Water Resources Data
Ohio
Water Year 1983

Volume 2. St. Lawrence River Basin Statewide Project Data

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT OH-83-2
Prepared in cooperation with the State of Ohio
and with other agencies

CALENDAR FOR WATER YEAR 1983

1982

OCTOBER

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Water Resources Data
Ohio
Water Year 1983

Volume 2. St. Lawrence River Basin
Statewide Project Data

by Harold L. Shindel, Lawrence L. Stewart, and James R. Kolva

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT OH-83-2
Prepared in cooperation with the State of Ohio
and with other agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

WILLIAM P. CLARK, 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
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Columbus, Ohio 43212

1984

PREFACE

This volume of the annual hydrologic data report of Ohio is one of the series of annual reports that document hydrologic data gathered from the U.S. Geological Survey's surface- and ground-water data-collection networks in each State, Puerto Rico, and the Trust Territories. These records of streamflow, ground-water levels, and quality of water provides the hydrologic information needed by State, local, and Federal agencies, and the private sector for developing and managing our Nation's land and water resources. Hydrologic data for Ohio are contained in 2 volumes:

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

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

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

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Water resources data for the 1983 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 ground-water wells. This report in two volumes contains records for water discharge at 135 gaging stations; stage and contents at 35 lakes and reservoirs; water quality at 24 gaging stations, 117 wells and 6 synoptic sites; and water levels at 168 observation wells. Also included are data from 70 crest-stage partial-record stations, 42 low-flow partial-record stations, and 10 miscellaneous 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.

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(Formerly NTIS-35)
Department of Commerce

CONTENTS

ILLUSTRATIONS

VI GAGING STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED

(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

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

WATER RESOURCES DATA FOR OHIO, 1983

VOLUME 1: OHIO RIVER BASIN
VOLUME 2: ST.LAWRENCE RIVER BASIN
STATE-WIDE PROJECT DATA

INTRODUCTION

Water-resources data for the 1983 water year for Ohio consists 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 wells and springs. This report (Volumes 1 and 2) contains discharge records of 135 streamflow-gaging stations, stage and contents of 35 lakes and reservoirs, low-flow data for 42 partial-record stations and 10 miscellaneous sites, peak flow information for 70 crest-stage partial-record stations; water-quality data for 24 streamflow-gaging stations, 117 wells and 6 synoptic sites; plus water levels for 168 observation wells. Locations of lake- and streamflow-gaging stations and water-quality stations are shown in figures 3a, and 3b, locations of crest-stage partial-record stations are shown at figures 3c, and 3d. Locations of observation wells are shown in figures 3e and 3f. These data represent that part of the National Water Data System collected by the U.S. Geological Survey in cooperation with State and Federal agencies of Ohio.

Records of discharge and stage of streams, contents and stage of lakes and reservoirs are published in a series of U.S. Geological Survey Water-Supply Papers entitled "Surface-Water Supply of the United States." These water-supply papers were published in an annual series through September 30, 1960, and then in 5-year water-supply papers 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 an annual series of water-supply papers entitled "Ground-water Levels in the United States." Water-supply papers may be purchased from Eastern Distribution Branch, Text Products Section, U.S. Geological Survey, 604 South Pickett Street, Alexandria, Va. 22304.

Publications similar to this report are published annually by the Geological Survey for all States, Puerto Rico, and Pacific Islands under United States juristiction. These official Survey reports have an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report OH-83-1." The reports for 1971-74 water years are also identified as water-data reports. These water-data reports can be purchased in paper copy or in microfiche from the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

Additional information, including current prices, for ordering specific reports may be obtained by writing the District Chief at the address given on the back of title page or by telephoning [614] 469-5553.

COOPERATION

The U.S. Geological Survey and agencies of the State of Ohio have had cooperative agreements for the collection of water-resources records since 1898. Organizations that assist in collecting data in this report are:

Ohio Department of Natural Resources, M.H. Shoemaker, director
Ohio Environmental Protection Agency, R.H. Maynard, director
Ohio Department of Transportation, W.J. Smith, 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
Northeast Ohio Areawide Coordinating Agency, S.A. Jones, director
Seneca County Soil and Water District, Gene Baltes, Chief, Quality Lab.

The following Federal and State agencies assisted in the data collection program.

Miami Conservancy District
Corps of Engineers, U.S. Army
Ohio Department of Natural Resources.

Funds or services were provided by the U.S. Army corps of Engineers in collecting records for 130 hydrologic-data stations in this report.

SUMMARY OF HYDROLOGIC CONDITIONS

Surface Water

At the start of the 1983 water year, streamflow was normal throughout the state. November and December streamflow remained in the normal range except in Northwest Ohio where it was excessive.

January streamflow was deficient in Eastern Ohio and normal for the remainder of the State. February streamflow remained normal except the central part of the State where it was deficient.

March streamflow dropped into the deficient range for the entire State, then recovered to the normal range in the Central and Southwest area and became excessive for the remainder of the State in April.

Persistant rain from April 30 to May 3 caused minor flooding throughout the State and produced streamflow in the excessive range for May.

June streamflow returned to the normal range; however heavy rain June 26-27 caused minor flooding in the northwestern part of the State. July streamflow remained in the normal range.

Despite below-normal rainfall, streamflow remained in the normal range throughout August and September with the exception of the southwestern portion of the State, where it fell into the deficient range during September.

Figure 2 compares the 1983 mean discharges at four selected long-term stations with median discharges for the base period 1951-80.

Water Quality

The chemical quality of surface water statewide showed very little change from previous years. The Hocking River below Athens was above the Ohio Environmental Protection Agency's (OEPA) limit for stream quality for dissolved manganese in all samples collected during the water year. Little Mill Creek near Coshocton was above the OEPA limit for dissolved manganese in all samples collected during the water year and for dissolved iron collected in December 1982.

Ground-water samples from counties in Ohio's coal-producing regions contained concentrations of dissolved manganese that exceeded the OEPA limit. Concentrations of dissolved iron that exceeded the OEPA limit were reported for several stations in these areas.

Maumee River at Waterville, Ohio, one of the three major basins that have U.S. Geological Survey Monitors at NASQAN sites, showed slight improvement in specific conductance, ph, dissolved oxygen, and temperature. This change probably was due to higher streamflow. The other two stations--Scioto River at Higby and Cuyahoga River at Independence--showed a drop in dissolved oxygen probably due to extremely dry weather and lower streamflow.

Ground Water

Most of the observation wells in Ohio tap 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, or occurs near the end of the growing season. Highs for the year usually occur from March through June, when recharge from snowmelt and springtime storms is greatest. The normal yearly water-level fluctuation for water-table and confined-aquifer wells is 3 to 5 feet.

As the 1983 water year ended, ground-water levels were fairly normal across the northern part of the State; only a few wells reached record lows, even though the southwestern part of the State was greatly deficient in rainfall.

Overall, the range between high and low water-level extremes throughout the observation well network during water year 1983 was similar to that of water year 1982. Considerable recharge to the state's ground-water aquifers resulted from above normal rainfall in November and December. Despite a mild winter, precipitation was below normal from January through March and the rate of recharge was reduced. Rainfall was above normal in April and May and water levels were at highs for the year in representative wells. The trend of 1983 Water Year lows for the same wells was less distinct. Most lows occurred in August and September 1983; however some lows occured in October and November 1982.

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.

Microgram 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.

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.

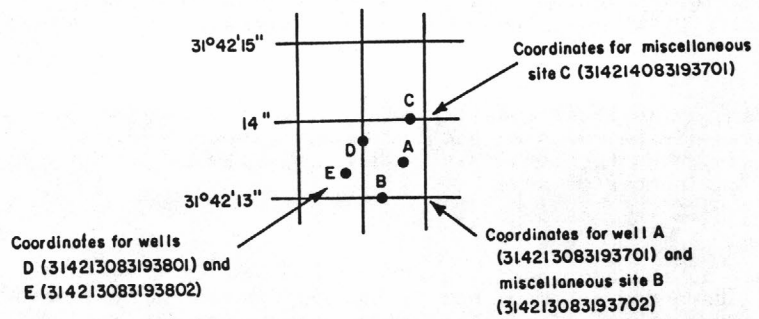

Figure 1 System for numbering wells and miscellaneous sites (latitude and longitude)

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

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.

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.

Water analysis

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.

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

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 2.

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.

Access to WATSTORE Data

The National WATer Data STOrage and REtrieval System (WATSTORE) was established for handling water data collected through the activities of the U.S. Geological Survey and to provide for more effective and efficient means of releasing the data to the public. The system is operated and maintained on the central computer facilities of the Survey at its National Center in Reston, Virginia.

WATSTORE can provide a variety of useful products ranging from simple data tables to complex statistical analyses. A minimal fee, plus the actual computer cost incurred in producing the desired product, is charged to the requester. Information about the availability of specific types of data, the acquisition of data or products, and user charges can be obtained locally from each of the Water Resources Division's district offices (see address given on the back of the title page).

General inquiries about WATSTORE may be directed to:

Chief Hydrologist
U.S. Geological Survey
437 National Center
Reston, Virginia 22092

Thirty-seven 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, 604 South Pickett St., Alexandria, VA 22304 (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-A9. *Measurement of time of travel and dispersion in streams by dye tracing,* by E. F. Hubbard, F. A. Kilpatrick, L. A. Martens, and J. F. Wilson, Jr.: USGS--TWRI Book 3, Chapter A9. 1982. 44 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-B3. *Type curves for selected problems of flow to wells in confined aquifers,* by J. E. Reed: USGS--TWRI Book 3, Chapter B3. 1980. 106 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.

7-C3. *A model for simulation of flow in singular and interconnected channels,* by R. W. Schaffranek, R. A. Baltzer, and D. E. Goldberg: USGS--TWRI Book 7, Chapter C3. 1981. 110 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.

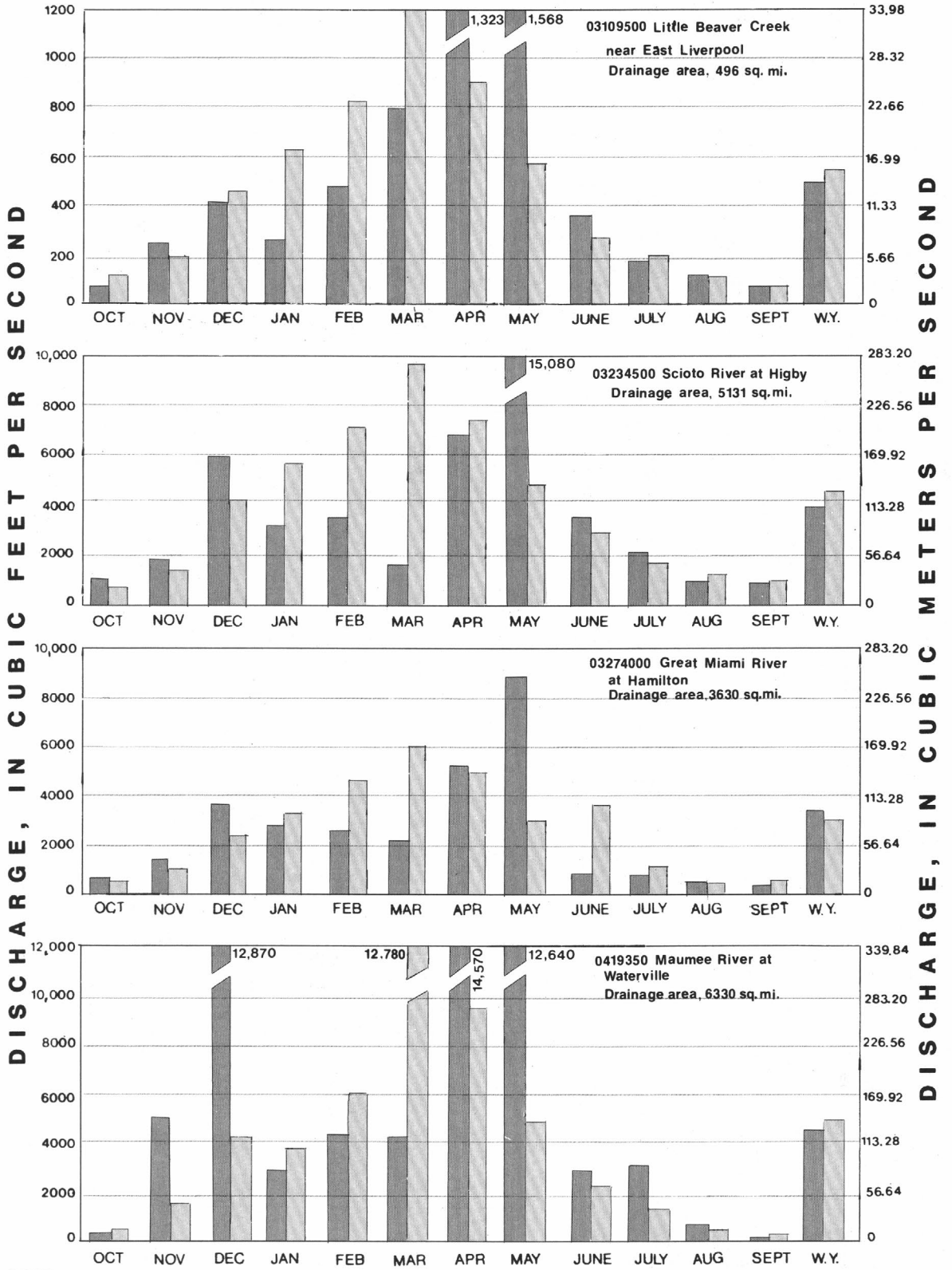

Figure 2.--Runoff during 1983 water year compared with median runoff for period 1951-80 for four representative gaging stations.

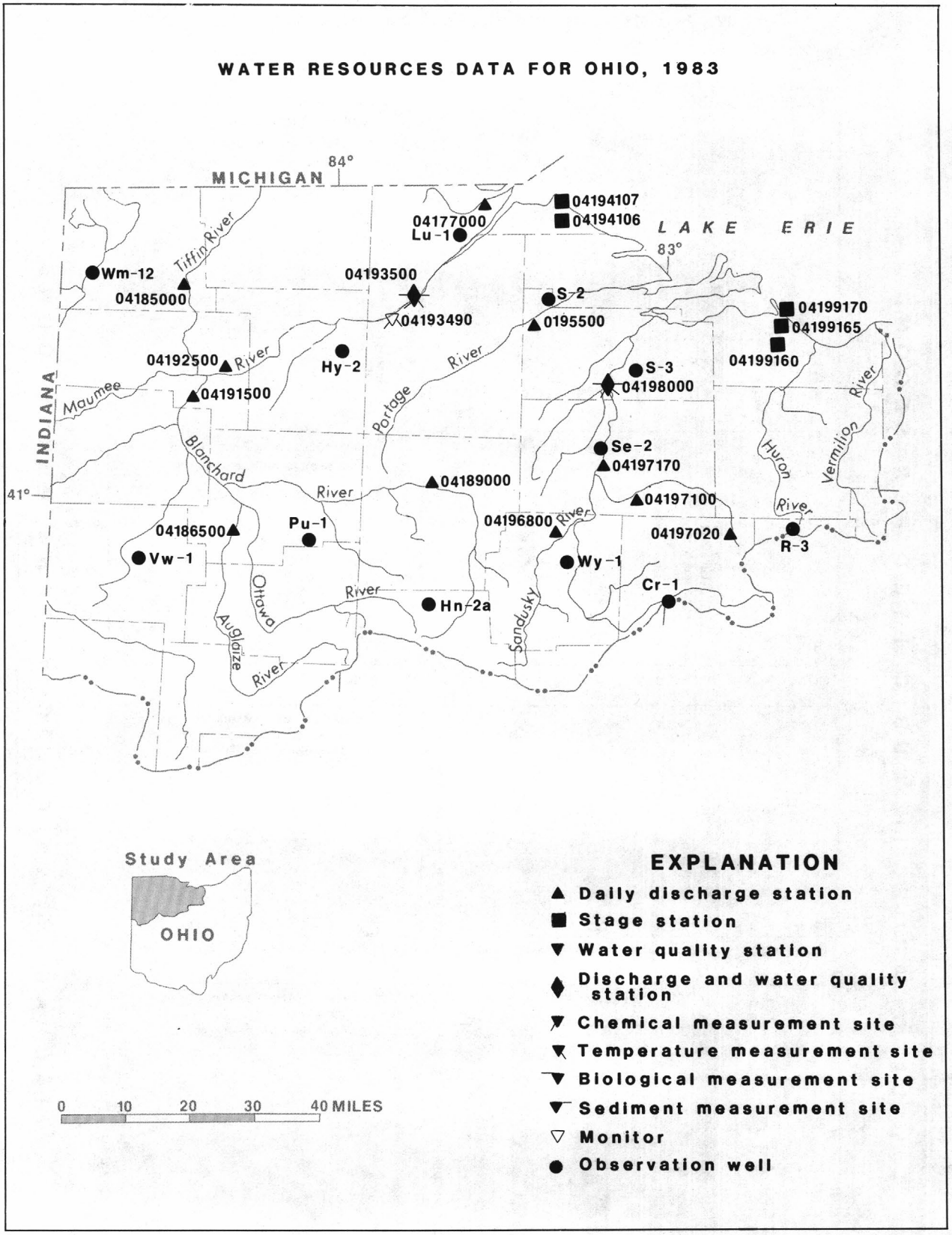

Figure 3a.--Location of data-collection stations excluding crest-stage and low-flow partial record sites.

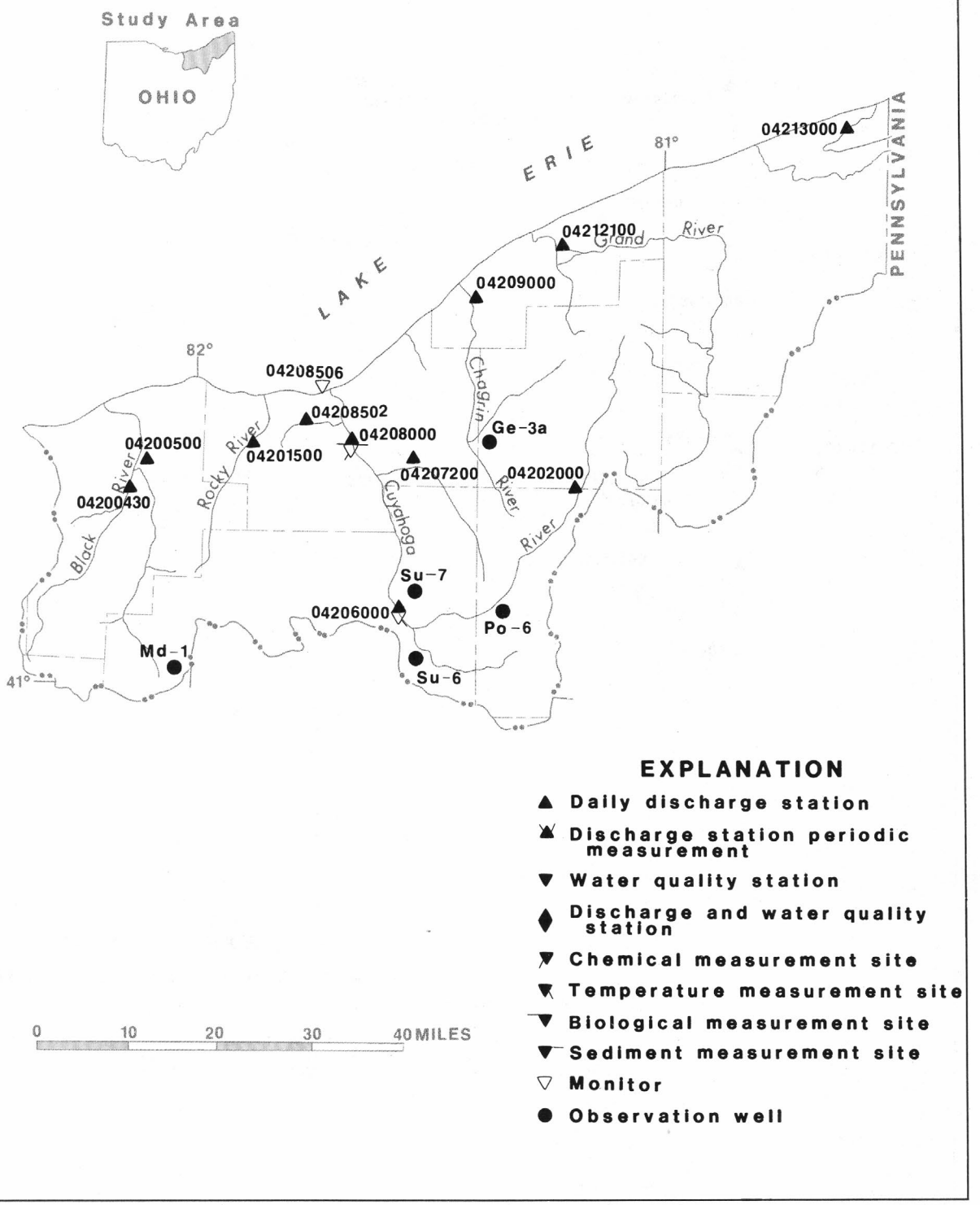

Figure 3b.--Location of data-collection stations excluding crest-stage and low-flow partial record sites.

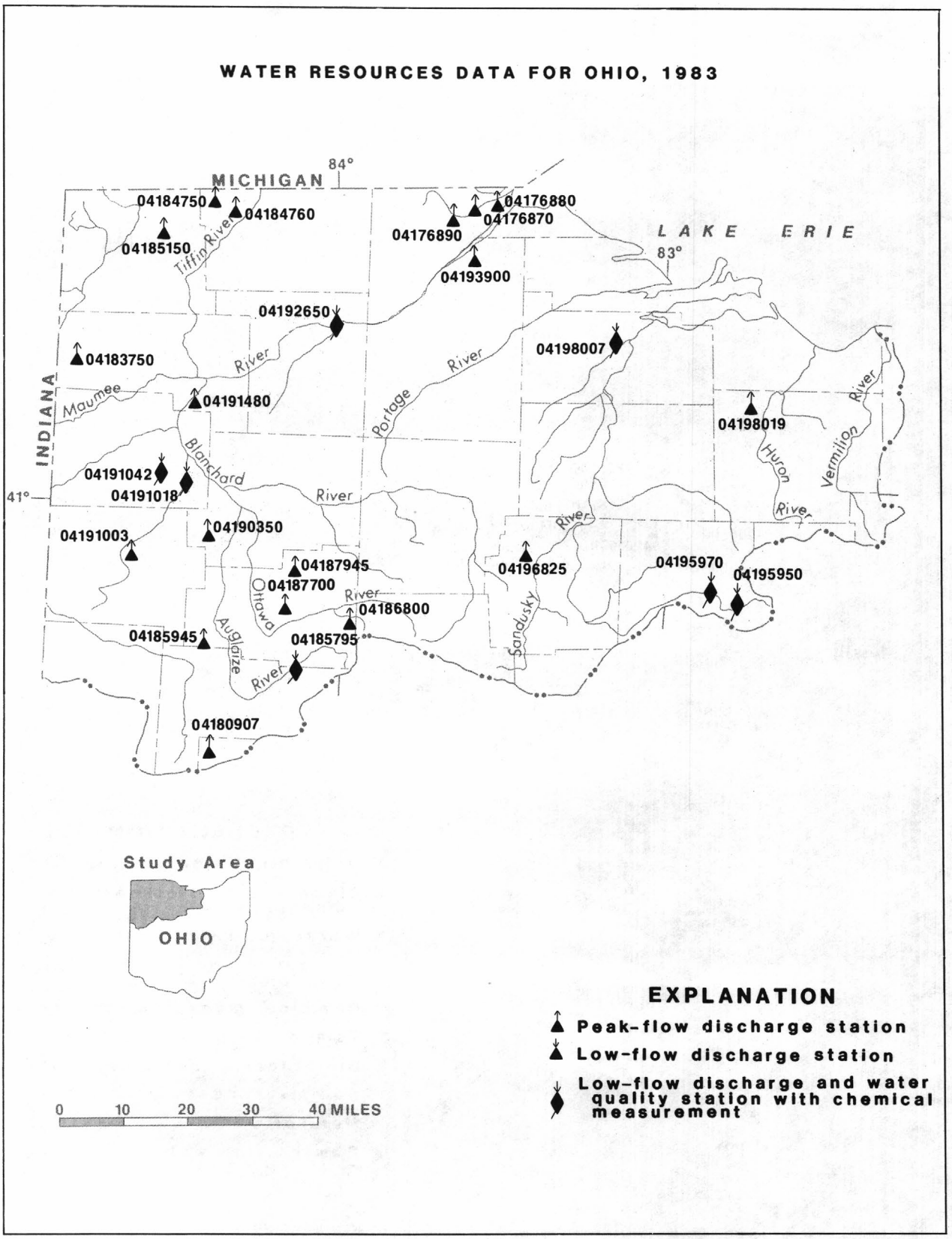

Figure 3c.--Location of crest-stage and low-flow partial record sites.

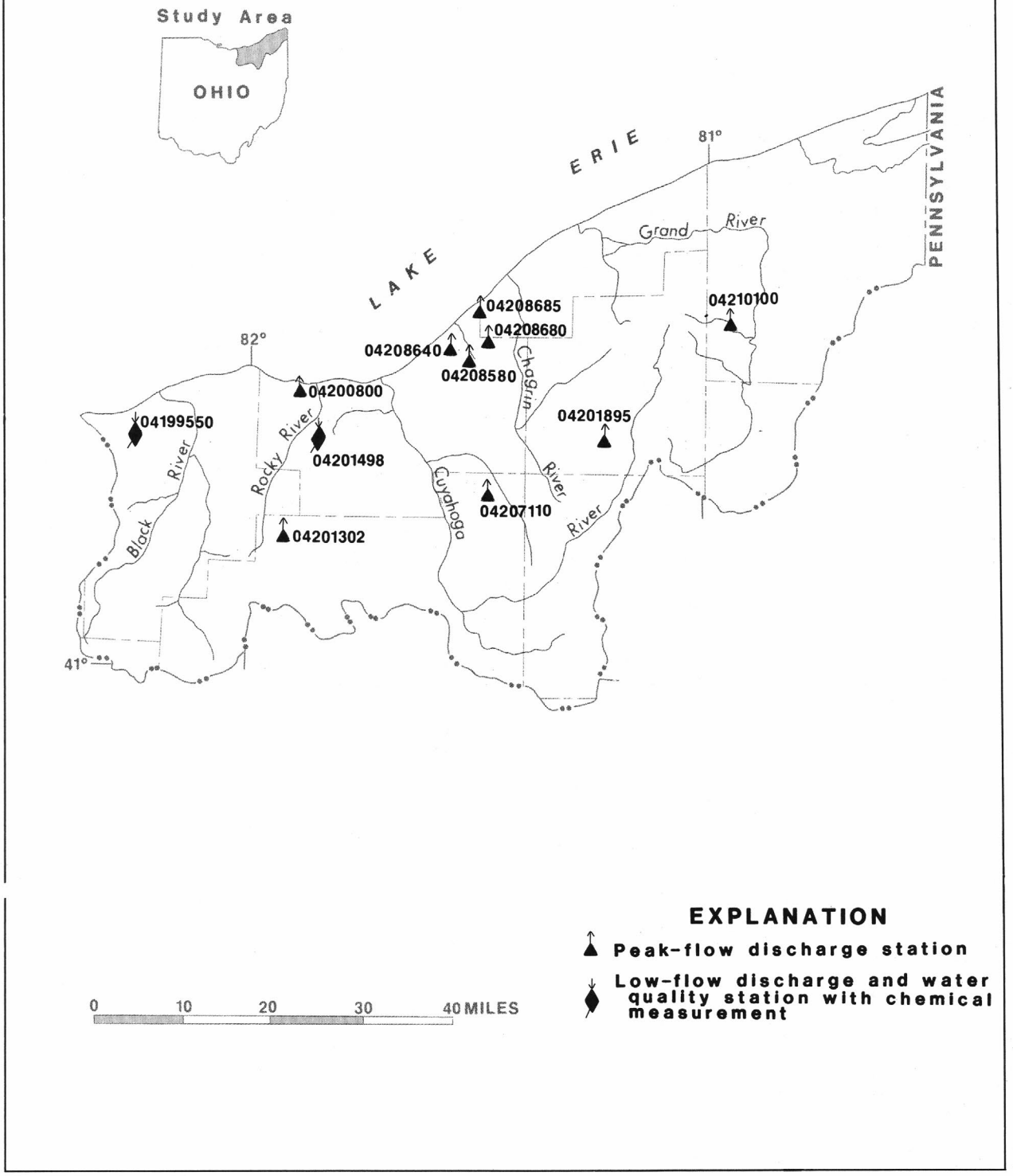

Figure 3d.--Location of crest-stage and low-flow partial record sites.

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 mi (388 km), 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 fair prior to Dec. 26, good thereafter. Water-quality data collected at this site 1977.

AVERAGE DISCHARGE.--10 years(1946-48, 1977-83) 124 ft³/s (3.512 m³/s) 11.23 in/yr 285 mm/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,950 ft³/s (112 m³/s) Mar. 14, 1982, gage height, 14.54 ft (4.432 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 1150 ft³/s (32.6 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)
Apr. 15	0700	1560	44.2	10.26	3.127	May 3	1300	*1820	51.5	*11.04	3.365

Minimum daily discharge, 1.5 ft³/s (0.04 m³/s) Oct. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	100	277	129	46	48	108	963	49	503	60	14
2	1.5	490	178	100	106	48	142	1430	40	322	47	9.5
3	1.9	253	142	82	273	45	417	1750	36	172	31	9.1
4	3.6	108	327	66	198	42	409	1310	35	136	25	9.1
5	21	61	856	63	97	41	208	701	34	169	15	9.5
6	11	42	827	60	77	47	151	373	108	106	9.5	20
7	11	33	410	61	74	52	328	245	117	60	9.1	25
8	10	26	220	57	60	58	495	212	93	45	9.1	15
9	8.0	24	105	50	50	81	313	145	61	39	9.1	9.5
10	5.9	29	103	60	48	94	481	111	57	32	9.1	9.1
11	5.4	44	96	74	52	73	436	93	89	27	161	9.1
12	5.2	72	79	78	40	59	253	82	68	23	44	9.1
13	5.1	57	67	61	35	53	243	76	52	20	28	9.1
14	5.7	56	64	56	34	50	833	77	44	17	17	9.1
15	8.6	50	88	42	36	48	1500	76	35	16	14	9.1
16	9.0	45	324	40	39	41	892	66	33	16	10	9.5
17	8.3	42	531	43	73	36	381	56	30	30	11	8.8
18	7.5	38	256	32	104	37	242	49	26	69	9.1	8.8
19	6.8	34	179	26	93	51	169	60	22	146	9.1	8.8
20	29	103	280	25	124	48	125	60	20	72	9.1	17
21	30	196	222	24	148	49	101	57	20	43	11	29
22	25	224	111	42	132	46	90	86	19	36	11	12
23	25	164	89	51	115	43	81	114	17	31	9.1	9.5
24	26	233	122	47	90	52	72	90	17	22	9.1	8.8
25	27	236	427	43	73	46	67	68	15	16	9.1	8.8
26	36	146	927	37	55	60	63	61	13	13	17	8.8
27	41	111	633	34	50	168	56	52	33	12	10	8.8
28	46	191	600	30	48	500	66	45	287	12	9.5	8.8
29	51	484	961	30	---	436	71	59	677	15	9.1	8.8
30	58	528	385	46	---	214	206	57	593	14	13	8.8
31	69	---	192	52	---	142	---	57	---	133	21	---
TOTAL	600.1	4220	10078	1641	2370	2808	8999	8681	2740	2367	665.1	340.3
MEAN	19.4	141	325	52.9	84.6	90.6	300	280	91.3	76.4	21.5	11.3
MAX	69	528	961	129	273	500	1500	1750	677	503	161	29
MIN	1.5	24	64	24	34	36	56	45	13	12	9.1	8.8
CFSM	.13	.94	2.17	.35	.56	.60	2.00	1.87	.61	.51	.14	.08
IN.	.15	1.05	2.50	.41	.59	.70	2.23	2.15	.68	.59	.16	.08

CAL YR 1982 TOTAL 62427.1 MEAN 171 MAX 3500 MIN 1.5 CFSM 1.14 IN 15.48
WTR YR 1983 TOTAL 45509.5 MEAN 125 MAX 1750 MIN 1.5 CFSM .83 IN 11.29

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 mi^2 (1,060 km^2).

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

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

GAGE.--Water-stage recorder. 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 fair. Small diversion 12.5 mi (20.1 km) upstream from gage for municipal supply of Archbold. Diversion averaged 2.19 ft^3/s (0.062 m^3/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.--50 years, 321 ft^3/s (9.091 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,800 ft^3/s (221 m^3/s) Mar. 15, 1982, gage height, 18.36 ft (5.600 m); minimum daily discharge, 3.9 ft^3/s (0.11 m^3/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 ft^3/s (215 m^3/s). Flood in 1937 reached a stage of 15.0 ft (4.57 m), from information by local resident, discharge, 6,000 ft^3/s (170 m^3/s).

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 1,850 ft^3/s (52.4 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Apr. 16	1800	2120	60.0	12.76	3.889	June 30	2100	3490	98.8	14.10	4.298
May 4	0400	*4500	127	*15.09	4.599						

Minimum daily discharge, 17 ft^3/s (0.48 m^3/s) Oct. 5, Sept. 14-17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	31	829	759	160	212	1280	997	231	3250	36	28
2	21	162	855	455	235	204	962	2640	212	2570	60	25
3	19	398	709	339	504	197	900	3910	197	1930	70	22
4	18	578	802	283	586	190	906	4330	191	1300	60	21
5	17	715	1030	247	475	184	978	3590	188	660	72	19
6	18	594	1310	237	280	179	963	2870	197	334	63	19
7	21	339	1500	229	220	187	891	2320	251	242	55	19
8	22	239	1360	219	190	273	873	1910	265	203	48	20
9	25	205	1120	205	170	540	963	1510	236	174	43	19
10	24	183	702	202	155	698	1200	1170	204	161	39	19
11	24	169	421	215	140	766	1350	908	179	170	36	20
12	24	165	314	231	135	637	1460	681	166	147	35	19
13	25	184	261	227	135	426	1410	507	160	126	41	18
14	25	238	219	200	135	317	1630	411	149	111	57	17
15	27	247	231	165	150	269	1920	364	139	100	70	17
16	28	223	402	150	150	240	2070	330	135	91	60	17
17	30	200	628	135	260	222	1970	293	131	83	43	17
18	31	184	716	125	390	211	1660	253	124	76	39	19
19	30	171	610	120	388	212	1310	249	113	75	36	19
20	29	190	457	120	399	218	990	291	105	79	34	20
21	28	376	428	125	440	222	697	294	99	87	31	25
22	28	559	378	130	460	224	505	330	93	94	31	37
23	27	641	329	130	463	224	408	519	87	122	31	38
24	27	650	420	145	428	224	350	593	82	118	31	34
25	27	625	764	155	360	224	311	552	77	106	28	29
26	27	603	1230	135	289	226	281	408	72	97	25	26
27	27	479	1460	130	242	385	259	314	74	77	25	24
28	27	374	1700	130	222	944	246	267	1470	63	28	24
29	27	499	1620	130	---	1210	247	247	2720	54	71	22
30	26	696	1420	135	---	1550	498	267	3340	39	55	19
31	26	---	1150	145	---	1560	---	253	---	38	35	---
TOTAL	778	10917	25375	6353	8161	13375	29488	33578	11687	12777	1388	672
MEAN	25.1	364	819	205	291	431	983	1083	390	412	44.8	22.4
MAX	31	715	1700	759	586	1560	2070	4330	3340	3250	72	38
MIN	17	31	219	120	135	179	246	247	72	38	25	17

CAL YR 1982 TOTAL 182630 MEAN 500 MAX 7640 MIN 16
WTR YR 1983 TOTAL 154549 MEAN 423 MAX 4330 MIN 17

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 (9.6 km) upstream from Ottawa River, and 7.3 mi (11.7 km) downstream from Jennings Creek.

DRAINAGE AREA.--332 mi^2 (860 km^2).

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

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

GAGE.--Water-stage recorder. Datum of gage is 713.6 ft (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 periods of no gage height record, Apr. 4 to May 25, Aug. 31 to Sept. 28, which are poor. 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 2,302 mil gal (8.71 hm^3), equivalent to a mean withdrawal of 9.8 ft^3/s (0.28 m^3/s). No releases have been made for low-flow augmentation. Some diversion from Grand Lake to Auglaize River basin through Miami and Erie Canal into Jennings Creek at a point 9.2 mi (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.--57 years, 284 ft^3/s (8.043 m^3/s), 11.62 in/yr (295 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 12,000 ft^3/s (340 m^3/s) Jan. 23, 1959; maximum gage height, 20.30 ft (6.187 m) Jan. 23, 1959, from floodmark (ice jam); minimum daily discharge, 2.6 ft^3/s (0.07 m^3/s) Sept 6, 1983, estimated from observer inspections during period of no gage height record; minimum recorded daily discharge, 4.9 ft^3/s (0.14 m^3/s) Oct. 7, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharges, about 3,000 ft^3/s (85.0 m^3/s) May 2, gage height unknown; above base of 2700 ft^3/s (76.5 m^3/s); minimum daily, 2.6 ft^3/s (0.07 m^3/s) Sept. 6, estimated from observer inspections during period of no gage height record.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	54	520	284	125	73	116	1300	91	131	45	4.9
2	26	87	294	221	229	72	260	2700	81	102	41	4.1
3	22	103	198	180	871	72	1270	1700	76	83	35	3.5
4	27	93	168	151	748	71	1100	1100	78	96	31	3.2
5	16	82	200	138	380	70	940	800	71	136	32	2.9
6	14	57	214	127	245	68	760	600	78	120	29	2.6
7	15	46	159	120	209	69	650	470	82	77	25	4.4
8	18	34	112	110	160	96	960	380	79	59	24	7.2
9	17	28	87	101	145	226	560	310	73	52	24	10
10	17	24	88	97	126	253	690	660	68	46	20	14
11	18	22	82	92	114	161	800	540	64	43	16	18
12	17	29	71	88	112	108	1100	490	58	40	21	10
13	24	83	63	84	96	88	1600	435	54	38	17	8.1
14	27	65	57	80	92	81	2100	390	52	37	12	7.3
15	20	47	56	76	91	74	1500	350	51	35	11	7.5
16	19	44	611	70	94	65	1200	320	54	35	11	11
17	18	34	1410	74	115	59	1000	285	51	32	11	8.5
18	16	29	735	65	157	58	760	255	54	31	11	8.9
19	15	26	452	61	179	68	500	230	55	32	14	10
20	14	37	646	58	155	65	350	210	50	31	12	11
21	12	280	567	56	133	350	280	195	47	29	8.7	10
22	12	633	333	63	118	644	230	175	50	35	6.1	10
23	11	444	262	86	115	431	200	215	54	35	4.9	12
24	12	1050	266	134	108	271	170	265	49	32	4.4	14
25	14	810	567	167	102	191	140	200	46	32	5.7	11
26	19	374	969	155	90	146	120	169	43	34	8.7	9.9
27	19	373	656	127	79	143	100	144	40	32	9.2	9.0
28	18	619	1620	108	75	158	110	121	82	29	7.8	13
29	17	1590	1700	106	---	156	130	110	87	29	6.1	11
30	16	1140	697	108	---	110	500	99	100	30	4.7	9.4
31	23	---	398	125	---	107	---	98	---	38	6.1	---
TOTAL	569	8337	14258	3512	5263	4604	20196	15316	1918	1611	514.4	266.7
MEAN	18.4	278	460	113	188	149	673	494	63.9	52.0	16.6	8.89
MAX	36	1590	1700	284	871	644	2100	2700	100	136	45	18
MIN	11	22	56	56	75	58	100	98	40	29	4.4	2.6
CFSM	.06	.84	1.39	.34	.57	.45	2.03	1.49	.19	.16	.05	.03
IN.	.06	.93	1.60	.39	.59	.52	2.26	1.72	.21	.18	.06	.03

CAL YR 1982 TOTAL 148954.0 MEAN 408 MAX 5540 MIN 11 CFSM 1.23 IN 16.69
WTR YR 1983 TOTAL 76365.1 MEAN 209 MAX 2700 MIN 2.6 CFSM .63 IN 8.56

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 mi^2 (896 km^2).

PERIOD OF RECORD.--October 1923 to December 1935, October 1940 to current year. Monthly discharge only for October 1923, published in WSP 1307.

REVISED RECORDS.--WSP 974: 1942. WSP 1054: 1927-30, 1933(M), 1945. WSP 1387: 1926, 1928(M), 1930(M), 1952. WSP 1912: Drainage area. WRD-OH-81-2: 1959, 1975 (M).

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.--55 years, 251 ft^3/s (7.108 m^3/s), 9.85 in/yr (250 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,000 ft^3/s (368 m^3/s) June14, 1981, gage height, 17.43 ft (5.313 m) from measurement made on peak; minimum daily, 0.4 ft^3/s (0.011 m^3/s) Aug. 27, Sept. 3, 1934.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a stage of 18.5ft (5.64 m); discharge, 22,000 ft^3/s (623 m^3/s), from rating curve extended above 10,000 ft^3/s (283 m^3/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge 3,140 ft^3/s (88.9 m^3/s) May 3, gage height 8.59 ft (2.618 m); above base of 2,800 ft^3/s (79.3 m^3/s); minimum daily discharge, 11 ft^3/s (0.31 m^3/s) Sept. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	77	540	225	73	51	112	972	68	555	58	29
2	20	186	360	177	120	51	128	2550	55	560	42	21
3	19	189	300	146	378	50	203	2910	59	636	35	17
4	19	121	250	120	357	51	303	2340	71	348	44	16
5	20	66	205	105	197	47	239	1010	52	344	38	17
6	19	48	170	94	175	52	191	543	70	197	34	40
7	20	39	135	94	160	73	282	388	92	122	32	61
8	21	35	115	82	110	106	300	694	83	89	30	33
9	19	34	96	73	92	135	474	856	59	71	29	25
10	19	32	92	73	76	114	1850	458	50	65	29	20
11	19	48	90	77	56	101	1470	312	52	58	38	17
12	19	63	73	80	52	96	753	244	56	52	32	18
13	18	52	66	75	50	94	577	202	54	47	28	18
14	18	40	69	69	74	85	1660	175	52	44	25	17
15	18	36	113	64	63	75	2260	183	48	41	25	16
16	17	34	1290	47	67	63	1400	166	49	38	26	17
17	16	33	1050	47	164	55	634	158	46	75	26	16
18	17	31	535	48	200	53	454	137	43	404	26	14
19	18	30	415	48	177	64	327	133	82	195	27	15
20	22	52	549	49	142	71	252	128	162	79	26	15
21	20	160	405	55	120	204	202	116	108	66	25	37
22	18	300	263	66	104	379	168	136	80	149	24	18
23	18	430	253	84	101	283	146	270	62	98	25	15
24	16	700	365	86	91	216	129	230	54	69	23	13
25	17	460	485	88	79	172	113	147	47	56	22	12
26	17	310	556	90	64	120	99	134	45	46	21	12
27	16	370	574	73	53	134	87	125	42	41	21	11
28	16	290	1660	52	51	233	99	91	110	39	21	12
29	16	1000	1330	73	---	190	88	116	285	35	20	12
30	18	740	604	84	---	150	249	113	220	34	22	12
31	26	---	324	82	---	125	---	78	---	67	60	---
TOTAL	577	6006	13332	2626	3446	3693	15249	16115	2356	4720	934	596
MEAN	18.6	200	430	84.7	123	119	508	520	78.5	152	30.1	19.9
MAX	26	1000	1660	225	378	379	2260	2910	285	636	60	61
MIN	16	30	66	47	50	47	87	78	42	34	20	11
CFSM	.05	.58	1.24	.25	.36	.34	1.47	1.50	.23	.44	.09	.06
IN.	.06	.65	1.43	.28	.37	.40	1.64	1.73	.25	.51	.10	.06

CAL YR 1982 TOTAL 152924 MEAN 419 MAX 5960 MIN 15 CFSM 1.21 IN 16.44
WTR YR 1983 TOTAL 69650 MEAN 191 MAX 2910 MIN 11 CFSM .55 IN 7.49

04191500 AUGLAIZE RIVER NEAR DEFIANCE, OH

LOCATION.--Lat 41°14'14", long 84°23'59", in NE 1/4 sec. 9, T.3 N. R.4 E., Defiance County, Hydrologic Unit 04100007, on right bank in former powerplant at 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 mi^2 (6,004 km^2).

PERIOD OF RECORD.--May to August 1903 (gage heights only), April 1915 to current year. Monthly discharges only for some periods, published in WSP 1307.

REVISED RECORDS.--WSP 954: 1941. WSP 1912: Drainage area. WRD OH-72-1: 1966 (M).

GAGE.--Water-stage recorder. Datum of gage is 659.70 ft (201.077 m) National Geodetic Vertical Datum of 1929. May 20 to Aug. 8, 1903, non-recording 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 downstream 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. Dec. 7, 1933 to Sept. 30, 1982, stilling well 125 ft (38 m) downstream from dam at present datum.

REMARKS.--Records good except those for period missing record, Nov. 4, to Feb. 2, which are poor. Flow regulated by dam at former powerplant at station; reservoir capacity, 9,800 acre-ft (12.1 hm^3), operation of plant discontinued Jan. 10, 1963; occasional gate operation subsequently. Some deversion 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.--68 years, 1,718 ft^3/s (48.65 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 52,500 ft^3/s (1,490 m^3/s) Feb.16, 1950, Feb. 12, 1959, gage height, 26.4 ft (8.05 m), from graph based on hourly powerplant tailwater-gage readings, and 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 ft^3/s (0.014 m^3/s) Oct. 13, 14, 1952 during repair to powerplant dam.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 22,000 ft^3/s (623 m^3/s) May 4, gage height 17.33 ft (5.282 m); minimum daily, 33 ft^3/s (0.93 m^3/s) Oct. 22, Aug. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	197	94	5400	2150	500	418	790	2600	536	1810	149	49
2	153	609	2100	1550	1380	404	680	14300	491	2060	185	49
3	125	827	1400	1300	5140	400	900	19000	428	1950	177	53
4	96	740	1200	1150	6110	384	7500	21200	401	1670	203	66
5	85	660	1050	990	3680	366	8900	14600	394	2880	243	84
6	83	580	1350	900	2480	381	4390	8100	570	2250	178	77
7	82	450	1500	840	1650	379	4740	4960	1170	1290	142	65
8	71	330	1650	790	1180	475	7970	1960	1190	777	122	63
9	63	230	780	720	923	958	5590	1560	988	528	94	107
10	80	190	680	660	762	1180	5630	3370	712	464	88	128
11	84	130	570	610	622	1010	7240	2500	630	481	87	105
12	88	150	500	580	603	788	6610	1630	485	404	73	86
13	74	740	430	540	553	641	4940	1220	382	305	85	67
14	94	540	370	500	489	553	8190	1040	330	243	88	60
15	62	420	320	470	504	513	14100	900	302	201	84	59
16	52	330	1300	440	522	473	13200	852	299	172	76	71
17	56	270	9000	410	733	430	8590	822	297	154	83	56
18	61	210	12500	380	1100	409	4290	743	288	136	80	80
19	62	150	3600	350	1420	459	2790	674	260	134	70	82
20	115	170	3500	330	1420	549	1540	583	292	350	66	82
21	34	900	5600	320	1190	1060	1360	592	323	390	63	79
22	33	5000	2500	340	986	3490	1280	657	342	333	58	80
23	41	3800	1800	370	847	3500	1070	863	354	260	33	89
24	48	3000	1650	410	769	2890	927	1070	307	259	37	95
25	52	10000	1850	780	683	2310	853	1100	261	262	46	92
26	86	4000	5400	1450	611	1820	762	940	232	222	48	87
27	76	2200	8200	880	525	2470	659	787	202	180	52	79
28	76	3300	6000	620	453	4010	629	665	1720	153	54	107
29	84	12000	13500	550	---	2920	658	591	5280	129	52	83
30	70	14000	15000	510	---	1800	853	563	3110	109	55	78
31	74	---	3100	490	---	1000	---	528	---	140	50	---
TOTAL	2457	66020	113800	22380	37835	38440	127631	110970	22576	20696	2921	2358
MEAN	79.3	2201	3671	722	1351	1240	4254	3580	753	668	94.2	78.6
MAX	197	14000	15000	2150	6110	4010	14100	21200	5280	2880	243	128
MIN	33	94	320	320	453	366	629	528	202	109	33	49

CAL YR 1982 TOTAL 1099843 MEAN 3013 MAX 52300 MIN 33
WTR YR 1983 TOTAL 568084 MEAN 1556 MAX 21200 MIN 33

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 mi^2 (14,362 km^2).

PERIOD OF RECORD.--October 1924 to December 1935, March 1939 to September 1974, October 1978 to current year.

REVISED RECORDS.--WSP 974: 1926-27, 1930. WSP 1387: 1925-28, 1946. WRD Ohio, 1970: Drainage Area.

GAGE.--Water-stage recorder. Datum of gage is 658.56 ft (200.729 m), National Geodetic Vertical Datum of 1929. Prior to Nov. 13, 1924, nonrecording gage at same site and datum.

REMARKS.--Records good. 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.--51 years, 4,182 ft^3/s (118.4 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 104,000 ft^3/s (2,945 m^3/s) Mar. 15, 1982, gage height, 15.87 ft (4.837 m); minimum discharge, 2 ft^3/s (0.057 m^3/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 ft^3/s (651 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Dec. 26	2000	28,800	816	6.40	1.951	Apr. 15	1700	30,300	858	6.57	2.003
Apr. 4	1400	24,400	691	5.89	1.795	May 3	2100	*44,800	1269	*8.21	2.502

Minimum daily discharge, 180 ft^3/s (5.10 m^3/s) Sept. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	605	427	12200	10400	1950	1950	8030	9780	2290	8750	488	266
2	503	3780	9030	7890	2920	1670	9460	30400	2100	8300	875	242
3	461	10300	7420	5430	9100	1650	21500	42900	1830	8740	858	249
4	432	8290	11500	4070	11600	1640	23700	43700	1750	7810	764	236
5	385	6890	15000	3590	9060	1380	18500	35800	1730	7970	848	242
6	383	5480	14300	3070	6540	1390	13900	27100	1770	6570	838	249
7	391	4310	12300	2660	4920	1420	13400	21700	3220	4210	713	233
8	360	3250	9990	2430	3990	1800	16200	16700	3970	2800	594	210
9	320	2540	8000	2200	3300	2900	14800	12200	3250	1980	473	248
10	297	2050	6620	2050	2670	3430	16600	10900	2680	1610	398	303
11	318	1490	5490	1960	2150	3330	18500	8620	3360	1570	364	291
12	353	1510	4350	1900	1990	3170	17300	6660	2600	1280	347	256
13	332	1550	3300	1900	1750	2840	15200	5310	1850	1080	352	209
14	323	1710	2630	1870	1570	2560	21200	4550	1540	931	375	191
15	313	1700	2310	1760	1530	2180	29700	3990	1150	730	384	180
16	275	1630	5680	1530	1480	1790	28200	3590	1280	676	352	195
17	266	1680	12200	1370	1930	1750	21600	3110	1310	626	349	194
18	288	1460	12300	1010	2940	1470	14900	2820	1150	570	370	196
19	328	1340	9400	907	4330	1550	11800	2650	1020	501	354	203
20	373	2150	7860	943	4900	1710	9370	2260	811	609	347	242
21	425	4460	7800	983	4840	2100	7460	2370	839	684	347	266
22	361	6370	6860	1070	4580	4270	6120	2580	834	763	315	236
23	273	6810	6090	1220	4130	4850	4800	4450	826	693	278	326
24	278	9010	6560	1490	3830	4730	4040	5300	794	647	252	380
25	287	9820	12900	1720	3380	4520	3510	4710	716	654	235	347
26	311	7320	27000	1740	3100	4220	3040	4090	637	629	246	327
27	318	5850	27400	1740	2400	6680	2650	3520	627	779	231	304
28	308	7000	26800	1580	2260	12900	2550	3060	7780	749	207	324
29	311	13600	26100	1510	---	13800	2460	2710	12100	496	249	338
30	307	14800	19800	1560	---	11700	3680	2470	8730	509	297	278
31	349	---	14200	1690	---	9520	---	2340	---	498	276	---
TOTAL	10834	148577	353390	75243	109140	120870	384170	332340	74544	74414	13376	7761
MEAN	349	4953	11400	2427	3898	3899	12810	10720	2485	2400	431	259
MAX	605	14800	27400	10400	11600	13800	29700	43700	12100	8750	875	380
MIN	266	427	2310	907	1480	1380	2460	2260	627	496	207	180

CAL YR 1982 TOTAL 2869572 MEAN 7862 MAX 98800 MIN 262
WTR YR 1983 TOTAL 1704659 MEAN 4670 MAX 43700 MIN 180

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 mi^2 (16,351 km^2).

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, 156 micromhos Mar. 14, 1982.
pH: Maximum, 11.4 units Jan. 16, 1965; minimum, 5.0 units Nov. 24, 1968.
WATER TEMPERATURES: Maximum, 34.0°C July 1, 1963; 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, 1,170 micromhos Jan. 4; minimum, 324 micromhos May 3, 4.
pH: Maximum recorded, 9.6 units Mar. 22,23; minimum recorded, 7.4 units on Apr. 12, 13.
WATER TEMPERATURES: Maximum, 32.5°C July 19; minimum, 0.0°C on many days during winter periods.
DISSOLVED OXYGEN: Maximum recorded, 16.5 mg/L May 24; minimum recorded, 2.4 mg/L Aug. 21.

04193490 MAUMEE RIVER NEAR WATERVILLE, OH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	735	717	729	792	747	785	504	498	501	447	429	437
2	741	732	737	768	705	730	543	501	512	471	450	460
3	741	720	739	819	741	775	522	513	517	498	471	483
4	747	744	744	738	525	611	528	516	523	1170	498	610
5	756	738	745	534	450	474	540	474	516	771	489	534
6	759	741	747	525	456	492	483	468	475	549	531	540
7	756	741	745	528	495	512	477	462	470	558	543	552
8	765	756	759	498	492	496	480	462	470	576	558	565
9	768	762	765	519	495	503	489	480	485	585	573	580
10	768	765	767	525	510	517	510	489	497	600	585	593
11	774	768	771	528	516	520	534	504	515	627	603	615
12	774	771	773	537	513	523	540	522	531	633	618	626
13	774	768	771	555	525	535	564	534	548	648	630	641
14	774	771	772	552	546	549	567	558	564	654	648	651
15	777	768	773	567	549	557	576	567	569	666	600	650
16	777	771	776	588	570	582	597	516	547	696	666	684
17	780	777	780	591	585	586	600	516	539	---	---	---
18	780	777	780	612	591	601	732	540	574	---	---	---
19	783	777	781	642	612	628	---	---	---	---	---	---
20	786	765	779	687	642	660	549	510	527	765	738	746
21	789	768	780	678	642	658	516	480	512	747	735	740
22	786	780	784	678	633	656	534	513	522	744	735	739
23	786	780	784	642	567	606	573	534	552	744	732	737
24	786	780	784	615	567	590	576	555	563	756	738	744
25	786	783	786	621	606	614	567	423	517	768	744	754
26	789	783	788	606	564	576	423	357	397	765	753	760
27	798	789	794	597	573	589	363	348	352	768	753	759
28	798	789	791	594	525	571	---	---	---	780	765	773
29	798	789	794	528	510	517	---	---	---	795	780	786
30	798	795	796	516	498	505	---	---	---	789	780	785
31	795	792	794	---	---	---	429	408	420	789	777	783
MONTH	798	717	771	819	450	584	732	348	508	1170	429	655

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	804	789	796	615	612	614	519	513	516	591	540	572
2	813	756	801	618	612	615	516	504	511	531	402	450
3	747	654	716	621	612	617	510	471	496	405	324	354
4	642	588	611	627	618	623	468	417	442	327	324	326
5	---	---	---	633	615	623	438	423	434	342	327	334
6	528	513	521	636	615	625	459	435	447	360	342	348
7	522	513	519	636	621	629	489	462	476	378	360	371
8	513	498	507	648	624	639	480	468	474	396	378	385
9	528	501	515	654	642	649	495	483	489	411	399	405
10	549	522	537	669	651	660	495	474	488	---	---	---
11	564	543	554	669	642	657	471	456	463	---	---	---
12	582	561	570	660	633	650	477	462	472	522	498	512
13	603	579	590	672	618	644	486	477	480	528	522	525
14	612	594	602	678	675	676	480	417	455	525	513	517
15	618	606	609	---	---	---	414	363	380	519	510	514
16	630	618	627	675	666	670	390	357	381	528	510	520
17	633	618	624	675	660	669	399	387	393	537	516	530
18	627	609	618	669	663	665	426	402	411	540	531	535
19	642	624	631	672	663	669	456	426	441	549	537	543
20	675	642	660	675	666	671	474	456	464	558	543	552
21	669	642	651	669	660	665	495	477	486	567	555	560
22	684	648	672	696	663	677	510	495	504	573	552	567
23	684	651	670	663	651	657	522	507	514	576	549	569
24	648	618	629	687	648	665	537	519	525	594	561	580
25	615	609	612	696	660	690	552	540	544	621	567	596
26	621	612	615	678	624	646	567	555	562	606	600	603
27	618	612	614	624	603	617	576	567	571	609	552	579
28	621	612	617	603	564	590	588	567	577	573	552	564
29	---	---	---	558	492	508	594	588	592	588	573	581
30	---	---	---	507	498	505	600	579	592	600	582	593
31	---	---	---	522	504	514	---	---	---	603	597	602
MONTH	813	498	618	696	492	633	600	357	486	621	324	506

04193490 MAUMEE RIVER NEAR WATERVILLE, OH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	609	597	602	510	465	487	510	498	503	582	576	580
2	606	600	604	474	465	468	516	504	512	582	570	579
3	615	609	612	489	474	481	507	477	495	579	570	575
4	624	612	618	495	459	481	477	456	471	579	573	577
5	627	618	620	507	465	494	471	441	459	582	579	580
6	621	612	617	522	492	504	477	426	459	582	576	581
7	627	615	622	516	492	501	474	447	466	585	579	583
8	633	621	627	528	516	524	468	456	463	588	579	585
9	633	627	630	531	528	529	480	468	472	594	585	590
10	633	606	624	531	519	525	480	468	475	600	594	596
11	636	612	626	522	498	509	492	474	483	603	594	600
12	648	627	635	504	483	496	513	495	502	621	600	612
13	633	618	626	501	489	497	528	516	523	633	618	624
14	618	585	604	504	495	499	540	531	536	633	627	629
15	600	564	584	504	495	501	558	543	551	630	627	629
16	573	555	564	498	486	493	567	555	561	627	615	624
17	555	534	546	495	483	490	570	564	567	624	618	620
18	543	528	534	498	495	496	576	564	571	618	612	616
19	552	540	546	---	---	---	576	567	573	615	615	615
20	570	552	562	---	---	---	582	570	577	618	609	615
21	579	567	573	---	---	---	588	579	583	615	609	612
22	588	570	578	---	---	---	588	582	586	612	609	610
23	570	543	560	---	---	---	594	585	590	615	609	612
24	561	489	533	---	---	---	594	591	592	621	615	616
25	519	489	505	---	---	---	594	585	590	621	615	619
26	519	495	506	489	447	473	594	588	590	636	624	628
27	537	516	526	486	438	469	591	585	590	639	630	634
28	621	534	560	528	489	513	591	576	587	642	633	637
29	612	414	557	534	528	532	588	573	581	645	636	641
30	483	408	455	534	495	525	582	573	578	645	639	642
31	---	---	---	510	483	500	582	576	579	---	---	---
MONTH	648	408	579	534	438	499	594	426	538	645	570	609
YEAR	1170	324	584									

PH (STANDARD UNITS), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

04193490 MAUMEE RIVER NEAR WATERVILLE, OH--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	8.7	8.5	8.7	8.6	8.4	8.5			
2	---	---	---	8.7	8.4	8.6	8.7	8.3	8.4			
3	---	---	---	8.5	8.4	8.5	8.5	8.1	8.2			
4	---	---	---	8.5	8.4	8.5	8.1	7.9	8.0			
5	---	---	---	8.6	8.4	8.5	7.9	7.8	7.9			
6	---	---	---	8.6	8.4	8.5	7.9	7.9	7.9			
7	---	---	---	8.5	8.3	8.4	7.9	7.7	7.8			
8	---	---	---	8.5	8.3	8.4	7.9	7.8	7.8			
9	---	---	---	8.4	8.2	8.3	8.0	7.8	7.9			
10	---	---	---	8.4	8.2	8.3	7.8	7.7	7.7			
11	---	---	---	8.5	8.3	8.4	7.7	7.6	7.6			
12	---	---	---	8.6	8.5	8.6	7.8	7.4	7.5			
13	---	---	---	8.6	8.4	8.5	7.4	7.4	7.4			
14	---	---	---	8.5	8.5	8.5	---	---	---			
15	---	---	---	---	---	---	---	---	---			
16	---	---	---	8.6	8.5	8.5	---	---	---			
17	8.4	8.2	8.4	8.7	8.5	8.6	---	---	---			
18	9.2	8.5	8.8	8.6	8.5	8.6	---	---	---			
19	8.8	8.6	8.7	8.7	8.5	8.6	---	---	---			
20	8.7	8.6	8.7	9.1	8.7	8.8	---	---	---			
21	8.7	8.5	8.6	9.3	9.1	9.2	---	---	---			
22	8.6	8.5	8.5	9.6	9.3	9.4	---	---	---			
23	8.4	8.3	8.4	9.6	9.3	9.4	---	---	---			
24	8.5	8.4	8.4	9.4	9.1	9.2	---	---	---			
25	8.8	8.5	8.7	9.3	9.0	9.2	---	---	---			
26	8.9	8.8	8.9	9.0	8.7	8.8	---	---	---			
27	8.9	8.8	8.8	8.7	8.4	8.5	---	---	---			
28	8.8	8.6	8.7	8.4	8.3	8.3	---	---	---			
29	---	---	---	8.4	8.4	8.4	---	---	---			
30	---	---	---	8.6	8.4	8.5	---	---	---			
31	---	---	---	8.6	8.4	8.5	---	---	---			
MONTH	9.2	8.2	8.6	9.6	8.2	8.6	8.7	7.4	7.9			

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1				---	---	---	8.8	8.5	8.6	8.7	8.1	8.2
2				---	---	---	8.6	8.3	8.5	8.7	8.2	8.4
3				---	---	---	9.0	8.5	8.7	8.8	8.5	8.7
4				---	---	---	9.0	8.5	8.7	8.9	8.5	8.6
5				---	---	---	8.8	8.3	8.6	8.6	8.4	8.5
6				---	---	---	8.9	8.1	8.4	8.5	8.3	8.4
7				---	---	---	8.8	8.0	8.4	8.6	8.3	8.4
8				---	---	---	9.1	8.2	8.7	8.8	8.2	8.4
9				---	---	---	9.1	8.3	8.7	8.6	8.2	8.5
10				---	---	---	9.0	8.2	8.6	8.6	8.4	8.5
11				---	---	---	9.1	7.8	8.3	8.8	8.4	8.6
12				---	---	---	8.6	8.3	8.4	8.7	8.2	8.5
13				---	---	---	9.0	8.3	8.6	8.7	8.4	8.5
14				---	---	---	8.9	8.6	8.8	8.5	8.4	8.5
15				---	---	---	8.8	8.2	8.6	8.5	8.3	8.5
16				---	---	---	8.9	8.4	8.6	8.5	8.3	8.4
17				---	---	---	8.8	8.4	8.6	8.7	8.4	8.5
18				---	---	---	8.7	8.1	8.3	8.5	8.3	8.5
19				---	---	---	8.9	8.4	8.6	8.6	8.4	8.5
20				---	---	---	8.8	8.4	8.6	8.6	8.5	8.5
21				---	---	---	8.7	7.8	8.5	8.7	8.4	8.5
22				---	---	---	8.5	8.3	8.4	8.6	8.4	8.5
23				---	---	---	---	---	---	8.8	8.5	8.5
24				---	---	---	---	---	---	8.7	8.4	8.6
25				---	---	---	---	---	---	8.7	8.6	8.6
26				8.6	8.0	8.3	8.6	8.3	8.4	8.7	8.5	8.6
27				8.4	7.9	8.2	8.6	8.2	8.4	8.8	8.6	8.6
28				8.6	7.8	8.3	8.7	8.0	8.3	8.7	8.4	8.5
29				8.5	8.1	8.4	8.7	8.2	8.5	8.9	8.4	8.6
30				8.7	8.2	8.4	8.6	8.0	8.3	8.7	8.4	8.6
31				8.5	8.2	8.4	8.4	8.1	8.3	---	---	---
MONTH				8.7	7.8	8.3	9.1	7.8	8.5	8.9	8.1	8.5

YEAR	9.6	7.4	8.4

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

STREAMS TRIBUTARY TO LAKE ERIE

04193490 MAUNEE RIVER NEAR WATERVILLE, OH--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	19.0	17.5	18.0	13.5	11.5	12.5	7.0	6.0	6.5	3.0	2.5	2.5
2	18.5	18.0	18.0	15.0	13.5	14.0	8.5	7.0	7.5	2.5	2.0	2.5
3	20.0	18.0	19.0	14.0	12.5	13.0	10.0	8.5	9.0	2.5	1.5	1.5
4	18.5	18.0	18.0	12.5	11.0	12.0	10.0	10.0	10.0	1.5	.5	1.0
5	18.5	17.5	18.0	11.0	8.5	10.0	11.0	9.5	10.5	1.0	.5	1.0
6	20.0	18.0	19.0	8.5	7.5	8.0	10.5	9.5	10.0	1.5	1.0	1.0
7	20.0	19.0	19.5	8.0	7.0	7.5	9.0	8.5	9.0	1.5	1.0	1.5
8	19.0	18.0	18.5	8.5	7.5	8.0	8.5	7.5	8.0	1.0	1.0	1.0
9	18.5	17.5	18.0	8.0	8.0	8.0	7.5	5.0	6.0	1.5	.5	1.0
10	18.5	17.0	17.5	8.5	7.5	8.0	5.0	4.5	4.5	2.5	1.5	2.0
11	17.5	16.0	17.0	9.0	8.5	9.0	4.5	3.0	4.0	2.0	1.5	2.0
12	16.0	15.0	15.5	9.5	8.5	9.0	3.0	2.0	2.5	1.5	.5	.5
13	15.0	14.0	14.5	8.0	5.5	6.5	2.0	1.0	1.5	.5	.0	.5
14	14.0	12.5	13.5	5.5	5.0	5.0	1.5	1.0	1.0	1.0	.5	1.0
15	13.0	12.0	12.5	5.0	4.0	4.5	2.5	1.5	2.0	1.0	.0	.5
16	12.0	10.5	11.5	4.5	4.0	4.0	4.0	2.5	3.5	.0	.0	.0
17	12.0	10.0	10.5	5.0	4.0	4.5	3.5	2.5	3.0	---	---	---
18	11.0	10.0	10.5	5.5	4.5	5.0	2.5	2.0	2.0	---	---	---
19	12.0	10.5	11.0	6.5	5.5	6.0	3.0	2.0	3.0	---	---	---
20	11.5	10.0	11.0	8.5	7.0	7.5	3.0	3.0	3.0	.5	.0	.0
21	10.0	9.5	10.0	9.0	8.5	9.0	2.5	2.0	2.5	.0	.0	.0
22	10.0	9.0	9.5	8.5	7.5	8.0	2.0	1.5	2.0	.0	.0	.0
23	9.0	8.5	9.0	9.0	8.0	8.5	4.0	2.0	3.0	.5	.0	.0
24	9.0	8.0	8.5	8.5	6.5	7.5	5.5	4.0	4.5	.0	.0	.0
25	8.5	8.5	8.5	6.0	5.5	5.5	8.0	5.5	7.0	.0	.0	.0
26	9.5	8.5	9.0	5.5	5.0	5.5	7.5	7.0	7.5	.0	.0	.0
27	10.5	8.5	9.5	5.0	4.5	4.5	7.5	7.0	7.0	.0	.0	.0
28	10.5	9.5	10.0	5.5	3.5	4.5	---	---	---	.0	.0	.0
29	11.0	9.5	10.0	6.0	5.5	5.5	---	---	---	.0	.0	.0
30	11.0	10.0	10.5	6.0	5.0	5.5	---	---	---	.5	.0	.0
31	11.5	11.0	11.0	---	---	---	4.0	3.0	3.5	.0	.0	.0
MONTH	20.0	8.0	13.5	15.0	3.5	7.5	11.0	1.0	5.0	3.0	.0	.5

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

04193490 MAUMEE RIVER NEAR WATERVILLE, OH--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	17.5	15.0	16.5	23.0	21.0	22.0	27.0	25.5	26.0	27.5	25.0	25.5
2	17.5	16.0	17.0	24.5	21.5	22.5	26.0	25.0	25.5	28.0	24.5	25.5
3	17.5	17.0	17.0	26.0	23.0	24.0	27.5	25.5	26.5	27.5	24.5	25.5
4	19.0	16.5	17.5	25.0	23.5	24.5	27.0	26.0	26.5	27.0	24.5	26.0
5	20.0	17.5	18.5	23.5	22.5	23.0	27.0	26.0	26.5	26.5	25.0	25.5
6	19.5	17.5	18.5	23.5	21.0	22.5	28.0	26.5	27.0	26.0	24.5	25.5
7	19.0	16.0	17.5	24.5	21.5	23.0	28.5	27.0	27.5	25.5	24.0	24.5
8	19.5	16.5	18.0	24.5	22.0	23.5	29.5	27.5	28.5	27.0	23.5	24.5
9	20.5	17.5	19.0	24.5	23.0	23.5	28.5	27.0	27.5	25.5	23.0	24.5
10	22.0	19.5	20.5	24.5	23.0	23.5	28.0	26.0	27.0	26.0	23.5	25.0
11	23.5	21.0	22.0	25.5	23.0	24.5	28.0	24.5	25.5	27.5	24.5	25.5
12	24.5	22.0	23.0	28.0	24.5	25.5	24.5	23.5	24.0	25.0	23.0	24.0
13	25.0	23.0	24.0	27.0	25.5	26.0	26.0	23.0	24.0	23.0	21.5	22.5
14	25.5	24.0	25.0	27.5	26.0	27.0	26.5	23.5	24.0	21.5	20.0	20.5
15	25.5	24.0	24.5	29.0	27.0	28.0	27.0	23.5	24.5	20.5	19.5	20.0
16	26.0	24.0	25.0	30.0	28.0	29.0	27.5	24.0	25.5	19.5	19.0	19.5
17	25.5	24.0	24.5	29.5	28.0	29.0	26.5	24.5	25.5	20.0	18.0	19.0
18	25.5	23.5	24.5	29.5	27.5	28.5	27.5	25.0	25.5	20.0	18.5	19.0
19	25.0	22.5	23.5	32.5	27.5	29.5	29.5	26.0	27.5	21.5	19.5	20.5
20	23.0	22.0	22.5	29.5	28.0	29.0	31.5	28.0	29.5	22.0	20.5	21.0
21	24.0	23.0	24.0	31.5	28.0	29.0	31.0	27.5	28.5	21.0	19.0	20.0
22	26.0	24.0	24.5	29.0	27.5	28.0	29.0	27.0	28.0	18.5	16.0	17.0
23	27.5	25.0	26.0	30.0	27.5	28.5	27.5	26.5	27.0	16.5	14.0	15.0
24	29.0	25.5	27.0	30.0	27.0	28.5	26.5	25.5	26.0	15.0	14.0	14.5
25	28.0	26.5	27.0	28.0	26.5	27.5	28.5	25.5	26.5	14.5	13.5	14.0
26	28.5	26.5	27.5	27.0	26.5	27.0	27.5	26.5	27.0	16.0	14.0	15.0
27	28.0	26.5	27.0	28.0	26.0	26.5	28.5	26.0	27.0	17.5	15.0	15.5
28	26.5	23.5	25.0	27.5	26.0	27.0	29.0	26.5	27.5	18.5	15.5	16.0
29	23.0	20.5	22.0	27.0	26.5	26.5	29.5	26.5	28.0	20.0	16.0	17.0
30	22.0	20.5	21.0	28.0	25.5	26.0	28.5	26.5	27.5	18.5	17.0	18.0
31	---	---	---	27.0	26.0	26.5	27.0	26.0	26.5	---	---	---
MONTH	29.0	15.0	22.5	32.5	21.0	26.0	31.5	23.0	26.5	28.0	13.5	21.0
YEAR	32.5	.0	13.0									

