

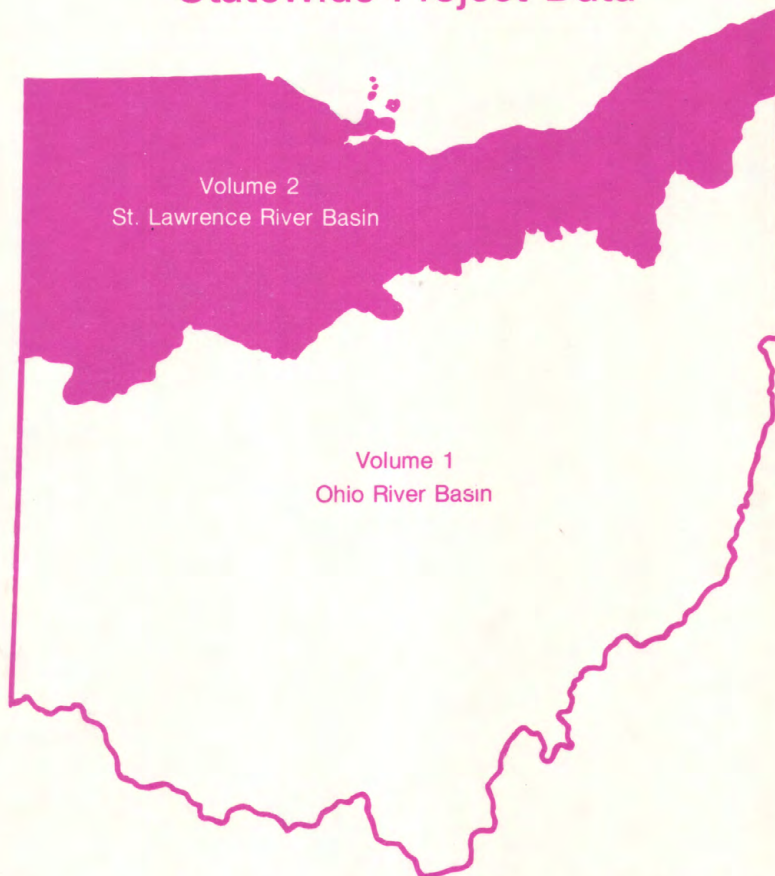
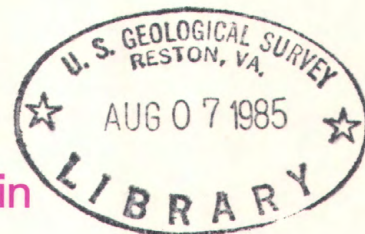
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# Water Resources Data Ohio

## Water Year 1984

Volume 2. St. Lawrence River Basin  
Statewide Project Data



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT OH-84-2  
Prepared in cooperation with the State of Ohio  
and with other agencies



# CALENDAR FOR WATER YEAR 1984

1983

## OCTOBER

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1984

## JANUARY

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## AUGUST

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## SEPTEMBER

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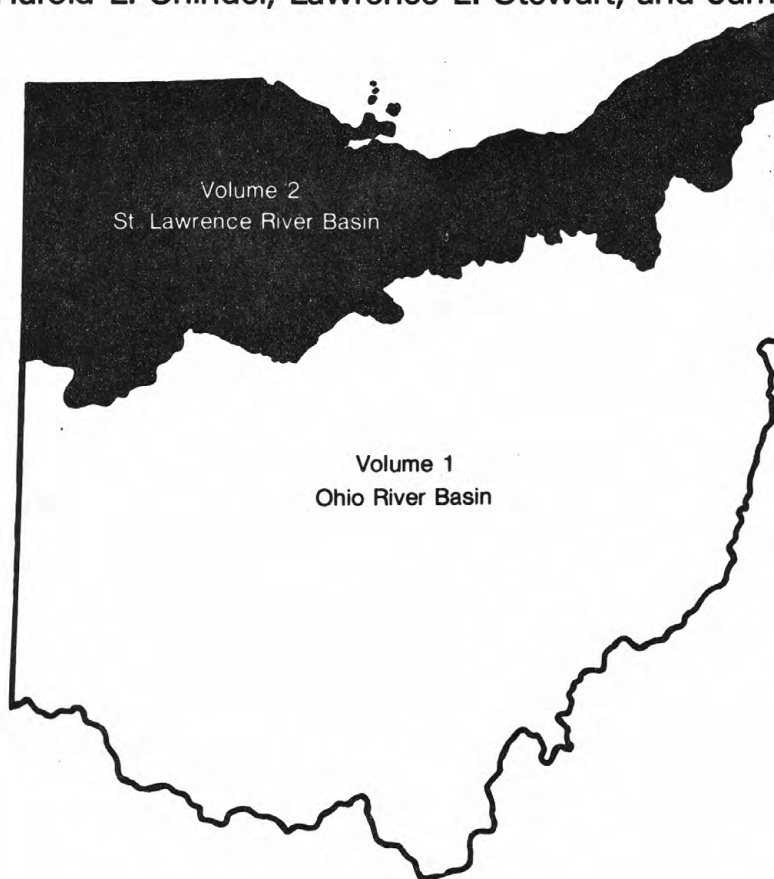




# Water Resources Data Ohio Water Year 1984

## 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-84-2  
Prepared in cooperation with the State of Ohio  
and with other agencies



UNITED STATES DEPARTMENT OF THE INTERIOR

DONALD PAUL HODEL, Secretary

GEOLOGICAL SURVEY

Dallas L. Peck, Director

For information on the water program in Ohio write to

District Chief, Water Resources Division  
U.S. Geological Survey  
975 West Third Avenue  
Columbus, Ohio 43212

1985



## 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 OHIO, 1984

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

### INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with State agencies, obtains a large amount of data pertaining to the water resources in Ohio each water year. These data, accumulated during many years, constitute a valuable data base for developing an improved understanding of the water resources of the State. To make these data readily available to the interested parties outside the Geological Survey, the data are published annually in this report series entitled "Water Resources Data - Ohio."

This report includes records on both surface and ground water in the State. Specifically, it (Volumes 1 and 2) contains: (1) Discharge records for 127 streamflow-gaging stations, 4 miscellaneous sites, and peak flow information for 60 crest-stage partial-record stations; (2) stage and content records for 4 lakes and reservoirs; (3) water-quality data for 31 streamflow-gaging stations, 32 wells, and 14 partial record sites; and (4) water levels for 387 observation wells. Locations of lake- and streamflow-gaging stations and water-quality stations and crest-stage partial-record stations are shown in figures 3a, 3b, 3c, and 3d. Locations of observation wells are shown in figures 3e and 3f.

This series of annual reports for Ohio began with the 1961 water year with a report that contained only data relating to the quantities of surface water. For the 1964 water year, a similar report was introduced that contained only data relating to water quality. Beginning with the 1975 water year, the report was changed to present, in two to three volumes, data on quantities of surface water, quality of surface and ground-water, and ground water levels.

Prior to introduction of this series and for several years concurrent with it, water-resources data for Ohio were published in a series of U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface-Water Supply of the United States, Part 3 and Part 4. For the 1961 through 1970 water years, the data were published in two 5-year reports. Data on the chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States," and ground-water levels for the 1935 through 1974 water years were published under the title "Ground-Water Levels in the United States." The above mentioned Water-Supply Papers may be consulted in the libraries of the principal cities of the United States and may be purchased from 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. These official Survey reports have an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report OH-84-2." For archiving and general distribution, the reports for 1971-74 water years are also identified as water-data reports. These water-data reports can be purchased in paper copy or in microfiche from the National Technical Information Service, U.S. Department of Commerce, 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-resource 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.

Funds or services were provided by the U.S. Army Corps of Engineers in collecting records for 76 hydrologic-data stations in this report.

The following organizations aided in collecting records: Miami Conservancy District, Corps of Engineers, U.S. Army, and Ohio Department of Natural Resources.



### Surface Water

At the start of the 1984 water year, streamflow was normal, except in the southwestern part of the State where it was deficient. Streamflow increased seasonally and became excessive in the southwestern and central parts of the State during October but remained normal in the rest of the State.

November streamflow was excessive for the entire State, whereas December streamflow remained excessive except in central Ohio where it returned to normal.

January streamflow returned to normal except in central Ohio where it was deficient.

February was normal except in the northwestern part of the State where mid-month precipitation and snow melt caused streamflow to be excessive.

March streamflow remained normal except in western and central Ohio, where it was excessive.

April streamflow remained excessive in western Ohio but was normal in the remainder of the State.

May and June streamflow remained in the normal range despite the lowest monthly rainfall on record for the month of June.

July remained normal in the southwestern part of the State but fell to the deficient range in northwestern and central Ohio. Thunderstorms during the first part of the month caused excessive streamflow for the month in the eastern part of the State but returned to the normal range by month end.

August streamflow remained in the normal range except in eastern Ohio, where it increased into the excessive range.

September streamflow was normal for the entire State.

Figure 2 compares the 1984 mean discharges at four selected long-term stations with median discharges for the base period 1951-84.

### Water Quality

The chemical quality of tested surface waters changed little from previous years.

Most of the streams tested in eastern and southeastern Ohio reported dissolved manganese above the alert limit (200 mg/l) as set by U.S. Geological Survey. Dissolved iron was above alert limit at all stations sampled in the Raccoon Creek Basin, during the water year and at the Hocking River below Athens during November 1983 and January 1984. Casto Creek at Columbus, and Turkey Run at Upper Arlington had some samples above the limit for total lead.

Wells sampled in the mining area of Jefferson County contained dissolved manganese above the limit.

Two of the three major basins in the State that have U.S. Geological Survey Monitors at NASQAN sites, showed slight improvement in water quality, as measured by specific conductance. Water quality of the Maumee and Scioto Basins improved, probably due to higher streamflow. The other station in the Cuyahoga Basin stayed about the same as previous years.

### Ground Water

Most of the observation wells in Ohio tap sand and gravel aquifers in buried-valley or water-course 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 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.

At the start of the 1984 water year, ground-water levels were generally below normal as drought conditions continued. Ground-water levels rose in response to above-average precipitation in late October and November and were generally in the normal to above-normal range throughout most of December.

Below-normal precipitation and below-normal temperatures caused ground-water levels to decline during January and February. Some record lows occurred at this time.

Rainfall was above normal in April and May and water levels rose in most wells to their highest level for the year.

Generally, ground-water levels declined throughout the rest of the year and remained in the normal range, with the exception of central and southeastern Ohio where deficient precipitation resulted in below normal levels by year-end.

## 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.

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

Algae are mostly aquatic single-celled, colonial, or multicelled plants, containing chlorophyll and lacking roots, stems, and leaves.

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

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

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 with a golden-green metallic sheen 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 intestine or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory they are defined as all organisms 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 intestine 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 KF-streptococcus 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<sup>3</sup>), and periphyton and benthic organisms in grams per square meter (g/m<sup>2</sup>).

Dry mass refers to the mass of residue present after drying in an oven at 105°C for zooplankton and periphyton, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry mass values are expressed in the same units as ash mass.

Organic mass or volatile mass of the living substance is the difference between the dry mass and the ash mass and represents the actual mass of the living matter. The organic mass is expressed in the same units as for ash and dry mass.

Wet mass is the mass of living matter plus contained water.

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 a 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.

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

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 (cfs, ft<sup>3</sup>/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.

Dissolved-solids concentration of water is determined either analytically by the "residue-on-evaporation" method, or mathematically by totalling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination of dissolved solids, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. Therefore, in the mathematical calculation of dissolved-solids concentration, the bicarbonate value, in milligrams per liter, is multiplied by 0.492 to reflect the change.

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 stream above the specified point. Figures of drainage area given herein include all closed basins, or noncontribution areas, 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 the equivalent concentration of calcium carbonate ( $\text{CaCO}_3$ ).

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.

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.

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

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

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 anionic 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 dry 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.

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.

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 unit area habitat, usually square meters ( $\text{m}^2$ ), 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.

Parameter code is a 5-digit number used in the U.S. Geological Survey computerized data system, WATSTORE, to uniquely identify a specific constituent. The codes used in WATSTORE are the same as those used in the U.S. Environmental Protection Agency data system, STORET. The Environmental Protection Agency assigns and approves all requests for new codes.

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.

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.

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 ( $1 \times 10^{-12}$ ) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields  $3.7 \times 10^{10}$  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.

Blue-green algae are a group of phytoplankton organisms having a blue pigment, in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water.

Diatoms are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells per milliliter (cells/ml) of sample.

Green algae have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algae mats or floating "moss" in lakes. Their concentrations are expressed as number of cells per millimeter (cells/mm) of sample.

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

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

Milligrams of carbon per area or volume per unit time [mg C/(m<sup>2</sup> time)] for periphyton and macrophytes and [mg C/(m<sup>3</sup> time)] for phytoplankton are units for expressing primary productivity. They define the amount of carbon dioxide consumed as measured by radioactive carbon (carbon 14). The carbon 14 method is of greater sensitivity than the oxygen light and dark bottle method, and is preferred for use in unenriched waters. Unit time may be either the hour or day, depending on the incubation period.

Milligrams of oxygen per area or volume per unit time [mg O/m<sup>2</sup> time)] for periphyton and macrophytes and [mg O/m<sup>3</sup> time)] for phytoplankton are the units for expressing primary productivity. They define production and respiration rates as estimated from changes in the measured dissolved oxygen concentration. The oxygen light and dark bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period.

Radiochemical program is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

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.

Return period is the average time interval between occurrences of a hydrological event of a given or greater magnitude, usually expressed in years. May also be called recurrence interval.

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.

Bed load is the sediment that is transported in a stream by rolling, sliding, or skipping along the bed and very close to it. In this report, bed load is considered to consist of particles in transit within 0.25 ft of the streambed.

Bed load discharge (tons per day) is the quantity of bed load measured by dry weight that moves past a section as bed load in a given time.

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.

7-day 10-year low flow (7 Q10) is the discharge at the 10-year recurrence interval taken from a frequency curve of annual values of the lowest mean discharge for 7 consecutive days (the 7-day low flow).

Sodium-adsorption-ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions within soil and is an index of sodium or alkali hazard to the soil. Waters range in respect to sodium hazard from those which can be used for irrigation on almost all soils to those which are generally unsatisfactory for irrigation.



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.

Substrate is the physical surface upon which an organism lives.

Natural substrate refers to any naturally occurring emerged or submersed solid surface, such as a rock or tree, upon which an organism lives.

Artificial substrate is a device which is purposely placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is taken. Examples of artificial substrate are basket samplers (made of wire cages fill with clean streamside rocks) and multiplate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton.

Surface area of a lake is that area outlined on the latest U.S.G.S. topographic map as the boundary of the lake and measured by a planimeter in acres. In localities not covered by topographic maps, the areas are computed from the best maps available at the time planimetered. All areas shown are those for the stage when the planimetered map was made.

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

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of 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.

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

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

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

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water 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 acre-foot indicates the dry mass of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration of the constituent, in milligrams per liter, by 0.00136.

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 discharge is the total quantity of any individual constituent, as measured by dry mass or volume, that passes through a stream cross-section per unit of time. This term needs to be qualified, such as "total sediment discharge," "total chloride discharge," and so on.

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.

Water year in Geological Survey reports dealing with surface-water supply is the 12-month period, October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 1980, is called the "1980 water year."

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.

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

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

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



## EXPLANATION OF THE RECORDS

The records in this report are for the 1984 water year that began October 1, 1983, and ended September 30, 1984. A calendar of the water year is provided on the inside of the front cover. Records for a given surface-water station, whether water discharge or water quality, are presented together, so far as practicable, with the water discharge presented first. Headings providing information on station location, drainage areas, and other pertinent items are included for all surface-water records except those regarded as miscellaneous or partial.

Station Identification Numbers

Each data station, whether streamsite or wellsite, in this report is assigned a unique identification number. This number is unique in that it applies specifically to a given station and to no other. The number usually is assigned when a station is first established and is retained for that station indefinitely. The systems used by the U.S. Geological Survey to assign identification numbers for surface-water stations and for ground-water well sites differ, but both are based on geographic locations. The "downstream order" system is used for regular surface-water stations and the "latitude-longitude" system is used for wells and, in Ohio, for surface-water stations where only miscellaneous measurements are made.

## 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 with respect to the stream to which it is immediately tributary is indicated by an indention in a "List of Stations" in the front of the report. Each indention represents one rank. This downstream order and system of indention show which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

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

Latitude-Longitude System

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

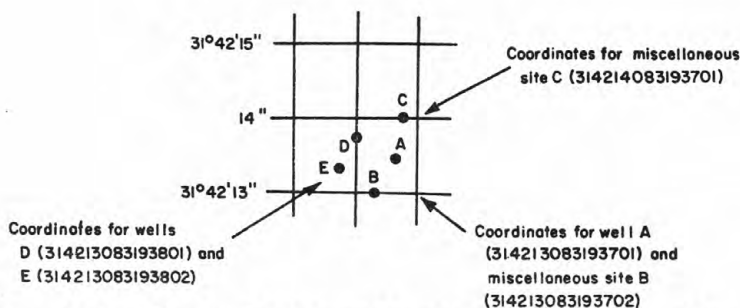


Figure 1 System for numbering wells and miscellaneous sites (latitude and longitude)

Records of Stage and Water Discharge

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

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. The nature of a partial record is indicated by table titles such as "Crest-stage partial records," or "Low-flow partial records." Records of miscellaneous discharge measurements or of measurements from special studies, such as low-flow seepage studies, may be considered as partial records, but they are presented separately in this report. Location of all complete-record and crest-stage stations for which data are given in this report are shown in figure 3.

#### Data Collection and Computation

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

Continuous records of stage are obtained with analog recorders that trace continuous graphs of stage or with digital recorders that punch stage values on paper tapes at selected time intervals. Measurements of discharge are made with current meters using methods adapted by the Geological Survey as a result of experience accumulated since 1880. These methods are described in standard textbooks, in Water-Supply Paper 2175, and in U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter A6.

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

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

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

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

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

## Data Presentation

The records published for each gaging station consist of two parts, the manuscript or station description and the data table for the current water year. The manuscript provides, under various headings, descriptive information, such as station location; period of record; average discharge; historical extremes; record accuracy; and other remarks pertinent to station operation and regulation. The following information, as appropriate, is provided with each continuous record of discharge or lake content. Comments to follow clarify information presented under the various headings of the station description.

**LOCATION.**--Information on locations is obtained from the most accurate maps available. The location of the gage with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name is given. River mileages, given for only a few stations, were determined by methods given in "River Mileage Measurement," Bulletin 14, Revision of October 1968, prepared by the Water Resources Council or were provided by the U.S. Army Corps of Engineers.

**DRAINAGE AREA.**--Drainage areas are measured using the most accurate maps available. Because the type maps available varies from one drainage basin to another, the accuracy of the drainage areas likewise varies. Drainage areas are updated as better maps become available.

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

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

**GAGE.**--The type of gage in current use, the datum of the current gage referred to National Geodetic Vertical Datum of 1929 (see glossary), and a condensed history of the types, locations, and datums of previous gages are given under this heading.

**REMARKS.**--The remarks contain information relative to the accuracy of the records, to special methods of computation, to conditions that affect natural flow at the station, and possibly to other pertinent items.

**COOPERATION.**--Records provided by a cooperating organization or obtained for the Geological Survey by a cooperating organization are identified here.

**AVERAGE DISCHARGE.**--The discharge value given is the arithmetic mean of the water-year mean discharges. It is computed only for stations having at least 5 water years of complete record, and only water years of complete record are included in the computation. It is not computed for stations where diversions, storage, or other water-use practices cause the value to be meaningless. If water developments significantly altering flow at the station are put into use after the station has been in operation for a period of years, a new average is computed as soon as 5 water years of record have accumulated following the development.

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

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

**EXTREMES FOR CURRENT YEAR.**--Extremes given here are similar to those for the period of record, except the peak discharge listing may include secondary peaks. For stations meeting certain criteria, all peak discharges and stages occurring during the water year and greater than a selected base discharge are presented under this heading. The peaks greater than the base discharge, excluding the highest one, are referred to as secondary peaks. Peak discharges are not published for canals, ditches, drains, or streams for which the peaks are subject to substantial control by man. The time of occurrence for peaks is expressed in 24-hour local standard time. For example, 12:30 a.m. is 0030, and 1:30 p.m. is 1330. The minimum for the current water year appears below the table of peak data.



REVISIONS.--If a critical error in published records is discovered, a revision is included in the first report following discovery of the error.

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

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

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

#### Accuracy of the Records

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

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

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

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

#### Other Records Available

Records of discharge, ground-water, reservoir contents, and water-quality; not published by the Geological Survey, are collected in Ohio at several sites by state and other federal agencies. The National Water Data Exchange (NAWDEX), U.S. Geological Survey, Reston, Va 22092, maintains an index of these sites as well as an index of records of discharge collected by other agencies but not published by the Geological Survey. Information on records at specific sites can be obtained from that office upon request.

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



### Records of Surface-Water Quality

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

### Classification of records

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

A careful distinction needs to be made between "continuing records" as used in this report and "continuous recordings," which refers to a continuous graph or a series of discrete values punched at short intervals on a paper tape. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recording; however, because of cost, most data are obtained only monthly or less frequently. Locations of stations for which records on the quality of surface water appear in this report are shown in figure 3a, 3b, 3c, 3d.

### Arrangement of Records

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

### Onsite Measurements and Sample Collection

In obtaining water-quality data, a major concern needs to be assuring that the data obtained represent the in situ quality of the water. To assure this, certain measurements, such as water temperature, pH, and dissolved oxygen, need to be made on site when the samples are taken. To assure that measurements made in the laboratory also represent the in situ water, carefully prescribed procedures need to be followed in collecting the samples, in treating the sample to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in publications on "Techniques of Water-Resources Investigations," Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4. All of these references are listed on p. 19 of this report. Also detailed information on collecting, treating, and shipping samples may be obtained from the Geological Survey District office.

