6	--	10	460
JUL											
24...	1445	1.9	26.0	3.0	2100	--	1905	4.3	--	4.5	1260

DATE	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	ARSENIC DIS-SOLVED (UG/L AS AS)	MERCURY DIS-SOLVED (UG/L AS HG)	NICKEL, DIS-SOLVED (UG/L AS NI)	ZINC, DIS-SOLVED (UG/L AS ZN)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
403639080472200 - 051 N F YELLOW C (66-6) NR SALINEVILLE OH (LAT 40 36 39 LONG 080 47 22)											
OCT , 1980											
15...	<200	<200	90	<30	40	30	<10	<.5	<100	<30	--
MAY , 1981											
11...	300	<200	440	<30	130	110	<10	<.5	<100	<30	8
AUG											
05...	<75	<75	187	127	<5	<5	<10	<.5	275	74	--
403706081262900 - 051 WOLF RN (59-9) NR ZOAR OH (LAT 40 37 06 LONG 081 26 29)											
OCT , 1980											
03...	8700	8600	11800	11000	40000	40000	<10	<.5	460	350	--
MAY , 1981											
15...	4600	4000	7650	4700	12500	12000	<10	<.5	200	220	96
JUL											
24...	7722	7430	6046	5415	30900	29270	<10	<.5	123	359	9

The following tables contain chemical analyses from wells on South Bass Island. The data was collected as part of a cooperative study with the National Park Service.

413940824848800. Local number, O-18.
LOCATION.--Lat 41°39'14", long 82°48'48", Hydrologic Unit 04100010, at Perry's Monument on South Bass Island.
AQUIFER.--Limestone of Silurian Age.
WELL CHARACTERISTICS.--Drilled test well, diameter 6 in (0.15 m), depth 561 ft (171 m), cased to 16 ft (4.9 m).
DATUM.--Altitude of land-surface datum is 576 ft (176 m), from topographic map.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
SEP										
01...	1045	9150	7.2	14.0	290	--	K3	2800	2300	800
02...	0700	5800	7.1	13.5	107	E1	E1	2100	1700	610

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)
SEP									
01...	190	770	36	6.4	130	584	0	479	59
02...	140	360	27	3.4	23	549	0	450	70

DATE	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)
SEP									
01...	660	1100	1.4	12	6470	3950	.18	4.20	19
02...	1200	1100	1.3	11	4300	3720	.03	2.20	.00

DATE	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS TOTAL (MG/L AS PO4)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)
SEP									
01...	23.0	23	100	.110	.34	270	80	3.1	2.0
02...	2.10	2.1	9.4	.030	.09	240	40	2.6	--

4139190824835. Local number, 0-19.
LOCATION.--Lat 41°39'19", long 82°48'35", Hydrologic Unit 04100010, at Perry's Monument on South Bass Island.
AQUIFER.--Limestone of Silurian Age.
WELL CHARACTERISTICS.--Drilled test well, diameter 8 in (0.20 m) to 53 ft (16.2 m), diameter 6 in (0.15 m) from 53 ft (16.2 m) to 78 ft(23.8 m), depth 78 ft (23.8 m), cased to 8 ft (2.4 m).
DATUM.--Altitude of land surface datum is 580 ft (177 m), from topographic map.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
SEP												
02...	1400	790	7.3	14.0	.0	K1	K1	360	39	83	37	7.1
03...	1100	790	7.2	14.5	.0	E1	--	360	42	83	37	6.3

DATE	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
SEP												
02...	4	.2	2.4	391	0	321	31	99	8.7	1.3	7.3	515
03...	4	.1	2.3	388	0	318	39	99	9.0	1.3	7.1	505

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
SEP											
02...	438	.03	.030	.40	.43	.46	2.0	<.010	60	10	1.9
03...	436	.04	.040	.19	.23	.27	1.2	<.010	40	<10	1.8

The following tables contain water-level measurements and chemical analyses from a network of wells and miscellaneous surface-water quality analyses in Southern Franklin County. The data was collected as part of a cooperative study with the City of Columbus for evaluating ground-water resources.