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	8.1	6.0	7.4	9.4	8.9	9.1	11.5	11.3	11.4	12.2	11.9	12.1
2	7.3	6.0	6.7	9.6	8.1	8.8	11.4	11.2	11.3	12.4	12.2	12.3
3	8.7	6.3	7.6	9.5	8.3	9.0	11.2	11.0	11.1	12.6	12.4	12.5
4	7.4	6.3	7.0	8.3	7.4	7.9	11.0	10.8	10.9	13.3	12.5	12.9
5	8.0	5.9	6.8	8.5	7.3	7.8	10.8	10.1	10.5	13.2	13.1	13.1
6	9.2	6.2	7.6	9.2	8.5	8.9	10.5	10.2	10.3	13.2	13.1	13.1
7	8.7	7.1	7.8	9.2	9.0	9.1	10.5	10.2	10.3	13.1	13.0	13.1
8	8.1	6.6	7.1	9.1	8.9	9.0	10.8	10.3	10.6	13.3	13.1	13.2
9	7.4	6.3	6.8	10.2	8.9	9.3	11.6	10.8	11.3	13.7	13.2	13.4
10	8.2	6.2	7.1	12.1	10.1	11.2	11.8	11.6	11.7	13.6	13.3	13.5
11	8.2	6.9	7.5	11.7	11.2	11.4	12.0	11.8	11.9	14.2	12.9	13.6
12	8.1	6.9	7.5	11.3	11.1	11.2	12.5	11.9	12.2	14.8	13.3	14.5
13	8.5	6.9	7.6	11.6	11.2	11.4	12.8	12.4	12.6	14.9	14.6	14.7
14	8.9	7.4	8.0	12.0	11.4	11.7	12.9	12.6	12.7	15.0	14.6	14.7
15	9.1	7.8	8.3	12.0	11.8	11.9	12.8	12.3	12.6	15.4	14.7	15.0
16	8.7	8.0	8.3	11.9	11.6	11.8	12.3	11.7	12.0	15.2	14.0	14.3
17	10.6	8.0	8.9	11.8	11.6	11.7	12.6	12.2	12.4	---	---	---
18	10.3	9.4	10.0	11.7	11.4	11.5	12.9	12.6	12.7	---	---	---
19	9.8	9.1	9.4	11.5	11.2	11.3	12.8	12.3	12.5	---	---	---
20	9.1	8.3	8.6	11.5	10.7	11.1	12.4	12.3	12.3	15.9	15.6	15.8
21	9.2	8.2	8.6	10.6	10.0	10.5	12.7	12.2	12.5	16.0	15.5	15.7
22	9.1	7.9	8.5	10.7	10.5	10.6	12.7	12.6	12.6	15.8	15.4	15.5
23	9.9	8.9	9.4	10.7	10.4	10.5	12.7	12.4	12.6	15.5	15.2	15.3
24	9.9	9.4	9.7	10.7	10.1	10.5	12.4	12.0	12.2	15.5	15.1	15.3
25	9.8	9.4	9.6	11.0	10.7	10.9	12.1	11.0	11.7	15.7	15.2	15.4
26	10.1	9.2	9.7	11.2	10.8	11.0	11.1	10.4	10.8	16.3	15.4	15.9
27	10.3	9.5	9.8	12.0	11.2	11.6	12.5	10.4	11.0	16.4	15.9	16.1
28	11.7	8.8	9.3	12.0	11.4	11.8	---	---	---	16.3	14.8	15.8
29	11.1	10.3	10.7	11.5	11.3	11.4	---	---	---	15.2	14.4	14.8
30	10.4	10.0	10.2	11.6	11.5	11.5	---	---	---	14.7	14.1	14.3
31	9.8	9.2	9.5	---	---	---	11.9	11.5	11.7	14.8	13.8	14.3
MONTH	11.7	5.9	8.4	12.1	7.3	10.5	12.9	10.1	11.7	16.4	11.9	14.3

STREAMS TRIBUTARY TO LAKE ERIE

04193490 MAUMEE RIVER NEAR WATERVILLE, HO--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	15.5	14.3	14.9	14.1	12.5	13.7	11.4	11.2	11.3	10.0	9.1	9.4
2	14.7	13.7	14.1	15.2	13.4	14.1	11.3	10.6	11.0	9.5	8.3	8.9
3	13.5	12.9	13.2	15.6	13.1	14.2	10.6	9.8	10.2	8.3	8.1	8.3
4	15.3	12.9	14.8	15.5	11.1	13.5	10.4	9.9	10.2	8.3	8.2	8.3
5	---	---	---	15.1	12.3	13.8	10.5	10.0	10.2	8.6	8.3	8.5
6	15.2	14.9	15.1	15.1	12.2	13.6	10.7	10.3	10.5	8.6	8.5	8.6
7	15.4	15.2	15.3	14.4	12.0	13.3	10.6	10.1	10.3	8.6	8.5	8.5
8	15.3	14.2	14.5	14.4	11.5	12.8	10.7	10.5	10.6	8.9	8.6	8.7
9	14.1	14.1	14.1	12.8	11.3	11.9	10.9	10.7	10.8	8.8	8.4	8.7
10	14.4	14.1	14.2	12.1	11.2	11.7	10.8	10.6	10.7	---	---	---
11	14.4	14.2	14.4	12.2	11.0	11.5	10.7	10.6	10.6	---	---	---
12	14.4	14.2	14.4	13.8	11.6	12.4	10.9	10.6	10.8	10.5	9.7	10.3
13	14.5	14.2	14.4	14.1	12.1	13.3	10.8	10.6	10.8	11.0	10.0	10.5
14	14.4	14.1	14.2	13.4	11.9	12.4	10.6	10.1	10.4	10.7	9.9	10.3
15	14.1	12.9	13.5	---	---	---	11.3	9.8	10.4	10.8	9.8	10.2
16	13.7	12.6	13.1	13.8	12.5	13.4	11.8	8.1	9.6	12.0	10.4	11.1
17	14.7	13.1	13.9	13.6	11.6	12.6	11.5	10.2	10.8	12.2	10.6	11.3
18	14.4	13.9	14.1	13.1	10.8	11.8	10.4	10.1	10.2	12.3	10.7	11.4
19	14.2	13.5	13.8	12.7	11.2	11.7	10.7	10.4	10.5	11.6	10.2	10.9
20	14.4	13.3	13.8	13.5	10.6	12.0	11.0	10.8	10.9	13.0	10.5	11.7
21	14.1	13.4	13.7	14.7	12.0	13.4	10.8	10.1	10.6	14.0	10.8	12.3
22	13.5	13.0	13.2	14.5	13.3	13.8	10.2	9.2	9.9	12.9	10.5	11.6
23	14.1	12.1	13.1	14.4	12.6	13.5	9.9	9.1	9.4	13.2	10.1	11.5
24	13.5	12.2	12.6	15.0	12.3	13.5	10.6	9.9	10.2	16.5	10.2	13.0
25	12.9	11.9	12.3	14.3	12.5	13.3	10.4	9.9	10.1	13.7	10.2	11.5
26	13.6	12.3	12.9	12.9	12.0	12.4	10.7	9.3	9.9	11.8	8.8	10.4
27	13.7	12.3	13.0	11.9	11.2	11.6	11.6	9.2	10.3	11.5	9.2	10.3
28	14.0	12.4	13.2	11.2	11.0	11.1	11.1	9.6	10.2	10.5	8.7	9.5
29	---	---	---	11.5	11.1	11.3	11.8	9.6	10.5	11.1	8.7	9.7
30	---	---	---	11.6	11.2	11.5	10.6	9.6	10.0	10.6	9.3	9.8
31	---	---	---	11.5	11.3	11.4	---	---	---	11.2	9.2	10.1
MONTH	15.5	11.9	13.8	15.6	10.6	12.7	11.8	8.1	10.4	16.5	8.1	10.2

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	11.8	9.4	10.6	6.9	6.6	6.8	10.3	8.2	9.1	8.7	5.0	6.1
2	11.4	9.5	10.5	6.9	6.6	6.7	9.8	7.0	8.6	9.4	6.1	7.1
3	11.0	9.3	9.7	6.6	6.3	6.5	13.3	7.8	10.4	9.9	7.3	8.6
4	12.8	8.8	10.6	7.0	6.3	6.6	12.2	8.1	10.3	10.1	6.9	8.1
5	12.6	9.6	11.3	7.0	6.8	6.9	12.3	7.1	9.1	7.7	6.0	6.9
6	11.7	8.0	9.2	7.1	6.9	7.0	14.2	7.2	9.8	7.8	6.4	6.9
7	10.8	7.8	9.1	7.3	7.0	7.1	13.2	7.3	9.9	8.1	6.1	7.0
8	10.9	8.7	9.8	7.5	7.0	7.3	13.6	8.7	11.0	9.3	5.6	6.8
9	12.7	8.9	10.6	7.5	7.0	7.3	12.6	6.3	9.5	8.4	6.1	7.4
10	13.9	9.7	11.8	8.2	6.9	7.4	10.7	6.1	8.8	8.2	6.7	7.4
11	13.8	9.6	11.6	8.2	7.2	7.7	10.7	4.8	6.7	8.9	6.4	7.5
12	12.5	8.9	10.6	10.9	7.0	8.2	8.1	6.1	6.7	8.4	5.4	6.7
13	10.5	8.3	9.5	9.3	7.3	8.1	10.8	6.1	7.5	8.1	6.2	7.0
14	12.2	7.7	9.8	9.3	6.8	8.0	9.4	7.3	8.5	7.7	6.6	7.1
15	12.0	8.3	9.9	10.2	6.9	8.2	8.4	5.0	6.6	7.7	6.4	7.2
16	10.2	7.5	8.9	11.5	7.6	9.4	9.4	5.5	7.3	7.8	6.5	7.1
17	8.9	6.0	7.1	10.0	7.4	8.8	8.6	6.1	7.5	9.1	7.0	7.9
18	7.5	5.6	6.4	11.6	7.8	8.9	8.4	5.2	6.2	8.7	7.3	8.0
19	6.8	5.7	6.3	14.5	7.8	10.2	10.4	6.5	8.3	8.9	7.0	7.9
20	7.4	6.1	6.6	11.9	7.5	9.5	8.9	6.5	7.6	8.3	7.5	8.0
21	8.2	6.6	7.5	10.3	6.7	8.5	8.7	2.4	6.6	8.8	7.2	7.8
22	10.8	7.3	8.5	7.7	4.9	6.4	7.6	5.4	6.3	8.9	7.3	8.1
23	13.4	8.5	10.6	13.9	6.0	9.2	7.2	4.4	5.5	9.8	8.0	8.5
24	15.3	7.9	11.7	15.3	8.0	11.5	6.5	4.3	5.4	9.6	7.8	8.8
25	14.7	7.6	10.5	13.5	7.1	10.8	8.9	5.2	6.8	9.6	8.7	9.1
26	12.4	8.9	10.7	12.7	11.0	12.0	8.6	6.0	7.0	9.6	8.4	9.0
27	10.9	7.3	9.1	13.8	7.9	10.8	8.4	5.1	6.6	10.3	8.9	9.3
28	7.5	5.1	6.2	11.3	6.6	9.4	8.1	4.1	6.1	9.8	7.5	8.4
29	6.6	6.2	6.4	9.2	7.1	8.3	9.3	5.4	7.4	10.8	7.5	8.5
30	6.7	6.3	6.5	11.7	6.6	8.3	7.9	4.4	6.4	8.6	6.9	7.7
31	---	---	---	10.6	7.1	9.1	6.8	5.2	5.9	---	---	---
MONTH	15.3	5.1	9.3	15.3	4.9	8.4	14.2	2.4	7.7	10.8	5.0	7.7
YEAR	16.5	2.4	10.4									

04193490 MAUMEE RIVER NEAR WATERVILLED, OH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	729	789	501	438	798	615	516	567	600	485	503	579
2	738	726	512	459	807	615	510	432	603	468	512	579
3	741	780	516	483	732	618	497	347	612	480	497	576
4	744	564	522	507	614	624	435	327	618	489	471	576
5	744	458	530	527	---	621	435	333	618	500	459	579
6	746	494	476	540	522	624	446	348	618	504	459	582
7	744	513	471	552	519	629	477	372	621	498	468	585
8	759	498	471	563	507	639	474	384	627	525	462	585
9	765	501	486	579	512	650	489	405	630	528	471	588
10	768	516	498	594	536	660	489	---	627	525	474	594
11	771	519	513	615	551	659	461	---	627	509	483	600
12	773	522	530	627	569	653	470	513	636	495	501	612
13	771	533	545	642	588	630	480	525	627	498	522	624
14	771	549	564	651	597	675	467	516	608	498	537	629
15	774	557	570	651	606	---	375	513	590	501	552	630
16	777	585	543	684	627	669	383	521	564	492	561	627
17	780	585	537	---	623	669	390	530	549	489	567	621
18	780	600	573	---	618	665	411	534	531	495	570	615
19	780	630	---	---	630	669	441	543	546	---	573	615
20	780	654	527	744	659	672	462	552	564	---	576	615
21	780	662	513	740	648	665	486	558	573	---	582	612
22	783	660	519	738	677	672	504	567	579	---	587	609
23	783	612	549	738	672	657	513	573	564	---	591	612
24	786	588	563	744	629	663	525	581	543	---	591	615
25	786	612	551	753	612	693	543	603	507	---	591	618
26	789	572	402	762	615	641	564	603	507	477	591	627
27	795	593	351	759	612	621	570	576	525	473	591	633
28	792	585	---	774	618	600	576	564	548	518	588	636
29	795	516	---	786	---	495	591	582	578	533	582	642
30	795	506	---	786	---	506	594	594	459	528	579	642
31	795	---	420	785	---	516	---	603	---	501	579	---
MEAN	771	583	509	651	618	633	486	506	580	500	538	609

WTR YR 1983 MEAN 584 MAX 807 MIN 327

PH (STANDARD UNITS), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.4	8.6	8.0	7.6	---	8.7	8.5			---	8.6	8.2
2	8.3	8.3	8.0	7.7	---	8.6	8.4			---	8.6	8.4
3	8.4	8.3	7.9	7.9	---	8.5	8.2			---	8.7	8.7
4	8.3	7.8	7.8	8.1	---	8.5	8.0			---	8.7	8.6
5	8.4	7.8	7.8	8.1	---	8.5	7.9			---	8.6	8.5
6	8.5	7.7	7.8	8.0	---	8.5	7.9			---	8.4	8.4
7	8.4	7.9	7.8	8.0	---	8.4	7.8			---	8.5	8.4
8	8.4	7.9	7.9	8.1	---	8.4	7.8			---	8.8	8.3
9	8.3	7.9	8.2	8.1	---	8.3	7.9			---	8.6	8.5
10	8.4	8.0	8.3	8.0	---	8.3	7.7			---	8.6	8.5
11	8.4	8.0	---	7.9	---	8.4	7.6			---	8.4	8.5
12	8.5	8.0	---	---	---	8.6	7.6			---	8.4	8.4
13	8.5	8.3	---	---	---	8.5	7.4			---	8.5	8.5
14	8.6	8.4	---	---	---	8.5	---			---	8.8	8.5
15	8.7	8.5	---	---	---	---	---			---	8.6	8.5
16	8.8	8.6	---	---	---	8.5	---			---	8.6	8.4
17	8.9	8.6	---	---	8.4	8.5	---			---	8.6	8.5
18	9.0	8.4	---	---	8.8	8.6	---			---	8.3	8.5
19	9.0	8.4	---	---	8.8	8.6	---			---	8.6	8.5
20	9.0	8.2	---	---	8.7	8.8	---			---	8.5	8.5
21	9.0	8.0	---	---	8.6	9.3	---			---	8.6	8.5
22	9.0	8.1	---	---	8.5	9.4	---			---	8.4	8.5
23	9.1	8.0	---	---	8.4	9.4	---			---	---	8.5
24	9.1	8.1	---	---	8.4	9.3	---			---	---	8.6
25	9.1	8.3	---	---	8.7	9.2	---			---	---	8.6
26	9.0	8.2	---	---	8.9	8.8	---			8.3	8.4	8.6
27	9.0	8.3	---	---	8.8	8.5	---			8.1	8.3	8.6
28	9.0	8.4	---	---	8.7	8.3	---			8.4	8.3	8.5
29	8.9	8.1	---	---	---	8.4	---			8.4	8.5	8.5
30	8.8	8.1	---	---	---	8.5	---			8.4	8.3	8.6
31	8.7	---	---	---	---	8.5	---			8.4	8.3	---
MEAN	8.7	8.2	8.0	8.0	8.6	8.6	7.9			8.3	8.5	8.5

WTR YR 1983 MEAN 8.4 MAX 9.4 MIN 7.4

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

04193490 MAUNEE RIVER NEAR WATERVILLE, OH--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.0	12.5	6.5	2.5	.0	5.0	6.0	11.5	16.0	21.5	26.0	25.5
2	18.0	14.0	7.5	2.5	.0	5.5	6.0	12.0	17.0	22.0	25.5	25.0
3	19.0	13.0	9.0	1.5	.5	6.5	6.5	12.0	17.0	24.0	26.5	25.0
4	18.5	11.5	10.0	1.0	.0	7.5	6.5	12.0	17.0	24.0	26.5	26.0
5	18.0	10.0	10.0	1.0	---	8.5	6.5	12.0	18.5	23.0	26.0	25.5
6	18.5	8.0	10.0	1.0	.0	8.5	6.5	12.5	18.5	22.5	26.5	25.0
7	19.5	7.5	9.0	1.5	.0	9.0	7.0	13.0	17.0	22.5	27.5	24.5
8	18.5	8.0	8.0	1.0	.0	10.0	7.0	13.5	18.0	23.5	28.5	24.0
9	17.5	8.0	6.0	1.0	.0	8.5	6.5	13.0	18.5	23.5	27.5	24.5
10	17.5	7.5	4.5	2.0	.0	7.5	7.0	---	20.0	23.5	27.0	24.5
11	17.0	9.0	4.0	2.0	.0	6.5	7.0	---	21.5	24.5	25.5	25.0
12	15.5	9.5	2.0	.5	.0	5.5	7.0	17.0	23.0	25.5	24.0	24.0
13	14.5	6.5	1.5	.5	.0	7.0	7.5	16.5	24.0	26.0	23.5	22.5
14	13.5	5.0	1.0	1.0	.0	7.5	8.5	17.0	25.0	26.5	24.0	20.5
15	12.5	4.5	2.0	.5	.0	---	8.0	15.5	24.5	27.5	24.0	20.0
16	11.5	4.0	3.5	.0	.5	8.5	8.5	15.0	24.5	29.0	24.5	19.5
17	10.5	4.5	3.0	---	1.5	8.0	7.5	15.5	24.5	29.0	25.5	19.0
18	10.5	5.0	2.0	---	1.5	8.0	7.0	15.5	24.5	28.0	25.5	19.0
19	10.5	5.5	3.0	---	2.0	7.5	6.5	15.0	23.0	28.5	27.5	20.0
20	11.5	7.5	3.0	.0	3.0	6.0	6.0	15.5	22.5	29.0	29.0	21.0
21	10.0	9.0	2.5	.0	4.0	3.5	6.5	16.5	24.0	28.5	28.5	20.0
22	9.5	8.0	2.0	.0	4.5	3.0	8.0	18.0	24.5	28.0	27.5	16.5
23	9.0	8.5	2.5	.0	5.5	3.0	9.5	18.0	26.0	28.0	27.0	15.0
24	8.5	7.5	4.5	.0	5.0	3.0	9.5	17.5	26.5	28.0	26.0	14.5
25	8.5	6.0	6.5	.0	3.5	3.5	9.5	17.5	27.0	27.0	26.0	14.5
26	9.0	5.5	7.5	.0	3.0	3.5	11.0	16.5	27.0	27.0	27.0	14.5
27	9.0	4.5	7.0	.0	3.5	5.0	13.0	16.5	27.0	26.5	26.5	15.5
28	10.5	4.0	---	.0	4.0	5.0	14.0	17.0	25.0	26.5	27.0	16.0
29	10.0	6.0	---	.0	---	5.0	13.0	17.0	22.0	26.5	27.5	16.5
30	10.5	5.5	---	.0	---	5.0	13.0	16.5	21.5	26.0	27.0	18.0
31	11.0	---	3.5	.0	---	5.0	---	15.5	---	26.5	26.5	---
MEAN	13.5	7.5	5.0	.5	1.5	6.0	8.0	15.0	22.0	26.0	26.5	20.5

WTR YR 1983 MEAN 13.0 MAX 29.0 MIN .0

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.6	9.1	11.4	12.1	14.9	13.7	11.3	9.5	10.7	6.8	9.1	6.0
2	6.7	8.7	11.3	12.4	14.1	14.1	11.2	8.9	10.6	6.7	8.9	6.8
3	7.6	9.0	11.2	12.5	13.1	14.2	10.3	8.3	9.5	6.5	10.8	8.5
4	7.1	7.9	10.9	12.7	15.0	13.7	10.3	8.3	10.4	6.6	10.6	7.9
5	6.8	7.7	10.6	13.2	---	13.8	10.1	8.5	11.5	6.9	8.7	7.0
6	8.0	8.9	10.3	13.1	15.1	13.5	10.6	8.6	8.8	7.1	9.0	6.9
7	7.8	9.1	10.4	13.1	15.3	13.6	10.3	8.5	8.7	7.2	9.5	6.7
8	7.0	9.0	10.6	13.2	14.2	12.5	10.7	8.8	9.7	7.3	11.0	6.1
9	6.9	9.0	11.4	13.6	14.1	11.7	10.8	8.8	10.1	7.3	9.6	7.5
10	7.2	11.8	11.7	13.5	14.2	11.7	10.7	---	11.5	7.4	8.7	7.3
11	7.6	11.4	11.9	13.7	14.4	11.4	10.6	---	11.7	7.7	6.6	6.9
12	7.5	11.2	12.1	14.6	14.4	12.0	10.8	10.4	10.6	7.6	6.5	6.5
13	7.5	11.3	12.6	14.7	14.4	13.5	10.8	10.5	9.6	7.9	6.8	7.1
14	8.1	11.6	12.7	14.7	14.2	12.2	10.4	10.3	9.5	8.1	8.6	7.0
15	8.1	11.9	12.8	15.0	13.8	---	10.1	10.1	10.0	8.2	6.6	7.3
16	8.3	11.8	12.1	14.1	13.0	13.6	9.3	10.9	9.1	9.4	7.2	7.1
17	8.3	11.7	12.4	---	14.2	12.7	11.0	11.2	7.0	8.6	7.6	7.9
18	10.1	11.4	12.8	---	14.1	11.9	10.2	11.4	6.4	8.7	5.9	8.0
19	9.4	11.3	12.5	---	13.9	11.8	10.5	10.8	6.3	9.5	8.0	7.6
20	8.6	11.0	12.3	15.8	13.7	11.7	10.9	11.3	6.5	9.8	7.4	8.1
21	8.5	10.5	12.6	15.7	13.7	13.1	10.8	12.3	7.5	8.7	7.1	7.7
22	8.8	10.6	12.6	15.5	13.2	13.8	10.1	11.8	8.5	6.6	6.3	8.0
23	9.4	10.5	12.6	15.3	12.9	13.5	9.3	11.5	10.3	7.9	5.5	8.4
24	9.6	10.6	12.2	15.3	12.5	13.5	10.1	12.5	11.7	11.3	5.4	8.8
25	9.6	11.0	12.0	15.4	12.3	13.2	10.2	11.3	10.3	10.8	6.3	9.1
26	9.7	11.0	10.9	15.9	12.9	12.4	9.8	10.4	11.1	11.4	6.9	9.0
27	9.7	11.4	10.5	16.1	12.8	11.6	10.2	10.4	9.0	10.5	6.3	9.1
28	9.5	11.8	---	16.1	12.9	11.1	10.2	9.4	6.4	9.4	6.1	8.3
29	10.7	11.4	---	14.8	---	11.4	10.3	9.6	6.4	8.3	7.5	8.3
30	10.2	11.5	---	14.3	---	11.5	10.0	9.8	6.5	7.8	6.4	7.6
31	9.5	---	11.6	14.2	---	11.4	---	9.8	---	8.9	6.0	---
MEAN	8.4	10.5	11.8	14.3	13.8	12.7	10.4	10.1	9.2	8.3	7.6	7.6

WTR YR 1983 MEAN 10.3 MAX 16.1 MIN 5.4

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 mi^2 (16,395 km^2).

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. WRD-OH-82-2: 1981.

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.--58 years (1921-35, 1939-83) 4,926 ft^3/s (139.5 m^3/s), 10.57 in/yr (268 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, 121,000 ft^3/s (3,427 m^3/s) Mar. 14, 1982, gage height, 14.96 ft (4.560 m) recorder-manometer; 17.18 ft (5.236 m) from floodmark. 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 ft^3/s (0.74 m^3/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 ft^3/s (5,100 m^3/s), from rating curve extended above 94,000 ft^3/s (2,662 m^3/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 56,600 ft^3/s (1,603 m^3/s) May 3, gage height, 11.12 ft (3.389 m); minimum daily, 134 ft^3/s (3.79 m^3/s) Sept. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	613	390	14000	13000	2540	2160	9030	9760	2570	11500	550	307
2	471	2210	10500	9700	2510	1900	8580	33400	2480	9340	1000	265
3	524	8900	8280	8000	7900	1770	20600	53000	2180	9300	960	255
4	379	9170	9980	6700	12100	1680	26300	54200	2160	8650	870	268
5	371	7320	15800	4450	10300	1510	22200	44900	1990	9770	970	303
6	345	5840	16300	3900	7700	1590	16300	32200	2340	8550	950	337
7	359	4720	13100	3200	5880	1640	15400	25000	3950	5790	830	421
8	334	3660	10900	2900	4460	1830	18500	20000	4970	3660	660	282
9	229	2690	8640	2600	3650	3600	17000	13600	4290	2490	500	236
10	278	2320	7250	2350	2950	4070	18700	11800	3260	1900	408	320
11	315	1910	6100	2150	2700	3890	20600	9820	3410	1760	550	326
12	264	1850	5030	2060	2550	3530	19700	7740	3130	1540	370	284
13	278	1430	3830	2040	2150	3220	17100	6260	2400	1190	382	245
14	353	1700	3010	2010	1850	2940	22800	5400	1800	1050	395	161
15	290	1770	2580	1960	1720	2450	36900	4690	1470	907	406	134
16	212	1740	5930	1700	1680	2010	33100	4210	1210	741	405	150
17	186	1620	12100	1550	2250	1940	26000	3530	1420	673	384	168
18	198	1640	13700	1200	3360	1920	18300	3140	1260	684	372	155
19	246	1340	10900	1100	4350	2040	12900	3110	1150	728	384	150
20	495	1720	9780	1100	5400	1640	11000	2850	976	703	414	165
21	245	4320	8560	1300	5330	2480	8430	2520	885	777	337	283
22	228	7030	7890	1150	5100	3780	7140	3140	968	868	394	208
23	276	7820	6710	1330	4610	5400	5670	4200	992	1010	265	148
24	212	8900	7740	1500	4170	5390	4900	6140	945	684	315	191
25	236	11100	11400	1770	3660	5480	4160	5410	945	613	278	263
26	253	9020	30000	1890	3310	5180	3590	4790	917	645	273	235
27	256	6440	32500	1870	2760	7090	3110	4080	831	900	285	215
28	260	7060	31000	2020	2310	14700	2890	3570	5090	760	317	200
29	270	14400	30000	1860	---	16000	2780	3430	14400	560	382	190
30	246	17200	25500	1680	---	13700	3560	3190	11300	580	363	220
31	254	---	20000	1780	---	11000	---	2850	---	560	345	---
TOTAL	9476	157230	399010	91820	119250	137530	437240	391930	85689	88883	15314	7085
MEAN	306	5241	12870	2962	4259	4436	14570	12640	2856	2867	494	236
MAX	613	17200	32500	13000	12100	16000	36900	54200	14400	11500	1000	421
MIN	186	390	2580	1100	1680	1510	2780	2520	831	560	265	134
CFSM	.05	.83	2.03	.47	.67	.70	2.30	2.00	.45	.45	.08	.04
IN.	.06	.92	2.34	.54	.70	.81	2.57	2.30	.50	.52	.09	.04

CAL YR 1982 TOTAL 3122689 MEAN 8555 MAX 113000 MIN 186 CFSM 1.35 IN 18.35
WTR YR 1983 TOTAL 1940457 MEAN 5316 MAX 54200 MIN 134 CFSM .84 IN 11.40

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, 840 mg/L May 3; minimum daily mean, 6 mg/L Jan. 26, 29.
SEDIMENT LOADS: Maximum daily, 120,000 tons (109,000 tonnes) May 3, minimum daily, 3.6 tons (3.3 tonnes) Oct. 15.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)
NOV 11...	0900	1960	210	2	62	<1	<1	<1	<3	12	280
FEB 16...	1400	1660	<10	2	56	1	1	<1	3	13	18
MAY 10...	1130	12000	40	1	54	<1	<1	<1	<3	20	21
AUG 04...	1330	741	40	2	83	<1	<1	<1	<3	8	19

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	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)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV 11...	6	<4	12	.2	20	6	<1	<1	740	<6.0	9
FEB 16...	2	5	11	.2	10	6	1	<1	740	6.0	9
MAY 10...	5	11	3	.1	<10	5	<1	<1	270	<6.0	5
AUG 04...	1	9	2	<.1	<10	4	<1	<1	690	<6.0	<3

04193500 MAUMEE RIVER AT WATERVILLE, OH--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
NOV										
11...	0900	1960	510	8.1	5.0	10.0	68	10.6	97	150
FEB										
16...	1400	1660	590	8.2	4.0	4.0	25	13.2	104	E1
MAY										
10...	1130	12000	380	8.0	15.0	15.0	100	9.8	98	500
AUG										
04...	1330	741	460	8.9	25.0	26.5	34	10.3	131	140

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
NOV										
11...	1200	60	16	21	17	.6	6.2	120	77	32
FEB										
16...	16	70	20	19	14	.5	2.8	160	85	36
MAY										
10...	620	53	12	6.0	7	.2	3.2	120	42	14
AUG										
04...	1700	47	19	20	18	.6	3.6	113	73	35

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)
NOV										
11...	.3	8.2	321	3.7	.210	.27	1.50	.250	.130	.090
FEB										
16...	.2	6.6	321	6.0	.200	.26	.70	.170	.110	.130
MAY										
10...	.3	6.5	252	3.5	.070	.09	1.90	.290	.100	.100
AUG										
04...	.4	.3	309	1.2	<.010	--	1.90	.110	.050	<.010

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)
NOV					
11...	0900	1960	10.0	80	423
FEB					
16...	1400	1660	4.0	20	90
MAY					
10...	1130	12000	15.0	166	5380
AUG					
04...	1330	741	26.5	58	116

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM
APR												
06...	1045	16400	295	13100	76	88	93	98	99	100	--	--
MAY												
03...	0730	51100	825	114000	69	81	87	92	95	98	99	100

04193500 MAUMEE RIVER AT WATERVILLE, OH--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	613	24	40	390	28	29	14000	169	6390
2	471	25	32	2210	54	322	10500	131	3710
3	524	26	37	8900	118	2840	8280	103	2300
4	379	23	24	9170	208	5150	9980	122	3290
5	371	22	22	7320	164	3240	15800	188	8020
6	345	23	21	5840	93	1470	16300	195	8580
7	359	24	23	4720	100	1270	13100	164	5800
8	334	20	18	3660	90	889	10900	136	4000
9	229	25	15	2690	86	625	8640	107	2500
10	278	36	27	2320	82	514	7250	92	1800
11	315	28	24	1910	80	413	6100	79	1300
12	264	24	17	1850	32	160	5030	69	937
13	278	22	17	1430	28	108	3830	52	538
14	353	21	20	1700	33	151	3010	44	358
15	290	20	16	1770	31	148	2580	39	272
16	212	20	11	1740	32	150	5930	36	576
17	186	19	9.5	1620	30	131	12100	147	4800
18	198	18	9.6	1640	29	128	13700	162	5990
19	246	25	17	1340	28	101	10900	133	3910
20	495	98	131	1720	32	149	9780	121	3200
21	245	30	20	4320	58	677	8560	108	2500
22	228	13	8.0	7030	92	1750	7890	99	2110
23	276	14	10	7820	99	2090	6710	88	1590
24	212	14	8.0	8900	108	2600	7740	100	2090
25	236	15	9.6	11100	140	4200	11400	143	4400
26	253	15	10	9020	115	2800	30000	358	29000
27	256	10	6.9	6440	86	1500	32500	387	34000
28	260	8	5.6	7060	94	1790	31000	370	31000
29	270	16	12	14400	170	6610	30000	358	29000
30	246	10	6.6	17200	207	9610	25500	305	21000
31	254	10	6.9	---	---	---	20000	241	13000
TOTAL	9476	---	634.7	157230	---	51615	399010	---	237961
		JANUARY			FEBRUARY			MARCH	
1	13000	160	5620	2540	9	62	2160	34	198
2	9700	118	3090	2510	9	61	1900	28	144
3	8000	102	2200	7900	33	704	1770	28	134
4	6700	83	1500	12100	206	6730	1680	28	127
5	4450	62	745	10300	172	4780	1510	30	122
6	3900	54	569	7700	124	2580	1590	32	137
7	3200	46	397	5880	90	1430	1640	26	115
8	2900	43	337	4460	96	1160	1830	28	138
9	2600	40	281	3650	93	917	3600	28	272
10	2350	38	241	2950	64	510	4070	25	275
11	2150	34	197	2700	48	350	3890	24	252
12	2060	35	195	2550	45	310	3530	30	286
13	2040	25	138	2150	32	186	3220	34	295
14	2010	20	109	1850	33	165	2940	28	222
15	1960	18	95	1720	35	163	2450	16	106
16	1700	16	73	1680	37	168	2010	18	98
17	1550	12	50	2250	21	128	1940	12	63
18	1200	10	32	3360	24	218	1920	14	73
19	1100	8	24	4350	24	282	2040	12	66
20	1100	7	21	5400	21	306	1640	12	53
21	1300	8	28	5330	25	360	2480	10	67
22	1150	8	25	5100	32	441	3780	10	102
23	1330	8	29	4610	36	448	5400	10	146
24	1500	10	40	4170	38	428	5390	10	145
25	1770	12	57	3660	38	376	5480	14	207
26	1890	6	31	3310	40	357	5180	20	280
27	1870	24	121	2760	40	298	7090	38	727
28	2020	12	65	2310	36	225	14700	135	5360
29	1860	6	30	---	---	---	16000	420	18100
30	1680	12	54	---	---	---	13700	365	13500
31	1780	10	48	---	---	---	11000	190	5640
TOTAL	91820	---	16442	119250	---	24143	137530	---	47452

04193500 MAUMEE RIVER AT WATERVILLE, OH--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	9030	138	3360	9760	72	1900	2570	46	319
2	8580	122	2830	33400	258	22600	2480	42	281
3	20600	220	13100	53000	840	120000	2180	42	247
4	26300	538	38200	54200	765	112000	2160	41	239
5	22200	435	26100	44900	502	60900	1990	41	220
6	16300	320	14100	32200	372	32300	2340	30	190
7	15400	240	9980	25000	290	19600	3950	41	437
8	18500	215	10700	20000	240	13000	4970	55	738
9	17000	225	10300	13600	202	7420	4290	54	625
10	18700	215	10900	11800	162	5160	3260	46	405
11	20600	280	15600	9820	115	3050	3410	56	516
12	19700	255	13600	7740	80	1670	3130	51	431
13	17100	250	11500	6260	66	1120	2400	53	343
14	22800	270	16600	5400	58	846	1800	51	248
15	36900	648	64600	4690	55	696	1470	56	222
16	33100	708	63300	4210	53	602	1210	60	196
17	26000	458	32200	3530	51	486	1420	51	196
18	18300	330	16300	3140	46	390	1260	53	180
19	12900	262	9130	3110	48	403	1150	54	168
20	11000	185	5490	2850	42	323	976	50	132
21	8430	145	3300	2520	38	259	885	54	129
22	7140	110	2120	3140	34	288	968	50	131
23	5670	82	1260	4200	33	374	992	51	137
24	4900	78	1030	6140	41	680	945	48	122
25	4160	76	854	5410	38	555	945	49	125
26	3590	52	504	4790	39	504	917	41	102
27	3110	34	285	4080	40	441	831	42	94
28	2890	35	273	3570	48	463	5090	100	1370
29	2780	30	225	3430	40	370	14400	310	12100
30	3560	34	327	3190	44	379	11300	415	12700
31	---	---	---	2850	42	323	---	---	---
TOTAL	437240	---	398068	391930	---	409102	85689	---	33343
		JULY			AUGUST			SEPTEMBER	
1	11500	260	8070	550	67	99	307	16	13
2	9340	244	6150	1000	80	216	265	15	11
3	9300	230	5780	960	58	150	255	14	9.6
4	8650	215	5020	870	57	134	268	12	8.7
5	9770	192	5060	970	50	131	303	16	13
6	8550	155	3580	950	45	115	337	20	18
7	5790	140	2190	830	30	67	421	28	32
8	3660	105	1040	660	25	45	282	20	15
9	2490	82	551	500	20	27	236	16	10
10	1900	84	431	408	20	22	320	18	16
11	1760	78	371	550	25	37	326	16	14
12	1540	70	291	370	38	38	284	16	12
13	1190	69	222	382	31	32	245	14	9.3
14	1050	66	187	395	12	13	161	9	3.9
15	907	56	137	406	22	24	134	10	3.6
16	741	45	90	405	18	20	150	10	4.1
17	673	38	69	384	16	17	168	19	8.6
18	684	38	70	372	20	20	155	14	5.9
19	728	36	71	384	15	16	150	18	7.3
20	703	32	61	414	14	16	165	20	8.9
21	777	43	90	337	15	14	283	24	18
22	868	41	96	394	18	19	208	21	12
23	1010	69	188	265	16	11	148	18	7.2
24	684	45	83	315	14	12	191	18	9.3
25	613	45	74	278	16	12	263	18	13
26	645	68	118	273	18	13	235	18	11
27	900	68	165	285	16	12	215	19	11
28	760	69	142	317	17	15	200	7	3.8
29	560	63	95	382	14	14	190	9	4.6
30	580	60	94	363	12	12	220	10	5.9
31	560	80	121	345	15	14	---	---	---
TOTAL	88883	---	40707	15314	---	1387	7085	---	319.7
YEAR	1940457		1261174.4						

STREAMS TRIBUTARY TO LAKE ERIE

04194107 LAKE ERIE AT RENO BEACH, OH

LOCATION.-- Lat 41°40'29", long 83°17'32", Lucus County, Hydrologic Unit 04100010, on right bank at mouth of Reno side cut (Coulee Canal) which is Cedar Creek drainage.

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

GAGE.--Water-stage recorder. Datum of gage is 560.00 ft (170.688 m) International Great Lakes Datum.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum recorded gage height, 15.12 ft (4.609 m) June 28, 1983; minimum recorded gage height 8.21 ft (2.502 m) Nov. 12, 1982

EXTREMES FOR CURRENT YEAR.--Maximum recorded gage height, 15.12 ft (4.609 m) June 28, minimun recorded gage height, 8.21 ft (2.502 m) Nov. 12.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.58	11.13	11.42	11.05	12.05	11.56	12.25	12.96	12.68	12.75	12.56	12.78
2	11.90	11.25	11.47	11.58	11.91	11.54	12.90	12.09	12.77	12.90	12.91	12.59
3	11.40	11.15	11.32	11.51	10.73	11.72	11.97	12.61	12.85	12.82	12.87	12.52
4	11.75	10.86	11.41	11.69	10.94	11.71	11.62	12.32	12.76	12.66	12.70	12.44
5	11.57	9.38	11.59	11.45	11.57	12.26	12.03	12.41	12.76	12.90	12.90	12.27
6	11.65	10.31	10.70	11.68	11.79	11.84	12.27	12.74	12.88	13.03	12.87	11.96
7	11.37	10.77	10.99	10.59	11.54	11.71	11.90	12.55	12.63	12.91	12.81	12.15
8	11.47	10.82	11.52	11.76	11.36	11.64	12.09	12.80	12.98	12.71	12.57	12.46
9	12.17	11.51	11.39	11.93	11.93	11.48	13.13	12.78	12.88	12.83	13.04	12.26
10	11.91	11.69	10.61	11.83	12.45	11.56	12.00	12.61	12.77	13.01	12.97	12.09
11	11.22	11.00	11.21	10.84	12.38	11.64	11.94	12.77	12.80	12.75	12.86	12.18
12	11.09	9.86	11.20	11.37	11.72	11.61	12.21	12.88	12.78	12.71	13.14	12.50
13	11.24	10.61	10.82	11.44	11.59	11.66	12.41	12.96	12.83	12.80	12.95	12.63
14	10.31	10.82	10.73	11.76	11.51	11.66	12.14	12.77	12.83	12.77	12.83	12.40
15	10.38	10.55	11.28	11.35	11.57	11.67	11.73	12.86	12.74	12.69	12.79	12.47
16	10.71	10.74	11.17	11.43	11.64	11.98	12.14	12.95	12.80	12.66	12.81	11.95
17	11.19	11.07	11.65	11.48	11.28	12.01	12.09	12.97	12.78	12.65	12.66	11.83
18	11.10	11.21	11.42	11.28	11.57	12.32	12.18	13.04	12.85	12.80	12.64	11.98
19	11.03	11.28	11.35	11.57	11.66	11.32	12.14	12.77	12.91	12.81	12.73	12.08
20	9.65	11.21	10.63	11.95	11.67	11.95	11.98	12.56	12.85	12.70	12.55	11.97
21	10.75	11.18	11.14	12.40	11.58	12.26	11.84	12.77	12.83	12.77	12.94	11.52
22	11.07	11.63	11.56	12.03	11.62	10.89	12.41	12.80	12.89	13.08	12.39	11.13
23	11.11	11.23	11.60	11.67	11.53	11.53	12.54	12.42	12.68	12.71	12.83	11.62
24	11.21	10.82	11.61	11.21	11.66	11.92	12.54	12.80	12.75	12.66	12.88	12.05
25	11.12	10.30	11.45	10.93	11.65	12.06	12.14	12.55	12.79	12.86	12.70	11.91
26	11.05	10.66	11.53	11.70	11.55	12.40	12.31	12.63	12.63	12.81	12.56	11.80
27	11.11	11.39	12.00	11.66	11.52	12.01	12.20	12.88	12.63	12.69	12.58	11.98
28	11.07	11.53	10.28	11.59	11.57	11.66	12.32	12.73	13.65	12.58	12.64	12.07
29	10.76	10.66	10.81	11.59	---	11.96	12.50	12.67	13.52	12.58	12.57	12.13
30	10.88	11.31	11.35	11.01	---	12.11	12.28	12.39	12.88	12.85	12.57	12.17
31	11.00	---	11.60	11.10	---	11.98	---	12.36	---	12.73	12.59	---
MEAN	11.16	10.93	11.25	11.50	11.63	11.79	12.21	12.69	12.85	12.78	12.76	12.13
MAX	12.17	11.69	12.00	12.40	12.45	12.40	13.13	13.04	13.65	13.08	13.14	12.78
MIN	9.65	9.38	10.28	10.59	10.73	10.89	11.52	12.09	12.63	12.58	12.39	11.13

WTR YR 1983 MEAN 11.97 MAX 13.65 MIN 9.38

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 mi^2 (1,109 km^2).

PERIOD OF RECORD.--July 1928 to December 1935, October 1939 to current year.

REVISED RECORDS.--WSP 894: 1929-30. WSP 1207: 1933. WSP 1387: 1931, 1933. WSP 1912: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 614.75 ft (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 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).--51 years, 321 ft^3/s (9.091 m^3/s), 10.19 in/yr (259 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,500 ft^3/s (326 m^3/s) Feb. 15, 1950, gage height, 14.51 ft (4.423 m); minimum daily (prior to diversion) 0.4 ft^3/s (0.011 m^3/s) Aug. 26, 1931; (subsequent to diversion) 1.8 ft^3/s (0.051 m^3/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 ft^3/s (481 m^3/s), from rating curve extended above 11,500 ft^3/s (326 m^3/s).

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

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Dec. 27	0400	5110	145	9.86	3.005	May 3	1800	*5410	153	*10.12	3.085
Apr. 15	1430	4040	114	8.87	2.704						

Minimum daily discharge, 9.2 ft^3/s (0.26 m^3/s) Aug. 18,20,22-25, Sept. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	39	696	386	77	77	293	1520	85	1260	142	10
2	12	191	435	296	88	81	256	3300	67	847	108	25
3	11	208	325	240	442	75	736	5050	58	412	53	19
4	10	156	276	191	613	70	842	3540	54	370	37	13
5	12	90	276	162	290	66	613	1690	64	1020	32	10
6	12	56	314	150	250	65	469	832	73	847	35	9.2
7	12	38	282	135	190	74	1460	531	150	364	28	18
8	9.9	29	198	125	130	106	2400	435	167	191	20	85
9	11	24	150	111	120	108	1190	469	120	121	15	60
10	15	22	129	106	110	99	2030	367	87	88	12	39
11	14	18	123	115	105	87	1900	279	69	70	23	24
12	11	23	99	120	98	84	991	233	61	55	29	17
13	10	29	90	100	94	80	684	203	53	46	29	12
14	10	39	99	90	87	74	1760	189	48	37	17	10
15	9.8	37	90	82	99	74	3840	225	46	31	12	9.8
16	10	29	1500	72	103	70	2150	238	46	27	10	10
17	11	25	2370	90	228	60	945	205	43	27	9.8	11
18	11	24	1050	86	376	59	597	158	40	222	9.2	12
19	11	23	679	76	308	69	442	136	37	1080	9.8	19
20	12	33	1490	58	251	81	346	144	37	650	9.2	16
21	13	254	1050	52	198	111	267	142	35	246	9.8	32
22	14	814	577	58	171	425	220	129	32	125	9.2	51
23	15	512	498	73	160	364	189	213	29	165	9.2	59
24	15	828	881	104	140	405	171	213	24	120	9.2	38
25	15	847	1570	99	110	466	156	146	20	70	9.2	25
26	13	432	4340	85	100	395	138	120	17	47	9.8	18
27	13	308	4360	75	83	367	123	113	19	37	11	15
28	13	480	3110	70	74	786	131	93	352	27	11	13
29	13	1930	2240	66	---	847	182	81	1960	23	12	12
30	14	1430	1020	69	---	498	319	81	991	20	10	12
31	20	---	546	77	---	364	---	99	---	81	9.8	---
TOTAL	390.7	8968	30863	3619	5095	6587	25840	21174	4884	8726	750.2	704.0
MEAN	12.6	299	996	117	182	212	861	683	163	281	24.2	23.5
MAX	20	1930	4360	386	613	847	3840	5050	1960	1260	142	85
MIN	9.8	18	90	52	74	59	123	81	17	20	9.2	9.2
+	5.1	4.7	4.2	4.7	5.1	4.7	4.9	4.2	4.9	4.9	5.2	5.6
MEAN ≠	7.5	294	992	112	177	207	856	679	158	276	19.0	17.9
CFSM ≠	.02	.69	2.32	.26	.41	.48	2.00	1.59	.37	.64	.04	.04
IN ≠	.02	.77	2.67	.30	.43	.56	2.23	1.83	.41	.74	.05	.05

CAL YR 1982 TOTAL 208003.7 MEAN 570 MAX 10400 MIN 9.8 + 5.0 MEAN ≠ 565 CFSM ≠ 1.32 IN ≠ 17.92
WTR YR 1983 TOTAL 117600.9 MEAN 322 MAX 5050 MIN 9.2 + 4.8 MEAN ≠ 317 CFSM ≠ 0.74 IN ≠ 10.06

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 mi^2 (593 km^2).

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1961-63, and annual maximum, water years 1961-64, June 1964 to current year.

REVISED RECORDS.--WRD Ohio 1969: 1964(P), 1966(M), 1967(P).

GAGE.--Water-stage recorder. Datum of gage is 785.86 ft (239.530 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records 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. During the year, withdrawals totaled 117.4 m gal (0.444 hm^3), equivalent to a mean annual withdraweal of 0.50 ft^3/s (0.014 m^3/s); short term releases totaled 131 m gal (0.500 hm^3), equivalant to a mean annual release of 0.56 ft^3/s (0.016 m^3/s). Water-quality data collected at this site 1968 to 1977. Sediment data collected 1970 to 1974.

AVERAGE DISCHARGE.--19 years, 175 ft^3/s (4.956 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,390 ft^3/s (181 m^3/s) Mar. 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.--Maximum discharge, 2,320 ft^3/s (65.7 m^3/s) May 3, gage height 6.49 ft (1.978 m), above base of 1,800 ft^3/s (51.0 m^3/s); minimum daily, 0.01 ft^3/s (<0.001 m^3/s) Aug. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	8.2	184	184	35	23	31	664	34	157	1.7	1.2
2	1.4	4.8	105	123	35	22	29	1620	33	245	1.1	1.2
3	1.0	6.2	68	91	129	21	35	2270	29	258	1.5	13
4	.63	8.0	49	71	329	23	47	2140	24	99	1.5	13
5	.66	8.3	39	57	275	22	73	1760	20	65	3.0	12
6	.84	6.1	35	48	147	21	73	1130	30	39	2.3	14
7	.85	9.9	30	44	102	24	82	441	32	26	1.5	18
8	.87	8.3	28	43	114	25	98	412	23	22	.86	15
9	.86	6.4	26	33	99	25	150	488	19	17	.58	15
10	.80	4.8	22	31	68	25	512	345	18	13	.39	11
11	.71	4.3	19	29	126	26	849	215	17	11	.58	6.6
12	.61	5.1	16	28	46	26	539	151	15	11	.71	3.8
13	.58	3.7	16	27	63	28	319	112	13	8.4	.71	2.6
14	.51	3.4	15	26	80	26	571	87	14	7.0	.58	1.8
15	.48	3.4	22	25	31	24	1000	76	19	6.2	.39	.86
16	.47	3.4	358	23	28	22	1000	74	19	5.2	.25	1.0
17	.47	3.4	663	23	41	20	517	104	18	4.7	.12	1.8
18	.45	3.3	454	24	60	21	302	99	20	10	.05	1.2
19	.41	4.4	217	20	78	21	210	75	55	9.6	.02	.58
20	.51	7.9	190	17	76	20	152	61	38	8.3	.12	.31
21	.75	18	251	15	62	32	117	59	35	5.4	.31	1.5
22	.96	24	179	14	51	84	96	101	39	9.9	.25	1.2
23	1.0	32	122	14	46	133	72	126	37	9.9	.12	1.0
24	1.0	52	136	17	42	83	59	83	39	8.1	.05	1.2
25	1.0	53	222	20	39	58	50	73	34	5.5	.02	1.0
26	1.0	68	208	29	36	45	45	68	23	4.1	.01	.58
27	.99	67	300	58	31	37	39	54	17	3.5	.05	.48
28	1.0	95	945	94	26	38	36	44	23	3.6	.58	.39
29	1.0	201	1140	31	---	38	35	40	24	2.6	.58	.39
30	1.0	258	949	24	---	40	37	37	49	2.2	.39	.39
31	1.2	---	339	24	---	36	---	31	---	2.2	1.8	---
TOTAL	25.61	981.3	7347	1307	2295	1089	7175	13040	810	1079.4	22.12	142.08
MEAN	.83	32.7	237	42.2	82.0	35.1	239	421	27.0	34.8	.71	4.74
MAX	1.6	258	1140	184	329	133	1000	2270	55	258	3.0	18
MIN	.41	3.3	15	14	26	20	29	31	13	2.2	.01	.31

CAL YR 1982 TOTAL 89801.70 MEAN 246 MAX 3630 MIN .01
WTR YR 1983 TOTAL 35313.51 MEAN 96.7 MAX 2270 MIN .01

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 mi^2 (44.0 km^2).

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 ft^3/s (51.3 m^3/s) June 13, 1981, gage height, 20.13 ft (6.136 m), from rating curve extended above 325 ft^3/s (9.20 m^3/s) on basis of step backwater analysis; minimum, No flow Oct. 17, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 250 ft^3/s (7.08 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Dec. 16	0515	250	7.08	13.45	4.100	May 2	1015	325	9.20	14.16	4.316
May 1	0345	262	7.42	13.58	4.139	May 3	1700	*442	12.5	*14.96	4.560

Minimum daily discharge, 0.08 ft^3/s (0.002 m^3/s) Sept. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.24	2.5	25	9.0	8.0	4.0	8.8	176	4.6	1.9	.64	.76
2	.16	2.7	15	7.6	11	3.5	9.5	194	3.5	89	.44	.24
3	.21	2.2	12	6.4	89	3.1	49	207	3.3	31	.29	.16
4	.21	2.2	10	5.6	27	2.9	30	129	3.9	12	.26	.08
5	.21	2.2	12	5.0	21	2.7	16	63	3.2	9.7	.32	.18
6	.24	1.9	11	4.6	11	2.6	16	38	9.2	7.7	.21	5.1
7	.26	1.5	10	4.2	9.0	2.5	18	26	9.9	5.0	.18	27
8	.32	1.1	9.0	3.8	7.0	2.5	21	46	7.1	3.2	.17	7.2
9	.38	.94	7.0	3.6	5.5	2.5	37	31	5.1	2.5	.15	1.9
10	.38	.94	5.6	3.4	5.0	2.5	91	20	3.7	2.1	.15	.56
11	.41	.94	4.6	3.3	4.4	2.5	36	17	3.1	1.6	.18	.29
12	.35	2.2	5.6	3.3	4.0	4.5	21	13	2.6	1.5	.26	.24
13	.29	8.0	4.0	3.2	3.7	14	22	10	2.3	1.2	.13	.16
14	.35	5.1	5.6	3.0	3.5	12	63	9.0	2.0	1.0	.12	.13
15	.38	3.2	41	2.9	6.9	9.2	88	8.7	2.0	.94	.11	.11
16	.41	2.6	180	2.8	11	7.7	33	10	2.0	.89	.11	2.6
17	.41	2.2	110	2.7	27	6.5	23	7.2	1.9	.89	.11	5.8
18	.41	1.9	60	2.4	18	6.5	19	5.8	1.7	2.6	.12	1.9
19	.41	1.7	32	2.2	14	6.6	14	5.6	1.7	1.6	.12	.80
20	.38	1.6	40	2.1	11	7.4	12	5.8	1.7	.99	.13	.38
21	.38	11	28	2.2	9.2	25	9.9	4.6	1.4	.80	.12	10
22	.38	24	22	2.2	8.4	18	8.3	11	1.0	.72	.11	6.9
23	.50	33	30	2.4	7.4	9.5	7.5	16	1.0	.68	.11	2.8
24	.50	90	44	2.6	6.0	8.3	6.9	7.9	.94	.50	.11	1.3
25	.50	35	28	2.9	5.6	7.7	6.0	6.5	.94	.41	.11	.80
26	.56	31	25	3.3	5.2	6.6	5.0	8.0	.85	.47	.12	.60
27	.64	36	95	3.5	4.6	6.3	4.2	6.0	.80	.44	.12	.50
28	.64	64	110	2.7	4.4	11	4.1	4.8	1.1	.38	.13	.44
29	.64	156	40	3.1	---	12	4.4	5.4	2.7	.41	.12	.41
30	.64	50	19	3.8	---	10	40	9.4	1.6	.38	.14	.38
31	.64	---	13	6.0	---	9.4	---	5.8	---	.47	.20	---
TOTAL	12.43	577.62	1053.4	115.8	347.8	229.5	723.6	1107.5	86.83	182.97	5.59	79.72
MEAN	.40	19.3	34.0	3.74	12.4	7.40	24.1	35.7	2.89	5.90	.18	2.66
MAX	.64	156	180	9.0	89	25	91	207	9.9	89	.64	27
MIN	.16	.94	4.0	2.1	3.5	2.5	4.1	4.6	.80	.38	.11	.08
CFSM	.02	1.14	2.00	.22	.73	.44	1.42	2.10	.17	.35	.01	.16
IN.	.03	1.26	2.30	.25	.76	.50	1.58	2.42	.19	.40	.01	.17

CAL YR 1982 TOTAL 7395.96 MEAN 20.3 MAX 200 MIN .13 CFSM 1.19 IN 16.18
WTR YR 1983 TOTAL 4522.76 MEAN 12.4 MAX 207 MIN .08 CFSM .73 IN 9.90

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 mi^2 (386 km^2).

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

AVERAGE DISCHARGE.--7 years, 138 ft^3/s (3.908 m^3/s), 12.58 in/yr (320 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,400 ft^3/s (125 m^3/s) June 13, 1981, gage height, 11.00 ft (3.353 m); minimum discharge 0.58 ft^3/s (0.016 m^3/s) Sept. 11, 28, 29, 30, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,940 ft^3/s (54.9 m^3/s) May 3, gage height 7.89 ft (2.405 m), above base of 1,500 ft^3/s (42.5 m^3/s); minimum daily discharge 0.70 ft^3/s (0.020 m^3/s) Nov. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	16	323	117	82	31	46	1030	32	54	3.5	3.8
2	1.8	27	177	90	87	31	46	1610	27	280	3.0	3.5
3	1.4	38	125	74	331	29	283	1810	23	329	2.8	3.5
4	1.5	27	100	59	396	27	326	1230	21	172	2.6	3.3
5	1.5	17	89	49	191	25	209	869	21	86	2.6	5.1
6	1.5	7.0	98	47	129	24	140	454	52	74	2.4	13
7	1.5	2.8	119	44	96	24	167	257	81	44	2.2	51
8	1.6	1.6	97	42	78	24	192	326	64	29	2.2	39
9	1.8	.95	68	38	61	24	230	378	40	22	2.2	17
10	2.0	.70	55	34	60	24	786	228	29	17	1.9	9.3
11	2.0	.82	50	32	47	24	626	143	23	14	2.2	5.8
12	1.9	1.2	39	30	44	27	298	106	19	12	2.2	3.8
13	1.6	1.6	48	29	38	48	185	84	16	10	2.2	2.4
14	1.8	18	34	28	35	80	366	88	14	8.8	2.0	2.0
15	1.8	12	66	27	38	65	626	147	13	8.4	1.8	1.9
16	1.6	5.1	810	27	49	47	479	138	12	7.0	1.8	2.4
17	1.5	3.0	975	27	242	37	242	109	11	6.6	1.8	2.4
18	1.5	2.0	561	24	224	33	167	77	10	6.2	1.8	2.0
19	1.5	1.5	303	21	147	32	135	62	16	24	1.9	5.4
20	1.5	1.5	402	20	110	42	112	56	16	24	1.9	7.0
21	1.6	21	378	19	84	68	91	49	15	12	1.9	6.6
22	1.6	153	217	19	70	150	76	51	12	8.4	1.9	11
23	1.9	170	207	21	62	100	65	63	10	6.6	1.9	9.7
24	1.9	324	402	23	54	65	56	67	8.6	21	2.4	5.1
25	1.9	398	360	25	46	54	50	51	6.8	16	2.4	4.1
26	1.8	257	254	30	39	45	43	50	5.5	8.4	2.4	2.8
27	1.8	236	395	38	34	41	37	48	5.2	5.8	2.4	1.8
28	1.8	332	887	51	31	73	36	38	12	4.5	2.4	1.5
29	1.8	605	796	26	---	85	39	37	64	3.5	2.4	1.4
30	1.8	585	370	28	---	66	135	38	32	3.3	2.6	1.3
31	2.0	---	178	63	---	52	---	37	---	3.5	4.5	---
TOTAL	54.2	3265.77	8983	1202	2905	1497	6289	9731	711.1	1321.0	72.2	228.9
MEAN	1.75	109	290	38.8	104	48.3	210	314	23.7	42.6	2.33	7.63
MAX	3.0	605	975	117	396	150	786	1810	81	329	4.5	51
MIN	1.4	.70	34	19	31	24	36	37	5.2	3.3	1.8	1.3
CFSM	.01	.73	1.95	.26	.70	.32	1.41	2.11	.16	.29	.02	.05
IN.	.01	.82	2.24	.30	.73	.37	1.57	2.43	.18	.33	.02	.06

CAL YR 1982 TOTAL 68791.47 MEAN 188 MAX 2250 MIN .70 CFSM 1.26 IN 17.17
WTR YR 1983 TOTAL 36260.17 MEAN 99.3 MAX 1810 MIN .70 CFSM .67 IN 9.05

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 mi^2 (3,240 km^2).

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 fair.

AVERAGE DISCHARGE.--57 years (1923-35, 1938-83), 980 ft^3/s (27.75 m^3/s), 10.64 in/yr (270 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,500 ft /s (1034 m^3/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 ft^3/s (0.12 m^3/s) Feb. 29, 1964 (result of freezeup); minimum gage height, 0.78 ft (0.238 m) Oct. 20, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,000 ft^3/s (312 m^3/s) May 3, gage height 6.33 ft (1.929 m), above base of 10,000 ft^3/s (283 m^3/s); minimum daily, 27 ft^3/s (0.76 m^3/s) Aug. 25,26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	86	74	2190	1420	306	259	394	2700	402	681	110	71
2	70	243	1410	949	432	253	373	8110	359	2360	93	110
3	63	343	978	723	1150	242	562	10800	300	3560	78	114
4	56	314	683	597	1930	242	1150	9850	288	2740	64	97
5	48	235	578	511	1710	231	1380	8330	259	1830	64	78
6	45	171	534	455	1000	226	1020	6020	288	1060	64	74
7	39	136	551	424	711	236	844	3090	462	711	61	163
8	44	108	516	394	579	242	1030	2090	439	478	61	326
9	38	94	480	366	478	242	1090	2770	326	346	55	365
10	35	86	414	352	424	231	4190	2240	259	264	48	294
11	35	87	366	346	409	242	4570	1520	215	226	61	184
12	37	105	320	339	366	253	3210	1050	179	195	68	128
13	35	123	281	332	313	247	1970	782	153	168	55	97
14	34	131	217	332	282	259	2770	643	133	148	48	78
15	34	141	260	332	276	288	5410	652	128	133	45	64
16	37	172	2430	306	300	294	4400	652	148	114	48	64
17	39	158	5400	270	462	270	3090	615	128	114	43	61
18	41	124	4380	250	770	247	1860	570	123	195	43	64
19	48	98	2530	240	794	247	1310	519	153	519	40	68
20	48	119	2150	240	690	242	991	462	288	447	37	78
21	37	263	2680	280	579	380	782	409	253	236	40	114
22	38	706	2110	430	503	536	643	409	200	168	37	128
23	40	742	1440	470	447	588	553	478	168	153	48	110
24	43	1790	1650	480	409	615	486	527	143	163	43	114
25	40	1950	2280	300	373	486	432	478	123	133	27	128
26	42	1680	2610	280	326	387	387	462	119	119	27	110
27	46	1290	1990	260	294	359	346	439	119	101	35	85
28	47	1480	5350	250	264	373	339	409	264	89	40	68
29	46	3740	5880	240	---	402	346	373	711	82	30	61
30	47	3310	4350	220	---	416	494	409	671	71	32	52
31	56	---	2560	250	---	455	---	373	---	89	48	---
TOTAL	1394	20013	59568	12638	16577	9990	46422	68231	7801	17693	1593	3549
MEAN	45.0	667	1922	408	592	322	1547	2201	260	571	51.4	118
MAX	86	3740	5880	1420	1930	615	5410	10800	711	3560	110	366
MIN	34	74	217	220	264	226	339	373	119	71	27	52
CFSM	.04	.53	1.54	.33	.47	.26	1.24	1.76	.21	.46	.04	.09
IN.	.04	.60	1.77	.38	.49	.30	1.38	2.03	.23	.53	.05	.11

CAL YR 1982 TOTAL 560671 MEAN 1536 MAX 15000 MIN 27 CFSM 1.23 IN 16.67
WTR YR 1983 TOTAL 265469 MEAN 727 MAX 10800 MIN 27 CFSM .58 IN 7.89

04198000 SANDUSKY RIVER NEAR FREMONT, OH--Continued

SEDIMENT ANALYSES

PERIOD OF RECORD.--Water years 1951-56, 1978 to current year.

PERIOD OF DAILY RECORD.--
SUSPENDED SEDIMENT DISCHARGE: Water years 1951-1956, 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, 1980, 1981.
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, 1,010 mg/L July 3; minimum daily mean, 2 mg/L Jan. 13.
SEDIMENT LOADS: Maximum daily, 17,100 tons (15,500 tonnes) May 3; minimum daily, 0.62 ton (0.56 tonne) Oct. 22.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)
NOV 10...	1100	97	30	1	75	<1	<1	<1	<3	8	170
FEB 16...	0930	294	10	1	67	1	1	<1	3	4	11
MAY 10...	1515	2180	10	2	59	<1	<1	<1	<3	4	27
AUG 04...	0900	61	20	2	110	<1	<1	4	<3	24	13

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	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)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV 10...	6	11	16	.2	20	2	<1	<1	4600	<6.0	<4
FEB 16...	1	8	13	.2	10	6	<1	<1	2500	6.0	5
MAY 10...	2	11	6	.1	<10	5	<1	1	790	<6.0	6
AUG 04...	7	14	6	.2	10	2	<1	<1	3700	<6.0	<3

STREAMS TRIBUTARY TO LAKE ERIE

04198000 SANDUSKY RIVER NEAR FREMONT, OH--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
NOV										
10...	1100	97	860	8.3	4.0	10.0	6.0	11.8	107	95
FEB										
16...	0930	294	700	8.2	2.5	2.0	4.7	14.0	104	70
MAY										
10...	1515	2180	480	8.0	14.0	21.0	110	10.0	114	3400
AUG										
04...	0900	61	730	8.3	24.0	24.0	20	7.3	90	1500

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
NOV										
10...	350	93	35	41	19	.9	7.7	198	190	52
FEB										
16...	160	83	29	20	12	.5	2.2	181	140	40
MAY										
10...	2700	64	17	8.1	7	.2	2.9	125	73	20
AUG										
04...	2000	70	31	32	18	.8	4.9	153	150	56

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)
NOV										
10...	.5	4.4	540	1.4	.010	.01	.80	.060	.030	.030
FEB										
16...	.3	2.5	439	4.2	.080	.10	.30	.080	.050	.060
MAY										
10...	.3	8.0	328	5.2	.080	.10	1.50	.310	.080	.060
AUG										
04...	.5	.9	483	<.10	<.010	--	1.40	.110	.040	<.010

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
NOV					
10...	1100	97	10.0	18	4.7
FEB					
16...	0930	294	2.0	6	4.8
MAY					
10...	1515	2180	21.0	178	1050
AUG					
04...	0900	61	24.0	26	4.3

04198000 SANDUSKY RIVER NEAR FREMONT, OH--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	24	5.6	74	20	4.0	2190	193	1140
2	70	10	1.9	243	83	54	1410	127	483
3	63	6	1.0	343	46	43	978	107	283
4	56	12	1.8	314	26	22	683	90	166
5	48	13	1.7	235	14	8.9	578	70	109
6	45	8	.97	171	13	6.0	534	52	75
7	39	16	1.7	136	10	3.7	551	36	54
8	44	12	1.4	108	9	2.6	516	31	43
9	38	12	1.2	94	11	2.8	480	22	29
10	35	14	1.3	86	12	2.8	414	18	20
11	35	10	.95	87	18	4.2	366	14	14
12	37	10	1.0	105	34	9.6	320	12	10
13	35	14	1.3	123	16	5.3	281	10	7.6
14	34	9	.83	131	15	5.3	217	8	4.7
15	34	10	.92	141	12	4.6	260	13	9.1
16	37	10	1.0	172	11	5.1	2430	252	2200
17	39	6	.63	158	10	4.3	5400	396	5770
18	41	14	1.5	124	10	3.3	4380	271	3200
19	48	7	.91	98	12	3.2	2530	157	1070
20	48	8	1.0	119	16	5.1	2150	107	621
21	37	9	.90	263	65	46	2680	94	680
22	38	6	.62	706	99	189	2110	92	524
23	40	10	1.1	742	70	140	1440	73	284
24	43	13	1.5	1790	139	672	1650	82	365
25	40	13	1.4	1950	122	642	2280	143	911
26	42	15	1.7	1680	102	463	2610	235	1660
27	46	20	2.5	1290	56	195	1990	149	806
28	47	21	2.7	1480	51	204	5350	364	5530
29	46	19	2.4	3740	227	2200	5880	356	5650
30	47	15	1.9	3310	229	2230	4350	280	3290
31	56	15	2.3	---	---	---	2560	196	1350
TOTAL	1394	---	47.63	20013	---	7180.8	59568	---	36358.4
		JANUARY			FEBRUARY			MARCH	
1	1420	120	460	306	6	5.0	259	8	5.6
2	949	74	190	432	8	9.3	253	8	5.5
3	723	55	107	1150	26	81	242	8	5.2
4	597	40	64	1930	72	381	242	12	7.9
5	511	32	44	1710	100	464	231	12	7.5
6	455	20	25	1000	86	232	226	14	8.5
7	424	16	18	711	61	117	236	15	9.5
8	394	13	14	579	45	70	242	16	10
9	366	10	9.9	478	29	37	242	13	8.5
10	352	8	7.6	424	20	23	231	11	6.9
11	346	11	10	409	16	18	242	8	5.2
12	339	6	5.5	366	9	8.9	253	7	4.8
13	332	2	1.8	313	8	6.8	247	15	10
14	332	3	2.7	282	5	3.8	259	15	10
15	332	4	3.6	276	4	3.0	288	20	16
16	306	4	3.3	300	6	4.9	294	24	19
17	270	7	5.1	462	12	15	270	22	16
18	250	7	4.7	770	18	37	247	18	12
19	240	8	5.2	794	22	47	247	15	10
20	240	8	5.2	690	22	41	242	12	7.8
21	280	9	6.8	579	18	28	380	28	29
22	430	9	10	503	16	22	536	26	38
23	470	10	13	447	12	14	588	16	25
24	480	10	13	409	13	14	615	14	23
25	300	11	8.9	373	10	10	486	11	14
26	280	10	7.6	326	8	7.0	387	8	8.4
27	260	11	7.7	294	7	5.6	359	13	13
28	250	8	5.4	264	8	5.7	373	18	18
29	240	6	3.9	---	---	---	402	16	17
30	220	6	3.6	---	---	---	416	18	20
31	250	8	5.4	---	---	---	455	22	27
TOTAL	12638	---	1071.9	16577	---	1711.0	9990	---	418.3

STREAMS TRIBUTARY TO LAKE ERIE

04198000 SANDUSKY RIVER NEAR FREMONT, OH--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	394	20	21	2700	200	1740	402	42	46
2	373	14	14	8110	496	11200	359	48	47
3	562	32	49	10800	588	17100	300	56	45
4	1150	57	178	9850	368	9790	288	55	43
5	1380	67	249	8330	280	6300	259	66	46
6	1020	43	118	6020	230	3740	288	90	70
7	844	35	80	3090	177	1480	462	122	152
8	1030	39	108	2090	133	751	439	94	111
9	1090	63	212	2770	176	1320	326	58	51
10	4190	401	4660	2240	175	1060	259	64	45
11	4570	333	4110	1520	128	525	215	57	33
12	3210	250	2170	1050	82	232	179	49	24
13	1970	155	824	782	55	116	153	49	20
14	2770	201	1710	643	50	87	133	42	15
15	5410	507	7400	652	51	90	128	18	6.2
16	4400	370	4400	652	44	77	148	31	12
17	3090	284	2370	615	62	103	128	27	9.3
18	1860	158	793	570	54	83	123	22	7.3
19	1310	80	283	519	52	73	153	38	16
20	991	49	131	462	59	74	288	92	72
21	782	34	72	409	45	50	253	86	59
22	643	36	62	409	45	50	200	86	46
23	553	34	51	478	44	57	168	69	31
24	486	28	37	527	46	65	143	53	20
25	432	29	34	478	40	52	123	54	18
26	387	22	23	462	40	50	119	46	15
27	346	32	30	439	34	40	119	40	13
28	339	16	15	409	36	40	264	366	321
29	346	21	20	373	36	36	711	176	338
30	494	55	73	409	24	27	671	130	236
31	---	---	---	373	19	19	---	---	---
TOTAL	46422	---	30297	68231	---	56427	7801	---	1967.8
		JULY			AUGUST			SEPTEMBER	
1	681	135	248	110	22	6.5	71	28	5.4
2	2360	547	5170	93	30	7.5	110	76	23
3	3560	1010	9840	78	16	3.4	114	34	10
4	2740	747	5530	64	13	2.2	97	18	4.7
5	1830	384	1900	64	44	7.6	78	17	3.6
6	1060	220	630	64	35	6.0	74	18	3.5
7	711	150	288	61	25	4.1	163	45	20
8	478	102	132	61	26	4.3	326	52	46
9	346	78	73	55	30	4.5	366	72	71
10	264	70	50	48	37	4.8	294	49	39
11	226	52	32	61	32	5.3	184	27	13
12	195	45	24	68	36	6.6	128	24	8.3
13	168	53	24	55	36	5.3	97	18	4.7
14	148	36	14	48	32	4.1	78	16	3.4
15	133	34	12	45	38	4.6	64	9	1.6
16	114	28	8.6	48	36	4.7	64	10	1.7
17	114	18	5.5	43	41	4.8	61	8	1.3
18	195	71	38	43	39	4.5	64	10	1.7
19	519	254	452	40	42	4.5	68	8	1.5
20	447	337	407	37	33	3.3	78	10	2.1
21	236	123	78	40	30	3.2	114	13	4.0
22	168	83	38	37	37	3.7	128	14	4.8
23	153	39	16	48	28	3.6	110	14	4.2
24	163	31	14	43	32	3.7	114	23	7.1
25	133	32	11	27	20	1.5	128	18	6.2
26	119	18	5.8	27	20	1.5	110	12	3.6
27	101	18	4.9	35	32	3.0	85	12	2.8
28	89	16	3.8	40	30	3.2	68	13	2.4
29	82	14	3.1	30	26	2.1	61	20	3.3
30	71	17	3.3	32	23	2.0	52	12	1.7
31	89	20	4.8	48	30	3.9	---	---	---
TOTAL	17693	---	25060.8	1593	---	130.0	3549	---	305.7
YEAR	265469		160976.33						

04198000 SANDUSKY RIVER NEAR FREMONT, OH--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
NOV 30...	1020	3310	223	1990	70	80	87
DEC 29...	1045	5910	355	5660	63	74	82
MAY 03...	0850	11000	683	20300	64	78	86
JUL 04...	1735	2520	713	4850	62	79	89

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM
NOV 30...	93	96	97	98	98	98	100
DEC 29...	90	93	96	96	97	98	100
MAY 03...	92	95	98	99	100	--	--
JUL 04...	96	98	99	100	--	--	--

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 mi^2 (681 km^2).