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

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

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

### Water Temperatures

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are 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, either mean temperatures or maximum and minimum temperatures for each day are published.

### Sediment

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

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

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

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

### Laboratory Measurements

Sediment samples, samples for biochemical-oxygen demand (BOD), and daily samples for specific conductance are analyzed locally. All other samples are analyzed in the Geological Survey laboratories in Arvada, Colo. or Doraville, Ga. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chap. C1. Methods used by the Geological Survey laboratories are given in TWRI, Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4.

### Data Presentation

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

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

LOCATION.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

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

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

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

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

COOPERATION.--Records provided by a cooperating organization or obtained for the Geological Survey by a cooperating organization are identified here.

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

REVISIONS.--If errors in published water-quality records are discovered after publication, appropriate updates are made 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.

#### Records of Ground-Water Levels

Water-level data from a network of observation wells (as well as project wells) are given in this report. The network well data are intended to provide a sampling and historical record of water-level changes in the Nations most important aquifers. Locations of the observation wells in this network in Ohio are shown in figure 3e, 3f. Water level data at projects are reported in Volume 2 under the specific project.

#### Data Collection and Computation

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

Tables of water-level data are presented by counties arranged in alphabetical order. The prime identification number for a given well is a 15-digit number that is based on latitude and longitude. The secondary identification number is the local well number, that is provided for local needs.

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

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

#### Data Presentation

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

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

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

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

DATUM.--This entry describes both the measuring point and the land surface altitude at the well. The measuring point is described physically (such as top of collar, notch in top of casing, plug in pump base and so on), and in relation to land surface (such as 1.3 ft above land-surface datum). The altitude of the land surface datum (LSD) is described in feet above (or below) National Geodetic Vertical Datum of 1929 (NGVD of 1929); it is reported with a precision depending on the method of determination.

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



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

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

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

#### Records of Ground-Water Quality

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

#### Data Collection and Computation

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

Most methods for collecting and analyzing water samples are described in the "U.S. Geological Survey Techniques of Water-Resources Investigations" manuals listed on the following page. The values reported in this report represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. All samples were obtained by trained personnel. The wells sampled were pumped long enough to assure that the water collected came directly from aquifer and had not stood for a long time in the well casing where it would have been exposed to the atmosphere and the metal comprising the casings.

#### Data Presentation

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

#### ACCESS TO 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 a 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 programmed 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. Ehlike, 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.

## WATER RESOURCES DATA FOR OHIO, 1984

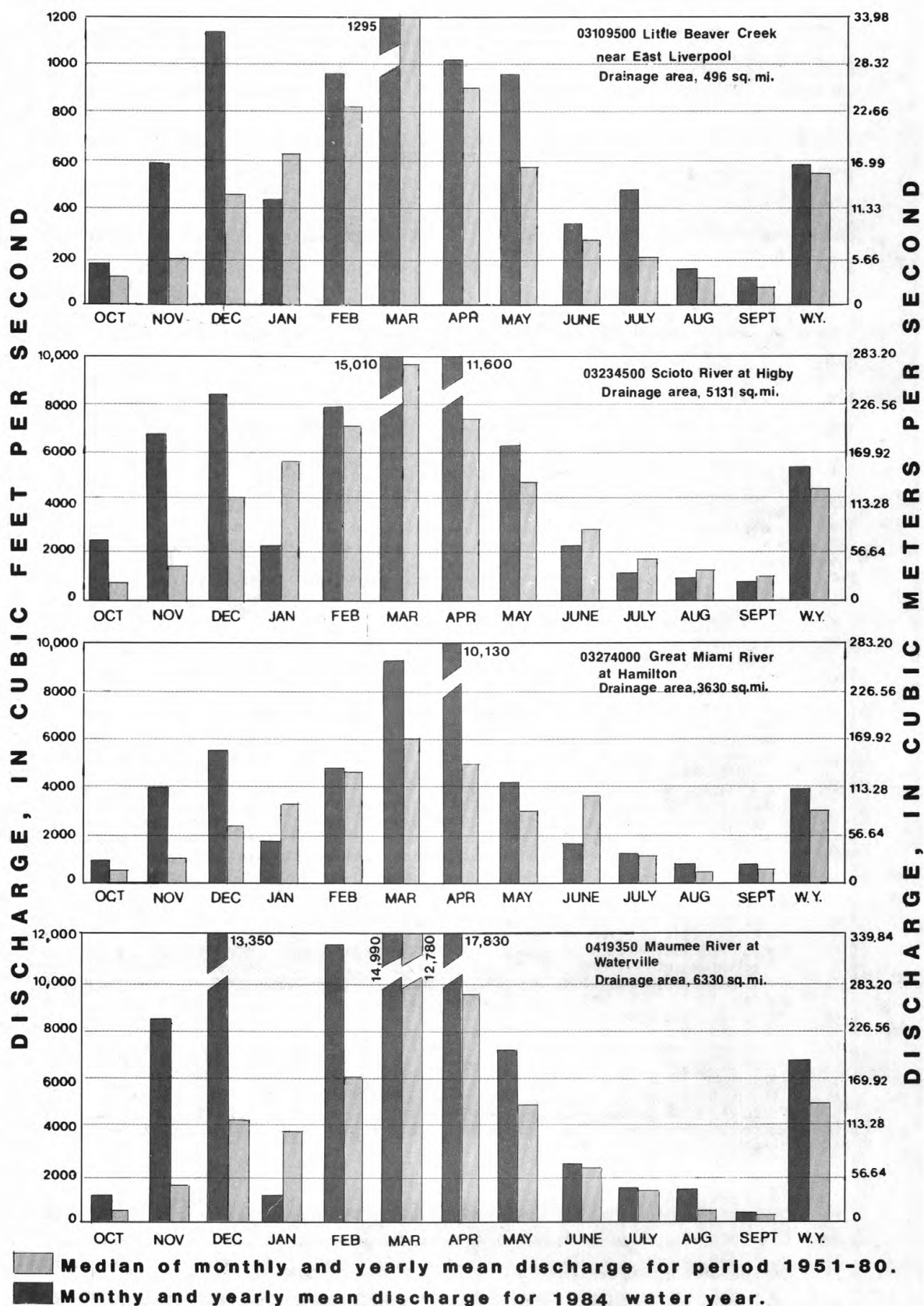


Figure 2.--Runoff during 1984 water year compared with median runoff for period 1951-80 for four representative gaging stations.

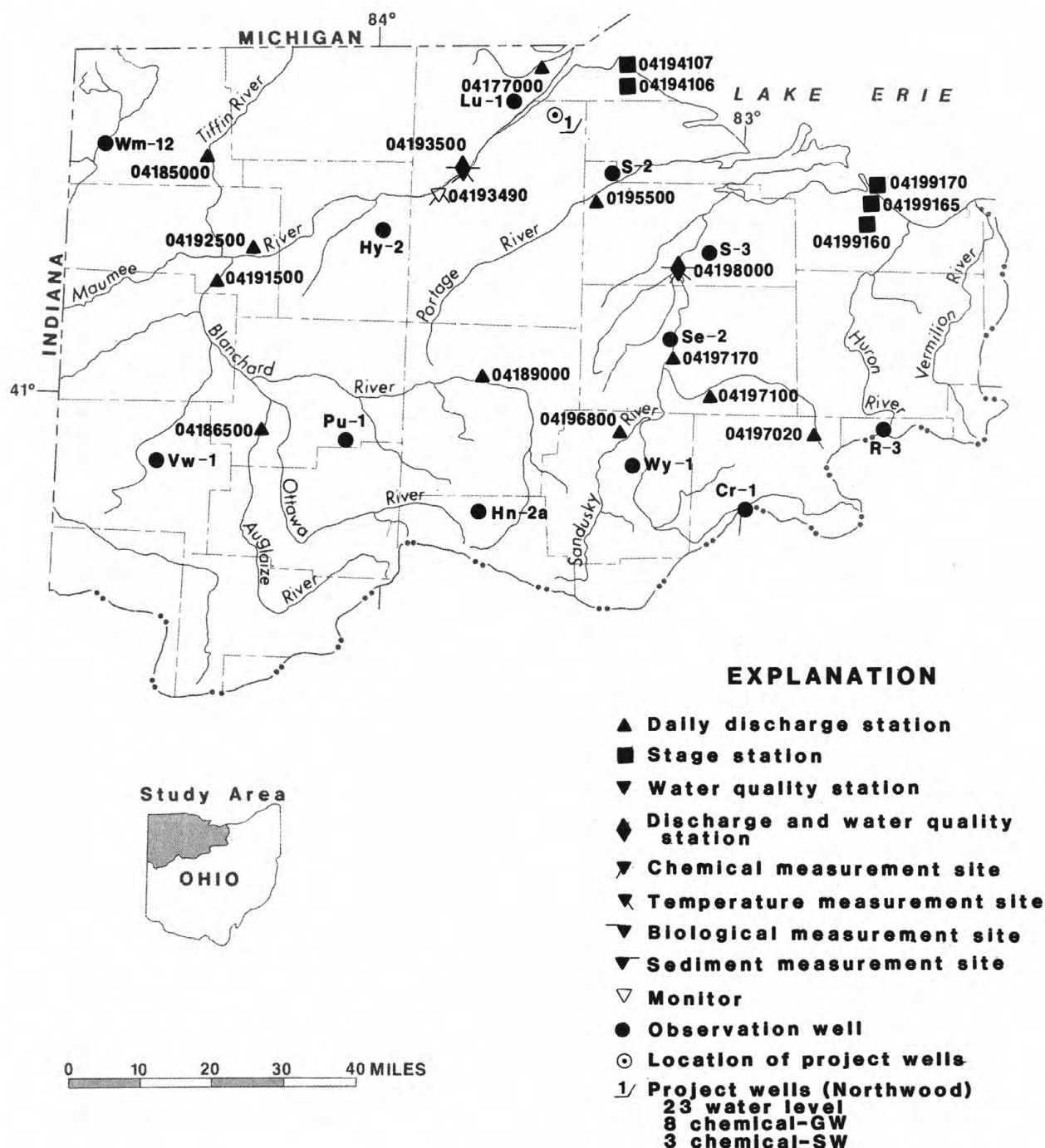


Figure 3a.--Location of data-collection stations excluding crest-stage and low-flow partial record sites.



## WATER RESOURCES DATA FOR OHIO, 1984

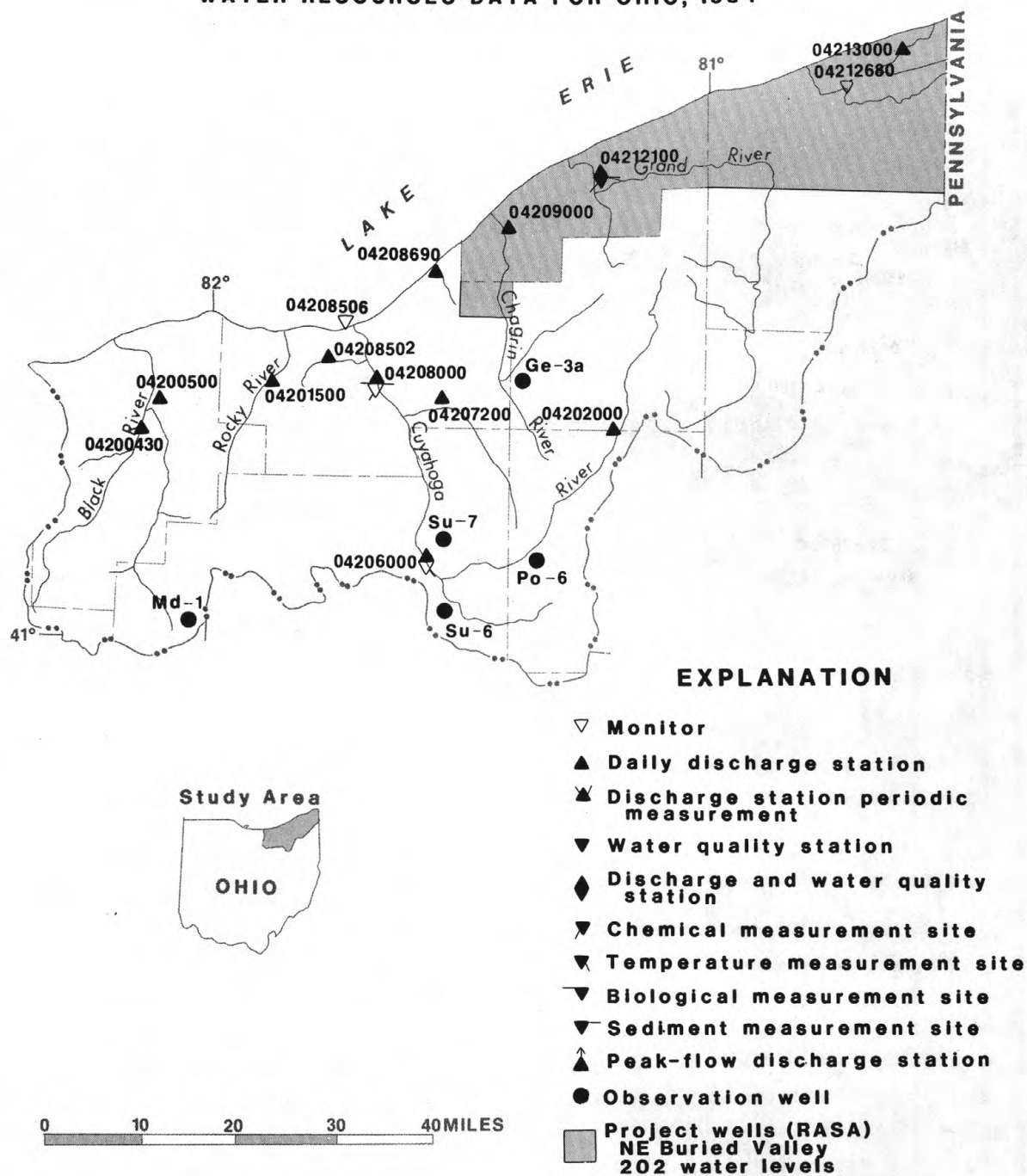


Figure 3b.--Location of data-collection stations including crest-stage and low-flow partial record sites.

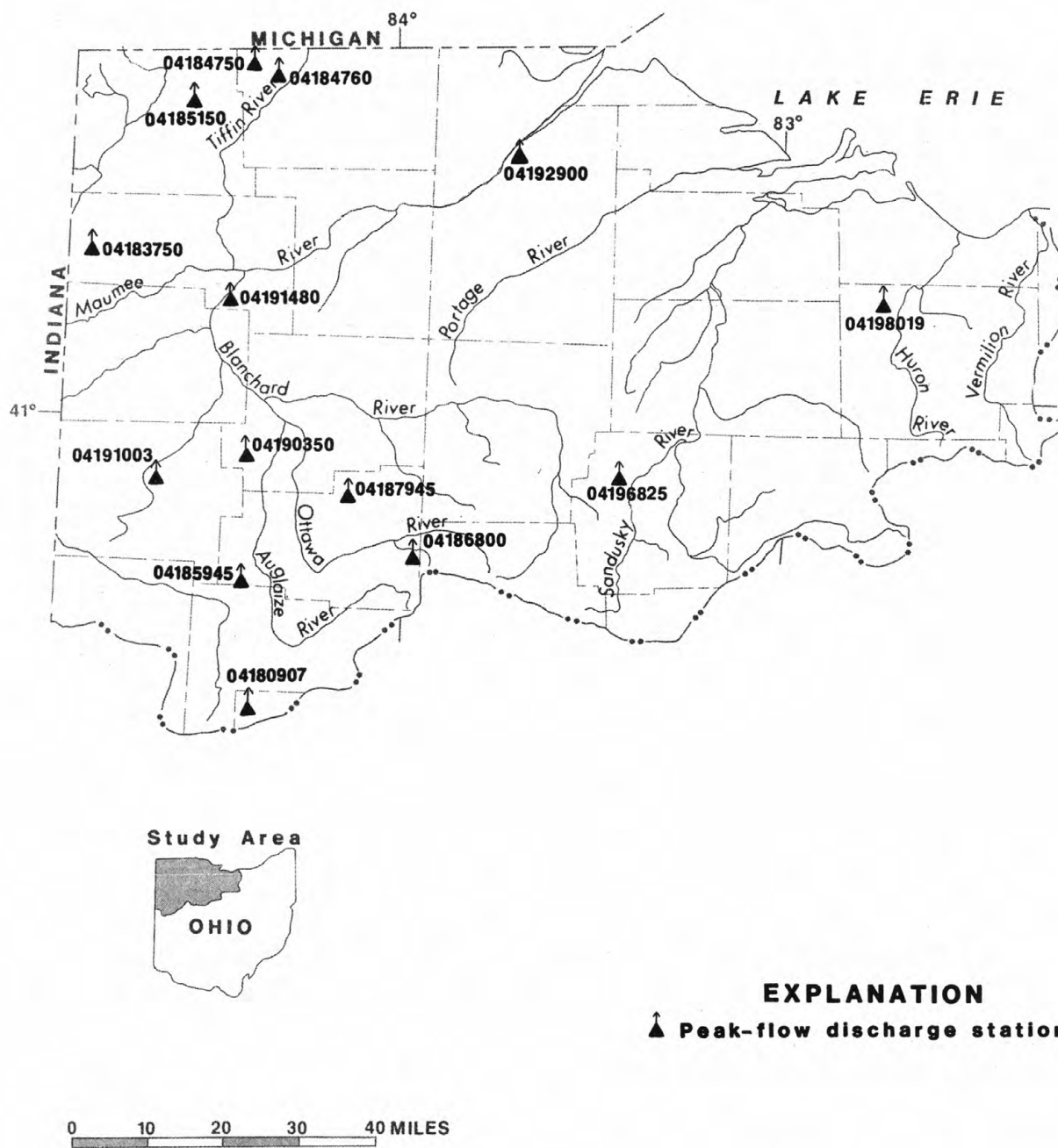


Figure 3c.--Location of crest-stage and low-flow partial record sites.

## STREAMS TRIBUTARY TO LAKE ERIE

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 downstream from Deline Ditch, 5.6 mi upstream from Sibley Creek, and 10.9 mi upstream from mouth.

DRAINAGE AREA.--150 mi<sup>2</sup>. Area at site used prior to Sept. 30, 1948, 150 mi<sup>2</sup>, revised.

PERIOD OF RECORD.--March 1945 to September 1948 (published as "Tenmile Creek at Toledo"), August 1976 to September 1984 (discontinued).

REVISED RECORDS.--WSP 1307: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 576.28 ft National Geodetic Vertical Datum of 1929. (From Aug. 1976 to July, 1979 at site 500 ft downstream. Prior to Sept. 30, 1948 water-stage recorder at site 2,500 ft upstream at datum 3.72 ft higher.

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

AVERAGE DISCHARGE.--11 years(1946-48, 1977-84) 126 ft<sup>3</sup>/s, 11.41 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,950 ft<sup>3</sup>/s Mar. 14, 1982, gage height, 14.54 ft; 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 present datum, from floodmark, Lucas County Sanitary Engineers, discharge, 3,400 ft<sup>3</sup>/s. Flood of Apr. 25, 1950 reached a stage of 15.0 ft present datum, from floodmark, discharge, 3,300 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1150 ft<sup>3</sup>/s and maximums (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 7	1300	1280	9.32	Mar. 21	2330	1340	9.53
Dec. 13	0700	*1530	10.17	Apr. 25	0130	1500	10.07
Feb. 14	0330	1150	a*11.01	Apr. 28	1130	1470	9.96

Minimum daily discharge, 0.88 ft<sup>3</sup>/s July 23.

a Ice jam.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.8	10	220	25	40	39	131	208	103	9.8	1.4	4.8
2	8.8	35	126	23	36	38	114	132	96	11	1.1	5.9
3	8.9	32	93	21	81	37	106	101	564	13	2.5	11
4	9.1	17	129	20	68	37	111	90	605	18	6.0	4.8
5	12	17	131	19	58	50	142	73	185	29	11	4.0
6	9.1	15	620	18	48	64	196	59	114	31	7.5	3.5
7	9.1	15	1230	17	43	80	171	53	87	17	8.6	5.9
8	10	14	722	16	41	92	117	55	73	9.5	9.6	4.0
9	9.1	13	322	16	41	72	92	51	67	20	5.9	7.2
10	8.8	22	194	15	46	58	75	46	59	14	5.6	8.5
11	8.8	118	237	15	72	50	65	42	50	9.1	4.3	17
12	11	89	1070	14	320	56	59	41	42	5.9	3.3	4.3
13	187	68	1480	14	670	47	103	45	56	5.3	3.1	4.8
14	36	50	915	13	1050	43	117	42	59	4.3	5.6	6.2
15	26	96	504	13	700	67	161	35	63	2.9	5.1	12
16	21	288	312	13	460	771	176	30	45	2.1	8.5	3.8
17	15	368	164	12	350	1100	189	28	37	1.5	11	2.7
18	11	154	102	12	290	584	367	33	54	2.3	43	2.5
19	8.8	233	80	12	230	316	332	64	48	2.5	68	2.5
20	8.5	580	72	12	180	539	211	141	42	2.3	26	2.3
21	8.5	523	68	12	145	1180	143	164	31	1.7	11	1.9
22	66	287	86	12	120	1250	343	149	27	1.2	8.5	1.9
23	36	207	150	11	90	771	1050	154	24	.88	7.8	3.1
24	39	436	110	11	74	735	1350	154	21	5.3	5.3	3.5
25	30	285	70	15	62	653	1330	122	19	3.8	3.1	11
26	25	141	55	19	52	485	619	601	15	9.5	1.5	17
27	20	120	45	26	46	354	774	758	20	11	1.4	3.8
28	15	641	38	50	43	313	1410	315	12	6.5	1.9	3.5
29	13	1100	34	75	41	294	815	213	12	5.1	2.1	4.5
30	9.5	534	30	56	---	212	358	155	10	4.0	14	5.1
31	9.1	---	27	46	---	159	---	124	---	2.7	6.5	---
TOTAL	697.9	6508	9436	653	5497	10546	11227	4278	2640	262.18	300.2	173.0
MEAN	22.5	217	304	21.1	190	340	374	138	88.0	8.46	9.68	5.77
MAX	187	1100	1480	75	1050	1250	1410	758	605	31	68	17
MIN	8.5	10	27	11	36	37	59	28	10	.88	1.1	1.9
CFSM	.15	1.45	2.03	.14	1.27	2.27	2.49	.92	.59	.06	.07	.04
IN.	.17	1.61	2.34	.16	1.36	2.62	2.78	1.06	.65	.07	.07	.04

CAL YR 1983 TOTAL 47253.30 MEAN 129 MAX 1750 MIN 8.5 CFSM .86 IN 11.72  
WTR YR 1984 TOTAL 52218.28 MEAN 143 MAX 1480 MIN .88 CFSM .95 IN 12.95

## STREAMS TRIBUTARY TO LAKE ERIE

25

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 downstream from bridge on State Highway 191 at west edge of Stryker, 0.6 mi upstream from Penn Central bridge, and 1.6 mi downstream from Leatherwood Creek.