395037082591600. Local number, FR-36.
LOCATION.--Lat 39°50'37", long 82°59'16", Hydrologic Unit 05060001, near Hamilton Meadows.
AQUIFER.--Glacial sand and gravel of Quaternary Age.
WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in (0.10 m), depth 31 ft (9.56 m).
DATUM.--Altitude of land-surface datum is 717 ft (221.12 m).

HIGHEST WATER LEVEL 12.40 FEET BELOW LAND SURFACE DATUM JUN 17, 1981.

LOWEST WATER LEVEL 14.70 FEET BELOW LAND SURFACE DATUM SEP 09, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
APR 28, 1981	14.59	JUN 17, 1981	12.40	JUL 29, 1981	13.57	SEP 09, 1981	14.70
MAY 19	13.52	JUL 01	12.66	AUG 12	14.01	23	13.74
JUN 03	13.69	10	12.94	26	14.22		

395114082592600. Local number, FR-46.
LOCATION.--Lat 39°51'14", long 82°59'26", Hydrologic Unit 05060001, near Hamilton Meadows.
AQUIFER.--Glacial sand and gravel of Quaternary Age.
WELL CHARACTERISTICS.--Drilled domestic well, diameter 6 in (0.15 m), depth 38 ft (11.58 m).
DATUM.--Altitude of land-surface datum is 724 ft (220.68 m).

HIGHEST WATER LEVEL 20.77 FEET BELOW LAND SURFACE DATUM JUL 01, 1981.

LOWEST WATER LEVEL 22.93 FEET BELOW LAND SURFACE DATUM JUN 03, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAY 19, 1981	22.62	JUL 01, 1981	20.77	AUG 12, 1981	21.39	SEP 23, 1981	22.52
JUN 03	22.93	10	20.78	26	21.81		
17	21.95	29	21.06	SEP 09	22.15		

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	NITROGEN, DISSOLV (MG/L AS N)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
SEP 02...	1100	787	6.9	14.0	.2	.20	.2	.0	460	150	120

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
SEP 02...	38	4.0	1.5	380	0	312	77	100	30	.3

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)	NITROGEN, ORGANIC TOTAL (MG/L AS N)
SEP 02...	11	534	494	<.010	.02	.01	.030	<.010	.01	.47

DATE	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DISSOLVED (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
SEP 02...	.50	.31	.19	.52	2.3	<.010	<.010	1500	230	3.4

395132083001200. Local number, FR-73.
LOCATION.--Lat 39°51'32", long 83°00'12", Hydrologic Unit 05060001, near Columbus.
AQUIFER.--Glacial sand and gravel of Quaternary Age.
WELL CHARACTERISTICS.--Drilled water-supply well, diameter 12 in (0.30 m), depth unknown.
DATUM.--Altitude of land-surface datum is 735 ft (224.03 m).

HIGHEST WATER LEVEL 39.38 FEET BELOW LAND SURFACE DATUM JUL 01, 1981.

LOWEST WATER LEVEL 41.49 FEET BELOW LAND SURFACE DATUM APR 28, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
APR 28, 1981	41.49	JUN 17, 1981	39.61	JUL 29, 1981	39.79	SEP 09, 1981	40.41
MAY 19	40.58	JUL 01	39.38	AUG 12	39.89	23	40.75
JUN 03	40.29	10	39.44	26	40.21		

395153083002900. Local number, FR-74.
LOCATION.--Lat 39°51'53", long 83°00'29", Hydrologic Unit 05060001, near Columbus.
AQUIFER.--Glacial sand and gravel of Quaternary Age.
WELL CHARACTERISTICS.--Drilled water supply well, diameter 8 in (0.20 m), depth 80 ft (24.38 m).
DATUM.--Altitude of land-surface datum is 730 ft (222.50 m).

HIGHEST WATER LEVEL 26.46 FEET BELOW LAND SURFACE DATUM JUN 17, 1981.