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 gage height, 17.56 ft (5.352 m) April 6, 1982; minimum gage height, 12.02 ft (3.664 m) Jan. 7, 1982.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 15.47 ft (4.715 m) Jan. 12; minimum gage height 12.05 ft. (3.673 m) Jan. 7.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.28	13.36	12.70	12.52	13.06	12.88	---	14.24	14.65		---	14.79
2	13.27	13.52	12.72	13.01	13.28	12.84	---	13.95	14.69		---	14.79
3	13.27	13.72	12.54	13.01	12.88	12.94	---	13.97	14.18		---	14.78
4	13.27	13.82	12.76	12.98	12.81	12.94	---	13.80	14.09		14.63	14.77
5	13.26	13.86	13.03	12.79	12.97	13.34	---	13.89	14.02		14.62	14.77
6	13.26	13.87	12.69	12.91	13.06	13.19	---	13.92	14.25		14.62	14.76
7	13.25	13.85	12.56	12.44	12.99	12.98	---	13.73	14.31		14.61	14.79
8	13.25	13.86	12.90	13.03	12.78	12.98	---	14.53	---		14.59	14.80
9	13.25	13.87	13.28	13.14	13.10	12.91	---	14.17	---		14.60	14.80
10	13.29	13.88	12.65	13.01	13.51	12.98	---	13.89	---		14.58	14.80
11	13.28	13.90	12.78	12.53	13.63	13.92	---	14.00	---		14.61	14.79
12	13.28	13.90	12.86	13.20	13.10	13.57	---	14.08	---		14.92	14.77
13	13.26	13.94	12.53	12.85	12.89	13.24	---	14.14	---		14.96	14.77
14	13.26	13.99	12.15	13.00	12.85	13.16	13.43	14.07	---		14.96	14.74
15	13.25	14.00	12.59	13.30	12.88	13.05	13.35	14.21	---		14.95	14.73
16	13.25	14.00	13.58	13.00	12.96	13.35	13.45	14.54	---		14.93	14.72
17	13.23	14.01	13.29	13.08	12.75	13.59	13.86	14.40	---		14.91	14.73
18	13.22	14.03	12.75	13.16	12.88	13.79	13.80	14.48	---		14.89	14.71
19	13.21	14.04	12.77	13.10	12.92	---	13.77	14.58	---		14.88	14.70
20	13.21	14.08	12.78	13.17	12.94	---	13.69	14.67	---		14.85	14.68
21	13.20	14.10	12.77	13.47	12.87	---	13.40	14.73	---		14.85	14.72
22	13.20	13.46	12.82	13.27	12.94	---	13.59	14.34	---		14.81	14.75
23	13.19	13.38	13.04	13.02	12.87	---	13.81	13.98	---		14.79	14.76
24	13.18	13.47	13.01	12.73	12.97	---	14.35	14.06	---		14.76	14.75
25	13.18	12.96	12.80	12.53	13.15	---	14.01	14.14	---		14.74	14.73
26	13.17	12.51	13.01	13.00	12.91	---	13.94	14.26	---		14.73	14.72
27	13.17	12.93	13.37	12.95	12.82	---	14.05	14.35	---		14.71	14.71
28	13.17	12.97	13.21	12.90	12.89	---	14.14	14.40	---		14.71	14.70
29	13.17	13.25	12.74	12.85	---	---	14.30	14.46	---		14.71	14.69
30	13.18	12.75	12.85	12.74	---	---	14.53	14.54	---		14.69	14.68
31	13.21	---	12.99	12.55	---	---	---	14.61	---		14.71	---
MEAN	13.23	13.64	12.86	12.94	12.99	---	---	14.23	---		---	14.75
MAX	13.29	14.10	13.58	13.47	13.63	---	---	14.73	---		---	14.80
MIN	13.17	12.51	12.15	12.44	12.75	---	---	13.73	---		---	14.68

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 mi^2 (68.6 km^2).

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, 16.05 ft (4.892 m) June 29, 1982; minimum gage height, 10.88 ft (3.316 m) Jan. 10,11, 1982.

EXTREMES FOR CURRENT YEAR.--Maximum recorded gage height, 15.89 ft (4.843 m) June 28; minimum gage height, 12.03 ft (3.667 m) Jan. 7.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			---	12.65	13.18	13.00	---	14.35	14.81	14.25	14.73	14.90
2			---	13.13	13.39	12.96	---	14.05	14.85	14.45	14.75	14.91
3			---	13.12	12.99	13.06	---	14.09	14.34	14.22	14.76	14.91
4			---	13.09	12.92	13.07	---	13.92	14.24	14.12	14.75	14.91
5			---	12.91	13.07	13.45	---	14.00	14.17	14.37	14.76	14.89
6			---	13.04	13.17	13.34	---	14.06	14.40	14.68	14.76	14.88
7			---	12.54	13.10	13.12	---	13.89	14.37	14.34	14.74	14.94
8			---	13.15	12.90	13.11	---	14.62	14.46	14.16	14.73	14.96
9			---	13.25	13.21	13.14	---	14.30	14.44	14.20	14.72	14.96
10			---	13.14	13.61	13.22	---	14.03	14.28	14.43	14.71	14.95
11			---	12.64	13.73	---	---	14.14	14.30	14.27	14.75	14.93
12			---	13.14	13.20	---	---	14.22	14.32	14.14	15.04	14.91
13			---	12.96	12.99	---	13.57	14.28	14.26	14.18	15.08	14.88
14			---	13.12	12.96	---	13.58	14.21	14.24	14.14	15.08	14.86
15			---	13.38	12.99	---	13.45	14.35	14.24	14.12	15.06	14.83
16			---	13.11	13.07	---	13.57	14.67	14.27	14.11	15.04	14.84
17			13.39	13.19	12.86	---	13.96	14.54	14.28	14.17	15.02	14.85
18			12.88	13.27	13.01	---	13.90	14.62	14.29	14.31	15.01	14.85
19			12.90	13.20	13.05	---	13.88	14.74	14.33	14.21	14.99	14.85
20			12.88	13.28	13.07	---	13.79	14.82	14.39	14.13	14.98	14.85
21			12.88	13.58	13.00	---	13.52	14.88	14.41	14.14	14.98	14.87
22			12.95	13.37	13.06	---	13.72	14.49	14.41	14.64	14.97	14.88
23			13.17	13.13	12.98	---	13.93	14.11	14.41	14.39	14.95	14.89
24			13.14	12.85	13.09	---	14.45	14.20	14.41	14.30	14.95	14.88
25			12.95	12.64	13.26	---	14.12	14.29	14.40	14.38	14.94	14.87
26			13.13	13.12	13.03	---	14.08	14.40	14.37	14.40	14.94	14.86
27			13.49	13.07	12.95	---	14.18	14.49	14.37	14.40	14.93	14.84
28			13.29	13.03	13.00	---	14.28	14.56	14.92	14.41	14.93	14.83
29			12.85	12.97	---	---	14.44	14.62	14.97	14.42	14.93	14.82
30			12.96	12.84	---	---	14.57	14.71	14.43	14.51	14.93	14.81
31			13.10	12.66	---	---	---	14.76	---	14.59	14.86	---
MEAN			---	13.05	13.10	---	---	14.37	14.41	14.31	14.90	14.88
MAX			---	13.58	13.73	---	---	14.88	14.97	14.68	15.08	14.96
MIN			---	12.54	12.86	---	---	13.89	14.17	14.11	14.71	14.81

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, 4.80 ft (1.463 m) Jan. 17, 1982.

EXTREMES FOR CURRENT YEAR.--Maximum recorded gage height, 15.73 ft (4.794 m) Aug. 11; minimum recorded gage height, 9.82 ft (2.993 m) Oct. 20.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.92	12.49	12.63	12.67	13.28	13.02	---	14.20	14.11	14.26	14.25	14.25
2	13.15	12.62	12.65	13.14	13.19	12.98	---	13.74	14.11	14.41	14.46	14.11
3	12.81	12.66	12.61	13.11	12.60	13.08	---	14.21	14.17	14.36	14.43	14.05
4	13.03	12.58	12.81	13.09	12.85	13.10	---	13.99	14.14	14.29	14.29	13.97
5	12.90	11.57	12.87	12.94	13.08	13.45	---	14.10	14.13	14.56	14.43	13.81
6	12.90	12.06	12.18	13.03	13.19	13.15	---	14.20	14.19	14.63	14.40	13.62
7	12.74	12.25	12.10	12.44	13.08	13.14	---	13.99	---	14.42	14.35	13.77
8	12.85	12.32	12.30	13.21	12.91	13.09	---	14.51	14.39	14.29	14.20	13.97
9	13.28	12.84	---	13.26	13.23	13.08	---	14.31	14.27	14.40	14.60	13.81
10	13.09	12.93	---	13.13	13.69	13.07	---	14.12	14.24	14.47	14.42	13.69
11	12.75	12.41	---	12.60	13.69	---	---	14.23	14.26	14.28	14.46	13.72
12	12.62	11.70	---	13.07	13.19	---	---	14.30	14.25	14.25	14.72	14.02
13	12.70	12.49	---	13.01	13.01	---	---	14.32	14.27	14.30	14.44	14.19
14	12.16	12.43	---	13.09	12.96	---	13.58	14.23	14.25	14.28	14.33	14.03
15	12.29	12.36	---	13.31	13.01	---	13.45	14.41	14.21	14.22	14.33	13.88
16	12.67	12.28	---	13.05	13.07	---	13.55	14.46	14.25	14.20	14.31	13.47
17	12.71	12.53	13.10	13.44	12.82	---	13.94	14.36	14.25	14.20	14.19	13.57
18	12.48	12.65	12.73	13.97	13.01	---	13.85	14.33	14.29	14.31	14.20	13.55
19	12.43	12.65	12.81	13.31	13.06	---	13.83	14.19	14.32	14.32	14.23	13.63
20	11.50	12.55	12.54	13.34	13.08	---	13.70	14.13	14.31	14.25	14.12	13.45
21	12.42	12.64	12.79	13.62	13.01	---	13.62	14.23	14.27	14.28	14.33	13.64
22	12.54	13.02	12.91	13.28	13.07	---	13.86	14.23	14.28	14.47	14.03	13.17
23	12.54	12.80	12.95	13.09	12.99	---	13.98	14.15	14.14	14.26	14.28	13.46
24	12.58	12.65	12.97	12.71	13.11	---	14.16	14.27	14.20	14.31	14.37	13.61
25	12.57	12.11	12.88	12.60	13.28	---	13.83	14.08	14.20	14.36	14.21	13.46
26	12.47	12.38	13.04	13.11	13.02	---	13.79	14.15	14.08	14.28	14.09	13.42
27	12.48	12.86	13.32	13.07	12.96	---	13.72	14.17	14.11	14.21	14.09	13.50
28	12.43	12.70	12.30	13.02	13.02	---	13.82	14.10	14.80	14.10	14.11	13.58
29	12.17	12.14	12.71	12.98	---	---	13.97	14.11	14.75	14.13	14.08	13.62
30	12.31	12.52	12.96	12.67	---	---	13.83	14.02	14.37	14.33	13.96	13.72
31	12.41	---	13.11	12.67	---	---	---	13.99	---	14.26	14.14	---
MEAN	12.61	12.47	---	13.07	13.09	---	---	14.19	---	14.31	14.29	13.73
MAX	13.28	13.02	---	13.97	13.69	---	---	14.51	---	14.63	14.72	14.26
MIN	11.50	11.57	---	12.44	12.60	---	---	13.74	---	14.10	13.96	13.17

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 mi^2 (451 km^2).

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

GAGE.--Water-stage recorder. Datum of gage is 672.65 ft (205.024 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Some low-flow regulation for industrial use. Sediment data collected at this site June 1980 to June 1981.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,610 ft^3/s (102 m^3/s) May 3, 1983, gage height, 8.44 ft (2.573 m); maximum gage height 8.58 ft (2.615 m) June 15, 1981; minimum daily discharge, 2.6 ft^3/s (0.074 m^3/s) Aug. 27, 1983.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,800 ft^3/s (51.0 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Dec. 16	2200	1940	54.9	6.59	2.009	July 3	0530	2300	65.1	7.03	2.143
May 3	1930	*3610	102	*8.44	2.573						

Minimum daily discharge, 2.6 ft^3/s (0.074 m^3/s). Aug. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.4	42	270	124	101	30	125	1170	51	133	8.0	70
2	6.6	67	182	101	162	31	115	1690	40	1680	8.0	26
3	5.4	69	137	84	597	29	536	3290	34	1520	7.3	11
4	5.4	62	124	64	404	27	697	3010	32	282	6.3	7.3
5	5.2	46	124	55	170	27	395	1150	30	227	6.3	7.0
6	5.2	37	180	50	80	25	238	435	56	133	5.7	12
7	5.4	29	184	48	60	25	227	246	133	80	3.9	285
8	4.9	19	126	46	50	33	282	222	108	55	4.9	285
9	4.2	11	94	44	46	57	255	280	64	40	4.6	83
10	4.2	9.4	75	48	44	81	1290	188	42	31	4.2	33
11	4.9	13	60	60	42	193	785	129	30	27	17	14
12	4.9	19	50	71	40	257	306	98	77	23	10	11
13	4.6	26	44	72	38	478	205	79	40	20	8.4	8.8
14	4.6	70	44	61	38	378	327	64	27	16	7.0	7.3
15	5.4	69	104	53	58	274	1370	76	21	14	6.6	6.0
16	4.6	40	1490	42	92	168	621	151	17	13	5.4	9.5
17	4.2	24	1260	38	230	115	274	151	14	10	4.6	7.0
18	4.6	16	382	34	217	92	212	96	18	9.9	4.4	7.3
19	4.9	11	288	30	143	183	225	72	46	9.9	3.9	8.4
20	5.2	13	950	28	108	494	172	71	68	12	3.5	8.0
21	4.9	71	621	26	87	424	129	68	48	17	2.7	31
22	4.9	162	279	31	76	454	103	86	34	13	3.7	54
23	4.2	276	392	73	64	230	84	277	24	12	3.5	41
24	4.2	699	834	216	56	155	72	193	18	10	3.5	21
25	4.9	720	466	239	49	125	64	103	14	9.5	3.5	13
26	4.9	270	306	169	42	101	55	86	11	7.7	3.3	12
27	4.9	247	395	85	35	104	49	76	26	8.4	2.6	10
28	4.9	381	1410	60	33	443	50	60	630	8.0	168	8.8
29	5.4	1010	697	55	---	510	55	56	712	7.7	87	7.7
30	4.9	597	264	50	---	266	104	87	200	5.7	30	7.7
31	7.6	---	164	101	---	168	---	67	---	6.3	51	---
TOTAL	158.5	5125.4	11996	2258	3162	5977	9422	13827	2665	4441.1	488.8	1112.8
MEAN	5.11	171	387	72.8	113	193	314	446	88.8	143	15.8	37.1
MAX	8.4	1010	1490	239	597	510	1370	3290	712	1680	168	285
MIN	4.2	9.4	44	26	33	25	49	56	11	5.7	2.6	6.0
CFSM	.03	.98	2.22	.42	.65	1.11	1.81	2.56	.51	.82	.09	.21
IN.	.03	1.10	2.56	.48	.68	1.28	2.01	2.96	.57	.95	.10	.24

CAL YR 1982 TOTAL 66700.6 MEAN 183 MAX 2350 MIN 3.5 CFSM 1.05 IN 14.26
WTR YR 1983 TOTAL 60633.6 MEAN 166 MAX 3290 MIN 2.6 CFSM .95 IN 12.96

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 mi^2 (1,026 km^2).

PERIOD OF RECORD.--October 1944 to current year. Records for May 1903 to July 1906 (published as "near Elyria") published in WSP 97, 129, and 205, are unreliable and should not be used.

REVISED RECORDS.--WSP 1912: Drainage area. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 620.83 ft (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.--39 years, 327 ft^3/s (9.261 m^3/s), 11.22 in/yr (285 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 51,700 ft^3/s (1,460 m^3/s) July 6, 1969, gage height, 26.4 ft (8.05 m), (from flood mark), from rating curve extended above 13,000 ft^3/s (368 m^3/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 ft /s (90.6 m /s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Dec. 16	2400	3930	111	9.14	2.786	June 28	2200	3440	97.4	8.52	2.597
May 3	1800	*7210	204	*12.51	3.813	July 2	1300	6000	170	11.40	3.475

Minimum daily discharge, 7.1 ft^3/s (0.20 m^3/s) Aug. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	108	721	279	258	75	291	2320	101	260	23	100
2	18	145	443	222	423	75	265	3640	80	3910	30	49
3	14	211	326	186	1200	71	1130	6850	69	3660	32	30
4	12	205	288	149	1060	68	1670	5150	69	772	27	23
5	11	151	284	124	479	65	920	2320	62	429	22	20
6	10	131	557	120	281	63	537	900	131	256	18	23
7	11	115	640	110	210	62	491	505	256	154	15	494
8	11	75	398	100	180	82	550	435	196	106	14	703
9	9.1	52	260	100	160	139	553	478	115	77	13	211
10	8.2	41	196	110	140	184	2340	340	77	61	11	87
11	10	47	164	131	130	435	1790	241	58	53	43	48
12	10	62	150	178	120	566	714	183	94	47	20	33
13	14	88	140	194	110	976	459	149	60	40	17	26
14	14	363	130	153	100	960	689	127	46	34	16	22
15	15	258	230	128	135	805	2830	167	39	31	15	17
16	13	141	3000	110	205	488	1850	274	33	29	15	27
17	9.5	90	3220	100	494	303	686	254	30	25	15	21
18	11	66	1120	90	537	229	479	188	64	25	15	19
19	12	53	761	80	344	497	497	146	69	25	12	19
20	14	56	1940	75	251	1230	395	135	141	26	11	21
21	14	229	1530	70	200	1030	286	146	91	32	9.1	83
22	13	440	797	79	170	944	223	230	60	32	8.2	85
23	12	896	881	190	147	541	180	502	44	26	11	92
24	11	1550	2040	479	131	336	151	339	34	24	8.7	58
25	13	1630	1380	528	117	267	129	210	27	22	8.2	41
26	13	801	761	382	101	215	113	171	22	21	8.2	32
27	14	596	900	233	87	229	101	138	59	19	7.1	26
28	14	960	2790	150	79	896	107	111	1220	18	233	22
29	16	2150	1760	130	---	1250	106	110	1690	18	120	19
30	16	1630	696	120	---	686	230	144	422	15	49	18
31	24	---	395	238	---	401	---	112	---	19	101	---
TOTAL	409.8	13340	28898	5338	7849	14168	20762	27015	5459	10266	947.5	2469
MEAN	13.2	445	932	172	280	457	692	871	182	331	30.6	82.3
MAX	24	2150	3220	528	1200	1250	2830	6850	1690	3910	233	703
MIN	8.2	41	130	70	79	62	101	110	22	15	7.1	17
CFSM	.03	1.12	2.35	.43	.71	1.15	1.75	2.20	.46	.84	.08	.21
IN.	.04	1.25	2.71	.50	.74	1.33	1.95	2.54	.51	.96	.09	.23

CAL YR 1982 TOTAL 167792.5 MEAN 460 MAX 4510 MIN 6.7 CFSM 1.16 IN 15.76
WTR YR 1983 TOTAL 136921.3 MEAN 375 MAX 6850 MIN 7.1 CFSM .95 IN 12.86

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).

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 fair. 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.--52 years, 266 ft³/s (7.533 m³/s), 13.53 in/yr (344 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)
Dec. 16	1230	4750	135	4.97	1.515	May 3	0030	8130	230	6.40	1.951
Apr. 10	0815	4580	130	4.89	1.490	June 28	1900	5520	156	5.32	1.622
Apr. 15	0700	4360	123	4.78	1.457	July 2	1800	*12900	365	*8.30	2.530
May 1	0730	4400	125	4.80	1.463						

Minimum daily discharge, 21 ft³/s (0.59 m³/s) Aug. 24.

REVISIONS.--Peak discharges and annual maximums (*) for Water Years 1978-82 have been revised, as shown in the following table. They supersede figures published in the reports for 1978-82.

Water Year	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)
1978	Dec. 15, 1977	0400	*14400	408	*8.92	2.719	Mar. 15, 1978	0600	11700	331	7.80	2.377
1979	Feb. 24, 1979	0600	6330	179	5.66	1.725	May 26, 1979	0800	6080	172	5.56	1.695
	Mar. 4,	1400	6430	182	5.70	1.737	Sept. 15,	0100	*7070	200	*5.95	1.814
1980	Dec. 25, 1979	2000	*7820	221	*6.27	1.911	Apr. 14, 1980	2300	4920	139	5.05	1.539
	Mar. 8, 1980	1800	5000	142	5.09	1.551						
1981	Feb. 20, 1981	0230	*7820	221	*6.27	1.911	June 9, 1981	1630	5000	142	5.09	1.551
	Apr. 14,	1845	6500	184	5.73	1.746	June 14,	1400	6860	194	5.87	1.789
1982	Dec. 23, 1981	1445	*5200	147	*5.18	1.579	Jan. 23, 1982	1515	4640	131	4.92	1.500
	Jan. 4, 1982	1800	4980	141	5.08	1.548	Mar. 12,	0015	4540	129	4.87	1.484

04201500 ROCKY RIVER NEAR BEREA, OH--continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58	418	418	206	337	85	254	3550	126	528	254	135
2	47	508	293	176	771	80	258	3160	95	9360	88	65
3	40	273	234	156	1380	80	1270	4790	85	2660	52	39
4	37	488	244	136	615	78	853	2900	111	412	42	33
5	34	383	315	117	343	76	521	1250	95	337	42	42
6	31	164	754	110	278	76	372	615	437	206	34	70
7	33	103	456	100	273	83	400	383	354	136	31	844
8	40	78	268	95	229	100	488	383	168	90	30	229
9	76	68	197	95	201	249	542	343	103	83	28	83
10	52	56	164	114	170	293	3460	244	81	72	25	51
11	44	70	150	210	150	578	958	192	70	60	70	37
12	37	258	140	229	130	631	508	164	58	54	88	33
13	33	686	130	153	117	798	406	139	51	49	60	30
14	33	239	130	132	126	1340	807	129	47	42	40	30
15	30	142	475	110	160	958	3000	192	44	42	33	29
16	34	106	3760	100	293	443	771	293	40	40	29	54
17	36	88	1290	90	556	288	462	210	39	37	25	72
18	34	76	535	80	337	229	462	146	39	44	24	52
19	36	68	1080	75	244	1100	654	153	39	44	24	37
20	39	76	1660	70	197	1550	662	268	60	40	23	31
21	37	549	834	70	164	825	389	201	58	39	22	219
22	37	1140	501	123	146	678	268	288	46	44	24	239
23	37	615	1250	331	142	372	206	495	39	42	23	85
24	37	1770	2080	737	129	299	172	273	33	49	21	56
25	36	872	728	528	117	239	149	184	29	49	22	49
26	36	412	535	360	106	188	129	201	26	37	22	40
27	36	501	891	224	95	229	117	156	25	31	22	37
28	37	987	2000	150	90	2010	120	123	1900	29	36	33
29	36	1970	728	140	---	1060	142	126	2040	29	44	30
30	36	670	389	315	---	495	535	146	449	26	42	29
31	51	---	258	662	---	337	---	142	---	92	176	---
TOTAL	1220	13834	22887	6194	7896	15847	19335	21839	6787	14803	1496	2814
MEAN	39.4	461	738	200	282	511	645	704	226	478	48.3	93.8
MAX	76	1970	3760	737	1380	2010	3460	4790	2040	9360	254	844
MIN	30	56	130	70	90	76	117	123	25	26	21	29
CFSM	.15	1.73	2.76	.75	1.06	1.91	2.42	2.64	.85	1.79	.18	.35
IN.	.17	1.93	3.19	.86	1.10	2.21	2.69	3.04	.95	2.06	.21	.39

CAL YR 1982 TOTAL 136421 MEAN 374 MAX 3760 MIN 22 CFSM 1.40 IN 19.01
WTR YR 1983 TOTAL 134952 MEAN 370 MAX 9360 MIN 21 CFSM 1.39 IN 18.80

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 mi^2 (391 km^2).

PERIOD OF RECORD.--August 1927 to December 1935 (published as "near Hiram"), October 1944 to current year.

REVISED RECORDS.--WSP 1054: 1945. WSP 1437: 1931. WSP 1912: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,087.46 ft (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 hm^3), 14.6 mi (23.5 km) upstream since 1939 and by LaDue Reservoir, usable capacity, 18,110 acre-ft (22.3 hm^3), 9.8 mi (15.8 km) upstream since 1961. Water-quality data collected at this site 1965 to 1977.

AVERAGE DISCHARGE.--47 years, 207 ft^3/s (5.862 m^3/s), 18.62 in/yr (473 mm/yr), unadjusted.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,420 ft^3/s (40.2 m^3/s) May 4, gage height, 4.59 ft (1.399 m); minimum daily, 18 ft^3/s (0.51 m^3/s) July 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	66	579	588	315	115	464	254	148	497	141	87
2	52	123	575	464	365	93	374	502	124	503	138	81
3	48	148	510	369	479	78	309	1050	105	423	134	94
4	39	167	439	324	598	72	276	1370	99	351	132	86
5	32	180	365	274	621	70	263	1350	103	278	138	82
6	30	203	337	244	564	69	251	1110	119	207	141	80
7	29	203	324	220	489	68	251	865	137	148	136	91
8	37	172	306	210	408	71	265	679	153	98	116	101
9	44	126	287	200	337	131	282	520	153	64	76	97
10	44	85	265	200	296	166	449	391	139	48	66	83
11	42	72	250	292	265	206	606	294	116	39	72	71
12	43	88	230	342	225	241	724	217	91	35	78	65
13	43	132	210	374	196	262	682	169	71	32	77	62
14	41	157	200	379	167	295	583	138	58	27	72	59
15	40	170	228	365	157	333	669	126	49	34	69	57
16	56	162	413	329	161	324	753	135	47	41	68	58
17	78	141	588	280	202	290	814	137	45	42	65	64
18	73	125	772	230	235	234	730	134	42	44	63	64
19	62	121	772	210	257	209	609	132	60	42	76	62
20	56	116	684	200	257	266	495	157	66	40	105	60
21	50	130	588	200	241	336	406	172	58	43	106	68
22	47	190	505	210	219	402	340	182	48	46	104	84
23	48	278	469	240	198	416	280	205	41	53	102	84
24	45	444	602	282	177	388	226	231	36	54	100	86
25	56	520	793	301	164	340	183	261	31	32	97	92
26	58	531	1010	310	158	291	154	287	28	23	93	92
27	49	494	975	292	156	261	129	272	31	20	90	85
28	43	449	919	274	150	335	112	242	174	18	86	76
29	41	469	919	256	---	450	111	214	435	50	82	69
30	40	499	859	252	---	549	130	191	479	119	77	64
31	41	---	730	287	---	544	---	167	---	132	83	---
TOTAL	1473	6761	16703	8998	8057	7905	11920	12154	3286	3583	2983	2304
MEAN	47.5	225	539	290	288	255	397	392	110	116	96.2	76.8
MAX	78	531	1010	588	621	549	814	1370	479	503	141	101
MIN	29	66	200	200	150	68	111	126	28	18	63	57
MEAN+	47.1	228	539	288	288	258	397	392	110	115	94.0	75.6
CFSM+	0.31	1.51	3.57	1.91	1.91	1.71	2.63	2.60	0.73	0.76	0.62	0.50
IN.+	0.36	1.68	4.11	2.19	1.98	1.96	2.93	2.99	0.81	0.87	0.72	0.56

CAL YR 1982 TOTAL 98754 MEAN 271 MAX 1890 MIN 17 MEAN+ 271 CFSM+ 1.79 IN.+ 24.32
WTR YR 1983 TOTAL 86127 MEAN 236 MAX 1370 MIN 18 MEAN+ 236 CFSM+ 1.56 IN.+ 21.17

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 mi^2 (1,046 km^2).

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 74 ft^3/s (2.10 m^3/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). Sediment data collected at this site 1972-1981.

AVERAGE DISCHARGE.--58 years, 426 ft^3/s (12.06 m^3/s).

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,470 ft^3/s (70.0 m^3/s) Apr. 14, gage height, 7.09 ft (2.161 m); minimum daily, 62 ft^3/s (1.756 m^3/s) Oct. 15-17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	107	449	760	1060	537	239	804	836	380	631	156	157
2	94	218	791	850	878	223	786	1190	338	1080	104	129
3	90	237	778	691	1170	201	751	1440	341	984	124	111
4	86	363	704	553	1040	177	687	1990	372	626	150	106
5	102	315	679	488	965	165	584	2140	291	526	163	91
6	223	285	670	436	952	186	553	2040	296	409	191	245
7	282	276	572	404	938	173	683	1760	299	315	166	671
8	246	276	507	380	800	344	649	1440	296	254	150	226
9	104	250	462	377	641	588	956	1120	285	195	133	165
10	79	201	429	458	576	657	1580	892	261	169	98	139
11	81	259	415	568	522	773	1380	769	319	132	295	126
12	79	300	404	572	454	760	1240	584	276	117	148	116
13	73	276	360	560	408	756	1330	454	217	113	124	100
14	65	262	341	557	370	859	1490	454	207	109	115	91
15	62	282	473	560	373	938	1850	560	161	112	106	89
16	62	267	1010	541	370	813	1590	600	147	110	94	122
17	62	245	952	466	429	708	1460	507	157	122	88	110
18	66	229	868	408	454	649	1510	458	212	116	80	82
19	63	203	1060	373	469	887	1330	408	199	103	72	86
20	76	182	1150	367	469	938	1110	338	170	105	86	96
21	76	373	1020	363	432	979	915	270	160	144	96	290
22	80	354	854	440	411	901	747	500	153	161	75	147
23	79	477	1090	500	390	831	657	708	127	190	82	134
24	79	738	1370	568	367	778	632	683	121	215	76	133
25	81	713	1330	564	325	696	492	624	121	128	81	129
26	74	725	1320	549	294	604	401	632	115	110	75	132
27	74	725	1630	515	279	708	363	588	115	105	78	129
28	76	934	1830	466	264	1030	325	541	482	104	83	127
29	76	970	1610	447	---	901	352	549	368	100	87	124
30	70	841	1380	530	---	827	571	522	571	101	84	108
31	80	---	1220	560	---	845	---	466	---	246	266	---
TOTAL	2947	12225	28039	16171	15577	20134	27778	26063	7557	7932	3726	4511
MEAN	95.1	408	904	522	556	649	926	841	252	256	120	150
MAX	282	970	1830	1060	1170	1030	1850	2140	571	1080	295	671
MIN	62	182	341	363	264	165	325	270	115	100	72	82

CAL YR 1982 TOTAL 177927 MEAN 487 MAX 2850 MIN 57
WTR YR 1983 TOTAL 172660 MEAN 473 MAX 2140 MIN 62

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 September 1981.

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 on several days during winter periods.
DESOLVED OXYGEN: Maximum, 19.1 mg/L Mar. 5, 1983; 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, 1,280 micromhos Aug. 31; minimum, 135 micromhos Sept. 6.
PH: Maximum, 9.1 units Mar. 4, 5; minimum, 7.2 units Nov. 1.
WATER TEMPERATURES: Maximum, 31.0°C July 16, 21, Aug. 20; minimum, 1.0°C, Jan. 20, 21.
DISSOLVED OXYGEN: Maximum, 19.1 mg/L Mar. 5; minimum, 1.8 mg/L, July 21.

04206000 CUYAHOGA RIVER AT OLD PORTAGE, OH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	693	678	684	765	276	603	450	444	449	360	348	356
2	720	687	703	771	720	752	450	426	435	384	360	369
3	747	723	734	768	639	723	429	417	421	399	378	387
4	771	750	759	654	603	631	432	417	424	417	399	407
5	768	744	759	654	594	624	444	393	422	438	417	427
6	765	711	742	627	579	601	426	408	418	462	432	449
7	720	411	654	597	561	573	441	423	435	471	459	465
8	567	531	545	579	558	562	441	435	439	480	468	474
9	612	549	584	567	561	563	462	435	454	483	474	478
10	624	597	618	582	558	567	462	459	460	504	423	478
11	639	615	623	576	456	532	---	---	---	468	453	462
12	672	642	651	594	483	539	---	---	---	555	465	499
13	714	672	692	636	561	600	549	462	522	546	504	526
14	735	711	720	639	633	636	543	525	530	504	492	498
15	759	735	742	645	627	634	582	501	554	528	486	500
16	762	723	741	642	591	618	525	492	509	675	516	601
17	777	732	749	597	582	588	495	429	451	672	630	643
18	783	741	749	588	579	585	435	411	423	645	606	627
19	786	744	761	594	576	587	561	411	485	681	615	640
20	801	747	771	609	591	597	570	504	535	678	633	655
21	795	759	779	594	438	546	522	492	508	639	624	631
22	849	795	807	621	552	583	516	462	481	951	606	749
23	828	804	816	564	393	534	546	459	487	912	735	798
24	825	816	821	525	501	515	462	393	432	753	678	707
25	984	822	859	522	504	514	393	378	386	678	603	641
26	846	825	834	504	471	487	390	375	381	600	564	574
27	852	828	840	483	474	479	408	369	386	573	549	562
28	867	834	844	483	396	461	387	375	381	558	546	553
29	861	834	845	465	444	453	387	372	378	558	552	556
30	867	825	842	453	444	449	381	354	370	681	558	610
31	855	714	821	---	---	---	360	351	355	606	591	598
MONTH	984	411	745	771	276	571	582	351	445	951	348	546

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	597	558	579	582	567	574	450	441	447	525	501	518
2	588	507	550	600	582	590	483	447	464	498	399	435
3	615	534	558	642	600	614	510	435	480	435	384	412
4	699	549	618	663	624	640	480	447	464	384	345	366
5	636	537	580	684	648	666	486	468	481	348	330	342
6	534	495	514	906	672	724	510	486	496	342	321	330
7	684	501	588	819	768	787	579	462	505	330	321	325
8	666	585	616	834	561	745	507	483	495	348	330	339
9	585	567	575	711	678	697	519	402	478	366	345	359
10	564	531	547	750	609	670	447	384	420	387	372	381
11	618	525	551	771	672	716	402	390	396	405	384	398
12	753	579	655	705	606	655	399	387	393	420	396	410
13	708	639	673	609	552	576	405	378	392	459	417	436
14	645	621	631	549	513	538	399	330	383	504	399	455
15	636	609	620	522	501	511	387	357	375	537	438	482
16	633	618	624	513	486	502	363	345	354	507	462	480
17	621	612	615	525	507	514	363	351	357	483	474	479
18	615	600	607	543	519	529	372	348	358	531	480	489
19	597	561	574	549	507	532	369	354	362	579	453	530
20	567	543	556	543	513	530	384	366	373	585	546	567
21	558	540	552	519	480	503	393	381	387	588	549	565
22	567	555	563	507	474	492	420	381	398	573	426	535
23	582	561	569	507	474	483	453	423	441	555	474	539
24	594	582	587	486	465	473	570	453	505	549	450	488
25	603	588	593	480	465	472	573	423	480	477	444	458
26	609	588	600	501	480	488	501	435	451	468	447	461
27	612	600	607	600	438	524	507	459	481	474	462	469
28	609	555	582	543	477	515	570	480	527	492	468	481
29	---	---	---	483	450	461	597	552	570	498	468	488
30	---	---	---	456	450	452	600	477	551	495	471	483
31	---	---	---	462	441	450	---	---	---	516	492	502
MONTH	753	495	589	906	438	568	600	330	442	588	321	452

04206000 CUYAHOGA RIVER AT OLD PORTAGE, OH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	513	495	500	513	468	493	819	711	771	861	810	844
2	549	513	530	477	414	441	843	741	793	867	801	848
3	585	501	557	420	381	399	810	750	781	867	845	852
4	588	537	563	429	390	407	807	762	784	852	831	840
5	570	549	558	438	411	424	810	744	780	840	765	812
6	591	564	578	468	438	456	768	753	763	765	135	689
7	588	579	583	501	450	474	753	699	725	684	327	586
8	594	579	588	549	480	503	702	600	654	642	618	632
9	606	552	588	600	513	545	654	606	627	639	615	629
10	600	549	577	645	600	626	684	636	664	654	630	644
11	690	468	609	681	567	631	741	327	554	651	636	644
12	627	552	602	705	618	668	684	504	597	687	645	660
13	639	606	621	756	645	712	708	633	682	738	687	708
14	669	615	637	849	666	741	717	708	711	744	723	729
15	681	633	659	843	693	791	714	648	688	759	720	737
16	717	681	696	843	750	821	771	675	723	768	600	710
17	741	699	715	867	753	835	804	708	763	693	669	684
18	774	570	698	846	759	810	804	723	771	717	678	696
19	711	630	685	861	807	842	780	741	756	786	711	725
20	738	660	704	873	810	852	855	792	826	825	795	810
21	765	732	744	906	642	848	852	741	777	825	351	623
22	774	756	762	918	744	828	822	765	796	768	690	735
23	792	732	763	918	639	809	852	774	809	789	768	779
24	822	753	783	861	810	835	879	813	847	795	786	790
25	822	801	804	846	774	815	888	849	871	795	783	790
26	822	804	810	816	762	797	906	777	848	783	771	776
27	831	771	823	876	774	820	912	876	903	789	774	777
28	771	315	613	894	780	844	921	900	905	789	774	783
29	747	660	720	858	783	830	906	882	892	789	774	783
30	699	453	615	870	849	859	915	852	903	810	726	773
31	---	---	---	870	351	740	1280	609	740	---	---	---
MONTH	831	315	656	918	351	693	1280	327	765	867	135	736
YEAR	1280	135	602									

PH (STANDARD UNITS), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

04206000 CUYAHOGA RIVER AT OLD PORTAGE, OH--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

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

STREAMS TRIBUTARY TO LAKE ERIE

04206000 CUYAHOGA RIVER AT OLD PORTAGE, OH--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	19.5	15.5	17.0	17.0	15.5	16.0	7.0	6.5	6.5	4.5	3.5	4.0
2	19.5	15.5	17.0	18.0	16.0	17.0	8.5	7.0	7.5	4.0	4.0	4.0
3	19.0	15.5	17.0	17.0	16.0	16.5	10.5	8.0	9.0	4.0	3.5	4.0
4	18.5	16.0	17.0	16.0	13.5	14.5	10.5	9.5	9.5	4.0	3.0	3.5
5	20.0	16.0	17.5	13.5	12.0	12.5	11.0	9.0	9.5	3.5	3.0	3.0
6	21.0	16.5	18.5	12.0	10.5	11.5	11.0	9.5	10.0	4.0	3.5	3.5
7	20.0	18.5	19.0	11.5	9.5	10.5	10.5	9.5	10.0	4.5	3.5	4.0
8	21.0	17.5	18.5	11.5	9.5	10.5	10.5	8.0	9.0	5.0	4.5	4.5
9	20.0	18.0	18.5	11.5	11.0	11.0	8.0	7.0	7.5	4.5	3.5	4.0
10	18.5	17.5	18.0	12.5	11.0	11.5	7.0	6.0	6.5	6.0	3.5	4.5
11	19.5	17.0	18.0	12.0	11.0	11.5	---	---	---	5.5	4.5	4.5
12	17.5	17.0	17.0	13.0	10.5	11.5	---	---	---	4.5	3.0	4.0
13	19.0	17.0	17.5	11.5	10.0	10.5	5.0	3.0	4.0	3.5	2.5	3.0
14	18.0	17.0	17.5	11.0	9.5	10.5	5.0	4.0	4.5	3.5	2.5	3.0
15	17.0	16.0	16.5	10.0	8.5	9.0	6.5	5.0	5.0	3.0	2.5	3.0
16	16.0	14.0	15.0	10.5	8.5	9.5	6.0	5.0	5.5	2.5	2.0	2.5
17	15.0	13.0	14.0	11.0	9.0	9.5	5.0	3.5	4.0	2.5	1.5	2.0
18	16.0	12.0	14.0	11.0	9.0	10.0	3.5	2.5	3.0	2.5	1.5	2.0
19	17.5	13.5	15.5	12.0	10.0	11.0	3.0	2.5	3.0	4.0	2.5	3.0
20	16.5	15.0	16.0	11.5	11.0	11.0	3.5	2.5	3.0	3.0	1.0	2.0
21	15.0	14.5	15.0	12.0	10.5	11.0	3.5	2.5	3.0	2.5	1.0	2.0
22	15.5	14.5	15.0	11.5	10.5	10.5	3.0	2.5	2.5	2.5	2.0	2.5
23	15.5	14.5	15.0	13.5	10.5	11.5	3.5	2.5	3.0	3.0	2.0	2.5
24	16.5	13.5	15.0	11.5	10.0	10.5	4.0	3.5	4.0	3.0	2.5	3.0
25	15.0	13.0	14.0	10.0	7.0	8.0	5.5	4.0	5.0	3.5	3.0	3.0
26	16.5	13.0	14.5	7.0	6.0	6.5	5.5	5.0	5.5	3.5	2.5	2.5
27	17.5	13.5	15.5	6.5	5.5	6.0	6.0	5.0	5.5	3.0	1.5	2.5
28	17.5	14.0	15.5	6.0	5.5	5.5	7.5	6.0	7.0	3.0	2.0	2.5
29	16.5	13.5	15.0	6.0	5.5	6.0	7.0	6.0	7.0	3.5	2.5	2.5
30	16.0	13.0	14.5	6.5	6.0	6.0	6.0	4.5	5.0	3.5	2.5	3.0
31	16.5	15.0	15.5	---	---	---	4.5	4.0	4.5	3.5	3.0	3.0
MONTH	21.0	12.0	16.0	18.0	5.5	10.5	11.0	2.5	6.0	6.0	1.0	3.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	3.5	2.5	3.0	8.5	6.0	7.0	10.0	7.0	8.0	15.0	14.0	14.5
2	4.5	3.5	4.0	9.5	6.0	7.0	10.5	8.5	9.5	17.0	14.0	15.5
3	4.5	3.5	4.0	11.0	6.5	8.5	9.5	8.5	9.0	16.0	14.5	15.5
4	3.5	2.5	3.0	12.5	8.0	10.0	9.5	8.5	9.0	15.0	13.5	14.5
5	2.5	1.5	2.0	14.0	10.0	11.5	11.0	8.5	10.0	15.0	14.0	14.5
6	2.5	2.0	2.0	11.5	10.0	10.5	11.5	9.0	10.0	15.0	14.0	14.5
7	3.0	2.0	2.5	13.5	9.5	11.0	11.5	10.5	11.0	16.0	15.0	15.5
8	2.5	2.0	2.5	13.0	11.0	11.5	10.5	10.0	10.5	16.0	13.5	15.0
9	3.5	2.0	2.5	12.0	10.5	11.0	10.0	9.0	9.5	14.5	12.5	13.5
10	3.5	1.5	2.5	11.0	8.0	9.5	10.0	9.0	9.5	14.5	12.5	13.5
11	3.5	2.5	3.0	7.5	6.0	7.0	10.0	9.0	9.5	15.5	13.0	14.0
12	3.5	1.5	2.5	6.0	5.0	5.5	11.0	9.0	10.0	17.0	14.0	15.5
13	3.5	1.5	2.5	7.0	5.0	5.5	11.5	10.0	10.5	19.0	15.0	16.5
14	4.5	2.0	3.0	8.0	5.5	7.0	12.5	10.5	11.5	19.0	16.0	17.5
15	4.5	4.0	4.0	8.5	7.5	8.0	11.5	10.5	11.0	18.0	14.5	16.5
16	6.0	4.0	5.0	10.0	7.5	8.5	10.0	9.5	9.5	17.5	14.0	15.5
17	5.0	4.5	5.0	10.5	8.0	9.0	9.5	7.5	8.5	18.0	14.5	16.0
18	6.0	4.5	5.0	9.5	8.5	9.0	8.0	7.0	7.5	18.5	14.0	16.5
19	6.5	4.5	5.0	9.5	9.0	9.0	8.0	7.0	7.5	17.0	16.0	17.0
20	7.0	4.5	5.5	8.5	7.0	8.0	8.5	7.0	7.5	19.0	16.5	17.5
21	7.5	5.0	6.0	7.0	6.5	7.0	9.5	7.5	8.5	19.5	16.5	18.0
22	9.0	5.5	7.0	6.5	5.5	5.5	10.5	8.5	9.5	18.5	16.5	17.5
23	7.5	6.0	6.5	5.5	4.5	5.0	12.0	9.0	10.5	19.5	17.0	18.0
24	7.5	5.5	6.5	6.0	4.5	5.0	11.0	9.0	10.0	20.0	17.0	18.5
25	6.0	5.0	5.5	7.0	5.0	5.5	11.5	9.0	10.0	19.5	18.0	18.5
26	7.0	5.0	6.0	7.5	5.0	6.0	14.0	10.0	12.0	18.5	17.0	17.5
27	8.0	4.5	6.0	7.5	5.5	6.0	16.0	12.5	13.5	18.0	16.0	17.0
28	9.5	5.0	7.0	7.0	6.5	6.5	18.5	13.5	15.5	17.5	15.0	16.0
29	---	---	---	7.5	6.0	6.5	17.5	15.0	16.0	16.5	15.5	16.0
30	---	---	---	8.0	6.5	7.0	16.5	15.0	15.5	17.0	15.5	16.0
31	---	---	---	9.0	6.5	7.5	---	---	---	18.0	15.5	16.5
MONTH	9.5	1.5	4.5	14.0	4.5	8.0	18.5	7.0	10.5	20.0	12.5	16.0

04206000 CUYAHOGA RIVER AT OLD PORTAGE, OH--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	17.5	15.5	16.5	26.5	23.5	24.5	27.5	24.5	25.5	29.5	26.5	27.5
2	19.0	15.0	17.0	25.0	23.5	24.0	28.5	23.5	25.5	29.0	25.0	26.5
3	17.5	16.5	17.0	25.5	24.0	24.5	28.5	23.5	26.0	28.5	24.0	26.0
4	18.0	16.0	17.0	25.5	24.0	24.5	28.5	26.0	27.0	28.5	24.5	26.0
5	20.0	16.0	17.5	25.5	23.0	24.0	29.0	26.0	27.5	27.0	24.5	25.5
6	19.5	17.0	18.0	24.0	22.0	23.0	28.5	25.5	26.5	28.0	21.0	26.0
7	22.5	18.0	20.0	24.0	21.0	22.0	28.0	23.5	25.5	27.5	23.5	25.5
8	23.0	18.5	20.5	24.5	21.0	22.5	29.0	24.0	26.0	27.5	24.0	25.5
9	23.5	18.5	20.5	24.5	21.5	22.5	28.5	25.0	26.5	27.5	23.5	25.5
10	24.5	20.0	22.0	25.5	21.0	23.0	28.5	23.5	25.5	28.5	24.0	26.0
11	25.0	20.5	22.5	26.5	20.0	23.0	26.5	23.0	24.5	26.0	24.5	25.0
12	24.5	21.0	22.5	28.0	22.5	25.0	27.0	24.0	25.5	26.0	23.5	24.5
13	25.5	21.0	23.0	29.5	24.5	26.5	26.5	23.0	24.5	25.0	22.5	23.5
14	26.0	22.5	24.5	29.5	23.0	26.0	28.0	22.5	25.0	23.5	21.0	22.0
15	27.5	23.0	25.0	30.5	25.5	27.5	28.0	22.5	25.0	23.0	19.0	21.0
16	28.0	23.5	25.5	31.0	26.5	28.5	29.0	23.5	25.5	21.0	20.0	20.5
17	26.5	24.0	25.0	29.5	26.5	28.0	28.0	24.0	26.0	23.5	20.5	21.5
18	26.0	23.0	24.0	30.5	26.0	28.0	29.0	26.0	27.5	25.0	20.0	22.0
19	24.0	22.5	23.5	30.0	26.0	28.0	30.5	26.0	28.0	25.5	21.5	23.5
20	26.0	22.5	23.5	30.5	26.0	28.0	31.0	27.0	28.5	25.5	22.5	23.5
21	27.5	22.0	24.5	31.0	26.0	27.5	29.0	23.5	26.5	24.0	20.5	22.5
22	28.0	23.0	25.0	30.5	25.5	28.0	28.5	25.5	26.5	21.0	19.0	20.5
23	29.0	23.0	25.5	28.0	24.5	26.0	29.0	25.5	27.0	20.0	18.5	19.0
24	29.0	24.5	26.5	29.5	26.0	27.5	30.0	24.0	26.5	21.5	18.0	19.5
25	28.5	23.5	25.5	27.5	24.5	25.5	30.0	25.0	27.0	20.5	17.0	18.5
26	29.0	22.0	25.5	28.5	23.0	25.5	30.0	25.5	27.5	20.5	18.0	19.0
27	29.5	24.0	26.5	28.5	23.0	25.5	30.0	27.0	28.0	20.5	17.0	18.5
28	26.5	23.0	25.0	28.5	23.5	26.0	28.5	27.0	27.5	21.5	18.0	19.5
29	24.5	23.5	24.0	28.0	25.5	26.5	29.0	25.0	27.0	22.0	18.5	20.0
30	25.0	22.5	23.5	29.5	25.5	27.0	29.5	24.5	26.5	22.5	18.5	20.5
31	---	---	---	27.0	25.0	25.5	29.5	25.5	27.5	---	---	---
MONTH	29.5	15.0	22.5	31.0	20.0	25.5	31.0	22.5	26.5	29.5	17.0	23.0
YEAR	31.0	1.0	14.5									

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	12.8	9.7	11.2	8.7	5.3	7.7	11.8	11.5	11.6	13.3	13.0	13.2
2	13.2	9.7	11.2	8.7	7.5	8.0	11.7	11.2	11.5	13.3	13.0	13.2
3	13.6	9.7	11.3	8.3	7.4	7.8	11.4	10.5	11.0	13.3	12.9	13.1
4	15.1	9.7	11.7	8.8	7.7	8.5	11.1	10.5	10.8	13.5	13.0	13.2
5	12.5	8.2	10.4	9.8	8.8	9.3	10.9	9.6	10.6	13.4	12.9	13.1
6	11.1	8.0	9.2	10.3	9.4	9.8	10.6	10.3	10.5	13.0	12.5	12.8
7	9.8	6.8	8.4	10.8	9.9	10.2	11.0	10.3	10.7	12.8	12.3	12.5
8	9.6	8.1	8.7	11.0	9.6	10.2	11.2	10.7	11.0	12.8	12.2	12.5
9	10.2	7.8	8.7	10.6	9.6	10.0	11.8	11.1	11.4	13.2	12.3	12.7
10	9.5	7.4	8.3	11.3	7.6	10.1	11.6	11.3	11.4	12.6	11.4	12.2
11	10.3	7.5	8.5	7.2	5.5	6.7	---	---	---	12.4	11.9	12.1
12	10.3	7.1	8.4	7.8	6.4	7.2	---	---	---	13.0	12.1	12.5
13	9.2	5.6	7.1	8.7	7.4	8.1	12.5	11.7	12.0	13.3	5.5	10.6
14	9.7	5.2	7.0	9.5	8.0	8.8	12.4	11.6	11.9	6.1	4.8	5.4
15	10.0	6.0	7.7	10.3	9.0	9.7	11.9	11.0	11.5	7.8	6.1	7.0
16	10.9	6.9	8.6	10.6	9.5	9.9	11.9	11.3	11.7	9.4	7.9	8.9
17	12.1	7.7	9.5	10.9	9.5	10.0	12.4	11.9	12.2	10.6	9.4	10.0
18	12.7	8.3	9.8	10.9	9.7	10.1	12.6	12.3	12.4	11.3	10.1	10.7
19	12.5	7.6	9.4	11.3	9.4	10.1	12.4	12.3	12.3	11.5	10.6	10.9
20	9.2	6.5	7.5	10.1	9.3	9.6	12.4	12.2	12.3	12.4	10.8	11.6
21	9.7	6.7	7.9	9.9	8.9	9.6	13.7	12.2	13.1	12.8	11.7	12.0
22	9.0	6.9	7.7	11.1	9.6	10.2	13.9	13.5	13.6	12.6	11.7	12.0
23	9.4	6.9	8.0	10.3	8.0	9.8	13.5	13.3	13.4	12.3	11.6	11.9
24	10.1	7.1	8.3	10.8	9.9	10.4	13.5	13.3	13.4	12.2	11.5	11.7
25	10.5	7.0	8.1	11.7	10.6	11.3	13.3	12.9	13.2	12.1	11.3	11.6
26	10.0	6.8	8.0	11.8	11.6	11.7	13.1	12.8	13.0	14.3	11.4	12.6
27	10.0	6.5	7.8	12.4	11.7	12.0	13.2	12.7	13.0	14.8	13.1	13.7
28	10.2	6.4	7.9	11.9	11.6	11.7	12.7	12.3	12.4	14.8	13.2	13.7
29	9.7	6.3	7.6	11.8	11.6	11.7	12.7	12.3	12.4	15.0	13.2	13.8
30	10.7	6.2	8.0	12.0	11.7	11.8	13.2	12.7	13.1	13.3	13.1	13.2
31	9.2	5.9	7.3	---	---	---	13.3	13.0	13.1	14.5	13.3	13.7
MONTH	15.1	5.2	8.7	12.4	5.3	9.7	13.9	9.6	12.1	15.0	4.8	11.9

04206000 CUYAHOGA RIVER AT OLD PORTAGE, OH--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	14.9	13.3	13.8	17.2	9.9	12.6	13.2	11.3	12.1	10.2	9.1	9.5
2	13.5	12.8	13.1	17.9	9.8	12.6	12.5	10.6	11.4	9.6	8.8	9.2
3	13.3	12.9	13.1	18.5	8.7	12.4	12.4	10.7	11.4	9.5	8.9	9.2
4	14.0	13.3	13.7	18.9	8.1	12.2	11.9	11.0	11.4	9.9	8.5	9.1
5	14.6	13.8	14.2	19.1	7.8	11.5	12.7	10.6	11.6	10.1	8.6	9.5
6	14.4	13.7	14.0	13.9	7.9	10.2	12.4	10.3	11.3	10.3	9.5	9.9
7	14.2	13.7	13.8	17.0	7.9	11.4	11.4	10.2	10.6	9.9	9.3	9.6
8	14.5	13.7	14.0	11.8	6.4	8.9	11.7	10.5	11.0	9.9	9.2	9.6
9	14.6	13.3	13.9	10.7	9.6	10.0	11.4	10.6	11.0	10.6	9.6	10.1
10	14.7	13.2	13.9	11.0	9.9	10.7	11.4	10.8	11.2	10.9	9.6	10.1
11	14.6	13.1	13.7	12.0	11.1	11.6	11.3	10.9	11.1	11.0	9.2	10.1
12	15.2	13.4	14.0	13.0	11.8	12.3	11.7	10.7	11.2	11.3	8.7	9.9
13	15.3	13.3	14.1	13.3	12.0	12.5	11.1	10.6	10.9	11.7	8.0	9.7
14	15.2	12.7	13.7	13.1	11.5	12.1	10.9	9.8	10.6	11.1	5.4	8.6
15	14.4	12.6	13.1	12.7	11.5	11.9	10.9	10.5	10.7	8.8	7.5	8.2
16	15.2	12.3	13.3	12.8	11.2	11.9	11.4	10.9	11.2	10.3	8.3	9.2
17	13.6	12.3	12.8	12.9	11.0	11.7	11.5	11.0	11.3	10.5	8.2	9.2
18	15.3	12.5	13.4	12.1	10.8	11.3	11.9	11.4	11.6	10.8	7.6	9.2
19	15.4	12.5	13.4	11.2	10.7	11.0	11.9	11.4	11.6	8.4	7.4	7.9
20	15.5	12.4	13.5	11.9	11.2	11.6	12.1	11.1	11.7	10.3	7.5	8.8
21	15.7	12.1	13.2	11.9	11.6	11.7	12.0	10.8	11.4	10.8	7.2	8.6
22	15.7	11.5	12.9	12.9	11.8	12.4	12.0	10.4	11.2	8.6	7.2	7.7
23	14.6	11.3	12.4	13.7	12.4	12.9	12.1	10.3	11.0	8.6	7.7	8.1
24	15.3	11.4	12.7	13.7	12.4	12.9	12.0	10.2	10.9	9.0	7.7	8.3
25	15.7	10.9	12.8	13.9	12.4	12.9	12.9	9.8	11.3	8.7	7.5	8.0
26	17.0	10.9	12.9	14.1	12.1	12.9	13.3	9.1	11.0	9.0	7.8	8.4
27	17.1	10.8	13.0	13.3	11.2	12.3	13.9	8.9	10.9	9.2	8.0	8.6
28	17.0	9.8	12.6	12.2	11.7	11.9	13.8	7.9	10.2	9.8	8.1	8.8
29	---	---	---	13.0	11.9	12.4	13.4	7.5	9.6	8.9	8.1	8.4
30	---	---	---	13.1	11.9	12.4	9.8	8.1	9.0	9.2	8.1	8.5
31	---	---	---	13.1	11.5	12.3	---	---	---	9.1	7.4	8.3
MONTH	17.1	9.8	13.4	19.1	6.4	11.9	13.9	7.5	11.1	11.7	5.4	9.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	9.1	7.5	8.4	6.5	5.9	6.2	6.0	4.6	5.3	7.2	3.5	5.7
2	10.2	7.6	8.8	6.5	6.1	6.3	7.5	4.5	5.8	7.9	5.1	6.3
3	8.6	7.4	8.0	6.7	6.2	6.5	7.5	5.3	6.2	8.2	5.1	6.3
4	9.3	7.8	8.5	6.7	5.7	6.2	7.0	5.3	5.9	8.4	5.1	6.4
5	9.4	7.6	8.4	6.6	5.9	6.2	6.9	5.3	6.0	8.3	5.1	6.4
6	8.2	7.2	7.7	6.9	6.0	6.4	7.2	5.4	6.1	8.3	3.3	6.0
7	8.8	6.9	7.8	8.2	6.2	7.2	7.7	5.5	6.4	6.7	5.9	6.3
8	8.8	6.9	7.7	8.5	6.6	7.5	7.9	5.1	6.3	7.3	5.8	6.4
9	9.0	6.6	7.7	8.6	6.3	7.3	7.7	5.0	6.0	7.1	5.6	6.2
10	8.8	6.3	7.4	8.9	6.1	7.2	7.7	4.9	6.0	7.0	5.3	6.1
11	8.9	4.7	7.2	9.0	5.5	7.2	5.8	2.5	4.6	6.8	5.4	6.0
12	8.5	6.1	7.2	9.3	4.9	6.8	6.5	4.9	5.6	7.6	5.4	6.3
13	8.6	5.3	6.9	8.7	4.5	6.2	7.0	4.9	5.7	8.2	5.4	6.5
14	8.2	5.0	6.2	8.8	4.6	6.3	7.5	4.8	5.8	8.7	5.7	6.8
15	8.1	4.8	6.2	8.6	4.4	6.1	8.4	4.7	6.2	9.2	5.9	7.1
16	8.6	4.6	6.2	8.3	4.1	5.7	9.6	4.5	6.3	8.1	5.7	6.8
17	7.8	4.5	6.0	8.0	4.0	5.3	10.3	4.3	6.8	9.3	6.7	7.6
18	7.8	2.4	5.2	7.6	4.2	5.6	8.9	5.0	6.4	9.5	6.4	7.5
19	6.0	4.7	5.4	8.0	3.9	5.6	8.2	4.4	5.8	9.7	6.0	7.4
20	7.1	4.9	5.8	8.2	4.2	5.8	8.6	4.2	5.8	9.4	6.0	7.2
21	7.4	4.8	5.9	8.9	1.8	5.3	8.7	4.3	6.1	7.9	5.7	6.9
22	7.6	4.7	5.8	7.0	3.8	5.2	8.0	4.4	5.8	8.8	6.9	7.7
23	7.7	4.5	5.8	5.3	3.7	4.6	8.0	4.3	5.8	8.6	7.1	7.7
24	7.6	4.4	5.6	6.3	4.6	5.3	8.3	4.4	5.9	9.2	7.3	8.0
25	7.5	4.4	5.7	6.6	4.5	5.4	8.6	4.2	5.9	9.5	7.2	8.2
26	7.8	4.6	5.9	7.2	4.5	5.6	7.3	4.1	5.5	9.5	7.2	8.0
27	7.9	4.3	5.7	7.4	4.5	5.7	7.5	4.0	5.3	10.2	7.0	8.3
28	5.7	4.0	5.0	7.4	4.5	5.7	6.9	4.0	5.2	10.4	6.8	8.2
29	6.3	5.7	6.0	6.7	4.2	5.2	7.6	4.2	5.5	10.4	6.7	8.1
30	6.7	5.1	6.2	7.7	4.3	5.6	7.4	3.5	5.4	10.1	6.4	7.9
31	---	---	---	5.2	3.6	4.4	6.4	2.6	5.1	---	---	---
MONTH	10.2	2.4	6.7	9.3	1.8	6.0	10.3	2.5	5.8	10.4	3.3	7.0
YEAR	19.1	1.8	9.4									

04206000 CUYAHOGA RIVER AT OLD PORTAGE, OH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	684	657	450	357	579	573	447	519	500	492	768	846
2	705	758	432	369	555	588	459	428	528	443	783	855
3	732	746	420	387	555	609	483	419	549	392	791	849
4	756	633	423	405	608	639	465	365	564	404	789	840
5	761	633	426	426	576	669	480	342	555	426	785	828
6	741	600	417	456	513	678	495	330	579	459	765	756
7	696	570	438	465	564	783	504	324	582	479	729	620
8	542	561	440	476	609	797	495	339	588	504	660	633
9	581	564	456	477	573	699	492	360	593	552	633	630
10	621	564	460	483	545	672	413	381	588	630	674	647
11	621	530	---	462	533	723	396	399	618	650	570	645
12	648	540	---	501	635	657	393	411	603	689	596	656
13	693	602	528	521	672	575	393	435	618	737	690	701
14	717	636	528	495	632	540	392	459	636	759	711	728
15	741	633	555	494	617	510	383	467	660	831	698	738
16	740	620	509	585	624	504	354	477	692	831	738	725
17	746	588	441	642	615	513	357	480	716	849	785	687
18	744	585	417	630	608	530	357	486	732	827	791	696
19	756	588	500	635	573	534	362	536	687	852	753	719
20	774	594	531	651	555	528	372	570	705	867	828	810
21	780	566	516	630	552	503	387	564	740	891	765	630
22	801	567	476	729	564	497	401	540	759	824	795	741
23	816	558	483	771	567	477	423	546	774	822	816	780
24	822	516	440	701	588	471	518	486	789	840	852	789
25	828	516	384	636	591	471	437	458	804	827	876	789
26	834	486	381	570	600	488	441	459	810	807	858	776
27	840	479	384	561	609	537	473	468	828	831	905	777
28	843	477	381	555	576	516	537	477	620	866	903	783
29	845	453	378	555	---	456	570	492	726	843	890	785
30	837	449	372	615	---	453	558	483	644	858	909	786
31	836	---	354	599	---	449	---	500	---	834	747	---
MEAN	745	576	446	543	585	569	441	452	660	707	769	742

WTR YR 1983 MEAN 604 MAX 909 MIN 324

PH (STANDARD UNITS), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.8	7.5	7.8	7.7	7.9	8.0	7.9	7.8	7.9	7.8	7.8	7.9
2	7.8	7.6	7.8	7.7	7.8	7.9	7.8	7.8	7.9	7.8	7.9	8.0
3	7.8	7.5	7.7	7.8	7.9	7.9	7.8	7.8	7.7	7.8	7.9	8.0
4	7.8	7.7	7.7	7.8	7.9	7.9	7.8	7.8	7.8	7.8	7.9	8.0
5	7.8	7.9	7.7	7.8	7.9	7.9	7.9	7.8	7.8	7.8	8.0	8.0
6	7.8	7.9	7.7	7.8	7.9	7.8	7.8	7.8	7.8	7.9	8.0	7.9
7	7.7	7.9	7.8	7.8	7.9	8.0	7.7	7.8	7.8	7.9	8.1	8.0
8	7.7	7.9	7.8	7.8	7.9	7.7	7.9	7.8	7.9	7.9	8.0	8.0
9	7.7	7.9	7.8	7.8	8.0	7.9	7.8	7.9	7.9	7.9	8.0	7.9
10	7.6	7.9	7.8	7.8	7.9	7.9	7.8	7.9	7.9	8.0	8.0	7.9
11	7.7	7.8	---	7.8	7.8	7.9	7.8	7.9	7.8	7.9	7.7	7.9
12	7.7	7.7	---	7.9	7.9	7.9	7.8	7.9	7.9	7.9	7.9	7.9
13	7.7	7.8	7.9	7.9	7.9	7.9	7.8	7.9	7.8	7.8	7.9	8.0
14	7.6	7.8	7.8	7.9	7.9	7.8	7.7	7.6	7.7	7.8	8.0	8.0
15	7.6	7.9	7.8	7.8	7.8	7.9	7.8	7.8	7.7	7.8	8.1	8.0
16	7.7	7.9	7.8	7.9	7.9	7.9	7.8	7.9	7.7	7.8	8.1	7.8
17	7.8	7.9	7.8	7.9	7.9	7.9	7.8	7.9	7.7	7.7	8.0	7.9
18	7.8	7.8	7.8	7.9	7.9	7.8	7.8	7.8	7.6	7.8	7.9	7.9
19	7.7	7.8	7.8	7.8	7.9	7.8	7.8	7.7	7.6	7.8	7.8	7.9
20	7.6	7.7	7.8	7.9	7.9	7.8	7.9	7.8	7.7	7.8	7.9	7.9
21	7.6	7.7	7.8	8.0	7.9	7.8	7.9	7.9	7.8	7.7	7.9	8.0
22	7.6	7.8	7.8	7.9	7.9	7.9	7.8	7.6	7.8	7.8	7.9	8.0
23	7.6	7.8	7.7	7.9	7.9	7.9	7.8	7.8	7.7	7.7	7.9	8.0
24	7.7	7.9	7.7	7.9	7.9	7.9	7.9	7.9	7.8	7.8	7.9	8.0
25	7.7	7.9	7.7	7.9	7.9	7.9	8.0	7.8	7.8	7.9	7.9	8.0
26	7.7	7.9	7.7	7.9	7.9	7.8	7.9	7.9	7.9	7.9	7.8	8.0
27	7.6	7.9	7.7	7.9	7.9	7.8	8.0	7.9	7.8	7.9	7.8	8.0
28	7.6	7.9	7.7	7.9	8.0	7.8	8.0	7.9	7.6	7.9	7.8	8.0
29	7.6	7.8	7.7	7.9	---	7.9	8.0	7.8	7.9	7.8	7.9	8.0
30	7.6	7.8	7.8	7.9	---	7.9	7.8	7.9	7.9	7.9	7.9	8.0
31	7.5	---	7.7	7.9	---	7.9	---	7.8	---	7.6	7.8	---
MEAN	7.7	7.8	7.8	7.9	7.9	7.9	7.8	7.8	7.8	7.8	7.9	8.0

WTR YR 1983 MEAN 7.8 MAX 8.1 MIN 7.5

04206000 CUYAHOGA RIVER AT OLD PORTAGE, OH--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.0	16.5	7.0	4.0	3.0	6.5	8.5	14.5	17.0	24.5	25.0	27.0
2	17.0	17.0	7.5	4.0	4.0	7.0	9.0	16.0	17.0	24.5	25.0	26.0
3	17.0	16.5	9.5	4.0	4.0	7.5	9.0	15.5	17.5	24.5	25.5	25.5
4	17.0	14.0	9.5	3.5	3.0	9.0	9.0	14.5	16.5	24.5	26.5	25.5
5	17.0	12.5	9.5	3.0	2.0	11.0	10.0	15.0	17.5	24.0	27.0	25.5
6	18.0	11.5	10.5	3.5	2.5	10.5	10.0	14.5	17.5	22.5	26.0	26.0
7	19.0	10.0	10.5	4.0	2.5	10.5	11.0	15.5	20.0	22.0	25.0	25.5
8	18.5	11.0	9.0	4.5	2.0	11.5	10.5	15.0	20.0	22.0	25.5	25.5
9	18.5	11.0	7.5	4.0	2.5	11.0	9.5	13.5	20.5	22.0	26.0	25.0
10	18.0	12.0	6.5	4.5	3.0	9.0	9.5	13.5	22.0	22.0	25.0	25.5
11	17.5	11.5	---	4.5	3.0	7.0	9.5	14.5	22.0	22.0	24.5	25.0
12	17.0	11.5	---	4.0	2.5	5.5	10.5	15.5	22.5	24.0	25.0	24.5
13	17.0	11.0	4.0	3.0	2.0	5.5	11.0	16.5	23.0	26.0	24.0	23.5
14	17.5	10.5	4.5	3.0	3.5	7.0	11.5	18.0	24.5	25.0	24.5	22.0
15	16.5	9.5	5.0	3.0	4.0	8.0	11.0	16.5	25.0	26.5	24.5	20.5
16	15.0	9.5	5.5	2.5	5.0	8.5	9.5	15.0	25.0	28.0	25.0	20.5
17	13.5	9.5	4.5	2.0	5.0	9.0	8.5	15.5	25.0	27.5	25.5	21.5
18	13.5	9.5	3.0	2.0	5.0	9.0	7.5	16.5	24.0	27.5	26.5	21.0
19	15.0	11.0	3.0	3.0	5.0	9.0	7.5	17.0	23.5	27.5	27.5	23.0
20	16.0	11.0	3.0	2.0	5.0	8.0	8.0	17.5	23.0	27.5	28.0	23.5
21	15.0	11.0	3.0	2.0	5.5	7.0	9.0	18.0	24.0	27.5	26.5	22.5
22	15.0	10.5	2.5	2.5	7.0	5.5	9.5	17.0	24.5	27.0	26.5	20.5
23	15.0	11.0	3.5	2.5	6.5	5.0	10.0	18.0	25.0	26.0	26.5	19.0
24	14.5	10.0	4.0	3.0	6.5	5.0	10.0	18.5	25.5	27.5	26.0	19.0
25	14.0	8.0	5.0	3.0	5.5	5.0	10.0	18.5	25.0	25.5	27.0	18.5
26	14.0	6.5	5.5	2.5	6.0	5.5	12.5	17.5	24.5	25.0	27.5	18.5
27	15.0	6.0	5.5	2.5	5.5	6.0	13.0	17.0	26.0	25.0	28.0	18.0
28	15.5	5.5	7.0	2.5	6.5	6.5	16.0	16.0	25.0	25.5	27.5	19.0
29	15.0	6.0	7.0	2.5	---	6.5	16.0	16.0	24.0	26.5	26.5	20.0
30	15.0	6.0	5.0	3.0	---	7.0	15.0	16.0	23.5	26.5	26.0	20.0
31	15.5	---	4.5	3.0	---	7.5	---	17.0	---	25.5	27.5	---
MEAN	16.0	10.5	6.0	3.0	4.0	7.5	10.5	16.0	22.5	25.0	26.0	22.5

WTR YR 1983 MEAN 14.5 MAX 28.0 MIN 2.0

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.0	8.2	11.6	13.2	13.5	11.5	11.8	9.5	8.4	6.2	5.2	5.5
2	10.7	8.0	11.5	13.2	13.2	10.9	11.2	9.3	8.5	6.3	5.9	5.9
3	10.8	7.8	11.2	13.0	13.1	10.4	11.2	9.1	8.1	6.4	6.0	6.0
4	11.0	8.7	10.8	13.2	13.7	10.2	11.3	9.0	8.4	6.2	5.8	6.0
5	10.2	9.4	10.7	13.1	14.1	9.3	11.4	9.8	8.2	6.2	5.8	6.1
6	8.9	9.8	10.5	12.8	14.0	9.1	11.0	9.9	7.6	6.4	5.9	5.7
7	8.2	10.1	10.7	12.5	13.8	9.6	10.5	9.6	7.7	7.2	6.1	6.3
8	8.6	10.1	11.1	12.4	13.9	8.4	10.8	9.7	7.5	7.3	6.0	6.2
9	8.2	9.9	11.3	12.5	13.8	9.9	11.0	10.0	7.5	7.0	5.7	6.1
10	8.2	9.9	11.4	12.5	13.7	10.9	11.2	9.9	7.2	6.8	5.7	5.9
11	8.0	6.9	---	12.1	13.6	11.7	11.1	9.8	7.1	6.7	4.7	5.9
12	8.0	7.3	---	12.6	13.7	12.2	11.2	9.6	7.1	6.4	5.4	6.1
13	7.2	8.1	11.9	12.7	13.7	12.3	10.9	9.1	6.7	5.8	5.5	6.2
14	6.7	8.9	11.8	5.6	13.4	11.9	10.7	8.1	6.0	5.6	5.5	6.4
15	7.4	9.6	11.6	7.2	12.8	11.7	10.8	8.5	5.9	5.7	5.8	6.6
16	8.4	9.8	11.8	9.2	12.8	11.6	11.2	9.0	5.8	5.2	5.5	6.9
17	9.2	9.9	12.2	10.0	12.7	11.4	11.4	8.9	5.9	4.7	6.9	7.3
18	9.2	9.9	12.4	10.6	12.8	11.1	11.6	8.7	4.8	5.3	5.9	7.2
19	8.6	9.8	12.3	10.7	12.8	11.1	11.6	7.9	5.3	5.1	5.4	7.0
20	7.2	9.4	12.4	11.6	12.8	11.6	11.6	8.5	5.5	5.3	5.3	6.7
21	7.4	9.6	13.5	11.8	12.5	11.8	11.3	8.4	5.6	4.3	5.7	7.0
22	7.5	10.1	13.6	11.9	12.1	12.4	11.0	7.6	5.5	4.8	5.6	7.5
23	7.7	10.0	13.4	11.8	11.8	12.7	10.3	8.1	5.4	4.6	5.5	7.6
24	7.9	10.5	13.4	11.7	11.9	12.7	10.6	8.2	5.3	5.1	5.4	7.8
25	7.9	11.5	13.2	11.6	11.8	12.6	10.9	7.8	5.4	5.3	5.4	7.9
26	7.6	11.6	13.0	12.4	11.5	12.5	10.4	8.3	5.6	5.3	5.3	7.7
27	7.4	11.9	13.1	13.5	11.5	12.2	10.2	8.5	5.3	5.4	5.1	7.7
28	7.6	11.8	12.4	13.4	11.2	11.9	9.5	8.7	4.8	5.5	5.1	7.6
29	7.1	11.7	12.5	13.4	---	12.3	8.5	8.4	6.0	4.9	5.1	7.4
30	7.5	11.7	13.1	13.2	---	12.2	8.9	8.4	6.3	5.4	5.0	7.3
31	6.9	---	13.1	13.5	---	12.0	---	8.3	---	4.4	5.4	---
MEAN	8.3	9.7	12.1	11.9	12.9	11.4	10.8	8.9	6.5	5.7	5.6	6.7

WTR YR 1983 MEAN 9.2 MAX 14.1 MIN 4.3

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 mi^2 (217 km^2).