DRAINAGE AREA.--410 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929. Prior to Sept. 30, 1928, nonrecording gage at site 3.5 mi downstream at different datum. Oct. 13, 1940, to Jan. 17, 1941, nonrecording gage and Jan. 18, 1941, to Sept. 30, 1953, water-stage recorder, at site 0.5 mi downstream at same datum.

REMARKS.--Records fair. Small diversion 12.5 mi upstream from gage for municipal supply of Archbold. Diversion averaged 1.99 ft<sup>3</sup>/s is returned as sewage to Brush Creek which flows into Tiffin River about 15 mi downstream from station. Water-quality data collected at this site 1965 to 1977. Sediment data collected 1969 to 1974.

AVERAGE DISCHARGE.--51 years, 323 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,800 ft<sup>3</sup>/s Mar. 15, 1982, gage height, 18.36 ft; minimum daily discharge, 3.9 ft<sup>3</sup>/s Aug. 30, 31, Sept. 1, 1953.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a stage of 16.0 ft, from floodmarks, discharge, 7,600 ft<sup>3</sup>/s. Flood in 1937 reached a stage of 15.0 ft, from information by local resident, discharge, 6,000 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 1,850 ft<sup>3</sup>/s and maximums (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 14	1800	2630	13.33	Apr. 25	1700	1950	12.09
Feb. 15	1300	*3990	*14.61	May 29	0100	1900	12.00
Mar. 19	0100	1880	11.97				

Minimum daily discharge, 18 ft<sup>3</sup>/s Oct. 1-9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	83	1050	115	69	224	496	816	749	55	36	45
2	18	86	790	110	68	200	407	529	463	54	36	43
3	18	94	430	105	68	180	355	392	409	52	59	50
4	18	108	311	100	68	155	334	340	653	50	116	51
5	18	112	302	99	67	155	559	308	764	50	124	49
6	18	112	532	96	67	145	856	280	681	54	96	43
7	18	111	870	94	66	135	977	257	404	58	103	38
8	18	109	1060	90	66	130	924	237	290	54	132	38
9	18	105	1190	87	66	125	702	222	240	52	104	40
10	19	104	1020	85	74	125	488	210	203	55	120	48
11	19	120	740	83	286	120	374	197	183	56	113	55
12	20	155	1430	81	774	120	315	189	164	54	158	79
13	28	165	1980	79	1940	120	314	178	145	53	144	77
14	47	154	2530	78	3210	120	348	171	157	52	99	70
15	58	149	2480	77	3920	154	597	170	175	49	70	98
16	57	316	2080	76	3380	853	961	165	173	47	56	108
17	50	457	1660	75	2770	1430	1100	154	149	45	53	104
18	44	372	1230	74	2310	1750	1160	146	136	44	52	90
19	41	320	740	73	1960	1800	1120	142	128	47	50	55
20	39	527	417	73	1660	1520	1020	172	119	44	45	56
21	39	688	318	72	1380	1480	798	293	107	42	41	48
22	49	705	280	72	1090	1530	758	334	96	41	38	44
23	88	551	235	72	791	1600	1400	334	89	39	36	42
24	111	532	205	72	585	1580	1690	337	85	38	35	41
25	114	601	180	71	473	1480	1910	368	80	36	35	45
26	109	524	170	70	403	1390	1850	945	73	36	34	105
27	100	363	155	70	336	1240	1560	1270	68	44	35	139
28	89	780	145	70	263	1100	1290	1730	65	50	35	116
29	80	1080	135	70	254	975	1210	1860	62	51	35	90
30	79	1180	130	69	---	834	1120	1590	58	45	38	55
31	77	---	120	69	---	655	---	1190	---	40	43	---
TOTAL	1519	10763	24915	2527	28464	23435	26994	15526	7169	1487	2171	1972
MEAN	49.0	359	804	81.5	982	756	900	501	239	48.0	70.0	55.7
MAX	114	1180	2530	115	3920	1800	1910	1860	764	58	158	139
MIN	18	83	120	69	66	120	314	142	58	36	34	38

CAL YR 1983 TOTAL 154676 MEAN 424 MAX 4330 MIN 17  
WTR YR 1984 TOTAL 146942 MEAN 401 MAX 3920 MIN 18



## STREAMS TRIBUTARY TO LAKE ERIE

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 upstream from bridge on U. S. Highway 224, 3.5 mi northeast of Fort Jennings, 6 mi upstream from Ottawa River, and 7.3 mi downstream from Jennings Creek.

DRAINAGE AREA.--332 mi<sup>2</sup>.

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

REMARKS.--Records good except for winter periods which are fair. Beginning Jan. 4, 1971, water was diverted at a point 24.3 mi upstream from station into Lake Bresler. Storage in Lake Bresler is available for low-flow augmentation and water supply of city of Lima, in Ottawa River basin. Net withdrawal totaled 2,973 mil gal, equivalent to a mean withdrawal of 12.6 ft<sup>3</sup>/s. No releases have been made for low-flow augmentation. Some diversion from Grand Lake to Auglaize River basin through Miami and Erie Canal into Jennings Creek at a point 9.2 mi upstream from station. Annual figures of runoff are considered to be within 10 percent of natural yield. Sediment data collected at this site 1970 to 1974. Water-quality data collected at this site 1968 to 1978.

AVERAGE DISCHARGE.--58 years, 287 ft<sup>3</sup>/s, 11.74 in/yr.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2700 ft<sup>3</sup>/s and maximums (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Nov. 17	1830	2890	11.07	Mar. 17	2330	*4850	*13.87
Nov. 29	1930	3760	12.39	Mar. 22	0730	3820	12.47
Dec. 7	1400	2830	10.97	Mar. 27	0200	2710	10.75
Dec. 13	0400	2700	10.72	Apr. 6	1300	3200	11.56
Feb. 13	0430	3340	11.77	Apr. 24	0430	4800	13.81

Minimum daily discharge, 6.0 ft<sup>3</sup>/s Oct. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.7	47	839	66	171	185	385	291	211	43	26	7.8
2	10	49	434	62	158	205	317	224	186	40	25	14
3	8.2	82	325	57	376	165	271	192	156	35	21	19
4	6.0	187	534	52	1540	155	304	179	130	35	20	20
5	17	310	1690	48	1790	145	1610	169	114	35	21	21
6	32	170	2270	44	1110	247	3100	152	104	65	27	22
7	22	111	2780	41	800	407	2380	137	90	132	27	18
8	31	82	2020	38	600	300	983	129	80	74	24	23
9	41	60	794	35	390	240	589	124	70	58	30	17
10	29	45	556	33	337	195	431	108	66	55	27	19
11	19	272	597	31	1380	170	339	84	62	50	30	30
12	15	1270	2050	30	2520	150	280	109	59	43	24	22
13	47	1130	2520	29	2640	140	255	273	65	39	22	17
14	68	478	1220	28	1400	135	267	259	80	35	20	16
15	77	329	719	28	840	130	578	154	59	32	26	23
16	119	1320	542	27	580	1750	1220	102	55	29	34	22
17	63	2720	380	26	470	4230	1840	94	54	25	28	14
18	38	2240	294	26	390	4290	1750	76	50	22	24	11
19	32	1060	235	27	350	2460	1210	71	49	22	20	11
20	41	853	210	27	290	1160	758	231	47	22	15	12
21	44	903	190	27	250	2970	525	583	45	24	11	11
22	130	744	170	27	230	3760	1030	428	43	22	11	10
23	732	485	150	27	215	2670	3880	849	45	19	17	9.2
24	1050	1210	135	27	210	1600	4580	1560	95	21	16	8.5
25	526	1570	125	29	200	1440	3560	678	95	41	15	6.5
26	220	711	115	96	394	2340	1090	431	190	32	13	10
27	129	389	105	470	439	2310	666	327	89	49	10	18
28	95	1750	94	758	307	1300	482	285	53	39	10	13
29	66	3560	87	581	207	930	354	618	35	40	9.6	17
30	53	3000	80	339	---	680	277	468	28	34	8.3	19
31	52	---	73	227	---	500	---	283	---	29	7.6	---
TOTAL	3820.9	27137	22333	3363	20584	37359	35411	9668	2505	1241	619.5	481.0
MEAN	123	905	720	108	710	1205	1180	312	83.5	40.0	20.0	16.0
MAX	1050	3560	2780	758	2640	4290	4580	1560	211	132	34	30
MIN	6.0	45	73	26	158	130	255	71	28	19	7.6	6.5
CFSM	.37	2.73	2.17	.33	2.14	3.63	3.55	.94	.25	.12	.06	.05
IN.	.43	3.04	2.50	.38	2.31	4.19	3.97	1.08	.28	.14	.07	.05

CAL YR 1983 TOTAL 106492.0 MEAN 292 MAX 3560 MIN 2.6 CFSM .88 IN 11.93  
WTR YR 1984 TOTAL 164522.4 MEAN 450 MAX 4680 MIN 6.0 CFSM 1.36 IN 18.43

## 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 west of Findlay, 3 mi downstream from Eagle Creek, and 3 mi upstream from Aurand Run.

DRAINAGE AREA.--346 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929. Prior to July 24, 1930, nonrecording gage at same site and datum.

REMARKS.--Records good except for those 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.--56 years, 256 ft<sup>3</sup>/s, 10.05 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,000 ft<sup>3</sup>/s June 14, 1981, gage height, 17.43 ft from measurement made on peak; minimum daily, 0.4 ft<sup>3</sup>/s Aug. 27, Sept. 3, 1934.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a stage of 18.5ft; discharge, 22,000 ft<sup>3</sup>/s, from rating curve extended above 10,000 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,800 ft<sup>3</sup>/s and maximums (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Nov. 16	2330	2,880	8.12	Mar. 17	1400	3,920	9.82
Nov. 29	0100	3,430	9.06	Mar. 21	2030	4,980	11.17
Dec. 7	0430	3,730	9.55	Apr. 23	1300	*6,510	*12.51
Dec. 12	1630	3,230	8.73	May 23	1600	2,960	8.26

Minimum daily discharge, 16 ft<sup>3</sup>/s Oct. 2, 3; Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	80	599	58	81	165	447	279	218	64	40	27
2	16	110	373	58	78	190	363	224	179	59	39	27
3	16	373	292	58	871	150	310	208	154	55	46	40
4	17	377	948	59	1290	135	370	212	130	59	53	30
5	75	287	1930	60	855	201	1580	185	116	125	47	28
6	47	178	2690	62	353	290	2190	164	103	388	47	25
7	55	129	3350	56	202	355	1650	156	92	372	219	26
8	47	103	1960	51	140	225	741	162	82	177	129	27
9	41	85	750	48	120	180	447	164	74	137	146	23
10	26	101	509	44	150	155	338	160	69	251	178	28
11	24	1690	680	42	400	140	271	150	66	189	108	41
12	22	2340	2940	40	1000	130	228	217	62	114	102	28
13	202	1610	2250	39	1600	125	237	479	69	76	73	25
14	352	673	1180	39	2500	125	450	322	83	63	56	25
15	230	579	727	39	1910	165	2160	242	77	54	47	31
16	120	2480	501	39	909	1770	1850	182	80	52	43	25
17	75	2650	342	39	638	3840	1210	149	70	47	38	23
18	58	1760	249	38	450	3240	1040	130	67	46	35	22
19	49	1150	194	37	370	1770	813	124	61	43	34	21
20	43	1300	177	37	305	1450	566	417	57	40	33	21
21	41	1040	164	36	275	4470	435	822	55	39	31	20
22	228	702	284	37	250	4420	1800	532	51	38	32	19
23	1030	646	145	38	235	2770	6000	2310	81	37	34	19
24	839	1730	120	61	220	1630	5390	1130	826	38	31	24
25	414	1230	105	93	311	1340	2570	499	917	38	30	21
26	237	579	92	326	396	1770	987	350	293	49	30	30
27	158	402	80	676	200	1600	1540	241	149	71	28	20
28	116	2510	74	402	155	1070	891	296	103	67	28	21
29	94	2860	68	238	140	1040	506	525	81	56	28	17
30	73	1820	63	144	---	790	373	366	70	55	28	16
31	63	---	60	97	---	573	---	280	---	45	29	---
TOTAL	4825	31574	23896	3091	16404	36274	37853	11677	4535	2954	1842	750
MEAN	156	1052	771	99.7	566	1170	1262	377	151	95.6	59.4	25.0
MAX	1030	2860	3350	676	2500	4470	6000	2310	917	388	219	41
MIN	16	80	60	36	78	125	228	124	51	37	28	16
CFSM	.45	3.04	2.23	.29	1.64	3.38	3.65	1.09	.44	.28	.17	.07
IN.	.52	3.39	2.57	.33	1.76	3.90	4.07	1.26	.49	.32	.20	.08

CAL. YR 1983 TOTAL 110030 MEAN 301 MAX 3350 MIN 11 CFSM .87 IN 11.83  
WTR YR 1984 TOTAL 175685 MEAN 480 MAX 6000 MIN 16 CFSM 1.39 IN 18.89

## STREAMS TRIBUTARY TO LAKE ERIE

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 upstream from Jackson ditch, and 3 mi south of Defiance.

DRAINAGE AREA.--2,318 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929. May 20 to Aug. 8, 1903, non-recording gage at site 1.8 mi 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 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 downstream from dam at present datum.

REMARKS.--Records good except those for winter period and those for periods of missing record, April 6-29 and June 6-July 19 which are fair. Flow regulated by dam at former powerplant at station; reservoir capacity, 9,800 acre-ft, operation of plant discontinued Jan. 10, 1963; occasional gate operation subsequently. Some diversion by Miami and Erie Canal from Grand Lake into Jennings Creek, tributary to Auglaize River 70 mi upstream from station. Water-quality data collected at this site 1966 to 1977.

AVERAGE DISCHARGE.--69 years, 1,738 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 52,500 ft<sup>3</sup>/s Feb.16, 1950, Feb. 12, 1959, gage height, 26.4 ft, from graph based on hourly powerplant tailwater-gage readings, and gage readings respectively; maximum gage height 27.65 ft Feb. 13, 1959, from flood mark (ice jam). minimum daily discharge, 0.5 ft<sup>3</sup>/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, from reading on powerplant tailwater gage at present datum; discharge, 120,000 ft<sup>3</sup>/s, from rating curve extended above 51,000 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 24,300 ft<sup>3</sup>/s Apr. 16, gage height 18.29 ft; minimum daily, 61 ft<sup>3</sup>/s Oct. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69	284	9960	295	741	1000	3670	2620	2380	215	181	72
2	67	260	5560	280	541	840	2680	2010	1090	200	162	97
3	73	258	3610	260	461	760	2010	1420	1180	195	192	125
4	68	474	2340	250	1210	700	1930	1100	1090	190	259	164
5	61	1030	5960	235	5880	670	6920	891	891	195	277	198
6	65	1080	12600	225	5650	660	15300	620	680	310	236	161
7	126	775	16100	215	3640	1360	15500	753	600	610	207	145
8	137	595	14900	210	1830	1780	10900	721	540	450	181	125
9	140	455	10500	205	1050	1090	6260	680	480	390	210	110
10	140	1270	6790	200	827	928	4080	660	440	340	341	116
11	142	1350	4950	195	3070	1340	2710	630	415	295	334	101
12	126	4400	10700	185	10500	1850	1840	800	395	260	312	116
13	168	6570	14900	180	17300	1240	1590	2000	385	235	288	119
14	426	5160	13000	175	21100	640	8810	1600	430	210	244	109
15	775	3830	9270	170	14900	510	22800	1480	370	190	200	118
16	773	8710	5840	165	10300	4940	24000	1610	355	170	160	120
17	621	11700	3950	160	8340	17200	22000	915	340	155	136	124
18	454	12200	2360	155	5570	21300	16000	530	320	135	125	115
19	312	10200	1090	155	4300	19300	11500	580	310	125	101	101
20	238	8280	800	150	3400	12800	8500	764	295	122	95	90
21	197	7260	700	150	2600	15700	6000	9580	280	109	92	70
22	333	5950	630	150	2100	19600	7200	9100	265	106	95	79
23	1880	4490	580	150	1750	20800	12000	6810	295	106	82	79
24	4990	5100	530	150	1600	17600	18000	9000	355	106	94	80
25	3420	7190	480	154	1350	14400	22500	7820	580	115	108	85
26	2220	5700	440	195	1800	14600	18100	5170	720	176	99	71
27	1050	4080	400	968	2100	14800	13000	4030	450	207	94	76
28	273	8050	380	1870	1800	12700	9000	3010	325	277	83	100
29	435	14200	355	1810	1300	8690	6000	3260	230	277	79	93
30	413	14500	335	1580	---	5940	4160	5160	165	242	63	88
31	329	---	315	1110	---	4400	---	3350	---	213	63	---
TOTAL	20521	155401	160325	12352	137010	240138	304960	88674	16651	6926	5193	3247
MEAN	662	5180	5172	398	4724	7746	10170	2860	555	223	168	108
MAX	4990	14500	16100	1870	21100	21300	24000	9580	2380	610	341	198
MIN	61	258	315	150	461	510	1590	530	165	106	63	70
CAL YR 1983	TOTAL	722054	MEAN	1978	MAX	21200	MIN	33				
WTR YR 1984	TOTAL	1151398	MEAN	3146	MAX	24000	MIN	61				



## STREAMS TRIBUTARY TO LAKE ERIE

29

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. upstream from Independence Dam, 4 mi downstream from mouth of Auglaize River, and 4.5 mi east of Defiance.

DRAINAGE AREA.--5,545 mi<sup>2</sup>.

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

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

AVERAGE DISCHARGE.--52 years, 4,222 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 104,000 ft<sup>3</sup>/s Mar. 15, 1982, gage height, 15.87 ft; minimum discharge, 2 ft<sup>3</sup>/s Sept. 3, 1925; minimum gage height, 1.09 ft Sept. 26, 1928.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 23,000 ft<sup>3</sup>/s and maximums (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Nov. 30	0100	26500	6.14	Mar. 18	2100	36800	7.31
Dec. 7	1400	29900	6.53	Apr. 6	2300	30200	6.56
Dec. 13	1500	33400	6.92	Apr. 17	2300	24100	5.85
Feb. 14	1600	*49600	*8.83	Apr. 24	1500	40400	7.70

Minimum daily discharge, 254 ft<sup>3</sup>/s Aug. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	262	900	19100	1150	1150	1800	9730	7270	9720	859	501	274
2	262	800	12800	1050	1050	1700	7370	5630	7000	694	437	293
3	258	833	9560	940	1000	1650	5880	4170	5060	582	496	391
4	259	922	7430	840	1830	1750	5140	3530	4040	508	560	608
5	277	1460	10900	760	6270	1800	13400	3020	3380	430	849	745
6	345	1640	22000	680	7390	1950	27300	2520	3070	374	1050	534
7	347	1320	29400	640	5610	2850	29100	2440	3210	438	929	465
8	311	1070	27400	620	3770	3250	23000	2290	2450	694	927	390
9	308	885	20900	600	2790	2440	16100	2100	2020	1090	927	381
10	315	1450	15500	580	2460	2050	12000	1960	1570	978	1250	439
11	304	2400	12600	570	5210	2550	8810	1900	1960	847	1190	581
12	304	5090	24400	580	16700	2930	6380	1580	1150	774	1040	587
13	408	7790	32900	590	29700	2000	5290	1120	1070	812	884	550
14	565	6660	30500	600	43200	1700	4930	1190	1100	704	730	557
15	1110	5870	24500	600	38400	1600	7370	2310	1230	574	586	599
16	1230	13900	18400	580	29000	9470	15900	3070	1480	502	488	581
17	1070	16700	13700	560	24200	31100	22800	2420	1530	448	515	711
18	825	16900	10600	550	18000	36200	23500	1030	1230	451	543	635
19	638	14500	7120	540	14000	34300	20300	899	1070	390	501	534
20	558	13500	4660	540	11000	26000	16100	1720	946	358	427	446
21	481	12800	3200	530	8800	30500	13200	14200	822	379	551	428
22	735	11300	2700	520	7000	35900	14200	19000	754	325	446	386
23	2250	9420	2400	510	5700	36400	32000	15100	715	333	357	336
24	5870	10100	2200	500	4700	33000	39700	15200	640	331	397	331
25	5230	11700	2000	510	3800	27600	38500	13800	801	328	402	336
26	3670	10600	1850	638	2950	26600	30500	12600	1490	1040	342	332
27	2470	7850	1700	914	2450	26900	21000	15200	1750	941	308	413
28	997	15800	1600	2290	2300	25500	15900	14200	1300	790	271	612
29	1120	25300	1500	2310	2050	20900	13600	14300	1030	726	254	524
30	1120	25600	1500	1650	---	16100	10400	15900	957	699	274	635
31	981	---	1300	1350	---	12800	---	12900	---	607	284	---
TOTAL	34880	255060	376320	25292	302480	461300	509400	214569	64545	19006	18716	14634
MEAN	1125	8502	12140	816	10430	14880	16980	6922	2152	613	604	488
MAX	5870	25600	32900	2310	43200	36400	39700	19000	9720	1090	1250	745
MIN	258	800	1300	500	1000	1600	4930	899	640	325	254	274

CAL YR 1983 TOTAL 1858118 MEAN 5091 MAX 43700 MIN 180  
WTR YR 1984 TOTAL 2296202 MEAN 6274 MAX 43200 MIN 254

## STREAMS TRIBUTARY TO LAKE ERIE

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 upstream from discharge station at Waterville.