LOWEST WATER LEVEL 32.72 FEET BELOW LAND SURFACE DATUM SEP 23, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAY 19, 1981	27.83	JUL 01, 1981	26.90	AUG 12, 1981	30.40	SEP 23, 1981	32.72
JUN 03	27.84	10	27.62	26	31.40		
17	26.46	29	29.34	SEP 08	32.20		

394954083002800. Local number, FR-106.
LOCATION.--Lat 39°49'54", long 83°00'28", Hydrologic Unit 05060001, near Shadeville.
AQUIFER.--Glacial sand and gravel of Quaternary Age.
WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in (0.15 m), depth 7.5 ft (22.86 m).
DATUM.--Altitude of land-surface datum is 687 ft (209.4 m).

HIGHEST WATER LEVEL 0.10 FEET ABOVE LAND SURFACE DATUM JUN 17, 1981.

LOWEST WATER LEVEL 6.79 FEET BELOW LAND SURFACE DATUM AUG 12, 1981.

WATER LEVELS IN FEET ABOVE OR BELOW(-) LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
APR 28, 1981	-4.87	JUN 17, 1981	0.10	JUL 29, 1981	-5.26	SEP 09, 1981	-6.19
MAY 20	-2.25	JUL 01	-2.67	AUG 12	-6.79	23	-6.46
JUN 03	-3.90	10	-4.31	26	-6.58		

395016083010300. Local number, FR-117, M2.
LOCATION.--Lat 39°50'16", long 83°01'03", Hydrologic Unit 05060001, near Shadeville.
AQUIFER.--Glacial clay, sand and gravel of Quaternary Age.
WELL CHARACTERISTICS.--Drilled observation well, diameter 2 in. (0.05 m), depth 45 ft (13.72 m).
DATUM.--Altitude of land-surface datum is 700 ft (213.36 m).

HIGHEST WATER LEVEL 13.02 FEET BELOW LAND SURFACE DATUM JUN 17, 1981.

LOWEST WATER LEVEL 15.77 FEET BELOW LAND SURFACE DATUM SEP 23, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
APR 24, 1981	13.79	JUN 17, 1981	13.02	JUL 29, 1981	14.46	SEP 09, 1981	15.41
MAY 20	13.28	JUL 01	13.45	AUG 12	14.90	23	15.77
JUN 03	13.38	10	14.00	26	15.32		

395111083002600. Local number, FR-119, M5.
LOCATION.--Lat 39°51'11", long 83°00'26", Hydrologic Unit 05060001, near Shadeville.
AQUIFER.--Glacial clay, sand, and gravel of Quaternary Age.
WELL CHARACTERISTICS.--Drilled observation well, diameter 2 in (0.05 m), depth 85 ft (25.9 m).
DATUM.--Altitude of land-surface datum is 700 ft (213.36 m).

HIGHEST WATER LEVEL 11.10 FEET BELOW LAND SURFACE DATUM JUN 17, 1981.

LOWEST WATER LEVEL 19.67 FEET BELOW LAND SURFACE DATUM AUG 26, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAY 19, 1981	12.47	JUL 01, 1981	13.30	AUG 12, 1981	17.88	SEP 23, 1981	18.42
JUN 03	14.26	10	15.02	26	19.67		
17	11.10	29	16.49	SEP 09	18.57		

395117083011600. Local number, FR-120, M6.
LOCATION.--Lat 39°51'17", long 83°01'16", Hydrologic Unit 05060001, near Columbus.
AQUIFER.--Glacial sand and gravel of Quaternary Age.
WELL CHARACTERISTICS.--Drilled observation well, diameter 2 in (0.05 m), depth 72 ft (21.94 m).
DATUM.--Altitude of land-surface datum is 685 ft (208.79 m).