PERIOD OF RECORD.--November 1962 to current year.

REVISED RECORDS.--WSP 1912: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 876.18 ft (267.060 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Water-quality data collected at this site 1965 to 1977. Sediment data collected at this site 1974 to 1979.

AVERAGE DISCHARGE.--20 years (1963-83), 128 ft^3/s (3.625 m^3/s), 20.72 in/yr (526 mm/yr).

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

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft^3/s (42.5 m^3/s) and maximums (*).

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
May 2	1930	2590	73.3	6.99	2.131	June 28	1500	*3400	96.3	*7.59	2.313
May 3	1730	1730	49.0	6.27	1.911	July 2	0230	2500	70.8	6.92	2.110

Minimum discharge, 19 ft^3/s (0.54 m^3/s) Oct. 3, 4, 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	182	132	98	157	44	104	642	48	135	65	80
2	24	159	106	82	425	42	100	1000	38	1220	35	33
3	21	272	110	77	581	40	159	1170	35	833	27	26
4	21	139	125	65	391	39	161	695	56	503	97	24
5	22	73	250	56	203	38	125	421	43	176	75	44
6	22	51	162	50	144	38	103	228	233	108	35	44
7	35	44	106	46	110	41	165	148	107	79	31	244
8	52	40	87	42	100	152	157	160	62	66	27	92
9	35	36	76	40	85	246	247	129	51	56	26	38
10	26	82	70	72	75	356	752	97	50	41	25	28
11	26	212	65	174	65	433	495	81	58	34	167	25
12	27	171	60	140	60	371	238	68	57	30	59	25
13	25	95	55	89	55	326	164	61	53	29	33	25
14	24	71	61	75	62	317	405	59	37	27	26	25
15	26	57	249	75	79	275	590	98	30	27	25	25
16	28	51	818	67	153	191	429	105	28	26	25	55
17	44	46	525	63	184	126	209	73	27	25	24	35
18	28	42	266	55	137	103	214	51	34	26	24	27
19	25	42	196	55	105	334	234	86	35	26	24	25
20	26	426	292	55	86	348	191	119	33	26	23	49
21	34	315	247	55	73	400	137	83	28	70	22	229
22	32	276	198	55	65	286	102	185	27	56	23	82
23	27	484	604	148	62	184	85	178	26	33	23	68
24	26	286	693	216	57	157	84	99	26	68	22	39
25	28	187	563	176	53	126	73	90	25	35	22	28
26	28	174	342	125	48	104	60	94	24	27	22	27
27	26	436	424	86	44	241	54	63	23	25	36	26
28	26	430	516	77	44	684	61	47	1030	25	24	25
29	25	311	381	79	---	429	72	58	567	27	23	25
30	40	173	196	221	---	213	377	58	361	25	62	25
31	341	---	128	237	---	138	---	55	---	93	180	---
TOTAL	1201	5363	8103	2951	3703	6822	6347	6501	3252	3977	1332	1543
MEAN	38.7	179	261	95.2	132	220	212	210	108	128	43.0	51.4
MAX	341	484	818	237	581	684	752	1170	1030	1220	180	244
MIN	21	36	55	40	44	38	54	47	23	25	22	24
CFSM	.46	2.13	3.11	1.14	1.57	2.62	2.53	2.50	1.29	1.53	.51	.61
IN.	.53	2.38	3.59	1.31	1.64	3.02	2.81	2.88	1.44	1.76	.59	.68

CAL YR 1982 TOTAL 47204 MEAN 129 MAX 911 MIN 15 CFSM 1.54 IN 20.93
WTR YR 1983 TOTAL 51095 MEAN 140 MAX 1220 MIN 21 CFSM 1.67 IN 22.65

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 mi^2 (1,831 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1903 to December 1905 (fragmentary), January to July 1906 (gage heights and discharge measurements only), September 1921 to May 1923, September 1927 to December 1935, March 1940 to current year.

REVISED RECORDS.--WSP 1307: 1922-23(M), 1928-30(M), 1933(M), 1940(M), 1947(M), 1950(M). WSP 1912: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 583.57 ft (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 ft^3/s (425 m^3/s), when channels merge.

AVERAGE DISCHARGE.--52 years (1921-22, 1927-35, 1940-83), 817 ft^3/s (23.14 m^3/s), not including flow in Ohio Canal.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,800 ft^3/s (702 m^3/s) Jan. 22, 1959, gage height, 22.41 ft (6.381 m), from rating curve extended above 17,000 ft^3/s (481 m^3/s) on basis of contracted-opening measurement of peak flow; minimum daily, 21 ft^3/s (0.59 m^3/s) Aug. 28, 1933; minimum combined daily discharge of river and canal, 55 ft^3/s (1.56 m^3/s) Aug. 28, 1933.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,400 ft^3/s (295 m^3/s) July 2, gage height, 17.60 ft (5.364 m); minimum daily, 150 ft^3/s (4.25 m^3/s) Oct. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	340	1570	1530	1530	1110	457	1330	3900	734	1220	672	520
2	275	1040	1200	1270	2300	426	1260	4120	639	8260	299	307
3	239	758	1170	1090	3460	408	1750	5630	597	3170	253	235
4	228	1330	1150	893	2210	373	1520	4290	783	1930	335	214
5	232	813	1120	788	1670	344	1210	3430	615	1350	471	267
6	315	560	1630	744	1500	335	1040	2790	1190	924	335	225
7	448	471	1180	696	1460	378	1290	2410	803	763	331	1890
8	700	435	944	653	1320	657	1330	2180	639	629	331	696
9	417	404	838	611	1110	1520	1570	1770	592	546	267	439
10	232	344	768	667	995	1550	4530	1420	551	466	228	331
11	225	421	778	1230	908	2210	2730	1230	529	386	629	271
12	225	944	749	1060	823	1900	2050	1010	592	356	615	275
13	196	1040	653	908	729	1800	1900	858	502	335	291	249
14	183	624	615	878	700	2110	2300	739	462	311	242	235
15	171	556	1140	883	739	1990	4750	965	435	315	228	225
16	183	524	4540	853	950	1550	2840	1260	382	291	217	299
17	180	466	2430	788	1180	1240	2160	929	382	291	210	399
18	159	426	1670	691	995	1120	2200	813	382	327	196	263
19	162	399	1730	648	914	2300	2240	863	502	291	193	228
20	159	361	2350	624	873	2350	1950	1010	466	287	203	283
21	177	1480	1980	615	803	2480	1570	734	391	307	210	1160
22	168	1680	1600	686	754	1920	1270	1040	378	506	210	583
23	171	1080	2940	1110	710	1530	1090	1510	344	356	203	412
24	165	2700	4010	1510	653	1350	1020	1200	311	524	183	365
25	156	1750	2670	1270	597	1210	950	1050	311	369	180	315
26	162	1340	2230	1070	537	1040	749	1150	307	303	180	311
27	150	1450	2690	914	489	1220	700	985	295	275	187	303
28	156	1900	4000	808	489	3850	648	878	3560	271	193	291
29	156	3120	2720	783	---	2260	648	858	2890	279	174	295
30	153	1930	2060	1330	---	1630	1730	955	1370	279	287	253
31	165	---	1730	1480	---	1390	---	838	---	466	1040	---
TOTAL	7048	31916	56815	29081	30978	44898	52325	52815	21934	26383	9593	12139
MEAN	227	1064	1833	938	1106	1448	1744	1704	731	851	309	405
MAX	700	3120	4540	1530	3460	3850	4750	5630	3560	8260	1040	1890
MIN	150	344	615	611	489	335	648	734	295	271	174	214

CAL YR 1982 TOTAL 387610 MEAN 1062 MAX 5900 MIN 144
WTR YR 1983 TOTAL 375925 MEAN 1030 MAX 8260 MIN 150

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, 15.6 mg/L May 5,6 1982; 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.
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, 1,510 micromhos Jan. 23; minimum, 264 micromhos July 2.
pH: Maximum, 8.3 Nov. 5-7, Dec. 14, Aug. 29; minimum, 7.0 units June 15, 16.
WATER TEMPERATURES: Maximum, 28.5°C July 16,20; minimum, 1.0°C Jan. 18, 19.
DISSOLVED OXYGEN: Maximum recorded, 12.4 mg/L Dec. 31, Jan. 26, Feb. 5; minimum, 2.8 mg/L Aug.12.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,260 mg/L June 28; minimum daily mean, 3 mg/L, Oct. 22, 29, 30.
SEDIMENT LOADS: Maximum daily, 47,000 tons (42,600 tonnes) July 2; minimum daily, 1.2 tons (1.1 tonnes) Oct. 30.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)
NOV 09...	1530	366	10	2	55	<1	<1	<1	<3	7	34
FEB 15...	1200	750	<10	1	50	<1	<1	<1	<3	9	22
MAY 11...	1330	1260	50	1	52	<1	<1	<1	<3	14	27
AUG 17...	1200	223	20	5	71	<1	<1	2	<3	.0	25

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	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)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV 09...	5	10	72	.2	<10	8	<1	<1	200	<6.0	10
FEB 15...	3	10	120	.3	<10	9	<1	<1	190	<6.0	26
MAY 11...	10	14	52	.2	<10	5	<1	<1	140	<6.0	13
AUG 17...	6	17	48	.4	<10	20	<1	<1	220	<6.0	17

04208000 CUYAHOGA RIVER AT INDEPENDENCE, OH--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
NOV										
09...	1530	366	720	7.8	4.0	10.0	5.5	10.2	92	17000
FEB										
15...	1200	750	835	7.7	2.0	4.5	5.0	11.5	91	4000
MAY										
11...	1330	1260	500	7.4	21.0	15.0	18	9.5	95	620
AUG										
17...	1200	223	905	7.8	29.0	23.5	7.7	7.4	89	1700

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
NOV										
09...	1400	64	18	61	36	1.8	5.5	139	94	78
FEB										
15...	2100	59	15	81	45	2.5	3.4	116	90	140
MAY										
11...	300	50	11	35	30	1.2	3.0	97	64	58
AUG										
17...	130	73	17	81	40	2.3	6.4	149	110	120

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)
NOV										
09...	.3	7.2	440	2.2	1.80	2.3	2.70	.280	.190	.190
FEB										
15...	.2	6.1	480	1.9	.650	.84	.90	.300	.190	.200
MAY										
11...	.3	3.8	311	1.2	.250	.32	1.20	.210	.090	.080
AUG										
17...	.5	9.0	562	3.6	.520	.67	1.50	.570	.470	.440

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
NOV.					
09...	1530	366	10.0	20	20
FEB					
15...	1200	750	4.5	13	26
MAY					
11...	1330	1260	15.0	82	279
AUG					
17...	1200	223	23.5	18	11

04208000 CUYAHOGA RIVER AT INDEPENDENCE, OH--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	340	29	27	1570	575	2650	1530	65	269
2	275	25	19	1040	169	517	1200	62	201
3	239	19	12	758	68	149	1170	54	171
4	228	19	12	1330	136	486	1150	52	161
5	232	15	9.4	813	56	123	1120	70	228
6	315	18	15	560	33	50	1630	151	692
7	448	29	35	471	18	23	1180	52	165
8	700	95	194	435	13	15	944	33	84
9	417	33	37	404	17	19	838	27	61
10	232	26	16	344	11	10	768	26	54
11	225	17	10	421	27	38	778	22	46
12	225	13	7.9	944	221	742	749	20	40
13	196	8	4.2	1040	187	571	653	20	35
14	183	13	6.4	624	37	62	615	20	33
15	171	7	3.2	556	16	24	1140	291	1500
16	183	6	3.0	524	13	18	4540	887	11300
17	180	7	3.4	466	14	18	2430	186	1250
18	159	5	2.1	426	11	13	1670	105	473
19	162	7	3.1	399	13	14	1730	118	562
20	159	5	2.1	361	15	15	2350	110	698
21	177	5	2.4	1480	431	2340	1980	64	342
22	168	3	1.4	1680	153	739	1600	46	199
23	171	4	1.8	1080	83	262	2940	660	6750
24	165	5	2.2	2700	440	3180	4010	323	3730
25	156	4	1.7	1750	81	392	2670	153	1100
26	162	6	2.6	1340	47	170	2230	108	650
27	150	5	2.0	1450	51	200	2690	451	4280
28	156	4	1.7	1900	230	1930	4000	319	3540
29	156	3	1.3	3120	298	2760	2720	178	1310
30	153	3	1.2	1930	105	547	2060	107	595
31	165	14	6.2	---	---	---	1730	73	341
TOTAL	7048	---	446.3	31916	---	18077	56815	---	40861
		JANUARY			FEBRUARY			MARCH	
1	1530	61	252	1110	32	96	457	10	12
2	1270	53	182	2300	614	4650	426	11	13
3	1090	43	127	3460	475	4680	408	13	14
4	893	37	89	2210	130	776	373	12	12
5	788	48	102	1670	88	397	344	9	8.4
6	744	29	58	1500	75	304	335	7	6.3
7	696	19	36	1460	65	256	378	7	7.1
8	653	14	25	1320	37	132	657	72	207
9	611	12	20	1110	28	84	1520	233	964
10	667	21	39	995	22	59	1550	143	614
11	1230	103	347	908	22	54	2210	173	1050
12	1060	37	106	823	27	60	1900	67	344
13	908	20	49	729	26	51	1800	88	445
14	878	16	38	700	19	36	2110	244	1390
15	883	14	33	739	15	30	1990	116	643
16	853	14	32	950	81	241	1550	48	201
17	788	14	30	1180	125	398	1240	51	171
18	691	16	30	995	25	67	1120	25	76
19	648	18	31	914	15	37	2300	333	3000
20	624	17	29	873	14	33	2350	470	2980
21	615	15	25	803	13	28	2480	293	2000
22	686	18	33	754	12	24	1920	163	870
23	1110	39	123	710	16	31	1530	87	359
24	1510	104	431	653	13	23	1350	32	117
25	1270	37	127	597	8	13	1210	21	69
26	1070	22	64	537	10	14	1040	27	76
27	914	17	42	489	9	12	1220	111	572
28	808	18	39	489	8	11	3850	903	9460
29	783	16	34	---	---	---	2260	176	1100
30	1330	135	634	---	---	---	1630	70	308
31	1480	95	380	---	---	---	1390	47	176
TOTAL	29081	---	3587	30978	---	12597	44898	---	27264.8

04208000 CUYAHOGA RIVER AT INDEPENDENCE, OH--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	1330	33	119	3900	626	7070	734	26	52
2	1260	43	154	4120	847	12200	639	22	38
3	1750	209	993	5630	758	12300	597	25	40
4	1520	47	193	4290	295	3480	783	58	126
5	1210	32	105	3430	249	2320	615	25	42
6	1040	26	73	2790	156	1180	1190	450	1510
7	1290	66	238	2410	137	891	803	55	125
8	1330	51	195	2180	128	753	639	18	31
9	1570	271	1550	1770	88	421	592	21	34
10	4530	903	11400	1420	67	257	551	14	21
11	2730	180	1330	1230	60	199	529	18	26
12	2050	118	653	1010	47	128	592	27	43
13	1900	103	528	858	37	86	502	15	20
14	2300	157	1340	739	32	64	462	14	17
15	4750	509	6930	965	120	317	435	13	15
16	2840	160	1230	1260	94	336	382	13	13
17	2160	91	531	929	32	80	382	13	13
18	2200	90	535	813	21	46	382	15	15
19	2240	88	532	863	63	189	502	34	48
20	1950	79	416	1010	70	196	466	20	25
21	1570	58	246	734	19	38	391	14	15
22	1270	59	202	1040	86	333	378	10	10
23	1090	48	141	1510	I19	497	344	11	10
24	1020	37	102	1200	61	198	311	7	5.9
25	950	28	72	1050	53	150	311	8	6.7
26	749	29	59	1150	61	189	307	10	8.3
27	700	24	45	985	37	98	295	15	12
28	648	25	44	878	31	73	3560	2260	37300
29	648	30	52	858	36	83	2890	802	9060
30	1730	313	2380	955	51	132	1370	148	555
31	---	---	---	838	29	66	---	---	---
TOTAL	52325	---	32388	52815	---	44370	21934	---	49236.9
		JULY			AUGUST			SEPTEMBER	
1	1220	142	365	672	128	279	520	116	181
2	8260	1950	47000	299	23	19	307	49	41
3	3170	540	4620	253	17	12	235	37	23
4	1930	287	1490	335	69	97	214	25	14
5	1350	165	601	471	340	432	267	58	51
6	924	107	267	335	58	52	225	136	140
7	763	78	161	331	32	29	1890	903	5180
8	629	60	102	331	32	29	696	118	222
9	546	51	75	267	30	22	439	49	58
10	466	40	50	228	20	12	331	23	21
11	386	27	28	629	287	603	271	18	13
12	356	28	27	615	113	233	275	28	21
13	335	19	17	291	27	21	249	27	18
14	311	19	16	242	19	12	235	23	15
15	315	14	12	228	12	7.4	225	20	12
16	291	14	11	217	16	9.4	299	37	30
17	291	13	10	210	18	10	399	53	57
18	327	9	7.9	196	14	7.4	263	26	18
19	291	15	12	193	10	5.2	228	20	12
20	287	12	9.3	203	11	6.0	283	32	24
21	307	37	34	210	10	5.7	1160	334	1210
22	506	97	137	210	12	6.8	583	140	220
23	356	27	26	203	5	2.7	412	32	36
24	524	56	79	183	4	2.0	365	25	25
25	369	35	35	180	7	3.4	315	25	21
26	303	24	20	180	10	4.9	311	23	19
27	275	16	12	187	7	3.5	303	20	16
28	271	18	13	193	8	4.2	291	20	16
29	279	17	13	174	5	2.3	295	22	18
30	279	13	9.8	287	98	188	253	14	9.6
31	466	75	134	1040	993	2740	---	---	---
TOTAL	26383	---	55394.0	9593	---	4860.9	12139	---	7741.6
YEAR	375925		296824.5						

04208000 CUYAHOGA RIVER AT INDEPENDENCE, OH--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
DEC 16...	0730	5590	1120	16900	22	32	43
FEB 02...	1640	3250	908	7970	25	36	49
MAR 28...	0720	4880	1270	16700	26	37	51
JUL 02...	1200	10400	2290	64300	45	61	77

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM
DEC 16...	59	73	83	89	97	99	100
FEB 02...	66	79	91	95	99	100	--
MAR 28...	69	82	91	95	99	100	--
JUL 02...	91	95	98	99	100	--	--

04208000 CUYAHOGA RIVER AT INDEPENDENCE, OH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	840	813	829	834	411	621	570	552	564	462	450	456
2	834	816	828	702	456	613	597	570	584	477	459	474
3	852	828	843	756	708	734	579	555	572	603	480	525
4	864	828	848	714	633	667	603	561	577	708	564	644
5	849	825	840	696	654	672	585	561	574	582	561	575
6	894	846	869	723	699	714	582	519	538	600	570	588
7	876	795	838	741	705	721	552	522	544	612	585	596
8	816	648	751	738	714	722	591	555	583	633	621	629
9	720	669	694	735	705	721	627	585	611	627	603	618
10	801	723	755	762	723	742	717	615	668	630	606	619
11	855	810	838	771	741	759	921	714	809	636	540	580
12	852	819	839	750	546	656	1030	924	979	573	546	563
13	855	819	844	654	576	615	900	759	805	678	567	633
14	912	855	896	729	654	691	759	723	733	657	600	629
15	939	885	916	774	726	746	855	678	789	636	606	621
16	906	888	899	804	771	785	636	474	510	768	609	684
17	909	879	891	807	774	793	534	516	526	933	744	819
18	894	864	883	795	753	772	531	516	525	909	735	784
19	885	870	878	777	747	766	726	531	623	810	732	764
20	879	864	874	831	759	784	801	741	777	861	756	796
21	924	873	904	834	528	650	795	735	767	900	771	824
22	927	870	900	618	513	570	786	669	729	1020	693	785
23	924	873	903	651	576	628	753	531	679	1510	1040	1300
24	921	888	911	573	471	518	516	486	490	1270	843	979
25	900	882	889	576	537	560	492	465	474	837	738	782
26	900	876	889	693	579	613	492	471	482	768	624	697
27	906	876	887	708	609	655	483	426	466	654	588	633
28	894	885	888	666	486	591	438	420	429	696	627	666
29	900	885	897	513	456	488	456	438	443	684	636	659
30	939	900	927	549	516	530	468	453	461	792	648	699
31	930	843	909	---	---	---	471	441	455	714	582	653
MONTH	939	648	863	834	411	670	1030	420	605	1510	450	686

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	588	573	579	837	699	777	558	531	547	---	---	---
2	612	498	555	819	753	787	573	558	565	---	---	---
3	525	462	484	804	765	780	585	531	563	---	---	---
4	672	510	567	831	774	806	576	555	565	---	---	---
5	801	657	734	852	810	832	597	564	581	---	---	---
6	708	606	658	849	813	833	621	603	614	432	399	411
7	705	606	644	861	804	829	648	609	631	408	399	404
8	924	717	852	927	861	888	633	573	593	432	414	420
9	807	759	783	846	714	768	609	543	592	471	420	432
10	762	681	709	909	705	782	507	426	457	483	447	460
11	687	642	657	981	861	928	498	471	479	507	483	494
12	771	618	688	939	756	840	528	498	509	534	513	524
13	921	720	799	753	654	710	549	513	523	570	537	555
14	926	828	889	636	582	601	549	444	519	627	564	602
15	870	824	845	618	564	589	459	414	431	636	564	601
16	940	852	884	639	591	615	---	---	---	606	525	557
17	824	754	788	666	624	647	---	---	---	597	546	568
18	796	740	759	696	654	668	309	297	300	600	570	587
19	759	740	755	711	519	650	297	288	294	660	591	620
20	761	719	746	678	567	614	294	294	294	660	561	607
21	733	698	719	705	570	617	297	291	295	678	618	653
22	730	688	706	600	492	547	297	291	295	696	588	661
23	747	712	734	657	558	616	297	294	296	588	528	557
24	747	687	671	693	621	658	297	294	297	606	591	597
25	789	678	738	690	579	601	297	294	295	588	570	577
26	798	720	768	657	588	610	300	294	297	603	549	573
27	798	726	778	795	660	686	---	---	---	585	552	564
28	792	750	763	573	438	478	---	---	---	597	579	585
29	---	---	---	525	477	506	---	---	---	---	---	---
30	---	---	---	531	507	519	---	---	---	---	---	---
31	---	---	---	576	531	548	---	---	---	603	594	598
MONTH	940	462	723	981	438	688	648	288	451	696	399	550

04208000 CUYAHOGA RIVER AT INDEPENDENCE, OH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	636	594	619	684	567	627	837	594	714	750	686	707
2	648	618	636	504	264	322	840	645	756	882	759	828
3	699	645	675	411	369	394	903	846	871	915	885	899
4	750	669	706	---	---	---	933	840	901	921	909	915
5	699	651	676	---	---	---	861	615	769	936	747	867
6	678	543	608	564	561	562	903	861	882	888	714	857
7	---	---	---	633	564	596	900	870	880	717	447	549
8	---	---	---	651	618	633	891	876	885	702	573	662
9	741	732	738	675	648	663	900	873	882	786	696	741
10	765	729	749	741	675	708	885	852	862	819	771	793
11	771	729	749	771	726	742	861	645	770	843	813	823
12	765	690	738	810	750	770	756	600	677	861	807	837
13	759	702	736	834	792	806	789	603	695	828	804	816
14	783	735	758	843	807	826	864	798	835	846	810	832
15	834	786	806	885	843	857	888	861	869	867	837	854
16	855	792	818	912	870	888	906	873	892	873	762	845
17	870	840	853	930	891	912	918	897	907	855	810	837
18	876	843	863	912	876	893	954	924	941	816	747	773
19	864	735	838	900	858	873	957	924	946	864	792	840
20	828	726	782	900	876	888	954	921	938	885	816	866
21	831	759	789	903	837	883	948	930	939	840	549	684
22	858	831	846	924	789	865	948	930	938	666	549	610
23	894	861	880	867	753	800	930	921	915	759	681	741
24	951	894	917	915	801	864	960	912	942	837	765	805
25	960	918	933	849	786	814	981	942	969	888	840	869
26	945	915	928	891	852	870	1010	969	991	900	882	893
27	939	897	921	915	885	899	987	876	966	906	888	897
28	894	297	601	915	888	904	1270	846	948	909	873	887
29	513	363	445	939	897	917	1000	945	971	900	876	891
30	648	516	592	972	936	954	972	723	927	912	891	905
31	---	---	---	957	702	848	747	618	690	---	---	---
MONTH	960	297	757	972	264	779	1270	594	873	936	447	811
YEAR	1510	264	712									

PH (STANDARD UNITS), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

04208000 CUYAHOGA RIVER AT INDEPENDENCE, OH--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.8	7.7	7.7	7.8	7.6	7.7	7.5	7.5	7.5	7.3	7.2	7.2
2	7.7	7.5	7.6	7.7	7.5	7.6	7.6	7.5	7.5	7.3	7.2	7.3
3	7.6	7.5	7.6	7.6	7.4	7.5	7.5	7.4	7.5	---	---	---
4	7.7	7.6	7.6	7.5	7.3	7.4	7.5	7.4	7.5	---	---	---
5	7.7	7.6	7.7	7.6	7.3	7.4	7.6	7.4	7.5	---	---	---
6	7.7	7.7	7.7	7.5	7.4	7.5	7.6	7.4	7.5	7.3	7.3	7.3
7	7.7	7.7	7.7	7.6	7.4	7.5	7.5	7.4	7.5	7.3	7.3	7.3
8	7.7	7.6	7.7	7.6	7.4	7.5	7.6	7.4	7.5	7.4	7.3	7.3
9	7.7	7.6	7.7	7.5	7.2	7.4	7.5	7.3	7.4	7.4	7.3	7.3
10	7.8	7.6	7.7	7.6	7.5	7.5	7.4	7.3	7.4	7.4	7.3	7.3
11	7.7	7.7	7.7	7.6	7.5	7.6	7.5	7.4	7.4	7.5	7.3	7.4
12	7.7	7.6	7.7	7.6	7.6	7.6	7.5	7.4	7.4	7.5	7.3	7.4
13	7.7	7.6	7.7	7.6	7.5	7.6	7.5	7.4	7.4	7.4	7.3	7.4
14	7.8	7.6	7.7	7.6	7.5	7.5	7.5	7.4	7.4	7.4	7.2	7.3
15	7.7	7.7	7.7	7.6	7.4	7.5	7.4	7.3	7.3	7.3	7.1	7.2
16	7.8	7.7	7.7	7.6	7.5	7.5	---	---	---	7.5	7.2	7.3
17	7.7	7.7	7.7	7.5	7.4	7.4	---	---	---	7.6	7.4	7.5
18	7.8	7.6	7.7	7.5	7.3	7.4	7.7	7.5	7.7	7.6	7.4	7.5
19	7.8	7.6	7.7	---	---	---	7.8	7.7	7.7	7.5	7.3	7.4
20	7.8	7.6	7.7	---	---	---	7.8	7.7	7.8	7.5	7.1	7.3
21	7.7	7.6	7.6	---	---	---	7.8	7.7	7.7	7.7	7.4	7.5
22	7.7	7.5	7.6	---	---	---	7.8	7.7	7.7	7.5	7.2	7.4
23	7.7	7.5	7.6	7.4	7.4	7.4	7.9	7.7	7.7	7.4	7.2	7.3
24	7.7	7.6	7.6	7.5	7.3	7.4	7.9	7.7	7.8	7.5	7.3	7.4
25	7.8	7.6	7.7	7.5	7.4	7.4	8.0	7.8	7.9	7.4	7.3	7.4
26	7.8	7.7	7.6	7.5	7.5	7.5	7.9	7.8	7.8	7.5	7.2	7.4
27	7.8	7.6	7.7	7.6	7.5	7.5	---	---	---	7.6	7.3	7.4
28	7.8	7.6	7.7	7.6	7.4	7.4	---	---	---	7.6	7.4	7.5
29	---	---	---	7.5	7.4	7.5	7.7	7.4	7.6	---	---	---
30	---	---	---	7.5	7.5	7.5	7.4	7.2	7.3	---	---	---
31	---	---	---	7.5	7.5	7.5	---	---	---	7.6	7.2	7.4
MONTH	7.8	7.5	7.7	7.8	7.2	7.5	8.0	7.2	7.6	7.7	7.1	7.4

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

04208000 CUYAHOGA RIVER AT INDEPENDENCE, OH--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	19.0	17.0	18.0	17.0	14.5	16.0	9.0	7.5	8.0	4.5	3.5	4.0
2	19.5	17.5	18.5	17.5	16.0	17.0	10.0	9.0	9.5	4.5	4.0	4.0
3	18.5	17.0	18.0	17.0	14.5	16.0	11.5	10.0	10.5	4.5	3.5	4.0
4	18.5	17.0	18.0	14.5	11.0	12.5	12.0	11.5	12.0	3.5	3.0	3.5
5	18.5	16.5	17.5	11.0	8.5	9.5	11.5	11.5	11.5	4.0	3.0	3.5
6	19.5	17.0	18.5	9.0	8.0	8.5	11.5	9.5	10.5	4.5	4.0	4.5
7	19.0	18.5	19.0	9.5	7.5	8.5	9.0	8.5	9.0	5.0	4.5	5.0
8	20.0	18.5	19.0	11.0	9.0	10.0	8.5	8.0	8.0	5.0	4.5	5.0
9	19.5	18.0	19.0	11.0	10.0	10.5	8.0	5.5	7.0	5.0	4.0	4.5
10	19.0	18.5	18.5	11.5	10.0	10.5	5.5	4.5	5.0	6.0	5.0	5.5
11	19.0	17.5	18.0	12.0	11.0	11.5	5.5	5.0	5.0	6.0	5.0	6.0
12	18.0	16.5	17.0	12.5	11.0	12.0	5.0	3.5	4.0	5.0	3.0	4.0
13	16.5	15.5	16.0	11.0	8.0	9.0	3.5	2.5	3.0	3.5	3.0	3.5
14	16.5	15.0	15.5	8.0	7.0	7.5	4.5	2.5	3.5	4.0	3.5	4.0
15	15.0	14.0	14.5	8.0	6.5	7.0	6.0	4.5	5.5	4.5	2.5	3.5
16	13.5	11.5	12.5	7.0	5.5	6.5	6.5	5.5	6.0	3.0	2.5	2.5
17	12.0	11.0	11.5	8.0	6.5	7.5	5.0	4.0	4.5	2.5	1.5	2.0
18	12.5	10.0	11.0	9.5	8.0	8.5	3.5	3.0	3.5	1.5	1.0	1.0
19	13.5	11.0	12.5	11.0	9.5	10.5	3.5	3.0	3.5	2.0	1.0	1.5
20	13.5	12.5	13.0	12.0	11.0	11.5	4.0	3.5	3.5	2.5	1.5	2.0
21	12.5	11.0	11.5	12.5	11.5	12.0	3.5	3.5	3.5	2.5	1.5	2.0
22	11.0	10.5	10.5	11.5	11.0	11.5	3.5	3.0	3.5	3.5	2.5	3.0
23	10.5	9.5	10.0	12.0	11.0	11.5	5.0	3.5	4.5	3.5	3.0	3.5
24	10.5	8.5	9.5	11.0	8.0	9.5	5.0	5.0	5.5	3.5	3.0	3.0
25	10.5	8.5	9.5	7.5	6.5	7.0	8.0	6.0	7.0	3.5	3.5	3.5
26	11.0	9.0	10.0	7.0	6.0	6.5	8.0	6.5	7.5	3.5	3.0	3.5
27	11.5	9.5	11.0	6.0	5.0	5.5	7.5	6.0	6.5	3.0	2.0	2.5
28	12.5	10.5	11.5	5.5	5.0	5.0	9.0	8.0	8.5	3.5	2.0	2.5
29	12.5	11.0	12.0	6.5	5.5	6.5	8.5	6.0	7.0	4.0	2.5	3.5
30	13.0	11.5	12.5	7.5	6.5	7.0	5.0	4.5	5.5	4.5	3.5	4.0
31	15.0	13.0	14.0	---	---	---	4.5	3.5	4.0	3.5	3.0	3.5
MONTH	20.0	8.5	14.5	17.5	5.0	10.0	12.0	2.5	6.5	6.0	1.0	3.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	4.0	3.0	3.5	8.0	6.0	7.0	10.0	7.5	9.0	14.0	13.5	14.0
2	5.5	4.0	4.5	8.0	6.0	7.5	10.0	9.0	9.5	16.5	14.0	15.0
3	5.5	4.0	5.0	9.0	6.5	8.0	10.0	9.0	9.5	16.0	14.0	15.0
4	4.0	2.5	3.0	11.5	8.5	10.0	9.5	8.5	9.0	15.0	13.0	14.5
5	3.0	2.0	2.5	13.5	11.0	12.5	10.0	8.0	9.0	15.0	14.0	14.5
6	3.0	2.0	2.5	13.0	12.5	12.5	11.0	10.0	10.5	16.5	14.0	15.0
7	3.0	2.5	3.0	13.0	11.5	12.5	12.0	11.0	11.5	16.5	15.0	16.0
8	3.0	2.5	3.0	12.5	11.5	12.0	11.5	10.0	10.5	16.0	13.0	14.5
9	3.0	2.5	2.5	11.5	9.5	10.5	10.0	9.5	10.0	14.5	11.5	13.0
10	3.5	2.5	3.0	9.5	6.5	8.0	10.5	9.5	10.0	15.5	12.0	13.5
11	3.0	2.5	3.0	6.5	5.0	5.5	10.0	9.5	9.5	16.5	13.0	14.5
12	3.5	2.5	3.0	6.0	5.0	5.5	12.0	9.0	10.5	17.5	14.5	16.0
13	3.5	2.0	2.5	7.0	4.5	6.0	11.5	10.0	11.0	19.0	16.0	17.5
14	4.0	2.0	3.0	9.0	6.0	7.5	12.5	11.5	12.0	19.0	17.5	18.0
15	5.0	4.0	4.5	9.0	8.0	8.5	12.0	10.5	11.0	18.5	14.5	16.5
16	6.0	4.5	5.5	9.5	7.5	8.5	---	---	---	15.5	13.5	14.5
17	5.5	5.0	5.0	10.0	8.5	9.0	---	---	---	16.5	14.0	15.5
18	6.5	5.0	5.5	10.0	9.5	10.0	7.5	7.5	7.5	16.5	14.0	15.5
19	7.0	5.5	6.5	---	---	---	8.5	6.5	7.5	16.5	15.5	16.0
20	8.0	6.0	7.0	---	---	---	9.0	6.5	7.5	17.5	15.5	16.5
21	7.5	6.5	7.0	---	---	---	10.5	7.5	9.0	19.5	16.5	18.0
22	8.5	6.5	7.5	---	---	---	12.0	9.0	10.5	19.0	17.5	18.0
23	8.0	6.5	7.5	5.5	5.5	5.5	13.0	11.0	12.0	18.5	17.0	17.5
24	6.5	5.5	6.0	6.5	4.5	5.5	12.5	10.5	11.5	20.0	17.0	18.5
25	5.5	4.5	5.0	6.5	4.5	5.5	12.0	9.5	10.5	19.0	17.0	18.0
26	6.0	4.0	5.0	7.5	5.0	6.5	11.0	10.5	10.5	17.5	16.0	16.5
27	6.5	4.0	5.5	8.0	7.5	7.5	---	---	---	17.5	15.5	16.5
28	7.5	5.0	6.0	7.0	6.5	7.0	---	---	---	17.5	16.5	17.5
29	---	---	---	7.5	6.0	6.5	16.0	15.0	15.5	---	---	---
30	---	---	---	7.5	5.5	6.5	15.0	14.5	15.0	---	---	---
31	---	---	---	9.0	7.0	8.0	---	---	---	16.5	16.0	16.5
MONTH	8.5	2.0	4.5	13.5	4.5	8.0	15.0	6.5	10.5	20.0	11.5	16.0

04208000 CUYAHOGA RIVER AT INDEPENDENCE, OH--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	18.0	15.5	16.5	25.0	23.0	24.0	26.0	24.0	25.0	24.5	22.0	23.5
2	17.5	15.5	16.5	24.0	21.5	22.5	25.5	24.0	25.5	24.5	22.5	23.5
3	17.0	16.0	16.5	25.0	23.0	23.5	25.5	24.0	25.5	25.0	22.5	24.0
4	18.0	16.0	17.0	---	---	---	26.0	24.5	25.0	26.0	23.0	24.5
5	19.5	17.0	18.5	---	---	---	26.5	23.5	25.0	25.5	24.0	25.0
6	19.0	17.0	18.0	22.5	21.5	22.5	27.0	24.5	25.5	26.0	24.0	25.0
7	---	---	---	22.5	20.0	21.5	27.0	25.0	26.0	24.0	22.0	23.0
8	---	---	---	23.5	20.5	22.0	27.5	25.0	26.0	24.0	22.0	23.0
9	21.5	19.0	20.5	23.5	21.5	22.5	27.0	25.0	26.0	24.0	22.0	23.0
10	22.5	19.5	21.0	23.5	21.5	22.5	25.5	23.0	24.5	25.5	23.0	24.0
11	24.0	20.5	22.5	24.0	21.0	22.5	24.5	22.0	22.5	24.5	23.5	24.0
12	24.5	22.0	23.0	26.0	23.0	24.5	24.0	22.0	22.5	24.5	22.5	23.5
13	24.5	22.5	23.5	27.0	24.0	25.5	23.0	21.5	22.5	23.0	22.0	22.5
14	24.5	22.5	24.0	27.0	23.5	25.5	24.0	20.5	22.5	22.0	20.5	21.0
15	25.0	23.0	24.0	27.5	24.5	26.0	24.5	21.5	23.0	20.5	18.5	19.5
16	25.5	23.5	24.0	28.5	25.5	27.0	25.0	22.0	23.5	19.5	18.0	18.5
17	24.0	23.0	23.5	28.0	26.0	27.0	25.0	23.0	24.0	19.5	17.5	18.5
18	24.5	22.0	23.0	28.0	25.5	26.5	25.0	24.0	24.5	21.0	18.0	19.5
19	23.5	22.0	22.5	28.0	25.5	27.0	26.5	23.5	25.0	23.0	20.0	21.5
20	24.0	21.5	22.5	28.5	25.5	27.0	28.0	25.5	26.5	23.5	21.5	22.5
21	25.0	22.0	23.5	28.0	26.0	27.0	27.0	24.5	26.0	23.0	18.5	20.0
22	26.0	23.0	24.5	27.0	24.5	25.5	26.0	24.5	25.5	18.5	16.0	17.0
23	26.5	24.0	25.0	26.0	24.0	25.0	26.0	24.0	25.0	16.0	14.5	15.0
24	27.0	24.5	25.5	26.5	24.5	25.5	25.5	23.0	24.0	16.5	14.0	15.0
25	26.5	24.0	25.0	26.5	24.5	25.5	26.0	23.5	25.5	17.0	14.5	16.0
26	26.5	23.0	25.0	26.0	23.5	25.0	26.5	24.5	25.5	18.5	16.0	17.5
27	27.5	24.0	25.5	26.5	23.0	25.0	26.5	25.0	26.0	19.0	17.0	18.0
28	26.0	21.5	23.0	26.0	23.5	25.0	26.5	25.0	25.5	19.5	17.5	18.5
29	21.5	20.5	21.5	25.5	24.5	25.0	26.5	24.5	25.5	20.0	18.0	19.0
30	24.0	21.0	22.5	27.5	24.5	26.0	25.5	23.5	24.5	20.0	17.5	19.0
31	---	---	---	27.0	24.5	25.5	24.0	22.5	23.0	---	---	---
MONTH	27.5	15.5	22.0	28.5	20.0	25.0	28.0	20.5	24.5	26.0	14.0	21.0
YEAR	28.5	1.0	14.0									

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	6.5	5.5	6.0	---	---	---	10.3	9.6	10.0	11.6	10.9	11.3
2	6.1	4.9	5.5	---	---	---	10.5	9.1	9.8	11.5	10.9	11.2
3	5.6	4.7	5.2	---	---	---	10.3	9.4	9.9	11.6	10.6	11.0
4	6.0	4.6	5.4	8.7	8.7	9.3	9.4	8.9	9.2	11.9	11.2	11.5
5	6.3	4.7	5.5	10.9	9.3	10.4	9.1	8.4	8.7	11.8	11.4	11.6
6	5.9	4.3	5.0	11.3	10.5	10.9	9.0	7.7	8.4	11.6	10.9	11.2
7	---	---	---	11.2	10.4	10.7	9.2	8.4	8.8	11.1	10.6	10.8
8	6.7	6.2	6.4	10.3	9.1	9.9	10.2	8.3	9.0	11.4	11.0	11.2
9	8.0	6.2	7.1	10.2	8.9	9.4	10.2	9.6	9.9	11.5	10.9	11.2
10	7.2	5.5	6.4	10.7	9.4	10.0	10.3	10.0	10.2	11.1	10.4	10.7
11	7.6	5.6	6.6	9.4	8.8	9.1	10.5	9.8	10.2	10.7	8.9	10.0
12	7.6	5.7	6.8	9.8	7.6	8.7	10.4	10.0	10.2	11.3	10.5	10.9
13	8.5	6.2	7.3	10.8	9.1	10.0	11.2	10.1	10.5	12.2	10.5	11.5
14	7.8	6.0	7.1	11.8	10.7	11.0	11.9	10.1	11.0	12.0	11.3	11.8
15	8.2	6.2	7.2	11.6	8.0	11.1	11.5	10.8	11.1	12.1	11.4	11.7
16	9.0	7.0	8.1	11.6	10.6	11.1	11.0	10.3	10.6	12.3	11.9	12.1
17	10.3	7.6	8.8	11.3	10.3	10.7	11.6	10.6	11.1	12.3	11.7	11.9
18	10.5	8.2	9.3	10.9	9.8	10.5	11.6	11.0	11.3	12.2	11.8	12.0
19	9.7	7.6	8.7	10.3	9.1	9.8	11.2	10.5	10.9	12.2	11.5	11.9
20	8.3	6.6	7.5	8.9	8.3	8.7	11.0	10.0	10.6	11.8	11.2	11.5
21	9.8	6.7	8.4	9.1	7.9	8.6	10.8	10.2	10.5	12.0	11.2	11.5
22	10.5	8.8	9.7	10.0	8.4	8.9	10.9	10.0	10.5	12.0	11.1	11.6
23	11.2	9.0	10.1	9.0	8.1	8.6	10.3	9.3	9.9	12.3	11.0	11.5
24	11.6	9.0	10.3	10.4	7.9	9.1	10.0	9.2	9.6	12.2	11.0	11.5
25	10.9	8.7	9.8	10.4	10.0	10.2	9.5	8.5	9.0	12.1	10.9	11.4
26	10.3	8.1	9.1	11.9	9.6	10.6	10.5	10.1	10.3	12.4	11.6	12.2
27	9.2	7.0	8.1	12.1	10.7	11.4	10.7	9.2	10.1	12.2	11.5	11.8
28	8.3	6.0	7.1	11.8	10.4	11.5	11.4	10.5	11.0	12.1	11.6	11.8
29	---	---	---	11.4	10.2	10.7	11.6	10.5	11.3	11.9	11.3	11.7
30	---	---	---	10.9	10.0	10.5	12.1	10.3	11.5	11.8	11.1	11.3
31	---	---	---	---	---	---	12.4	11.5	12.0	12.1	11.1	11.6
MONTH	11.6	4.3	7.5	12.1	7.6	10.1	12.4	7.7	10.2	12.4	8.9	11.5

04208000 CUYAHOGA RIVER AT INDEPENDENCE, OH--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	11.9	11.3	11.6	10.9	9.3	10.1	10.0	9.0	9.6	---	---	---
2	11.5	10.1	10.8	9.3	7.4	8.8	9.3	8.2	8.6	---	---	---
3	11.0	10.2	10.6	9.0	6.5	7.8	9.6	8.6	8.9	---	---	---
4	12.2	10.7	11.3	7.4	5.2	6.6	9.7	8.2	9.1	---	---	---
5	12.4	11.6	12.1	7.0	4.8	6.0	10.4	8.8	9.3	---	---	---
6	12.1	11.6	11.9	7.1	5.5	6.3	8.7	7.7	8.3	9.3	8.7	9.0
7	11.7	11.2	11.5	8.3	5.5	6.7	7.7	6.5	7.1	8.8	8.6	8.7
8	11.8	11.3	11.5	8.1	6.7	7.3	7.6	5.9	6.5	9.4	8.3	8.8
9	11.8	11.1	11.4	8.5	5.2	7.3	8.2	7.0	7.6	9.9	9.0	9.5
10	12.3	11.3	11.8	9.6	7.9	8.8	10.1	8.6	9.3	9.7	8.9	9.4
11	12.3	11.9	12.0	9.8	9.0	9.4	9.0	8.4	8.7	9.6	8.6	9.1
12	12.2	11.7	11.9	10.5	8.6	9.5	9.4	8.1	8.7	9.3	8.3	8.9
13	12.0	11.5	11.8	9.9	7.9	9.0	8.5	7.3	8.1	8.7	7.4	8.2
14	11.9	11.2	11.6	9.8	7.3	8.5	8.6	6.8	8.0	8.0	7.0	7.4
15	11.6	10.7	11.2	---	---	---	8.8	7.6	8.2	7.8	5.8	6.9
16	11.7	11.0	11.3	---	---	---	---	---	---	9.0	7.3	8.3
17	11.3	10.9	11.1	---	---	---	---	---	---	9.1	8.5	8.8
18	11.4	10.4	11.0	---	---	---	9.9	9.7	9.8	9.2	8.3	8.7
19	11.3	10.1	10.7	---	---	---	9.9	9.6	9.7	8.2	7.8	8.0
20	10.6	9.8	10.2	---	---	---	9.8	9.1	9.6	8.5	6.5	7.7
21	11.2	9.6	10.4	---	---	---	9.3	8.5	8.9	8.4	7.3	7.9
22	10.9	9.7	10.2	---	---	---	8.9	7.7	8.4	8.0	6.8	7.5
23	9.8	8.9	9.4	11.4	11.2	11.3	8.3	7.1	7.7	7.7	6.7	7.2
24	10.4	9.4	10.0	11.5	11.0	11.3	7.4	6.8	7.1	7.9	7.2	7.5
25	11.1	9.8	10.4	11.4	10.7	11.1	8.0	6.8	7.2	7.9	7.1	7.6
26	11.3	10.0	10.7	11.0	9.4	10.5	---	---	---	8.4	6.7	7.8
27	10.9	9.6	10.3	9.3	6.9	8.1	---	---	---	8.7	7.7	8.2
28	11.4	9.5	10.1	9.9	6.9	8.9	---	---	---	8.8	7.9	8.4
29	---	---	---	10.5	9.1	9.7	---	---	---	---	---	---
30	---	---	---	11.4	9.1	10.4	---	---	---	---	---	---
31	---	---	---	10.2	9.6	9.9	---	---	---	9.1	8.4	8.9
MONTH	12.4	8.9	11.0	11.5	4.8	8.8	10.4	5.9	8.5	9.9	5.8	8.3

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.9	7.9	8.4	7.0	5.8	6.5	4.2	2.9	3.6	---	---	---
2	9.1	7.7	8.4	7.7	6.5	7.0	5.8	3.8	4.8	---	---	---
3	8.4	7.5	8.0	---	---	---	4.9	3.6	4.2	---	---	---
4	7.8	6.5	7.4	---	---	---	5.7	3.2	4.4	---	---	---
5	8.2	7.4	7.7	---	---	---	5.3	4.3	4.8	---	---	---
6	7.5	6.9	7.2	7.3	6.9	7.1	5.8	4.4	5.1	---	---	---
7	---	---	---	7.6	6.9	7.2	6.0	4.3	5.1	---	---	---
8	---	---	---	7.6	6.9	7.2	5.3	3.5	4.5	7.1	6.0	6.1
9	8.0	6.4	7.3	7.3	6.4	6.8	5.9	3.8	4.7	7.4	5.5	6.2
10	7.1	5.6	6.5	7.9	6.2	7.0	5.2	3.6	4.6	7.4	6.1	6.8
11	6.6	5.1	5.8	8.2	5.9	6.9	5.0	3.5	4.2	7.3	5.2	6.0
12	6.1	4.6	5.5	8.2	6.0	7.2	4.0	2.8	3.4	7.3	6.1	6.7
13	---	---	---	8.1	5.7	7.0	5.5	3.1	4.3	7.3	6.0	6.8
14	---	---	---	7.9	5.2	6.7	5.7	4.5	5.4	7.4	5.9	6.8
15	---	---	---	7.5	5.2	6.3	5.6	4.2	5.1	7.5	5.5	6.8
16	6.6	5.2	5.9	7.7	4.0	5.9	7.2	4.8	5.8	---	---	---
17	7.8	4.8	6.2	6.9	4.0	5.6	7.4	5.4	6.4	---	---	---
18	8.3	5.2	6.7	7.5	4.1	5.6	8.3	4.3	5.9	---	---	---
19	5.9	4.0	5.1	7.9	4.7	6.2	8.5	4.4	6.1	---	---	---
20	5.8	3.9	4.9	8.9	4.3	6.6	8.8	4.7	6.3	---	---	---
21	5.5	3.8	4.7	8.9	5.3	6.9	7.3	3.7	5.4	---	---	---
22	7.3	3.0	4.8	7.1	4.4	5.5	8.0	3.7	5.8	8.8	7.6	8.3
23	7.2	3.9	5.5	7.0	3.4	5.2	8.9	4.3	6.4	9.4	8.0	8.8
24	7.1	3.9	5.4	6.4	4.8	5.4	7.2	4.2	5.3	9.4	8.4	8.9
25	7.3	3.9	5.3	8.0	4.4	6.0	8.9	5.2	7.5	8.9	8.0	8.5
26	8.9	4.0	6.2	7.7	4.5	6.1	8.8	4.7	6.7	8.8	7.7	8.2
27	9.3	4.3	6.7	7.3	4.4	5.8	8.5	4.7	6.3	8.4	6.9	7.7
28	7.1	3.3	5.4	7.6	4.2	5.9	7.7	3.7	5.6	8.8	7.0	8.1
29	7.7	6.2	7.1	6.0	4.3	5.1	9.6	4.5	6.8	8.2	6.4	7.3
30	7.8	6.9	7.4	6.5	3.4	5.0	8.1	4.1	6.0	8.5	7.0	7.9
31	---	---	---	4.9	3.7	4.3	---	---	---	---	---	---
MONTH	9.3	3.0	6.4	8.9	3.4	6.2	9.6	2.8	5.4	9.4	5.2	7.4
YEAR	12.4	2.8	8.5									

04208000 CUYAHOGA RIVER AT INDEPENDENCE, OH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	830	617	564	456	576	794	546	---	621	615	737	702
2	828	630	582	477	551	791	564	---	636	315	759	830
3	845	735	575	506	483	777	566	---	678	399	870	894
4	851	672	578	644	558	818	567	---	705	---	905	914
5	840	675	573	576	731	830	581	---	680	---	824	912
6	867	717	534	590	656	837	615	405	606	562	887	867
7	840	719	545	591	630	825	633	405	---	594	879	539
8	782	720	588	630	873	891	585	417	---	633	885	681
9	696	723	609	623	783	765	600	426	741	662	882	743
10	759	738	666	624	699	731	456	461	752	699	855	788
11	842	761	819	575	651	935	477	492	747	735	759	822
12	842	689	989	564	660	836	509	524	744	762	680	842
13	851	609	809	645	782	704	522	555	743	804	702	819
14	903	693	731	627	900	596	528	603	764	830	828	834
15	918	737	791	621	845	591	429	600	803	855	866	858
16	900	780	504	662	879	617	---	546	813	890	894	863
17	891	795	527	813	782	654	---	572	849	912	909	840
18	885	774	524	767	760	665	297	591	864	888	941	771
19	879	770	618	765	756	693	294	615	855	872	951	851
20	876	777	777	780	751	620	294	606	782	888	936	869
21	909	600	770	801	721	594	294	657	777	890	941	669
22	908	570	729	747	700	534	296	666	846	882	936	615
23	908	630	696	1340	740	618	297	560	882	797	918	747
24	915	515	486	908	693	668	297	597	918	873	946	809
25	888	561	471	774	750	591	294	576	927	815	963	870
26	891	597	483	708	762	605	297	576	927	869	993	895
27	882	647	474	648	783	678	---	564	929	896	968	899
28	888	606	429	675	762	473	---	585	681	905	936	887
29	897	489	441	659	---	518	---	---	489	915	965	894
30	932	534	462	681	---	519	---	---	596	956	960	906
31	917	---	453	656	---	548	---	597	---	857	702	---
MEAN	866	669	606	682	722	688	452	550	763	778	877	814

WTR YR 1983 MEAN 713 MAX 1340 MIN 294

PH (STANDARD UNITS), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.7	7.5	7.7	7.8	7.7	7.7	7.5	7.2	7.5	7.5	7.5	7.6
2	7.7	7.6	7.7	7.8	7.7	7.6	7.5	7.3	7.5	7.5	7.6	7.8
3	7.6	7.6	7.7	7.8	7.6	7.5	7.5	---	7.4	---	7.6	7.8
4	7.6	7.8	7.7	7.9	7.6	7.4	7.5	---	7.4	---	7.6	7.9
5	7.7	8.2	7.6	7.8	7.7	7.4	7.5	---	7.4	---	7.6	7.8
6	7.7	8.3	7.7	7.8	7.7	7.5	7.5	7.3	7.3	7.5	7.7	7.9
7	7.6	8.2	8.1	7.8	7.7	7.5	7.5	7.3	---	7.6	7.8	7.4
8	7.5	8.1	8.1	7.9	7.7	7.5	7.5	7.3	---	7.7	7.7	7.7
9	7.6	8.0	8.0	7.9	7.7	7.4	7.4	7.3	7.4	7.7	7.7	7.7
10	7.5	7.8	8.1	7.8	7.7	7.5	7.4	7.3	7.3	7.8	7.7	7.8
11	7.6	7.8	8.1	7.8	7.7	7.6	7.4	7.3	7.3	7.8	7.6	7.8
12	7.6	7.7	8.1	7.8	7.7	7.6	7.4	7.4	7.3	7.8	7.5	7.8
13	7.6	7.8	8.1	7.8	7.7	7.6	7.4	7.4	7.3	7.8	7.6	7.9
14	7.6	8.0	8.2	7.8	7.7	7.5	7.4	7.3	7.2	7.8	7.8	7.8
15	7.6	8.0	8.2	7.8	7.7	7.5	7.3	7.2	7.1	7.9	7.9	7.9
16	7.7	8.1	7.9	7.8	7.7	7.5	---	7.3	7.4	7.8	7.8	7.9
17	7.7	8.0	8.0	7.8	7.7	7.4	---	7.4	7.4	8.0	7.8	7.8
18	7.8	7.8	8.0	7.8	7.7	7.4	7.7	7.5	7.5	8.0	7.7	7.7
19	7.8	7.7	8.0	7.8	7.7	---	7.7	7.4	7.4	8.0	7.7	7.8
20	7.7	7.6	7.9	7.8	7.7	---	7.8	7.3	7.4	7.9	7.8	7.8
21	7.7	7.6	7.9	7.8	7.6	---	7.7	7.5	7.4	8.0	7.7	7.7
22	7.7	7.7	7.9	7.8	7.6	---	7.7	7.4	7.5	7.8	7.8	7.7
23	7.8	7.6	7.9	7.8	7.6	7.4	7.7	7.3	7.4	7.7	7.8	7.8
24	7.8	7.7	8.0	7.8	7.6	7.4	7.8	7.4	7.5	7.8	7.7	7.9
25	7.8	7.9	8.0	7.8	7.7	7.4	7.9	7.4	7.5	7.9	7.9	7.9
26	7.9	7.9	7.8	7.8	7.7	7.5	7.8	7.4	7.5	8.0	7.9	7.8
27	7.8	7.8	7.9	7.8	7.7	7.5	---	7.4	7.6	8.0	7.9	7.8
28	7.9	7.9	7.6	7.8	7.7	7.4	---	7.5	7.5	8.0	7.8	7.9
29	7.8	7.7	7.7	7.7	---	7.5	7.6	---	7.4	7.9	8.0	7.9
30	7.8	7.7	7.8	7.7	---	7.5	7.3	---	7.5	7.8	7.9	7.9
31	7.7	---	7.8	7.7	---	7.5	---	7.4	---	7.7	7.6	---
MEAN	7.7	7.8	7.9	7.8	7.7	7.5	7.6	7.4	7.4	7.8	7.7	7.8

WTR YR 1983 MEAN 7.7 MAX 8.3 MIN 7.1

04208000 CUYAHOGA RIVER AT INDEPENDENCE, OH--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.5	16.0	8.0	4.0	3.5	7.0	8.5	14.0	16.0	24.0	24.5	23.5
2	18.5	17.0	9.5	4.0	4.5	7.0	9.5	15.0	17.0	22.5	25.0	23.5
3	18.0	16.0	10.5	4.0	5.0	7.5	9.5	15.0	16.5	23.5	25.5	23.5
4	18.0	12.5	12.0	3.5	3.0	10.0	8.5	14.0	16.5	---	25.0	24.5
5	17.5	9.5	11.5	3.5	2.5	12.0	9.0	14.5	18.5	---	25.0	25.0
6	18.0	8.5	11.0	4.5	2.5	12.5	10.0	15.0	18.0	22.5	25.5	24.5
7	19.0	8.5	9.0	5.0	3.0	12.5	11.5	16.0	---	21.5	26.0	23.0
8	19.0	10.0	8.0	5.0	3.0	12.0	10.5	14.5	---	21.5	26.0	23.0
9	19.0	10.5	7.0	4.5	3.0	10.5	10.0	12.5	20.5	22.5	26.0	23.0
10	18.5	10.5	5.0	5.5	3.0	8.0	10.0	13.5	21.0	23.0	24.5	24.0
11	18.5	11.5	5.0	6.0	3.0	5.5	9.5	14.5	22.5	22.5	22.5	24.0
12	17.0	12.5	4.0	3.5	3.0	5.5	10.5	15.5	23.0	24.5	22.5	23.5
13	16.0	9.0	3.0	3.0	2.5	5.5	11.0	17.0	23.5	25.5	22.5	22.5
14	16.0	7.5	3.5	4.0	3.0	7.0	12.0	18.0	24.0	25.5	22.0	21.0
15	14.5	7.0	5.5	4.0	4.5	8.5	11.0	17.0	24.0	26.0	23.0	20.0
16	12.0	6.5	6.0	2.5	5.5	8.5	---	14.0	24.0	26.5	23.5	18.5
17	11.5	7.5	4.5	2.0	5.0	9.0	---	15.0	23.5	27.0	24.0	18.5
18	11.0	8.5	3.5	1.0	5.5	10.0	7.5	15.5	23.0	26.5	24.5	19.0
19	12.0	10.0	3.5	1.5	6.5	---	7.5	16.0	22.5	27.0	24.5	21.5
20	13.0	11.5	3.5	2.0	7.0	---	7.5	16.0	22.0	27.0	26.5	22.5
21	11.5	12.0	3.5	2.0	7.0	---	8.5	17.5	23.5	27.0	26.0	19.5
22	10.5	11.5	3.5	3.5	7.5	---	10.0	18.0	24.0	25.5	25.5	17.0
23	10.0	11.5	4.5	3.5	7.5	5.5	12.0	17.5	25.0	25.5	25.0	15.0
24	9.5	9.0	5.5	3.0	6.0	5.0	11.5	18.0	25.5	25.0	24.0	15.5
25	10.0	7.0	7.0	3.5	5.0	5.5	10.5	18.0	25.0	25.5	25.5	16.0
26	10.0	6.5	7.5	3.0	5.0	6.0	10.5	16.5	24.5	25.0	25.5	18.0
27	11.0	6.0	6.5	2.5	5.0	7.5	---	16.5	25.5	25.0	26.0	18.0
28	11.5	5.0	8.5	2.5	6.0	7.0	---	17.5	23.0	25.0	26.0	18.5
29	12.5	6.5	7.0	3.0	---	6.5	15.5	---	21.5	25.0	25.5	19.0
30	12.5	7.0	5.5	4.0	---	6.5	15.0	---	22.0	25.5	24.5	19.0
31	14.0	---	4.5	3.5	---	7.5	---	16.5	---	25.5	22.5	---
MEAN	14.5	10.0	6.5	3.5	4.5	8.0	10.5	16.0	22.0	25.0	24.5	21.0

WTR YR 1983 MEAN 14.0 MAX 27.0 MIN 1.0

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	---	10.1	11.3	11.7	10.0	9.6	---	8.4	6.7	3.7	---
2	5.4	---	10.0	11.3	10.9	9.0	8.5	---	8.4	6.9	4.8	---
3	5.3	---	9.9	10.9	10.6	7.8	8.8	---	8.0	---	4.1	---
4	5.5	9.4	9.2	11.6	11.0	6.7	9.4	---	7.5	---	4.3	---
5	5.5	10.7	8.8	11.6	12.1	6.2	9.2	---	7.6	---	4.8	---
6	5.0	10.9	8.5	11.2	11.9	6.3	8.4	9.0	7.2	7.1	5.0	---
7	---	10.7	8.8	10.8	11.5	6.5	7.0	8.7	---	7.2	5.0	---
8	6.4	10.0	8.6	11.2	11.6	7.4	6.4	8.7	---	7.2	4.7	6.6
9	7.1	9.2	9.9	11.3	11.5	7.7	7.6	9.5	7.3	6.7	4.6	6.1
10	6.5	9.9	10.2	10.7	11.9	9.0	9.1	9.4	6.5	7.0	4.7	6.7
11	6.8	9.1	10.2	10.3	12.0	9.4	8.8	9.0	5.8	6.7	4.2	5.6
12	6.9	8.6	10.2	10.8	11.9	9.4	8.8	8.8	5.6	7.2	3.4	6.7
13	7.4	10.0	10.4	11.9	11.8	9.0	8.1	8.3	---	6.9	4.5	6.9
14	7.3	11.0	10.8	11.9	11.6	8.3	8.4	7.4	---	6.7	5.4	6.8
15	7.2	11.1	11.2	11.7	11.2	---	8.2	6.9	---	6.1	4.9	6.9
16	8.3	11.0	10.6	12.1	11.3	---	---	8.2	6.0	5.8	5.5	---
17	8.9	10.6	11.0	11.9	11.1	---	---	8.9	6.2	5.7	6.4	---
18	9.3	10.6	11.4	12.0	11.0	---	7.7	8.6	6.7	5.5	5.7	---
19	8.7	9.8	10.9	11.9	10.7	---	9.7	8.0	5.1	5.9	5.8	---
20	7.4	8.7	10.8	11.5	10.2	---	9.6	7.9	4.8	6.2	5.9	---
21	9.3	8.7	10.5	11.5	10.5	---	9.0	7.9	4.8	6.8	5.2	---
22	9.9	8.7	10.5	11.7	10.1	---	8.3	7.5	4.3	5.2	5.9	8.4
23	10.4	8.6	10.0	11.3	9.4	11.3	7.7	7.1	5.4	5.5	6.3	8.9
24	10.5	9.0	9.7	11.5	10.0	11.3	7.1	7.6	5.3	5.4	5.2	8.9
25	9.9	10.2	9.0	11.5	10.5	11.1	7.1	7.6	5.3	6.0	7.7	8.5
26	9.1	9.9	10.3	12.2	10.6	10.6	---	7.9	6.3	6.0	6.6	8.3
27	8.0	11.4	10.1	11.8	10.3	8.2	---	8.2	6.6	5.8	6.0	7.8
28	7.0	11.6	11.1	11.8	10.0	9.6	---	8.4	5.3	6.0	5.5	8.0
29	---	10.5	11.4	11.7	---	9.6	---	---	7.6	5.0	6.6	7.3
30	---	10.5	11.6	11.3	---	10.6	---	---	7.6	5.3	5.8	8.0
31	---	---	12.0	11.6	---	10.0	---	9.0	---	4.2	---	---
MEAN	7.6	10.0	10.3	11.5	11.0	8.9	8.4	8.3	6.4	6.2	5.3	7.4

WTR YR 1983 MEAN 8.5 MAX 12.2 MIN 3.4

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 mi^2 (91.4 km^2).

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

REVISED RECORDS.-- WRD OH-82-2: 1973-81.

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.--10 years, 56.6 ft^3/s (1.603 m^3/s), 21.77 in/yr (553 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,100 ft^3/s (258 m^3/s) Aug. 24, 1975, gage height, 16.20 ft (4.938 m) (from floodmarks), from rating curve extended above 500 ft^3/s (14.2 m^3/s) on basis of slope-area measurements of peak flow; minimum daily, 2.3 ft^3/s (0.065 m^3/s) Sept. 16-17, 1973.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 2,700 ft^3/s (76.5 m^3/s) and maximums (*): Revised.