DRAINAGE AREA.--6,313 mi<sup>2</sup>.

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 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, 1,060 micromhos Feb. 3, 4; minimum, 228 micromhos Feb. 12.

pH: Maximum recorded, 8.8 units Oct. 1-3, 5, 6, Aug. 16; minimum recorded, 6.9 units on July 10.

WATER TEMPERATURES: Maximum, 30.0°C Aug. 18; minimum, 0.0°C on many days during winter periods.

DISSOLVED OXYGEN: Maximum recorded, 15.6 mg/L May 17; minimum recorded, 2.7 mg/L Aug. 3.

04193490 MAUMEE RIVER NEAR WATERVILLE, OH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	648	642	644	609	603	606	396	387	392	708	693	701
2	651	645	647	609	597	604	420	393	403	729	711	720
3	654	648	651	603	597	599	450	420	435	744	732	738
4	654	648	650	606	597	601	507	450	477	768	744	757
5	657	645	650	642	609	625	522	477	491	786	771	777
6	663	645	652	639	627	634	483	411	444	795	783	789
7	648	645	648	642	639	639	411	336	361	798	786	789
8	657	651	652	639	636	638	359	351	362	801	786	792
9	663	657	659	648	636	642	387	372	382	798	786	792
10	678	657	667	657	648	653	402	384	394	795	777	792
11	687	669	671	654	639	646	447	396	421	801	789	795
12	687	669	675	645	567	596	387	348	372	810	798	804
13	681	672	677	732	576	667	348	324	333	813	801	807
14	681	666	670	720	639	670	348	336	343	813	804	807
15	756	675	710	633	543	594	357	345	349	810	801	807
16	732	669	694	531	462	491	384	357	370	825	807	816
17	729	702	719	462	426	440	420	387	402	831	813	816
18	756	729	740	477	429	452	450	420	433	966	792	831
19	771	759	764	477	468	472	486	450	470	819	810	813
20	774	765	769	492	471	477	510	483	499	822	807	813
21	777	774	775	486	471	479	525	501	510	825	813	819
22	777	759	767	525	489	505	531	516	526	837	822	828
23	765	729	740	543	519	531	585	525	554	843	837	840
24	828	654	725	531	495	513	606	570	588	861	843	849
25	897	837	879	528	507	519	612	609	611	876	852	861
26	843	705	769	552	528	541	624	609	617	903	864	879
27	732	699	716	558	540	545	636	621	626	903	885	894
28	729	660	699	543	420	457	678	639	660	---	---	---
29	660	621	642	420	375	394	690	681	685	---	---	---
30	618	612	613	399	387	390	684	675	681	---	---	---
31	612	606	609	---	---	---	693	681	685	---	---	---
MONTH	897	606	695	732	375	554	693	324	480	966	693	805

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	954	933	943	594	564	581	477	450	463	459	450	454
2	1040	954	1000	606	594	601	498	474	484	465	450	455
3	1060	1030	1050	636	606	623	501	486	493	495	468	482
4	1060	1010	1040	639	630	635	519	495	509	525	495	509
5	1010	708	832	630	621	625	537	495	521	552	525	539
6	711	657	679	636	630	633	501	393	426	570	552	562
7	675	501	598	639	627	632	393	384	391	579	570	574
8	498	447	462	663	630	638	384	372	376	579	573	575
9	459	456	456	672	657	663	396	369	384	591	576	586
10	471	414	457	684	663	673	435	399	414	603	588	599
11	399	243	300	693	672	683	453	429	441	609	594	604
12	267	228	244	711	684	700	477	453	465	621	606	614
13	---	---	---	732	708	722	516	474	497	627	618	621
14	---	---	---	726	714	721	543	510	529	630	621	625
15	300	276	289	723	705	713	564	495	531	630	615	623
16	336	303	319	705	462	546	516	453	484	642	621	632
17	357	339	347	---	---	---	510	405	443	639	588	618
18	390	360	374	---	---	---	432	411	423	603	576	593
19	420	390	406	---	---	---	429	408	418	582	552	572
20	441	420	430	339	312	324	447	420	432	582	543	562
21	465	438	452	333	327	330	468	447	458	621	537	584
22	489	462	474	333	324	327	486	339	431	549	468	511
23	507	480	494	336	321	326	342	285	312	492	450	470
24	513	504	509	348	327	336	309	279	291	486	453	470
25	540	513	523	372	342	357	300	285	295	501	483	493
26	555	540	547	390	372	380	330	300	312	498	474	484
27	555	531	547	396	390	391	339	285	302	489	474	482
28	546	531	539	402	390	394	384	318	363	489	474	480
29	561	546	555	---	---	---	435	384	408	501	465	479
30	---	---	---	426	411	418	456	438	449	471	459	466
31	---	---	---	456	426	440	---	---	---	495	471	485
MONTH	1060	228	551	732	312	534	564	279	425	642	450	542



## STREAMS TRIBUTARY TO LAKE ERIE

04193490 MAUMEE RIVER NEAR WATERVILLE, OH--Continued  
 SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	510	489	498	645	615	632	588	561	580	567	549	556
2	519	501	511	633	609	625	594	573	582	567	540	553
3	528	510	519	633	609	624	585	558	572	561	543	552
4	534	519	526	639	621	633	585	561	572	570	549	559
5	534	519	528	639	621	628	585	561	577	582	558	570
6	546	528	538	633	615	626	594	579	585	582	558	573
7	555	537	549	642	624	635	582	561	572	591	573	580
8	570	546	561	669	648	660	660	471	547	585	582	583
9	585	561	576	657	645	652	513	471	496	594	582	586
10	582	558	570	666	642	657	483	378	404	603	588	592
11	567	552	562	678	651	658	474	396	447	609	588	591
12	570	555	565	693	663	680	510	474	495	603	588	593
13	579	558	568	675	603	654	531	510	522	603	588	592
14	585	561	578	657	603	623	537	510	530	603	594	598
15	594	579	585	609	594	602	525	498	517	618	600	608
16	612	576	596	609	591	602	513	489	504	633	609	624
17	609	585	596	600	579	590	543	513	526	645	624	635
18	621	564	596	600	576	592	552	516	538	678	636	656
19	594	525	543	594	567	585	579	552	561	693	669	681
20	582	561	568	579	564	576	597	567	585	699	681	692
21	573	558	565	582	570	580	600	558	580	705	687	697
22	585	558	572	582	537	561	582	567	576	708	687	698
23	597	564	579	558	516	538	600	579	592	708	693	699
24	612	585	602	564	531	544	600	576	589	708	693	702
25	615	597	608	561	537	551	585	555	575	708	684	698
26	621	609	616	561	519	533	576	552	561	702	684	691
27	645	609	634	579	531	561	570	546	558	699	681	687
28	651	636	645	591	579	587	570	555	558	687	681	685
29	651	621	644	585	570	575	573	555	561	684	681	684
30	642	618	632	597	558	578	570	546	556	702	687	697
31	---	---	---	594	564	581	570	552	559	---	---	---
MONTH	651	489	574	693	516	604	660	378	548	708	540	630
YEAR	1060	228	577	PH (STANDARD UNITS), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984								

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

PH (STANDARD UNITS), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

PH (STANDARD UNITS), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.8	7.7	7.8	8.7	8.5	8.6	7.5	7.2	7.3	7.9	7.8	7.8
2	7.9	7.7	7.9	8.7	8.5	8.6	7.4	7.3	7.3	7.8	7.7	7.8
3	7.9	7.9	7.9	8.6	8.3	8.5	7.5	7.3	7.4	7.9	7.8	7.8
4	7.9	7.8	7.9	8.5	8.3	8.4	7.4	7.3	7.4	7.9	7.9	7.9
5	7.8	7.5	7.7	8.3	8.1	8.2	7.4	7.3	7.3	7.9	7.8	7.9
6	7.6	7.4	7.5	8.2	8.0	8.1	7.2	7.1	7.1	8.0	7.8	7.9
7	7.6	7.5	7.6	8.5	8.2	8.3	7.3	7.2	7.2	8.1	8.0	8.0
8	7.7	7.7	7.7	8.5	8.3	8.4	7.3	7.2	7.2	8.2	8.0	8.0
9	---	---	---	8.5	8.4	8.4	7.4	7.2	7.3	8.2	8.0	8.1
10	7.6	7.5	7.5	8.5	8.3	8.4	7.4	7.2	7.3	8.2	8.1	8.1
11	7.5	7.3	7.4	8.5	8.3	8.4	7.4	7.2	7.3	8.2	8.0	8.1
12	7.6	7.3	7.5	8.5	8.4	8.4	7.5	7.4	7.4	8.2	8.0	8.1
13	---	---	---	8.4	8.3	8.4	7.5	7.2	7.3	8.3	8.1	8.2
14	---	---	---	8.4	8.3	8.4	7.5	7.4	7.4	8.4	8.2	8.3
15	7.6	7.4	7.5	8.4	8.1	8.3	7.6	7.3	7.4	8.4	8.3	8.4
16	7.6	7.4	7.5	8.1	7.9	8.0	7.6	7.5	7.6	8.5	8.2	8.4
17	7.6	7.2	7.4	---	---	---	7.6	7.4	7.4	8.4	8.1	8.2
18	7.7	7.2	7.4	---	---	---	7.7	7.4	7.4	8.3	8.0	8.1
19	7.5	7.3	7.4	---	---	---	7.7	7.6	7.6	8.3	8.0	8.1
20	7.5	7.4	7.5	---	---	---	7.8	7.1	7.5	8.1	7.8	8.0
21	7.6	7.2	7.4	7.8	7.7	7.7	8.1	7.4	7.9	7.9	7.2	7.6
22	7.6	7.2	7.4	7.9	7.9	7.9	8.2	7.8	8.0	7.6	7.6	7.4
23	7.4	7.2	7.3	8.0	7.7	7.8	8.0	7.3	7.6	7.6	7.5	7.5
24	7.5	7.2	7.4	7.8	7.6	7.7	7.3	7.1	7.2	7.8	7.6	7.7
25	7.6	7.3	7.5	7.7	7.6	7.6	7.7	7.2	7.3	7.8	7.6	7.8
26	7.8	7.6	7.7	7.8	7.5	7.6	7.8	7.3	7.6	7.9	7.6	7.8
27	8.3	7.6	8.0	7.6	7.5	7.6	7.8	7.7	7.7	8.0	7.2	7.5
28	8.5	8.3	8.4	7.6	7.5	7.6	7.6	7.4	7.5	8.2	7.8	8.2
29	8.7	8.4	8.6	---	---	---	7.8	7.6	7.7	7.9	7.3	7.5
30	---	---	---	7.4	7.2	7.3	7.8	7.6	7.7	7.5	7.2	7.4
31	---	---	---	7.6	7.4	7.5	---	---	---	7.7	7.3	7.4
MONTH	8.7	7.2	7.7	8.7	7.2	8.1	8.2	7.1	7.4	8.5	7.2	7.9
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.5	7.4	7.4	8.2	8.1	8.1	8.3	7.9	8.1	8.6	7.8	8.1
2	7.5	7.4	7.4	8.1	7.9	8.0	8.2	7.5	7.9	8.7	8.1	8.4
3	7.5	7.4	7.4	8.2	7.9	8.1	8.2	7.4	7.8	8.5	8.1	8.3
4	7.5	7.4	7.4	8.1	7.9	8.1	8.5	7.6	7.9	8.4	8.0	8.2
5	7.5	7.4	7.5	7.9	7.8	7.8	8.5	7.7	8.2	8.5	8.2	8.4
6	7.6	7.3	7.5	7.9	7.6	7.7	8.6	8.1	8.3	8.7	8.3	8.5
7	7.8	7.6	7.6	7.9	7.6	7.7	8.7	8.1	8.4	8.5	8.3	8.4
8	7.8	7.7	7.7	8.3	7.8	8.0	8.5	7.5	8.0	8.5	8.2	8.3
9	7.9	7.7	7.8	8.2	7.7	8.0	8.0	7.6	7.8	8.5	8.2	8.3
10	7.9	7.5	7.8	8.2	6.9	7.7	7.7	7.4	7.5	8.2	7.9	8.1
11	8.0	7.8	7.9	8.4	7.9	8.2	8.2	7.5	7.8	8.3	7.9	8.1
12	8.1	7.8	8.0	8.4	8.1	8.2	8.2	7.9	8.0	8.2	7.9	8.0
13	8.2	8.0	8.1	8.1	7.9	8.0	8.3	7.8	7.9	8.5	8.3	8.4
14	8.2	7.9	8.1	8.3	7.8	8.0	8.4	7.9	8.1	8.4	8.0	8.3
15	8.1	7.9	8.0	8.4	7.8	8.1	8.4	8.1	8.2	8.6	8.2	8.4
16	8.2	8.0	8.1	8.4	7.9	8.1	8.8	8.2	8.4	8.6	8.4	8.4
17	8.2	7.9	8.0	8.3	7.9	8.1	8.4	7.6	8.0	8.6	8.4	8.5
18	8.3	8.0	8.1	8.4	7.9	8.1	8.5	7.8	8.2	8.7	8.5	8.5
19	8.2	7.8	8.0	8.5	8.2	8.3	8.3	7.9	8.1	8.6	8.5	8.5
20	8.1	7.9	8.0	8.5	8.1	8.3	8.3	8.0	8.2	8.5	8.4	8.5
21	8.2	8.0	8.1	8.3	8.0	8.1	8.6	8.1	8.4	8.5	8.4	8.5
22	8.2	8.0	8.1	8.7	7.8	8.1	8.4	8.0	8.2	8.7	8.4	8.6
23	8.2	7.9	8.0	8.6	7.8	8.2	8.7	8.2	8.4	8.6	8.4	8.5
24	8.0	7.8	7.9	8.3	7.4	8.0	8.5	8.1	8.3	8.4	8.2	8.4
25	8.3	7.9	8.0	8.0	7.3	7.5	8.6	8.1	8.3	8.5	8.3	8.4
26	8.2	8.0	8.1	8.3	7.3	8.0	8.7	7.9	8.3	8.4	8.2	8.3
27	8.2	7.8	8.0	8.2	7.8	8.0	8.6	8.2	8.4	8.3	8.2	8.3
28	8.1	7.9	8.0	8.3	8.1	8.2	8.6	8.3	8.4	8.6	8.4	8.4
29	8.2	8.0	8.1	8.2	8.1	8.2	8.7	8.2	8.4	8.6	8.4	8.6
30	8.2	8.0	8.1	8.2	8.0	8.1	8.6	8.0	8.4	8.7	8.5	8.6
31	---	---	---	8.3	8.1	8.2	8.7	7.9	8.3	---	---	---
MONTH	8.3	7.3	7.9	8.7	6.9	8.0	8.8	7.4	8.2	8.7	7.8	8.4
YEAR	8.8	6.9	7.9									

## STREAMS TRIBUTARY TO LAKE ERIE

04193490 MAUMEE RIVER NEAR WATERVILLE, OH--Continued  
 TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

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

## STREAMS TRIBUTARY TO LAKE ERIE

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04193490 MAUMEE RIVER NEAR WATERVILLE, OH--Continued  
 TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	23.5	21.5	22.0	25.5	24.5	24.5	24.5	23.0	23.5
2	---	---	---	23.5	22.5	23.0	26.0	24.5	25.0	25.0	22.5	23.5
3	---	---	---	24.5	23.5	24.0	25.0	24.5	25.0	24.0	22.5	23.5
4	---	---	---	25.0	24.0	24.5	26.0	24.5	25.0	22.5	21.5	22.0
5	---	---	---	24.5	23.5	24.0	26.5	25.0	26.0	21.5	20.0	20.5
6	23.0	22.5	23.0	24.5	23.0	23.5	---	---	---	21.5	20.0	20.5
7	23.5	21.5	22.5	23.5	21.5	22.5	---	---	---	21.0	20.0	20.5
8	23.5	22.0	22.5	24.0	21.5	22.5	28.0	27.5	27.5	21.0	19.5	20.5
9	25.0	22.0	23.5	23.5	22.0	22.5	28.5	27.0	27.5	20.5	20.0	20.5
10	25.5	23.5	24.5	25.0	22.5	23.0	28.0	26.0	26.5	21.0	20.0	20.5
11	25.0	23.5	24.0	25.0	24.5	24.5	27.5	26.0	26.5	22.0	21.0	21.5
12	25.5	23.0	24.5	25.0	23.5	24.0	27.0	25.5	26.5	22.0	21.5	21.5
13	27.0	24.5	25.5	25.5	24.0	24.5	27.5	26.0	26.5	22.0	21.5	21.5
14	26.0	24.5	25.0	27.5	25.0	26.0	28.5	27.0	27.5	22.5	21.0	22.0
15	24.0	20.5	22.5	27.5	26.5	27.0	29.5	27.5	28.5	21.0	19.5	20.0
16	22.5	21.5	22.0	26.5	25.5	26.0	29.5	28.5	29.0	19.5	18.5	19.0
17	24.5	22.0	23.0	25.5	24.0	24.5	29.0	28.0	28.5	19.5	17.5	18.5
18	26.0	24.0	25.0	23.5	22.5	23.0	30.0	28.5	29.5	19.5	18.0	18.5
19	26.0	24.5	25.0	24.0	21.0	22.0	28.5	28.0	28.0	20.5	18.5	19.5
20	26.0	25.0	25.5	24.0	22.5	23.0	27.5	25.0	25.5	20.5	19.5	20.0
21	25.5	24.0	24.5	23.0	22.5	23.0	27.5	24.5	26.0	20.5	20.0	20.0
22	24.5	22.5	23.5	25.0	23.0	24.0	27.0	24.5	25.5	22.0	20.0	21.0
23	25.0	23.5	24.5	27.5	24.5	26.0	26.5	24.5	25.5	21.5	21.5	21.5
24	24.5	23.5	24.0	26.0	25.0	25.5	25.5	24.0	24.5	22.0	21.0	21.5
25	25.0	23.0	24.0	25.5	24.5	24.5	26.5	24.0	24.5	22.5	21.5	22.0
26	24.5	22.5	23.5	24.5	23.0	24.0	27.5	24.5	25.5	21.5	19.5	20.5
27	24.0	22.0	23.0	23.5	21.5	22.0	27.5	25.5	26.5	19.5	17.5	18.5
28	23.5	21.5	22.5	23.5	22.0	22.5	---	---	---	17.5	16.0	16.5
29	24.0	22.5	23.5	24.0	22.5	23.0	---	---	---	16.0	15.5	16.0
30	24.0	22.0	22.5	24.0	22.5	23.5	26.5	25.5	26.0	16.0	15.0	15.5
31	---	---	---	24.5	23.0	24.0	27.5	24.0	25.5	---	---	---
MONTH	27.0	20.5	23.5	27.5	21.0	24.0	30.0	24.0	26.5	25.0	15.0	20.5
YEAR	30.0	.0	11.5									

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	9.2	6.2	7.8	10.5	10.0	10.2	11.5	11.0	11.3	13.9	13.6	13.7
2	9.4	7.2	8.3	10.2	9.6	9.9	11.8	11.5	11.7	14.1	13.8	13.9
3	8.8	7.9	8.4	9.8	9.4	9.6	12.1	11.9	12.0	13.9	13.6	13.7
4	8.5	8.1	8.3	10.8	10.0	10.3	12.1	12.0	12.1	14.0	13.8	13.9
5	9.7	7.3	8.3	11.4	10.6	10.9	12.0	11.6	11.7	14.1	13.9	14.0
6	9.6	7.8	8.3	11.3	10.5	11.0	11.6	11.1	11.3	14.4	13.9	14.0
7	9.4	7.8	8.6	11.2	10.3	10.7	11.7	11.1	11.3	14.1	13.8	13.9
8	9.0	8.4	8.7	11.8	10.4	11.0	12.0	9.1	11.3	14.1	14.0	14.0
9	9.1	8.3	8.7	11.9	11.0	11.4	12.1	11.8	11.9	14.2	13.9	14.0
10	9.2	8.7	8.9	12.3	10.6	11.5	12.1	11.8	12.0	14.1	13.3	13.7
11	9.8	8.5	9.0	11.0	10.0	10.6	12.3	11.9	12.2	13.9	13.2	13.7
12	9.3	8.2	8.6	10.6	10.3	10.5	11.8	11.3	11.6	14.1	13.7	13.9
13	8.9	8.3	8.6	10.8	10.5	10.7	11.8	10.3	11.1	14.0	13.6	13.7
14	10.1	8.4	9.4	10.9	10.6	10.7	11.7	10.2	11.2	13.9	13.5	13.7
15	10.5	9.6	10.1	10.8	10.4	10.6	11.8	11.3	11.6	13.9	13.5	13.6
16	10.3	9.3	9.8	10.3	10.1	10.2	12.3	11.7	12.1	14.1	13.5	13.6
17	10.7	9.3	10.0	10.7	10.1	10.4	12.9	12.3	12.6	13.9	13.4	13.6
18	10.7	9.8	10.2	10.9	10.7	10.8	13.2	12.9	13.0	14.1	11.2	13.4
19	11.1	10.2	10.7	10.8	10.4	10.6	13.4	13.1	13.3	14.2	13.8	14.0
20	11.1	10.4	10.7	10.5	10.3	10.4	13.3	13.1	13.2	14.0	13.8	13.9
21	11.5	10.3	10.9	10.5	10.4	10.4	13.3	13.0	13.2	14.1	13.9	14.0
22	10.9	10.0	10.6	10.5	10.4	10.5	13.5	13.0	13.3	14.1	13.8	13.9
23	9.9	9.2	9.5	10.4	10.0	10.2	---	---	---	14.0	13.7	13.9
24	9.2	8.9	9.1	10.3	10.0	10.2	13.8	13.6	13.8	13.9	13.7	13.8
25	9.9	9.1	9.5	10.8	10.3	10.6	13.9	13.8	13.9	14.0	13.6	13.8
26	9.8	9.3	9.6	10.9	10.8	10.9	13.8	13.6	13.8	13.9	13.6	13.8
27	10.2	9.6	9.8	11.0	10.8	10.9	13.6	13.4	13.5	14.1	13.7	13.9
28	10.0	9.7	9.8	10.9	10.1	10.4	13.4	13.2	13.3	---	---	---
29	9.9	9.5	9.7	10.4	10.1	10.2	13.2	13.1	13.2	---	---	---
30	10.3	9.6	10.0	11.0	10.4	10.7	13.2	13.1	13.1	---	---	---
31	10.5	10.1	10.2	---	---	---	13.2	13.0	13.1	---	---	---
MONTH	11.5	6.2	9.4	12.3	9.4	10.6	13.9	9.1	12.4	14.4	11.2	13.8