WATER LEVEL, IN FEET ABOVE OR BELOW (-) LAND SURFACE DATUM , WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							---	1.82	---	1.24	3.93	5.17
2							---	1.15	---	1.40	3.96	5.17
3							---	1.31	1.62	1.50	4.02	4.84
4							---	1.65	1.84	1.63	4.11	4.48
5							---	1.86	1.96	1.84	4.17	4.32
6							---	1.86	1.71	2.10	4.15	4.20
7							---	1.49	1.25	2.29	4.18	4.32
8							---	1.29	1.51	2.44	4.28	4.47
9							---	1.45	1.51	2.58	4.35	4.63
10							---	1.57	1.38	2.73	4.37	4.71
11							---	1.36	.49	2.85	4.42	4.80
12							---	-0.39	.35	2.95	4.45	4.86
13							---	---	.08	3.04	4.40	4.89
14							---	---	-0.42	3.16	4.41	4.93
15							---	---	---	3.24	4.43	4.87
16							---	---	---	3.36	4.52	4.89
17							---	---	---	3.43	4.57	4.93
18							---	---	---	3.49	4.59	4.91
19							---	---	---	3.54	4.63	4.76
20							---	---	---	3.54	4.68	4.66
21							---	---	---	3.46	4.72	4.62
22							---	---	---	3.51	4.72	4.77
23							---	---	-0.92	3.54	4.77	4.88
24							---	---	-0.35	3.58	4.83	4.95
25							---	---	-0.02	3.66	5.08	4.97
26							---	---	-0.02	3.68	5.06	5.03
27							---	---	-0.05	3.72	5.12	5.13
28							---	---	.13	3.71	5.13	5.20
29							1.77	---	.54	3.80	5.14	5.23
30							1.82	---	.93	3.86	5.17	5.27
31							---	---	---	3.90	5.16	---
MAX							1.82	1.86	1.96	3.90	5.16	5.27

WTR YR 1981 MEAN 3.28 MAX 5.27 MIN -0.92

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

395117083011600 - FR-120 M6 AT HOLTON RD NR GROVE CITY OH

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	NITROGEN, DISSOLV (MG/L AS N)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
AUG 25...	1215	675	6.8	12.5	.2	.26	.7	.0	380	45	100

DATE	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
AUG 25...	32	3.8	1.4	408	0	335	103	59	11	.5

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)	NITROGEN, ORGANIC TOTAL (MG/L AS N)
AUG 25...	13	436	425	<.010	.02	.02	.150	.160	.21	.47

DATE	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS TOTAL (MG/L AS PO4)	PHOSPHORUS, DISSOLVED (MG/L AS P)	ARSENIC DISSOLVED (UG/L AS AS)
AUG 25...	.08	.62	.38	.24	.64	2.8	.180	.55	.020	5

DATE	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	SELENIUM, DISSOLVED (UG/L AS SE)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
AUG 25...	2	<10	2	2600	4	60	<.1	<1	170	5.1

395123083003300. Local number, FR-121, M7.
LOCATION.--Lat 39°51'23", long 83°00'33", Hydrologic Unit 0506001, near Columbus.
AQUIFER.--Glacial clay, sand, and gravel of Quaternary Age.
WELL CHARACTERISTICS.--Drilled observation well, diameter 2 in (0.05 m), depth 45 ft (13.72 m).
DATUM.--Altitude of land-surface datum is 692 ft (210.92 m).

HIGHEST WATER LEVEL 6.27 FEET BELOW LAND SURFACE DATUM JUN 17, 1981.

LOWEST WATER LEVEL 12.22 FEET BELOW LAND SURFACE DATUM SEP 23, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAY 19, 1981	7.58	JUL 01, 1981	6.90	AUG 12, 1981	10.78	SEP 23, 1981	12.22
JUN 03	7.20	10	8.03	25	12.20		
17	6.27	29	9.87	SEP 08	12.20		

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	NITROGEN, DISSOLV (MG/L AS N)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)
AUG 25...	1600	724	7.4	13.0	.3	3	.35	.7	.3	400	77

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
AUG 25...	110	31	3.6	1.6	394	0	323	25	67	17	.4

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)
AUG 25...	8.6	548	452	<.010	.05	.06	.060	.060	.08	.22	.23

DATE	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS TOTAL (MG/L AS PO4)	PHOSPHORUS, DISSOLVED (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
AUG 25...	.28	.00	.29	.33	1.5	.050	.15	<.010	18000	300	5.0

395059083000900. Local number, FR-122, M8.
LOCATION.--Lat 39°50'59", long 83°00'09", Hydrologic Unit 05060001 near Shadeville.
AQUIFER.--Glacial clay and sand of Quaternary Age.
WELL CHARACTERISTICS.--Drilled observation well, diameter 2 in (0.05 m), depth 104 ft (31.7 m).
DATUM.--Altitude of land-surface datum is 730 ft (222.5 m).