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
May 2	2100	2930	83.0	8.85	2.697	July 2	2200	*5470	155	*12.96	3.950
June 28	1330	3270	92.6	9.55	2.911	July 31	2215	2800	79.3	8.57	2.612

Minimum daily discharge, 10 ft^3/s (0.28 m^3/s) Sept. 25, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	265	28	20	25	16	27	415	27	66	186	28
2	13	67	24	17	98	15	115	797	19	1420	27	24
3	11	76	22	15	74	15	115	967	30	86	21	19
4	11	103	42	14	37	16	84	298	58	152	135	16
5	11	33	71	13	31	16	45	82	28	74	64	135
6	12	24	66	13	28	16	35	40	138	27	24	115
7	16	19	29	12	26	16	56	37	31	20	19	343
8	16	17	22	12	24	64	33	71	22	19	19	27
9	12	12	23	12	22	49	190	33	18	19	24	24
10	31	11	21	26	20	121	508	26	17	17	23	21
11	19	64	19	27	19	118	48	25	18	19	303	19
12	12	125	18	16	17	98	33	22	17	24	71	17
13	12	49	17	14	16	109	43	21	16	18	26	16
14	29	24	27	14	23	101	358	33	15	16	17	28
15	22	23	163	14	28	53	178	109	14	17	15	12
16	17	19	460	13	43	33	40	54	14	17	15	138
17	11	16	60	13	38	28	39	26	13	16	15	31
18	12	14	37	13	28	32	53	20	12	17	16	14
19	12	13	363	13	28	393	53	49	13	16	16	15
20	17	26	112	13	23	69	42	25	21	16	16	20
21	14	235	51	13	22	142	30	19	16	49	16	298
22	12	66	46	33	21	48	25	250	13	26	16	20
23	12	148	125	60	23	45	23	86	12	37	16	54
24	12	353	64	53	19	40	21	28	12	39	16	19
25	12	48	43	33	18	35	19	51	12	25	16	10
26	11	53	40	25	16	28	18	35	11	20	19	11
27	11	51	190	19	15	159	19	21	13	18	135	11
28	11	270	101	19	16	221	34	18	803	16	24	12
29	12	91	39	18	---	67	43	69	103	25	20	11
30	15	38	28	76	---	38	420	31	182	24	298	10
31	46	---	24	35	---	30	---	42	---	466	255	---
TOTAL	478	2353	2375	688	798	2231	2747	3800	1718	2821	1883	1518
MEAN	15.4	78.4	76.6	22.2	28.5	72.0	91.6	123	57.3	91.0	60.7	50.6
MAX	46	353	460	76	98	393	508	967	803	1420	303	343
MIN	11	11	17	12	15	15	18	18	11	16	15	10
CFSM	.44	2.22	2.17	.63	.81	2.04	2.60	3.48	1.62	2.58	1.72	1.43
IN.	.50	2.48	2.50	.73	.84	2.35	2.89	4.00	1.81	2.97	1.98	1.60

CAL YR 1982 TOTAL 21867.7 MEAN 59.9 MAX 876 MIN 5.0 CFSM 1.70 IN 23.04
WTR YR 1983 TOTAL 23410.0 MEAN 64.1 MAX 1420 MIN 10 CFSM 1.82 IN 24.67

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 to 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 1983.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 1,800 micromhos Jan. 23, 24; minimum, 330 micromhos July 2.
pH: Maximum, 8.8 units Jan. 13; minimum, 7.0 units Aug. 7.
WATER TEMPERATURES: Maximum, 30.5°C July 20, 21; minimum, 3.5°C Jan. 19, 20.
DISSOLVED OXYGEN: Maximum, 12.2 mg/L Nov. 26; minimum, 0.0 mg/L on many 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 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	921	873	892	975	540	759	645	603	632	546	519	539
2	951	888	930	657	486	545	672	498	641	558	492	543
3	972	954	965	753	561	660	696	555	672	591	549	575
4	969	957	963	771	624	715	693	663	674	669	585	622
5	978	966	971	729	672	695	696	660	679	777	678	735
6	978	963	970	801	720	755	666	594	624	723	591	699
7	987	975	980	831	801	810	624	603	612	735	690	714
8	996	936	970	837	816	827	672	624	646	765	720	743
9	933	873	901	834	822	829	732	672	702	765	720	745
10	876	831	847	828	819	820	768	723	742	762	720	741
11	840	819	830	840	822	832	972	777	848	768	684	734
12	840	825	829	825	708	781	1200	990	1090	693	648	671
13	885	846	862	696	606	631	1200	1160	1180	702	648	679
14	915	888	904	705	645	676	1160	966	1040	765	675	724
15	930	894	910	783	690	736	963	900	923	756	720	742
16	942	933	937	855	786	811	993	540	648	816	717	755
17	945	933	940	915	855	900	612	564	598	981	822	885
18	945	936	939	927	906	918	651	606	618	1210	987	1090
19	954	945	951	924	903	912	831	630	706	1240	1130	1190
20	990	954	966	921	900	910	936	831	875	1140	1110	1120
21	1010	990	999	900	591	797	1010	945	990	1190	1140	1170
22	999	966	977	606	564	580	993	912	945	1200	1170	1190
23	1010	969	983	717	609	667	918	726	868	1800	1160	1470
24	1030	990	1020	720	516	578	699	549	575	1800	1250	1590
25	1030	990	1020	621	546	591	555	537	549	1230	1020	1110
26	1010	972	986	672	624	645	564	450	548	1030	927	981
27	972	954	961	816	681	761	582	525	557	924	867	904
28	957	951	954	795	621	710	513	450	483	858	837	844
29	999	960	979	618	519	547	510	447	499	852	828	839
30	1010	987	997	600	582	590	534	429	493	954	819	848
31	987	960	974	---	---	---	540	420	512	954	795	850
MONTH	1030	819	945	975	486	733	1200	420	715	1800	492	872

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	798	765	786	870	852	859	717	666	691	621	447	488
2	837	663	771	879	855	863	699	669	686	555	360	523
3	660	564	606	915	879	908	599	636	661	456	342	395
4	777	600	670	915	909	913	575	624	657	489	390	441
5	1030	801	934	960	918	931	693	678	685	516	378	484
6	1100	894	1010	960	936	946	735	687	719	510	486	495
7	888	831	865	951	942	946	777	735	758	513	492	501
8	1120	894	1010	951	930	943	762	690	715	552	513	529
9	1290	1140	1230	1020	849	935	726	690	700	543	519	532
10	1110	1040	1090	909	807	833	672	420	479	588	543	571
11	1030	936	977	1350	966	1120	531	450	501	633	588	622
12	933	894	904	1400	1080	1220	570	528	544	654	635	648
13	1020	900	943	1080	870	964	603	573	582	696	654	683
14	1090	990	1030	867	690	765	618	549	587	741	690	715
15	1090	990	1040	717	654	681	525	390	431	795	720	763
16	1000	969	986	705	678	696	498	450	483	732	657	690
17	1020	891	980	741	690	732	546	501	520	681	660	670
18	882	834	855	777	741	764	735	552	669	729	681	705
19	852	834	844	831	663	771	750	675	719	762	720	740
20	852	834	844	654	594	623	762	630	689	762	720	741
21	837	810	828	771	648	688	633	624	629	732	690	718
22	810	789	799	723	627	650	648	636	642	795	720	759
23	828	789	804	957	738	901	693	648	673	720	591	622
24	879	828	853	1060	972	1030	696	675	688	666	612	641
25	873	855	863	1010	894	958	720	690	708	708	675	697
26	873	858	865	885	801	849	762	702	729	801	693	733
27	876	855	867	843	795	806	783	750	769	708	681	689
28	879	870	875	918	528	642	822	750	786	720	675	697
29	---	---	---	636	588	618	909	822	854	732	717	722
30	---	---	---	672	633	649	897	645	819	720	690	705
31	---	---	---	690	666	680	---	---	---	708	687	700
MONTH	1290	564	897	1400	528	835	909	390	659	801	342	633

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

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	729	681	702	732	633	682	825	489	581	603	546	575
2	753	720	734	741	330	421	720	534	660	687	621	652
3	795	750	775	483	381	440	783	720	752	756	687	705
4	852	795	814	519	486	498	903	750	836	837	720	779
5	858	813	830	588	513	552	909	867	898	864	810	843
6	825	630	750	651	591	626	897	750	811	843	720	802
7	654	612	625	831	654	695	894	720	829	711	390	540
8	771	657	712	762	666	736	960	840	925	516	453	468
9	795	750	777	807	750	787	969	957	963	642	510	577
10	---	---	---	819	807	817	963	939	952	723	624	685
11	---	---	---	837	816	826	951	906	935	804	711	761
12	---	---	---	873	840	855	---	---	---	831	780	805
13	---	---	---	894	873	881	---	---	---	825	810	819
14	855	813	829	930	894	910	---	---	---	828	819	824
15	894	822	865	948	930	941	---	---	---	840	828	835
16	987	798	840	957	948	954	---	---	---	867	843	854
17	915	852	881	972	960	966	852	831	843	870	807	841
18	969	894	935	972	966	970	876	828	850	831	750	784
19	996	966	985	972	963	969	885	852	870	813	768	794
20	999	978	991	969	963	966	915	876	896	813	801	808
21	978	918	950	1030	969	982	915	897	907	816	420	628
22	948	918	934	981	936	951	915	861	884	591	450	510
23	966	939	954	930	867	890	909	897	903	654	600	635
24	993	927	980	936	870	910	900	894	897	723	642	682
25	1010	990	1010	927	897	912	900	894	898	732	720	725
26	1030	990	1020	909	900	905	903	897	900	807	789	793
27	1040	972	1010	903	891	897	918	867	894	855	813	843
28	1030	381	824	942	897	922	921	900	911	915	855	867
29	507	378	433	972	939	956	900	819	850	891	825	877
30	633	525	593	984	972	979	864	822	832	903	888	895
31	---	---	---	984	870	939	828	495	623	---	---	---
MONTH	1040	378	837	1030	330	830	969	489	850	915	390	740
YEAR	1800	330	794									

PH (STANDARD UNITS), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.7	7.6	7.7	7.7	7.5	7.6	7.7	7.6	7.6	---	---	---
2	7.7	7.6	7.6	7.6	7.5	7.6	---	---	---	---	---	---
3	7.6	7.5	7.6	7.7	7.6	7.6	---	---	---	7.9	7.7	7.8
4	7.6	7.5	7.6	7.9	7.6	7.7	---	---	---	8.0	7.8	7.9
5	7.6	7.5	7.6	7.9	7.9	7.9	---	---	---	8.0	7.9	7.9
6	7.6	7.5	7.6	8.0	7.9	7.9	---	---	---	7.9	7.8	7.9
7	7.6	7.6	7.6	8.0	7.9	7.9	---	---	---	7.8	7.8	7.8
8	7.7	7.6	7.6	8.0	7.9	7.9	---	---	---	7.8	7.7	7.8
9	7.7	7.6	7.6	8.0	8.0	8.0	---	---	---	7.8	7.7	7.8
10	7.6	7.6	7.6	8.0	7.7	7.9	---	---	---	7.9	7.7	7.8
11	7.6	7.5	7.6	7.8	7.5	7.7	---	---	---	7.8	7.6	7.7
12	7.5	7.5	7.5	7.9	7.7	7.7	---	---	---	7.8	7.5	7.7
13	7.6	7.5	7.5	7.9	7.8	7.9	---	---	---	8.8	7.7	8.1
14	7.6	7.5	7.6	7.9	7.9	7.9	---	---	---	7.8	7.7	7.8
15	7.6	7.5	7.6	8.0	7.9	8.0	---	---	---	7.7	7.6	7.7
16	7.6	7.5	7.6	8.0	7.9	8.0	---	---	---	7.7	7.7	7.7
17	7.6	7.6	7.6	7.9	7.7	7.8	---	---	---	7.8	7.7	7.8
18	7.6	7.6	7.6	7.9	7.7	7.8	---	---	---	7.8	7.8	7.8
19	7.7	7.6	7.7	7.8	7.7	7.7	---	---	---	7.9	7.8	7.9
20	7.7	7.7	7.7	7.7	7.7	7.7	---	---	---	7.9	7.8	7.8
21	7.7	7.7	7.7	7.7	7.6	7.7	---	---	---	7.9	7.7	7.8
22	7.7	7.6	7.7	7.7	7.6	7.6	---	---	---	7.9	7.7	7.8
23	7.8	7.7	7.8	7.6	7.6	7.6	---	---	---	7.9	7.7	7.8
24	7.8	7.7	7.7	7.7	7.5	7.6	---	---	---	7.8	7.8	7.8
25	7.8	7.7	7.8	7.7	7.5	7.6	---	---	---	---	---	---
26	7.8	7.7	7.8	7.7	7.5	7.7	---	---	---	7.8	7.8	7.8
27	7.8	7.7	7.8	7.7	7.7	7.7	---	---	---	7.8	7.8	7.8
28	7.8	7.7	7.8	7.7	7.4	7.6	---	---	---	7.9	7.8	7.8
29	7.8	7.7	7.8	7.7	7.4	7.6	---	---	---	7.8	7.7	7.8
30	7.7	7.6	7.7	7.8	7.6	7.7	---	---	---	7.8	7.8	7.8
31	7.7	7.6	7.7	---	---	---	---	---	---	7.9	7.8	7.8
MONTH	7.8	7.5	7.7	8.0	7.4	7.8	7.7	7.6	7.6	8.8	7.6	7.8

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

PH (STANDARD UNITS), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	7.8	7.7	7.7	7.7	7.6	7.7	7.7	7.6	7.6
2	---	---	---	7.7	7.6	7.6	7.7	7.6	7.6	7.7	7.6	7.7
3	7.8	7.6	7.6	7.7	7.5	7.6	7.7	7.6	7.6	7.7	7.6	7.6
4	7.9	7.7	7.7	7.5	7.5	7.5	7.8	7.6	7.7	7.7	7.5	7.6
5	7.8	7.7	7.7	7.5	7.5	7.5	7.7	7.6	7.6	7.6	7.5	7.5
6	7.7	7.6	7.6	7.5	7.5	7.5	7.7	7.6	7.6	7.8	7.5	7.6
7	7.9	7.7	7.8	7.5	7.5	7.5	7.7	7.6	7.6	7.9	7.7	7.8
8	8.1	7.7	7.9	7.5	7.5	7.5	7.6	7.6	7.6	7.8	7.6	7.7
9	8.0	7.8	7.9	7.7	7.5	7.6	7.7	7.6	7.6	7.8	7.7	7.8
10	7.9	7.8	7.9	7.8	7.6	7.7	7.7	7.6	7.6	7.8	7.7	7.8
11	7.9	7.8	7.9	7.9	7.7	7.9	7.7	7.6	7.7	7.8	7.7	7.7
12	7.9	7.8	7.9	7.9	7.8	7.8	7.8	7.7	7.7	7.8	7.7	7.7
13	7.9	7.8	7.9	7.8	7.7	7.8	7.7	7.6	7.6	7.8	7.7	7.7
14	7.9	7.8	7.9	7.8	7.6	7.7	7.7	7.6	7.6	7.7	7.6	7.6
15	8.0	7.8	7.9	7.6	7.6	7.6	7.7	7.6	7.7	7.6	7.6	7.6
16	7.9	7.8	7.8	7.7	7.6	7.7	7.7	7.7	7.7	7.9	7.6	7.8
17	7.9	7.8	7.8	7.7	7.6	7.6	7.7	7.6	7.7	7.7	7.6	7.6
18	7.8	7.8	7.8	7.6	7.5	7.6	7.8	7.7	7.8	7.6	7.5	7.6
19	7.8	7.6	7.7	7.6	7.6	7.6	8.0	7.7	7.8	7.6	7.5	7.6
20	7.7	7.7	7.7	7.6	7.5	7.6	8.0	7.7	7.8	7.7	7.5	7.6
21	7.7	7.7	7.7	7.8	7.6	7.7	7.9	7.7	7.8	7.8	7.5	7.7
22	7.7	7.6	7.7	7.7	7.7	7.7	7.8	7.6	7.7	8.1	7.7	7.9
23	7.7	7.6	7.6	7.8	7.7	7.8	7.7	7.6	7.6	8.1	7.6	7.8
24	7.6	7.6	7.6	7.7	7.6	7.7	7.6	7.6	7.6	7.7	7.6	7.6
25	7.8	7.6	7.7	7.7	7.6	7.6	7.7	7.6	7.7	8.0	7.6	7.7
26	7.8	7.5	7.7	7.6	7.6	7.6	7.8	7.6	7.7	8.1	7.8	7.9
27	7.7	7.5	7.7	7.6	7.5	7.6	7.7	7.6	7.6	8.2	7.8	8.0
28	7.8	7.7	7.7	7.7	7.6	7.6	7.6	7.5	7.6	8.0	7.7	7.9
29	---	---	---	7.6	7.6	7.6	7.6	7.5	7.5	8.2	7.7	8.0
30	---	---	---	7.9	7.5	7.7	7.6	7.5	7.6	8.0	7.6	7.7
31	---	---	---	7.8	7.7	7.7	---	---	---	7.7	7.6	7.7
MONTH	8.1	7.5	7.8	7.9	7.5	7.6	8.0	7.5	7.7	8.2	7.5	7.7

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.7	7.6	7.7	7.7	7.6	7.6	7.8	7.6	7.7	7.8	7.7	7.8
2	7.6	7.5	7.5	8.1	7.7	7.9	7.8	7.7	7.7	7.7	7.7	7.7
3	7.5	7.4	7.4	7.8	7.7	7.8	7.7	7.6	7.7	7.7	7.6	7.6
4	7.5	7.4	7.5	7.7	7.6	7.7	7.8	7.6	7.7	7.7	7.6	7.6
5	7.5	7.5	7.5	7.7	7.6	7.7	7.7	7.7	7.7	7.9	7.7	7.7
6	7.5	7.4	7.5	7.7	7.5	7.6	7.8	7.3	7.7	7.8	7.7	7.7
7	7.4	7.4	7.4	8.0	7.6	7.7	7.7	7.0	7.6	7.9	7.5	7.5
8	7.5	7.4	7.4	7.8	7.6	7.7	7.9	7.7	7.7	7.5	7.3	7.4
9	7.5	7.4	7.5	7.7	7.7	7.7	7.9	7.8	7.8	7.5	7.3	7.4
10	7.6	7.5	7.5	7.7	7.6	7.6	7.8	7.7	7.8	7.5	7.4	7.4
11	7.6	7.5	7.5	7.7	7.6	7.7	7.7	7.6	7.6	7.5	7.4	7.4
12	7.5	7.5	7.5	7.7	7.6	7.7	---	---	---	7.5	7.3	7.4
13	7.7	7.5	7.6	7.7	7.6	7.7	---	---	---	7.4	7.3	7.4
14	7.7	7.6	7.6	7.6	7.6	7.6	---	---	---	7.4	7.3	7.4
15	7.7	7.6	7.6	7.6	7.6	7.6	---	---	---	7.4	7.4	7.4
16	---	---	---	7.6	7.6	7.6	---	---	---	7.4	7.3	7.4
17	7.6	7.6	7.6	7.6	7.6	7.6	7.7	7.6	7.6	7.5	7.4	7.4
18	7.6	7.5	7.6	7.6	7.6	7.6	7.7	7.6	7.7	7.5	7.4	7.5
19	7.6	7.6	7.6	7.7	7.6	7.6	7.7	7.6	7.6	7.5	7.4	7.5
20	8.0	7.6	7.6	7.7	7.6	7.6	7.7	7.6	7.6	7.4	7.3	7.4
21	7.7	7.6	7.6	7.7	7.6	7.6	7.7	7.6	7.6	7.6	7.3	7.5
22	7.6	7.5	7.6	7.7	7.6	7.6	7.7	7.6	7.7	7.6	7.5	7.5
23	7.6	7.3	7.5	7.7	7.6	7.6	7.7	7.6	7.7	7.6	7.5	7.5
24	7.6	7.6	7.6	7.8	7.6	7.7	7.7	7.6	7.6	7.6	7.5	7.5
25	7.6	7.6	7.6	7.8	7.7	7.7	7.7	7.6	7.6	7.6	7.5	7.5
26	7.6	7.6	7.6	7.8	7.7	7.8	7.6	7.6	7.6	7.6	7.5	7.5
27	7.7	7.6	7.6	7.8	7.7	7.7	7.7	7.5	7.6	7.6	7.5	7.5
28	8.1	7.6	7.7	7.9	7.7	7.8	7.6	7.6	7.6	7.6	7.5	7.5
29	8.0	7.7	7.8	7.8	7.7	7.7	7.6	7.5	7.6	7.5	7.4	7.4
30	7.8	7.7	7.7	7.7	7.7	7.7	7.7	7.6	7.6	7.4	7.4	7.4
31	---	---	---	7.7	7.6	7.6	7.8	7.6	7.7	---	---	---
MONTH	8.1	7.3	7.6	8.1	7.5	7.7	7.9	7.0	7.7	7.9	7.3	7.5
YEAR	8.8	7.0	7.7									

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	20.5	19.5	20.0	17.5	16.0	17.0	9.0	8.5	9.0	5.5	5.0	5.0
2	20.5	19.5	20.5	17.0	16.5	17.0	10.5	9.0	10.0	5.5	5.0	5.5
3	22.0	20.5	21.0	18.0	17.0	17.5	12.0	11.0	11.5	5.5	5.5	5.5
4	22.0	21.0	21.5	17.5	13.5	15.5	13.0	11.5	12.5	5.5	5.5	5.5
5	21.5	21.0	21.0	13.5	11.5	12.5	13.5	13.0	13.5	5.5	5.0	5.5
6	22.5	21.0	21.5	11.5	11.0	11.0	13.0	11.5	12.5	6.5	5.5	6.0
7	22.5	21.5	22.0	11.0	10.5	10.5	11.5	10.0	10.5	7.0	6.0	6.5
8	22.5	21.0	21.5	11.0	11.0	11.0	10.0	9.5	10.0	7.0	6.5	7.0
9	21.5	21.0	21.0	12.0	11.0	11.5	9.5	9.0	9.5	7.0	6.5	7.0
10	22.0	21.0	21.5	13.0	12.5	12.5	9.0	7.5	8.5	7.0	6.0	7.0
11	21.5	21.5	21.5	13.5	12.5	13.0	8.0	7.0	7.5	8.0	7.0	7.5
12	21.5	21.0	21.0	14.0	13.5	14.0	7.5	7.0	7.0	7.0	6.0	7.0
13	21.0	21.0	21.0	13.5	11.0	12.0	7.0	6.0	6.5	6.0	5.5	5.5
14	21.0	20.0	20.5	11.0	10.0	10.5	6.5	5.5	6.0	6.0	5.0	5.5
15	20.0	19.5	20.0	10.0	9.5	9.5	7.5	5.5	6.0	6.0	5.5	6.0
16	19.5	17.5	18.5	9.5	9.0	9.0	8.0	6.5	7.0	6.0	4.5	5.5
17	18.0	17.0	17.5	9.5	9.0	9.0	6.5	5.5	6.0	4.5	3.5	4.5
18	17.5	17.0	17.0	10.0	9.0	9.5	5.5	4.5	5.0	4.5	4.0	4.0
19	17.5	17.0	17.0	11.5	10.0	11.0	5.5	4.5	5.0	4.0	3.5	3.5
20	17.0	16.5	17.0	13.0	11.5	12.0	5.5	4.5	5.0	4.5	3.5	4.0
21	17.0	16.5	17.0	14.0	12.5	13.0	5.0	4.5	4.5	5.0	4.5	4.5
22	17.0	16.5	16.5	12.5	11.5	12.0	5.0	4.5	5.0	5.5	5.0	5.0
23	16.5	15.5	16.0	12.5	12.0	12.5	6.0	4.5	5.5	6.0	5.0	5.5
24	16.0	15.5	15.5	12.5	9.0	10.5	6.5	5.5	6.0	5.5	4.5	5.0
25	16.0	15.0	15.5	9.0	7.5	8.5	8.0	6.5	7.0	5.0	4.5	5.0
26	15.0	15.0	15.0	8.0	7.5	8.0	8.5	8.0	8.5	5.0	4.5	5.0
27	15.5	15.0	15.0	8.0	7.0	7.5	8.0	7.0	7.5	5.0	5.0	5.0
28	15.5	15.0	15.5	7.0	6.5	7.0	9.0	7.5	8.5	5.0	4.5	5.0
29	16.5	15.5	16.0	7.5	6.0	7.0	9.0	6.5	8.0	5.5	4.5	5.0
30	17.0	16.5	16.5	8.0	7.5	8.0	7.0	5.5	6.0	6.5	5.5	6.0
31	17.5	16.5	17.0	---	---	---	6.0	5.0	5.5	6.0	4.5	5.0
MONTH	22.5	15.0	18.5	18.0	6.0	11.5	13.5	4.5	8.0	8.0	3.5	5.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	5.0	4.5	5.0	9.0	8.5	8.5	10.5	9.0	9.5	15.0	13.5	14.0
2	6.0	5.0	5.5	9.5	9.0	9.0	11.0	9.5	10.5	15.5	14.0	14.5
3	6.5	5.5	6.0	10.5	9.5	10.0	11.0	10.0	10.5	15.5	13.0	14.5
4	5.5	4.0	4.5	11.0	10.0	10.5	10.5	10.0	10.0	14.5	13.0	13.0
5	4.0	4.0	4.0	13.5	11.0	12.0	10.0	9.5	10.0	15.0	14.0	14.5
6	4.5	4.0	4.0	14.0	12.5	13.5	11.5	10.0	10.5	15.0	14.0	14.5
7	4.5	4.0	4.5	15.0	14.0	14.5	12.5	11.0	12.0	16.0	15.0	15.5
8	4.5	4.5	4.5	14.5	14.0	14.5	12.5	11.5	12.0	16.0	14.0	15.5
9	5.0	4.5	4.5	14.0	11.0	12.0	11.5	11.0	11.5	14.0	12.5	13.0
10	5.0	4.5	5.0	11.0	9.0	10.0	11.0	10.0	10.0	14.5	12.5	14.0
11	5.0	4.5	5.0	8.5	6.0	7.0	10.5	10.0	10.5	15.5	14.0	15.0
12	5.0	4.5	5.0	6.5	6.0	6.0	11.0	10.0	10.5	16.5	15.0	16.0
13	6.0	5.0	5.5	7.0	6.5	6.5	12.0	11.5	11.5	18.0	16.0	17.0
14	6.0	5.0	5.5	8.0	7.5	7.5	13.0	11.5	12.0	19.5	18.5	19.0
15	6.5	5.5	6.0	9.5	8.5	9.0	13.0	10.5	11.5	19.5	17.5	18.5
16	7.5	6.5	7.0	9.5	6.5	9.0	10.5	10.0	10.5	17.5	14.5	16.0
17	7.5	7.0	7.5	10.0	9.0	9.5	10.5	9.0	10.0	16.0	14.5	15.0
18	7.5	6.5	7.0	11.0	9.5	10.5	9.5	7.5	8.0	17.0	15.5	16.0
19	8.5	7.0	7.5	11.0	9.0	10.5	8.5	7.5	8.0	17.5	16.5	17.0
20	9.0	7.5	8.5	9.0	8.0	8.5	8.5	8.0	8.5	17.0	16.5	16.5
21	9.5	8.5	9.0	8.0	6.5	7.5	9.5	8.5	9.5	18.0	16.5	17.5
22	9.5	9.0	9.0	7.0	5.5	6.0	11.5	9.5	11.0	20.0	18.0	19.0
23	9.5	9.0	9.5	6.0	5.5	5.5	13.5	11.5	12.5	18.0	17.5	17.5
24	9.5	9.0	9.5	7.0	5.5	6.5	14.0	12.5	13.5	18.5	17.5	18.0
25	9.0	7.5	8.0	7.5	6.5	7.0	13.0	11.5	12.5	19.0	18.5	19.0
26	8.0	7.0	7.5	8.5	6.5	7.5	13.0	11.5	12.5	18.5	16.5	17.5
27	8.0	7.5	8.0	9.5	7.5	8.5	15.5	13.0	14.0	17.5	16.5	17.0
28	8.5	8.0	8.5	9.5	7.0	8.0	18.0	15.5	17.0	18.0	17.0	17.5
29	---	---	---	7.5	7.0	7.0	18.0	17.0	17.5	18.5	17.0	18.0
30	---	---	---	8.0	7.0	7.5	17.0	15.0	16.5	18.0	17.0	17.5
31	---	---	---	9.5	7.5	8.5	---	---	---	17.5	17.0	17.5
MONTH	9.5	4.0	6.5	15.0	5.5	9.0	18.0	7.5	11.5	20.0	12.5	16.5

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	17.5	17.0	17.0	24.0	22.5	23.5	27.0	24.5	25.0	24.5	24.0	24.5
2	18.5	17.0	18.0	24.5	21.5	22.5	25.0	25.0	25.5	26.0	24.5	25.5
3	19.0	18.0	18.5	24.5	23.0	23.5	28.0	26.0	27.0	27.0	25.5	26.0
4	18.5	18.0	18.5	25.5	24.5	25.0	28.5	27.0	28.0	28.0	26.5	27.5
5	19.0	18.0	18.5	25.0	24.0	24.5	27.5	27.0	27.5	28.5	27.5	28.0
6	20.0	17.5	19.0	24.5	24.0	24.0	28.0	26.0	27.0	28.0	27.0	27.5
7	18.0	17.0	17.5	24.0	23.5	23.5	28.5	26.0	27.5	27.5	22.5	24.0
8	19.0	17.5	18.5	24.0	23.0	23.5	29.5	28.0	28.5	24.5	23.0	24.0
9	21.0	19.0	20.0	24.5	24.0	24.0	29.0	28.0	28.5	26.0	24.[illegible]	25.0
10	21.5	20.5	21.0	25.0	24.5	24.5	28.5	28.0	28.0	26.5	25.5	26.0
11	23.0	21.5	22.0	26.0	25.0	25.5	28.0	26.5	27.5	27.5	26.0	27.0
12	24.0	22.5	23.5	26.0	25.5	26.0	---	---	---	27.5	26.5	27.0
13	24.5	23.5	24.0	27.5	26.0	26.5	---	---	---	27.0	26.0	26.5
14	25.0	23.5	24.0	28.5	27.0	28.0	---	---	---	26.5	26.0	26.5
15	25.5	23.5	24.5	29.0	28.5	28.5	---	---	---	26.5	25.5	26.0
16	24.5	23.5	24.0	29.5	29.0	29.5	---	---	---	25.5	25.0	25.5
17	25.5	24.5	25.0	30.0	29.5	30.0	27.5	27.0	27.5	24.5	23.0	23.5
18	26.0	25.0	25.5	30.5	30.0	30.0	27.5	26.5	27.0	23.5	22.5	23.0
19	26.0	25.5	25.5	30.0	30.0	30.0	28.0	27.0	27.5	24.5	23.0	23.5
20	25.5	24.5	25.0	30.5	30.0	30.0	29.5	28.0	28.5	26.0	24.0	25.0
21	25.0	24.5	25.0	30.5	30.0	30.0	30.0	28.5	29.5	25.5	19.5	22.5
22	26.0	24.5	25.0	30.0	28.5	29.5	29.5	28.0	28.5	19.5	19.0	19.5
23	27.0	26.0	26.0	28.5	27.5	28.0	29.0	28.0	28.5	19.5	19.5	19.5
24	27.5	26.5	27.0	28.5	28.0	28.0	29.0	28.5	28.5	19.5	19.0	19.0
25	28.0	27.5	27.5	28.0	27.5	27.5	29.5	28.5	29.0	19.5	19.5	19.5
26	28.0	27.5	28.0	28.5	27.5	28.0	29.5	28.5	29.0	20.0	19.5	20.0
27	28.0	26.5	27.0	28.5	28.0	28.0	30.0	29.0	29.5	22.0	20.0	21.0
28	28.0	21.0	25.5	29.5	28.0	28.5	29.0	29.0	29.0	22.5	21.5	22.0
29	21.5	21.0	21.0	29.0	28.5	28.5	29.5	28.5	29.0	23.0	21.5	22.5
30	23.0	21.5	22.0	29.5	28.5	29.0	29.5	28.5	29.0	23.5	22.0	22.5
31	---	---	---	29.5	28.0	29.0	28.5	24.0	25.0	---	---	---
MONTH	28.0	17.0	23.0	30.5	21.5	27.0	30.0	24.0	28.0	28.5	19.0	24.0
YEAR	30.5	3.5	15.5									

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	5.8	4.5	5.2	7.3	2.7	5.3	9.7	9.0	9.4	9.0	7.9	8.6
2	6.0	2.5	4.0	7.1	4.4	5.3	7.5	5.1	6.7	9.0	8.1	8.5
3	3.8	2.0	2.7	5.9	1.9	4.7	5.9	4.6	5.2	9.4	8.5	8.9
4	4.0	1.1	2.3	9.3	2.3	6.4	5.1	2.2	3.9	8.7	8.1	8.5
5	1.8	.8	1.2	9.4	8.6	9.1	3.1	2.3	2.7	8.4	6.8	8.2
6	3.8	.6	2.3	10.2	9.1	9.7	5.2	3.2	4.3	8.2	6.1	7.9
7	4.3	2.3	3.5	10.8	10.1	10.4	5.3	5.1	5.4	7.9	7.3	7.5
8	4.4	2.3	3.1	11.1	10.3	10.6	5.8	5.7	6.3	7.3	6.1	7.0
9	4.9	2.7	3.5	10.7	9.9	10.4	6.6	5.2	6.0	7.1	5.9	6.8
10	4.0	2.6	3.3	9.8	6.6	8.2	5.4	4.5	5.4	7.5	6.6	7.2
11	2.6	1.0	1.6	8.4	7.0	8.1	7.3	5.1	6.5	7.5	5.7	6.8
12	1.2	.1	.6	7.8	3.7	5.9	6.6	5.5	6.2	7.7	6.6	7.2
13	1.1	.6	.7	10.2	5.6	8.8	8.4	5.9	7.1	8.0	7.0	7.5
14	2.7	1.1	1.9	10.3	9.8	10.1	8.3	7.0	7.7	8.6	7.9	8.2
15	1.7	.8	1.2	11.1	10.1	10.7	8.9	7.4	8.3	7.9	7.0	7.8
16	.6	.0	.1	11.0	9.5	10.3	9.4	8.5	9.1	7.6	6.8	7.2
17	1.2	.3	.8	11.9	10.7	11.2	9.7	9.4	9.6	8.9	7.4	8.4
18	3.6	1.0	2.7	11.9	10.8	11.3	9.7	9.4	9.6	8.8	8.2	8.6
19	5.8	3.4	4.2	10.9	9.3	10.0	9.6	9.4	9.5	8.8	8.2	8.5
20	5.1	4.3	4.8	9.2	7.6	8.1	10.1	9.4	9.7	8.8	8.4	8.6
21	4.5	2.8	3.5	9.5	6.7	7.6	9.8	9.5	9.6	8.7	8.1	8.5
22	3.9	3.0	3.5	10.0	7.7	9.1	9.6	9.4	9.5	8.7	8.3	8.5
23	5.9	3.7	4.9	7.4	3.6	5.3	9.7	9.4	9.5	8.8	8.1	8.5
24	7.0	5.8	6.3	11.1	4.9	9.2	9.7	9.5	9.6	9.7	8.5	9.0
25	8.2	5.9	7.0	12.1	10.8	11.4	9.5	8.9	9.2	9.6	8.0	9.3
26	7.9	7.2	7.5	12.2	10.7	11.6	8.9	7.6	8.6	9.3	8.[illegible]	9.0
27	8.0	7.3	7.6	11.5	10.8	11.1	8.8	8.2	8.5	9.0	8.7	8.8
28	7.7	6.8	7.2	11.9	8.4	10.4	8.7	7.7	8.1	8.9	8.6	8.7
29	7.6	6.9	7.2	10.5	8.3	9.7	8.3	7.9	8.5	9.2	8.8	9.0
30	7.1	5.9	6.5	10.4	9.8	10.1	8.4	7.4	8.0	8.9	8.4	8.8
31	6.2	4.5	5.5	---	---	---	8.6	6.7	8.2	9.4	8.5	9.2
MONTH	8.2	.0	3.8	12.2	1.9	9.0	10.1	2.2	7.6	9.7	5.7	8.2

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

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	9.4	9.3	9.4	7.7	7.3	7.6	9.1	8.5	8.7	7.7	6.5	7.2
2	9.4	8.8	9.2	7.4	6.6	6.9	8.6	7.8	8.2	7.5	6.8	7.1
3	9.2	8.7	9.0	7.0	5.8	6.5	8.1	7.6	7.9	8.3	6.8	7.4
4	9.8	9.2	9.5	5.8	4.6	5.0	8.4	8.0	8.2	8.3	6.9	7.7
5	9.9	9.8	9.8	4.9	4.1	4.5	8.4	7.8	8.1	7.8	7.3	7.6
6	9.9	9.6	9.8	4.4	3.9	4.1	8.4	7.5	7.9	7.9	7.4	7.6
7	9.8	9.5	9.7	4.3	4.0	4.2	7.6	6.8	7.1	7.8	6.9	7.3
8	9.6	9.4	9.5	4.2	3.0	3.7	7.3	6.8	7.1	7.3	7.0	7.1
9	9.6	9.3	9.4	6.3	3.4	5.3	7.5	6.9	7.2	8.0	7.2	7.7
10	9.6	9.2	9.4	7.9	6.2	7.2	8.5	7.9	8.3	8.0	7.2	7.5
11	9.5	9.0	9.2	9.1	8.0	8.7	8.6	8.4	8.5	7.4	6.5	7.1
12	9.4	9.0	9.3	9.3	9.0	9.2	8.7	8.4	8.6	7.3	5.6	6.4
13	9.1	8.8	9.0	9.3	8.8	9.1	8.5	8.0	8.2	6.5	5.3	6.0
14	9.1	8.6	8.9	9.0	8.6	8.8	8.0	7.0	7.8	5.9	4.4	5.4
15	9.1	8.6	9.0	8.7	8.3	8.5	8.5	7.6	8.1	4.5	3.8	4.2
16	8.8	8.4	8.6	8.6	8.3	8.5	8.9	8.5	8.7	6.0	4.2	5.1
17	8.8	8.6	8.7	8.4	7.5	8.0	8.9	8.6	8.7	6.3	5.2	5.8
18	8.8	8.5	8.6	7.5	6.8	7.1	9.4	8.6	9.1	5.8	4.7	5.4
19	8.5	8.0	8.3	7.9	6.6	7.2	9.5	9.2	9.3	5.2	4.5	4.9
20	8.2	7.8	8.0	8.5	7.8	8.2	9.5	9.2	9.3	5.2	4.1	4.7
21	8.0	7.5	7.8	8.8	8.5	8.7	9.3	8.4	8.8	5.2	3.9	4.6
22	7.6	7.0	7.4	9.2	8.6	9.0	8.5	7.8	8.1	4.4	3.3	3.9
23	7.5	6.8	7.3	9.3	9.2	9.2	8.1	7.2	7.8	5.0	3.3	4.4
24	6.9	6.6	6.8	9.3	9.0	9.1	7.5	6.6	7.1	5.0	3.8	4.6
25	7.6	6.8	7.4	9.1	8.7	8.9	7.3	6.8	7.0	5.0	3.3	4.2
26	7.8	7.4	7.6	8.8	8.4	8.6	7.5	5.8	6.9	4.3	3.2	3.8
27	7.8	7.4	7.6	8.5	7.8	8.2	5.3	5.0	5.8	4.1	2.6	3.1
28	8.1	7.2	7.6	8.8	7.8	8.5	5.6	3.9	5.0	4.2	3.3	3.8
29	---	---	---	9.3	8.8	9.1	4.6	3.0	3.8	4.1	3.5	3.9
30	---	---	---	10.0	8.8	9.3	5.2	3.6	4.8	3.9	2.3	3.3
31	---	---	---	9.6	9.0	9.3	---	---	---	4.1	3.0	3.7
MONTH	9.9	6.6	8.6	10.0	3.0	7.6	9.5	3.0	7.7	8.3	2.3	5.6

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	3.8	2.4	3.1	4.1	1.6	2.9	2.7	1.0	2.1	4.1	2.5	3.2
2	2.8	1.0	2.2	4.9	3.0	4.3	3.0	1.5	2.2	2.8	.7	1.7
3	2.1	1.0	1.6	4.8	4.1	4.5	3.4	1.1	2.1	2.2	.5	1.2
4	2.0	.9	1.4	4.7	3.5	4.3	3.1	1.2	1.9	2.0	.4	1.1
5	1.6	.6	1.2	4.2	2.1	3.2	1.4	.8	1.1	2.7	.7	1.9
6	1.2	.4	.9	3.7	2.5	3.0	2.4	1.0	1.5	1.8	.6	1.1
7	2.5	1.0	2.0	4.2	2.6	3.2	1.9	.7	1.2	4.6	.4	3.4
8	2.6	1.3	1.9	3.7	3.0	3.4	4.3	.8	1.8	2.9	1.2	2.2
9	1.8	.9	1.4	3.6	2.8	3.3	3.6	1.2	2.1	3.9	2.0	3.2
10	1.2	.7	1.0	3.1	1.8	2.5	1.9	.9	1.3	3.2	1.4	2.3
11	.8	.0	.3	3.7	2.0	2.6	1.6	.5	.8	3.8	1.3	2.6
12	.4	.0	.0	2.0	1.0	1.5	---	---	---	4.2	.7	2.1
13	.4	.0	.1	2.2	.8	1.3	---	---	---	3.2	.7	1.7
14	.6	.1	.3	.8	.2	.4	---	---	---	3.5	.3	1.8
15	1.1	.2	.6	.4	.0	.2	---	---	---	3.3	1.5	2.1
16	.8	.0	.3	.9	.2	.5	---	---	---	1.7	.5	1.1
17	.3	.0	.0	1.6	.0	.7	5.4	3.1	4.3	2.4	1.6	2.1
18	.3	.0	.0	1.8	.3	.8	4.0	1.0	2.2	4.1	2.0	3.0
19	.8	.0	.1	.9	.0	.3	2.5	.4	1.0	3.3	2.4	2.9
20	.5	.0	.0	.5	.3	.4	3.9	.0	1.4	3.1	2.0	2.5
21	.5	.0	.2	.5	.0	.2	4.3	.6	2.6	5.3	1.4	3.7
22	.3	.0	.0	1.7	.0	.4	3.9	.7	1.3	5.2	4.6	4.9
23	.4	.0	.0	1.3	.1	.4	2.0	.5	.8	4.5	3.6	4.0
24	.4	.0	.0	1.7	.2	.5	1.0	.3	.6	4.5	3.9	4.3
25	.8	.0	.2	3.0	1.2	1.9	2.3	.3	.7	5.0	4.2	4.7
26	.7	.0	.2	3.4	1.7	2.4	2.0	.0	.8	4.6	3.6	4.0
27	.7	.0	.2	1.7	.8	1.2	2.9	.2	1.2	4.5	3.2	3.9
28	3.9	.0	.9	5.8	.9	2.8	.9	.2	.5	4.2	2.7	3.6
29	4.5	3.7	4.1	3.0	.7	1.3	1.8	.0	.4	4.0	1.8	2.9
30	4.3	4.0	4.1	1.5	.1	.5	1.8	.0	.9	2.4	1.6	2.1
31	---	---	---	2.0	.3	1.2	3.1	.8	2.1	---	---	---
MONTH	4.5	.0	.9	5.8	.0	1.8	5.4	.0	1.5	5.3	.3	2.7
YEAR	12.2	.0	5.5									

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

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	893	744	633	542	792	858	693	474	698	668	539	582
2	932	522	660	546	782	861	686	533	734	359	696	653
3	966	666	681	578	590	911	656	405	779	444	753	699
4	963	714	675	618	663	915	663	440	807	497	839	788
5	972	690	681	743	953	923	684	486	822	549	900	846
6	971	747	615	702	1040	942	726	495	789	629	798	812
7	981	807	612	711	872	945	762	501	624	686	843	521
8	984	827	642	738	1020	942	707	527	714	738	933	464
9	894	831	699	747	1230	936	699	531	780	789	963	587
10	840	819	735	741	1090	834	450	573	---	819	953	690
11	827	834	834	735	975	1100	510	627	---	827	939	762
12	828	777	1070	669	903	1210	546	650	---	855	---	807
13	861	627	1180	684	930	951	581	687	---	879	---	819
14	906	675	1030	728	1020	743	585	714	831	909	---	825
15	909	734	912	747	1030	678	422	756	875	939	---	834
16	936	806	561	750	990	696	486	689	813	954	---	852
17	942	906	603	882	993	737	522	671	879	966	846	836
18	939	920	614	1080	857	767	689	705	933	969	849	768
19	951	911	705	1190	843	780	728	747	987	969	870	798
20	960	909	866	1120	846	624	693	737	993	966	897	809
21	1000	863	996	1170	830	669	630	719	956	981	909	663
22	974	578	933	1190	798	647	642	753	936	950	881	500
23	980	668	888	1470	801	926	675	620	953	885	903	636
24	1030	566	555	1650	849	1030	690	636	984	917	896	690
25	1020	596	552	1120	864	966	708	696	1010	909	897	725
26	980	645	558	986	864	860	731	729	1020	906	900	793
27	959	759	560	909	867	803	774	686	1000	894	894	843
28	954	720	485	843	876	575	785	698	987	921	912	864
29	975	539	506	840	---	621	836	723	428	954	848	882
30	1000	590	500	837	---	---	857	708	602	980	828	897
31	972	---	524	824	---	680	---	699	---	968	560	---
MEAN	945	733	712	874	899	838	661	633	844	828	848	742

WTR YR 1983 MEAN 795 MAX 1650 MIN 359

PH (STANDARD UNITS), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.7	7.6	7.6	---	---	7.7	7.7	7.6	7.7	7.6	7.7	7.8
2	7.6	7.6	---	---	---	7.6	7.6	7.7	7.5	8.0	7.7	7.7
3	7.6	7.6	---	7.8	7.6	7.6	7.7	7.7	7.4	7.8	7.7	7.5
4	7.6	7.7	---	7.9	7.7	7.5	7.7	7.6	7.5	7.7	7.7	7.7
5	7.6	7.9	---	7.9	7.7	7.5	7.6	7.6	7.5	7.7	7.7	7.7
6	7.6	7.9	---	7.9	7.6	7.5	7.6	7.6	7.5	7.6	7.7	7.7
7	7.6	7.9	---	7.8	7.8	7.5	7.6	7.8	7.4	7.6	7.7	7.7
8	7.6	7.9	---	7.8	7.9	7.5	7.6	7.7	7.4	7.7	7.7	7.4
9	7.6	8.0	---	7.8	7.9	7.6	7.6	7.8	7.5	7.7	7.8	7.4
10	7.6	7.8	---	7.8	7.9	7.7	7.7	7.8	7.5	7.6	7.8	7.4
11	7.6	7.7	---	7.7	7.9	7.9	7.7	7.7	7.5	7.7	7.6	7.4
12	7.5	7.7	---	7.7	7.9	7.8	7.7	7.7	7.5	7.7	---	7.4
13	7.5	7.9	---	7.9	7.9	7.8	7.6	7.7	7.6	7.7	---	7.4
14	7.6	7.9	---	7.8	7.9	7.8	7.6	7.6	7.7	7.6	---	7.4
15	7.6	8.0	---	7.7	7.9	7.6	7.7	7.6	7.6	7.6	---	7.4
16	7.6	8.0	---	7.7	7.8	7.7	7.7	7.8	---	7.6	---	7.4
17	7.6	7.8	---	7.8	7.8	7.6	7.7	7.6	7.6	7.6	7.6	7.4
18	7.6	7.8	---	7.8	7.8	7.6	7.8	7.6	7.6	7.6	7.7	7.5
19	7.7	7.7	---	7.9	7.7	7.6	7.8	7.6	7.6	7.6	7.6	7.5
20	7.7	7.7	---	7.8	7.7	7.6	7.8	7.6	7.6	7.6	7.6	7.4
21	7.7	7.7	---	7.8	7.7	7.7	7.8	7.7	7.6	7.6	7.6	7.5
22	7.7	7.6	---	7.8	7.7	7.7	7.7	7.9	7.6	7.6	7.7	7.5
23	7.8	7.6	---	7.8	7.6	7.8	7.6	7.7	7.6	7.6	7.7	7.5
24	7.7	7.7	---	7.8	7.6	7.7	7.6	7.6	7.6	7.7	7.6	7.5
25	7.8	7.6	---	---	7.7	7.6	7.7	7.6	7.6	7.7	7.6	7.6
26	7.8	7.7	---	7.8	7.7	7.6	7.7	7.9	7.6	7.8	7.6	7.5
27	7.8	7.7	---	7.8	7.7	7.6	7.6	7.9	7.6	7.7	7.6	7.5
28	7.8	7.6	---	7.8	7.7	7.6	7.6	7.8	7.6	7.7	7.6	7.5
29	7.8	7.7	---	7.8	---	7.6	7.5	8.0	7.8	7.7	7.6	7.4
30	7.7	7.7	---	7.8	---	---	7.6	7.6	7.7	7.7	7.6	7.4
31	7.7	---	---	7.8	---	7.7	---	7.7	---	7.6	7.7	---
MEAN	7.7	7.8	7.6	7.8	7.8	7.6	7.7	7.7	7.6	7.7	7.7	7.5

WTR YR 1983 MEAN 7.7 MAX 8.0 MIN 7.4

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.0	17.0	9.0	5.5	5.0	8.5	9.5	13.5	17.0	23.5	25.0	24.5
2	20.5	17.0	10.0	5.5	5.5	9.0	10.5	14.5	18.0	22.0	25.5	25.5
3	21.0	17.5	12.0	5.5	6.0	10.0	10.5	15.0	18.5	23.5	27.0	26.0
4	21.5	15.5	13.0	5.5	4.5	10.5	10.0	13.0	18.0	25.0	27.5	27.5
5	21.5	12.5	13.5	5.5	4.0	12.0	10.0	14.5	18.5	24.5	27.0	28.0
6	21.5	11.0	12.5	6.0	4.0	13.5	11.0	14.5	19.0	24.0	27.0	27.5
7	22.0	10.5	11.0	6.5	4.5	14.5	12.0	15.5	17.5	23.5	28.0	23.0
8	21.5	11.0	10.0	7.0	4.5	14.5	12.0	15.5	18.5	23.5	28.5	24.0
9	21.0	11.5	9.5	7.0	4.5	12.0	11.5	13.0	20.0	24.0	28.5	25.0
10	21.5	12.5	8.5	7.0	5.0	10.5	10.0	14.0	20.5	24.5	28.0	26.0
11	21.5	13.0	7.5	7.5	5.0	6.5	10.5	15.0	22.0	25.5	27.5	27.0
12	21.0	14.0	7.0	7.0	5.0	6.0	10.5	16.0	23.5	25.5	---	27.0
13	21.0	12.0	6.5	5.5	5.5	6.5	11.5	17.0	24.0	26.5	---	26.5
14	20.5	10.5	6.0	5.5	5.5	7.5	12.0	19.0	24.0	28.0	---	26.5
15	20.0	9.5	6.0	6.0	6.0	9.0	11.5	18.5	25.0	28.5	---	26.0
16	18.5	9.0	7.0	5.5	7.0	9.0	10.5	16.0	24.0	29.0	---	25.0
17	17.5	9.0	6.0	4.5	7.5	10.0	10.0	15.5	25.0	30.0	27.5	23.5
18	17.0	9.5	5.0	4.0	7.0	10.5	8.0	16.5	26.0	30.0	27.0	23.0
19	17.0	11.0	5.0	3.5	7.5	10.5	8.0	17.0	25.5	30.0	27.5	23.5
20	17.0	12.0	5.0	4.0	8.5	8.5	8.5	16.5	25.0	30.0	28.5	25.0
21	17.0	13.5	4.5	4.5	9.0	7.5	9.5	17.5	24.5	30.0	29.5	23.0
22	16.5	12.0	5.0	5.0	9.5	6.0	11.5	19.0	25.0	29.5	28.5	19.5
23	16.0	12.5	5.5	5.5	9.5	5.5	12.5	17.5	26.0	27.5	28.5	19.5
24	15.5	10.5	5.5	5.0	9.5	6.5	13.5	18.0	27.0	28.0	28.5	19.0
25	15.5	8.5	7.0	5.0	8.0	7.0	12.5	19.0	27.5	27.5	28.5	19.5
26	15.0	8.0	8.5	5.0	7.5	7.5	12.5	17.5	28.0	28.0	29.0	20.0
27	15.0	7.5	7.5	5.0	7.5	9.0	14.0	17.5	27.0	28.0	29.0	21.0
28	15.5	7.0	8.5	5.0	8.0	7.5	17.0	17.5	27.5	28.5	29.0	22.0
29	16.0	7.0	8.5	5.0	---	7.0	17.5	17.5	21.0	28.5	29.0	22.5
30	16.5	8.0	6.0	6.0	---	---	16.5	18.0	22.0	29.0	29.0	22.5
31	17.0	---	5.5	5.0	---	8.5	---	17.5	---	29.0	24.5	---
MEAN	18.5	11.5	8.0	5.5	6.5	9.0	11.5	16.5	23.0	27.0	28.0	24.0

WTR YR 1983 MEAN 15.5 MAX 30.0 MIN 3.5

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.3	5.6	8.8	8.6	9.4	7.6	8.6	7.3	3.3	2.9	2.2	4.7
2	3.5	5.2	7.0	8.5	9.2	6.9	8.3	7.1	2.5	4.5	2.1	4.0
3	2.6	5.1	5.3	8.9	9.1	6.5	8.0	7.3	1.6	4.5	1.8	1.1
4	1.7	6.2	3.9	8.4	9.5	4.9	8.2	7.7	1.3	4.3	1.9	1.0
5	1.2	9.1	2.8	8.3	9.8	4.5	8.2	7.6	1.3	3.4	1.2	2.5
6	2.7	9.8	4.3	8.0	9.8	4.1	7.9	7.6	1.0	3.0	1.3	1.0
7	3.8	10.3	5.3	7.7	9.7	4.2	7.1	7.3	2.2	2.8	1.1	3.7
8	3.2	10.6	6.4	7.0	9.5	3.8	7.1	7.1	2.1	3.4	1.8	2.2
9	3.3	10.4	6.0	7.0	9.5	5.8	7.2	7.7	1.5	3.4	1.9	3.1
10	3.3	8.4	5.4	7.2	9.4	7.1	8.3	7.4	1.1	2.5	1.2	2.3
11	1.5	8.1	6.7	7.1	9.2	8.8	8.5	7.2	.2	2.3	.8	2.5
12	.6	5.8	6.3	7.3	9.3	9.2	8.6	6.4	.0	1.5	---	2.1
13	.7	9.4	7.1	7.6	9.0	9.1	8.1	6.1	.1	1.3	---	1.5
14	1.9	10.1	7.7	8.1	9.0	8.8	7.9	5.6	.4	.4	---	1.8
15	1.1	10.8	8.4	7.8	9.0	8.5	8.1	4.1	.6	.2	---	2.1
16	.0	10.6	9.2	7.3	8.6	8.5	8.6	4.9	.2	.5	---	1.2
17	.9	11.2	9.6	8.7	8.7	8.1	8.7	5.9	.0	.7	4.4	2.1
18	3.1	11.2	9.6	8.6	8.6	7.0	9.1	5.5	.0	.6	2.0	3.0
19	3.9	10.0	9.5	8.5	8.4	7.0	9.3	4.9	.0	.3	.9	3.0
20	4.7	7.9	9.6	8.6	8.0	8.2	9.3	4.7	.0	.4	1.2	2.4
21	3.5	7.3	9.7	8.5	7.8	8.7	8.7	4.7	.3	.3	2.7	4.1
22	3.7	9.4	9.5	8.6	7.5	9.0	8.0	4.0	.1	.2	1.1	4.9
23	4.9	5.2	9.5	8.6	7.4	9.2	7.8	4.6	.0	.2	.7	4.0
24	6.2	10.0	9.6	8.9	6.8	9.1	7.2	4.6	.0	.4	.6	4.4
25	7.0	11.3	9.2	9.3	7.5	8.8	7.0	4.0	.1	1.7	.5	4.7
26	7.7	11.8	8.5	9.0	7.6	8.6	7.1	3.9	.2	2.4	.7	4.0
27	7.6	11.1	8.6	8.8	7.6	8.2	5.9	2.9	.2	1.3	.9	4.0
28	7.2	10.4	8.1	8.7	7.6	8.6	5.0	3.9	.0	2.7	.6	3.7
29	7.2	10.1	8.5	8.9	---	9.2	3.8	3.9	4.1	1.1	.4	2.5
30	6.4	10.1	8.0	8.8	---	---	4.7	3.4	4.1	.4	.8	2.1
31	5.7	---	8.3	9.3	---	9.3	---	3.7	---	1.3	2.1	---
MEAN	3.8	9.1	7.6	8.3	8.7	7.6	7.7	5.6	1.0	1.8	1.4	2.9

WTR YR 1983 MEAN 5.5 MAX 11.8 MIN .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).

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 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. Sediment data collected at this site 1969 to 1981.

AVERAGE DISCHARGE.--54 years, 333 ft³/s (9.431 m³/s), 18.39 in/yr (467 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)
Dec. 16	0500	4660	132	7.45	2.271	May 3	2130	*5490	155	*8.16	2.487

Minimum daily discharge, 21 ft³/s (0.595 m³/s) June 28, Aug. 23-26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	100	440	538	321	396	132	316	2490	280	457	321	126
2	82	538	446	290	987	126	295	2070	203	413	119	69
3	82	418	396	275	1970	119	375	4230	164	827	75	47
4	69	1040	418	203	827	119	413	2280	255	491	196	37
5	63	556	429	190	491	126	385	987	248	342	216	126
6	53	295	676	180	375	119	321	579	486	342	100	126
7	53	203	486	160	353	119	364	413	480	235	75	633
8	100	176	391	150	280	216	396	468	300	164	63	216
9	88	158	353	140	229	591	435	396	216	132	47	113
10	75	146	331	170	210	573	2190	305	176	113	37	82
11	69	261	310	474	200	1230	776	261	158	94	189	75
12	69	520	290	413	190	769	486	235	132	69	255	58
13	58	827	280	300	170	694	375	210	113	64	113	53
14	164	424	268	255	200	1060	757	196	113	47	82	47
15	176	364	544	261	235	795	2200	290	106	42	63	42
16	248	331	3470	189	337	451	738	342	94	42	47	69
17	158	210	1180	170	509	337	480	268	82	42	42	126
18	106	196	597	160	353	290	446	210	75	42	42	82
19	100	183	645	150	295	853	457	203	69	37	42	58
20	94	170	1010	150	261	1010	441	311	82	33	37	53
21	132	1170	676	140	229	926	357	285	100	63	33	300
22	106	1300	532	140	210	688	304	311	113	216	25	280
23	69	639	1660	385	210	457	267	941	69	176	21	544
24	69	1960	2930	544	183	402	238	491	53	295	21	280
25	63	934	1230	446	164	391	218	353	33	132	21	119
26	58	556	795	337	152	396	202	491	29	82	21	82
27	53	526	875	261	139	609	188	369	25	58	25	69
28	47	941	1960	241	139	2320	189	290	21	42	33	58
29	47	1930	795	222	---	964	267	241	1090	75	37	53
30	53	834	474	468	---	503	1050	321	1740	88	33	53
31	94	---	364	669	---	369	---	268	---	241	126	---
TOTAL	2798	18246	25349	8454	10294	17754	15926	21105	7105	5496	2557	4075
MEAN	90.3	608	818	273	368	573	531	681	237	177	82.5	136
MAX	248	1960	3470	669	1970	2320	2200	4230	1740	827	321	633
MIN	47	146	268	140	139	119	188	196	21	33	21	37
MEAN+	94.2	612	822	277	372	577	535	685	241	182	87.3	140
CFSM+	0.38	2.49	3.34	1.13	1.51	2.35	2.17	2.78	0.98	0.74	0.35	0.57
IN.+	0.44	2.77	3.85	1.30	1.57	2.70	2.42	3.21	1.09	0.85	0.41	0.64

CAL YR 1982 TOTAL 167534 MEAN 459 MAX 4000 MIN 40
WTR YR 1983 TOTAL 139160 MEAN 381 MAX 4230 MIN 21

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

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.--9 years, 1,029 ft³/s (29.14 m³/s), 20.39 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)
Dec. 16	1830	*7220	204	*7.57	2.307	Dec. 24	2100	6730	191	7.25	2.210

Minimum discharge, 12 ft³/s (0.340 m³/s) Aug. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	80	265	2760	1330	1590	285	929	568	379	1120	115	35
2	60	347	1860	1030	1970	260	697	1940	335	2250	54	32
3	46	412	1280	762	4390	236	592	1720	275	1480	38	30
4	38	1550	950	551	3870	218	609	1370	245	1170	33	25
5	32	1220	828	470	2340	201	735	898	245	898	37	43
6	28	898	1190	385	1690	193	809	848	419	518	34	50
7	26	635	1480	350	1280	193	819	1810	652	285	30	125
8	25	405	1180	330	1050	182	868	725	635	182	26	54
9	25	265	888	310	838	275	972	568	448	131	24	50
10	24	197	660	300	600	455	1800	771	312	98	24	50
11	20	255	580	1370	500	2240	4500	560	222	74	35	49
12	18	688	540	1970	430	2790	1800	433	172	63	78	44
13	17	1610	490	1550	390	2690	1200	353	137	54	71	33
14	66	1750	450	1170	360	3030	1000	329	112	45	55	27
15	109	1230	888	900	353	2790	4500	502	96	39	41	24
16	182	809	6270	740	448	2120	5000	560	90	35	35	20
17	112	635	5980	600	1040	1470	3500	478	74	30	33	20
18	90	584	3520	450	1370	1080	1700	433	67	28	28	20
19	78	502	2580	410	1150	1610	1800	405	64	25	26	19
20	84	412	2870	380	961	2980	1950	433	66	23	22	15
21	76	1520	2160	360	781	2900	1340	448	78	21	19	51
22	55	2720	1710	350	626	2800	909	534	78	21	18	255
23	45	2680	3000	1000	518	2040	688	1240	80	20	16	1190
24	38	4000	6170	3140	440	1440	455	2040	74	24	14	725
25	35	3790	5990	1780	379	1190	280	1180	57	21	14	385
26	34	2460	4350	1590	335	1020	285	983	44	18	14	205
27	34	1680	3610	1070	290	878	285	809	39	19	14	122
28	32	1630	5040	725	285	1550	175	618	222	24	14	84
29	30	3640	4200	609	---	1780	73	463	643	73	13	61
30	30	4020	2750	609	---	1470	426	412	878	74	12	49
31	43	---	1830	1310	---	1170	---	379	---	76	23	---
TOTAL	1612	42809	78054	27901	30274	43536	40696	24810	7238	8939	1010	3893
MEAN	52.0	1427	2518	900	1081	1404	1357	800	241	288	32.6	130
MAX	182	4020	6270	3140	4390	3030	5000	2040	878	2250	115	1190
MIN	17	197	450	300	285	182	73	329	39	18	12	16
CFSM	.08	2.08	3.68	1.31	1.58	2.05	1.98	1.17	.35	.42	.05	.19
IN.	.09	2.32	4.24	1.52	1.64	2.36	2.21	1.35	.39	.49	.05	.21

CAL YR 1982 TOTAL 436383 MEAN 1196 MAX 10900 MIN 13 CFSM 1.75 IN 23.70
WTR YR 1983 TOTAL 310772 MEAN 851 MAX 6270 MIN 12 CFSM 1.24 IN 16.88

04212100 GRAND RIVER NEAR PAINESVILLE, OHIO--Continued

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, 1 mg/L Nov. 18, 1981, Oct. 26, 27, 1982.
SEDIMENT LOADS: Maximum daily, 38,800 tons (35,200 tonnes) Dec. 25, 1979; minimum daily, 0.09 ton (0.08 tonne) Oct. 26, 27, 1982

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATIONS: Maximum daily mean, 764 mg/L Sept. 23; minimum daily mean, 1 mg/L Oct. 26, 27.
SEDIMENT LOADS: Maximum daily, 6,080 tons (5,520 tonnes) Dec. 16; minimum daily, 0.09 ton (0.08 tonne) Oct. 26, 27.

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	80	12	2.6	265	55	34	2760	42	313
2	60	7	1.1	347	24	22	1860	32	161
3	46	6	.75	412	22	24	1280	24	83
4	38	5	.51	1550	218	929	950	23	59
5	32	4	.35	1220	48	158	828	20	45
6	28	5	.38	898	25	61	1190	30	96
7	26	6	.42	635	17	29	1480	30	120
8	25	6	.41	405	12	13	1180	20	64
9	25	5	.34	265	8	5.7	888	17	41
10	24	5	.32	197	7	3.7	660	8	14
11	20	4	.22	255	22	21	580	7	11
12	18	5	.24	688	44	82	540	13	19
13	17	4	.18	1610	70	304	490	18	24
14	66	16	2.9	1750	58	274	450	14	17
15	109	13	3.8	1230	31	103	888	38	113
16	182	18	8.8	809	18	39	6270	380	6080
17	112	5	1.5	635	15	26	5980	143	2350
18	90	2	.49	584	13	20	3520	68	646
19	78	3	.63	502	15	20	2580	44	307
20	84	5	1.1	412	15	17	2870	42	325
21	76	4	.82	1520	125	743	2160	26	152
22	55	4	.59	2720	108	793	1710	18	83
23	45	2	.24	2680	82	593	3000	89	909
24	38	2	.21	4000	132	1380	6170	147	2450
25	35	2	.19	3790	77	788	5990	87	1410
26	34	1	.09	2460	38	252	4350	46	540
27	34	1	.09	1680	22	100	3610	60	585
28	32	4	.35	1630	58	342	5040	84	1140
29	30	2	.16	3640	72	687	4200	50	567
30	30	3	.24	4020	70	760	2750	32	238
31	43	14	2.3	---	---	---	1830	27	133
TOTAL	1612	---	32.32	42809	---	8623.4	78054	---	19095

04212100 GRAND RIVER NEAR PAINESVILLE. OH--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	1330	22	79	1590	60	258	285	6	4.6
2	1030	18	50	1970	149	909	260	4	2.8
3	762	14	29	4390	229	2690	236	4	2.5
4	551	7	10	3870	113	1180	218	3	1.8
5	470	5	6.3	2340	60	379	201	15	8.1
6	385	2	2.1	1690	39	178	193	7	3.5
7	350	2	1.9	1280	26	90	193	4	2.1
8	330	3	2.7	1050	22	62	182	3	1.5
9	310	2	1.7	838	19	43	275	4	3.0
10	300	7	5.7	600	17	28	455	21	33
11	1370	99	340	500	12	16	2240	126	762
12	1970	23	122	430	11	13	2790	95	716
13	1550	27	113	390	17	18	2690	59	429
14	1170	22	69	360	16	16	3030	63	515
15	900	16	39	353	10	9.5	2790	52	392
16	740	12	24	448	15	18	2120	35	200
17	600	9	15	1040	50	140	1470	27	107
18	450	9	11	1370	40	148	1080	21	61
19	410	10	11	1150	25	78	1610	49	252
20	380	11	11	961	21	54	2980	98	862
21	360	12	12	781	18	38	2900	51	399
22	350	10	9.5	626	15	25	2800	34	257
23	1000	11	30	518	12	17	2040	26	143
24	3140	33	280	440	9	11	1440	18	70
25	1780	44	211	379	9	9.2	1190	15	48
26	1590	21	90	335	10	9.0	1020	12	33
27	1070	16	46	290	9	7.0	878	21	50
28	725	18	35	285	7	5.4	1550	43	180
29	609	14	23	---	---	---	1780	28	135
30	609	18	30	---	---	---	1470	18	71
31	1310	64	226	---	---	---	1170	17	54
TOTAL	27901	---	1935.9	30274	---	6449.1	43536	---	5799.0
		APRIL			MAY			JUNE	
1	929	14	35	568	247	379	379	10	10
2	697	11	21	1940	167	875	335	10	9.0
3	592	9	14	1720	273	1220	275	15	11
4	609	8	13	1370	179	635	245	10	6.6
5	735	8	16	898	112	272	245	7	4.6
6	809	8	17	848	93	213	419	18	20
7	819	5	11	1810	81	396	652	30	53
8	868	4	9.4	725	58	114	635	23	39
9	972	7	18	568	37	57	448	13	16
10	1800	300	1460	771	18	37	312	6	5.1
11	4500	200	2430	560	12	18	222	6	3.6
12	1800	83	403	433	8	9.4	172	7	3.3
13	1200	61	198	353	7	6.7	137	7	2.6
14	1000	48	130	329	16	14	112	6	1.8
15	4500	300	3650	502	20	27	96	6	1.6
16	5000	160	2160	560	12	18	90	8	1.9
17	3500	68	643	478	8	10	74	9	1.8
18	1700	55	252	433	7	8.2	67	9	1.6
19	1800	44	214	405	12	13	64	8	1.4
20	1950	27	142	433	15	18	66	14	2.5
21	1340	21	76	448	13	16	78	17	3.6
22	909	13	32	534	16	23	78	7	1.5
23	688	10	19	1240	74	248	80	8	1.7
24	455	8	9.8	2040	101	556	74	11	2.2
25	280	8	6.0	1180	42	134	57	10	1.5
26	285	6	4.6	983	28	74	44	16	1.9
27	285	5	3.8	809	17	37	39	19	2.0
28	175	13	6.1	618	15	25	222	123	103
29	73	13	2.6	463	15	19	643	130	226
30	426	153	299	412	12	13	878	107	254
31	---	---	---	379	8	8.2	---	---	---
TOTAL	40696	---	12295.3	24810	---	5493.5	7238	---	793.8

04212100 GRAND RIVER NEAR PAINESVILLE. OH--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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	1120	120	380	115	59	18	35	15	1.4
2	2250	170	1030	54	15	2.2	32	13	1.1
3	1480	102	408	38	13	1.3	30	8	.65
4	1170	77	243	33	7	.62	25	7	.47
5	898	70	170	37	7	.70	43	64	12
6	518	52	73	34	8	.73	50	50	6.8
7	285	44	34	30	8	.65	125	278	100
8	182	23	11	26	9	.63	54	61	10
9	131	27	9.5	24	10	.65	50	28	3.8
10	98	22	5.8	24	9	.58	50	23	3.1
11	74	16	3.2	35	14	1.3	49	22	2.9
12	63	21	3.6	78	18	3.8	44	22	2.6
13	54	17	2.5	71	13	2.5	33	21	1.9
14	45	10	1.2	55	12	1.8	27	21	1.5
15	39	8	.84	41	9	1.0	24	16	1.0
16	35	4	.38	35	10	.95	20	15	.81
17	30	8	.65	33	12	1.1	20	11	.59
18	28	5	.38	28	12	.91	20	12	.65
19	25	3	.20	26	13	.91	19	14	.72
20	23	5	.31	22	9	.53	16	15	.65
21	21	3	.17	19	11	.56	51	60	11
22	21	3	.17	18	13	.63	255	367	295
23	20	6	.32	16	12	.52	1190	764	2360
24	24	4	.26	14	8	.30	725	83	173
25	21	4	.23	14	7	.26	385	38	40
26	18	7	.34	14	8	.30	205	25	14
27	19	5	.26	14	10	.38	122	16	5.3
28	24	4	.26	14	10	.38	84	11	2.5
29	73	57	16	13	11	.39	61	11	1.8
30	74	27	5.4	12	12	.39	49	11	1.5
31	76	57	16	23	15	.93	---	---	---
TOTAL	8939	---	2416.97	1010	---	45.90	3893	---	3056.74
YEAR	310772		66036.93						

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 mi (1,816 km).

PERIOD OF RECORD.--March 1950 to February 1952, October 1962 to current year.

REMARKS.--Water temperatures available for Mar. 1950 to February 1952, October 1962 to December 1966. Four parameter (Specific Conductance, pH, Water Temperature, and Dissolved Oxygen) Water quality monitor at site from December 1966 to September 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)
NOV 09...	1130	260	<10	1	65	<1	<1	34	<3	5	89
FEB 15...	1515	353	<10	1	49	<1	<1	18	<3	6	33
MAY 11...	0930	576	40	2	52	<1	2	15	<3	13	81
AUG 18...	1100	29	10	2	110	<1	<1	7	<3	8	14

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	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)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
NOV 09...	3	8	61	.2	<10	2	<1	<1	230	<6.0	6
FEB 15...	1	7	52	.2	<10	5	<1	<1	180	<6.0	8
MAY 11...	7	13	40	.1	<10	4	<1	<1	130	<6.0	6
AUG 18...	2	24	14	.4	<10	33	<1	<1	390	<6.0	6

04212200 GRAND RIVER AT PAINESVILLE, OH--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE, AIR (DEG C)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
NOV										
09...	1130	260	1050	7.8	8.0	8.0	8.5	11.4	98	70
FEB										
15...	1515	353	920	7.6	1.0	1.0	6.5	13.2	96	30
MAY										
11...	0930	576	595	7.7	16.0	13.5	6.3	9.8	95	50
AUG										
18...	1100	29	1960	8.2	26.0	25.0	7.5	11.4	143	3000

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
NOV										
09...	40	100	12	86	38	2.3	5.3	77	71	240
FEB										
15...	30	92	8.9	74	37	2.1	2.5	58	57	230
MAY										
11...	100	60	6.7	41	33	1.4	2.3	52	41	130
AUG										
18...	120	210	11	170	39	3.3	4.6	85	63	590

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)
NOV										
09...	.2	6.4	670	.48	.200	.26	.70	.070	.030	.020
FEB										
15...	.1	5.1	582	.62	.200	.26	.10	.040	.010	.010
MAY										
11...	.1	3.5	432	.22	.060	.08	.70	.050	.020	<.010
AUG										
18...	.3	.3	1350	.50	.140	.18	1.10	.090	.020	<.010

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)
NOV					
09...	1130	260	8.0	16	11
FEB					
15...	1515	353	1.0	5	4.8
MAY					
11...	0930	576	13.5	12	19
AUG					
18...	1100	29	25.0	20	1.6

04212680 FIELDS BROOK AT ASHTABULA, OH

LOCATION.--Lat 41°53'36", long 80°47'44", Ashtabula County, Hydrologic Unit 04110003, on left upstream side of bridge at E. 15 th Street in Ashtabula, 1,750 ft (574 m) upstream from mouth.

DRAINAGE AREA.--3.63 mi^2 (9.40 km^2).

PERIOD OF RECORD.--April 1983 to September 1983.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 1983 to September 1983.
pH: April 1983 to September 1983.
WATER TEMPERATURES: April 1983 to September 1983.
DISSOLVED OXYGEN: April 1983 current September 1983.

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, 9,140 micromhos July 14, 1983; minimum, 610 micromhos June 25, 1983.
pH: Maximum, 8.7 units Aug. 9, 1983; minimum, 4.4 units Sept. 30, 1983.
WATER TEMPERATURES: Maximum, 32.5°C July 20,21, 1983; minimum, 8.5°C Apr. 18,1983.
DISSOLVED OXYGEN: Maximum, 11.3 mg/L Apr. 18, 1983; minimum, 1.7 mg/L Aug. 24, 1983.

EXTREMES FOR PERIOD APRIL 1983 TO SEPTEMBER 1983.--
SPECIFIC CONDUCTANCE: Maximum, 9,140 micromhos July 14; minimum, 610 micromhos June 25.
pH: Maximum recorded, 8.7 units Aug. 9; minimum recorded, 4.4 units on Sept. 30.
WATER TEMPERATURES: Maximum, 32.5°C July 20 21; minimum, 8.5°C Apr. 18.
DISSOLVED OXYGEN: Maximum recorded, 11.3 mg/L Apr. 18; minimum recorded, 1.7 mg/L Aug. 24.