04193490 MAUMEE RIVER NEAR WATERVILLE, OH--Continued  
OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	---	---	---	15.0	14.4	14.7	14.2	13.4	13.9	11.1	10.8	10.9
2	---	---	---	15.0	14.3	14.7	13.8	13.2	13.7	11.1	10.9	11.0
3	---	---	---	15.0	14.8	15.0	14.1	13.7	13.9	11.1	10.9	11.0
4	12.9	11.1	12.1	14.9	14.7	14.9	13.9	13.7	13.8	11.4	11.0	11.2
5	12.5	12.0	12.1	14.9	13.6	14.5	13.8	13.2	13.7	11.8	11.1	11.4
6	12.2	11.5	11.6	14.9	13.6	14.0	14.0	12.2	12.3	12.0	11.1	11.5
7	12.9	12.2	12.7	15.1	14.7	14.9	12.3	12.1	12.2	11.9	11.0	11.4
8	12.8	12.6	12.8	15.2	14.5	14.9	12.4	12.1	12.3	11.5	10.8	11.1
9	12.7	12.4	12.6	14.6	14.2	14.4	12.3	11.9	12.1	12.4	10.9	11.5
10	13.0	12.3	12.5	14.5	14.3	14.4	12.8	11.8	12.2	12.7	11.7	12.2
11	13.4	13.1	13.4	14.4	13.8	14.1	13.4	12.8	13.2	12.3	11.2	11.8
12	13.8	13.1	13.5	14.8	14.0	14.4	13.4	12.9	13.2	13.5	11.0	12.1
13	---	---	---	14.7	14.3	14.5	13.0	11.4	12.4	12.7	11.5	12.0
14	---	---	---	14.7	14.3	14.5	11.6	11.3	11.4	13.7	11.8	12.2
15	12.6	12.1	12.2	14.6	14.3	14.5	11.5	11.3	11.3	14.2	10.9	12.6
16	12.3	11.9	12.2	14.6	13.6	13.9	11.5	11.4	11.4	15.5	11.8	13.5
17	12.3	12.0	12.1	---	---	---	12.6	11.4	11.9	15.6	9.9	12.5
18	12.3	11.6	11.9	---	---	---	13.1	11.6	12.6	15.2	10.7	13.0
19	13.2	11.6	12.4	---	---	---	13.3	11.9	12.5	13.9	11.4	12.9
20	13.5	13.1	13.3	---	---	---	12.1	11.8	12.0	13.4	8.8	10.3
21	13.5	13.2	13.3	13.2	12.9	13.1	12.2	11.9	12.1	11.8	9.8	10.5
22	13.5	13.2	13.4	12.6	12.5	12.6	12.4	12.1	12.2	10.0	7.5	8.7
23	13.4	13.2	13.3	12.8	12.5	12.6	12.1	11.1	11.7	8.5	7.5	8.0
24	13.3	13.1	13.2	12.6	12.4	12.5	11.7	10.6	11.5	8.5	8.1	8.4
25	13.7	13.2	13.5	12.4	12.3	12.3	11.9	11.1	11.6	8.1	7.7	7.9
26	14.0	13.5	13.8	13.3	12.2	12.7	11.8	10.4	11.2	9.0	7.2	8.1
27	14.8	13.8	14.2	13.3	13.2	13.2	10.4	9.5	10.1	9.1	8.1	8.5
28	14.9	14.5	14.7	14.2	13.5	14.0	10.8	10.4	10.5	9.3	7.9	8.7
29	15.0	14.7	14.8	---	---	---	10.8	10.4	10.6	9.8	8.8	9.4
30	---	---	---	14.5	14.4	14.4	10.8	9.0	10.5	9.5	9.0	9.4
31	---	---	---	14.6	13.7	14.2	---	---	---	9.5	8.4	8.7
MONTH	15.0	11.1	13.0	15.2	12.2	14.0	14.2	9.0	12.1	15.6	7.2	10.7
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	8.3	7.7	8.1	10.3	7.7	8.8	11.7	6.5	8.7	9.4	5.9	6.8
2	7.8	7.0	7.5	10.2	6.8	8.0	10.6	4.0	7.0	11.0	6.3	8.3
3	7.4	5.9	6.6	9.5	7.7	8.5	7.2	2.7	5.4	9.0	6.0	7.5
4	7.8	5.8	6.6	8.3	7.1	7.9	9.1	3.6	5.4	9.2	6.0	7.3
5	8.0	5.5	7.0	7.3	6.1	6.7	9.9	4.5	7.7	8.2	6.9	7.7
6	8.0	7.1	7.6	7.9	5.8	6.6	11.5	6.8	8.8	9.7	7.6	8.4
7	7.8	7.1	7.4	8.4	6.1	7.1	10.6	6.1	8.6	8.1	6.6	7.3
8	7.7	7.0	7.3	11.8	7.4	9.3	8.9	5.6	6.6	7.5	5.8	6.7
9	8.5	6.9	7.6	11.9	7.3	8.8	7.8	5.4	6.5	9.9	8.0	8.7
10	8.3	7.0	7.7	10.6	7.0	8.3	6.6	5.4	6.0	8.9	6.4	7.6
11	8.5	7.0	7.7	12.9	7.4	10.3	8.6	6.0	7.0	8.6	6.5	7.6
12	9.2	6.4	7.8	13.5	9.0	10.7	8.4	6.5	7.4	8.8	6.2	7.2
13	8.9	7.4	8.2	12.0	6.2	8.6	9.2	6.3	7.3	10.4	7.6	8.8
14	8.6	6.0	7.2	12.1	6.7	9.0	10.1	5.9	7.6	9.8	7.4	8.4
15	8.1	5.9	7.6	11.8	7.8	9.3	12.8	6.9	9.2	11.2	7.5	8.7
16	7.7	5.8	6.8	9.4	6.0	8.3	12.6	8.7	10.4	9.8	8.1	9.0
17	8.6	5.8	7.1	10.4	7.9	9.3	9.0	4.3	6.8	9.0	7.6	8.1
18	10.3	5.9	7.9	10.5	6.7	8.1	11.6	5.7	9.2	8.3	7.0	7.7
19	9.8	6.5	8.1	13.6	8.3	10.4	8.5	6.6	7.6	---	---	---
20	10.3	7.6	9.0	12.9	10.4	11.6	9.4	6.3	7.5	---	---	---
21	9.8	7.0	8.4	10.5	7.8	9.1	13.4	6.6	10.0	---	---	---
22	9.1	6.7	8.0	15.4	7.6	11.0	11.3	7.6	8.8	---	---	---
23	9.5	6.4	7.9	14.3	6.6	10.7	11.6	7.5	8.9	---	---	---
24	8.3	6.2	7.3	9.4	4.0	7.3	11.0	7.6	8.7	---	---	---
25	10.4	6.4	7.6	7.4	3.1	4.5	13.3	7.8	9.7	---	---	---
26	10.0	6.5	8.1	10.1	2.8	8.1	13.3	7.8	10.2	---	---	---
27	9.2	6.6	8.1	10.0	5.5	7.1	11.7	9.1	10.4	---	---	---
28	9.7	7.2	8.4	9.9	7.6	8.4	10.9	9.0	9.8	---	---	---
29	10.1	7.9	8.8	11.0	7.5	9.1	11.1	7.2	9.0	---	---	---
30	10.2	8.2	8.9	11.8	6.7	8.9	10.7	6.2	8.3	---	---	---
31	---	---	---	11.2	8.4	9.9	11.0	5.8	8.7	---	---	---
MONTH	10.4	5.5	7.7	15.4	2.8	8.7	13.4	2.7	8.2	11.2	5.8	7.9
YEAR	15.6	2.7	10.7									

04193490 MAUNEE RIVER NEAR WATERVILLE, OH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	645	606	393	702	942	584	462	456	495	632	582	555
2	645	605	404	722	1010	600	483	455	513	627	582	555
3	651	600	435	738	1050	621	492	483	519	624	573	551
4	651	600	483	762	1040	636	510	507	528	633	573	558
5	651	624	483	780	803	624	525	539	528	626	578	573
6	651	633	440	789	678	633	408	561	540	627	585	573
7	648	639	348	789	612	630	392	575	551	636	572	579
8	651	639	363	789	456	635	375	575	563	660	543	582
9	660	642	384	792	456	663	384	585	573	651	498	585
10	666	653	395	792	459	672	410	600	570	657	386	591
11	671	645	419	795	296	681	443	606	564	666	449	591
12	675	587	372	804	237	702	465	614	567	691	498	591
13	678	672	333	807	---	725	497	621	567	657	525	591
14	669	660	342	807	---	720	531	624	578	623	531	597
15	693	594	348	807	286	711	537	624	582	603	519	606
16	696	485	371	816	318	518	482	633	597	603	507	624
17	725	434	402	816	345	---	419	621	593	588	525	635
18	738	453	432	819	374	---	423	594	600	594	539	654
19	762	471	467	813	407	---	417	573	579	588	560	681
20	768	477	498	813	429	324	431	564	567	576	585	696
21	774	477	510	819	453	330	458	579	564	582	582	695
22	768	504	527	825	473	327	467	516	570	563	576	701
23	735	531	549	840	492	327	314	468	579	537	594	696
24	725	506	590	849	510	335	291	471	603	542	590	705
25	888	519	612	858	519	357	297	492	609	549	576	696
26	771	543	615	876	548	380	309	483	615	528	560	690
27	713	543	624	894	549	390	309	483	635	560	558	687
28	704	453	663	---	540	396	369	480	645	588	558	684
29	641	387	684	---	555	---	407	480	648	573	561	684
30	612	390	681	---	---	420	450	465	632	582	557	702
31	609	---	684	---	---	441	---	486	---	---	558	---
MEAN	695	552	479	804	550	533	425	542	576	605	548	630

WTR YR 1984      MEAN      577      MAX      1050      MIN      237  
 PH (STANDARD UNITS), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
 MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.7	7.7	7.8	---	7.8	8.6	7.4	7.8	7.4	8.1	8.1	8.1
2	8.7	7.6	7.9	---	7.9	8.6	7.4	7.8	7.4	8.0	8.1	8.3
3	8.7	7.8	8.0	---	7.9	8.5	7.4	7.8	7.4	8.1	7.9	8.3
4	8.6	7.9	8.1	7.7	7.9	8.4	7.4	7.9	7.4	8.1	7.8	8.2
5	8.5	8.0	7.9	7.7	7.7	8.2	7.3	7.9	7.5	7.8	8.3	8.4
6	8.6	8.0	7.8	7.7	7.5	8.2	7.1	7.9	7.5	7.7	8.3	8.5
7	8.6	7.9	7.6	7.7	7.6	8.3	7.2	8.0	7.6	7.7	8.5	8.4
8	8.6	8.0	7.4	7.7	7.7	8.4	7.2	8.0	7.7	8.0	7.9	8.3
9	8.6	8.1	7.4	7.7	---	8.4	7.3	8.1	7.8	8.0	7.8	8.3
10	8.7	8.2	7.4	7.7	7.5	8.4	7.3	8.1	7.9	7.9	7.6	8.1
11	8.7	8.0	7.5	7.7	7.4	8.4	7.3	8.1	7.9	8.0	7.9	8.1
12	8.6	7.7	7.4	7.7	7.5	8.4	7.4	8.2	8.0	8.2	8.1	8.0
13	8.6	7.8	7.4	7.7	---	8.4	7.3	8.2	8.1	8.0	7.9	8.4
14	8.4	7.8	7.4	7.7	---	8.4	7.4	8.3	8.1	7.9	8.1	8.3
15	8.3	7.6	7.5	7.7	7.5	8.3	7.4	8.4	8.1	8.1	8.2	8.4
16	8.2	7.4	7.5	7.7	7.5	8.0	7.6	8.4	8.1	8.1	8.3	8.4
17	8.4	7.3	7.4	7.7	7.5	---	7.5	8.2	8.1	8.1	8.1	8.5
18	8.5	7.4	7.3	7.8	7.4	---	7.4	8.1	8.1	8.1	8.2	8.5
19	8.5	7.3	7.3	7.9	7.4	---	7.6	8.1	8.0	8.2	8.2	8.5
20	8.3	7.3	---	7.9	7.5	---	7.6	8.0	8.0	8.4	8.2	8.5
21	8.3	7.5	---	7.9	7.5	7.7	7.9	7.6	8.1	8.1	8.4	8.5
22	8.3	7.6	---	7.8	7.4	7.9	8.1	7.4	8.1	8.1	8.2	8.6
23	7.7	7.6	---	7.8	7.3	7.9	7.6	7.5	8.0	8.2	8.3	8.5
24	7.6	7.7	---	7.8	7.4	7.7	7.2	7.7	7.9	8.1	8.3	8.4
25	7.8	7.8	---	7.7	7.6	7.6	7.3	7.8	8.0	7.4	8.3	8.4
26	7.7	7.8	---	7.7	7.6	7.6	7.6	7.8	8.1	8.1	8.3	8.3
27	7.7	7.8	---	7.7	7.9	7.6	7.7	7.5	8.1	8.0	8.4	8.3
28	7.6	7.6	---	---	8.4	7.5	7.4	8.2	8.0	8.2	8.4	8.4
29	7.7	7.7	---	---	8.5	---	7.7	7.5	8.1	8.2	8.4	8.6
30	7.7	7.8	---	---	---	7.3	7.7	7.4	8.1	8.1	8.4	8.6
31	7.7	---	---	---	---	7.4	---	7.4	---	---	8.4	---
MEAN	8.3	7.7	7.6	7.7	7.7	8.1	7.5	7.9	7.9	8.0	8.2	8.4

WTR YR 1984      MEAN      7.9      MAX      8.7      MIN      7.1

## STREAMS TRIBUTARY TO LAKE ERIE

04193490 MAUMEE RIVER NEAR WATERVILLE, OH--Continued  
 TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
 MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.0	9.5	3.5	.0	.0	.5	5.0	---	---	22.0	24.5	23.5
2	18.5	11.0	2.5	.0	.0	.5	5.5	13.5	---	23.0	25.0	23.5
3	18.5	11.5	2.5	.0	.0	1.0	5.5	11.5	---	24.0	25.0	23.5
4	18.5	8.5	2.5	.0	.0	1.0	5.5	11.5	---	24.5	25.0	21.5
5	18.0	7.5	4.0	.0	.0	1.0	5.5	11.5	---	24.0	26.0	20.5
6	17.0	7.5	4.0	.0	.0	1.5	4.5	13.0	23.0	23.5	---	20.5
7	16.0	8.5	3.0	.0	.0	1.0	4.5	13.5	22.5	22.5	---	20.5
8	15.5	9.0	3.0	.0	.0	.5	5.0	13.5	22.5	22.5	27.5	20.0
9	14.0	9.0	2.5	.0	.0	.5	5.5	11.0	23.0	22.5	27.5	20.5
10	13.5	9.5	2.5	.0	.0	.5	5.5	11.0	24.5	23.0	26.5	20.5
11	13.5	7.5	2.5	.0	.0	.5	6.5	13.5	24.0	24.5	26.5	21.5
12	15.0	6.0	4.0	.0	.0	.5	7.5	14.5	25.0	24.0	26.5	21.5
13	14.5	5.5	4.5	.0	---	.5	9.0	14.5	25.5	24.5	26.5	22.0
14	11.0	5.5	4.0	.0	---	.5	9.5	13.5	25.0	25.5	27.0	22.0
15	10.5	5.5	3.5	.0	1.5	.5	9.5	14.5	22.5	26.5	28.0	20.0
16	11.5	5.5	2.5	.0	2.0	.5	8.5	15.0	22.0	25.5	29.0	19.0
17	13.0	5.5	1.5	.0	2.0	---	8.0	15.5	22.5	24.5	28.5	18.5
18	13.0	5.0	.5	.0	3.0	---	7.0	---	24.5	23.0	29.5	18.5
19	12.0	6.0	.0	.0	3.5	---	7.0	---	25.0	22.0	28.0	19.5
20	11.0	7.0	.0	.0	3.5	---	7.5	---	25.5	23.5	26.0	20.0
21	10.5	7.0	.0	.0	3.5	.5	8.0	---	24.5	22.5	25.5	20.0
22	10.5	7.5	.0	.0	4.0	1.0	7.0	---	23.5	24.0	25.5	20.5
23	11.0	8.5	.0	.0	4.5	1.0	6.0	---	24.0	26.0	25.0	21.5
24	11.5	8.0	.0	.0	5.0	1.5	6.0	---	24.0	25.5	24.5	21.5
25	11.0	6.5	.0	.0	4.0	2.0	---	---	24.0	24.5	24.5	21.5
26	10.0	6.0	.0	.0	4.0	2.0	---	---	23.5	24.0	25.5	20.5
27	9.5	6.5	.0	.0	2.5	2.5	---	---	23.5	22.0	26.5	18.5
28	9.5	7.0	.0	---	1.0	2.5	---	---	22.5	22.5	---	16.5
29	10.5	6.0	.0	---	1.0	---	---	---	23.5	23.0	---	16.0
30	9.5	4.5	.0	---	---	4.0	---	---	22.5	23.0	26.0	15.5
31	9.0	---	.0	---	---	4.5	---	---	---	---	25.5	---
MEAN	13.0	7.5	1.5	.0	1.5	1.5	6.5	13.0	23.5	23.5	26.5	20.5

WTR YR 1984 MEAN 11.5 MAX 29.5 MIN .0

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
 MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.9	10.1	11.3	11.7	---	14.7	14.0	10.9	8.2	8.7	7.8	6.5
2	8.4	10.0	11.7	11.5	---	14.5	13.7	11.0	7.5	7.6	7.5	7.3
3	8.4	9.6	12.0	11.4	---	15.0	13.9	11.1	6.7	8.5	5.5	7.5
4	8.3	10.3	12.1	13.9	12.3	14.9	13.8	11.2	6.5	8.0	4.7	7.2
5	8.1	10.9	11.7	14.0	12.1	14.8	13.7	11.4	7.2	6.7	7.7	7.9
6	8.1	11.1	11.3	14.0	11.7	13.7	12.3	11.5	7.6	6.4	8.2	8.4
7	8.5	10.8	11.3	13.9	12.8	14.9	12.3	11.4	7.4	7.2	8.6	7.3
8	8.6	11.1	11.5	14.0	12.8	15.0	12.3	11.2	7.3	9.1	6.2	6.8
9	8.6	11.4	11.8	14.0	12.6	14.4	12.2	11.3	7.3	8.4	6.3	8.7
10	8.9	11.6	12.0	13.9	12.4	14.4	12.1	12.1	7.7	8.0	6.0	7.6
11	9.0	10.7	12.2	13.9	13.4	14.0	13.2	11.9	7.6	9.3	7.1	7.7
12	8.5	10.5	11.7	13.9	13.5	14.2	13.2	11.9	7.9	10.3	7.4	7.3
13	8.7	10.7	11.1	13.7	---	14.5	12.9	12.0	8.3	8.2	6.9	8.9
14	9.4	10.8	11.6	13.7	---	14.4	11.4	12.2	6.9	8.0	7.1	8.1
15	10.1	10.6	11.7	13.6	12.1	14.5	11.3	12.5	8.0	9.3	8.9	8.4
16	9.9	10.2	12.1	13.6	12.2	13.8	11.4	13.4	6.8	8.4	10.1	8.3
17	10.0	10.5	12.6	13.6	12.1	---	11.9	12.2	7.2	9.4	7.2	8.2
18	10.2	10.8	13.0	13.5	11.9	---	12.8	13.2	7.5	8.0	9.0	8.0
19	10.8	10.7	13.2	14.0	11.9	---	12.4	13.1	8.5	9.1	7.7	---
20	10.6	10.4	13.2	13.9	13.2	---	12.0	9.7	8.9	11.8	7.5	---
21	11.1	10.4	13.2	14.0	13.3	13.1	12.1	10.5	8.3	9.2	10.4	---
22	10.6	10.5	13.3	13.9	13.4	12.6	12.2	8.9	8.0	11.2	8.8	---
23	9.5	10.3	---	13.9	13.4	12.6	11.7	7.9	7.8	10.9	8.6	---
24	9.1	10.1	13.8	13.8	13.2	12.5	11.5	8.5	7.3	7.8	8.5	---
25	9.5	10.6	13.9	13.8	13.5	12.3	11.7	7.9	7.5	4.0	9.8	---
26	9.6	10.9	13.8	13.8	13.8	12.4	11.2	8.2	7.5	8.7	10.0	---
27	9.8	10.9	13.5	13.9	14.3	13.2	10.1	8.5	8.3	6.8	10.4	---
28	9.9	10.4	13.3	---	14.7	14.0	10.5	9.1	8.4	8.3	9.8	---
29	9.7	10.2	13.2	---	14.9	---	10.6	9.4	8.7	8.8	8.9	---
30	10.0	10.7	13.1	---	---	14.4	10.6	9.4	8.7	8.5	8.0	---
31	10.2	---	13.1	---	---	14.4	---	8.6	---	---	8.9	---
MEAN	9.4	10.6	12.4	13.6	13.0	14.0	12.2	10.7	7.7	8.5	8.1	7.8

WTR YR 1984 MEAN 10.6 MAX 15.0 MIN 4.0

## STREAMS TRIBUTARY TO LAKE ERIE

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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 downstream from Tontogany Creek, and 20.7 mi upstream from mouth.