HIGHEST WATER LEVEL 30.15 FEET BELOW LAND SURFACE DATUM MAY 19, 1981.

LOWEST WATER LEVEL 74.28 FEET BELOW LAND SURFACE DATUM SEP 09, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAY 19, 1981	30.15	JUL 01, 1981	33.28	AUG 12, 1981	33.67	SEP 23, 1981	62.03
JUN 03	31.55	10	33.47	26	33.94		
17	32.74	29	33.70	SEP 09	74.28		

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	NITROGEN, DISSOLV (MG/L AS N)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)
SEP 02...	1330	239	8.8	12.0	2.1	19	.58	.2	7.3	99	23

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
SEP 02...	20	12	7.8	4.0	70	11	76	.2	37	14	.5

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)
SEP 02...	.4	173	142	<.010	.03	.04	.190	.130	.17	.51	.41

DATE	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS TOTAL (MG/L AS PO4)	PHOSPHORUS, DISSOLVED (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
SEP 02...	.70	.16	.54	.73	3.2	.070	.21	.020	10	10	12

395008082593100. Local number, FR-126, M13.
LOCATION.--Lat 39°50'08", long 82°59'31", Hydrologic Unit 05060001, near Shadeville.
AQUIFER.--Glacial clay and sand of Quaternary Age.
WELL CHARACTERISTICS.--Drilled observation well, diameter 2 in (0.05 m), depth 122 ft (37.18 m).
DATUM.--Altitude of land-surface datum is 695 ft (211.84 m).

HIGHEST WATER LEVEL 1.96 FEET BELOW LAND SURFACE DATUM JUN 17, 1981.

LOWEST WATER LEVEL 6.90 FEET BELOW LAND SURFACE DATUM SEP 23, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAY 19, 1981	3.22	JUL 01, 1981	2.66	AUG 12, 1981	4.81	SEP 23, 1981	6.90
JUN 03	4.00	10	3.11	26	5.55		
17	1.96	29	4.12	SEP 09	6.23		

395126083014000. Local number, FR-131, M18.
LOCATION.--Lat 39°51'26", long 83°01'40", Hydrologic Unit 05060001, near Columbus.
AQUIFER.--Glacial clay, sand and gravel of Quaternary Age.
WELL CHARACTERISTICS.--Drilled observation well, diameter 2 in (0.05 m), depth 53 ft (16.15 m).
DATUM.--Altitude of land-surface datum is 727 ft (221.59 m).

HIGHEST WATER LEVEL 37.77 FEET BELOW LAND SURFACE DATUM JUL 01, 1981.

LOWEST WATER LEVEL 42.02 FEET BELOW LAND SURFACE DATUM APR 28, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
APR 28, 1981	42.02	JUN 17, 1981	39.07	JUL 29, 1981	39.74	SEP 09, 1981	41.50
MAY 20	40.84	JUL 01	37.77	AUG 12	40.47	23	41.98
JUN 03	40.29	10	38.37	26	41.08		

395130083005700. Local number, FR-147.
LOCATION.--Lat 39°51'30", long 83°00'57", Hydrologic Unit 05060001, near Columbus.
AQUIFER.--Glacial sand and gravel of Quaternary Age.
WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in. (0.15 m), depth 79 ft (24.08 m).
DATUM.--Altitude of land-surface datum is 685 ft (208.79 m).

HIGHEST WATER LEVEL 2.54 FEET BELOW LAND SURFACE DATUM MAY 19, 1981.