04212680 FIELDS BROOK AT ASHTABULA, OH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1							---	---	---	2020	1420	1610
2							---	---	---	1430	960	1130
3							---	---	---	1250	690	950
4							---	---	---	1330	760	1080
5							---	---	---	1900	1310	1800
6							---	---	---	2430	1900	2140
7							---	---	---	2890	2240	2560
8							---	---	---	2950	2200	2450
9							---	---	---	5100	2220	2500
10							---	---	---	2610	2150	2360
11							---	---	---	2980	2510	2790
12							---	---	---	2880	2320	2590
13							---	---	---	2720	2190	2440
14							---	---	---	7940	1970	2820
15							---	---	---	2330	1800	1980
16							2870	1540	1900	2250	1800	1900
17							7140	1560	1840	2340	2040	2150
18							2430	1600	1750	2410	1830	2200
19							1960	1720	1830	4900	2370	2930
20							1920	1490	1710	4830	2680	2970
21							1860	1590	1720	3060	2700	2840
22							6960	1910	2270	3270	1240	1990
23							3630	2070	2420	1330	1120	1190
24							5340	2270	2600	1750	1190	1400
25							2760	2170	2310	1430	1260	1350
26							2870	2000	2410	2500	1120	1370
27							3740	2450	2900	1420	1080	1230
28							2990	2400	2760	1370	1150	1300
29							2810	2170	2500	3670	1240	1400
30							2560	1520	2000	1850	1310	1370
31							---	---	---	1380	1160	1280
MONTH							7140	1490	2190	7940	690	1940

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	1260	1010	1160	3690	1800	2330	2040	680	1150	2570	2030	2280
2	1970	930	1090	2880	1830	2180	1990	1130	1560	2660	2290	2490
3	1030	820	873	6260	2430	3030	3380	2050	2420	2640	2470	2570
4	970	810	873	5820	2810	3430	2990	2280	2720	4360	2550	2760
5	3230	750	989	---	---	---	3010	2390	2770	3910	2280	2950
6	1000	730	837	3360	2790	3060	3510	2870	3110	3290	1290	2820
7	---	---	---	8110	2910	3450	8190	2930	3280	7060	2490	3510
8	---	---	---	3440	2900	3100	5520	2840	3410	2910	2550	2750
9	---	---	---	3320	2910	3170	3310	2510	2910	3230	2210	2700
10	---	---	---	3480	3260	3410	3580	2770	3210	3010	2720	2860
11	---	---	---	7260	1180	3630	3480	2830	3170	3050	2830	2950
12	---	---	---	4200	3020	3590	3370	2720	2940	3450	3010	3110
13	---	---	---	3620	3040	3250	3740	970	2980	3840	3260	3500
14	---	---	---	9140	3440	3830	3330	2830	3100	4000	3140	3420
15	1890	1670	1790	4290	3320	3500	6070	2660	3150	7690	3190	3690
16	1890	1460	1630	6960	3230	3500	3940	2940	3170	3780	3110	3400
17	4420	1680	2110	3520	3230	3320	3960	3000	3290	3490	3090	3350
18	2090	1810	1930	4430	3390	3630	3880	3090	3310	3960	3110	3400
19	2030	1610	1860	4160	2830	3410	3200	2670	2900	3290	2850	3040
20	2630	1800	1920	3160	2820	3000	3190	2820	3020	3680	3060	3260
21	2240	1820	1910	3570	2890	3240	3390	3110	3240	3350	2150	2830
22	1890	1650	1840	3720	2900	3170	5220	3310	3630	2580	930	1470
23	2420	1400	1650	3200	810	2860	3630	3170	3420	1700	960	1280
24	2090	1660	1920	4430	2640	2960	5490	3110	3410	1980	1640	1880
25	5010	610	1950	3010	2270	2730	3440	2560	3040	2540	2000	2300
26	3000	1800	2210	3060	2300	2660	3210	3010	3140	2570	2050	2340
27	3230	1820	2210	3020	2320	2600	3140	2810	2970	2290	1150	1560
28	2490	1420	1800	2730	2210	2470	3430	2970	3080	1900	1310	1700
29	1680	1400	1530	3390	1970	2550	2970	2670	2830	2770	1700	1920
30	2810	1600	1960	2950	2590	2790	3350	2360	2800	2410	1630	1820
31	---	---	---	2780	1180	2300	4200	1960	2370	---	---	---
MONTH	5010	610	1640	9140	810	3070	8190	680	2950	7690	930	2660
YEAR	9140	610	2470									

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

04212680 FIELDS BROOK AT ASHTABULA, OH--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1							---	---	---	---	---	---
2							---	---	---	---	---	---
3							---	---	---	---	---	---
4							---	---	---	---	---	---
5							---	---	---	7.8	7.7	7.7
6							---	---	---	7.9	7.7	7.8
7							---	---	---	8.0	7.6	7.9
8							---	---	---	7.8	7.6	7.8
9							---	---	---	7.9	7.7	7.8
10							---	---	---	7.9	7.8	7.8
11							---	---	---	7.9	7.7	7.8
12							---	---	---	7.9	7.5	7.8
13							---	---	---	7.9	7.4	7.8
14							---	---	---	7.9	7.0	7.7
15							---	---	---	7.7	7.5	7.7
16							7.8	7.7	7.7	7.8	7.7	7.8
17							7.8	7.6	7.7	7.9	7.7	7.8
18							7.8	7.7	7.7	7.9	7.4	7.8
19							7.8	7.7	7.7	7.8	7.5	7.7
20							7.9	7.6	7.8	7.9	7.7	7.8
21							8.0	7.7	7.8	7.9	7.7	7.8
22							8.0	7.3	7.8	7.9	7.5	7.7
23							8.0	7.7	7.9	8.0	7.5	7.8
24							8.1	7.8	7.9	8.0	7.7	7.8
25							8.0	7.7	7.9	7.9	7.5	7.8
26							8.1	7.8	7.9	7.9	7.6	7.8
27							8.0	7.5	7.8	7.9	7.7	7.8
28							---	---	---	7.9	7.8	7.8
29							---	---	---	7.9	7.7	7.8
30							---	---	---	7.9	7.8	7.8
31							---	---	---	8.0	7.8	7.8
MONTH							8.1	7.3	7.8	8.0	7.0	7.8

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.0	7.7	7.8	7.7	6.8	7.5	7.8	7.3	7.5	8.0	7.8	7.9
2	7.8	7.3	7.6	7.7	7.5	7.6	7.8	7.5	7.7	8.0	7.8	7.9
3	7.8	7.5	7.7	7.7	7.5	7.7	7.9	7.8	7.9	8.1	7.9	8.0
4	7.8	7.7	7.7	7.7	7.6	7.6	7.9	7.7	7.9	8.0	7.9	7.9
5	7.8	7.7	7.8	---	---	---	8.0	7.8	7.9	8.0	7.0	7.9
6	7.8	7.3	7.7	7.9	7.8	7.9	8.1	7.8	7.9	8.1	6.9	7.9
7	---	---	---	8.0	7.3	7.8	8.1	7.8	7.9	7.9	7.1	7.8
8	---	---	---	7.9	7.4	7.8	8.2	7.8	7.9	8.0	7.6	7.9
9	---	---	---	8.0	7.7	7.8	8.7	7.9	8.1	7.9	6.8	7.6
10	---	---	---	8.0	7.7	7.9	8.1	7.6	8.0	8.0	5.7	7.5
11	---	---	---	8.1	6.9	7.8	8.0	7.8	7.9	8.1	6.8	7.7
12	---	---	---	8.1	7.8	7.9	8.1	7.9	8.0	8.1	6.9	8.0
13	---	---	---	8.3	7.8	8.0	8.1	7.7	8.0	8.1	4.5	7.6
14	---	---	---	8.3	7.6	8.0	8.0	7.9	8.0	8.2	7.9	8.1
15	8.3	7.8	8.0	8.3	7.6	7.9	8.1	7.6	8.0	8.2	7.9	8.1
16	8.1	7.6	7.9	8.3	7.7	8.0	8.1	7.9	8.0	8.0	7.5	7.7
17	8.2	7.4	7.9	8.3	7.8	8.0	8.1	7.9	8.0	8.2	7.8	8.1
18	8.3	7.8	8.0	8.2	7.4	7.8	8.0	7.6	7.9	8.2	8.0	8.1
19	8.1	7.6	8.0	8.3	7.6	7.9	8.1	7.8	7.9	8.2	8.0	8.1
20	8.1	7.8	7.9	8.2	7.7	7.9	8.0	7.8	7.9	8.2	7.4	7.9
21	8.1	7.7	7.9	8.1	6.5	7.7	7.9	7.5	7.7	7.9	7.0	7.5
22	7.9	7.6	7.9	8.1	7.4	7.9	7.6	6.8	7.4	7.8	7.3	7.4
23	8.0	7.2	7.8	8.1	7.5	7.9	7.3	6.6	7.2	7.7	7.0	7.4
24	7.8	7.4	7.7	8.0	7.0	7.8	7.4	7.0	7.2	8.0	7.8	7.9
25	7.9	7.4	7.8	8.1	7.7	7.9	7.9	6.7	7.5	8.0	7.9	8.0
26	7.9	6.6	7.7	8.1	7.8	7.9	7.9	7.5	7.7	8.0	7.8	8.0
27	7.9	7.6	7.7	8.2	7.8	8.0	8.0	7.7	7.8	8.2	7.8	8.1
28	7.7	7.2	7.4	8.2	7.4	7.8	7.9	7.7	7.8	8.2	7.3	7.9
29	7.8	7.2	7.5	7.8	6.9	7.6	7.9	7.7	7.8	8.0	6.4	7.5
30	7.8	7.3	7.7	7.9	7.7	7.8	8.0	7.2	7.8	8.1	4.4	7.3
31	---	---	---	7.9	7.2	7.7	8.0	7.4	7.8	---	---	---
MONTH	8.3	6.6	7.8	8.3	6.5	7.8	8.7	6.6	7.8	8.2	4.4	7.8
YEAR	8.7	4.4	7.8									

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

04212680 FIELDS BROOK AT ASHTABULA, OH--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1							---	---	---	15.0	13.5	14.0
2							---	---	---	20.5	14.0	17.0
3							---	---	---	16.5	12.0	14.5
4							---	---	---	19.0	11.5	15.0
5							---	---	---	17.5	14.5	16.0
6							---	---	---	20.5	13.5	16.5
7							---	---	---	19.0	16.0	17.0
8							---	---	---	17.0	11.5	14.5
9							---	---	---	17.0	11.0	13.5
10							---	---	---	19.5	13.0	15.5
11							---	---	---	21.0	14.0	17.5
12							---	---	---	22.0	16.0	18.5
13							---	---	---	22.5	16.5	19.0
14							---	---	---	21.5	17.5	19.0
15							---	---	---	18.5	14.0	16.0
16							14.5	11.0	12.5	17.0	12.5	14.5
17							12.0	9.5	11.0	20.0	14.5	16.5
18							11.5	8.5	9.5	19.0	15.0	17.0
19							11.5	9.0	10.0	17.5	17.0	17.0
20							13.5	8.5	10.5	21.5	17.0	19.0
21							15.5	10.0	13.0	22.5	18.0	20.0
22							19.5	12.5	15.5	21.0	18.5	19.5
23							19.0	15.0	16.0	22.0	18.0	19.5
24							16.5	12.0	14.5	22.5	17.5	19.5
25							15.5	11.0	13.0	20.5	17.5	19.0
26							19.5	12.5	16.0	22.0	16.5	18.5
27							22.0	16.0	18.5	23.0	17.0	19.5
28							21.5	16.5	19.0	22.0	17.5	19.5
29							18.5	16.0	17.0	22.0	19.0	20.0
30							16.5	15.0	16.0	21.5	18.5	19.5
31							---	---	---	20.0	18.0	19.0
MONTH							22.0	8.5	14.0	23.0	11.0	17.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	23.5	18.0	20.0	27.5	22.5	24.5	25.5	20.5	24.0	30.0	26.0	27.5
2	23.0	18.0	20.5	27.5	23.0	25.0	28.5	23.5	26.0	29.5	25.5	27.0
3	20.5	19.0	20.0	29.0	24.0	26.5	29.5	25.5	27.5	29.5	25.5	27.5
4	21.5	19.5	20.5	26.0	25.0	25.5	29.0	27.5	28.0	30.0	26.5	28.0
5	24.0	19.0	21.0	---	---	---	31.0	27.5	29.0	29.0	26.5	27.5
6	21.5	19.0	20.0	26.5	23.0	25.0	31.0	28.0	29.0	29.5	23.5	27.0
7	---	---	---	26.0	22.0	24.0	31.5	27.5	29.5	28.0	24.5	26.0
8	---	---	---	27.0	22.5	24.5	32.0	28.0	29.5	28.5	25.5	27.0
9	---	---	---	27.0	24.0	25.5	30.0	27.0	28.5	29.5	26.0	27.5
10	---	---	---	28.5	24.0	25.5	29.5	26.0	27.5	30.5	26.5	28.5
11	---	---	---	28.5	23.5	25.5	27.0	25.0	26.0	29.0	27.0	28.0
12	---	---	---	30.0	25.5	27.0	27.5	24.0	25.5	29.5	26.5	27.5
13	---	---	---	30.0	25.0	27.5	28.5	24.5	26.0	28.5	25.5	26.5
14	---	---	---	30.0	25.0	27.5	29.0	24.5	26.5	27.0	24.0	25.5
15	28.5	24.0	26.5	31.5	27.0	29.0	29.0	25.0	26.5	27.0	24.0	25.0
16	27.0	23.0	25.0	31.5	28.0	29.5	29.5	25.5	27.0	24.0	23.0	23.5
17	26.5	24.0	25.0	32.0	28.0	29.5	29.5	26.0	27.5	25.0	23.0	23.5
18	28.0	22.0	24.5	32.0	28.0	29.5	28.5	27.0	27.5	26.0	22.5	24.5
19	25.0	23.0	24.0	32.0	29.0	30.0	30.5	26.5	28.0	28.0	24.5	26.0
20	27.5	22.0	24.5	32.5	28.5	30.0	31.0	27.5	29.0	27.5	25.0	26.0
21	27.5	22.0	24.0	32.5	28.5	30.0	30.0	26.0	28.0	25.5	19.0	21.5
22	27.0	22.0	24.0	30.5	27.0	28.5	28.5	27.0	27.5	19.0	12.5	14.5
23	27.5	22.0	24.5	29.5	25.5	27.5	30.0	26.5	28.0	16.0	12.5	14.5
24	28.0	23.0	25.5	30.0	26.0	28.0	30.0	26.0	27.5	19.5	16.0	18.0
25	28.5	23.0	25.5	30.5	26.5	28.0	30.5	26.5	28.5	21.0	17.5	19.5
26	28.5	23.0	25.5	31.0	26.5	28.0	30.0	27.5	28.5	22.5	20.5	21.5
27	29.0	24.0	26.0	31.0	26.0	28.5	30.0	27.5	29.0	24.0	21.0	22.5
28	24.5	20.0	22.0	30.5	27.0	28.5	31.0	28.0	29.0	24.5	21.5	22.5
29	24.5	20.0	22.0	28.5	25.5	27.5	31.0	27.5	29.0	24.5	21.5	23.0
30	26.5	21.0	23.0	30.5	27.5	28.5	29.5	27.5	28.0	24.0	21.0	22.5
31	---	---	---	29.0	24.0	27.0	29.0	24.0	26.5	---	---	---
MONTH	29.0	18.0	23.5	32.5	22.0	27.5	32.0	20.5	27.5	30.5	12.5	24.5
YEAR	32.5	8.5	23.0									

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

04212680 FIELDS BROOK AT ASHTABULA, OH--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1							---	---	---	9.8	9.1	9.5
2							---	---	---	9.3	7.9	8.6
3							---	---	---	9.4	8.4	9.0
4							---	---	---	9.7	8.3	9.1
5							---	---	---	9.7	8.4	9.1
6							---	---	---	10.0	8.7	9.4
7							---	---	---	9.7	8.7	9.1
8							---	---	---	10.3	8.8	9.6
9							---	---	---	10.9	9.4	10.1
10							---	---	---	10.3	9.1	9.6
11							---	---	---	10.0	8.7	9.3
12							---	---	---	9.6	8.3	8.9
13							---	---	---	9.3	7.9	8.6
14							---	---	---	9.0	7.6	8.2
15							---	---	---	9.2	7.9	8.8
16							10.4	10.1	10.3	9.9	8.8	9.4
17							10.8	10.4	10.6	9.7	8.5	9.0
18							11.3	10.7	11.0	9.5	8.7	9.1
19							10.8	10.6	10.7	9.5	8.7	9.0
20							11.0	10.2	10.6	9.6	8.5	9.0
21							10.6	9.4	10.1	9.6	8.2	8.9
22							10.0	8.9	9.5	9.1	8.2	8.5
23							9.8	8.7	9.3	9.6	8.3	8.8
24							10.0	9.3	9.6	9.8	8.2	8.9
25							10.5	9.3	9.9	9.6	8.4	8.8
26							10.1	8.7	9.4	9.9	8.4	9.0
27							9.7	8.3	8.9	9.4	8.2	8.7
28							9.4	8.1	8.6	9.3	8.2	8.6
29							10.0	8.6	9.1	8.8	7.9	8.3
30							9.2	8.7	9.0	8.7	8.0	8.2
31							---	---	---	8.6	8.3	8.5
MONTH							11.3	8.1	9.8	10.9	7.6	9.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.7	6.7	7.8	7.4	6.4	7.0	7.5	6.0	6.7	3.3	2.7	3.1
2	7.0	6.1	6.6	7.3	6.4	6.8	7.6	7.1	7.3	4.8	3.1	3.9
3	6.7	6.3	6.5	7.0	6.2	6.6	8.0	6.9	7.6	5.1	4.6	4.9
4	6.4	6.1	6.2	6.5	6.4	6.5	7.2	6.8	7.0	5.1	4.6	4.8
5	6.5	5.6	6.1	---	---	---	7.0	6.4	6.8	5.5	4.6	5.1
6	6.5	6.0	6.2	7.8	7.4	7.5	7.3	6.2	6.7	6.1	5.0	5.4
7	---	---	---	8.0	7.1	7.6	7.3	6.0	6.5	5.8	5.5	5.7
8	---	---	---	7.8	6.7	7.3	7.3	5.7	6.4	5.8	5.4	5.6
9	---	---	---	7.7	6.7	7.1	6.8	5.9	6.5	5.8	5.2	5.5
10	---	---	---	7.8	6.7	7.2	7.1	6.5	6.8	5.5	5.0	5.3
11	---	---	---	8.0	6.5	7.3	7.1	6.5	6.7	5.5	5.1	5.3
12	---	---	---	8.0	6.4	7.0	7.4	6.7	7.0	5.6	5.2	5.4
13	---	---	---	8.2	6.4	7.1	7.2	6.6	6.9	5.7	5.3	5.5
14	---	---	---	8.4	6.2	7.1	7.3	6.5	6.9	6.1	5.5	5.8
15	7.6	6.5	6.9	8.2	5.6	6.7	7.3	6.4	6.8	6.2	5.5	5.8
16	7.8	6.8	7.2	8.2	5.7	6.6	7.2	6.3	6.7	6.2	5.7	5.9
17	7.7	6.8	7.3	8.3	5.7	6.6	7.4	6.0	6.6	6.4	5.8	6.0
18	8.2	7.0	7.5	7.9	5.1	6.3	6.8	6.0	6.3	6.5	5.4	5.9
19	7.8	7.2	7.4	7.7	5.2	6.0	7.2	5.4	6.2	6.0	5.2	5.6
20	8.1	6.8	7.4	7.5	5.5	6.2	6.6	5.5	5.9	6.0	5.1	5.4
21	8.2	6.9	7.5	7.0	5.6	6.2	6.5	4.5	5.6	6.9	5.3	6.3
22	8.1	6.9	7.4	7.6	5.9	6.6	5.3	3.5	4.4	8.6	6.8	7.9
23	7.7	6.9	7.3	7.8	5.7	6.5	3.6	1.9	3.0	8.7	8.0	8.3
24	7.3	6.4	6.8	7.1	5.5	6.6	2.9	1.7	2.3	8.1	7.5	7.8
25	7.0	6.4	6.8	7.2	6.1	6.7	4.0	2.1	3.0	7.7	7.2	7.4
26	7.3	6.5	6.8	7.1	6.1	6.5	3.7	2.5	3.0	7.3	6.9	7.1
27	7.0	6.4	6.7	7.5	6.0	6.6	3.6	2.8	3.1	7.2	6.8	7.0
28	7.8	6.8	7.2	7.5	5.6	6.3	3.4	2.8	3.1	7.2	6.7	6.9
29	8.1	7.2	7.6	6.5	5.7	6.1	3.4	2.9	3.1	7.0	6.6	6.8
30	7.7	6.8	7.3	6.5	5.8	6.1	3.5	2.7	3.0	7.1	6.4	6.7
31	---	---	---	6.5	5.8	6.1	3.4	3.0	3.2	---	---	---
MONTH	8.7	5.6	7.0	8.4	5.1	6.7	8.0	1.7	5.5	8.7	2.7	5.9
YEAR	11.3	1.7	7.1									

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

04212680 FIELDS BROOK AT ASHTABULA, OH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							---	1600	1190	2270	900	2290
2							---	1080	1040	2080	1480	2520
3							---	1020	870	2680	2450	2570
4							---	1080	855	3080	2730	2690
5							---	1830	830	---	2780	2890
6							---	2160	850	3070	3070	2860
7							---	2560	---	3240	3070	2900
8							---	2290	---	3030	3120	2700
9							---	2380	---	3240	2900	2780
10							---	2370	---	3440	3260	2880
11							---	2810	---	3380	3190	2950
12							---	2570	---	3620	2890	3080
13							---	2480	---	3170	2980	3480
14							---	2660	---	3600	3130	3400
15							---	1890	1810	3440	3000	3370
16							1670	1890	1630	3320	3090	3470
17							1620	2120	2020	3290	3250	3380
18							1720	2270	1880	3630	3190	3390
19							1840	2740	1870	3350	2940	3050
20							1690	2880	1850	3030	3020	3200
21							1700	2830	1870	3230	3240	2850
22							2060	1360	1850	3130	3570	1320
23							2370	1190	1640	2960	3460	1230
24							2360	1350	1890	2800	3260	1910
25							2290	1350	1860	2760	3090	2320
26							2340	1270	2220	2690	3160	2280
27							2720	1210	2210	2520	2990	1300
28							2760	1300	1640	2510	3050	1740
29							2540	1300	1490	2530	2860	1900
30							2000	1340	1870	2800	2790	1750
31							---	1340	---	2440	2310	---
MEAN							2110	1890	1600	3010	2910	2620

WTR YR 1983 MEAN 2420 MAX 3630 MIN 830

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

PH (STANDARD UNITS), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							---	---	7.8	7.6	7.4	7.9
2							---	---	7.7	7.6	7.8	7.9
3							---	---	7.7	7.7	7.9	8.0
4							---	---	7.7	7.7	7.9	7.9
5							---	7.8	7.8	---	7.9	7.9
6							---	7.8	7.8	7.9	7.9	8.0
7							---	7.8	---	7.8	7.9	7.8
8							---	7.8	---	7.8	7.9	7.9
9							---	7.8	---	7.8	8.1	7.5
10							---	7.8	---	7.8	8.0	7.7
11							---	7.8	---	7.8	7.9	7.9
12							---	7.8	---	7.9	8.0	8.0
13							---	7.8	---	7.9	8.0	8.0
14							---	7.7	---	7.9	8.0	8.1
15							7.7	7.7	8.1	7.9	8.0	8.1
16							---	7.8	7.9	7.9	7.9	7.7
17							7.7	7.8	7.9	7.9	8.0	8.1
18							7.7	7.7	8.0	7.8	7.9	8.1
19							7.7	7.7	8.0	7.8	7.9	8.0
20							7.9	7.7	7.9	7.8	7.9	8.0
21							7.8	7.8	7.9	7.8	7.7	7.8
22							7.9	7.7	7.9	7.9	7.5	7.4
23							7.9	7.8	7.9	7.8	7.2	7.3
24							7.9	7.9	7.7	7.9	7.2	7.9
25							7.9	7.8	7.8	7.9	7.5	8.0
26							7.9	7.8	7.8	7.9	7.7	8.0
27							7.6	7.8	7.8	7.9	7.8	8.1
28							---	7.8	7.4	7.8	7.8	8.0
29							---	7.8	7.6	7.7	7.8	7.5
30							---	7.8	7.7	7.8	7.8	7.8
31							---	7.8	---	7.8	7.8	---
MEAN							7.8	7.8	7.8	7.8	7.8	7.9

WTR YR 1983 MEAN 7.8 MAX 8.1 MIN 7.2

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

04212680 FIELDS BROOK AT ASHTABULA, OH--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							---	14.0	19.5	24.0	24.0	27.0
2							---	17.0	20.0	25.0	26.0	27.0
3							---	14.5	20.0	26.0	27.5	27.5
4							---	15.0	20.0	25.5	28.0	28.0
5							---	15.5	20.5	---	29.0	27.5
6							---	17.0	20.0	25.0	29.0	27.0
7							---	17.0	---	23.5	29.0	26.0
8							---	14.0	---	24.5	29.5	26.5
9							---	14.0	---	25.0	28.0	27.5
10							---	15.5	---	25.0	27.5	28.5
11							---	17.0	---	26.0	26.0	28.0
12							---	18.5	---	27.0	25.5	27.5
13							---	18.5	---	27.0	26.0	26.5
14							---	19.0	---	27.5	26.0	25.0
15							---	16.0	26.5	29.0	26.5	25.0
16							12.5	14.0	25.0	29.0	26.5	23.5
17							11.0	16.0	24.5	29.0	27.5	23.5
18							9.5	17.0	24.0	29.5	27.5	24.5
19							10.0	17.0	24.0	29.5	28.0	26.0
20							10.5	19.0	24.0	30.0	28.5	26.0
21							13.5	20.0	23.5	29.5	27.5	21.5
22							15.0	19.5	23.5	28.0	27.5	13.5
23							15.0	19.0	24.5	27.0	27.5	15.0
24							14.5	19.0	25.0	27.5	27.5	18.0
25							13.0	18.5	25.0	27.5	28.5	20.5
26							16.5	17.5	25.0	28.0	28.5	21.5
27							18.5	19.5	25.5	28.0	28.5	22.0
28							18.5	19.0	21.5	29.0	29.0	22.5
29							16.5	20.0	22.0	27.5	28.5	22.5
30							16.0	19.5	23.0	29.0	28.0	23.0
31							---	19.0	---	27.5	27.0	---
MEAN							14.0	17.5	23.0	27.0	27.5	24.5

WTR YR 1983 MEAN 23.0 MAX 30.0 MIN 9.5

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

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							---	9.5	8.4	7.0	6.7	3.1
2							---	8.7	6.8	6.9	7.3	3.8
3							---	9.2	6.5	6.6	7.8	4.9
4							---	9.3	6.2	6.5	7.0	4.8
5							---	9.2	6.3	---	6.8	5.1
6							---	9.5	6.2	7.6	6.5	5.4
7							---	9.0	---	7.6	6.4	5.7
8							---	9.9	---	7.3	6.2	5.7
9							---	10.3	---	6.9	6.6	5.5
10							---	9.8	---	7.1	6.8	5.3
11							---	9.4	---	7.2	6.7	5.3
12							---	8.9	---	6.7	6.9	5.4
13							---	8.6	---	6.8	6.9	5.5
14							---	8.1	---	6.8	6.9	5.7
15							---	8.9	6.8	6.3	6.7	5.8
16							10.3	9.4	7.0	6.2	6.6	5.9
17							10.6	9.0	7.3	6.0	6.5	5.9
18							11.0	8.9	7.3	5.9	6.2	6.0
19							10.7	8.9	7.3	5.7	6.3	5.6
20							10.7	8.9	7.3	5.9	5.8	5.3
21							10.0	8.7	7.4	6.0	5.6	6.4
22							9.4	8.3	7.3	6.4	4.5	8.1
23							9.3	8.7	7.3	6.4	3.2	8.4
24							9.6	8.8	6.8	6.6	2.4	7.7
25							10.0	8.7	6.9	6.6	3.0	7.4
26							9.6	8.9	6.9	6.4	2.8	7.1
27							8.9	8.7	6.8	6.5	3.0	7.0
28							8.4	8.6	7.2	6.2	3.0	7.0
29							8.8	8.3	7.7	6.0	3.0	6.8
30							9.0	8.2	7.3	6.1	3.0	6.8
31							---	8.4	---	6.1	3.1	---
MEAN							9.8	9.0	7.1	6.5	5.5	6.0

WTR YR 1983 MEAN 7.1 MAX 11.0 MIN 2.4

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

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 mi^2 (453 km^2).

PERIOD OF RECORD.--July 1922 to December 1935, March 1950 to September 1961 (published as "at Amboy"), October 1961 to current year.

REVISED RECORDS.--WSP 714: 1926. WSP 784: 1933. WSP 1437: 1923-25(M), 1926-30, 1931-32(M), 1933, 1935(M). WSP 1912: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 610.30 ft (186.019 m) National Geodetic Vertical Datum of 1929, unadjusted. Prior to Aug. 17, 1924, nonrecording gage at same site and datum.

REMARKS.--Records fair except those for discharges below 40 ft^3/s (1.13 m^3/s), which are poor. Water-quality data collected at this site 1965 to 1977. Sediment data collected 1970 to 1974.

AVERAGE DISCHARGE.--46 years, 267 ft^3/s (7.561 m^3/s), 20.72 in/yr (526 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,000 ft^3/s (481 m^3/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 ft^3/s (0.006 m^3/s) July 31, Aug. 1, 1933, Aug. 1, 2, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,740 ft^3/s (106 m^3/s) Dec. 25, gage height 6.67 ft (2.033 m) above base of 2,900 ft^3/s (82.1 m^3/s); minimum daily discharge, 11 ft^3/s (0.31 m^3/s) Oct. 14, Aug. 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	383	482	214	418	109	161	1220	112	351	784	30
2	27	804	294	179	331	103	135	1650	92	495	203	36
3	25	518	219	157	1360	91	119	1650	76	249	100	30
4	23	924	196	132	1340	83	119	1580	67	114	55	24
5	21	1580	217	108	443	77	130	815	71	78	44	20
6	19	586	360	100	304	72	137	358	87	60	32	30
7	18	254	474	95	281	68	135	231	236	52	30	33
8	16	156	315	90	212	68	219	184	190	45	28	31
9	15	117	211	85	186	74	237	163	104	40	26	34
10	14	94	166	85	145	105	576	148	72	38	24	26
11	13	90	147	187	130	684	742	124	56	34	22	21
12	12	282	140	424	120	801	460	106	49	32	65	18
13	12	960	130	285	110	577	288	94	44	28	68	15
14	11	798	126	198	100	623	224	89	38	26	43	15
15	32	374	213	170	100	582	1360	158	36	24	32	14
16	50	252	1700	150	124	405	1710	326	32	24	30	15
17	69	216	2150	140	340	243	471	269	30	22	24	16
18	102	247	556	120	563	176	331	167	28	20	22	15
19	77	235	295	110	445	284	376	124	28	20	20	14
20	49	177	365	110	317	1110	490	121	28	20	18	14
21	34	325	348	100	228	858	380	158	36	18	17	41
22	27	1010	308	100	175	1000	267	143	40	18	16	272
23	24	788	514	368	146	492	204	430	34	18	15	422
24	22	974	1920	573	128	336	159	547	30	26	14	275
25	20	1240	3220	426	115	291	134	236	28	20	13	146
26	18	486	1330	316	105	258	117	171	26	18	13	82
27	17	323	784	197	96	297	101	208	24	16	12	52
28	16	326	1210	145	98	680	91	145	94	16	12	40
29	16	974	1110	136	---	495	91	104	755	69	11	33
30	16	1180	450	141	---	305	241	97	512	51	11	30
31	44	---	280	399	---	204	---	158	---	98	37	---
TOTAL	890	16673	20230	6040	8460	11551	10205	11974	3055	2140	1841	1844
MEAN	28.7	556	653	195	302	373	340	386	102	69.0	59.4	61.5
MAX	102	1580	3220	573	1360	1110	1710	1650	755	495	784	422
MIN	11	90	126	85	96	68	91	89	24	16	11	14
CFSM	.16	3.18	3.73	1.11	1.73	2.13	1.94	2.21	.58	.39	.34	.35
IN.	.19	3.54	4.30	1.28	1.80	2.46	2.17	2.55	.65	.45	.39	.39

CAL YR 1982 TOTAL 122271 MEAN 335 MAX 4000 MIN 11 CFSM 1.91 IN 25.99
WTR YR 1983 TOTAL /94903 MEAN 260 MAX 3220 MIN 11 CFSM 1.49 IN 20.17

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 othersites 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. All low-flow sites in the following pages were discontinued in 1983.

STREAMS TRIBUTARY TO LAKE ERIE

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 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	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)	SULFATE DIS-SOLVED (MG/L AS SO4)
MAR 16...	0900	24	710	8.0	6.0	14.4	81	34	16	2.0	300	95
AUG 25...	1130	1.1	--	--	--	--	--	--	--	--	--	--

DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	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)	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)
MAR 16...	34	.4	2.7	411	2.2	.020	.38	.060	.040	30	63
AUG 25...	--	--	--	--	--	--	--	--	--	--	--

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 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	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)	SULFATE DIS-SOLVED (MG/L AS SO4)
JUN 22...	1120	--	770	8.2	24.5	6.4	81	22	38	4.5	200	97
AUG 25...	1633	1.2	--	--	--	--	--	--	--	--	--	--

DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	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)	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 22...	79	.4	1.9	458	2.6	.060	1.2	.370	.350	6	28
AUG 25...	--	--	--	--	--	--	--	--	--	--	--

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 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	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)	SULFATE DIS-SOLVED (MG/L AS SO4)
JUN 21...	1045	2.5	920	8.0	20.0	8.8	98	32	54	5.7	370	140

DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	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)	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 21...	65	.4	12	586	1.1	3.20	.20	1.40	1.30	65	210

LOW-FLOW PARTIAL-RECORD STATIONS--Continued

STREAMS TRIBUTARY TO LAKE ERIE

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 1982 TO SEPTEMBER 1983

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	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)	SULFATE DISSOLVED (MG/L AS SO4)
JUN 21...	1130	780	8.2	22.5	9.0	87	29	41	4.2	310	110

DATE	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)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
JUN 21...	55	.4	8.2	527	1.6	.120	.78	.410	.390	9	120

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 1982 TO SEPTEMBER 1983

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	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)
JUN 21...	1400	3.5	685	8.4	24.0	11.0	73	31	24	3.1	270	5

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)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
JUN 21...	110	43	.7	6.2	519	1.5	.070	.93	.130	.120	11	25

STREAMS TRIBUTARY TO LAKE ERIE

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 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	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)
MAR 07...	1415	8.0	770	8.5	15.0	13.0	62	18	54	5.2	170	3
JUL 18...	1310	2.5	--	--	--	--	--	--	--	--	--	--

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)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	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)	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)
MAR 07...	120	83	.4	1.2	491	2.0	1.00	1.2	.600	.550	79	62
JUL 18...	--	--	--	--	--	--	--	--	--	--	--	--

STREAMS TRIBUTARY TO LAKE ERIE

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 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	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)	SULFATE DIS-SOLVED (MG/L AS SO4)
MAR 07...	1030	32	795	8.3	11.5	13.4	61	19	68	4.2	170	110
JUL 18...	1225	24	--	--	--	--	--	--	--	--	--	--

DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	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)	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)
MAR 07...	110	.3	.9	492	1.4	.960	.84	.550	.510	11	190
JUL 18...	--	--	--	--	--	--	--	--	--	--	--

LOW-FLOW PARTIAL RECORD STATIONS--Continued

Discharge Measurements made at low-flow partial-record stations during water year 1983

Station Number	Station name	Location	Drainage area (mi^2)	Period of Record	Measurements Date	Measurements Discharge (ft^3/s)
04184500	Bean Creek nr Powers, Oh	Lat 41°39'34", long 84°14'55" Fulton County, Hydrologic Unit 04100006, at bridge on County Highway 20, 5.2 mi (8.4 km) east of Fayette.	206	1940-81# 1982-83	06-22-83 08-25-83	56.8 24.4
04187500	Ottawa River at Allentown, Oh	Lat 40°45'18", long 84°11'41", Allen County, Hydrologic Unit 04100007, at bridge on State Highway 81 at Allentown, 0.3 mi (0.05 km) downstream from Kessler Run.	160	1923-35 1943-81# 1982-83	03-16-83 08-25-83	43.2 31.5
04196000	Sandusky River at Bucyrus Oh	Lat 40°48'13", long 83°00'21", Crawford County, Hydrologic Unit 04100011, at bridge on Township Road, 12 mi (19 km) downstream from Loss Creek, 1.5 mi (2.4 km) west of Bucyrus.	88.8	1925-35 1938-51 1963-81# 1982-83	06-21-83	6.34

* Period of record for Water Quality Data
\# Operated as a continuous record gaging station

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 1983.

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	1980-83	5- 1-83	13.27	41
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	1980-83	5- 1-83	12.47	142
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	1980-83	11- 1-83	14.69	101
04180907 (d)	Carter Creek near New Bremen, OH	Lat 40°26'16", long 84°19'34", Shelby County, Hydrologic Unit 04100004, at culvert on State Route 274, .58 mi west of State Route 29, .82 mi upstream of an unnamed tributary and 2.27 mi east of New Bremen	0.72	1982-83	4-30-83	11.38	30
04183750 (d)	Racetrack Run 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	1978-83	5- 1-83	13.95	59
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	1978-83	6-28-83	97.00	260
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	1978-83	5- 2-83	15.89	86
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	1978-83	6-27-83	99.53	138
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	1978-83	12-28-82	96.98	20

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Date	Gage height (feet)	Discharge (ft^3/s)
		Streams tributary to Lake Erie--Continued					
04186800 (d)	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	1966-83	4-30-83	19.89	54
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	1980-83	5- 2-83	12.08	64
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	1978-83	5- 2-83	20.39	49
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	1978-83	12-26-82	99.03	107
04191003 (d)	Stripe Creek near Van Wert, OH	Lat 40°54'29", long 84°33'43", Van Wert County, Hydrologic Unit 04100007, at culvert on State Route 224, .76 mi northeast of State Route 127, 700 ft upstream of Town Creek and 1.87 mi north of Van Wert.	1.50	1982-83	4-14-83	12.29	36
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	1978-83	6-28-83	101.24	95
04192900	Ritz Run at Waterville, OH	Lat 41°29'50", long83°42'35", Wood County, Hydrologic Unit 04100012, at culvert on State Highways 64 and 65, 0.1 mi upstream from mouth, 0.5 mi southeast of Waterville.	1.06	1966-83	5- 2-83	17.98	20
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	1980-83	4-14-83	15.99	289
04196825 (d)	Browns Run near Crawford, OH	Lat 40°53'13", long 83°20'15", Wyandot County, Hydrologic Unit 04100011, at culvert on U.S. Highway 23, 5.9 mi north of U.S. Highway 30N, 1.29 mi upstream of Little Tymochtee Creek and 2.3 mi south of Crawford.	2.00	1982-83	7- 2-83	12.85	60
04198019 (d)	Sandhill Creek near Monroeville, OH	Lat 41°12'13", long 82°42'56", Huron County, Hydrologic Unit 04100012, at culvert on State Route 99, 1,200 ft upstream of Slate Run 1.1 mi north of Pontiac, and 2.4 mi south of Monroeville.	1.76	1982-83	5- 2-83	12.52	69
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	1980-83	6-28-83	12.89	90

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Date	Gage height (feet)	Discharge (ft^3/s)
		Streams tributary to Lake Erie--Continued					
04201302 (d)	Delwood Run at Valley City, OH	Lat 41°14'15", long 81°55'18", Medina County, Hydrologic Unit 04110001, at culvert on State Route 303, 250 ft east of State Route 252, 400 ft upstream of West Branch Rocky River, and about .5 mi east of Valley City.	0.45	1982-83	7- 2-83	16.68	214
04201895 (d)	Fire Run at Auburn Corners, OH	Lat 41°23'36", long 81°12'56", Geauga County, Hydrologic Unit 04110002, at culvert on State Route 44, .6 mi upstream of LaDue Reservoir, and .4 mi north of U.S. Highway 422 in Auburn Corners.	0.30	1982-83	6-28-83	14.15	103
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	1980-83	7- 2-83	11.78	48
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	1980-83	7-23-83	15.05	281
04210100	Hoskins Creek at Hartsgrove, OH	Lat 41°36'00", long 80°57'12", Ashtabula County, Hydrologic Unit 04110004, at culvert on State Route 534, 0.4 mi south of Hartsgrove.	5.42	1982-83	5- 1-83	7.18	95

c Operated as an urban hydrology site where additional data may be available.
d Operated as a rural flood volume site where additional data may be available.

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, 23.88 ft (7.279 m) Oct. 1; minimum daily low, 18.45 ft (5.624 m) May 7.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.88	23.12	22.38	20.95	21.00	20.67	21.13	19.70	18.88	20.50	20.94	21.40
2	23.83	23.08	22.39	20.94	20.69	20.72	21.09	19.29	18.91	20.43	20.94	21.38
3	23.75	23.09	22.92	21.02	20.78	20.76	20.75	18.98	18.83	20.36	20.84	21.31
4	23.76	23.09	23.18	21.03	20.98	20.74	20.83	18.58	19.17	20.16	20.76	21.27
5	23.73	23.13	22.73	20.92	20.97	20.78	20.78	18.57	19.10	20.13	20.80	21.22
6	23.72	23.15	22.77	20.87	20.77	20.70	20.63	18.60	18.94	20.18	20.78	21.24
7	23.62	23.10	22.77	20.99	20.80	20.64	20.59	18.45	18.95	20.22	20.74	21.32
8	23.59	23.09	22.70	21.04	20.85	20.70	20.60	18.67	19.11	20.15	20.84	21.32
9	23.54	23.14	22.68	20.97	20.78	20.73	20.46	18.77	19.12	20.06	20.83	21.27
10	23.52	23.07	22.41	20.82	20.78	20.77	20.36	18.73	19.15	20.19	20.84	21.23
11	23.54	22.96	22.42	20.84	20.84	20.82	20.26	18.66	19.29	20.17	20.77	21.18
12	23.55	23.03	22.38	21.05	20.95	20.82	20.30	18.60	19.24	20.11	20.89	21.25
13	23.46	23.13	22.39	20.99	20.91	20.77	20.17	18.58	19.19	20.15	20.91	21.31
14	23.40	23.02	22.31	20.97	20.70	20.74	20.03	18.52	19.16	20.12	20.88	21.33
15	23.41	23.08	22.27	20.99	20.73	20.86	19.96	18.63	20.07	20.08	20.88	21.42
16	23.50	22.97	22.15	20.98	20.69	20.85	20.09	18.71	19.82	20.14	21.02	21.31
17	23.54	22.95	22.12	21.04	20.83	20.75	19.97	18.93	19.56	20.14	20.96	21.25
18	23.46	22.95	21.92	21.14	20.83	20.67	19.78	18.88	19.64	20.19	20.92	21.24
19	23.42	22.92	21.72	21.19	20.82	20.76	19.76	18.67	19.57	20.34	20.93	21.26
20	23.42	22.87	21.68	21.16	20.89	20.77	19.75	18.78	19.90	20.34	20.91	21.25
21	23.44	22.86	21.76	21.03	20.84	20.72	19.77	18.76	19.84	20.50	20.93	21.19
22	23.44	22.82	21.72	20.92	20.74	20.91	19.79	18.65	19.69	20.67	21.76	21.21
23	23.42	22.75	21.57	20.85	20.66	20.92	19.73	18.84	19.65	20.83	21.73	21.39
24	23.38	22.88	21.55	20.94	20.67	20.86	19.72	18.92	19.59	20.96	21.36	21.40
25	23.30	22.81	21.47	21.03	20.86	20.91	19.99	18.80	19.60	20.98	21.24	21.26
26	23.32	22.70	21.60	21.05	20.93	20.92	19.95	18.77	19.83	20.97	21.18	21.25
27	23.28	22.74	21.43	21.07	20.89	20.65	19.90	18.80	20.86	20.83	21.92	21.25
28	23.22	22.48	21.08	21.01	20.75	20.86	19.94	18.78	21.24	20.77	21.69	21.42
29	23.20	22.39	21.12	20.94	---	20.95	19.94	18.64	21.16	21.08	21.38	21.42
30	23.22	22.42	21.16	20.97	---	20.88	19.83	18.81	20.83	20.92	21.68	21.38
31	23.17	---	21.00	21.02	---	20.72	---	18.75	---	20.78	21.60	---
MAX	23.88	23.15	23.18	21.19	21.00	20.95	21.13	19.70	21.24	21.08	21.92	21.42

WTR YR 1983 MEAN 21.04 HIGH 18.45 LOW 23.88

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 recorded daily low, 28.40 ft (8.656 m) Sept. 28; minimum daily low, 11.53 ft (3.514 m) May 14.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.53	16.32	15.96	14.53	14.83	14.37	13.31	12.23	12.06	13.80	15.26	
2	16.53	16.19	16.05	14.50	14.17	14.45	13.10	11.83	12.17	13.89	15.42	
3	16.47	16.22	15.88	14.77	14.10	14.56	12.98	11.73	12.13	13.95	15.41	
4	16.58	16.34	15.77	14.82	14.65	14.55	13.38	11.62	12.10	13.83	15.31	
5	16.67	16.51	15.57	14.61	14.72	14.64	13.42	11.84	12.23	13.98	15.39	
6	16.69	16.64	15.89	14.42	14.35	14.61	13.26	11.88	12.25	14.18	15.34	
7	16.52	16.64	16.25	14.54	14.26	14.46	13.16	11.57	12.30	14.31	15.34	
8	16.46	16.68	16.25	14.71	14.39	14.74	13.18	11.77	12.64	14.26	16.09	
9	16.37	16.84	16.27	14.63	14.39	14.82	13.06	11.85	12.71	14.12	16.80	
10	16.39	16.79	15.88	14.38	14.42	14.85	12.85	11.92	12.84	14.12	17.10	
11	16.47	16.45	15.68	14.23	14.55	14.88	12.86	11.85	12.94	14.13	18.32	
12	16.54	16.25	15.69	14.58	14.77	14.82	12.99	11.76	13.01	14.13	20.54	
13	16.44	16.74	15.79	14.63	14.77	14.74	12.95	11.71	13.03	14.25	22.05	
14	16.27	16.67	15.65	14.52	14.38	14.50	12.67	11.53	13.00	14.24	22.48	
15	16.15	16.76	15.63	14.44	14.38	14.65	12.74	11.65	12.95	14.17	22.39	
16	16.52	16.68	15.66	14.41	14.35	14.65	12.73	11.87	13.09	14.18	23.32	
17	16.71	16.59	15.73	14.54	14.54	14.42	12.44	12.07	13.17	14.23	23.93	
18	16.71	16.60	15.45	14.85	14.55	14.18	12.37	12.11	13.22	14.37	24.69	
19	16.68	16.59	14.97	15.09	14.64	13.93	12.28	11.89	13.29	14.47	25.13	
20	16.52	16.48	15.05	15.14	14.72	13.99	12.28	11.93	13.46	14.51	25.73	
21	16.75	16.44	15.36	14.96	14.63	13.62	12.29	11.93	13.59	14.55	26.03	
22	16.79	16.41	15.36	14.74	14.45	14.04	11.94	11.72	13.67	14.68	26.55	
23	16.84	16.13	15.15	14.48	14.14	14.14	11.90	11.78	13.70	14.62	27.05	
24	16.86	16.58	15.18	14.56	14.18	14.08	11.65	11.93	13.65	14.78	27.42	
25	16.70	16.64	15.05	14.78	14.58	14.15	11.78	11.86	13.73	14.97	27.68	
26	16.67	16.43	15.24	14.87	14.83	14.19	11.94	11.97	13.75	15.08	27.95	
27	16.68	16.61	15.04	14.94	14.84	13.64	12.01	12.03	13.77	15.15	28.24	
28	16.55	16.28	14.54	14.83	14.61	13.64	12.20	12.01	13.81	15.22	28.40	
29	16.40	15.85	14.76	14.70	---	13.89	12.26	11.73	13.90	15.32	---	
30	16.50	15.98	14.87	14.66	---	13.83	12.20	11.63	13.87	15.30	---	
31	16.44	---	14.68	14.80	---	13.49	---	11.75	---	15.26	---	
MAX	16.86	16.84	16.27	15.14	14.84	14.88	13.42	12.23	13.90	15.32	28.40	

WTR YR 1983 MEAN 15.01 HIGH 11.53 LOW 28.40

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, 5.65 ft (1.722 m) Apr. 3, 1982.
EXTREMES FOR CURRENT YEAR.--Maximum daily low, 11.14 ft (3.395 m) Nov. 25; minimum daily low, 6.01 ft (1.832 m) May 15.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.38	10.30	10.55	8.77	7.64	6.90	6.61	6.32	6.38	6.53	7.04	8.50
2	9.33	10.14	10.61	8.63	7.38	6.88	6.49	6.20	6.44	6.56	7.24	8.52
3	9.29	10.28	10.54	8.62	6.92	6.92	6.43	6.02	6.39	6.59	7.23	8.55
4	9.45	10.39	10.41	8.64	7.54	6.88	6.86	6.06	6.24	6.49	7.17	8.56
5	9.51	10.56	10.36	8.63	7.71	6.91	6.88	6.26	6.31	6.62	7.23	8.56
6	9.61	10.68	10.36	8.38	7.66	6.82	6.75	6.30	6.33	6.81	7.24	8.64
7	9.59	10.65	10.77	8.19	7.29	6.76	6.60	6.30	6.34	6.89	7.22	8.90
8	9.50	10.73	10.81	8.27	7.48	6.63	6.63	6.20	6.46	6.83	7.22	9.00
9	9.50	10.83	10.86	8.29	7.45	6.77	6.53	6.36	6.53	6.68	7.35	9.00
10	9.47	10.80	10.67	8.12	7.38	6.87	6.32	6.36	6.56	6.60	7.42	8.98
11	9.62	10.56	10.26	7.75	7.35	6.97	6.34	6.34	6.61	6.58	7.41	9.00
12	9.80	10.53	10.27	8.02	7.61	7.01	6.51	6.23	6.57	6.61	7.44	9.05
13	9.80	10.92	10.28	8.05	7.62	6.95	6.43	6.12	6.53	6.70	7.62	9.30
14	9.71	10.88	10.14	7.94	7.54	6.85	6.24	6.06	6.48	6.67	7.65	9.45
15	9.65	11.02	10.04	7.75	7.18	6.95	6.31	6.01	6.41	6.64	7.66	9.50
16	9.86	10.93	10.13	7.87	7.17	7.04	6.36	6.17	6.51	6.64	7.69	9.35
17	10.16	10.83	10.15	7.81	7.17	6.98	6.23	6.33	6.56	6.64	7.65	9.42
18	10.16	10.87	9.99	8.05	7.30	6.83	6.21	6.36	6.51	6.67	7.63	9.44
19	10.13	10.86	9.51	8.21	7.22	6.67	6.17	6.36	6.49	6.68	7.79	9.60
20	10.13	10.77	9.50	8.21	7.34	6.82	6.21	6.22	6.55	6.71	7.81	9.57
21	10.28	10.83	9.69	8.18	7.32	6.68	6.21	6.26	6.63	6.69	7.90	9.72
22	10.41	10.82	9.69	7.87	---	7.00	6.26	6.23	6.64	6.73	7.86	9.86
23	10.48	10.66	9.45	7.61	---	7.19	6.23	6.07	6.62	6.64	8.09	10.13
24	10.50	11.10	9.33	7.52	---	7.16	6.09	6.31	6.56	6.69	8.23	10.28
25	10.49	11.14	9.31	7.66	---	7.15	6.21	6.31	6.55	6.81	8.27	10.18
26	10.44	11.01	9.47	7.77	---	7.16	6.35	6.26	6.56	6.91	8.24	10.15
27	10.44	11.10	9.37	7.82	---	7.00	6.32	6.31	6.54	6.97	8.19	10.22
28	10.43	10.72	8.98	7.67	7.00	6.85	6.37	6.32	6.52	6.98	8.17	10.35
29	10.33	10.43	8.96	7.55	---	7.16	6.44	6.24	6.57	7.08	8.26	10.39
30	10.36	10.53	9.13	7.43	---	7.15	6.36	6.01	6.54	7.10	8.27	10.38
31	10.35	---	9.06	7.62	---	6.86	---	6.18	---	7.08	8.38	---
MAX	10.50	11.14	10.86	8.77	7.71	7.19	6.88	6.36	6.64	7.10	8.38	10.39

WTR YR 1983 MEAN 8.01 HIGH 6.01 LOW 11.14

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, 21.28 ft (6.486 m) Oct. 23-24; minimum daily low, 17.19 ft (5.240 m) Apr. 3.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.87	19.33	18.45	18.87	17.97	18.79	17.36	18.67	18.75	20.10	20.82	20.46
2	20.89	19.03	18.72	18.82	17.68	18.82	17.30	18.75	18.77	20.18	20.94	20.57
3	20.91	19.00	18.89	18.86	17.91	18.84	17.19	18.86	18.75	20.20	20.95	20.65
4	20.94	19.01	19.06	18.89	18.42	18.71	17.39	19.04	18.70	20.22	20.91	20.71
5	20.97	18.96	19.06	18.76	18.56	18.46	17.41	19.00	18.69	20.32	20.63	20.72
6	20.99	18.97	19.40	18.70	18.54	18.21	17.63	18.70	18.68	20.47	20.35	20.73
7	20.92	18.93	19.63	18.69	18.69	18.03	17.87	18.26	18.70	20.54	20.20	20.84
8	20.91	18.90	19.65	18.76	18.79	17.86	18.00	18.06	18.77	20.51	20.09	20.79
9	20.89	18.92	19.76	18.73	18.83	17.86	18.00	18.05	18.82	20.41	20.13	20.55
10	20.87	18.85	19.54	18.59	18.83	18.13	18.05	17.97	18.90	20.42	20.31	20.31
11	20.96	18.67	19.38	18.56	18.83	18.35	18.22	17.88	18.96	20.41	20.43	20.18
12	21.01	18.98	19.14	18.66	18.62	18.48	18.33	17.84	18.96	20.41	20.64	20.18
13	20.94	19.43	18.95	18.70	18.55	18.49	18.21	17.99	18.96	20.50	20.76	20.45
14	20.89	19.49	18.80	18.69	18.25	18.48	17.84	18.06	18.95	20.49	20.81	20.68
15	20.89	19.68	18.90	18.64	18.04	18.48	17.65	18.20	18.92	20.47	20.75	20.74
16	21.08	19.69	19.14	18.64	17.96	18.33	17.64	18.36	18.92	20.48	20.45	20.68
17	21.13	19.73	19.14	18.67	17.92	18.09	17.51	18.55	18.94	20.49	20.08	20.81
18	21.13	19.79	18.95	18.77	17.92	17.85	17.43	18.55	18.94	20.48	19.72	20.81
19	21.11	19.83	18.76	18.94	17.86	17.65	17.39	18.49	18.93	20.53	19.77	20.87
20	21.05	19.63	18.81	19.00	17.87	17.65	17.36	18.59	19.07	20.56	19.77	20.87
21	21.21	19.27	18.93	18.99	18.00	17.50	17.35	18.62	19.48	20.60	19.66	20.91
22	21.22	19.11	18.94	18.89	18.07	17.68	17.35	18.59	19.79	20.49	19.67	20.97
23	21.28	18.84	18.86	18.89	18.31	17.70	17.32	18.60	19.88	20.33	19.99	21.10
24	21.28	18.91	18.90	18.90	18.51	17.69	17.24	18.68	19.95	20.48	20.35	21.13
25	21.19	18.92	18.88	18.84	18.76	17.73	17.25	18.68	20.02	20.66	20.51	21.11
26	21.00	18.83	18.98	18.68	18.91	17.72	17.31	18.72	20.06	20.74	20.60	20.98
27	20.58	18.85	18.94	18.53	18.92	17.52	17.40	18.79	20.13	20.80	20.68	20.65
28	20.15	18.69	18.72	18.38	18.88	17.49	17.73	18.73	20.04	20.84	20.68	20.31
29	19.81	18.43	18.89	18.16	---	17.63	18.06	18.64	20.09	20.88	20.55	20.12
30	19.64	18.43	18.94	17.95	---	17.63	18.45	18.55	20.06	20.95	20.48	20.07
31	19.52	---	18.94	17.97	---	17.50	---	18.59	---	20.84	20.38	---
MAX	21.28	19.83	19.76	19.00	18.92	18.84	18.45	19.04	20.13	20.95	20.95	21.13

WTR YR 1983 MEAN 19.26 HIGH 17.19 LOW 21.28

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 m), present depth 523.0 ft (159 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 September 1982 continuous, periodic thereafter.
EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 117.25 ft (35.738 m) Sept. 18, 1957; minimum daily low, 65.40 ft (19.934 m) Sept. 21, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 7, 1982	65.66	Sept. 21, 1983	65.40

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, 39.33 ft (11.988 m) July 21, 1983; minimum daily low, 7.60 ft (2.316 m) July 6, 1969.
EXTREMES FOR CURRENT YEAR.--Maximum recorded daily low, 39.33 ft (11.988 m) July 21; minimum recorded daily low, 22.56 ft (6.876 m) Dec. 1.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	22.56	---	24.15		---	25.25	---	---	28.77	
2	---	---	23.03	---	---		---	---	36.20	---	28.60	
3	---	28.70	29.21	---	---		---	---	---	---	30.59	
4	---	24.61	---	---	---		---	---	28.32	---	31.32	
5	---	30.02	---	---	---		---	---	28.41	---	38.53	
6	---	24.29	---	---	---		---	---	---	---	28.79	
7	---	23.51	29.91	---	24.00		---	---	30.60	---	---	
8	---	24.25	23.88	---	---		---	---	30.44	---	31.32	
9	---	31.30	24.12	---	---		---	---	37.51	---	34.63	
10	---	27.32	27.45	---	---		---	---	31.18	---	---	
11	---	---	28.67	---	---		---	---	31.80	---	---	
12	---	28.05	36.41	---	---		---	---	---	---	---	
13	---	24.97	---	---	---		---	---	31.70	---	---	
14	32.09	24.17	---	---	---		---	---	31.01	---	---	
15	26.28	24.90	---	---	---		---	---	37.50	---	---	
16	26.03	30.62	---	---	---		---	---	32.57	---	---	
17	24.80	27.14	---	---	---		---	---	32.26	---	---	
18	28.78	25.75	---	---	---		---	---	---	---	---	
19	32.22	30.85	---	---	---		28.26	---	---	29.23	---	
20	27.50	---	---	---	---		30.28	---	---	29.33	---	
21	27.67	---	---	24.36	---		29.55	---	---	39.33	---	
22	32.16	---	---	---	---		32.31	---	---	---	---	
23	25.73	27.48	---	---	---		26.60	---	---	---	---	
24	24.92	24.65	---	---	---		24.71	---	30.47	---	---	
25	25.66	23.55	---	---	---		28.73	---	---	---	---	
26	32.17	29.43	---	24.31	---		24.93	32.41	---	---	---	
27	26.13	24.09	---	27.61	---		24.68	---	30.11	---	---	
28	26.00	23.65	---	25.47	---		32.99	---	26.80	---	---	
29	31.92	24.05	---	---	---		32.72	---	27.74	36.02	---	
30	---	29.78	---	---	---		26.41	---	30.67	29.95	---	
31	---	---	---	---	---		---	---	---	---	---	
MAX	32.22	31.30	36.41	27.61	24.15		32.99	32.41	37.51	39.33	38.53	

WTR YR 1983 MEAN 28.64 HIGH 22.56 LOW 39.33

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

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 recorced daily low, 24.19 ft (7.373 m) Dec. 1; minimum daily low, 17.07 ft (5.203 m) June 6, 7.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.38	23.49	24.19	23.45	21.86	21.25	20.53	18.52	17.15	17.95	19.34	20.91
2	22.41	23.51	24.18	23.34	21.82	21.25	20.43	18.44	17.15	17.94	19.39	20.97
3	22.46	23.56	24.17	23.31	21.76	21.28	20.35	18.40	17.10	17.96	19.42	21.02
4	22.50	23.60	24.17	23.27	21.79	21.26	20.35	18.35	17.09	18.00	19.47	21.08
5	22.55	23.64	24.16	23.19	21.79	21.29	20.30	18.32	17.09	18.06	19.52	21.13
6	22.57	23.66	24.18	23.12	21.77	21.28	20.24	18.28	17.07	18.11	19.56	21.19
7	22.61	23.68	24.18	23.05	21.70	21.26	20.17	18.19	17.07	18.16	19.61	21.28
8	22.65	23.72	24.17	23.01	21.68	21.27	20.14	18.13	17.14	18.16	19.65	21.34
9	22.69	23.75	24.16	22.94	21.67	21.29	20.08	18.09	17.14	18.19	19.71	21.39
10	22.72	23.77	24.10	22.87	21.63	21.30	20.03	18.03	17.15	18.23	19.75	21.44
11	22.77	23.78	24.11	22.78	21.59	21.32	19.95	17.97	17.17	18.26	19.80	21.51
12	22.80	23.83	24.10	22.73	21.58	21.32	19.91	17.90	17.18	18.32	19.87	21.58
13	22.83	23.86	24.09	22.69	21.56	21.29	19.84	17.84	17.20	18.36	19.93	21.63
14	22.87	23.88	24.07	22.63	21.50	21.25	19.75	17.77	17.21	18.39	19.96	21.70
15	22.91	23.91	24.05	22.55	21.47	21.24	19.68	17.72	17.26	18.44	19.99	21.73
16	22.96	23.92	24.06	22.50	21.45	21.24	19.61	17.68	17.32	18.49	20.03	21.78
17	23.00	23.95	24.06	22.43	21.42	21.18	19.49	17.66	17.37	18.55	20.07	21.85
18	23.02	23.98	24.02	22.39	21.41	21.14	19.41	17.62	17.41	18.61	20.14	21.90
19	23.05	24.00	23.97	22.35	21.37	21.08	19.31	17.54	17.45	18.67	20.18	21.94
20	23.10	24.01	23.96	22.30	21.37	21.09	19.21	17.52	17.50	18.72	20.24	21.97
21	23.14	24.05	23.97	22.24	21.34	21.03	19.12	17.49	17.55	18.78	20.26	22.05
22	23.17	24.06	23.94	22.18	21.32	21.01	19.06	17.42	17.59	18.83	20.35	22.11
23	23.21	24.09	23.90	22.12	21.28	20.99	18.97	17.40	17.61	18.86	20.42	22.17
24	23.23	24.12	23.88	22.07	21.27	20.94	18.85	17.39	17.65	18.94	20.47	22.20
25	23.27	24.13	23.83	22.05	21.28	20.90	18.80	17.34	17.71	18.99	20.52	22.25
26	23.30	24.16	23.81	22.02	21.31	20.85	18.76	17.31	17.74	19.06	20.56	22.29
27	23.33	24.16	23.72	21.99	21.30	20.81	18.69	17.30	17.78	19.10	20.61	22.34
28	23.36	24.16	23.65	21.96	21.26	20.76	18.65	17.26	17.84	19.15	20.67	22.39
29	23.40	24.17	23.60	21.92	---	20.70	18.61	17.19	17.89	19.20	20.73	22.43
30	23.43	24.18	23.56	21.88	---	20.65	18.55	17.15	17.93	19.25	20.79	22.48
31	23.46	---	23.53	21.87	---	20.58	---	17.15	---	19.28	20.85	---
MAX	23.46	24.18	24.19	23.45	21.86	21.32	20.53	18.52	17.93	19.28	20.85	22.48

WTR YR 1983 MEAN 20.92 HIGH 17.07 LOW 24.19

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, 17.62 ft (5.371 m) Aug. 31; minimum daily low, 10.78 ft (3.286 m) Jan. 6.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.63	15.41	13.26	11.79	12.67	12.64	11.65	12.31	12.66	12.98	13.30	16.35
2	15.19	14.30	12.85	11.74	12.66	12.81	12.38	12.13	12.62	12.07	14.68	15.57
3	15.14	13.20	11.68	12.17	12.33	12.79	12.11	10.94	12.80	13.15	13.93	15.27
4	13.66	15.31	13.18	10.89	12.51	12.57	12.43	12.10	11.94	13.04	13.48	16.38
5	15.49	15.19	11.84	12.14	12.61	12.93	11.44	11.30	12.79	12.43	14.56	15.83
6	15.41	13.23	10.98	10.78	12.53	12.73	12.33	12.24	11.82	13.39	13.74	15.38
7	13.59	15.37	13.24	12.32	12.43	12.75	11.50	11.17	12.63	12.51	13.56	16.36
8	15.36	14.81	12.91	12.04	12.53	12.58	12.15	12.06	12.32	12.19	14.98	15.23
9	14.89	13.42	11.85	12.22	12.38	12.66	10.86	11.48	12.90	13.69	14.17	15.07
10	13.26	15.11	12.76	11.85	12.42	12.59	11.79	12.26	12.22	12.38	14.28	16.35
11	15.53	15.15	12.52	12.23	12.57	12.73	11.41	11.36	13.36	12.35	15.07	15.34
12	14.55	13.19	11.78	12.24	12.86	13.05	12.68	12.49	12.65	13.83	14.83	15.22
13	13.27	15.63	13.18	12.36	12.70	12.67	11.71	11.61	13.64	12.98	13.80	16.34
14	15.17	14.29	11.55	12.36	12.53	12.00	11.86	13.66	13.82	12.84	14.76	16.03
15	15.37	13.15	12.53	12.54	12.44	12.27	10.87	12.09	13.47	14.56	14.54	15.60
16	13.33	15.20	12.83	11.22	12.46	11.89	12.20	12.43	12.74	13.55	14.52	16.71
17	15.71	15.03	12.79	12.52	12.52	12.41	10.90	11.65	12.23	13.60	15.54	15.47
18	15.14	13.57	12.76	12.33	12.73	11.63	11.82	13.32	13.45	14.23	14.22	16.63
19	14.50	15.42	12.32	12.52	12.81	12.67	10.94	11.54	11.94	13.23	14.60	16.78
20	15.47	14.70	12.02	12.56	12.85	11.64	12.01	12.61	12.05	12.90	15.76	15.57
21	15.25	13.33	11.03	12.53	12.59	12.51	11.52	11.80	13.58	14.26	14.86	15.06
22	14.65	14.93	12.43	12.60	12.60	11.56	12.72	12.27	12.62	13.07	14.93	16.52
23	15.83	13.88	12.09	12.36	12.51	12.64	11.82	11.69	12.34	12.72	16.09	16.38
24	15.93	12.58	12.15	12.50	12.40	11.52	12.54	12.70	13.59	13.83	15.14	15.33
25	13.49	14.57	12.17	12.81	12.44	12.51	12.05	11.69	12.95	13.99	14.73	16.50
26	15.68	14.25	12.06	12.72	12.75	12.40	12.55	12.57	12.49	13.18	15.91	15.58
27	15.62	13.14	11.80	12.90	12.62	12.34	11.55	11.71	13.77	12.92	14.87	15.48
28	13.53	13.70	11.73	12.50	12.95	11.39	12.59	12.69	12.56	14.95	14.85	16.67
29	15.55	13.60	11.55	12.85	---	12.33	11.51	11.46	12.07	13.76	16.21	15.70
30	15.56	12.00	12.06	12.29	---	11.52	12.26	12.40	13.13	15.05	15.21	15.63
31	13.43	---	11.89	12.76	---	12.31	---	12.15	---	14.64	17.62	---
MAX	15.93	15.63	13.26	12.90	12.95	13.05	12.72	13.66	13.82	15.05	17.62	16.78

WTR YR 1983 MEAN 13.27 HIGH 10.78 LOW 17.62

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, 34.05 ft (10.378 m) Sept. 24; minimum daily low, 30.07 ft (9.165 m) May 30.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32.94	32.80	33.08	32.24	32.00	31.54	31.45	31.15	30.37	30.79	32.33	33.61
2	32.87	32.74	33.10	32.14	31.51	31.62	31.26	30.92	30.40	30.90	32.43	33.56
3	32.87	32.80	32.97	32.28	31.60	31.73	31.33	30.86	30.27	30.91	32.40	33.48
4	33.01	32.95	32.89	32.28	32.09	31.61	31.78	30.90	30.21	30.87	32.33	33.48
5	33.04	33.03	32.73	32.11	32.08	31.60	31.80	31.10	30.25	31.03	32.37	33.43
6	33.02	33.16	33.07	31.92	31.63	31.47	31.57	31.10	30.20	31.24	32.33	33.44
7	32.89	33.17	32.25	31.99	31.83	31.40	31.54	30.78	30.25	31.30	32.34	33.66
8	32.83	33.20	33.29	32.10	31.88	31.41	31.62	30.99	30.45	31.23	32.37	33.75
9	32.73	33.39	33.33	32.01	31.81	31.47	31.49	31.08	30.48	31.09	32.64	33.69
10	32.73	33.37	32.97	31.80	31.76	31.59	31.39	31.02	30.54	31.15	32.74	33.62
11	32.89	33.03	32.77	31.63	31.83	31.64	31.54	30.90	30.60	31.20	32.60	33.53
12	32.98	33.03	32.83	31.98	32.02	31.61	31.65	30.75	30.57	31.39	32.67	33.64
13	32.79	33.41	32.81	32.01	31.96	31.56	31.56	30.64	30.61	31.54	32.76	33.74
14	32.69	33.31	32.70	31.96	31.61	31.54	31.31	30.43	30.62	31.60	32.73	33.94
15	32.61	33.42	32.70	31.88	31.61	31.74	31.51	30.44	30.56	31.66	32.76	33.89
16	32.88	33.34	32.89	31.88	31.61	31.71	31.47	30.58	30.61	31.79	32.76	33.62
17	33.01	33.26	32.88	31.95	31.82	31.56	31.36	30.72	30.64	31.85	32.78	33.68
18	32.99	33.22	32.70	32.21	31.76	31.48	31.28	30.70	30.59	31.85	32.84	33.67
19	33.01	33.17	32.31	32.32	31.79	31.52	31.37	30.43	30.56	31.80	32.92	33.75
20	32.98	33.07	32.45	32.33	31.85	31.50	31.31	30.47	30.68	31.85	33.04	33.71
21	33.12	33.11	32.69	32.18	31.85	31.43	31.38	30.38	30.77	31.85	33.07	33.75
22	33.12	33.10	32.63	31.83	31.71	31.82	31.37	30.18	30.77	31.84	33.07	33.81
23	33.11	32.98	32.42	31.69	31.54	31.95	31.27	30.34	30.76	31.76	33.25	34.02
24	33.09	33.46	32.51	31.79	31.54	31.82	31.14	30.53	30.78	31.79	33.33	34.05
25	33.06	33.45	32.44	31.98	31.84	31.93	31.18	30.39	30.84	31.92	33.33	33.95
26	33.09	33.31	32.68	32.01	32.00	31.93	31.35	30.48	30.91	32.01	33.33	33.85
27	33.03	33.44	32.56	32.04	31.90	31.44	31.32	30.50	30.90	32.09	33.31	33.91
28	32.95	33.22	32.11	31.95	31.71	31.74	31.33	30.39	30.84	32.21	33.29	34.02
29	32.82	32.92	32.42	31.80	---	31.98	31.32	30.14	30.86	32.48	33.35	34.01
30	32.91	33.05	32.62	31.81	---	31.90	31.17	30.07	30.78	32.41	33.39	33.99
31	32.83	---	32.41	32.03	---	31.62	---	30.15	---	32.40	33.52	---
MAX	33.12	33.46	33.33	32.33	32.09	31.98	31.80	31.15	30.91	32.48	33.52	34.05

WTR YR 1983 MEAN 32.09 HIGH 30.07 LOW 34.05

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, 23.21 ft (7.074 m) July 17; minimum daily low, 15.08 ft (4.596 m) May 3.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.55	16.60	16.22	15.95	15.72	15.58	15.58	15.35	17.02	17.65	19.64	19.47
2	17.55	16.48	16.27	15.89	15.38	15.57	15.43	15.09	17.02	17.44	19.33	19.28
3	17.42	16.44	16.21	15.96	15.35	15.59	15.45	15.08	17.02	17.33	19.08	21.19
4	17.47	16.51	16.15	16.03	15.70	15.56	15.71	15.16	17.02	17.16	18.79	21.57
5	17.44	16.53	16.08	15.88	15.75	15.61	15.70	15.39	17.02	17.10	18.58	20.43
6	17.43	16.61	16.22	15.78	15.64	15.54	15.52	15.42	17.02	17.15	19.98	20.20
7	17.30	16.59	16.41	15.78	15.63	15.51	15.58	15.28	17.02	17.16	21.29	19.83
8	17.24	16.53	16.42	15.89	15.66	15.52	15.60	15.44	17.02	17.08	22.20	19.79
9	17.18	16.64	16.48	15.84	15.63	15.57	15.53	15.59	15.79	18.59	22.49	21.48
10	17.13	16.55	16.27	15.67	15.63	15.61	15.40	15.60	17.28	19.70	22.65	22.05
11	17.21	16.34	16.21	15.60	15.66	15.67	15.50	15.57	18.32	20.76	21.08	21.05
12	17.26	16.23	16.22	15.80	15.80	15.65	15.60	15.54	17.36	21.47	20.13	20.19
13	17.14	16.46	16.21	15.78	15.82	15.61	15.50	15.49	16.73	22.03	19.70	19.77
14	17.02	16.45	16.11	15.76	15.63	15.55	15.32	15.36	17.05	22.43	19.42	19.50
15	16.93	16.53	16.08	15.74	15.56	15.70	15.42	15.37	18.14	22.55	19.12	19.29
16	17.10	16.47	16.11	15.76	15.54	15.73	15.48	15.47	19.31	22.79	18.93	18.96
17	17.16	16.40	16.14	15.78	15.64	15.61	15.42	15.56	18.76	23.21	20.68	18.79
18	17.11	16.41	16.03	15.92	15.67	15.49	15.36	15.55	17.70	22.74	20.47	18.62
19	17.07	16.41	15.81	16.00	15.71	15.51	15.38	15.39	17.28	21.19	21.49	18.56
20	16.95	16.34	15.84	16.02	15.80	15.56	15.35	15.45	16.96	20.48	21.33	18.43
21	17.03	16.26	16.00	15.86	15.80	15.46	15.38	15.49	16.88	19.99	21.35	18.25
22	17.07	16.30	16.03	15.68	15.72	15.71	15.41	15.39	16.81	19.62	21.97	18.21
23	17.03	16.17	15.88	15.59	15.55	15.75	15.35	15.43	16.76	19.30	20.96	18.21
24	17.06	16.44	15.92	15.66	15.54	15.74	15.30	15.66	18.11	19.04	20.29	18.25
25	16.95	16.53	15.88	15.78	15.74	15.81	15.36	15.54	19.75	18.92	21.23	18.15
26	16.97	16.44	16.08	15.80	15.81	15.80	15.43	15.58	19.93	18.92	22.34	18.02
27	16.92	16.54	16.01	15.79	15.81	15.51	15.38	15.64	20.13	20.93	22.58	17.98
28	16.84	16.40	15.81	15.76	15.67	15.67	15.38	15.56	19.51	21.93	21.24	17.97
29	16.69	16.18	16.00	15.67	---	15.86	15.49	15.40	18.44	22.41	20.43	17.94
30	16.77	16.20	16.02	15.59	---	15.80	15.33	15.41	18.01	21.35	19.99	17.91
31	16.71	---	16.02	15.67	---	15.64	---	15.45	---	20.31	19.64	---
MAX	17.55	16.64	16.48	16.03	15.82	15.86	15.71	15.66	20.13	23.21	22.65	22.05

WTR YR 1983 MEAN 17.11 HIGH 15.08 LOW 23.21

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, 100.97 ft (30.776 m) Jan. 29, 1982; minimum daily low, 18.60 ft (5.669 m) May 6, 1977.
EXTREMES FOR CURRENT YEAR.--Maximum recorded daily low, 83.35 ft (25.405 m) Aug. 5; minimum daily low, 24.30 ft (7.407 m) May 6.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---			---	---	71.17	68.26	34.86	46.21	---	80.41	
2	---			---	---	69.38	73.31	30.73	53.96	---	79.05	
3	---			---	---	---	72.07	29.09	50.32	---	81.53	
4	---			---	---	72.00	66.44	27.83	---	---	80.18	
5	---			---	---	74.90	70.92	26.91	50.17	---	83.35	
6	---			---	---	---	71.01	24.30	53.03	---	82.03	
7	63.35			---	---	71.10	70.02	25.10	---	---	79.74	
8	63.74			---	---	---	61.93	25.39	51.66	---	80.97	
9	58.65			---	---	---	59.71	26.19	52.59	---	82.10	
10	55.90			---	---	---	40.32	26.33	---	---	81.14	
11	63.48			---	---	---	---	26.57	---	---	77.24	
12	---			---	---	---	36.11	26.35	---	---	---	
13	64.43			---	---	---	34.14	27.32	---	---	---	
14	65.68			---	---	---	---	26.53	---	---	---	
15	61.87			---	---	---	33.84	26.86	---	---	---	
16	62.92			---	---	---	29.52	27.70	---	---	---	
17	61.35			---	---	---	29.48	---	---	---	---	
18	51.76			---	---	56.96	29.75	---	---	---	---	
19	---			---	---	---	28.74	28.91	---	---	---	
20	58.44			---	---	58.71	27.02	32.30	---	74.24	---	
21	---			---	---	62.22	26.46	---	---	72.81	---	
22	62.01			---	---	65.36	28.01	42.62	---	77.57	---	
23	---			---	---	70.17	29.03	43.26	---	79.86	---	
24	---			---	66.22	73.10	29.55	38.64	---	79.59	---	
25	---			---	72.20	73.24	30.16	47.84	---	79.81	---	
26	---			54.06	70.24	71.14	30.06	39.48	---	80.81	---	
27	---			---	67.37	---	32.13	43.42	---	80.92	---	
28	---			---	---	60.68	33.21	38.63	---	81.79	---	
29	---			---	---	60.55	33.86	31.61	---	81.83	---	
30	---			65.06	---	61.66	33.61	44.08	---	76.59	---	
31	---			---	---	67.35	---	43.32	---	80.20	---	
MAX	65.68			65.06	72.20	74.90	73.31	47.84	53.96	81.83	83.35	