DRAINAGE AREA.--6,330 mi<sup>2</sup>.

## 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 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 good except those for winter period which are fair. Low flow slightly regulated by powerplants upstream from station. Small diversion upstream from gage into Portage River basin (see station 04195500).

AVERAGE DISCHARGE.--59 years (1921-35, 1939-84) 4,954 ft<sup>3</sup>/s, 10.63 in/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<sup>3</sup>/s Mar. 14, 1982, gage height, 14.96 ft recorder-manometer; 17.18 ft 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<sup>3</sup>/s Oct. 24, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a stage of 19.9 ft, from information by local resident, estimated discharge, 180,000 ft<sup>3</sup>/s, from rating curve extended above 94,000 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 53,300 ft<sup>3</sup>/s Apr. 24, gage height, 11.20 ft; minimum daily, 205 ft<sup>3</sup>/s Oct. 4, 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	210	980	19700	1500	1400	2550	9370	7260	9330	1110	604	225
2	210	902	12900	1300	1250	2300	7050	5500	7190	960	544	266
3	210	1030	8800	1200	1150	2050	5560	4390	5030	790	574	357
4	205	1110	7260	1050	1150	2200	4790	3790	4170	652	620	394
5	205	1220	8920	980	2100	2650	9210	3240	3500	686	703	652
6	210	1590	20800	890	9000	2400	24400	2580	3170	737	1030	686
7	340	1430	35900	820	6800	2500	28900	2650	3120	529	1860	501
8	325	1180	31400	780	5000	2700	23800	2540	2940	574	2470	459
9	320	940	23500	750	3500	3430	16500	2260	2260	1140	1930	345
10	320	826	16500	740	2850	2800	11800	2050	1930	1440	1900	381
11	365	2560	12600	710	3050	2390	8490	2050	1530	1200	1550	419
12	570	4070	25700	710	9400	2800	6340	2030	1910	980	1290	529
13	864	6500	39900	730	30600	2400	5220	1350	1250	940	1090	559
14	980	6210	35600	740	50000	2150	4740	1340	1180	921	864	446
15	845	5190	27700	740	39500	2000	7830	1760	1200	790	669	544
16	1350	12500	20900	720	30100	5810	13600	2890	1410	659	515	544
17	1300	17500	14200	700	24000	25200	21800	2620	1660	544	406	515
18	997	16600	10800	680	19500	34800	24100	1880	1460	589	515	636
19	737	14500	7430	670	17400	35100	21100	1010	1140	487	419	544
20	574	13700	4970	660	13500	27700	16200	1880	960	432	381	473
21	501	12800	4070	650	10500	30400	12500	13100	960	357	406	255
22	883	10600	3650	640	8400	38100	13100	21800	883	310	515	406
23	1860	8800	3200	630	6700	39400	38900	17300	902	310	381	321
24	3840	11000	2900	620	5800	36200	51300	15500	940	299	321	266
25	5100	11500	2550	620	4900	29000	45600	14100	652	266	459	321
26	3620	10500	2300	690	4450	24600	32800	12800	1010	446	515	357
27	2760	7680	2150	1350	4300	25400	25500	14800	1860	1180	432	266
28	1720	14600	2000	2350	3500	25300	19600	13800	1550	902	345	501
29	883	27900	1900	2750	2950	21900	13900	14500	1250	845	225	604
30	1140	26100	1800	2100	---	16300	10900	15300	1110	754	299	529
31	1050	---	1700	1600	---	12100	---	13300	---	720	266	---
TOTAL	34494	252018	413700	31070	322750	464630	534900	221370	67457	22559	24098	13301
MEAN	1113	8401	13350	1002	11130	14990	17830	7141	2249	728	777	443
MAX	5100	27900	39900	2750	50000	39400	51300	21800	9330	1440	2470	636
MIN	205	826	1700	620	1150	2000	4740	1010	652	266	225	225
CFSM	.18	1.33	2.11	.16	1.76	2.37	2.82	1.13	.36	.12	.12	.07
IN.	.20	1.48	2.43	.18	1.90	2.73	3.14	1.30	.40	.13	.14	.08

CAL YR 1983 TOTAL 2074953 MEAN 5685 MAX 54200 MIN 134 CFSM .90 IN 12.19  
WTR YR 1984 TOTAL 2402347 MEAN 6564 MAX 51300 MIN 205 CFSM 1.04 IN 14.12



## STREAMS TRIBUTARY TO LAKE ERIE

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 September 1984 (discontinued).

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 Feb. 12, 1959; minimum daily, 0.26 ton Sept. 18, 1955.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1200 mg/L Apr. 23; minimum daily mean, 2 mg/L Jan. 26.

SEDIMENT LOADS: Maximum daily, 137,000 tons Apr. 24, minimum daily, 3.7 tons Jan. 26.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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 CJ)	IRON, DIS- SOLVED (UG/L AS FE)
NOV 09...	1400	940	30	1	61	.5	<1	<1	<3	12	9
FEB 15...	1200	43700	20	1	33	<.5	<1	<1	<3	23	78
MAY 15...	1100	1720	<10	1	56	<1	<1	20	<3	10	18
JUL 25...	1300	288	60	1	55	1	<1	<1	<3	5	15

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...	7	<4	1	.1	<10	4	<1	<1	1200	<6	5
FEB 15...	2	<4	60	.2	<10	2	<1	<1	54	<6	8
MAY 15...	5	8	2	<.1	<10	4	1	<1	830	<6	8
JUL 25...	4	6	2	.3	10	3	<1	2	1200	<6	5

## STREAMS TRIBUTARY TO LAKE ERIE

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04193500 MAUMEE RIVER AT WATERVILLE, OH--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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...	1400	940	620	9.0	18.5	12.0	9.6	14.8	141	30
FEB 15...	1200	43700	275	7.9	4.0	3.5	140	10.0	77	1800
MAY 15...	1100	1720	580	8.8	16.0	14.5	6.0	16.0	150	<10
JUL 25...	1300	288	535	8.6	27.0	26.0	9.4	10.6	134	44

DATE	STREP- TOCUCCI 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 CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
NOV 09...	110	65	21	30	20	.9	5.3	150	90	46
FEB 15...	4800	17	4.0	14	33	.8	2.3	80	26	15
MAY 15...	280	76	21	18	12	.5	2.8	171	81	32
JUL 25...	2100	43	23	28	23	.9	4.0	99	110	50

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...	.50	4.3	394	5.20	.070	.09	2.0	.160	.070	.060
FEB 15...	.20	4.6	164	3.70	.470	.61	1.7	.490	.150	.140
MAY 15...	.30	3.4	461	3.30	.070	.09	2.4	.120	.060	<.010
JUL 25...	.50	.3	418	.540	.010	.01	1.3	.110	.020	<.010

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, DIS- SOLVED (MG/L)	SEDI- MENT, CHARGE, SUS- PENDED (T/DAY)
NOV 09...	1400	940	12.0	34	86
FEB 15...	1200	43700	3.5	300	35400
MAY 15...	1100	1720	14.5	17	79
JUL 25...	1300	288	26.0	14	11

## STREAMS TRIBUTARY TO LAKE ERIE

04193500 MAUMEE RIVER AT WATERVILLE, OH--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER				NOVEMBER			DECEMBER		
1	210	18	10	980	34	90	19700	500	26600
2	210	20	11	902	30	73	12900	200	6970
3	210	24	14	1030	44	122	8800	150	3560
4	205	22	12	1110	34	102	7260	125	2450
5	205	22	12	1220	32	105	8920	140	3370
6	210	11	6.2	1590	30	129	20800	375	21100
7	340	9	8.3	1430	30	116	35900	405	39300
8	325	11	9.7	1180	28	89	31400	315	26700
9	320	14	12	940	26	66	23500	212	13500
10	320	14	12	826	24	54	16500	175	7800
11	365	12	12	2560	73	505	12600	150	5100
12	570	14	22	4070	133	1460	25700	113	7840
13	864	22	51	6500	103	1810	39900	242	26100
14	980	30	79	6210	42	704	35600	272	26100
15	845	21	48	5190	38	532	27700	321	24000
16	1350	30	109	12500	235	7930	20900	248	14000
17	1300	34	119	17500	455	21500	14200	172	6590
18	997	18	48	16600	470	21100	10800	134	3910
19	737	20	40	14500	375	14700	7430	100	2010
20	574	21	33	13700	300	11100	4970	67	899
21	501	20	27	12800	256	8850	4070	65	714
22	883	33	79	10600	200	5720	3650	60	591
23	1860	36	181	8800	171	4060	3200	50	432
24	3840	47	487	11000	169	5020	2900	40	313
25	5100	42	578	11500	167	5190	2550	30	207
26	3620	38	371	10500	139	3940	2300	25	155
27	2760	46	343	7680	164	3400	2150	24	139
28	1720	52	241	14600	294	11600	2000	20	108
29	883	49	117	27900	560	42200	1900	18	92
30	1140	46	142	26100	765	53900	1800	16	78
31	1050	36	102	---	---	---	1700	14	64
TOTAL	34494	---	3336.2	252018	---	226167	413700	---	270792
JANUARY				FEBRUARY			MARCH		
1	1500	10	40	1400	6	23	2550	6	41
2	1300	8	28	1250	8	27	2300	10	62
3	1200	6	19	1150	10	31	2050	15	83
4	1050	4	11	1150	12	37	2200	18	107
5	980	4	11	2100	12	68	2650	19	136
6	890	4	9.6	9000	14	340	2400	16	104
7	820	4	8.9	6800	16	294	2500	30	202
8	780	4	8.4	5000	18	243	2700	51	372
9	750	4	8.1	3500	20	189	3430	40	370
10	740	4	8.0	2850	22	169	2800	30	227
11	710	4	7.7	3050	25	206	2390	20	129
12	710	4	7.7	9400	53	1350	2800	13	98
13	730	4	7.9	30600	115	9500	2400	10	65
14	740	4	8.0	50000	252	34000	2100	6	35
15	740	4	8.0	39500	163	17400	2050	15	81
16	720	4	7.8	30100	150	12200	5810	56	878
17	700	4	7.6	24000	125	8100	25200	700	47600
18	680	4	7.3	19500	100	5260	34800	525	49300
19	670	4	7.2	17400	74	3480	35100	350	33200
20	660	4	7.1	13500	60	2190	27700	175	13100
21	650	4	7.0	10500	50	1420	30400	200	16400
22	640	4	6.9	8400	40	907	38100	330	33900
23	630	4	6.8	6700	36	651	39400	320	34000
24	620	4	6.7	5800	35	548	36200	192	18800
25	620	3	5.0	4900	37	490	29000	170	13300
26	690	2	3.7	4450	38	457	24600	180	12000
27	1350	4	15	4300	68	789	25400	190	13000
28	2350	4	25	3500	20	189	25300	211	14400
29	2750	4	30	2950	26	207	21900	146	8630
30	2100	4	23	---	---	---	16300	100	4400
31	1600	6	26	---	---	---	12100	75	2450
TOTAL	31070	---	383.4	322750	---	100765	464630	---	317470

## STREAMS TRIBUTARY TO LAKE ERIE

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04193500 MAUMEE RIVER AT WATERVILLE, OH--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	9370	70	1770	7260	250	4900	9330	119	3000
2	7050	60	1140	5500	200	2970	7190	115	2230
3	5560	50	751	4390	190	2250	5030	112	1520
4	4790	45	582	3790	185	1890	4170	110	1240
5	9210	46	1140	3240	180	1570	3500	100	945
6	24400	564	37200	2580	184	1280	3170	90	770
7	28900	450	35100	2650	150	1070	3120	85	716
8	23800	310	19900	2540	100	686	2940	75	595
9	16500	198	8820	2260	60	366	2260	90	549
10	11800	144	4590	2050	45	249	1930	110	573
11	8490	109	2500	2050	40	221	1530	114	471
12	6340	82	1400	2030	38	208	1910	112	578
13	5220	75	1060	1350	36	131	1250	100	337
14	4740	68	870	1340	34	123	1180	75	239
15	7830	75	1590	1760	32	152	1200	50	162
16	13600	163	5990	2890	32	250	1410	40	152
17	21800	255	15000	2620	30	212	1660	38	170
18	24100	292	19000	1880	28	142	1460	36	142
19	21100	246	14000	1010	26	71	1140	36	111
20	16200	197	8620	1880	24	122	960	35	91
21	12500	159	5370	13100	150	5310	960	35	91
22	13100	164	5800	21800	255	15000	883	34	81
23	38900	1200	126000	17300	322	15000	902	32	78
24	51300	990	137000	15500	186	7780	940	30	76
25	45600	750	92300	14100	173	6590	652	35	62
26	32800	640	56700	12800	156	5390	1010	25	68
27	25500	530	36500	14800	175	6990	1860	25	126
28	19600	400	21200	13800	166	6190	1550	30	126
29	13900	350	13100	14500	174	6810	1250	30	101
30	10900	300	8830	15300	184	7600	1110	40	120
31	---	---	---	13300	162	5820	---	---	---
TOTAL	534900	---	683823	221370	---	107343	67457	---	15520
JULY			AUGUST			SEPTEMBER			
1	1110	42	126	604	22	36	225	24	15
2	960	46	119	544	25	37	266	25	18
3	790	50	107	574	30	46	357	20	19
4	652	45	79	620	45	75	394	22	23
5	686	30	56	703	61	116	652	16	28
6	737	25	50	1030	75	209	686	18	33
7	529	25	36	1860	70	352	501	14	19
8	574	25	39	2470	65	433	459	12	15
9	1140	75	231	1930	60	313	345	10	9.3
10	1440	50	194	1900	55	282	381	12	12
11	1200	52	168	1550	50	209	419	14	16
12	980	48	127	1290	50	174	529	16	23
13	940	46	117	1090	45	132	559	20	30
14	921	45	112	864	40	93	446	22	26
15	790	40	85	669	35	63	544	26	38
16	669	35	63	515	30	42	544	22	32
17	544	35	51	406	28	31	515	20	28
18	589	30	48	515	26	36	636	18	31
19	487	25	33	419	24	27	544	16	24
20	432	25	29	381	24	25	473	16	20
21	357	25	24	406	22	24	255	14	9.6
22	310	24	20	515	20	28	406	12	13
23	310	22	18	381	20	21	321	10	8.7
24	299	20	16	321	18	16	266	14	10
25	266	24	17	459	18	22	321	16	14
26	446	26	31	515	16	22	357	18	17
27	1180	24	76	432	20	23	266	16	11
28	902	20	49	345	22	20	501	14	19
29	845	20	46	225	24	15	604	12	20
30	754	22	45	299	22	18	529	10	14
31	720	20	39	266	20	14	---	---	---
TOTAL	22559	---	2251	24098	---	2954	13301	---	595.6
YEAR	2402347		1731400.2						



STREAMS TRIBUTARY TO LAKE ERIE  
04193500 MAUMEE RIVER AT WATERVILLE, OH--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (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 21...	1505	13400	254	9190	77	87	92
MAR 28...	1435	25500	131	9020	53	66	78

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 21...	97	98	99	100	--	--	--
MAR 28...	85	89	92	96	97	98	100

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

GAGE.--Water-stage recorder. Datum of gage is 560.00 ft International Great Lakes Datum.

EXTREMES FOR PERIOD OF RECORD.--Maximum recorded gage height, 15.20 ft Feb. 27, 1984; minimum recorded gage height 8.21 ft Nov. 12, 1982

EXTREMES FOR CURRENT YEAR.--Maximum recorded gage height, 15.20 ft Feb. 27, minimum recorded gage height, 8.28 ft Apr. 30.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.10	11.69	11.05	11.95	11.58	11.49	12.58	11.36	12.74	12.86	12.55	12.31
2	11.90	11.68	11.44	11.77	11.60	11.81	12.61	12.46	12.90	12.80	12.55	12.21
3	11.69	11.68	12.06	11.64	11.36	12.04	12.99	12.76	12.61	12.75	12.59	12.20
4	11.69	11.51	12.09	11.59	11.53	12.34	13.20	12.29	12.79	12.58	12.64	12.29
5	11.80	11.64	11.79	11.72	11.43	11.74	12.70	12.26	12.79	12.58	12.53	12.46
6	11.49	11.47	11.64	11.60	11.37	11.73	12.42	12.43	12.78	12.58	12.44	12.37
7	11.94	11.66	10.41	11.74	11.42	12.13	12.61	12.49	12.71	12.56	12.42	12.30
8	11.77	11.53	11.77	11.56	11.38	13.04	12.95	12.03	12.54	12.77	12.62	12.05
9	12.54	11.72	11.93	11.92	11.47	11.89	13.55	11.91	12.71	12.77	12.40	11.94
10	12.28	11.82	12.09	11.75	11.52	11.43	13.20	12.24	12.67	12.73	12.57	12.03
11	12.04	11.33	13.12	11.81	11.47	11.25	12.73	12.33	12.70	12.53	12.86	12.30
12	12.08	11.38	12.23	12.07	11.62	12.51	12.94	12.23	12.83	12.73	12.74	12.43
13	11.30	11.77	12.33	11.84	11.67	12.30	12.64	12.82	12.63	12.84	12.67	11.99
14	9.95	11.77	12.28	11.60	11.67	12.06	12.80	12.20	12.79	12.77	12.58	12.45
15	11.86	12.11	11.13	11.75	11.76	12.18	12.66	12.45	13.09	12.62	12.39	12.29
16	11.97	10.94	10.76	11.71	12.06	11.97	12.58	12.43	12.89	12.53	12.46	12.20
17	11.65	11.26	11.37	11.55	11.85	12.84	12.40	12.49	12.78	12.45	12.72	12.25
18	11.95	11.84	11.75	11.69	11.83	12.68	12.55	12.33	12.64	12.47	12.52	12.16
19	12.41	11.95	12.07	11.39	11.78	12.39	12.48	12.28	12.93	12.67	12.71	11.94
20	12.83	11.70	12.86	11.48	11.62	12.68	12.37	12.49	13.18	12.52	12.94	11.93
21	12.71	10.87	12.72	11.57	11.72	12.04	12.59	12.70	13.06	12.62	12.51	12.37
22	12.11	11.70	10.87	11.63	11.95	11.03	13.44	12.46	13.17	12.74	12.18	12.29
23	11.80	12.25	11.23	11.65	11.95	11.97	12.55	12.42	13.03	12.57	12.52	12.00
24	12.22	10.78	9.50	11.63	11.94	12.49	12.09	12.68	12.49	12.55	12.48	12.10
25	11.60	10.81	10.28	11.42	11.87	12.92	12.30	12.52	12.82	12.75	12.40	11.93
26	11.47	11.59	11.01	11.64	12.03	12.67	12.59	12.50	12.93	12.79	12.40	11.72
27	11.43	12.42	11.42	11.51	13.72	12.86	12.55	12.94	12.22	12.75	12.26	12.28
28	10.33	12.26	11.91	11.64	13.16	13.68	12.38	13.83	12.81	12.78	12.26	12.18
29	11.64	9.98	11.32	11.41	11.50	13.02	12.54	12.55	12.98	12.72	12.22	12.09
30	11.77	9.95	11.46	11.67	---	12.49	10.61	12.65	12.97	12.69	12.19	12.39
31	11.81	---	11.68	11.48	---	1						

## STREAMS TRIBUTARY TO LAKE ERIE

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 downstream from unnamed right bank tributary, and 10.3 mi upstream from Sugar Creek.

DRAINAGE AREA.--428 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929. Prior to Oct. 8, 1933, nonrecording gage, Oct. 9, 1933 to Dec. 30 1935, water-stage recorder, Oct. 17 to Nov. 29, 1939, nonrecording gage, all at same site and datum.

REMARKS.--Records good except those for winter periods, and those for periods of no gage height record, Oct. 20 to Dec. 6, which are fair. Flow supplemented by water imported from Maumee River basin for municipal supply for city of Bowling Green 16 mi upstream. The importation of this water began Sept. 1, 1951. Sediment data collected at this site 1950 to 1956. Water-quality data collected at this site 800 ft downstream 1968 to 1980.