LOWEST WATER LEVEL 9.29 FEET BELOW LAND SURFACE DATUM AUG 26, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAY 19, 1981	2.54	JUL 10, 1981	7.15	AUG 12, 1981	8.81	SEP 08, 1981	8.58
JUN 03	5.72	29	8.07	26	9.29	23	8.78
JUL 01	5.55						

395135083005800. Local number, FR-148.
LOCATION.--Lat 39°51'35", long 83°00'58", Hydrologic Unit 05060001, near Columbus.
AQUIFER.--Glacial clay, sand, and gravel of Quaternary Age.
WELL CHARACTERISTICS.--Drilled observation well, diameter 12 in (0.30 m), depth 80 ft (24.38 m).
DATUM.--Altitude of land-surface datum is 688 ft (209.70 m).

HIGHEST WATER LEVEL 5.19 FEET BELOW LAND SURFACE DATUM MAY 19, 1981.

LOWEST WATER LEVEL 11.90 FEET BELOW LAND SURFACE DATUM AUG 26, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAY 19, 1981	5.19	JUL 10, 1981	9.71	AUG 12, 1981	11.37	SEP 08, 1981	11.17
JUN 03	8.28	29	10.66	26	11.90	23	11.39
JUL 01	8.14						

395027082585600. Local number, TH-83, M15.
LOCATION.--Lat 39°50'27", long 82°58'56", Hydrologic Unit 05060001, near Hamilton Meadows.
AQUIFER.--Glacial sand and gravel of Quaternary Age.
WELL CHARACTERISTICS.--Drilled observation well, diameter 8 in (.20 m), depth 64 ft (19.74 m).
DATUM.--Altitude of land-surface datum is 707 ft (218.03 m).

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							---	15.98	15.02	13.48	15.43	16.71
2							---	15.83	15.08	13.56	15.48	16.75
3							---	15.88	15.18	13.62	15.54	16.76
4							---	15.93	15.25	13.66	15.57	16.74
5							---	15.99	15.28	13.73	15.62	16.78
6							---	15.99	15.27	13.86	15.62	16.82
7							---	15.92	14.93	13.96	15.66	16.83
8							---	15.87	14.92	14.03	15.75	16.86
9							---	15.94	14.97	14.11	15.83	16.90
10							---	15.97	14.93	14.22	15.87	16.94
11							---	15.94	14.71	14.28	15.91	16.99
12							---	15.66	14.78	14.35	15.97	17.03
13							---	15.17	14.81	14.43	16.02	17.05
14							---	15.06	14.46	14.50	16.06	17.09
15							---	14.83	11.50	14.58	16.08	17.08
16							---	14.63	11.72	14.66	16.16	17.09
17							---	14.73	11.87	14.73	16.20	17.14
18							---	14.86	12.06	14.80	16.25	17.16
19							---	14.75	12.24	14.85	16.29	17.16
20							---	14.81	12.43	14.85	16.35	17.22
21							---	14.93	12.62	14.86	16.40	17.24
22							---	15.01	12.78	14.92	16.43	17.33
23							---	15.09	12.86	14.98	16.47	17.35
24							---	15.18	12.88	15.04	16.52	17.38
25							---	15.27	13.00	15.09	16.55	17.40
26							---	15.32	13.09	15.12	16.59	17.39
27							---	15.30	13.17	15.16	16.64	17.44
28							---	15.20	13.27	15.17	16.64	17.48
29							---	15.11	13.38	15.26	16.66	17.51
30							15.98	15.15	13.48	15.33	16.68	17.53
31							---	15.04	---	15.39	16.69	---
MAX							15.98	15.99	15.28	15.39	16.69	17.53