WTR YR 1983 MEAN 54.43 HIGH 24.30 LOW 83.35

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

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, 1964; minimum daily low, 14.71 ft (4.484 m) Mar. 20, 1982.
EXTREMES FOR CURRENT YEAR.--Maximum daily low, 21.62 ft (6.590 m) Oct. 22, 23; minimum daily low, 16.93 ft (5.160 m) May 7.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.03	21.36	19.16	17.56	19.35	19.13	19.08	18.20	18.72	19.29	19.92	20.83
2	21.02	21.19	19.20	17.65	18.85	19.20	18.95	17.58	18.80	19.20	20.07	20.81
3	21.06	21.14	19.09	17.92	18.93	19.26	19.01	17.29	18.71	19.09	20.04	20.79
4	21.11	21.18	19.02	18.01	19.36	19.26	19.31	17.00	18.70	18.89	19.99	20.79
5	21.18	21.23	18.90	---	19.36	19.32	19.25	17.18	18.80	18.96	20.08	20.73
6	21.21	21.31	19.31	---	19.08	19.22	19.03	17.20	18.75	19.15	20.08	20.71
7	21.06	21.25	19.56	---	19.14	19.17	19.01	16.93	18.79	19.27	20.08	20.89
8	21.08	21.24	19.54	---	19.20	19.25	19.01	17.31	18.96	19.20	20.05	20.89
9	21.04	21.37	19.59	---	19.17	19.36	18.89	17.37	19.03	19.07	20.24	20.76
10	21.06	21.25	19.24	---	19.17	19.45	18.54	17.39	19.13	19.13	20.27	20.63
11	21.24	20.96	19.18	---	19.30	19.52	18.43	17.34	19.19	19.15	20.10	20.59
12	21.35	21.02	19.24	---	19.44	19.48	18.52	17.30	19.20	19.20	20.29	20.70
13	21.21	21.30	19.24	18.66	19.43	19.38	18.36	17.30	19.19	19.35	20.38	20.81
14	21.13	21.25	19.18	18.62	19.11	19.34	18.01	17.19	19.13	19.33	20.41	20.91
15	21.19	21.24	19.19	18.75	19.07	19.56	17.79	17.46	19.14	19.32	20.38	20.95
16	21.51	21.14	19.00	18.75	19.06	19.57	17.69	17.67	19.20	19.39	20.40	20.65
17	21.58	21.00	19.00	18.93	19.25	19.41	17.41	17.88	19.28	19.45	20.32	20.82
18	21.50	21.01	18.59	19.19	19.25	19.24	17.30	17.91	19.27	19.55	20.41	20.75
19	21.44	21.02	18.08	19.24	19.20	19.32	17.41	17.66	19.32	19.47	20.53	20.89
20	21.44	20.91	18.16	19.24	19.30	19.38	17.45	17.94	19.35	19.48	20.53	20.80
21	21.59	20.83	18.39	19.16	19.24	19.19	17.60	17.94	19.47	19.45	20.61	20.87
22	21.62	20.77	18.40	18.86	19.14	19.62	17.67	17.77	19.51	19.54	20.58	20.94
23	21.62	20.40	18.15	18.78	19.00	19.62	17.63	18.07	19.52	19.39	20.75	21.10
24	21.61	20.46	18.17	18.98	19.11	19.50	17.74	18.26	19.48	19.52	20.85	21.14
25	21.46	20.42	18.11	19.20	19.46	19.56	17.86	18.19	19.50	19.67	20.81	20.99
26	21.50	20.13	18.36	19.27	19.55	19.53	18.04	18.33	19.56	19.79	20.72	20.86
27	21.49	20.13	18.31	19.25	19.55	19.05	18.10	18.44	19.57	19.85	20.66	20.90
28	21.37	19.79	17.64	19.22	19.30	19.42	18.29	18.37	19.50	19.85	20.66	20.96
29	21.36	19.13	17.61	19.10	---	19.64	18.34	18.15	19.46	19.91	20.71	21.01
30	21.43	19.13	17.69	19.18	---	19.55	18.19	18.25	19.36	19.94	20.70	21.00
31	21.39	---	17.65	19.34	---	19.22	---	18.43	---	19.89	20.72	---
MAX	21.62	21.37	19.59	19.34	19.55	19.64	19.31	18.44	19.57	19.94	20.85	21.14

WTR YR 1983 MEAN 19.52 HIGH 16.93 LOW 21.62

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, 24.69 ft (7.526 m) Oct. 7; minimum recorded daily low, 12.86 ft (3.920 m) Feb. 14.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24.67	22.42	16.00	13.41	13.05			---	17.82	19.06	20.47	20.95
2	24.66	22.29	15.88	13.32	12.97			---	17.90	19.07	20.56	21.05
3	24.65	22.24	15.73	13.31	12.96			---	17.95	18.74	20.65	21.10
4	24.63	22.20	15.61	13.32	13.04			---	17.99	15.92	20.74	21.11
5	24.66	22.23	15.45	13.31	13.04			---	17.99	16.90	20.81	21.12
6	24.68	22.23	15.27	13.29	12.95			---	18.03	17.93	20.41	21.17
7	24.69	22.17	15.20	13.26	12.94			---	18.08	18.27	20.03	20.85
8	24.35	22.13	15.11	13.26	12.96			---	18.19	18.50	19.89	21.09
9	23.90	22.14	14.98	13.19	12.95			---	18.27	18.57	20.38	21.23
10	23.55	22.13	14.92	13.13	12.95			---	18.35	18.61	20.61	21.31
11	23.18	22.13	14.80	13.10	12.96			---	18.38	18.72	20.69	21.34
12	23.06	22.14	14.69	13.17	12.98			---	18.35	18.80	20.75	21.41
13	22.99	22.14	14.58	13.19	12.95			---	18.40	18.89	20.77	21.52
14	22.95	22.26	14.52	13.19	12.86			---	18.48	18.96	20.76	21.60
15	22.92	22.32	14.47	13.13	12.92			---	18.53	19.05	20.72	21.72
16	22.87	22.36	14.34	13.11	12.92			---	18.58	19.10	20.57	21.84
17	22.84	22.37	14.28	13.09	12.99			---	18.64	19.10	20.46	21.88
18	22.76	20.11	14.23	13.21	12.98			---	18.67	19.10	20.37	21.88
19	22.72	19.07	14.10	13.21	12.97			---	18.67	19.16	20.30	21.90
20	22.68	18.57	13.99	13.19	12.96			---	18.69	19.23	20.29	21.96
21	22.67	18.19	13.95	13.16	12.91			---	18.76	19.25	20.25	22.05
22	22.69	17.86	13.88	13.15	12.87			---	18.81	19.30	20.15	22.15
23	22.69	17.58	13.82	13.05	12.89			---	18.88	19.39	20.12	22.25
24	22.67	17.40	13.73	13.04	---			---	18.93	19.67	20.12	22.30
25	22.60	17.23	13.66	13.08	---			17.45	18.94	19.84	20.15	22.37
26	22.60	16.98	13.58	13.07	---			17.53	18.91	19.98	20.16	22.42
27	22.60	16.76	13.54	13.10	---			17.59	18.97	20.11	20.37	22.51
28	22.60	16.54	13.51	13.12	---			17.64	18.98	20.23	20.49	22.58
29	22.60	16.24	13.52	13.12	---			17.64	18.98	20.32	20.64	22.64
30	22.59	16.13	13.53	13.04	---			17.62	19.00	20.38	20.76	22.69
31	22.50	---	13.51	13.05	---			17.72	---	20.39	20.85	---
MAX	24.69	22.42	16.00	13.41	13.05			17.72	19.00	20.39	20.85	22.69

WTR YR 1983 MEAN 18.32 HIGH 12.86 LOW 24.69

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

GROUND-WATER RECORDS

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, 0.34 ft (0.104 m) Mar. 17, 1982.
EXTREMES FOR CURRENT YEAR.--Maximum daily low, 29.05 ft (8.854 m) Sept. 2; minimum daily low, 2.29 ft (0.698 m) May 7.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24.99	26.79	20.97	6.38	17.34	18.95	14.38	12.86	13.31	20.58	24.62	29.04
2	25.06	26.75	20.48	7.55	17.34	19.41	14.04	12.98	13.55	19.79	24.80	29.05
3	25.07	26.67	19.87	8.39	16.99	19.63	14.17	12.58	13.75	17.73	24.81	28.88
4	25.12	26.53	19.29	9.39	15.93	19.83	14.28	11.47	14.05	15.28	24.75	27.91
5	25.23	26.24	19.08	10.23	14.79	20.14	14.64	6.09	14.32	15.73	24.64	27.10
6	25.24	25.98	18.78	10.86	13.95	20.33	14.90	3.20	14.49	16.22	24.48	26.65
7	24.94	25.81	18.69	11.57	13.23	20.52	14.97	2.29	14.55	16.72	24.34	26.43
8	24.56	25.77	18.58	12.13	12.99	20.77	15.15	3.26	14.85	17.20	24.36	26.13
9	24.29	25.74	18.69	12.86	13.34	20.81	15.18	4.99	15.12	17.68	24.56	25.87
10	24.48	25.82	18.76	13.34	13.59	20.68	14.95	5.82	15.46	18.09	24.70	26.14
11	24.55	25.87	18.96	13.53	14.03	20.45	13.35	6.49	16.02	18.47	24.85	26.53
12	24.60	25.90	19.11	13.77	14.25	20.03	11.43	7.29	16.49	19.28	24.85	26.93
13	24.75	25.91	19.28	13.97	14.81	19.65	10.54	7.78	16.95	19.72	24.85	27.25
14	24.82	25.90	19.49	13.98	15.22	19.34	9.63	8.55	17.44	20.38	24.79	27.52
15	24.85	25.93	19.56	14.19	15.37	18.92	8.90	8.95	17.68	20.98	24.91	27.78
16	24.89	25.84	19.59	14.35	16.08	17.96	6.96	9.31	17.99	21.47	25.06	27.95
17	24.95	25.93	19.24	14.70	16.38	17.63	5.65	9.83	18.49	21.94	25.23	28.01
18	25.04	25.95	18.28	14.99	16.76	17.48	5.33	10.22	18.77	22.14	25.66	27.98
19	25.30	25.97	17.53	15.32	17.02	17.51	5.08	10.97	18.81	22.32	25.88	28.01
20	25.50	26.11	16.38	15.73	17.24	17.42	5.86	11.52	18.89	22.64	26.09	28.18
21	25.78	26.28	15.01	16.04	17.45	16.91	6.72	11.94	18.98	22.95	26.49	28.24
22	25.81	26.27	14.23	16.30	17.62	16.49	7.52	12.19	19.23	23.11	26.70	28.21
23	25.97	26.28	14.02	16.55	17.90	15.98	8.19	12.28	19.66	23.17	27.09	28.20
24	26.00	26.26	13.64	16.66	17.97	15.49	8.78	12.23	19.90	23.17	27.36	28.28
25	26.07	25.56	12.60	16.71	18.34	15.49	9.44	12.19	20.38	23.21	27.71	28.37
26	26.12	24.74	11.22	16.77	18.58	15.65	9.99	12.30	20.63	23.32	27.96	28.46
27	26.32	24.13	10.28	16.81	18.65	15.80	10.43	12.42	21.26	23.48	28.30	28.53
28	26.39	23.40	8.68	16.96	18.93	15.83	10.98	12.51	21.41	23.67	28.56	28.61
29	26.50	22.77	5.74	16.99	---	15.64	11.76	12.63	21.42	23.93	28.75	28.72
30	26.59	21.74	5.55	17.24	---	15.03	12.49	12.89	21.30	24.30	28.94	28.87
31	26.72	---	5.99	17.29	---	14.79	---	13.06	---	24.57	29.04	---
MAX	26.72	26.79	20.97	17.29	18.93	20.81	15.18	13.06	21.42	24.57	29.04	29.05

WTR YR 1983 MEAN 18.99 HIGH 2.29 LOW 29.05

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 26.55 ft (8.092 m) Dec. 9; minimum daily low 23.80 ft (7.254 m) May 30.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25.75	25.80	26.00	25.90	25.30	24.75	24.50	24.15	24.05	24.25	24.95	25.75
2	25.70	25.65	26.10	25.85	24.90	24.70	24.25	23.85	24.10	24.25	25.05	25.80
3	25.70	25.65	26.00	25.95	24.80	24.70	24.30	23.85	24.00	24.30	25.05	25.80
4	25.75	25.80	26.00	26.00	25.25	24.65	24.60	23.90	23.90	24.20	24.95	25.75
5	25.75	25.90	25.85	25.80	25.30	24.65	24.60	24.10	23.95	24.25	25.05	25.70
6	25.80	26.05	26.10	25.75	25.10	24.55	24.50	24.15	23.90	24.45	25.00	25.70
7	25.70	26.00	26.40	25.70	25.00	24.50	24.50	23.95	23.95	24.55	25.00	25.90
8	25.70	26.00	26.45	25.80	25.10	24.45	24.50	24.20	24.05	24.50	24.95	26.00
9	25.60	26.15	26.55	25.75	25.05	24.50	24.40	24.30	24.15	24.35	25.10	25.95
10	25.65	26.10	26.35	25.50	25.05	24.60	24.25	24.35	24.20	24.30	25.15	25.90
11	25.85	25.90	26.15	25.30	25.10	24.65	24.40	24.25	24.25	24.25	24.95	25.85
12	25.95	25.75	26.15	25.65	25.30	24.70	24.50	24.20	24.25	24.25	25.15	25.85
13	25.85	26.10	26.20	25.55	25.35	24.65	24.50	24.10	24.20	24.35	25.20	26.00
14	25.75	26.10	26.05	25.55	25.05	24.45	24.20	24.00	24.15	24.35	25.20	26.15
15	25.65	26.20	26.05	25.45	24.90	24.60	24.35	24.00	24.05	24.35	25.20	26.15
16	25.90	26.15	26.15	25.55	24.85	24.65	24.40	24.15	24.10	24.40	25.15	26.00
17	26.05	26.05	26.25	25.40	25.00	24.60	24.30	24.25	24.20	24.40	25.10	25.95
18	26.00	26.05	26.10	25.70	25.00	24.45	24.25	24.30	24.15	24.50	25.05	25.90
19	26.00	26.15	25.75	25.85	24.95	24.35	24.25	24.15	24.15	24.50	25.20	26.00
20	25.90	26.10	25.90	25.85	25.05	24.45	24.25	24.20	24.20	24.60	25.20	25.95
21	26.00	26.10	26.00	25.75	25.05	24.30	24.25	24.25	24.30	24.60	25.30	26.00
22	26.15	26.15	---	25.45	25.00	24.60	24.25	24.10	24.30	24.65	25.30	26.05
23	26.15	25.95	25.90	25.25	24.70	24.75	24.25	24.00	24.30	24.60	25.45	26.30
24	26.15	26.35	25.95	25.25	24.70	24.75	24.05	24.15	24.25	24.65	25.60	26.45
25	26.10	26.40	25.95	25.40	24.95	24.85	24.15	24.10	24.25	24.70	25.65	26.40
26	26.10	26.35	26.10	25.45	25.10	24.85	24.25	24.15	24.25	24.80	25.55	26.25
27	26.05	26.45	26.00	25.45	25.10	24.60	24.20	24.20	24.25	24.85	25.55	26.30
28	25.95	26.25	25.75	25.40	24.90	24.75	24.25	24.10	24.20	24.85	25.50	26.30
29	25.85	25.90	26.00	25.25	---	24.90	24.25	23.90	24.30	24.95	25.60	26.30
30	25.90	25.95	26.05	25.15	---	24.90	24.15	23.80	24.25	24.95	25.60	26.25
31	25.90	---	26.00	25.25	---	24.65	---	23.85	---	24.95	25.65	---
MAX	26.15	26.45	26.55	26.00	25.35	24.90	24.60	24.35	24.30	24.95	25.65	26.45

WTR YR 1983 MEAN 25.13 HIGH 23.80 LOW 26.55

GROUND-WATER RECORDS

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 September 1982 continuous, periodic thereafter.
EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 10.56 ft (3.219 m) Feb. 6-7, 1977; minimum daily low, 3.83 ft (1.167 m) Mar. 17, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL
Oct. 5, 1982	10.05

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, 30.75 ft (9.373 m) Sept. 29; minimum recorded daily low, 26.69 ft (8.135 m) Apr. 25.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27.98	27.88	27.58	27.00	27.89	26.82	28.45	27.14	27.39	29.12	28.71	29.99
2	27.91	27.77	27.64	26.90	27.87	27.31	28.10	27.31	27.56	28.51	28.75	29.89
3	27.78	27.78	27.66	26.93	27.68	27.52	27.60	27.41	29.25	28.01	28.60	29.57
4	27.71	27.85	27.65	27.03	28.09	27.96	28.42	27.21	30.26	27.57	29.32	29.01
5	27.78	27.90	27.58	27.04	27.93	27.79	28.55	27.15	27.92	28.09	29.70	28.73
6	27.84	27.97	27.44	27.03	27.65	27.44	28.39	27.55	27.13	28.56	29.47	29.53
7	27.85	27.99	27.69	26.96	27.86	27.75	28.59	27.43	27.37	28.20	28.59	30.24
8	27.84	27.91	27.76	27.03	27.73	27.61	28.47	26.79	27.40	28.26	29.17	30.21
9	27.83	27.97	27.82	27.02	28.11	28.02	28.19	26.88	27.98	28.09	29.94	29.98
10	27.76	27.98	27.81	26.88	27.96	27.88	27.55	27.37	28.14	27.85	30.08	29.62
11	27.65	27.96	27.68	26.78	27.41	28.12	27.77	27.27	27.96	28.32	30.04	29.11
12	27.76	27.88	27.60	26.95	27.22	28.03	27.74	27.18	27.59	28.88	29.92	29.85
13	27.77	27.91	27.50	27.02	27.17	27.55	28.03	27.38	27.97	28.42	29.50	30.17
14	27.78	27.92	27.52	27.20	27.00	27.84	28.02	27.15	28.31	28.74	28.71	30.17
15	27.87	27.85	27.54	27.10	26.93	27.88	27.28	26.95	28.04	28.88	29.65	30.08
16	27.85	27.88	27.51	26.99	26.94	28.20	27.04	27.02	28.33	28.64	30.07	29.97
17	27.91	27.92	27.54	26.86	27.00	28.04	26.93	27.63	28.49	28.21	29.73	29.69
18	27.92	27.96	27.53	27.07	27.03	27.99	26.85	27.42	28.23	28.62	29.74	29.04
19	27.93	27.97	27.35	27.92	27.02	27.80	26.79	27.25	28.07	28.61	29.75	29.69
20	27.91	27.96	27.13	27.95	26.97	27.40	26.77	26.91	28.11	28.66	29.60	29.81
21	27.96	27.86	27.29	28.21	26.92	27.64	26.76	26.91	28.42	28.49	28.96	29.59
22	28.00	27.74	27.35	27.98	26.92	27.66	26.76	26.84	28.21	28.27	29.76	30.17
23	28.03	27.73	27.44	27.53	26.89	28.17	26.76	26.95	28.60	28.10	30.36	30.53
24	28.05	27.85	27.76	27.84	26.88	28.01	26.71	27.80	28.65	27.81	30.17	30.09
25	28.05	27.88	27.45	27.82	27.08	28.22	26.69	27.62	28.59	27.96	30.33	29.13
26	28.02	27.84	27.16	28.17	27.10	28.04	26.74	27.98	28.06	28.15	30.38	29.80
27	28.02	27.70	27.15	28.02	27.06	27.70	26.80	27.92	28.42	28.67	30.00	30.09
28	28.01	27.66	27.17	28.04	26.91	27.92	27.11	27.66	29.01	29.66	29.17	30.60
29	27.97	27.39	27.14	27.81	---	28.54	27.66	27.28	29.07	29.86	29.74	30.75
30	27.97	27.49	27.17	27.43	---	28.60	27.53	26.91	29.14	29.41	29.89	30.70
31	27.97	---	27.15	27.94	---	28.55	---	27.10	---	28.59	29.92	---
MAX	28.05	27.99	27.82	28.21	28.11	28.60	28.59	27.98	30.26	29.86	30.38	30.75

WTR YR 1983 MEAN 28.07 HIGH 26.69 LOW 30.75

The following tables contain water level measurements and miscellaneous chemical analyses from a network of wells in the vicinity of several recently completed collector wells in southern Franklin County. The data was collected as part of a cooperative study with the City of Columbus to evaluate the effects of infiltration induced by the collector well system.

395006083013600. Local number, FR-116, M1.
LOCATION.--Lat 39°50'06", long 83°01'36", Hydrologic Unit 05060001, near Shadeville.
AQUIFER.--Glacial sand and gravel of Quaternary Age.
WELL CHARACTERISTICS.--Drilled observation well, diameter 2 in (0.05 m), depth 62 ft (18.90 m).
DATUM.--Altitude of land-surface datum is 725 ft (220.98 m).

HIGHEST WATER LEVEL 22.00 FEET BELOW LAND SURFACE DATUM MAY 09, 1983.

LOWEST WATER LEVEL 25.61 FEET BELOW LAND SURFACE DATUM NOV 03, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1982	25.17	JAN 06, 1983	23.72	APR 05, 1983	23.56	JUL 12, 1983	23.24
NOV 03	25.61	FEB 11	23.47	MAY 09	22.00	AUG 15	24.20
DEC 03	25.14	MAR 04	23.52	JUN 07	22.47	SEP 02	24.58

395160083010300. 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 13.34 FEET BELOW LAND SURFACE DATUM MAY 09, 1983.

LOWEST WATER LEVEL 16.50 FEET BELOW LAND SURFACE DATUM NOV 03, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1982	16.12	JAN 06, 1983	14.90	APR 05, 1983	15.19	JUL 12, 1983	14.35
NOV 03	16.50	FEB 11	14.91	MAY 09	13.34	AUG 15	14.93
DEC 03	15.71	MAR 04	15.14	JUN 07	13.69	SEP 02	15.36

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 41.78 FEET BELOW LAND SURFACE DATUM JUN 07, 1983.

LOWEST WATER LEVEL 44.45 FEET BELOW LAND SURFACE DATUM DEC 03, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1982	43.74	JAN 06, 1983	43.94	APR 05, 1983	44.17	JUL 12, 1983	41.91
NOV 03	44.18	FEB 11	44.02	MAY 09	42.53	AUG 15	42.67
DEC 03	44.45	MAR 04	43.94	JUN 07	41.78	SEP 02	43.11

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 BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.41	6.32	4.40	1.26	3.80	4.77	4.93	2.47	2.89	3.37	4.92	5.71
2	6.38	6.30	4.59	1.80	3.87	4.85	4.92	-0.37	2.94	3.23	4.96	5.71
3	6.36	6.30	4.72	2.23	---	4.87	4.76	-2.27	2.96	3.23	4.99	5.74
4	6.36	6.28	4.84	2.45	---	4.92	4.66	-2.71	3.14	3.30	5.02	5.77
5	6.36	6.24	4.93	2.65	---	4.93	4.54	-2.35	3.26	3.30	5.04	5.79
6	6.36	6.24	5.08	2.76	---	4.93	4.44	-2.34	3.37	3.31	5.07	5.81
7	6.36	6.17	5.11	3.18	---	4.94	4.40	-2.16	3.48	3.40	5.09	5.84
8	6.36	6.12	5.11	3.29	---	4.99	4.34	-1.68	3.62	3.53	5.12	7.47
9	6.35	6.12	5.16	3.40	---	4.99	3.51	-1.44	3.68	3.66	5.17	7.72
10	6.28	6.13	5.15	3.44	---	5.00	2.78	-0.97	3.78	3.83	5.17	6.45
11	6.27	6.13	5.25	3.63	3.96	5.00	2.32	-0.07	3.84	3.93	5.18	6.20
12	6.27	6.09	5.33	3.79	4.09	4.98	2.04	.54	3.91	4.03	5.23	6.12
13	6.27	6.71	5.38	3.85	4.13	4.99	1.92	1.03	3.97	4.15	5.27	6.07
14	6.24	6.27	5.40	3.85	4.16	5.04	1.87	1.36	4.03	4.19	5.27	6.08
15	6.24	6.27	5.41	4.02	4.24	5.09	1.64	1.37	4.09	4.28	5.31	6.08
16	6.27	6.27	5.00	4.35	4.26	5.09	1.35	1.16	4.13	4.38	5.31	6.06
17	6.28	6.22	4.53	4.42	4.37	5.09	1.07	1.44	4.16	4.44	5.33	6.02
18	6.28	6.20	3.78	4.45	4.38	5.09	1.39	1.61	4.09	4.36	7.32	6.04
19	6.28	6.19	3.65	4.43	4.38	5.13	1.82	1.79	4.09	4.42	5.71	6.08
20	6.31	6.15	2.99	4.45	4.38	5.13	2.25	2.06	3.79	4.47	5.63	6.08
21	6.33	6.08	2.83	4.45	4.36	5.13	2.54	2.22	1.08	4.56	5.62	7.57
22	6.33	5.86	2.74	4.44	4.34	5.17	2.77	2.22	1.38	4.59	5.63	6.46
23	6.33	5.63	3.17	4.40	4.42	5.17	2.95	1.81	1.91	4.61	5.66	6.32
24	6.33	5.43	3.31	4.39	4.49	5.01	3.16	1.93	2.26	4.70	5.66	6.30
25	6.33	5.40	3.31	4.45	4.61	4.95	3.38	1.93	2.58	4.75	5.67	6.27
26	6.33	5.27	3.14	4.45	4.62	4.96	3.52	2.12	2.84	4.77	5.67	6.24
27	6.33	5.29	3.00	4.44	4.62	4.91	3.65	2.34	2.98	4.78	5.68	6.34
28	6.33	5.29	1.70	4.21	4.65	5.00	3.78	2.45	3.17	4.83	5.68	6.27
29	6.32	4.77	1.08	3.84	---	5.03	3.82	2.47	3.29	4.88	5.61	6.48
30	6.33	4.73	0.19	3.44	---	5.03	3.82	2.61	3.40	4.90	5.67	6.26
31	6.33	---	0.61	3.68	---	4.95	---	2.78	---	4.92	5.71	---
MAX	6.24	4.73	0.19	1.26	3.80	4.77	1.07	2.71	1.08	3.23	4.92	5.71

WTR YR 1983 MEAN 4.34 HIGH -2.71 LOW 7.72

395058083002400. Local number Fr-119, M5.
LOCATION.--Lat 39°50'58", long 83°00'24", 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).

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.80	19.70	19.05	16.40		---	18.45	16.89	15.29	16.08	17.62	
2	19.80	19.71	18.95	16.23		---	18.45	16.60	15.39	16.14	17.66	
3	19.80	19.72	18.90	16.22		---	18.42	15.76	15.46	16.16	17.68	
4	19.78	19.72	18.85	16.25		18.08	18.42	14.52	15.56	16.16	17.72	
5	19.78	19.71	18.85	16.28		18.10	18.40	13.40	15.65	16.17	17.76	
6	19.78	19.70	18.85	16.29		18.12	18.33	12.80	15.76	16.19	17.79	
7	19.77	19.70	18.86	---		18.15	18.30	12.38	15.84	16.23	17.83	
8	19.75	19.67	18.86	---		18.17	18.26	12.14	15.97	16.25	17.86	
9	19.75	19.66	18.87	---		18.19	18.21	12.14	16.05	16.28	17.89	
10	19.75	19.65	18.87	---		18.22	18.05	12.21	16.16	16.31	17.92	
11	19.75	19.64	18.88	---		18.22	17.84	12.45	16.23	16.37	17.95	
12	19.74	19.65	18.89	---		18.25	17.62	12.80	16.30	16.44	17.99	
13	19.73	19.66	18.89	---		18.26	17.41	13.14	16.38	16.48	18.04	
14	19.72	19.66	18.94	---		18.27	17.24	13.39	16.47	16.74	18.07	
15	19.70	19.67	18.94	---		18.29	17.10	13.60	16.48	16.80	18.11	
16	19.70	19.67	18.94	---		18.32	16.93	13.68	16.48	16.87	18.13	
17	19.70	19.67	18.90	---		18.33	16.73	13.79	16.54	16.93	18.26	
18	19.70	19.67	18.74	---		18.33	16.54	13.94	16.59	16.96	18.49	
19	19.70	19.66	18.60	---		18.38	16.41	14.08	16.64	17.01	18.51	
20	19.70	19.64	18.42	---		18.38	16.37	14.25	16.69	17.05	18.54	
21	19.70	19.63	18.25	---		18.39	16.39	14.37	16.73	17.10	19.18	
22	19.70	19.60	18.10	---		18.44	16.43	14.46	16.73	17.16	20.05	
23	19.70	19.55	17.91	---		18.45	16.48	14.51	16.71	17.20	20.47	
24	19.70	19.50	17.85	---		18.45	16.56	14.58	16.36	17.26	20.50	
25	19.70	19.45	17.83	---		18.44	16.59	14.63	16.10	17.32	20.87	
26	19.70	19.40	17.80	---		18.44	16.69	14.69	15.98	17.37	21.05	
27	19.70	19.32	17.74	---		18.42	16.76	14.79	15.94	17.40	21.06	
28	19.70	19.30	17.63	---		18.42	16.82	14.89	15.93	17.46	20.96	
29	19.70	19.21	17.40	---		18.45	16.87	15.00	15.97	17.50	20.60	
30	19.70	19.15	17.02	---		18.45	16.89	15.09	16.02	17.54	---	
31	19.70	---	16.70	---		18.45	---	15.19	---	17.57	---	
MAX	19.80	19.72	19.05	16.40		18.45	18.45	16.89	16.73	17.57	21.06	

WTR YR 1983 MEAN 17.64 HIGH 12.14 LOW 21.06

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

395020083003700. Local number, FR 104, TH 73.
LOCATION.--Lat 39°50'20", long 83°00'37", Hydrological Unit 05060001, near Shadeville.
AQUIFER.--Glacial sand and gravel of Quaternary Age.
WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in (0.15 m), depth 68 ft (20.7 m).
DATUM.--Altitude of land-surface datum is 685 ft (208.79 m).

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.01	9.95	8.23	5.46	8.63	8.89	8.98	7.08	7.12	7.56	9.03	9.60
2	9.98	9.93	8.37	5.95	8.49	8.94	8.99	3.71	7.21	7.46	9.05	9.64
3	9.96	10.78	8.53	6.36	8.23	8.99	8.84	1.43	7.28	7.51	9.07	9.68
4	10.28	9.88	8.65	6.58	7.83	9.03	8.69	.66	7.40	7.57	9.10	9.69
5	10.03	9.83	8.73	6.79	7.37	9.05	8.61	1.02	7.52	7.56	9.12	9.70
6	10.00	11.66	8.79	7.00	7.39	9.07	8.54	1.02	7.62	7.52	9.15	9.70
7	9.97	9.80	8.85	7.22	7.59	9.09	8.49	1.19	7.71	7.64	9.18	9.73
8	9.96	9.74	8.88	7.39	7.76	9.11	8.40	1.61	7.81	7.76	9.19	9.74
9	9.93	9.74	8.92	7.55	7.88	9.11	7.83	1.84	7.89	7.89	9.21	9.74
10	9.87	9.76	8.97	7.63	7.99	9.12	7.07	2.37	7.98	8.02	9.22	9.73
11	9.86	11.05	9.03	7.77	8.09	9.10	6.34	2.47	8.05	8.11	9.24	9.73
12	9.86	10.18	9.09	7.89	8.21	9.07	6.09	4.13	8.13	8.22	9.26	9.79
13	9.85	10.35	9.14	8.01	8.29	9.11	6.02	4.69	8.19	8.31	9.28	12.07
14	9.84	9.82	9.20	8.05	8.35	9.12	5.96	5.13	8.25	8.39	9.31	10.02
15	9.83	9.84	9.21	8.14	8.41	9.16	5.76	5.15	8.29	8.48	9.33	10.04
16	9.84	9.83	8.94	8.22	8.46	9.18	5.23	4.73	8.33	8.56	9.34	10.05
17	9.87	9.78	8.40	8.32	8.53	9.19	5.00	5.18	8.35	8.62	9.84	10.06
18	9.88	9.76	7.73	8.42	8.55	9.19	5.43	5.47	8.38	8.46	9.41	10.06
19	9.89	9.73	7.61	8.53	8.55	9.19	5.83	5.68	8.40	8.53	9.42	10.10
20	9.91	9.72	7.00	8.60	8.52	9.19	6.25	6.00	8.08	8.61	9.44	10.16
21	9.92	9.65	6.75	8.65	8.50	9.17	6.53	6.26	5.64	8.67	9.46	10.16
22	9.92	9.53	6.69	8.66	8.55	9.18	6.77	6.28	5.67	8.70	12.08	10.19
23	9.93	9.43	7.15	8.63	8.64	9.12	6.99	5.96	6.16	8.75	9.82	10.21
24	9.93	9.17	7.29	8.65	8.68	8.97	7.16	6.11	6.51	8.79	9.70	10.21
25	9.93	9.10	7.29	8.65	8.73	8.93	7.37	6.12	6.80	8.83	9.65	10.19
26	9.95	9.01	7.19	8.57	8.76	8.96	7.53	6.33	7.04	8.86	9.61	10.17
27	9.95	9.01	7.07	8.55	8.80	8.98	7.67	6.58	7.21	8.86	9.59	10.12
28	9.95	9.01	5.77	8.62	8.83	8.98	7.76	6.73	7.41	8.89	9.57	10.10
29	9.94	8.68	4.80	8.67	---	9.01	7.86	6.82	7.53	8.95	9.49	10.44
30	9.95	8.58	4.29	8.67	---	9.01	7.87	6.91	7.65	8.99	9.52	10.23
31	9.95	---	4.76	8.66	---	8.98	---	7.04	---	9.03	9.54	---
MAX	10.28	11.66	9.21	8.67	8.83	9.19	8.99	7.08	8.40	9.03	12.08	12.07

WTR YR 1983 MEAN 8.32 HIGH .66 LOW 12.08

395153083002900. Local number, FR-74.
LOCATION.--Lat 39°51'53", long 83°00'29", Hydrological 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 29.54 FEET BELOW LAND SURFACE DATUM MAY 10, 1983; JUN 07, 1983.

LOWEST WATER LEVEL 35.39 FEET BELOW LAND SURFACE DATUM DEC 03, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1982	34.90	JAN 06, 1983	33.20	APR 05, 1983	34.31	JUL 13, 1983	30.81
NOV 03	35.36	FEB 11	33.33	MAY 10	29.54	AUG 12	32.48
DEC 03	35.39	MAR 04	33.67	JUN 07	29.54		

365123083003300. Local number, FR-121, M7.
LOCATION.--Lat 39°51'23", long 83°00'33", 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 45 ft (13.72 m).
DATUM.--Altitude of land-surface datum is 692 ft (210.92 m).

HIGHEST WATER LEVEL 6.44 FEET BELOW LAND SURFACE DATUM MAY 10, 1983.

LOWEST WATER LEVEL 13.90 FEET BELOW LAND SURFACE DATUM NOV 03, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1982	13.82	JAN 06, 1983	9.86	APR 05, 1983	12.51	JUL 11, 1983	10.13
NOV 03	13.90	FEB 11	11.49	MAY 10	6.44	AUG 12	11.96
DEC 03	13.14	MAR 04	12.09	JUN 07	9.31		

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 4.26 FEET BELOW LAND SURFACE DATUM MAY 12, 1983.

LOWEST WATER LEVEL 10.06 FEET BELOW LAND SURFACE DATUM OCT 07, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1982	10.06	JAN 06, 1983	6.88	APR 05, 1983	8.28	JUL 11, 1983	8.02
NOV 03	10.00	FEB 11	7.92	MAY 12	4.26	AUG 15	9.34
DEC 03	8.42	MAR 04	8.96	JUN 08	7.71		

395132083001200. Local number, FR-73.
LOCATION.--Lat 39°51'32", long 83°00'12", Hydrological 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 42.28 FEET BELOW LAND SURFACE DATUM JUN 07, 1983.

LOWEST WATER LEVEL 43.87 FEET BELOW LAND SURFACE DATUM APR 05, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1982	42.78	JAN 06, 1983	43.39	APR 05, 1983	43.87	JUL 12, 1983	43.06
NOV 03	43.20	FEB 11	43.62	MAY 09	42.84	AUG 12	42.71
DEC 03	43.41	MAR 04	43.77	JUN 07	42.28		

395059083000900. Local number, FR-122, M8.
LOCATION.--Lat 39°50'59", long 83°00'09", Hydrologic Unit 05060002 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 36.95 FEET BELOW LAND SURFACE DATUM OCT 07, 1982.

LOWEST WATER LEVEL 37.63 FEET BELOW LAND SURFACE DATUM MAY 10, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1982	36.95	FEB 11, 1983	37.27	MAY 10, 1983	37.63	AUG 05, 1983	37.04
DEC 03	36.99	MAR 04	37.43	JUN 08	37.48		
JAN 06, 1983	37.12	APR 05	37.57	JUL 11	37.22		

394954083002800. Local number, FR-106.
LOCATION.--Lat 39°49'54", long 83°00'28", Hydrological Unit 05060001, near Shadeville.
AQUIFER.--Glacial sand and gravel of Quaternary Age.
WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in (0.15 m), depth 75 ft (22.86 m).
DATUM.--Altitude of land-surface datum is 687 ft (209.4 m).

HIGHEST WATER LEVEL 1.50 FEET BELOW LAND SURFACE DATUM MAY 09, 1983.

LOWEST WATER LEVEL 8.23 FEET BELOW LAND SURFACE DATUM NOV 03, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1982	8.08	JAN 06, 1983	5.25	APR 05, 1983	6.17	JUL 12, 1983	5.24
NOV 03	8.23	FEB 11	5.78	MAY 09	1.50	AUG 15	6.21
DEC 03	7.33	MAR 04	6.44	JUN 07	4.59	SEP 02	6.48

395131082592400. Local number, FR-123, M9.
LOCATION.--LAT 39°51'31", long 82°59'24", Hydrologic Unit 05060001, near Hamilton Meadows.
AQUIFER.--Glacial sand and gravel of Quaternary Age.
WELL CHARACTERISTICS.--Drilled observation well, diameter 2 in (0.05 m), depth 36.5 ft (11.13 m).
DATUM.--Altitude of land-surface datum is 710 ft (216.41 m).

HIGHEST WATER LEVEL 8.27 FEET BELOW LAND SURFACE DATUM JUN 07, 1983.

LOWEST WATER LEVEL 10.17 FEET BELOW LAND SURFACE DATUM APR 05, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1982	9.09	JAN 06, 1983	9.62	APR 05, 1983	10.17	JUL 12, 1983	8.68
NOV 03	9.63	FEB 11	9.96	MAY 09	8.54	AUG 12	9.22
DEC 03	9.93	MAR 04	10.00	JUN 07	8.27	SEP 02	9.56

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 23.27 FEET BELOW LAND SURFACE DATUM JUN 07, 1983.

LOWEST WATER LEVEL 25.89 FEET BELOW LAND SURFACE DATUM DEC 03, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1982	24.45	JAN 06, 1983	24.78	APR 05, 1983	25.34	JUL 12, 1983	23.62
NOV 03	24.85	FEB 11	24.98	MAY 09	23.87	AUG 12	24.08
DEC 03	25.89	MAR 04	25.07	JUN 07	23.27	SEP 02	24.44

395037082581900. Local number, FR-36.
LOCATION.--Lat 39°50'37", long 82°58'19", 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 (9.56m).
DATUM.--Altitude of land-surface datum is 717 ft (221.12 m).

HIGHEST WATER LEVEL 12.12 FEET BELOW LAND SURFACE DATUM MAY 09, 1983.

LOWEST WATER LEVEL 14.12 FEET BELOW LAND SURFACE DATUM NOV 03, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1982	13.75	JAN 06, 1983	12.71	APR 05, 1983	13.97	JUL 13, 1983	13.12
NOV 03	14.12	FEB 11	13.24	MAY 09	12.12	AUG 12	13.52
DEC 03	13.32	MAR 04	13.46	JUN 07	12.64	SEP 02	13.77

395039082585800. Local number, FR 115, TH 67.
LOCATION.--Lat 39°50'39", long 82°58'58", Hydrologic Unit 05060001, near Hamilton Meadows.
AQUIFER.--Glacial sand and gravel of Quaternary Age.
WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in (0.15 m), depth 116 ft (35.36 m).
DATUM.--Altitude of land-surface datum is 721 ft (219.76 m).

HIGHEST WATER LEVEL 27.42 FEET BELOW LAND SURFACE DATUM MAY 11, 1983.

LOWEST WATER LEVEL 34.55 FEET BELOW LAND SURFACE DATUM JUL 15, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1982	30.74	DEC 03, 1982	29.84	FEB 11, 1983	29.45	APR 05, 1983	30.54
NOV 03	30.77	JAN 06, 1983	29.08	MAR 04	29.89	MAY 11	27.42

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								---	28.44	28.99	29.51	32.28
2								---	28.46	29.03	29.53	31.20
3								---	28.44	29.07	29.56	30.72
4								---	28.52	29.08	29.62	30.56
5								---	28.56	29.09	29.67	30.44
6								---	28.65	29.15	29.70	32.79
7								---	28.67	29.20	29.74	31.28
8								---	28.76	30.43	29.79	30.79
9								---	28.80	29.30	29.84	30.62
10								---	28.86	29.31	29.84	30.55
11								27.52	28.89	31.10	29.87	30.46
12								32.28	28.93	29.98	29.89	30.43
13								33.39	28.97	29.65	29.92	30.58
14								31.22	28.99	33.83	29.95	30.40
15								29.42	29.06	34.55	29.99	30.39
16								29.94	29.11	32.06	30.02	30.35
17								28.71	29.14	30.79	31.66	30.34
18								28.46	28.97	29.90	32.19	30.30
19								28.30	28.85	29.37	30.78	30.28
20								28.19	28.24	29.13	30.37	30.19
21								28.13	28.19	28.97	30.21	30.21
22								28.01	31.96	28.97	31.72	30.16
23								27.74	33.35	29.03	30.56	30.22
24								27.79	32.75	29.09	31.10	30.24
25								27.90	30.87	29.14	30.34	30.20
26								30.80	29.82	29.21	32.22	30.24
27								28.76	29.50	29.26	30.76	30.42
28								28.33	29.34	29.30	30.39	30.31
29								28.24	29.25	29.37	31.07	31.40
30								28.29	29.17	29.42	31.75	32.19
31								28.36	---	29.46	32.17	---
MAX								33.39	33.35	34.55	32.22	32.79

WTR YR 1983 MEAN 29.91 HIGH 27.52 LOW 34.55

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

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 (0.20 m), depth 64 ft (19.74 m).
DATUM.--Altitude of land-surface datum is 707 ft (218.03 m).

HIGHEST WATER LEVEL 13.77 FEET BELOW LAND SURFACE DATUM MAY 12, 1983.

LOWEST WATER LEVEL 23.59 FEET BELOW LAND SURFACE DATUM JUL 15, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 06, 1983	15.35	MAR 04, 1983	16.30	APR 05, 1983	16.99	MAY 12, 1983	13.77
FEB 11	15.79						

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.83							---	14.76	15.45	15.84	19.50
2	16.88							---	14.78	15.42	15.88	18.08
3	16.95							---	14.78	15.44	15.91	17.24
4	16.98							---	14.87	15.45	15.97	16.97
5	17.02							---	14.93	15.47	16.02	16.85
6	17.05							---	14.99	15.54	16.06	20.16
7	17.06							---	15.03	15.58	16.09	18.23
8	---							---	15.10	16.63	16.16	17.30
9	---							---	15.12	15.74	16.20	17.05
10	---							---	15.24	15.71	16.21	16.92
11	---							---	15.28	18.34	16.23	16.84
12	---							---	15.32	16.69	16.26	16.80
13	---							22.08	15.36	16.14	16.29	16.98
14	---							19.16	15.41	22.26	16.32	16.77
15	---							16.18	15.47	23.59	16.37	16.74
16	---							17.05	15.52	19.84	16.40	16.69
17	---							15.26	15.55	17.70	18.69	16.70
18	---							14.90	15.40	16.62	18.90	16.67
19	---							14.68	15.23	15.87	17.53	16.62
20	---							14.50	14.74	15.47	16.85	16.53
21	---							14.41	14.54	15.27	16.62	16.53
22	---							14.30	19.80	15.21	18.78	16.49
23	---							14.11	21.97	15.28	17.22	16.54
24	---							14.09	20.71	15.35	17.64	16.57
25	---							14.17	18.31	15.43	16.81	16.55
26	---							18.30	16.55	15.49	19.33	16.57
27	---							15.32	16.05	15.55	17.43	16.68
28	---							14.73	15.80	15.62	16.82	16.64
29	---							14.59	15.69	15.69	17.49	18.06
30	---							14.61	15.57	15.73	18.74	19.36
31	---							14.69	---	15.78	19.33	---
MAX	17.06							22.08	21.97	23.59	19.33	20.16

WTR YR 1983 MEAN 16.52 HIGH 14.09 LOW 23.59

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

395027082592500. Local number, FR 151.
LOCATION.--Lat 39°50'27", long 82°59'25", Hydrologic Unit 05060001, near Shadeville.
AQUIFER.--Glacial sand and gravel of Quaternary Age.
WELL CHARACTERISTICS.--Drilled observation well, diameter 2 in (0.05 m), depth 60 ft (18.29 m).
DATUM.--Altitude of land-surface datum is 720 ft (219.46 m).

HIGHEST WATER LEVEL 24.72 FEET BELOW LAND SURFACE DATUM JUL 22, 1983.

LOWEST WATER LEVEL 25.80 FEET BELOW LAND SURFACE DATUM SEP 01, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JUL 13, 1983	25.11	JUL 22, 1983	24.72	AUG 12, 1983	25.38	SEP 01, 1983	25.80

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
SEP 01...	1230	745	7.2	12.5	1.4	.0	.2	110	34	9.1

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE FET-FLD (MG/L AS HCO3)	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)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)
SEP 01...	1.4	420	73	27	.2	11	409	<.010	.080	.010

DATE	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, DISSOLVED (MG/L AS P)	ARSENIC DISSOLVED (UG/L AS AS)	CADMIUM DISSOLVED (UG/L AS CD)
SEP 01...	.01	.32	.19	.40	.20	.20	<.010	<.010	4	<1

DATE	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 DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)
SEP 01...	<10	3	1100	<1	52	<.1	<1	12	.9	.3

395025082592000. Local number, FR 150.
LOCATION.--Lat 39°50'25", long 82°59'20", Hydrologic Unit 05060001, near Shadeville.
AQUIFER.--Glacial sand and gravel of Quaternary Age.
WELL CHARACTERISTICS.--Drilled domestic well, diameter 5 in (0.13 m), depth 55 ft (16.76 m).
DATUM.--Altitude of land-surface datum is 728 ft (221.89 m).

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
SEP 01...	0940	720	7.3	14.5	1.6	.0	.3	110	35	4.9

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE FET-FLD (MG/L AS HCO3)	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)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)
SEP 01...	1.2	390	84	30	.2	12	486	<.010	.020	.040

DATE	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, DISSOLVED (MG/L AS P)	ARSENIC DISSOLVED (UG/L AS AS)	CADMIUM DISSOLVED (UG/L AS CD)
SEP 01...	.05	.48	.26	.50	.20	.30	<.010	<.010	3	<1

DATE	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 DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)
SEP 01...	<10	3	1800	<1	53	<.1	<1	16	.8	.2

395008082593100. Local number, FR-126, M13.
LOCATION.--Lat 39°50'08", long 82°59'31", Hydrological 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 15.33 FEET BELOW LAND SURFACE DATUM MAY 12, 1983.

LOWEST WATER LEVEL 19.20 FEET BELOW LAND SURFACE DATUM NOV 03, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1982	19.15	JAN 06, 1983	18.29	APR 05, 1983	18.88	JUL 12, 1983	17.55
NOV 03	19.20	FEB 11	18.16	MAY 12	15.33	AUG 12	17.66
DEC 03	18.47	MAR 04	18.68	JUN 07	15.51	30	18.09

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)
SEP 01...	1600	520	7.2	12.5	1.4	1.0	3.6	65	25	6.1	2.3

DATE	BICARBONATE FET-FLD (MG/L AS HCO3)	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)	NITROGEN, NITRITE TOTAL (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 01...	400	3.1	3.6	.6	7.2	267	<.010	.310	.280	.36	.99

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)	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 DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)
SEP 01...	.32	1.30	.70	.60	.010	<.010	11000	800	3.0	.6

395029082590300. Local number, FR 115, P3.
LOCATION.--Lat 39°50'29", long 82°59'03", Hydrologic Unit 05060001, near Hamilton Meadows.
AQUIFER.--Glacial sand and gravel of Quaternary Age.
WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in (0.15 m), depth 65 ft (19.81 m).
DATUM.--Altitude of land-surface datum is 710 ft (216.41 m).

HIGHEST WATER LEVEL 12.62 FEET BELOW LAND SURFACE DATUM MAY 09, 1983.

LOWEST WATER LEVEL 19.68 FEET BELOW LAND SURFACE DATUM SEP 01, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1982	16.13	JAN 06, 1983	14.72	APR 05, 1983	16.14	JUL 12, 1983	15.36
NOV 03	16.45	FEB 11	15.08	MAY 09	12.62	AUG 15	15.48
DEC 03	15.44	MAR 04	15.53	JUN 07	14.17	SEP 01	19.68

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)
SEP 01...	1445	785	7.0	12.5	1.6	.0	.0	120	37	2.6	1.0

DATE	BICARBONATE FET-FLD (MG/L AS HCO3)	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)	NITROGEN, NITRITE TOTAL (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 01...	440	91	19	.3	14	500	<.010	.120	.040	.05	.18

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)	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 DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)
SEP 01...	.26	.30	.00	.30	<.010	.010	5200	72	.8	.2

FRANKLIN COUNTY

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 to evaluate the effects of several landfills on the chemical quality of the ground-water and surface-water systems just south of Columbus, Ohio.

395218083023900. Local number, FR-133.
LOCATION.--Lat 39°52'18", long 83°02'39", Hydrologic Unit 0506001, on White Road near Grove City, Ohio
Owner: City of Columbus.
AQUIFER.--Gravel of Quaternary Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 2 in (5.08 cm), depth 82 ft (24.9 m), cased to 82 ft (24.9 m), finish: 4.0 ft (1.22 m) of 0.80 in (2.0 cm) well screen.
DATUM.--Altitude of land-surface datum is 680 ft (207.26 m). Measuring point: Top of casing, 0.0 ft (0.0 m) above land-surface datum.
PERIOD OF RECORD.--April 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level 49.05 ft (14.95 m) below land surface datum, April 1, 1980; lowest, 55.5 ft (16.92 m) below land-surface datum, Sept 16, 1982.

HIGHEST WATER LEVEL 54.93 FEET BELOW LAND SURFACE DATUM MAY 12, 1983.

LOWEST WATER LEVEL 56.18 FEET BELOW LAND SURFACE DATUM NOV 16, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	55.74	DEC 15, 1982	55.70	FEB 15, 1983	55.53	MAY 12, 1983	54.93
NOV 16	56.18	JAN 17, 1983	55.43				

395314083015600. Local number, FR-201
LOCATION.--Lat 39°53'14", long 83°01'56", Hydrologic Unit 05060001, on Thrailkill Road near Columbus, Ohio.
Owner: Mason-Dixon Truck Lines
AQUIFER.--Glacial Gravel of Quaternary Age.
WELL CHARACTERISTICS.--Drilled commercial water well, diameter 4.25 in (10.79 cm), depth 84 ft (25.60 m), cased to 84 ft (25.60 m).
DATUM.--Altitude of land-surface datum is 731 ft (222.80 m).!Measuring point: Top of casing, 1.03 ft (0.31 m) above land surface datum.
PERIOD OF RECORD.--June 1979 to curent year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 66.97 ft (20.41 m) below land-surface datum, June 25, 1979; lowest, 75.30 ft (22.95 m) below land-surface datum, May 12, 1983.

HIGHEST WATER LEVEL 73.39 FEET BELOW LAND SURFACE DATUM OCT 13, 1982.

LOWEST WATER LEVEL 75.30 FEET BELOW LAND SURFACE DATUM MAY 12, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	73.39	DEC 15, 1982	74.14	FEB 16, 1983	74.67	MAY 12, 1983	75.30
NOV 17	73.99	JAN 17, 1983	74.45				

395314083021900. Local number FR-202
LOCATION.--Lat.39°53'14", long 83°02'19", Hydrologic Unit 05060001, on Thrailkill Road near Columbus, Ohio
Owner: D.W. Himes
AQUIFER.--Limestone of Silurian age.
WELL CHARACTERISTICS.-- Drilled domestic water well, diameter 5 in (12.7 cm), depth 220 ft (67.06 m), cased to 139 ft (42.37 m).
DATUM.--Altitude of land-surface datum is 752 ft(229.21 m). Measuring point: Top of casing, 1.17 ft (0.36 m) above land-surface datum.
PERIOD OF RECORD.--June 1979 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 66.17 ft (20.17 m) below land-surface datum, June 25, 1979; lowest, 74.36 ft (22.66 m) below land-surface datum, Nov. 17, 1982.

HIGHEST WATER LEVEL 73.78 FEET BELOW LAND SURFACE DATUM JAN 17, 1983.

LOWEST WATER LEVEL 74.36 FEET BELOW LAND SURFACE DATUM NOV 17, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	74.05	DEC 15, 1982	74.03	FEB 16, 1983	74.05	MAY 12, 1983	74.05
NOV 17	74.36	JAN 17, 1983	73.78				

395238083015500. Local number, FR-204
LOCATION.--Lat 39°52'38", long 83°01'55", Hydrologic Unit 05060001, on Stringtown Road near Grove City, Ohio.
Owner: C Evans.
AQUIFER.--Sand and Gravel of Quaternary Age.
WELL CHARACTERISTICS.--Drilled domestic water well, diameter 5 in (12.7 cm), depth 73.7 ft (22.46 m).
DATUM.--Altitude of land-surface datum is 740 ft (225.55 m). Measuring point: Top of casing, 0.0 ft (0.0 m) above land-surface datum.
PERIOD OF RECORD.--June 1979 to current year.
EXTREMES FOR PERIOD OF RECORD.-- Highest water level, 68.06 ft (20.74 m) below land-surface datum, June 25, 1979; lowest, 73.02 ft (22.25 m) below land-surface datum, May 12, 1982.

HIGHEST WATER LEVEL 70.18 FEET BELOW LAND SURFACE DATUM MAY 12, 1983.

LOWEST WATER LEVEL 73.02 FEET BELOW LAND SURFACE DATUM NOV 16, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	72.60	DEC 15, 1982	72.78	FEB 16, 1983	71.96	MAY 12, 1983	70.18
NOV 16	73.02	JAN 17, 1983	71.71				

FRANKLIN COUNTY

395206083014501. Local number, FR-209.
LOCATION.--Lat 39°52'06", long 83°01'45", Hydrologic Unit 05060001, on White Road near Grove City, Ohio.
Owner: M. Davis.
AQUIFER.--Sand and gravel of Quaternary Age.
WELL CHARACTERISTICS.--Drilled domestic water well, diameter 5 in (12.7 cm) depth unknown.
DATUM.-- Altitude of land-surface datum is 700 ft (213.36 m). Measuring point: Top of casing, 0.72 ft (0.22 m) above land-surface datum.
PERIOD OF RECORD.--June 1979 to current year.
EXTREMES FOR PERIOD OF RECORD.-- Highest water level, 13.51 ft (4.12 m) below land-surface datum, June 8, 1982; lowest, 16.13 ft (4.92 m) below land-surface datum, Nov. 16, 1982.

HIGHEST WATER LEVEL 13.04 FEET BELOW LAND SURFACE DATUM MAY 12, 1983.

LOWEST WATER LEVEL 16.13 FEET BELOW LAND SURFACE DATUM NOV 16, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	15.83	DEC 15, 1982	15.96	FEB 16, 1983	15.25	MAY 12, 1983	13.04
NOV 16	16.13	JAN 17, 1983	15.34				

395206083014901. Local number FR-210
LOCATION.--Lat 39°52'06", long 83°01'49", Hydrologic Unit 05060001, on White Road near Grove City, Ohio.
Owner: J. Carducci.
AQUIFER.--Sand and gravel of Quaternary age.
WELL CHATERISTICS.--Drilled domestic water well, diameter 5 in (12.7 cm) depth unknown.
DATUM.-- Altitude of land-surface datum is 707 ft (215.49 m). Measuring point: Top of casing, 0.45 ft. (0.14 m) above land-surface datum.
PERIOD OF RECORD.-- June 1979 to current year.
EXTREMES FOR PERIOD OF RECORD.-- Highest water level, 20.72 ft; (6.32 m) below land-surface datum, June 27, 1979; lowest, 23.87 ft (7.27 m) below land-surface datum, Nov. 18, 1982.

HIGHEST WATER LEVEL 20.84 FEET BELOW LAND SURFACE DATUM MAY 12, 1983.

LOWEST WATER LEVEL 23.87 FEET BELOW LAND SURFACE DATUM NOV 18, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	23.46	DEC 15, 1982	23.61	FEB 16, 1983	22.91	MAY 12, 1983	20.84
NOV 18	23.87	JAN 17, 1983	22.92				

FRANKLIN COUNTY

395213083022101. Local number FR-212
LOCATION.--Lat 39°52'13", long 83°02'21", Hydrologic Unit 05060001, on White Road near Grove City, Ohio.
Owner: J. Seidenschmidt.
AQUIFER.--Sand and gravel of Quaternary Age.
WELL CHARACTERISTICS.--Drilled domestic water well, diameter 4.25 in (10.8 cm) depth unknown
DATUM.--Altitude of land surface datum is 752 ft (229.21 m).Measuring point: Top of casing, 0.8 ft (0.24 m) above land-surface datum.
PERIOD OF RECORD.--June 1979 to current year.
EXTREMES FOR PERIOD OF RECORD.-- Highest water level, 62.82 ft (19.15 m) below land-surface datum; June 27, 1979; lowest, 67.93 ft (20.70 m) below land-surface datum, Nov. 16, 1982, and Jan. 17, 1983

HIGHEST WATER LEVEL 66.44 FEET BELOW LAND SURFACE DATUM MAY 12, 1983.

LOWEST WATER LEVEL 67.93 FEET BELOW LAND SURFACE DATUM NOV 16, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	67.54	DEC 15, 1982	67.77	FEB 16, 1983	67.34	MAY 12, 1983	66.44
NOV 16	67.93	JAN 17, 1983	67.93				

395315083020002. Local number FR-213
LOCATION.--Lat 39°53'15", long 83°02'00", Hydrologic Unit 05060001, on Thrailkill Road near Columbus, Ohio.
Owner: Tom Cannon Co.
AQUIFER.--Gravel of Quaternary Age.
WELL CHARACTERISTICS.--Drilled domestic water well, diameter 5 in (12.7 cm), depth 97 ft (29.56 m), cased to 97 ft (29.56 m).
DATUM.--Altitude of land-surface datum is 731 ft (222.80 m). Measuring point: Top of casing, 0.8 ft (0.24 m) above land-surface datum.
PERIOD OF RECORD.--June 1982 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 71.38 ft (21.75 m) below land-surface datum, June 8, 1982; lowest, 74.75 ft (22.78 m) below land-surface datum, May 12, 1983.

HIGHEST WATER LEVEL 72.80 FEET BELOW LAND SURFACE DATUM OCT 13, 1982.

LOWEST WATER LEVEL 74.75 FEET BELOW LAND SURFACE DATUM MAY 12, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	72.80	DEC 15, 1982	73.65	FEB 16, 1983	74.14	MAY 12, 1983	74.75
NOV 17	73.38	JAN 17, 1983	73.85				

FRANKLIN COUNTY

395409083013201. Local number FR-217
LOCATION.--Lat 39°54'09", long 83°01'32", Hydrologic Unit 05060001, on Dyer Road near Columbus, Ohio
Owner: J.Strawser
AQUIFER.--Sand and Gravel of Quaternary Age.
WELL CHARACTERISTICS.--Drilled domestic water well, diameter 4.25 in (10.8 cm), depth 93 ft (28.34 m), cased to 93 ft (28.34 m).
DATUM.--Altitude of land-surface is 712 ft (217.02 m). Measuring point: Top of casing, 1.12 ft (0.34 m) above land-surface datum.
PERIOD OF RECORD.--July 1979 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 36.38 ft (11.09 m) below land-surface datum, July 1, 1979; lowest, 61.38 ft (18.70 m) below land-surface datum, Feb. 15, 1983.

HIGHEST WATER LEVEL 58.56 FEET BELOW LAND SURFACE DATUM OCT 13, 1982.

LOWEST WATER LEVEL 61.38 FEET BELOW LAND SURFACE DATUM FEB 15, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	58.56	DEC 15, 1982	59.43	FEB 15, 1983	61.38	MAY 10, 1983	60.13
NOV 16	59.46	JAN 17, 1983	60.20				

395409083015001. Local number, FR-224
LOCATION.--Lat 39°54'09", long 83°01'50", Hydrologic Unit 05060001, on Dyer Road near Columbus, Ohio.
Owner: H. Barnes.
AQUIFER.--Sand and gravel of Quaternary Age.
WELL CHARACTERISTICS.--Drilled domestic water well, diameter 5.5 in (13.9 cm), depth 78 ft (23.77 m), cased to 78 ft (23.77 m).
DATUM.--Altitude of land-surface datum is 721 ft (219.76 m). Measuring point: Top of casing, 0.69 ft (0.21 m) above land-surface datum.
PERIOD OF RECORD.--July 1979 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 44.72 ft (13.63 m) below land-surface datum, July 11,1979; lowest, 69.31 ft (21.12 m) below land-surface datum, May 11, 1983.

HIGHEST WATER LEVEL 65.49 FEET BELOW LAND SURFACE DATUM OCT 13, 1982.

LOWEST WATER LEVEL 69.31 FEET BELOW LAND SURFACE DATUM MAY 11, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	65.49	DEC 15, 1982	67.43	FEB 16, 1983	68.96	MAY 11, 1983	69.31
NOV 16	67.50	JAN 17, 1983	67.91				

FRANKLIN COUNTY

395348083022701 Local number FR-227
LOCATION.--Lat 39°53'48", long 83°02'27", Hydrologic Unit 05060001, on Lazar Road near Columbus, Ohio
Owner: J. Johnson.
AQUIFER.--Limestone of Silurian and Devonian Age.
WELL CHARACTERISTICS.--Drilled domestic water well, diameter 5 in (12.7 cm), depth 260 ft (79.25 m), cased to 93 ft (28.35 m).
DATUM.--Altitude of land-surface datum is 748 ft (227.99 m). Measuring point: Top of casing, 1.56 ft (0.48 m) above land-surface datum.
PERIOD OF RECORD.--July 1979 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 61.98 ft (18.89 m) below land-surface datum, July 11, 1979; lowest, 73.90 ft (22.52 m) below land-surface datum, Jan. 17, 1983.

HIGHEST WATER LEVEL 70.98 FEET BELOW LAND SURFACE DATUM OCT 13, 1982.

LOWEST WATER LEVEL 73.90 FEET BELOW LAND SURFACE DATUM JAN 17, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	70.98	DEC 15, 1982	72.69	FEB 16, 1983	72.77	MAY 12, 1983	72.06
NOV 17	71.90	JAN 17, 1983	73.90				

0395350083030001 Local number FR-230
LOCATION.--Lat 39°53'50", long 83°03'00", Hydrologic Unit 05060001, on Marlane Drive near Grove City, Ohio.
Owner:J. Kendrick.
AQUIFER.--Sand and gravel of Quaternary Age.
WELL CHARACTERISTICS.--Drilled domestic water well, diameter 6.0 in (15.2 cm), depth unknown.
DATUM.--Altitude of land-surface datum is 760 ft (231.65 m). Measuring point: Top of casing, 1.2 ft (0.36 m) above land-surface datum.
PERIOD OF RECORD.--July 1979 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 69.50 ft (21.18 m) below land-surface datum, July 11, 1979; lowest, 81.38 ft (24.38 m) below land-surface datum, Feb. 16, 1983.

HIGHEST WATER LEVEL 77.03 FEET BELOW LAND SURFACE DATUM OCT 13, 1982.

LOWEST WATER LEVEL 81.38 FEET BELOW LAND SURFACE DATUM FEB 16, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	77.03	DEC 15, 1982	77.57	FEB 16, 1983	81.38	MAY 12, 1983	78.01
NOV 16	77.67	JAN 17, 1983	77.51				

FRANKLIN COUNTY

395413083021301. Local number FR-234.
LOCATION.--Lat 39°54'13", long 83°02'13", Hydrologic Unit 05060001, on Brown Road near Columbus, Ohio.
Owner: H Koontz.
AQUIFER.--Limestone of Devonian Age.
WELL CHARACTERISTICS.--Drilled domestic water well, diameter 4 in (10.2 cm), depth 108 ft (32.92 m). cased to 80 ft (24.38 m).
DATUM.--Altitude of land-surface datum is 733 ft (223.42 m). Measuring point: Top of casing, 1.32 ft (0.40 m) above land-surface datum.
PERIOD OF RECORD.--July 1979 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 55.69 ft (16.97 m) below land-surface datum, July 12, 1979; lowest, 73.32 ft (22.34 m) below land-surface datum, May 12, 1983.

HIGHEST WATER LEVEL 70.72 FEET BELOW LAND SURFACE DATUM OCT 13, 1982.

LOWEST WATER LEVEL 73.32 FEET BELOW LAND SURFACE DATUM MAY 12, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	70.72	DEC 15, 1982	72.08	FEB 16, 1983	72.81	MAY 12, 1983	73.32
NOV 16	71.94	JAN 17, 1983	72.29				

395250083014101 Local number, FR-236
LOCATION--Lat 39°52'50", long 83°01'41", Hydrologic Unit 05060001, on S.R. 104 near Grove City, Ohio.
Owner: S.B. Riegle.
AQUIFER.--Sand and gravel of Quaternary Age.
WELL CHARACTERISTICS.--Drilled domestic water well, diameter 4.25 in (10.8 cm), depth 95 ft (28.96 m), cased to 95 ft (28.96 m).
DATUM.--Altitude of land-surface datum is 718 ft (218.85 m). Measuring point: Top of casing, 1.05 ft (0.32 m) above land-surface datum.
PERIOD OF RECORD.--July 1979 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 54.47 ft (16.60 m) below land-surface datum, July 6, 1979; lowest, 59.43 ft (18.11 m) below land-surface datum, Nov. 16, 1982.

HIGHEST WATER LEVEL 55.68 FEET BELOW LAND SURFACE DATUM MAY 12, 1983.

LOWEST WATER LEVEL 59.43 FEET BELOW LAND SURFACE DATUM NOV 16, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	58.83	DEC 15, 1982	58.70	FEB 16, 1983	57.99	MAY 12, 1983	55.68
NOV 16	59.43	JAN 17, 1983	57.78				

FRANKLIN COUNTY

395407083021500. Local number FR-237
LOCATION.-- Lat 39° 54'07", long 83°02'15", Hydrologic Unit 05060001, on Brown Road near Columbus Ohio
Owner: E Baugess
AQUIFER.--Limestone of Devonian Age.
WELL CHARACTERISTICS.--Drilled domestic water well, diameter 5.75 in (14.6 cm), depth 114 ft (34.75 m), cased to 96 ft (29.26 m).
DATUM.--Altitude of land-surface is 735 ft (224.03). Measuring point: Top of casing, 1.7 ft (0.52 m) above land-surface datum.
PERIOD OF RECORD.--October 1981 to September 1982.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 74.01 ft (22.56 m) below land-surface datum, June 7, 1982; lowest 80.08 ft (24.40 m) below land-surface datum, May 12, 1983.

HIGHEST WATER LEVEL 76.37 FEET BELOW LAND SURFACE DATUM OCT 13, 1982.

LOWEST WATER LEVEL 80.08 FEET BELOW LAND SURFACE DATUM MAY 12, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	76.37	DEC 15, 1982	78.16	FEB 16, 1983	79.12	MAY 12, 1983	80.08
NOV 16	77.82	JAN 17, 1983	78.58				

395333083020700. Local number FR-241.
LOCATION.--Lat 39°53'33", long 83°02'07", Hydrologic Unit 05060001, at Model Landfill Inc. near Columbus Ohio
Owner: Model Landfill Inc.
AQUIFER.--Clay and cobbles of Quaternary Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in (11.4 cm), depth 80 ft (24.38 m), cased to 60 ft (18.29 m), finish is 20.0 ft (6.09 m) of slotted screen.
DATUM.--Altitude of land-surface is 740 ft (225.55 m). Measuring point: Top of casing, 3.01 ft (0.92 m) above land-surface datum.
PERIOD OF RECORD.--August 1979 to current year.
EXTREEMES FOR PERIOD OF RECORD.--Highest water level, 37.52 ft (11.43 m) below land-surface datum, May 12, 1983; lowest, 50.69 ft (15.47 m) below land-surface datum, Nov. 18, 1982.

HIGHEST WATER LEVEL 37.52 FEET BELOW LAND SURFACE DATUM MAY 12, 1983.

LOWEST WATER LEVEL 50.69 FEET BELOW LAND SURFACE DATUM NOV 18, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	50.55	JAN 13, 1983	44.59	FEB 15, 1983	42.92	MAY 12, 1983	37.52
NOV 18	50.69						

FRANKLIN COUNTY

395319083012800. Local number FR-242
LOCATION.--Lat 39°53'19", long 83°01'28", Hydrologic Unit 05060001, at Model Landfill near Columbus, Ohio.
Owner: Model Landfill Inc.
AQUIFER.--Sand and gravel of Quaternary Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 6.0 in (15.24 cm), depth 68 ft (20.73 m), cased to 68 ft (20.73 m).
DATUM.--Altitude of land-surface datum is 705 ft (214.88 m). Measuring point: Top of casing, 0.94 ft (2.39 cm) above land-surface datum.
PERIOD OF RECORD.--April 1982 to September 1982.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 53.44 ft (16.29 m) below land-surface datum, April 13, 1982: lowest, 56.49 ft (17.21 m) below land-surface datum, Dec. 15, 1982.

HIGHEST WATER LEVEL 55.83 FEET BELOW LAND SURFACE DATUM MAY 12, 1983.

LOWEST WATER LEVEL 56.49 FEET BELOW LAND SURFACE DATUM DEC 15, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	56.21	JAN 13, 1983	56.26	FEB 16, 1983	56.39	MAY 12, 1983	55.83
DEC 15	56.49						

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)
JUL 27...	1000	1530	6.5	25.5	12.5	9.4	.0	.0	560	150	46

DATE	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE FET-FLD (MG/L AS HCO3)	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)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)
JUL 27...	110	2.9	480	241	130	240	.8	14	1230	<.10	.490

DATE	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	ARSENIC DISSOLVED (UG/L AS AS)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, HEXAVALENT, DIS. (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)
JUL 27...	.63	.01	.50	<.010	6	2	<1	4	3700	5	190

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY SUSPENDED RECOVERABLE (UG/L AS HG)	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS TOTAL (UG/L)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
JUL 27...	.4	.2	.2	8	16	1.8	.5	<.01	<1	.04

FRANKLIN COUNTY

395351083013700. Local number, FR-244
LOCATION.--Lat 39°53'51", long 83°01'37", Hydrologic Unit 05060001, at Model Landfill near Columbus, Ohio.
Owner: Model Landfill Inc.
AQUIFER.--Sand and gravel of Quaternary Age.
WELL CHARACTERISTICS.--Drilled observation well, diameter 4.5 in (11.4 cm), depth 75 ft (22.9 m), cased to 55 ft (16.76 m), finish is 20.0 ft (6.09 m) of slotted screen.
DATUM.--Altitude of land-surface datum is 700 ft (213.36 m). Measuring point: Top of casing, 3.63 ft (1.10 m) above land-surface datum.
PERIOD OF RECORD.--August 1979 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 41.89 ft (12.77 m) below land surface datum, Oct. 18, 1979; lowest, 61.99 ft (18.89 m) below land surface datum, Feb. 16, 1983.

HIGHEST WATER LEVEL 60.00 FEET BELOW LAND SURFACE DATUM OCT 13, 1982.

LOWEST WATER LEVEL 61.99 FEET BELOW LAND SURFACE DATUM FEB 16, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	60.00	DEC 15, 1982	61.22	FEB 16, 1983	61.99	MAY 12, 1983	60.10
NOV 16	61.13	JAN 13, 1983	60.97				

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
JUL 27...	1215	931	6.8	29.0	15.0	.6	.0	15	.0	400	110

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)	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)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)
JUL 27...	30	41	3.8	320	81	130	91	.2	9.6	740	<.10

DATE	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	ARSENIC DISSOLVED (UG/L AS AS)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, HEXAVALENT, DIS. (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)
JUL 27...	.220	.28	.18	.40	<.010	3	<1	<1	5	220	3

DATE	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY SUSPENDED RECOVERABLE (UG/L AS HG)	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS TOTAL (UG/L)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
JUL 27...	64	.1	.0	.2	5	6	2.0	.4	<.01	<1	.02

FRANKLIN COUNTY

395331083013900. Local number, Fr-246.
LOCATION.--Lat 39°53'31", long 83°01'39", Hydrologic Unit 05060001, at Model Landfill, near Columbus, Ohio.
Owner: Model Landfill, Inc.
AQUIFER.--Limestone of Devonian Age.
WELL CHARACTERISTICS.--Drilled commercial water well, diameter 4.0 in (10.2 cm), depth 142 ft (43.28 m), cased to 89 ft (27.1 m).
DATUM.--Altitude of land-surface datum is 722 ft (220.06 m). Measuring point: Top of casing, 0.0 ft (0.0 m) above land-surface datum.
PERIOD OF RECORD.--October 1979 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 104.40 ft (31.82 m) below land-surface datum, Oct. 18, 1979; lowest, 116.26 ft (35.43 m) below land-surface datum, Feb. 15, 1983.

HIGHEST WATER LEVEL 114.02 FEET BELOW LAND SURFACE DATUM MAY 12, 1983.