AVERAGE DISCHARGE (adjusted for diversion).--52 years, 327 ft<sup>3</sup>/s, 10.38 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,500 ft<sup>3</sup>/s Feb. 15, 1950, gage height, 14.51 ft; minimum daily (prior to diversion) 0.4 ft<sup>3</sup>/s Aug. 26, 1931; (subsequent to diversion) 1.8 ft<sup>3</sup>/s Sept. 22, 1955.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a stage of 17 ft, from information by local residents, discharge, 17,000 ft<sup>3</sup>/s, from rating curve extended above 11,500 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,500 ft<sup>3</sup>/s and maximums (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Nov. 17	unknown	3900	-----	Mar. 17	2100	4100	8.94
Nov. 29	unknown	4100	-----	Mar. 22	1100	6110	10.69
Dec. 7	2030	4880	9.66	Apr. 24	0800	*7770	*11.94
Dec. 13	0930	4670	9.47	Apr. 28	1300	3790	8.62
Feb. 12	1730	ice jam	10.09	May 22	0200	5820	10.46

Minimum daily discharge, 8.0 ft<sup>3</sup>/s Oct. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	120	1500	80	96	110	614	725	457	22	13	54
2	11	150	750	76	88	115	487	441	338	20	15	30
3	9.2	450	360	70	321	94	392	334	268	18	40	29
4	8.0	550	1100	68	1220	86	365	308	211	18	138	29
5	13	400	2500	68	1100	130	712	265	170	27	84	30
6	21	250	3710	70	686	290	1470	210	143	62	45	24
7	59	200	4550	71	426	440	1120	184	123	57	42	20
8	45	150	3210	60	320	427	670	176	105	57	693	19
9	34	120	1170	54	230	320	471	183	90	48	925	18
10	27	150	724	49	200	230	369	166	80	40	860	18
11	24	1500	639	44	500	180	293	141	70	49	319	19
12	21	3000	3140	41	1500	140	242	134	60	91	137	17
13	82	2000	4310	37	2500	130	241	157	55	60	74	17
14	1130	1200	2010	34	3000	120	299	157	66	40	49	17
15	653	800	1230	31	2000	110	2020	179	118	33	37	26
16	276	2300	840	29	1300	1570	2160	149	93	26	29	26
17	149	3600	494	28	1000	3850	1270	124	67	20	23	25
18	96	2500	341	27	820	3370	1360	111	58	17	19	20
19	72	1600	225	27	660	1880	1280	110	53	16	17	15
20	66	1750	278	27	520	1450	862	426	46	16	16	16
21	56	1300	233	27	440	4080	605	4220	40	14	14	14
22	300	980	332	28	380	5820	1120	4680	35	13	13	13
23	1400	740	423	28	330	3620	5340	3310	35	12	14	12
24	1000	2200	300	28	260	2640	7340	3610	49	12	14	11
25	550	1500	210	33	190	2070	4950	1290	41	11	15	15
26	320	840	160	86	150	1590	1920	828	35	13	13	16
27	210	520	140	163	120	1280	1690	725	31	20	12	18
28	150	1500	140	247	110	1260	3550	494	28	30	13	28
29	130	3800	110	200	110	1390	1660	1430	26	35	13	20
30	100	2800	94	150	---	1200	882	1240	24	22	21	17
31	90	---	86	120	---	804	---	687	---	16	44	---
TOTAL	7114.2	38970	35309	2101	20577	40796	45754	27194	3015	925	3761	633
MEAN	229	1299	1139	67.8	710	1316	1525	877	101	29.8	121	21.1
MAX	1400	3800	4550	247	3000	5820	7340	4680	457	81	925	54
MIN	8.0	120	86	27	88	86	241	110	24	11	12	11
+	5.2	4.7	4.7	4.5	4.9	4.5	4.8	4.4	4.8	5.2	4.9	5.2
MEAN +	224	1294	1134	63.3	705	1312	1520	873	95.7	24.6	116	15.9
CFSM +	.52	3.02	2.65	.15	1.65	3.07	3.55	2.04	.22	.06	.27	.04
IN +	.60	3.37	3.06	.17	1.78	3.53	3.96	2.35	.25	.07	.31	.04
CAL YR 1983 TOTAL	158772.4			MEAN 435	MAX 5050	MIN 8.0	(+) 4.9	MEAN +	430	CFSM +	1.00	IN. + 13.64
WTR YR 1984 TOTAL	226149.2			MEAN 618	MAX 7340	MIN 8.0	(+) 4.8	MEAN +	613	CFSM +	1.43	IN. + 19.50

## STREAMS TRIBUTARY TO LAKE ERIE

47

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 northwest of Crawford, 1.5 mi downstream from Lick Run, 2.7 mi upstream from Little Tymochtee Creek, and 3 mi southeast of Carey.

DRAINAGE AREA.--229 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter periods which are fair. Beginning Mar. 9, 1972 water was diverted at a point 29.4 mi upstream from station into Killdeer Reservoir. Storage is available for low-flow augmentation. During the year, withdrawals totaled 21.2 m gal, equivalent to a mean annual withdrawal of 0.09 ft<sup>3</sup>/s; no short term releases were made this year. Water-quality data collected at this site 1968 to 1977. Sediment data collected 1970 to 1974.

AVERAGE DISCHARGE.--20 years, 181 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,390 ft<sup>3</sup>/s Mar. 17, 1978, gage height, 9.94 ft; maximum gage height, 11.21 ft 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, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,800 ft<sup>3</sup>/s and maximums (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Nov. 13	1630	1920	6.06	Mar. 22	1800	*3220	*7.33
Feb. 15	2100	2570	6.74	Apr. 24	1030	3150	7.27
Mar. 18	0900	3060	7.19				

minimum daily discharge, 0.32 ft<sup>3</sup>/s Sept. 27-29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.39	30	943	38	84	105	276	130	58	31	7.1	3.2
2	.39	36	325	36	70	142	202	106	44	24	5.0	1.8
3	.48	167	202	33	433	97	157	86	38	17	4.3	5.0
4	.58	459	452	31	897	75	172	80	33	23	5.7	2.4
5	21	405	996	30	1190	62	740	80	26	262	27	1.8
6	13	218	1470	28	788	80	1350	78	21	130	20	3.7
7	11	124	1690	26	200	170	1670	65	18	164	76	4.3
8	23	83	1560	25	135	279	994	61	17	128	31	5.7
9	14	60	885	24	110	180	402	68	16	78	101	3.7
10	7.9	54	374	23	100	115	251	67	12	70	70	4.3
11	6.0	738	399	22	205	85	180	65	11	63	38	3.2
12	5.2	1230	1040	21	390	68	132	277	9.6	47	21	1.8
13	84	1750	1290	21	720	61	109	259	9.6	31	13	1.8
14	114	1420	1330	20	1350	57	143	198	12	20	9.6	3.7
15	166	553	645	20	2310	98	418	135	14	14	6.4	3.7
16	110	922	386	19	1970	778	500	97	17	11	4.3	3.2
17	53	1190	239	19	827	1830	363	74	13	8.7	3.2	1.8
18	28	1290	142	18	470	2890	332	58	11	7.1	2.4	1.8
19	17	947	115	18	320	1780	293	49	12	5.7	3.2	2.4
20	12	628	100	18	250	975	260	74	9.6	5.0	1.8	1.8
21	9.9	695	91	18	195	1940	194	198	7.8	5.7	2.4	1.4
22	167	610	82	18	155	2940	975	385	54	5.0	2.4	1.4
23	685	479	74	18	125	2470	2140	549	89	3.7	3.2	1.8
24	966	814	68	18	110	1400	2910	358	942	3.7	2.4	1.8
25	818	934	62	158	95	926	1880	253	1250	4.3	1.8	1.1
26	340	553	58	468	90	977	1010	155	669	5.0	1.4	.94
27	177	276	53	795	86	1150	494	110	198	12	1.8	.32
28	106	997	50	723	80	809	334	86	110	13	1.4	.32
29	68	1360	46	422	75	650	233	89	68	11	1.1	.32
30	49	1650	43	199	---	596	169	78	44	7.1	3.2	.64
31	38	---	41	120	---	395	---	72	---	7.8	3.7	---
TOTAL	4110.84	20672	15251	3447	13830	24180	19283	4440	3833.6	1217.8	474.8	71.04
MEAN	133	689	492	111	477	780	543	143	128	39.3	15.3	2.37
MAX	966	1750	1690	795	2310	2940	2910	549	1250	262	101	5.7
MIN	.39	30	41	18	70	57	109	49	7.8	3.7	1.1	.32

CAL YR 1983 TOTAL 66993.44 MEAN 184 MAX 2270 MIN .01  
WTR YR 1984 TOTAL 110811.08 MEAN 303 MAX 2940 MIN .32



## STREAMS TRIBUTARY TO LAKE ERIE

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 downstream from State Route 103 bridge and 3.4 mi east of New Washington.

DRAINAGE AREA.--17 mi<sup>2</sup>.

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

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

REMARKS.--Records fair.

AVERAGE DISCHARGE.--5 years(1980-1984), 17.9 ft<sup>3</sup>/s, 14.30 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,810 ft<sup>3</sup>/s June 13, 1981, gage height, 20.13 ft, from rating curve extended above 325 ft<sup>3</sup>/s on basis of step backwater analysis; minimum, No flow Oct. 17, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 300 ft<sup>3</sup>/s "revised" and maximums (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 5	1700	*705	*16.35	Mar. 16	1030	673	16.20
Nov. 3	0300	322	14.14	Mar. 21	0445	652	16.10
Nov. 28	0945	317	14.09	Apr. 22	1930	345	14.32
Feb. 14	0230	413	14.78				

Minimum discharge, 0.12 ft<sup>3</sup>/s Aug. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.29	56	21	2.0	3.2	6.1	22	14	8.6	1.1	.70	.56
2	.29	75	15	1.9	3.5	5.7	17	12	7.4	.99	.66	.50
3	.26	178	12	1.8	70	5.3	14	11	6.3	.99	.73	.99
4	.24	65	116	1.7	45	5.1	12	14	5.1	1.7	1.1	1.3
5	266	31	105	1.6	30	16	22	13	4.3	3.5	.92	.72
6	115	19	100	1.6	19	36	41	13	3.8	6.1	.85	.60
7	47	14	65	1.6	12	25	27	12	3.4	6.1	.67	.42
8	21	12	30	1.6	10	16	17	15	2.8	2.3	.57	.32
9	14	9.9	22	1.6	9.7	10	12	18	2.6	1.8	.48	.30
10	9.5	11	18	1.5	12	8.2	9.7	13	2.4	16	.41	.37
11	6.9	194	45	1.5	19	7.1	8.2	21	2.1	42	.38	.54
12	5.9	97	112	1.5	35	6.4	7.1	126	1.9	11	.35	.37
13	77	52	46	1.5	90	5.8	5.6	43	2.0	4.7	.33	.37
14	83	35	32	1.5	202	5.5	5.3	40	2.2	2.6	.31	.60
15	31	28	28	1.4	78	39	21	23	2.3	1.8	.29	.54
16	17	84	18	1.4	45	376	17	16	1.9	1.6	.27	.42
17	11	68	11	1.4	30	119	12	12	1.8	1.3	.25	.32
18	8.3	31	9.0	1.4	23	67	19	11	1.7	1.3	.25	.32
19	8.2	30	7.0	1.4	16	44	19	9.5	1.6	1.1	1.2	.31
20	8.2	40	6.0	1.4	13	107	17	43	1.5	.78	.54	.30
21	7.7	42	5.2	1.3	11	421	13	118	1.4	.62	.31	.30
22	67	22	15	1.3	9.0	132	123	39	1.3	.55	.32	.29
23	140	45	7.0	1.3	7.8	91	151	27	1.3	.52	.48	.28
24	65	77	5.0	1.8	6.6	81	115	20	1.4	.51	.42	.28
25	33	29	4.0	25	5.8	79	68	14	1.2	.51	.37	.30
26	21	18	3.5	41	5.6	58	40	11	1.1	.78	.30	.29
27	14	15	3.0	16	5.3	43	63	8.3	1.1	3.9	.22	.29
28	11	192	2.5	10	6.1	41	48	9.5	1.2	1.9	.19	.29
29	9.2	80	2.3	6.6	7.5	58	26	18	1.1	1.4	.19	.29
30	7.7	36	2.2	4.5	---	33	20	13	1.2	.99	1.4	.29
31	7.2	---	2.1	3.7	---	27	---	10	---	.78	1.6	---
TOTAL	1112.88	1685.9	869.8	143.8	830.1	1974.2	993.9	767.3	79.0	121.72	17.06	13.27
MEAN	35.9	56.2	28.1	4.64	28.6	63.7	33.1	24.8	2.63	3.93	.55	.44
MAX	266	194	116	41	202	421	151	126	8.6	42	1.6	1.3
MIN	.24	9.9	2.1	1.3	3.2	5.1	6.3	8.3	1.1	.51	.19	.28
CFSM	2.11	3.31	1.65	.27	1.68	3.75	1.95	1.46	.16	.23	.03	.03
IN.	2.44	3.69	1.90	.31	1.82	4.32	2.17	1.68	.17	.27	.04	.03

CAL YR 1983 TOTAL 6547.89 MEAN 17.9 MAX 266 MIN .08 CFSM 1.05 IN 14.33  
WTR YR 1984 TOTAL 8608.93 MEAN 23.5 MAX 421 MIN .19 CFSM 1.38 IN 18.84

## STREAMS TRIBUTARY TO LAKE ERIE

49

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 upstream from Buckeye Creek.

DRAINAGE AREA.--149 mi<sup>2</sup>.

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

GAGE.--Water-stage recorder. Altitude of gage is 818 ft from topographic map.

REMARKS.--Records good except those for winter periods and those for period of doubtful gage height, Apr. 3-26, which are poor. Water-quality data collected at this site 1976 to 1977.

AVERAGE DISCHARGE.--8 years, 144 ft<sup>3</sup>/s, 13.12 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,400 ft<sup>3</sup>/s June 13, 1981, gage height, 11.00 ft; minimum discharge 0.58 ft<sup>3</sup>/s Sept. 11, 28, 29, 30, 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft<sup>3</sup>/s and maximums (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 17	0200	2850	9.24	Apr. 23	----	1950	unknown
Mar. 21	1800	*3020	*9.46				

minimum daily discharge 0.47 ft<sup>3</sup>/s Sept. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	23	283	27	29	42	190	117	56	6.0	11	7.1
2	1.1	66	154	23	25	47	146	89	46	5.1	8.0	8.4
3	1.0	300	112	18	505	54	117	74	37	4.8	6.4	7.1
4	1.2	406	459	15	698	60	115	85	30	5.1	8.0	4.8
5	20	252	887	14	545	46	261	92	26	8.9	9.2	4.8
6	170	124	1240	13	248	120	425	83	25	64	8.0	4.8
7	250	82	1160	12	133	160	312	74	23	102	8.9	3.8
8	121	60	633	11	100	110	172	71	20	64	19	3.3
9	51	47	288	11	73	80	120	79	18	37	22	1.9
10	28	40	191	10	86	68	91	83	16	26	15	1.9
11	19	964	255	10	125	58	74	72	14	20	11	2.3
12	13	1260	834	10	300	54	62	227	13	52	8.4	2.1
13	150	848	702	9.8	800	51	57	334	12	45	5.1	2.1
14	343	425	377	9.7	1200	49	54	237	14	27	4.8	1.9
15	281	274	271	9.7	560	74	110	162	16	18	6.4	1.7
16	124	574	197	9.7	350	1640	115	104	17	12	4.8	1.7
17	65	725	128	9.7	260	2510	95	76	16	9.7	4.4	1.7
18	42	479	84	9.6	200	1300	170	60	12	8.9	4.4	1.9
19	33	370	72	9.6	145	608	170	53	12	6.4	3.5	1.7
20	28	388	68	9.6	115	656	137	190	12	4.1	3.0	1.4
21	26	363	64	9.8	90	2640	101	625	11	3.8	2.8	1.1
22	37	289	85	10	75	2370	757	598	9.2	3.8	4.1	.73
23	259	255	110	11	62	1230	1910	688	8.4	3.8	4.8	.47
24	383	490	135	63	52	876	1500	263	8.4	3.8	4.1	1.5
25	263	376	175	301	45	750	921	140	7.1	3.8	3.0	1.9
26	135	195	135	390	43	595	434	95	6.4	4.1	2.1	2.6
27	87	131	94	450	42	425	482	71	6.4	8.0	2.1	1.9
28	59	958	76	230	39	365	698	63	6.4	8.9	2.1	1.7
29	42	1040	58	110	38	473	340	74	6.0	16	2.1	1.1
30	34	643	45	62	---	355	172	75	6.0	29	8.4	2.1
31	27	---	33	40	---	252	---	67	---	18	6.8	---
TOTAL	3094.4	12447	9405	1928.2	6983	18118	10208	5121	510.3	629.0	213.7	81.50
MEAN	99.8	415	303	62.2	241	584	340	165	17.0	20.3	6.89	2.72
MAX	383	1260	1240	450	1200	2640	1810	688	55	102	22	8.4
MIN	1.0	23	33	9.6	25	42	54	53	6.0	3.8	2.1	.47
CFSM	.67	2.79	2.03	.42	1.62	3.92	2.28	1.11	.11	.14	.05	.02
IN.	.77	3.11	2.35	.48	1.74	4.52	2.55	1.28	.13	.16	.05	.02

CAL YR 1983 TOTAL 48903.60 MEAN 134 MAX 1810 MIN 1.0 CFSM .90 IN 12.21  
WTR YR 1984 TOTAL 68739.10 MEAN 188 MAX 2640 MIN .47 CFSM 1.26 IN 17.16

## STREAMS TRIBUTARY TO LAKE ERIE

04197170 ROCK CREEK AT TIFFIN, OH

LOCATION.--Lat 41°06'49", long 83°10'06", Seneca County, Hydrologic Unit 04100011, on left bank 0.05 mi downstream from bridge on Rebecca Street, at Heidelberg College, Tiffin, Ohio.

DRAINAGE AREA.--34.6 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1983 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 740 ft, from topographic map.

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

COOPERATION.-- Gage-height record and computations of daily discharge were furnished by Heidelberg College; 11 discharge measurements were made, rating developed, and records reviewed by Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1590 ft<sup>3</sup>/s Mar. 16, 1984, gage height, 7.70 ft; minimum daily discharge 0.74 ft<sup>3</sup>/s Oct. 4, 1983.

EXTREMES FOR PERIOD JUNE TO SEPTEMBER 1983.--Maximum discharge 261 ft<sup>3</sup>/s July 2, gage height, 5.10 ft; minimum daily discharge 0.93 ft<sup>3</sup>/s Sept. 27, 30.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 1590 ft<sup>3</sup>/s Mar. 16, gage height 7.70 ft; minimum daily discharge 0.74 ft<sup>3</sup>/s Oct. 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									12	27	3.9	1.6
2									11	178	2.9	1.6
3									8.8	84	2.6	1.5
4									7.8	22	2.7	1.5
5									7.4	20	2.8	1.5
6									20	9.6	2.8	4.7
7									29	6.1	2.6	6.6
8									14	4.6	2.2	3.0
9									8.0	3.6	1.7	2.7
10									5.8	2.7	1.6	1.8
11									4.7	2.1	2.7	1.4
12									4.0	1.7	2.0	1.3
13									3.6	1.6	1.6	1.2
14									3.4	1.6	1.6	1.1
15									3.5	1.7	1.5	.95
16									2.9	1.9	1.6	1.5
17									2.5	2.6	1.5	1.4
18									2.2	5.4	1.5	1.3
19									2.9	29	1.6	1.2
20									3.1	8.8	1.5	1.2
21									2.7	5.4	1.9	3.6
22									3.7	4.9	1.5	1.5
23									3.4	5.2	1.4	1.2
24									2.5	6.1	1.3	1.2
25									2.1	6.8	1.3	1.2
26									2.5	4.5	1.5	1.2
27									3.2	3.4	1.5	.93
28									13	3.1	1.7	1.0
29									38	3.0	1.6	1.1
30									23	4.1	1.5	.93
31									---	6.0	3.1	---
TOTAL									250.7	466.5	61.2	52.91
MEAN									8.36	15.0	1.97	1.76
MAX									38	178	3.9	6.6
MIN									2.1	1.6	1.3	.93
CFSM									.24	.43	.06	.05
IN.									.27	.50	.07	.06

## STREAMS TRIBUTARY TO LAKE ERIE

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04197170 ROCK CREEK AT TIFFIN, OH--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.97	4.1	15	4.4	4.5	7.2	35	16	13	4.7	.97	2.4
2	.92	6.2	11	4.2	4.1	7.4	26	13	11	4.7	.97	2.6
3	.82	132	9.0	4.0	323	7.8	22	13	9.5	4.4	1.6	3.1
4	.74	50	216	3.9	201	10	24	24	8.6	5.4	4.1	2.6
5	1.7	14	267	3.8	30	9.0	63	21	8.1	5.4	3.8	2.4
6	7.0	8.6	416	3.7	10	15	134	16	8.6	6.1	3.3	2.2
7	30	6.5	313	3.7	7.0	30	54	13	8.6	4.7	5.4	2.1
8	8.6	5.8	45	3.6	5.0	39	24	18	8.1	6.1	13	2.2
9	2.1	5.1	23	3.5	5.0	25	18	24	8.6	6.5	6.5	2.2
10	1.6	6.2	18	3.4	15	10	14	19	8.6	5.8	5.1	3.3
11	1.2	527	40	3.3	60	8.2	12	17	8.6	5.1	3.8	3.6
12	1.1	386	397	3.3	150	7.8	12	19	8.6	4.7	3.8	2.6
13	46	57	91	3.2	246	7.6	12	18	9.0	4.4	4.1	2.4
14	113	32	36	3.1	826	7.0	13	22	9.0	4.7	3.8	2.4
15	22	24	24	3.0	113	6.8	20	15	7.7	4.4	3.8	2.4
16	8.1	279	15	3.0	48	853	22	11	7.3	4.4	3.6	2.4
17	5.4	224	10	3.0	35	706	18	9.0	6.9	3.8	3.6	2.2
18	4.1	54	8.0	3.0	30	107	80	7.3	6.1	3.6	3.3	2.2
19	3.6	37	7.4	3.0	25	39	60	9.0	5.8	3.3	2.8	2.2
20	3.3	53	6.8	3.0	20	163	29	186	5.1	3.1	2.8	2.2
21	3.3	40	6.2	3.0	14	1130	21	488	5.1	2.8	2.6	2.1
22	6.5	23	15	3.0	12	285	476	92	5.4	2.6	2.6	2.1
23	31	54	90	3.0	11	96	720	581	5.4	2.4	2.4	2.2
24	23	168	146	4.5	10	138	313	132	5.8	2.1	2.4	2.4
25	13	35	36	25	9.2	132	109	27	5.4	2.1	2.4	2.2
26	8.6	16	8.6	94	8.6	94	41	21	5.1	2.4	2.4	2.4
27	6.5	12	7.2	78	8.0	69	102	15	4.4	2.2	2.4	2.2
28	5.4	505	6.2	50	7.6	66	124	15	4.4	1.6	2.2	2.4
29	4.1	189	5.4	15	7.2	89	31	32	4.4	3.1	2.2	2.4
30	3.6	29	5.0	8.0	---	65	21	21	4.7	1.1	5.1	2.2
31	3.6	---	4.6	6.0	---	44	---	16	---	.97	3.3	---
TOTAL	370.85	2982.5	2298.4	358.6	2245.2	4273.8	2650	1930.3	216.9	118.67	110.14	72.3
MEAN	12.0	99.4	74.1	11.6	77.4	138	88.3	62.3	7.23	3.83	3.55	2.41
MAX	113	527	416	94	826	1130	720	581	13	6.5	13	3.6
MIN	.74	4.1	4.6	3.0	4.1	6.8	12	7.3	4.4	.97	.97	2.1
CFSM	.35	2.87	2.14	.34	2.24	3.99	2.55	1.80	.21	.11	.10	.07
IN.	.40	3.21	2.47	.39	2.41	4.59	2.85	2.08	.23	.13	.12	.08

WTR YR 1984 TOTAL 17627.66 MEAN 48.2 MAX 1130 MIN .74 CFSM 1.39 IN 18.95



## STREAMS TRIBUTARY TO LAKE ERIE

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 upstream from Ballville diversion dam, 2.5 mi downstream from Wolf Creek, and 3.5 mi southwest of Fremont.