WTR YR 1981 MEAN 15.38 HIGH 11.50 LOW 17.53

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

SURFACE-WATER RECORDS

395114083010401 SCIOTO RIVER AT SITE 101 NEAR COLUMBUS, OH

LOCATION.--Lat 39°51'14", long 83°01'04", Franklin County, Hydrologic Unit 05060001, on left bank adjacent to City of Columbus Radial Collector Well No. 101, 2000 ft (610 m) upstream of Grant Run, 2.5 mi (4 km) downstream of Scioto Big Run, and 1.4 mi (2.2 km) northwest of Shadeville.
PERIOD OF RECORD:--October 1979 to September 1981.
REMARKS.--This site is used for chemical quality sampling only as part of a cooperative study with the City of Columbus.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	NITROGEN, DISSOLV (MG/L AS N)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)
AUG 25...	1445	899	7.1	25.0	3.2	38	14	.0	.0	330	180

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
AUG 25...	89	27	55	7.8	183	0	150	23	170	68	1.0

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)	NITROGEN, ORGANIC TOTAL (MG/L AS N)
AUG 25...	8.0	625	568	10	.510	11	11	2.30	2.40	3.1	.80

DATE	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS TOTAL (MG/L AS PO4)	PHOSPHORUS, DISSOLVED (MG/L AS P)	ARSENIC DISSOLVED (UG/L AS AS)
AUG 25...	.60	3.10	.10	3.0	14	62	3.60	11	3.60	4

DATE	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	SELENIUM, DISSOLVED (UG/L AS SE)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
AUG 25...	2	10	4	20	1	40	.3	<1	60	7.9

395027082585600 - TH-83 M15 AT JP S&G NR HAMILTON MDWS OH

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	NITROGEN, DISSOLV (MG/L AS N)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)
SEP 03...	1115	260	8.5	11.5	.0	1.0	.0	.5	110	0	10	21

DATE	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	ALKALINITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)
SEP 03...	7.3	3.2	145	6	129	.8	2.7	14	.1	2.0	139	<.010

DATE	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS TOTAL (MG/L AS PO4)
SEP 03...	<.01	.04	.770	.630	.81	.53	.35	1.30	.32	.98	.010	.03

DATE	PHOSPHORUS, DISSOLVED (MG/L AS P)	ARSENIC DISSOLVED (UG/L AS AS)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	SELENIUM, DISSOLVED (UG/L AS SE)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
SEP 03...	<.010	1	<1	10	2	<10	1	50	<.1	<1	<10	1.1

☆USGPO: 1982 — 560-883/68

October 1, 1978

FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI). This report contains both the inch-pound and SI unit equivalents in the station manuscript descriptions.

Multiply inch-pound units	By	To obtain SI units
	Length	
inches (in)	2.54×10^{1}	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^{0}	kilometers (km)
	Area	
acres	4.047×10^{3}	square meters (m^2)
	4.047×10^{-1}	square hectometers (hm^2)
	4.047×10^{-3}	square kilometers (km^2)
square miles (mi^2)	2.590×10^{0}	square kilometers (km^2)
	Volume	
gallons (gal)	3.785×10^{0}	liters (L)
	3.785×10^{0}	cubic decimeters (dm^3)
	3.785×10^{-3}	cubic meters (m^3)
million gallons	3.785×10^{3}	cubic meters (m^3)
	3.785×10^{-3}	cubic hectometers (hm^3)
cubic feet (ft^3)	2.832×10^{1}	cubic decimeters (dm^3)
	2.832×10^{-2}	cubic meters (m^3)
cfs-days	2.447×10^{3}	cubic meters (m^3)
	2.447×10^{-3}	cubic hectometers (hm^3)
acre-feet (acre-ft)	1.233×10^{3}	cubic meters (m^3)
	1.233×10^{-3}	cubic hectometers (hm^3)
	1.233×10^{-6}	cubic kilometers (km^3)
	Flow	
cubic feet per second (ft^3/s)	2.832×10^{1}	liters per second (L/s)
	2.832×10^{1}	cubic decimeters per second (dm^3/s)
	2.832×10^{-2}	cubic meters per second (m^3/s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (L/s)
	6.309×10^{-2}	cubic decimeters per second (dm^3/s)
	6.309×10^{-5}	cubic meters per second (m^3/s)
million gallons per day	4.381×10^{1}	cubic decimeters per second (dm^3/s)
	4.381×10^{-2}	cubic meters per second (m^3/s)
	Mass	
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons

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