LOWEST WATER LEVEL 116.26 FEET BELOW LAND SURFACE DATUM FEB 15, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	114.43	DEC 15, 1982	115.70	FEB 15, 1983	116.26	MAY 12, 1983	114.02
NOV 16	115.57	JAN 13, 1983	115.69				

395451083005000. Local number, Fr-247.
LOCATION.--Lat 39°54'51", long 83°00'50", Hydrologic Unit 05060001, on SR 104 near Columbus Ohio.
Owner: Inland Products Inc.
AQUIFER.--Sand and gravel of Quaternary Age.
WELL CHARACTERISTICS.--Drilled commercial well, diameter 26 in (66.0 cm), depth 83 ft (25.29 m), cased to 43 ft (13.10 m), finish is 20 ft (6.10 m) of slotted screen.
DATUM.--Altitude of land-surface datum is 695 ft (211.84 m). Measuring point: Top of casing, 2.2 ft (0.67 m) above land-surface datum.
PERIOD OF RECORD.--August 1979 to currrent year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.24 ft (3.73 m) below land-surface datum, Aug. 9, 1979; lowest, 22.73 ft (6.93 m) below land-surface datum, Feb. 15, 1983.

HIGHEST WATER LEVEL 19.92 FEET BELOW LAND SURFACE DATUM OCT 13, 1982.

LOWEST WATER LEVEL 22.73 FEET BELOW LAND SURFACE DATUM FEB 15, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	19.92	DEC 15, 1982	20.76	FEB 15, 1983	22.73	MAY 10, 1983	20.93
NOV 17	20.07	JAN 17, 1983	20.05				

395458083011600. Local number. FR-248
LOCATION.--Lat 39°54'58", long 83°01'16" , Hydrologic unit 05060001, on Frank Road near Columbus, Ohio
Owner: Agg-Rok Inc.
AQUIFER.--Gravel of Quaternary Age.
WELL CHARACTERISTICS.--Drilled commercial water well, diameter 4.25 in (10.8 cm), depth 63 ft (19.20 m), cased to 63 ft (19.20 m).
DATUM.--Altitude of land-surface datum is 698 ft (212.75 m) Measuring point: Top of casing, 3.21 ft (0.98 m) below land-surface datum.
PERIOD OF RECORD.--August 1979 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 24.23 ft (7.38 m) below land-surface datum, Aug. 21, 1979: lowest, 40.87 ft (12.45 m) below land-surface datum, Nov. 17, 1982.

HIGHEST WATER LEVEL 34.66 FEET BELOW LAND SURFACE DATUM FEB 16, 1983.

LOWEST WATER LEVEL 40.87 FEET BELOW LAND SURFACE DATUM NOV 17, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	39.47	DEC 15, 1982	39.94	FEB 16, 1983	34.66	MAY 11, 1983	36.93
NOV 17	40.87	JAN 17, 1983	39.36				

395254083010700. Local number FR-253
LOCATION.--Lat 39°52'54", long 83°01'07", Hydrologic Unit 05060001, at Scioto River and I-270 E near Columbus, Ohio.
Owner: American Aggregates Corp.
AQUIFER.--Sand and Gravel of Quaternary Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 2 in (5.08 cm), depth 50 ft (15.24 m), cased to 40 ft (12.19 m), finish is 10 ft (3.05 m) 0.010 in (0.025 cm) slot screen.
DATUM.--Altitude of land-surface datum is 691 ft (210.62 m). Measuring point: Top of casing, 3.0 ft (0.91 m) above land-surface datum.
PERIOD OF RECORD.--May 1982 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 18.60 ft (5.67 m) below land-surface datum, May 11, 1983; lowest, 24.27 ft (7.38 m) below land-surface datum, Nov. 17, 1982.

HIGHEST WATER LEVEL 18.60 FEET BELOW LAND SURFACE DATUM MAY 11, 1983.

LOWEST WATER LEVEL 24.27 FEET BELOW LAND SURFACE DATUM NOV 17, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	24.25	DEC 16, 1982	23.30	FEB 15, 1983	23.51	MAY 11, 1983	18.60
NOV 17	24.27	JAN 13, 1983	23.09				

FRANKLIN COUNTY

395344083004100. Local number FR-254.
LOCATION.--Lat 39°53'44", long 83°00'41", Hydrologic Unit 05060001, at American Aggregates Quarry near Columbus, Ohio.
Owner: American Aggregates Corporation.
AQUIFER.--Sand and gravel of Quaternary Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 2 in (5.08 cm), depth 35 ft (10.67 m), cased to 30 ft (9.14 m), finish is 5 ft (1.52 m) of 0.10 in (0.025 cm) well screen.
DATUM.--Altitude of land-surface datum is 691.20 ft (210.68 m). Measuring point: Top of casing, 3.00 ft (0.91 m) above land-surface datum.
PERIOD OF RECORD.--May 1982 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 20.21 ft (6.16 m) below land-surface datum, May 11, 1982; lowest, 31.74 ft (9.67m) below land-surface datum, July 15, 1982.

HIGHEST WATER LEVEL 20.21 FEET BELOW LAND SURFACE DATUM MAY 11, 1983.

LOWEST WATER LEVEL 23.48 FEET BELOW LAND SURFACE DATUM OCT 13, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	23.48	DEC 16, 1982	22.40	FEB 15, 1983	22.23	MAY 11, 1983	20.21
NOV 17	23.25	JAN 13, 1983	21.34				

395403083000300. Local number, FR-255.
LOCATION.--Lat 39°54'03", long 83°00'03", Hydrologic Unit 05060001, at American Aggregates Quarry near Columbus, Ohio.
Owner: American Aggregates Corporation.
AQUIFER.--Sand and Gravel of Quaternary Age.
WELL CHARACTERISTICS.-- Drilled observation water well, diameter 2 in (5.08 cm), depth 80 ft (24.38 m), cased to 70 ft (21.34 m), finish is 10 ft (3.05 m) of 0.010 in (0.025 cm) well screen.
DATUM.--Altitude of land-surface datum is 714.20 ft (217.69 m). Measuring point: Top of casing, 3.0 ft (0.91 m) above land-surface datum.
PERIOD OF RECORD.--May 1982 to current year.
EXTREMES FOR PERIOD OF RECORD.--highest water level, 32.16 ft (9.80 m) below land-surface datum, May 11, 1983; lowest, 51.76 ft (15.78 m) below land-surface datum, July 15, 1982.

HIGHEST WATER LEVEL 32.16 FEET BELOW LAND SURFACE DATUM MAY 11, 1983.

LOWEST WATER LEVEL 41.68 FEET BELOW LAND SURFACE DATUM OCT 13, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	41.68	DEC 16, 1982	36.00	FEB 15, 1983	36.44	MAY 11, 1983	32.16
NOV 17	39.95	JAN 13, 1983	35.58				

FRANKLIN COUNTY

395523083003100. Local number FR-256.
LOCATION.--Lat 39°55'23", long 83°00'31", Hydrologic Unit 05060001, on Scioto River levee 0.6 mi (0.96 km) north of Frank Road near Columbus, Ohio.
Owner: City of Columbus.
AQUIFER.--Sand of Quaternary Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 2 in (5.08 cm), depth 40 ft (12.19 m),cased to 30 ft (9.14 m), finish is 10 ft (3.05 m) of 0.010 in (0.025 cm) well screen.
DATUM.--Altitude of land-surface datum is 710 ft (216.41 m). Measuring point: top of casing, 3.00 ft (0.91 m) above land-surface datum.
PERIOD OF RECORD.--May 1982 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 19.88 ft (6.06 m) below land-surface datum, May 11, 1983; lowest, 24.97 ft (7.61 m) below land-surface datum, Sept. 16, 1982.

HIGHEST WATER LEVEL 19.88 FEET BELOW LAND SURFACE DATUM MAY 11, 1983.

LOWEST WATER LEVEL 24.92 FEET BELOW LAND SURFACE DATUM OCT 13, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	24.92	DEC 15, 1982	24.20	FEB 15, 1983	23.59	MAY 11, 1983	19.88
NOV 16	24.92	JAN 13, 1983	23.52				

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
JUL 26...	0930	1520	6.8	28.0	17.0	1.7	.0	73	4.2	440	75

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)	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)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)
JUL 26...	62	84	34	790	199	48	130	.4	21	1000	<.10

DATE	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	ARSENIC DISSOLVED (UG/L AS AS)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, HEXAVALENT, DIS. (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)
JUL 26...	19.0	24	2.0	21	.020	9	2	<1	170	7600	8

DATE	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY SUSPENDED RECOVERABLE (UG/L AS HG)	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS TOTAL (UG/L)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
JUL 26...	25	.3	.1	.2	18	8	21	.1	<.01	1	.13

FRANKLIN COUNTY

395509083003700. Local number, FR-257
LOCATION.--Lat 39°55'09", long 83°00'37", Hydrologic Unit 05060001, on Scioto River levee 700 ft (213.36 m) north of Frank Road near Columbus, Ohio.
Owner: City of Columbus.
AQUIFER.--Sand and gravel of Quaternary Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 2 in (5.08 cm), depth 40 ft (12.19 m), cased to 35 ft (10.67 m), finish is 5 ft (1.52 m) of 0.010 in (0.025 cm) well screen.
DATUM.--Altitude of land-surface datum is 710 ft (216.41 m). Measuring point: Top of casing, 3.00 ft (0.91 m) above land-surface datum.
PERIOD OF RECORD.--May 1982 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 21.71 ft (6.62 m) below land-surface datum, May 11, 1983; lowest, 25.93 ft (7.90 m) below land-surface datum, Nov. 16, 1982.

HIGHEST WATER LEVEL 21.71 FEET BELOW LAND SURFACE DATUM MAY 11, 1983.

LOWEST WATER LEVEL 25.93 FEET BELOW LAND SURFACE DATUM NOV 16, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	25.73	DEC 15, 1982	25.24	FEB 15, 1983	24.60	MAY 11, 1983	21.71
NOV 16	25.93	JAN 13, 1983	24.37				

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
JAN 26...	0925	1450	6.7	--	14.0	.7	.3	97	2.0	530	120
JUL 26...	1230	1530	6.6	28.0	15.5	.2	.7	50	2.2	620	130

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)	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)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)
JAN 26...	55	52	22	900	285	33	76	.5	17	796	--
JUL 26...	72	61	16	820	327	140	81	.6	13	1100	<.10

DATE	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	ARSENIC DISSOLVED (UG/L AS AS)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, HEXAVALENT, DIS. (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)
JAN 26...	--	--	--	--	--	1	<1	<1	1	430	1
JUL 26...	11.0	14	1.0	12	.040	1	2	<1	7	260	3

DATE	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY SUSPENDED RECOVERABLE (UG/L AS HG)	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS TOTAL (UG/L)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
JAN 26...	120	--	--	<.1	9	<4	--	--	<.01	<1	.15
JUL 26...	100	.2	.0	.2	6	<3	12	.4	<.01	<1	.08

FRANKLIN COUNTY

395448083004200. Local number FR-258
LOCATION.--Lat 39°54'48", long 83°00'42", Hydrologic Unit 05060001, on Scioto River levee behind Inland Products near Columbus, Ohio.
Owner: City of Columbus.
AQUIFER.--Gravel and cobbles of Quaternary Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 2 in (5.08 cm), depth 50 ft (15.24 m), cased to 40 ft (12.19 m), finish is 5 ft (1.52 m) 0f 0.010 in (0.025 cm) well screen from 40 ft (12.19 m) to 45 ft (13.72 m).
DATUM.--Altitude of land-surface datum is 713 ft (217.32 m). Measuring point: Top of casing, 3.00 ft (0.91 m) above land-surface datum.
PERIOD OF RECORD.--May 1982 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 23.97 ft (7.31 m) below land-surface datum, May 10, 1983: lowest,30.76 ft (9.38 m) below land-surface datum, Aug. 13, 1982.

HIGHEST WATER LEVEL 23.97 FEET BELOW LAND SURFACE DATUM MAY 10, 1983.

LOWEST WATER LEVEL 30.26 FEET BELOW LAND SURFACE DATUM NOV 16, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	29.92	DEC 15, 1982	29.16	FEB 15, 1983	29.23	MAY 10, 1983	23.97
NOV 16	30.26	JAN 13, 1983	28.22				

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
JUL 26...	1530	954	6.7	28.0	15.5	3.7	.0	16	.2	380	96

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)	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)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)
JUL 26...	34	53	8.3	520	165	110	42	.6	13	687	<.10

DATE	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	ARSENIC DISSOLVED (UG/L AS AS)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, HEXAVALENT, DIS. (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)
JUL 26...	2.10	2.7	.60	2.7	<.010	4	2	<1	3	410	1

DATE	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS TOTAL (UG/L)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
JUL 26...	450	.2	<.1	7	8	3.9	4.3	<.01	<1	.02

FRANKLIN COUNTY

395417083005000. Local number FR-259
LOCATION.--Lat 39°54'17", long 83°00'50", Hydrologic Unit 05060001, in Columbus Landfill near Columbus, Ohio. Owner: City of Columbus.
AQUIFER.--Sand and Gravel of Quaternary Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 2 in (5.08 cm), depth 50 ft (15.24 m), cased to 45 ft (13.72 m), finish is 5 ft (1.52 m) of 0.010 in (0.025 cm) well screen.
DATUM.--Altitude of land-surface is 720 ft (219.46 m). Measuring point: Top of casing, 3.00 ft (0.91 m) above land-surface datum.
PERIOD OF RECORD.--May 1982 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 39.21 ft (11.95 m) below land-surface datun, May 10, 1983; lowest, 46.72 ft (14.24 m) below land-surface datum, Aug. 13, 1982.

HIGHEST WATER LEVEL 39.21 FEET BELOW LAND SURFACE DATUM MAY 10, 1983.

LOWEST WATER LEVEL 43.45 FEET BELOW LAND SURFACE DATUM NOV 16, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	43.12	DEC 15, 1982	41.88	FEB 15, 1983	42.80	MAY 10, 1983	39.21
NOV 16	43.45	JAN 13, 1983	41.95				

FRANKLIN COUNTY

395413083002900. Local number, FR-260
LOCATION.--Lat 39°54'13", long 83°00'29", Hydrologic Unit 05060001, on Scioto River levee 600 ft (182.88 m) North of Columbus Corporate boundary near Columbus, Ohio.
Owner: City of Columbus.
AQUIFER.--Gravel of Quaternary Age.
WELL CHARACTERISTICS.-- Drilled observation water well, diameter 2 in (5.08 cm), depth 60 ft (18.29 m), cased to 55 ft (16.76 m), finish is 5 ft (1.52 m) of 0.010 in (0.025 cm) well screen.
DATUM.--Altitude of land-surface datum is 713 ft (217.32 m). Measuring point: Top of casing, 3.00 ft (0.91 m) above land-surface datum.
PERIOD OF RECORD.--May 1982 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 27.82 ft (8.48 m) below land-surface datum, May 10, 1983; lowest, 43.35 ft (13.21 m) below land-surface datum, July 14, 1982.

HIGHEST WATER LEVEL 27.82 FEET BELOW LAND SURFACE DATUM MAY 10, 1983.

LOWEST WATER LEVEL 34.59 FEET BELOW LAND SURFACE DATUM OCT 13, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	34.59	DEC 15, 1982	31.81	FEB 15, 1983	31.76	MAY 10, 1983	27.82
NOV 16	33.90	JAN 13, 1983	30.94				

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
JUL 27...	1530	915	7.0	29.5	14.5	.2	.0	43	.3	290	73

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)	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)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)
JUL 27...	27	44	10	420	67	72	68	.8	17	600	<.10

DATE	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	ARSENIC DISSOLVED (UG/L AS AS)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, HEXAVALENT, DIS. (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)
JUL 27...	19.0	24	7.0	26	<.010	1	1	<1	2	1300	2

DATE	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY SUSPENDED RECOVERABLE (UG/L AS HG)	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS TOTAL (UG/L)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
JUL 27...	18	.3	.1	.2	5	6	5.3	.2	<.01	<1	.08

FRANKLIN COUNTY

395426083010200. Local number FR-261
LOCATION.--Lat 39°54'26", long 83°01'02", Hydrologic Unit 05060001, in Columbus Landfill near Columbus, Ohio.
Owner: City of Columbus.
AQUIFER.--Gravel of Quaternary Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 2 in (5.08 cm), depth 45 ft (13.72 m), cased to 40 ft (12.19 m), finish is 5 ft (1.52 m) of 0.010 in (0.025 cm) well screen.
DATUM.--Altitude of land-surface datum is 723 ft (220.37 m). Measuring point: Top of casing, 3.00 ft (0.91 m) above land-surface datum.
PERIOD OF RECORD.--May 1982 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 31.97 ft (9.74 m) below land-surface datum, Jan. 13, 1983; lowest, 41.88 ft (12.76 m) below land-surface datum, July 2, 1982.

HIGHEST WATER LEVEL 31.97 FEET BELOW LAND SURFACE DATUM JAN 13, 1983.

LOWEST WATER LEVEL 38.40 FEET BELOW LAND SURFACE DATUM OCT 13, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1982	38.40	DEC 15, 1982	35.82	FEB 15, 1983	36.64	MAY 10, 1983	32.31
NOV 16	37.90	JAN 13, 1983	31.97				

395255083003000. Local number FR-262
LOCATION.--Lat 39°52'55", long 83°00'30", Hydrologic Unit 05060001, 0.4 mi (0.64 km) N. of I-270, 0.4 mi (0.64 km) W. of US 23S, near Columbus, Ohio.
Owner: American Aggregates Corp.
AQUIFER.--Sand and gravel of Quaternary Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 2 in (5.08 cm), depth 50 ft (15.24 m), cased to 45 ft (13.72 m), finish is 5 ft (1.52 m) of 0.010 in (0.025 cm) well screen.
DATUM.--Altitude of land-surface datum is 691.8 ft (210.86 m). Measuring point: Top of casing, 3.00 ft (0.91 m) above land-surface datum.
PERIOD OF RECORD.--May 1982 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level 9.12 ft (2.78 m) below land-surface datum May 10, 1983; lowest, 17.78 ft (5.42 m) below land-surface datum, Oct. 14, 1982.

HIGHEST WATER LEVEL 9.12 FEET BELOW LAND SURFACE DATUM MAY 10, 1983.

LOWEST WATER LEVEL 17.78 FEET BELOW LAND SURFACE DATUM OCT 14, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14, 1982	17.78	DEC 16, 1982	16.10	FEB 15, 1983	15.38	MAY 10, 1983	9.12
NOV 17	17.65	JAN 13, 1983	13.83				

FRANKLIN COUNTY

395324083001500. Local number FR-263
LOCATION.--Lat 39°53'24", long 83°00'15", Hydrologic Unit 05060001, 500 ft (152.4 m) E of Scioto River and 1.0 mi (1.61 km) N of I-270 near Columbus, Ohio.
Owner: American Aggregates Corp.
AQUIFER.--Gravel of Quaternary Age.
WELL CHARACTERISTICS.--Drilled observation water well, diameter 2 in (5.08 cm), depth 50 ft (15.24 m), cased to 40 ft (12.19 m), finish is 5 ft (1.52 m) of 0.010 in (0.025 cm) well screen from 40 ft (12.19 m) to 45 ft (13.72 m).
DATUM.--Altitude of land-surface datum is 691.2 ft (210.68 m). Measuring point: base of instrument shelter 3.0 ft (0.91 m) above land-surface datum.
PERIOD OF RECORD.--May 1982 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.85 ft (1.48 m) below land surface datum, May 6, 7, 8, 1983; lowest, 16.52 ft (5.04 m) below land surface datum, Sept. 26, 1982.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.08	15.77	---	8.80	11.86	12.55	12.91	9.36	10.20	11.12	13.43	14.08
2	16.09	15.79	---	9.44	11.56	12.65	12.90	6.38	10.27	10.71	13.33	14.06
3	16.13	15.79	---	9.98	10.92	12.72	12.57	4.95	10.35	10.67	13.35	14.18
4	16.16	15.63	---	10.19	10.18	12.77	11.93	4.86	10.56	10.85	13.44	14.30
5	16.19	15.38	---	10.40	9.49	12.81	11.66	4.85	10.72	10.81	13.52	14.43
6	16.22	15.18	---	10.60	9.70	12.83	11.56	4.85	10.85	10.80	13.59	14.52
7	16.24	14.98	---	10.99	10.10	12.85	11.51	4.85	10.96	11.03	13.67	14.62
8	16.26	14.79	---	11.17	10.44	12.89	11.35	4.85	11.10	11.30	13.75	14.68
9	16.26	14.63	---	11.32	10.71	12.93	10.22	4.98	11.19	11.54	13.82	14.73
10	16.15	14.54	---	11.38	10.99	12.94	9.22	5.46	11.31	11.76	13.89	14.77
11	15.85	14.53	---	11.56	11.27	12.92	8.40	6.21	11.40	11.91	13.94	14.81
12	15.66	14.51	---	11.72	11.50	12.83	8.23	7.00	11.50	12.08	13.94	14.80
13	15.53	14.37	---	11.68	11.62	12.88	8.30	7.59	11.58	12.21	14.00	14.65
14	15.43	14.31	---	11.58	11.76	12.97	8.32	8.00	11.68	12.32	14.06	14.71
15	15.37	14.32	---	11.71	11.88	13.04	8.11	8.01	11.77	12.44	14.13	14.78
16	15.33	14.31	11.62	11.76	11.96	13.08	7.57	7.57	11.81	12.58	14.19	14.80
17	15.26	14.31	11.14	11.92	12.12	13.13	7.49	7.97	11.82	12.68	14.25	14.73
18	15.27	14.27	10.10	12.03	12.08	13.15	8.02	8.25	11.33	12.48	14.31	14.60
19	15.32	14.23	9.99	12.15	12.08	13.15	8.55	8.44	11.37	12.32	14.36	14.67
20	15.37	14.17	9.39	12.22	11.97	13.17	9.14	8.81	10.30	12.48	14.42	14.74
21	15.42	14.00	9.17	12.28	11.84	13.21	9.60	9.10	7.34	12.64	14.46	14.74
22	15.47	13.39	9.36	12.28	11.77	13.22	9.95	9.11	8.00	12.75	14.52	14.30
23	15.52	12.89	10.02	12.10	12.04	13.17	10.27	8.58	8.68	12.84	14.56	14.21
24	15.56	12.19	10.31	12.06	12.18	12.81	10.61	8.76	9.36	12.91	14.60	14.30
25	15.60	11.86	10.31	12.06	12.30	12.56	10.91	8.76	9.96	13.01	14.64	14.41
26	15.64	11.33	10.10	11.87	12.38	12.67	11.13	8.99	10.44	13.10	14.67	14.54
27	15.67	---	9.98	11.70	12.43	12.75	11.31	9.35	10.71	13.10	14.71	14.65
28	15.69	---	8.40	11.75	12.47	12.79	11.48	9.59	10.96	13.12	14.71	14.74
29	15.72	---	7.60	11.84	---	12.86	11.56	9.69	11.06	13.22	14.31	14.81
30	15.75	---	7.45	11.88	---	12.88	11.56	9.83	11.27	13.31	14.05	14.89
31	15.77	---	8.05	11.88	---	12.88	---	10.05	---	13.40	14.10	---
MAX	16.26	15.79	11.62	12.28	12.47	13.22	12.91	10.05	11.82	13.40	14.71	14.89

WTR YR 1983 MEAN 12.14 HIGH 4.85 LOW 16.26

FRANKLIN COUNTY

395329083013100. Local number FR-264
LOCATION.-- Lat 39°53'29", long 83°01'31", Hydrologic Unit 05060001, at American Aggregates Quarry near Columbus, Ohio.
Owner: American Aggregates Corp.
AQUIFER.--Limestone of Silurian and Devonian Age
WELL CHARACTERISTICS.--Drilled observation water well, diameter 5 in (12.7 cm), depth 140.52 ft (42.83 m), cased to 15.0 ft (4.57 m).
DATUM.--Altitude of land-surface datum is 663 ft (202.08 m). Measuring point: base of instrument shelter 0.0 ft (0.0 m) above land-surface datum.
PERIOD OF RECORD.--July 1982 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 57.14 ft (17.42 m) below land-surface datum, May 7, 1983; lowest, 62.19 ft (18.96 m) below land-surface datum, Sept. 21, 1983.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR.	APR	MAY	JUN	JUL	AUG	SEP
1	58.43	59.73	59.54	59.16	59.49	59.60	59.80	59.17	59.22	59.19	59.57	61.15
2	58.44	59.83	59.54	59.14	59.49	59.62	59.70	58.75	59.23	59.22	59.60	61.40
3	58.45	59.85	59.56	59.18	59.49	59.63	59.58	58.38	59.25	59.24	59.72	61.60
4	58.45	59.91	59.57	59.20	59.49	59.63	59.63	57.84	59.29	59.28	59.83	61.61
5	58.46	59.97	59.57	59.23	59.49	59.51	59.63	57.47	59.31	59.27	59.99	61.62
6	58.46	60.04	59.58	59.26	59.49	59.50	59.63	57.16	59.32	59.33	59.99	61.66
7	58.46	60.11	59.58	59.30	59.48	59.52	59.61	57.14	59.34	59.34	60.06	61.73
8	58.46	60.24	59.58	59.31	59.49	59.52	59.60	57.16	59.36	59.34	60.06	61.95
9	58.46	59.79	59.58	59.32	59.49	59.53	59.48	57.33	59.37	59.34	60.18	61.96
10	58.45	59.67	59.59	59.33	59.50	59.53	59.41	57.46	59.37	59.38	60.21	61.89
11	58.46	59.71	59.59	59.36	59.50	59.53	59.41	57.97	59.37	59.39	60.17	61.91
12	58.46	59.86	59.62	59.38	59.51	59.53	59.41	58.25	59.38	59.40	60.43	61.89
13	58.47	59.92	---	59.39	59.51	59.53	59.40	58.54	59.40	59.42	60.70	61.81
14	58.56	60.01	59.64	59.39	59.53	59.54	59.34	58.71	59.40	59.42	60.70	61.72
15	58.63	60.01	59.64	59.40	59.56	59.55	59.27	58.72	59.39	59.43	60.72	61.46
16	58.70	59.99	59.52	59.41	59.56	59.57	59.29	58.81	59.40	59.45	60.81	61.60
17	58.76	60.05	59.53	59.43	59.56	59.57	59.29	58.88	59.40	59.45	60.86	61.50
18	58.84	60.07	59.53	59.44	59.56	59.57	59.29	58.92	59.32	59.43	60.98	61.33
19	58.91	60.15	59.46	59.44	59.56	59.57	59.29	58.95	59.32	59.46	61.00	61.35
20	58.98	60.16	59.41	59.44	59.56	59.58	59.32	59.03	59.25	59.46	61.09	61.27
21	59.06	59.91	59.41	59.46	59.56	59.59	59.35	59.08	59.26	59.46	61.09	62.19
22	59.12	59.60	59.41	59.46	59.56	59.61	59.39	59.08	59.25	59.47	61.09	61.36
23	59.19	59.65	59.41	59.45	59.56	59.61	59.42	59.01	59.19	59.49	61.24	61.23
24	59.27	59.66	59.41	59.46	59.59	59.85	59.45	59.03	59.16	59.49	61.26	61.03
25	59.35	59.66	59.41	59.47	59.61	59.99	59.47	59.06	59.19	59.49	61.24	60.87
26	59.42	59.66	59.40	59.47	59.61	60.01	59.47	59.11	59.21	59.50	61.24	60.67
27	59.49	59.62	59.40	59.49	59.61	59.91	59.49	59.14	59.23	59.51	61.24	60.47
28	59.51	59.62	59.30	59.50	59.61	59.69	59.51	59.15	59.23	59.52	61.23	60.37
29	59.58	59.52	59.30	59.51	---	59.69	59.51	59.17	59.22	59.55	61.00	60.07
30	59.62	59.54	59.25	59.51	---	59.67	59.51	59.19	59.23	59.57	61.05	60.07
31	59.68	---	59.19	59.49	---	59.82	---	59.22	---	59.57	61.08	---
MAX	59.68	60.24	59.64	59.51	59.61	60.01	59.80	59.22	59.40	59.57	61.26	62.19

WTR YR 1983 MEAN 59.62 HIGH 57.14 LOW 62.19

FRANKLIN COUNTY

395329083013100. Local number FR-264--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE (DEG C)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)
NOV 08...	1310	1510	6.7	18.5	12.5	.5	11	12	680	190

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)	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)
NOV 08...	50	57	3.1	650	206	180	93	.6	15	945

DATE	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	ARSENIC DISSOLVED (UG/L AS AS)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, HEXAVALENT, DIS. (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)
NOV 08...	<.10	.550	.71	.45	1.0	.010	3	<1	<1	1

DATE	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, DISSOLVED (UG/L AS ZN)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS TOTAL (UG/L)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
NOV 08...	3100	4	340	<.1	<1	<4	<.01	<1	.04

SURFACE-WATER RECORDS

395316083013300 SCIOTO BIG RUN AT COLUMBUS, OH

LOCATION.--Lat 39°53'16", long 83°01'33", Franklin County, Hydrologic Unit 05060001, right bank, 0.83 mi (1.34 km) downstream of Marsh Run and 0.68 mi (1.09 km) upstream from confluence with Scioto River at Columbus, Ohio.
PERIOD OF RECORD:--May 1979 to current year.
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 1982 TO SEPTEMBER 1983

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	TEMPERATURE (DEG C)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
NOV 09...	1230	935	12.0	.0	<10	.4	430	100	43	46

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE FET-FLD (MG/L AS HCO3)	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)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)
NOV 09...	4.0	390	130	70	.3	7.6	514	.22	.030	.04

DATE	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	ARSENIC DISSOLVED (UG/L AS AS)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, HEXAVALENT, DIS. (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)
NOV 09...	.37	.40	.030	1	<1	<1	5	26	5

DATE	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS TOTAL (UG/L)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
NOV 09...	30	.1	2	12	3.4	.5	<.01	<1	.04

SURFACE-WATER RECORDS

395436083003300 SCIOTO RIVER 2.2 MI SOUTH OF GREENLAWN AVE. AT COLUMBUS,OH

LOCATION.Lat 39°54'36", long 83°00'33", Franklin County, Hydrologic Unit 05060001, left bank, 2.2 mi (3.54 km) downstream from bridge at Greenlawn Ave and 0.85 mi (1.37 km) upstream from Kain Run at Columbus, Ohio
PERIOD OF RECORD.May 1982 to current year.
REMARKS.This site is used for chemical quality sampling only as a part of a cooperative study with the City of Columbus.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)
OCT 19...	1430	724	7.6	18.0	.0	68	3.2	250	64	22

DATE	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE FET-FLD (MG/L AS HCO3)	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)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)
OCT 19...	56	7.0	180	7.2	130	69	1.0	5.6	462	4.2

DATE	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	ARSENIC DISSOLVED (UG/L AS AS)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, HEXAVALENT, DIS. (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)
OCT 19...	2.50	3.2	.90	3.4	2.80	2	<1	<1	7

DATE	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, DISSOLVED (UG/L AS ZN)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS TOTAL (UG/L)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
OCT 19...	19	5	27	.4	12	200	.01	<1	.21

Water-quality urban hydrology stations are particular sites where chemical-quality data are collected systematically over a period of years for use in areal hydrologic analysis. The data are collected for three to ten selected runoff events during the year.

03226890 Turkey Run at Upper Arlington, Ohio

LOCATION.--Lat 40°02'10", long 83°04'06", Franklin County, Hydrologic Unit 05060001, at culvert on Lytham Road at Upper Arlington.
DRAINAGE AREA.--0.90 mi^2 (1.45 km^2).
PERIOD OF RECORD.--April 1981 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE LAB (UMHOS)	PH (STAND-ARD UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
NOV										
11...	1255	8.6	475	7.6	10.5	5.8	41	--	--	--
11...	1310	9.7	440	7.4	10.5	5.6	49	--	--	--
11...	1340	11	299	7.3	11.5	5.7	27	--	--	--
11...	1455	6.6	188	7.3	12.0	6.0	38	--	--	--
JUN										
19...	0510	13	136	6.4	22.5	--	40	--	--	--
19...	0755	23	162	6.4	22.0	--	18	--	--	--
19...	1455	5.2	255	6.6	24.0	--	42	.0	--	--
JUL										
17...	1620	6.7	585	--	26.5	--	42	--	--	--
17...	1635	17	161	6.6	27.0	--	110	--	--	--
17...	1650	45	311	6.5	25.5	--	72	--	--	--
17...	1810	16	310	--	26.0	--	68	--	--	--
17...	2015	4.2	200	6.5	25.0	--	57	--	--	--
AUG										
28...	1335	5.8	151	--	--	--	91	--	--	--
28...	1345	27	222	--	--	--	53	--	--	--
28...	1430	57	165	--	--	--	70	--	--	--
SEP										
01...	1050	.50	413	--	--	--	74	--	--	--
01...	1051	.50	413	--	--	--	23	--	--	--
01...	1100	.50	--	--	--	--	--	2.0	1500	2070
01...	1102	.50	--	--	--	--	--	1.8	--	2000

DATE	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)	ALKA-LINITY LAB (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
NOV										
11...	180	79	54	11	23	4.1	101	4.9	40	55
11...	160	55	47	11	23	3.8	108	8.3	40	37
11...	110	37	34	6.9	18	2.9	76	7.4	34	23
11...	68	15	21	3.8	8.7	1.3	53	5.1	20	11
JUN										
19...	47	3	14	2.9	3.9	1.3	44	34	14	7.6
19...	59	--	19	2.9	5.1	2.3	--	--	19	7.9
19...	100	31	31	6.2	8.9	2.4	72	35	29	15
JUL										
17...	230	98	60	20	27	2.5	134	--	73	57
17...	44	0	13	2.9	6.3	2.0	47	23	16	12
17...	97	3	25	8.3	12	2.3	94	58	33	23
17...	98	0	27	7.5	11	3.6	124	--	32	21
17...	71	15	22	4.0	6.0	2.8	56	34	22	11
AUG										
28...	55	20	17	3.1	3.3	1.9	35	--	19	6.0
28...	78	0	24	4.3	4.7	2.6	68	--	25	9.2
28...	47	0	15	2.2	2.1	3.1	58	--	17	4.7
SEP										
01...	180	61	52	12	12	3.0	118	--	50	22
01...	180	61	52	12	12	3.0	118	--	51	22
01...	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--

03226890 Turkey Run at Upper Arlington, Ohio--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	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)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS TOTAL (MG/L AS PO4)
NOV										
11...	317	2460	.50	.320	1.9	2.20	2.7	12	.360	1.1
11...	274	3240	.20	.500	1.9	2.40	2.6	12	.380	1.2
11...	201	2180	.20	.340	2.2	2.50	2.7	12	.380	1.2
11...	116	130	<.10	.120	1.3	1.40	--	--	.230	.71
JUN										
19...	72	154	.50	.150	1.8	1.90	2.4	11	.090	.28
19...	91	152	1.1	.340	1.2	1.50	2.6	12	.090	.28
19...	159	16	1.1	.110	.79	.90	2.0	8.9	.080	.25
JUL										
17...	377	51	.60	.070	.83	.90	1.5	6.6	.200	.61
17...	81	156	1.0	.520	3.8	4.30	5.3	23	.430	1.3
17...	168	311	1.0	.300	3.0	3.30	4.3	19	.440	1.4
17...	160	960	1.0	.500	5.7	6.20	7.2	32	.920	2.8
17...	115	80	1.2	.410	1.7	2.10	3.3	15	.330	1.0
AUG										
28...	100	17	.90	.960	.94	1.90	2.8	12	.110	.34
28...	135	108	.90	.760	2.9	3.70	4.6	20	.110	.34
28...	86	392	1.0	.830	3.4	4.20	5.2	23	.150	.46
SEP										
01...	259	8	1.3	.050	.65	.70	2.0	8.9	.030	.09
01...	280	6	1.3	.040	.76	.80	2.1	9.3	.030	.09
01...	--	--	1.3	.040	.56	.60	1.9	8.4	.050	.15
01...	--	--	1.3	.020	.68	.70	2.0	8.9	.040	.12

DATE	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV									
11...	4	<1	20	21	4200	72	12	170	10
11...	4	<1	20	22	5100	70	17	190	16
11...	4	<1	10	27	5000	95	16	250	21
11...	3	<1	10	17	2600	79	9	140	14
JUN									
19...	2	5	30	39	4400	83	11	230	8.7
19...	2	4	10	20	5700	49	15	150	11
19...	2	3	10	10	620	20	6	80	6.9
JUL									
17...	2	2	20	9	830	32	9	50	11
17...	2	2	30	200	3300	370	30	150	15
17...	3	2	30	32	3300	140	26	180	28
17...	4	5	50	66	22000	530	94	420	20
17...	2	3	20	20	3500	68	28	80	16
AUG									
28...	2	2	20	42	1200	46	6	130	8.4
28...	3	2	20	52	5400	200	14	210	4.4
28...	4	3	50	83	22000	200	34	420	18
SEP									
01...	2	1	20	30	460	5	1	20	6.9
01...	2	1	20	26	530	3	3	20	6.9
01...	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--

03228900 Casto Creek at Columbus, Ohio

LOCATION--Lat 40°04'54", long 82°55'37", Franklin County, Hydrologic Unit 05060001, at culvert on K-Mart service road 300 ft (91 m) north of Old State Route 161 at Columbus.
DRAINAGE AREA.--1.96 mi^2(5.08 km^2).
PERIOD OF RECORD.--May 1983 to September 1983

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE LAB (UMHOS)	TEMPER-ATURE (DEG C)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	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)
JUN												
17...	0900	11	200	--	28	--	--	--	91	39	27	5.7
17...	0920	70	299	--	33	--	--	--	100	21	30	6.2
17...	0935	102	235	--	24	--	--	--	83	23	25	5.1
17...	1000	52	328	--	37	--	--	--	120	27	34	7.5
19...	0555	7.2	408	--	29	--	--	--	150	48	43	10
19...	0700	97	227	--	23	--	--	--	88	18	26	5.7
19...	0810	66	243	--	31	--	--	--	88	13	26	5.7
SEP												
01...	1245	.50	--	--	--	1.1	2000	1400	--	--	--	--
01...	1246	.50	470	--	86	--	--	--	200	84	58	14
01...	1247	.50	--	--	--	1.0	--	2200	--	--	--	--
01...	1248	.50	473	--	28	--	--	--	190	69	56	13
11...	1610	7.2	648	34.5	120	--	--	--	240	120	65	19
11...	1615	24	369	34.5	50	--	--	--	120	51	35	9.0
11...	1625	48	430	34.0	67	--	--	--	140	53	39	9.9
11...	1710	16	296	34.0	76	--	--	--	110	43	33	7.0

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	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)	NITRO-GEN, TOTAL (MG/L AS N)
JUN												
17...	9.2	3.1	52	34	17	--	44	1.6	.340	1.8	2.10	3.7
17...	12	2.9	79	35	22	192	272	1.1	.470	1.8	2.30	3.4
17...	7.8	4.0	60	32	13	188	500	1.3	.550	1.5	2.00	3.3
17...	11	3.2	89	38	20	239	572	1.3	.350	2.0	2.30	3.6
19...	17	3.2	101	54	29	273	86	1.3	.210	1.1	1.30	2.6
19...	9.7	2.3	70	25	13	125	72	.40	.160	.84	1.00	1.4
19...	10	2.3	75	28	14	154	314	.40	.160	1.3	1.50	1.9
SEP												
01...	--	--	--	--	--	--	--	1.0	.040	1.2	1.20	2.2
01...	18	3.0	118	68	28	288	4	.90	.040	.46	.50	1.4
01...	--	--	--	--	--	--	--	.90	.030	.57	.60	1.5
01...	16	3.0	124	70	27	334	6	.90	.090	.41	.50	1.4
11...	38	3.6	123	97	70	437	114	.40	.060	1.4	1.50	1.9
11...	22	2.8	73	48	39	224	96	.80	.300	1.8	2.10	2.9
11...	29	4.0	85	56	45	279	266	.80	.310	.79	1.10	1.9
11...	13	2.9	68	41	20	201	190	1.1	.320	1.2	1.50	2.6

DATE	NITRO-GEN, TOTAL (MG/L AS NO3)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS TOTAL (MG/L AS PO4)	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
JUN												
17...	16	.160	.49	2	2	10	14	950	28	9	90	14
17...	15	.110	.34	2	2	10	22	5600	170	15	180	14
17...	15	.120	.37	2	3	30	27	12000	73	44	230	10
17...	16	.080	.25	4	3	10	25	2300	64	33	280	22
19...	12	.070	.21	2	2	<10	3	80	4	3	10	12
19...	6.2	.080	.25	2	2	20	12	4200	36	12	180	8.8
19...	8.4	.110	.34	2	2	20	38	9100	49	20	130	12
SEP												
01...	9.7	.040	.12	--	--	--	--	--	--	--	--	--
01...	6.2	.050	.15	1	1	10	11	190	5	5	40	6.8
01...	6.6	.040	.12	--	--	--	--	--	--	--	--	--
01...	6.2	.040	.12	2	1	10	28	260	7	2	30	7.2
11...	8.4	.250	.77	2	2	20	30	1900	41	8	120	19
11...	13	.190	.58	3	2	<10	34	2100	5	<1	140	12
11...	8.4	.370	1.1	2	5	10	34	4600	43	8	150	9.1
11...	12	.360	1.1	3	4	10	35	3100	64	14	160	23

The following tables contain chemical analyses from domestic and public ground-water sources throughout southeastern Ohio. The data was collected as part of a study to evaluate water quality associated with coal-bearing strata in the region.

STATION NUMBER	LOCAL IDENTIFIER	DATE OF SAMPLE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)
Athens County									
392004082112900	AT-51 G MISNER WATERLOO	83-01-31	1745	4350	8.0	8.5	4.0	34	.2
391931082155100	AT-52 BEN JONES OFF SR 3	83-02-01	1130	750	8.0	15.0	2.4	24	.3
391348082053700	AT-53 G YOUNG COUNTY RD	83-02-01	1445	540	7.3	6.0	8.8	70	.3
392407082131300	AT-54 R MOHLER YORK TWP	83-02-01	2000	940	8.6	8.5	4.9	42	1.0
391407082023700	AT-55 CHARLES POWELL US	83-02-02	0930	560	7.6	10.0	4.9	43	.2
391613082131700	AT-56 ROBT CONGROVE COUN	83-02-02	1045	1500	8.9	11.5	1.8	16	.3
392704082104400	AT-57 W WRIGHT COUNTY RD	83-02-02	1610	1020	7.3	12.0	5.3	49	.2
392541082164800	AT-58 W DIXON YORK TWP R	83-02-02	1710	945	7.0	13.0	5.2	49	.3
392407082133000	AT-59 E SHRIDER YORK TWP	83-02-06	1840	775	7.2	10.5	4.8	43	.0
392602082115800	AT-60 D PARSONS US 33 1.	83-02-07	1010	2350	7.2	9.5	5.7	50	.0
392820082095700	AT-61 J KEMPTON SR 78 1	83-02-07	1130	1050	7.4	10.0	6.6	58	.0
391959082554800	AT-63 W BURSON ROME TWP	83-02-08	1015	260	6.9	7.5	5.3	44	.0
392221081543700	AT-64 A HOLBERT CO RD 38	83-02-08	1200	310	7.6	6.5	7.6	62	.0
392049081524000	AT-65 J MARTIN ROME TWP	83-02-08	1350	600	7.2	10.0	4.6	41	.0
392122081522300	AT-66 J TABLER CO RD 85	83-02-08	1445	4250	7.5	10.0	4.2	37	.0
392752082103900	BUCHTEL SPRING OFF SR 78	83-02-07	1230	940	6.4	10.5	7.2	64	.0
Belmont County									
400826080543100	B-21 J DUNDR WHEELING TW	83-04-13	1220	790	7.6	15.0	6.8	67	.0
400818080520000	B-22 S DLESK COLERAIN TW	83-04-13	1415	690	7.3	12.0	5.8	54	.0
395510080460200	B-23 P MATOSZKIA 57756 V	83-04-13	1700	925	8.6	15.5	3.8	38	.0
400237081004100	B-24 ST OF OH BARKAMP ST	83-04-14	1115	450	7.6	12.5	6.3	59	.0
395700081101900	B-25 R HOLLAND SR 800 S	83-04-14	1400	430	7.6	14.0	5.6	54	.0
400015081100400	B-26 BRILL OFF HILLCREST	83-04-13	1730	630	7.4	15.0	4.6	45	.0
400758081105700	B-27 C WILKINS NR PIEDMT	83-04-22	1310	480	7.6	12.5	--	--	.0

----------	DATE OF SAMPLE	HARDNESS (MG/L AS 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)	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
Athens County											
392004082112900	83-01-31	273	70	23	870	5.4	560	--	8.9	120	1100
391931082155100	83-02-01	32	9.1	2.2	190	1.8	370	--	5.9	9.0	73
391348082053700	83-02-01	256	56	28	27	1.1	340	--	27	29	13
392407082131300	83-02-01	13	3.2	1.1	260	1.1	510	26	2.0	<5.0	52
391407082023700	83-02-02	203	65	9.8	41	1.2	300	--	12	56	21
391613082131700	83-02-02	7	2.0	.5	380	.9	490	41	1.0	51	180
392704082104400	83-02-02	565	170	34	12	2.4	310	--	25	360	11
392541082164800	83-02-02	477	130	37	25	1.4	310	--	49	270	17
392407082133000	83-02-06	293	79	23	65	1.8	440	--	44	130	6.9
392602082115800	83-02-07	521	150	35	350	6.6	480	--	48	270	400
392820082095700	83-02-07	190	43	20	160	2.7	360	--	23	46	140
391959082554800	83-02-08	98	27	7.4	13	.7	80	--	16	15	10
392221081543700	83-02-08	150	46	8.4	9.6	.3	170	--	6.8	20	8.9
392049081524000	83-02-08	298	60	36	26	1.7	360	--	36	68	6.8
392122081522300	83-02-08	214	62	14	850	3.1	390	--	20	43	1300
392752082103900	83-02-07	332	83	30	80	3.7	92	--	58	440	4.7
Belmo											
400826080543100	83-04-13	295	68	29	76	2.8	470	--	19	96	4.6
400818080520000	83-04-13	340	88	29	10	2.2	290	--	23	130	14
395510080460200	83-04-13	88	17	11	200	1.9	510	41	2.0	10	39
400237081004100	83-04-14	182	51	13	25	1.5	230	--	9.2	58	2.6
395700081101900	83-04-14	193	57	12	18	1.3	300	--	12	15	2.9
400015081100400	83-04-13	334	94	24	6.2	2.8	400	--	25	67	2.7
400758081105700	83-04-22	258	72	19	3.4	1.4	360	--	14	35	4.3

STATION NUMBER	DATE OF SAMPLE	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
Athens County									
392004082112900	83-01-31	.8	9.5	<.10	.020	<100	140	30	1.4
391931082155100	83-02-01	1.1	10	<.10	.090	<100	98	23	2.2
391348082053700	83-02-01	.1	11	1.3	<.010	<100	6	2	.7
392407082131300	83-02-01	1.9	8.1	<.10	.040	<100	33	5	1.0
391407082023700	83-02-02	.3	12	<.10	<.010	<100	24	91	.4
391613082131700	83-02-02	2.6	7.3	.12	.060	<100	<3	3	.8
392704082104400	83-02-02	1.0	30	1.0	<.010	100	49	630	1.3
392541082164800	83-02-02	.3	18	1.6	.020	<100	65	35	.8
392407082133000	83-02-06	.2	11	<.10	<.010	<100	680	850	.5
392602082115800	83-02-07	.4	15	<.10	<.010	<100	990	210	.6
392820082095700	83-02-07	.6	8.9	.22	<.010	<100	88	340	1.6
391959082554800	83-02-08	.1	14	11	<.010	100	13	5	.7
392221081543700	83-02-08	<.1	23	2.5	<.010	100	11	1	.7
392049081524000	83-02-08	.2	8.9	1.1	<.010	100	29	1	.5
392122081522300	83-02-08	.7	12	.13	<.010	100	30	240	.6
392752082103900	83-02-07	.3	8.9	.19	<.010	100	14	20	.5
Belmont County									
400826080543100	83-04-13	.3	12	.63	<.010	<100	5	3	1.0
400818080520000	83-04-13	.2	12	3.4	<.010	<100	31	2	1.2
395510080460200	83-04-13	2.7	8.9	<.10	<.010	<100	15	4	1.3
400237081004100	83-04-14	.2	14	.24	.010	100	49	11	.7
395700081101900	83-04-14	.3	17	<.10	<.010	300	1200	210	1.1
400015081100400	83-04-13	.2	7.7	1.6	<.010	100	66	9	.7
400758081105700	83-04-22	.3	6.3	.52	<.010	200	7	4	1.3

GROUND-WATER QUALITY OF COAL ASSOCIATED AQUIFERS IN EASTERN OHIO--continued.

STATION NUMBER	LOCAL IDENTIFIER	DATE OF SAMPLE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)
Guernsey County									
395658081371500	GU-71 F GOMBEDA SR 660 A	83-03-25	1110	1080	8.9	11.0	4.5	41	.2
395520081324200	GU-72 Z CLARK SR 313 IN	83-03-25	1340	440	7.8	12.0	6.9	64	.0
400121081310700	GU-73 M BROWN US RT 40 4	83-03-25	1605	1020	7.4	11.0	3.4	31	.0
400431081341700	GU-74 B KNOX TWP RD 639	83-03-28	1745	360	7.4	12.0	5.2	48	.0
400352081391600	GU-75 T LOWRY ADAMS TWP	83-03-28	1920	110	6.9	10.5	11.6	100	.0
401032081204700	GU-76 D BECKER CO RD 84	83-03-29	1100	1100	8.6	12.5	4.3	40	.0
400825081263700	GU-77 J JANOVYAK T587 NW	83-03-29	1345	560	7.7	9.5	6.6	57	.0
400844081330900	GU-78 STD OIL SR 541 AT	83-03-29	1830	2380	7.0	12.0	3.4	31	.2
401034081260700	GU-79 E JEWELL IN BIRMIN	83-04-07	1840	510	7.0	12.5	3.2	30	.0
400302081385400	GU-80 E STAVELY SR 209 3	83-04-08	1115	610	7.8	10.5	8.4	75	.8
400558081355100	GU-81 R CULBERTSON CO RD	83-04-08	1340	630	8.0	11.5	4.4	40	.2
400521081355700	GU-82 R DOUGLASS CO RD 3	83-04-08	1430	750	9.1	12.5	4.4	47	.0
Harrison County									
401109081003300	HS-21 H APPKEGARTH ST RT	83-04-21	1645	645	7.5	15.0	9.4	92	.2
401921080555100	HS-22 F HALL 47050 GABLE	83-04-21	1820	880	7.2	14.0	5.9	57	.2
Hocking County									
392608082170700	HK-51 M HUBBLE STARR TWP	83-04-01	1340	1990	7.3	12.0	6.4	59	.0
Jefferson County									
402020080493400	JE-91 J BROWNING US 22 I	83-04-22	1520	970	7.5	20.0	7.3	79	.0
402037080514800	JE-92 C LOUK COUNTY RD 3	83-04-22	1610	3600	6.9	17.5	4.3	45	.0
401414080480700	JE-93 E FETTY TWP RD 126	83-04-22	1800	700	7.5	11.0	8.9	80	.0
401701080481500	JE-94 E SMITH AND W WEST	83-04-22	1930	1250	7.4	12.0	3.2	30	.2
Meigs County									
390957082151000	ME-21 D ELLIOT COLUMBIA	83-02-22	1510	145	6.6	18.0	6.1	64	.2
391117082123000	ME-22 C BURKE COLUMBIA T	83-02-22	1645	940	8.7	11.0	2.2	20	.3
391129082061500	ME-23 O E MILARD MEIGS C	83-02-22	1900	540	7.0	13.5	4.9	47	.0

STATION NUMBER	DATE OF SAMPLE	HARDNESS (MG/L AS 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)	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
Guernsey County											
395658081371500	83-03-25	8	2.3	.6	340	2.5	650	37	1.3	12	30
395520081324200	83-03-25	189	52	14	18	.7	242	--	6.1	9.8	23
400121081310700	83-03-25	452	120	36	50	3.9	450	--	28	150	76
400431081341700	83-03-28	177	46	15	14	1.7	190	--	12	48	1.9
400352081391600	83-03-28	45	13	3.1	2.2	1.0	37	--	7.4	20	1.1
401032081204700	83-03-29	13	3.4	1.0	310	.9	610	41	2.4	6.1	46
400825081263700	83-03-29	244	62	21	38	4.4	290	--	9.2	88	1.3
400844081330900	83-03-29	973	240	90	140	6.9	360	--	57	900	210
401034081260700	83-04-07	203	55	16	26	1.6	190	--	30	90	33
400302081385400	83-04-08	65	17	5.4	130	2.4	440	--	11	11	9.7
400558081355100	83-04-08	20	5.5	1.6	150	1.9	400	--	6.4	2.0	33
400521081355700	83-04-08	5	1.1	.4	180	1.0	340	59	.4	3.0	30
Harrison County											
401109081003300	83-04-21	331	86	28	5.4	1.1	280	--	14	130	12
401921080555100	83-04-21	402	91	42	30	2.7	260	--	26	255	34
Hocking County											
392608082170700	83-04-01	1227	260	140	31	3.5	370	--	29	1000	6.6
Jefferson County											
402020080493400	83-04-22	474	120	42	37	2.4	390	--	20	180	80
402037080514800	83-04-22	3113	520	440	13	6.7	690	--	138	2700	4.0
401414080480700	83-04-22	370	90	35	3.9	2.3	380	--	19	100	7.0
401701080481500	83-04-22	123	32	10	270	5.4	840	--	53	54	57
Meigs County											
390957082151000	83-02-22	34	8.9	2.8	14	.7	32	--	13	36	1.4
391117082123000	83-02-22	12	3.3	1.0	260	1.5	450	31	1.4	<5.0	80
391129082061500	83-02-22	260	86	11	28	.8	220	--	35	37	31

GROUND-WATER QUALITY OF COAL ASSOCIATED AQUIFERS IN EASTERN OHIO--continued.

STATION NUMBER	DATE OF SAMPLE	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
Guernsey County									
395658081371500	83-03-25	1.6	5.5	<.10	.120	200	12	23	1.0
395520081324200	83-03-25	.4	17	<.10	.020	<100	760	100	.7
400121081310700	83-03-25	.3	6.1	<.10	<.010	200	870	190	1.3
400431081341700	83-03-28	.2	15	.13	<.010	300	8	9	.6
400352081391600	83-03-28	<.1	10	.22	<.010	<100	27	6	.6
401032081204700	83-03-29	4.7	7.0	<.10	.010	300	17	3	.5
400825081263700	83-03-29	.5	12	.62	<.010	100	17	3	.6
400844081330900	83-03-29	.3	10	<.10	<.010	200	15000	1100	1.3
401034081260700	83-04-07	.2	10	.20	<.010	300	220	110	1.1
400302081385400	83-04-08	.6	10	<.10	.010	100	24	83	.6
400558081355100	83-04-08	.4	11	<.10	.050	<100	22	18	.9
400521081355700	83-04-08	.8	8.9	<.10	.100	<100	6	4	.9
Harrison County									
401109081003300	83-04-21	.1	10	1.9	<.010	<100	20	5	1.2
401921080555100	83-04-21	.2	9.0	<.10	<.010	100	13	21	1.1
Hocking County									
392608082170700	83-04-01	.2	10	.20	<.010	<100	210	10	.9
Jefferson County									
402020080493400	83-04-22	.3	11	.15	<.010	<100	15	16	1.3
402037080514800	83-04-22	.2	10	<.10	<.010	<100	7300	5200	2.5
401414080480700	83-04-22	.1	9.6	2.0	<.010	<100	29	6	.5
401701080481500	83-04-22	.4	6.7	<.10	<.010	<100	600	60	1.3
Meigs County									
390957082151000	83-02-22	.3	34	.11	.010	100	18	29	.3
391117082123000	83-02-22	2.1	8.0	.10	.070	100	20	48	.4
391129082061500	83-02-22	.1	27	13	<.010	100	12	16	.8

GROUND-WATER QUALITY OF COAL ASSOCIATED AQUIFERS IN EASTERN OHIO--continued.

STATION NUMBER	LOCAL IDENTIFIER	DATE OF SAMPLE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)
Morgan County									
392825081513100	MG-51 B DANIELS OFF SR 5	83-02-08	1705	300	7.6	12.0	6.2	57	.0
392810081503800	MG-52 G STEVENS SR 555 2	83-02-08	1840	175	6.3	7.5	8.8	73	.0
393417081513300	MG-53 J STOUT CO RD 39 N	83-02-14	1630	1100	7.2	9.0	5.0	43	.0
392841081582200	MG-54 F WADE MORGAN CO R	83-02-14	1830	675	7.4	7.0	4.6	38	.0
392831081582900	MG-55 G EVERETT MORGAN C	83-02-14	1955	830	7.4	11.0	6.1	55	.0
393107081504600	MG-56 G STANLEY CO RD 5	83-02-15	1520	1050	7.4	10.0	6.6	58	.0
393106081510500	MG-57 W DANIELS SR 377 2	83-02-15	1610	2550	7.0	12.0	3.8	35	.0
393814081533100	MG-58 B DRAKE MALTA TWP	83-02-15	1830	1050	7.3	13.0	4.7	44	.2
394053081505200	MG-59 F DUGAN MORGAN TWP	83-02-18	1245	850	7.2	11.5	5.2	47	.0
393753081402600	MG-60 F SILVUS SR 83 AT	83-02-18	1710	1100	7.0	12.0	4.4	41	.0
393417081454200	MG-61 C RAINES MORGAN CO	83-02-19	1145	140	6.2	12.0	6.2	57	.0
393358081453900	MG-62 L PATTERSON MRGN C	83-02-19	1240	285	6.2	11.5	4.4	40	.0
393304081453700	MG-63 E KILBARGER MRGN C	83-02-19	1345	690	7.8	12.5	3.7	35	.0
393836081463800	MG-64 H KUNZE MRGN CO RD	83-02-19	1630	465	7.6	10.5	5.6	50	.0
393839081462600	MG-65 J HOPKINS MRGN CO	83-02-19	1720	795	7.5	11.5	6.4	58	.0
394012081553400	MG-66 E NUCE MORGAN CO R	83-02-19	1845	595	7.0	10.5	4.8	43	.0
394336081422900	MG-67 OHIO PWR CMPGRD A	83-02-18	1540	610	7.4	11.5	4.9	45	.0
393336081591300	MG-69 R MURPHY CO RD 110	83-03-23	1400	545	7.0	15.5	3.1	31	.0
Muskingum County									
395552081550000	MU-41 R FULLER MILLERS L	83-03-17	1130	430	7.6	12.5	5.6	52	.0
395204081530800	MU-42 P BESSER SUGAR GRO	83-03-17	1430	3050	7.9	13.0	5.7	54	.0
395519081452900	MU-44 D KIRTBRIDE CO RD	83-03-17	1800	670	7.5	12.0	7.7	71	.0
395551081514200	MU-45 T JENKINS CLAY PIK	83-03-28	1440	265	6.8	14.5	4.8	47	.0
400222081540500	MU-46 M MADDEN PIPER RD	83-04-07	1230	615	7.4	13.0	9.3	88	.2
400140081544100	MU-47 P MURPHY SR 93 3MI	83-04-07	1345	685	7.0	13.0	3.9	37	.2
400737081463500	MU-48 E RIFFLE SR 83 0.5	83-04-07	1600	470	7.7	15.0	3.2	31	.3
Noble County									
394738081200200	N-11 J BURBACHER AT E ED	83-03-24	1740	725	7.6	13.0	8.0	75	.0

STATION NUMBER	DATE OF SAMPLE	HARDNESS (MG/L AS 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)	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
Morgan County											
392825081513100	83-02-08	139	42	8.3	4.3	.5	170	--	6.8	5.0	4.8
392810081503800	83-02-08	54	14	4.5	14	.4	55	--	44	9.0	6.5
393417081513300	83-02-14	607	140	62	9.9	1.8	430	--	43	320	29
392841081582200	83-02-14	289	66	30	43	1.1	390	--	25	84	9.6
392831081582900	83-02-14	415	110	34	23	.9	450	--	28	140	9.6
393107081504600	83-02-15	568	120	65	39	2.7	400	--	25	330	25
393106081510500	83-02-15	1500	300	180	80	3.5	540	--	86	1300	69
393814081533100	83-02-15	453	130	31	25	.7	400	--	32	130	45
394053081505200	83-02-18	469	120	41	13	.8	440	--	44	100	28
393753081402600	83-02-18	549	150	42	29	1.5	230	--	37	200	130
393417081454200	83-02-19	47	12	4.1	5.6	.6	40	--	40	26	2.9
393358081453900	83-02-19	114	29	10	11	.7	72	--	72	31	12
393304081453700	83-02-19	310	71	32	44	3.3	320	--	8.1	140	9.1
393836081463800	83-02-19	238	64	19	6.0	.4	270	--	11	32	13
393839081462600	83-02-19	1	.3	.1	210	.1	340	--	17	52	66
394012081553400	83-02-19	325	110	12	5.7	1.0	380	--	60	40	6.6
394336081422900	83-02-18	367	92	33	7.5	1.1	370	--	23	56	11
393336081591300	83-03-23	289	100	9.4	1.8	.7	330	--	52	57	3.3
Muskingum County											
395552081550000	83-03-17	224	58	19	13	1.5	270	--	11	30	8.2
395204081530800	83-03-17	63	15	5.9	690	3.3	570	--	11	100	730
395519081452900	83-03-17	357	78	39	8.9	1.6	410	--	21	63	12
395551081514200	83-03-28	116	30	10	12	.7	130	--	33	37	1.9
400222081540500	83-04-07	277	68	26	17	2.0	240	--	15	58	34
400140081544100	83-04-07	293	74	26	22	2.4	230	--	37	22	110
400737081463500	83-04-07	57	14	5.2	87	2.0	240	--	7.6	56	12
Noble County											
394738081200200	83-03-24	254	75	16	66	1.1	340	--	14	110	15

STATION NUMBER	DATE OF SAMPLE	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
Morgan County									
392825081513100	83-02-08	<.1	20	2.7	<.010	<100	8	14	.7
392810081503800	83-02-08	<.1	32	7.6	<.010	100	18	4	.4
393417081513300	83-02-14	.2	15	4.4	<.010	200	34	9	.3
392841081582200	83-02-14	.2	9.4	1.6	<.010	100	12	2	.5
392831081582900	83-02-14	.2	10	2.5	<.010	100	4	8	.6
393107081504600	83-02-15	.2	9.2	2.7	<.010	200	41	9	.5
393106081510500	83-02-15	.2	17	.50	<.010	200	130	190	.3
393814081533100	83-02-15	.1	14	14	<.010	100	48	2	.5
394053081505200	83-02-18	.2	12	12	<.010	<100	17	1	.6
393753081402600	83-02-18	.3	24	.13	<.010	100	3	730	.8
393417081454200	83-02-19	<.1	21	1.6	<.010	100	38	9	.2
393358081453900	83-02-19	.1	20	7.4	<.010	<100	17	28	.2
393304081453700	83-02-19	.2	7.9	.48	<.010	100	12	5	1.6
393836081463800	83-02-19	.2	9.1	1.0	<.010	200	6	1	.2
393839081462600	83-02-19	.3	10	1.1	<.010	<100	4	<1	.7
394012081553400	83-02-19	.2	12	.13	<.010	100	18	14	.3
394336081422900	83-02-18	.2	14	<.10	<.010	<100	5	270	.7
393336081591300	83-03-23	.2	9.1	<.10	<.010	<100	12	28	.6
Muskingum County									
395552081550000	83-03-17	.2	18	.11	<.010	100	27	20	.5
395204081530800	83-03-17	1.0	8.1	<.10	<.010	<100	20	30	.7
395519081452900	83-03-17	.2	11	.42	<.010	<100	14	7	.4
395551081514200	83-03-28	.3	22	.22	<.010	100	49	21	.8
400222081540500	83-04-07	.3	7.7	10	<.010	300	10	4	4.0
400140081544100	83-04-07	.2	18	.26	<.010	<100	4	99	.6
400737081463500	83-04-07	.5	10	<.10	<.010	100	16	50	.7
Noble County									
394738081200200	83-03-24	.2	8.1	2.1	<.010	<100	8	3	1.1

GROUND-WATER QUALITY OF COAL ASSOCIATED AQUIFERS IN EASTERN OHIO--continued.

STATION NUMBER	LOCAL IDENTIFIER	DATE OF SAMPLE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)
Perry County									
394733082114100	PE-31 E WOLFE SR 669 W O	83-03-14	1545	1200	6.8	15.5	5.2	41	.0
394502082130200	PE-32 R PHILLIPS CO RD 1	83-03-14	1800	595	7.3	18.0	5.1	54	.0
394615082143900	PE-33 T JOHNSON CO RDS 5	83-03-14	1850	520	8.4	13.5	3.7	35	.0
394110082152900	PE-34 B PERRIN JCKSN TWP	83-03-15	1555	560	7.0	12.5	7.7	72	.0
394209082073600	PE-35 P WHITE SR 13-37-9	83-03-15	1745	3380	8.2	12.0	4.4	41	.0
394206082084600	PE-36 S BLAGG SR 13-37-9	83-03-15	1840	670	7.4	12.5	6.0	56	.0
395025082103100	PE-37 K DANISON MADISON	83-03-15	1940	415	7.7	12.5	4.3	40	.0
394137082045100	PE-38 M GRIMMETT SR 37 7	83-03-16	1540	810	7.0	13.5	4.4	42	.0
Tuscarawas County									
401704081370900	TU-41 R HART CO RD 104 N	83-04-20	1630	1450	5.6	11.0	6.9	62	.2
402121081224000	TU-42 M WILLS CO RD 28 N	83-04-20	1925	430	8.0	10.5	7.3	65	.0
401852081183400	TU-43 G DURMANN SR 800 S	83-04-21	1430	625	7.4	13.0	7.9	75	.2
402407081163900	TU-44 N AMICONE US RTE 2	83-04-21	1520	680	7.4	12.0	10.6	98	.2
402505081191000	TU-45 R BROKAW CO RD 66	83-04-21	1940	740	7.6	10.0	6.0	53	.2
402050081212400	TU-46 J ROBINSON CO RD 3	83-04-22	1045	315	7.0	13.0	3.4	32	.2
Vinton County									
391408082185500	V-86 G HUGHES US 504 MI	83-03-30	1030	505	9.2	12.0	3.7	34	.2
391155082192400	V-87 E BARNEY VINTON TWP	83-03-30	1130	1080	7.2	10.0	8.7	77	.0
391147082200700	V-88 D BOBO VINTON TWP R	83-03-30	1345	640	7.8	8.0	3.2	27	.0
390850082211300	V-89 D COLEMAN VINTON TW	83-04-01	1655	485	8.0	12.0	4.8	44	.0

STATION NUMBER	DATE OF SAMPLE	HARDNESS (MG/L AS 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)	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
Perry County											
394733082114100	83-03-14	660	160	63	28	6.0	200	--	50	590	29
394502082130200	83-03-14	283	80	20	11	5.6	182	--	14	140	8.6
394615082143900	83-03-14	24	5.9	2.2	110	1.4	250	18	1.6	53	6.9
394110082152900	83-03-15	259	59	27	15	1.8	98	--	16	220	7.4
394209082073600	83-03-15	336	86	29	710	5.1	120	--	1.2	1800	4.0
394206082084600	83-03-15	136	42	7.3	83	1.8	52	--	3.3	290	2.0
395025082103100	83-03-15	181	50	13	16	3.3	260	--	8.2	26	6.9
394137082045100	83-03-16	321	87	25	55	3.1	310	--	49	190	20
Tuscarawas County											
401704081370900	83-04-20	760	170	81	5.3	4.8	--	--	--	930	32
402121081224000	83-04-20	195	55	14	11	1.7	230	--	3.7	55	1.7
401852081183400	83-04-21	324	90	24	11	2.6	330	--	21	120	2.1
402407081163900	83-04-21	336	93	25	14	4.2	330	--	21	130	1.5
402505081191000	83-04-21	244	66	19	68	4.9	340	--	14	130	21
402050081212400	83-04-22	148	43	9.9	6.0	1.5	146	--	23	49	3.1
Vinton County											
391408082185500	83-03-30	11	3.1	.8	120	.8	190	73	.2	5.1	8.3
391155082192400	83-03-30	465	110	46	77	2.4	420	--	42	250	50
391147082200700	83-03-30	44	12	3.4	140	3.0	240	--	6.0	120	14
390850082211300	83-04-01	67	21	3.4	80	8.2	250	--	4.0	11	28

STATION NUMBER	DATE OF SAMPLE	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
Perry County									
394733082114100	83-03-14	.1	12	<.10	<.010	<100	33	1100	1.0
394502082130200	83-03-14	.3	12	.30	<.010	<100	19	77	1.4
394615082143900	83-03-14	.3	13	.33	.020	100	35	4	.6
394110082152900	83-03-15	.1	24	<.10	<.010	<100	510	240	.7
394209082073600	83-03-15	.3	6.6	<.10	<.010	<100	10	120	1.0
394206082084600	83-03-15	.1	3.9	1.2	<.010	200	62	60	2.7
395025082103100	83-03-15	.4	13	<.10	<.010	<100	120	47	.8
394137082045100	83-03-16	.2	20	<.10	<.010	<100	7600	1300	.7
Tuscarawas County									
401704081370900	83-04-20	.2	18	<.10	<.010	<100	17000	30000	1.8
402121081224000	83-04-20	.2	18	<.10	<.010	<100	750	300	1.1
401852081183400	83-04-21	.3	17	<.10	<.010	<100	220	140	.6
402407081163900	83-04-21	.4	13	<.10	<.010	<100	700	240	1.2
402505081191000	83-04-21	.4	9.6	<.10	<.010	<100	500	600	1.0
402050081212400	83-04-22	.2	18	<.10	<.010	100	2300	220	.5
Vinton County									
391408082185500	83-03-30	.8	8.7	<.10	<.010	200	17	4	.8
391155082192400	83-03-30	.2	8.8	3.6	<.010	100	26	2	1.7
391147082200700	83-03-30	.4	12	<.10	.040	<100	79	49	1.0
390850082211300	83-04-01	.6	11	<.10	<.010	100	370	68	.7

STATION NUMBER		LOCAL IDENTIFIER	DATE OF SAMPLE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)
Washington County										
392633081474800	WA-51 H	BENNETT CO RD 20	83-02-15	1145	595	7.2	10.5	2.2	20	.0
392105081472800	WA-52 C	HARRIS SR 555 S	83-02-19	1010	680	7.2	10.5	5.6	50	.0
393432081243400	WA-53 G	FULTON SALEM TWP	83-02-23	1100	1150	7.0	7.5	5.4	45	.0
393500081192100	WA-54 B	HENDERSHOT WASH	83-02-23	1300	585	7.4	11.0	4.6	41	.0
393349081190400	WA-55 J	CLOSE WASH CO RD	83-02-23	1450	455	7.4	11.5	8.4	76	.0
393456081395900	WA-56 S	LOWE OLIVE GRN C	83-02-23	1830	720	7.4	10.5	8.3	74	.0
393511081185500	WA-57 V	HENDERSHOT AT GE	83-02-23	1345	505	6.9	10.0	3.9	35	.3
393059081394000	WA-58 D	WEBSTER CO RD 6	83-03-23	1640	905	7.6	12.5	4.2	39	.0
393228081431600	WA-59 R	MILLER ON MUSKNG	83-03-23	1810	825	9.1	10.0	6.1	54	.0
393357081295500	WA-60 F	SCHMIDT ADAMS TW	83-03-24	1150	520	7.4	14.5	9.4	91	.0
393348081341200	WA-61 B	WEISEND SR 60 1	83-03-24	1315	1350	7.4	10.5	9.9	88	.0

STATION NUMBER	DATE OF SAMPLE	HARDNESS (MG/L AS 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)	BICARBONATE FET-FLD (MG/L AS HCO3)	CARBONATE FET-FLD (MG/L AS CO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
Washington County											
392633081474800	83-02-15	260	71	20	30	.8	340	--	34	83	2.7
392105081472800	83-02-19	351	96	27	25	.7	230	--	23	120	48
393432081243400	83-02-23	677	150	73	34	2.5	260	--	41	510	3.8
393500081192100	83-02-23	294	88	18	24	2.4	330	--	21	38	23
393349081190400	83-02-23	242	77	12	4.9	.9	290	--	18	35	7.1
393456081395900	83-02-23	424	110	36	14	1.3	390	--	25	120	5.2
393511081185500	83-02-23	206	59	14	36	2.5	190	--	38	82	52
393059081394000	83-03-23	367	69	47	59	1.5	310	--	12	220	24
393228081431600	83-03-23	5	1.4	.5	250	8.6	340	84	.4	45	7.7
393357081295500	83-03-24	246	54	27	22	1.2	290	--	18	59	8.4
393348081341200	83-03-24	588	160	45	73	2.0	480	--	30	400	29

STATION NUMBER	DATE OF SAMPLE	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
Washington County									
392633081474800	83-02-15	.2	13	<.10	.070	100	5700	500	.2
392105081472800	83-02-19	.2	33	.38	<.010	<100	62	4	.3
393432081243400	83-02-23	.9	16	<.10	<.010	<100	28000	3700	.7
393500081192100	83-02-23	.2	12	5.9	<.010	100	47	17	.9
393349081190400	83-02-23	.2	11	3.0	<.010	200	3	6	.4
393456081395900	83-02-23	.3	7.4	.49	<.010	<100	33	2	.3
393511081185500	83-02-23	.1	9.7	7.8	.020	<100	17	10	.8
393059081394000	83-03-23	.3	8.4	5.2	<.010	100	20	4	.7
393228081431600	83-03-23	1.2	6.4	<.10	.010	<100	6	2	.7
393357081295500	83-03-24	.2	7.8	2.6	<.010	300	14	4	1.0
393348081341200	83-03-24	.3	13	<.10	<.010	<100	6000	410	1.1

*USGPO: 1984-760-932-5014

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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