DRAINAGE AREA.--1,251 mi<sup>2</sup>.

## 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 National Geodetic Vertical Datum, adjustment of 1912. Nov. 18, 1898, to Mar. 10, 1901, nonrecording gage at site 4 mi downstream at different datum. Nov. 8, 1923, to Sept. 5, 1930, nonrecording gage at present site and datum.

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

AVERAGE DISCHARGE.--58 years (1923-35, 1938-84), 1000 ft<sup>3</sup>/s, 10.86 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,500 ft<sup>3</sup>/s Mar. 16, 1978 gage height, 13.57 ft; maximum gage height, 16.14 ft Feb. 24, 1979, (ice jam); minimum discharge, 4.4 ft<sup>3</sup>/s Feb. 29, 1964 (result of freezeup); minimum gage height, 0.78 ft Oct. 20, 1963.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 10,000 ft<sup>3</sup>/s and maximums (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 7	0430	12,300	6.75	Feb. 11	2400	27,200	11.20
Dec. 24	1200	ice jam	7.72	Mar. 17	0600	14,800	7.58
Jan. 27	1530	ice jam	6.98	Mar. 21	2300	16,600	8.14
Feb. 4	0730	*32,700	*12.63	Apr. 23	1400	16,400	8.07

Minimum daily, 37 ft<sup>3</sup>/s Oct. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52	289	4160	600	980	510	1960	1140	669	169	117	154
2	48	270	2240	560	880	480	1560	844	545	149	101	286
3	43	1540	1240	520	840	460	1240	699	470	153	90	231
4	37	2720	2350	500	27200	450	1100	698	407	153	92	167
5	82	2380	6500	470	24800	440	1450	703	357	168	153	149
6	689	1500	8520	440	21600	781	3980	673	333	736	122	213
7	1830	868	11300	420	16000	1300	4400	646	299	968	119	200
8	1380	607	7200	390	11700	1420	3690	628	273	728	255	141
9	703	475	4410	370	9630	3350	2260	685	238	538	473	106
10	360	403	2520	350	9410	1610	1370	680	209	389	691	95
11	243	3600	1790	340	20300	902	993	669	185	318	619	108
12	187	8920	6130	330	21400	917	791	788	163	407	353	99
13	325	6740	6530	320	12000	1810	699	2260	148	332	221	96
14	2770	4990	4700	300	8800	548	661	2250	171	252	164	127
15	2830	3320	3400	280	6400	540	1160	1490	213	206	125	112
16	1670	4740	2190	270	4800	5910	1610	1020	217	163	104	99
17	842	6960	1480	260	3800	14500	1480	740	191	131	93	89
18	503	5040	1020	250	3160	11300	1840	600	168	111	88	88
19	365	3720	759	240	2600	8630	2140	526	129	92	79	91
20	289	3640	819	230	2410	5960	1790	1650	105	89	69	76
21	258	3120	900	230	1960	13600	1410	5790	93	87	65	68
22	267	2800	1000	230	1490	15000	2920	4010	89	82	58	64
23	2070	2210	1100	220	1140	12200	15100	6060	120	75	69	61
24	4030	4490	1200	220	957	11300	13100	4620	187	73	67	67
25	3530	4000	1400	3400	860	7370	10900	2100	1170	65	67	67
26	2160	2790	1200	5100	740	5210	7380	1380	1500	68	69	63
27	1160	1690	1000	6100	640	4670	4040	917	914	91	71	58
28	725	5260	860	3600	580	4090	4180	763	413	109	66	61
29	515	8690	780	2000	546	4090	2690	1350	273	154	69	59
30	399	6170	720	1500	---	3520	1710	1090	207	151	80	58
31	328	---	640	1150	---	2640	---	829	---	143	127	---
TOTAL	30690	103942	90058	31190	217623	145508	99504	48298	10456	7350	4936	3343
MEAN	990	3465	2905	1006	7504	4694	3320	1558	349	237	159	111
MAX	4030	8920	11300	6100	27200	15000	15100	6060	1500	968	691	286
MIN	37	270	640	220	546	440	661	526	89	65	58	58
CFSM	.79	2.77	2.32	.80	6.00	3.75	2.65	1.25	.28	.19	.13	.09
IN.	.91	3.09	2.68	.93	6.47	4.33	2.96	1.44	.31	.22	.15	.10

CAL YR 1983 TOTAL 409184 MEAN 1121 MAX 11300 MIN 27 CFSM .90 IN 12.17  
WTR YR 1984 TOTAL 792998 MEAN 2167 MAX 27200 MIN 37 CFSM 1.73 IN 23.58

## 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 June 14, 1981; minimum daily, less than 0.05 ton on several days during 1952 and 1954.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,470 mg/L Apr. 23; minimum daily mean, 5 mg/L Jan. 22-24.

SEDIMENT LOADS: Maximum daily, 59,900 tons Apr. 23; minimum daily, 1.4 ton Sept. 26.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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...	1000	478	20	1	64	.5	<1	<1	<3	11	1100
JAN 24...	1200	204	40	1	78	<.5	<1	<1	<3	3	11
MAY 15...	1330	1460	10	1	50	<1	<1	9	<3	21	42
JUL 25...	0930	65	30	<1	59	<1	<1	<1	<3	6	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...	4	<4	15	.2	<10	4	<1	<1	1400	<6	11
JAN 24...	2	10	19	.2	<10	1	<1	<1	4600	<6	14
MAY 15...	6	7	4	.2	<10	1	<1	<1	1000	<6	12
JUL 25...	6	6	4	.3	<10	<1	<1	2	2800	<6	6

## STREAMS TRIBUTARY TO LAKE ERIE

04198000 SANDUSKY RIVER NEAR FREMONT, OH--Continued

## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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...	1000	478	570	8.2	4.0	10.5	35	10.8	99	380
JAN 24...	1200	204	940	7.9	2.0	1.0	2.5	11.2	81	210
MAY 15...	1330	1460	455	7.9	16.0	15.0	55	9.9	100	1700
JUL 25...	0930	65	555	8.4	20.0	23.0	10	8.6	103	120

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- LINEITY LAB (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
NOV 09...	500	75	21	11	8	.3	3.7	155	88	29
JAN 24...	54	120	40	27	11	.6	3.4	282	200	46
MAY 15...	370	57	16	9.5	9	.3	3.0	127	63	20
JUL 25...	2600	51	25	18	14	.5	4.2	100	130	36

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, ORTH0, DIS- SOLVED (MG/L AS P)
NOV 09...	.30	9.2	366	5.50	.130	.17	3.1	.190	.100	.100
JAN 24...	.50	9.2	673	3.50	.590	.76	1.1	.140	.110	.090
MAY 15...	.30	4.9	346	3.50	.220	.28	3.8	.030	<.010	.030
JUL 25...	.40	.7	409	2.50	<.010	--	1.0	.110	.010	<.010

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
NOV 09...	1000	478	10.5	43	55
JAN 24...	1200	204	1.0	5	2.8
MAY 15...	1330	1460	15.0	84	331
JUL 25...	0930	65	23.0	42	7.4

## STREAMS TRIBUTARY TO LAKE ERIE

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04198000 SANDUSKY RIVER NEAR FREMONT, OH--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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	52	17	2.4	289	28	22	4160	186	2090
2	48	20	2.6	270	33	24	2240	139	841
3	43	20	2.3	1540	143	750	1240	82	275
4	37	20	2.0	2720	190	1400	2350	79	616
5	82	40	8.9	2380	137	880	6500	135	2360
6	689	139	387	1500	85	344	8520	156	3940
7	1830	200	981	868	67	157	11300	227	6930
8	1380	149	555	607	56	92	7200	127	2470
9	703	120	228	475	50	64	4410	102	1210
10	360	79	77	403	50	54	2520	86	585
11	243	72	47	3600	332	4860	1790	54	261
12	187	70	35	8920	472	11400	6130	194	3380
13	325	86	101	6740	220	4000	6530	217	3830
14	2770	259	1910	4990	150	2020	4700	176	2230
15	2830	292	2200	3320	104	932	3400	100	918
16	1670	182	821	4740	159	2190	2190	75	443
17	842	90	205	6960	233	4430	1480	43	172
18	503	80	109	5040	120	1630	1020	30	83
19	365	66	65	3720	94	944	759	25	51
20	289	52	41	3640	106	1040	819	20	44
21	258	46	32	3120	112	943	900	100	243
22	267	40	29	2800	120	907	1000	50	135
23	2070	163	1180	2210	120	710	1100	60	178
24	4030	384	4150	4490	321	3970	1200	687	2230
25	3530	275	2620	4000	318	3430	1400	724	2740
26	2160	143	834	2790	222	1670	1200	604	1960
27	1160	76	238	1690	150	684	1000	486	1310
28	725	78	153	5260	309	5200	860	395	917
29	515	57	79	8690	379	8890	780	314	661
30	399	45	48	6170	264	4400	720	247	480
31	328	29	26	---	---	---	640	195	337
TOTAL	30690	---	17169.2	103942	---	68037	90058	---	43920
JANUARY				FEBRUARY			MARCH		
1	600	153	248	980	153	405	510	13	18
2	560	135	204	880	135	321	480	13	17
3	520	115	161	840	115	261	460	12	15
4	500	110	148	27200	734	53900	450	12	15
5	470	100	127	24800	717	48000	440	8	9.5
6	440	95	113	21600	789	46000	781	18	38
7	420	90	102	16000	764	33000	1300	33	116
8	390	85	90	11700	665	21000	1420	52	199
9	370	80	80	9630	615	16000	3350	252	2280
10	350	75	71	9410	590	15000	1610	224	974
11	340	70	64	20300	803	44000	902	90	219
12	330	65	58	21400	796	46000	917	15	37
13	320	60	52	12000	460	14900	1810	10	49
14	300	60	49	8800	560	13300	548	8	12
15	280	58	44	6400	395	6830	540	10	15
16	270	55	40	4800	218	2830	5910	249	5900
17	260	50	35	3800	146	1500	14500	368	14400
18	250	40	27	3160	81	691	11300	222	6770
19	240	30	19	2600	58	407	8630	142	3310
20	230	20	12	2410	45	293	5960	88	1420
21	230	10	6.2	1960	48	254	13600	380	14700
22	230	5	3.1	1490	27	109	15000	337	13600
23	220	5	3.0	1140	25	77	12200	272	8960
24	220	5	3.0	957	24	62	11300	145	4420
25	3400	327	3000	860	22	51	7370	114	2270
26	5100	436	6000	740	16	32	5210	89	1250
27	6100	486	8000	640	16	28	4670	110	1390
28	3600	340	3300	580	15	23	4090	99	1090
29	2000	204	1100	546	14	21	4090	91	1000
30	1500	163	660	---	---	---	3520	78	741
31	1150	132	410	---	---	---	2640	68	485
TOTAL	31190	---	24229.3	217623	---	365295	145508	---	85719.5



## STREAMS TRIBUTARY TO LAKE ERIE

04198000 SANDUSKY RIVER NEAR FREMONT, OH--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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	1960	57	302	1140	100	308	669	76	137
2	1560	48	202	844	72	164	545	68	100
3	1240	40	134	699	56	106	470	72	91
4	1100	32	95	698	57	107	407	57	63
5	1450	22	86	703	35	66	357	42	40
6	3980	100	1070	673	44	80	333	47	42
7	4400	117	1390	646	42	73	299	27	22
8	3690	61	608	628	45	76	273	45	33
9	2260	79	482	685	47	87	238	58	37
10	1370	57	211	680	35	64	209	76	43
11	993	42	113	669	43	78	185	93	46
12	791	40	85	788	35	74	163	65	29
13	699	33	62	2260	120	732	148	82	33
14	661	31	55	2250	145	881	171	119	55
15	1160	69	216	1490	102	410	213	80	46
16	1610	58	252	1020	67	185	217	63	37
17	1480	58	232	740	37	74	191	55	28
18	1840	65	323	600	30	49	168	69	31
19	2140	79	456	526	48	68	129	49	17
20	1790	54	261	1650	208	1560	105	35	9.9
21	1410	37	141	5790	330	5160	93	37	9.3
22	2920	584	8850	4010	218	2360	89	21	5.0
23	15100	1470	59900	6060	464	8150	120	52	17
24	13100	630	22300	4620	463	6530	187	63	32
25	10900	210	5180	2100	135	765	1170	133	420
26	7380	226	4500	1380	76	283	1500	762	3090
27	4040	158	1720	917	58	144	914	730	1800
28	4180	324	3660	763	73	150	413	442	493
29	2690	258	1870	1350	168	612	273	200	147
30	1710	137	633	1090	92	271	207	152	85
31	---	---	---	829	79	177	---	---	---
TOTAL	99604	---	116389	48298	---	29844	10456	---	7038.2
JULY			AUGUST			SEPTEMBER			
1	169	120	55	117	17	5.4	154	27	11
2	149	94	38	101	12	3.3	286	68	53
3	153	56	23	90	23	5.6	231	34	21
4	153	58	24	92	30	7.5	167	30	14
5	168	52	24	153	38	16	149	22	8.9
6	736	121	240	122	30	9.9	213	30	17
7	968	119	311	119	32	10	200	38	21
8	728	120	236	255	78	54	141	33	13
9	538	123	179	473	95	121	106	25	7.2
10	389	98	103	691	102	190	95	29	7.4
11	318	81	70	619	85	142	108	23	6.7
12	407	100	110	353	68	65	99	20	5.3
13	332	75	67	221	62	37	96	22	5.7
14	252	58	39	164	51	23	127	22	7.5
15	206	48	27	125	34	11	112	22	6.7
16	163	48	21	104	22	6.2	99	19	5.1
17	131	34	12	93	27	6.8	89	16	3.8
18	111	29	8.7	88	22	5.2	88	18	4.3
19	92	24	6.0	79	31	6.6	81	9	2.0
20	89	16	3.8	69	29	5.4	76	11	2.3
21	87	20	4.7	65	20	3.5	68	14	2.6
22	82	22	4.9	58	29	4.5	64	12	2.1
23	75	24	4.9	69	23	4.3	61	10	1.6
24	73	34	6.7	67	31	5.6	67	10	1.8
25	65	26	4.6	67	30	5.4	67	12	2.2
26	68	35	6.4	69	28	5.2	63	8	1.4
27	91	40	9.8	71	25	4.8	58	10	1.6
28	109	40	12	66	20	3.6	61	10	1.6
29	154	58	24	69	20	3.7	59	10	1.6
30	151	31	13	80	18	3.9	58	10	1.6
31	143	25	9.7	127	34	12	---	---	---
TOTAL	7350	---	1698.2	4936	---	787.4	3343	---	241.0
YEAR	792998		760367.8						

STREAMS TRIBUTARY TO LAKE ERIE

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04198000 SANDUSKY RIVER NEAR FREMONT, OH--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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 12...	1035	9050	349	8530	60	73	81
MAR 21...	1405	15100	366	14900	39	53	63
APR 23...	1800	16100	1100	47800	70	86	92
MAY 23...	1945	7650	561	11600	69	82	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 12...	88	92	94	96	97	99	100
MAR 21...	73	81	94	97	99	100	--
APR 23...	96	97	98	99	100	--	--
MAY 23...	94	97	99	100	--	--	--

## STREAMS TRIBUTARY TO LAKE ERIE

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 south of bridge on U.S. Highway 6 and State Highway 2, 0.75 mi east of Huron.

DRAINAGE AREA.--26.3 mi .

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

GAGE.-- Water-stage recorder. Datum of gage is 560.00 ft 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, 17.56 ft April 6, 1982; minimum recorded gage height, 12.02 ft Jan. 7, 1982.

EXTREMES FOR CURRENT YEAR.--Maximum recorded gage height, 16.25 ft Feb. 27; minimum recorded gage height 12.09 ft. Nov. 30.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.68	14.05	12.79		---	13.28			---	14.44	14.24	14.37
2	14.68	14.18	12.80		---	13.35			---	14.44	14.22	14.32
3	14.67	14.77	13.27		---	13.48			---	14.44	14.28	14.29
4	14.64	15.21	13.92		---	13.56			---	14.46	14.30	14.30
5	14.78	15.33	13.21		---	13.56			---	14.51	14.32	14.29
6	15.11	15.37	13.63		---	13.49			---	14.23	14.34	14.28
7	15.19	13.29	12.94		---	13.73			---	14.45	14.34	14.30
8	15.19	12.85	13.34		---	14.35			---	14.29	14.32	14.31
9	15.14	12.96	13.19		---	13.75			---	14.17	14.40	14.38
10	14.11	13.07	13.42		---	13.32			---	14.10	14.40	14.40
11	13.49	14.54	14.19		---	13.16			---	14.07	14.40	14.38
12	13.29	13.56	13.67		---	13.70			---	14.12	14.43	14.37
13	13.31	13.15	13.77		---	13.78			---	14.14	14.42	14.31
14	13.41	13.06	13.85		---	13.54			---	14.15	14.40	14.32
15	13.47	13.34	13.09		13.18	13.60			---	14.16	14.41	14.28
16	13.51	13.37	12.75		13.45	14.45			---	14.12	14.36	14.29
17	13.53	13.28	13.06		13.26	14.49			---	14.12	14.36	14.27
18	13.55	13.07	13.29		13.20	14.47			---	14.14	14.36	14.27
19	13.58	13.15	13.53		13.23	13.80			---	14.12	14.38	14.27
20	13.66	13.19	13.72		13.06	13.99			14.67	14.10	14.41	14.29
21	13.68	12.61	13.87		13.15	14.76			14.52	14.08	14.38	14.26
22	13.72	13.23	14.23		13.27	13.42			14.51	14.09	14.36	14.22
23	13.77	13.42	12.87		13.31	13.70			14.47	14.08	14.35	14.20
24	13.84	12.87	12.23		13.38	13.89			14.27	14.08	14.33	14.21
25	13.91	12.64	12.22		13.71	14.25			14.32	14.09	14.33	14.21
26	13.95	12.82	---		13.43	14.06			14.32	14.09	14.31	14.23
27	13.98	13.62	---		14.84	14.18			14.02	14.26	14.30	14.22
28	14.01	14.35	---		15.87	14.89			14.07	14.27	14.27	14.20
29	14.01	12.73	---		14.07	14.58			14.37	14.27	14.28	14.18
30	14.01	12.29	---		---	13.89			14.57	14.25	14.33	14.15
31	14.01	---	---		---	---			---	14.24	14.38	---
MEAN	14.06	13.51	---		---	---			---	14.22	14.35	14.28
MAX	15.19	15.37	---		---	---			---	14.51	14.43	14.40
MIN	13.29	12.29	---		---	---			---	14.07	14.22	14.15

## STREAMS TRIBUTARY TO LAKE ERIE

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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 east of Huron.

DRAINAGE AREA.--26.5 mi<sup>2</sup>.

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

GAGE.--Water-stage recorder. Datum of gage is 560.00 ft 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, 16.26 ft Feb. 27, 1984; minimum recorded gage height, 10.88 ft Jan. 10, 11, 1982.

EXTREMES FOR CURRENT YEAR.--Maximum recorded gage height, 16.26 ft Feb. 27; minimum recorded gage height, 11.69 ft Dec. 24.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.80	14.17	12.84	13.16	12.82	13.28	13.97	13.33	14.07	14.41	14.22	14.28
2	14.80	14.31	12.90	13.04	12.81	13.35	13.97	13.73	14.17	14.42	14.22	14.27
3	14.79	14.90	13.39	12.82	13.25	13.49	14.20	14.03	14.05	14.42	14.24	14.27
4	14.79	15.33	13.90	12.83	13.12	13.56	14.36	13.88	14.09	14.47	14.29	14.27
5	14.91	15.45	13.26	12.93	12.77	13.51	14.12	13.64	14.09	14.50	14.33	14.26
6	15.25	15.49	13.69	12.97	12.73	13.48	13.94	13.76	14.07	14.22	14.34	14.26
7	15.32	13.28	12.81	13.07	12.73	13.71	14.06	13.77	14.06	14.41	14.34	14.24
8	14.60	12.93	13.28	12.86	12.67	14.28	14.20	13.61	13.93	14.23	14.35	14.24
9	14.30	13.07	13.27	13.17	12.72	13.58	14.51	13.50	14.04	14.11	14.43	14.22
10	13.82	13.16	13.48	13.22	12.76	13.22	14.30	13.66	14.02	14.07	14.43	14.23
11	13.53	14.56	14.29	13.11	13.01	13.11	14.06	13.56	14.06	14.04	14.43	14.24
12	13.35	13.55	13.79	13.27	12.96	13.68	14.15	13.69	14.09	14.12	14.41	14.23
13	13.43	13.20	13.88	13.20	13.05	13.70	13.96	14.07	14.02	14.13	14.40	14.22
14	13.57	13.10	13.88	12.95	13.47	13.47	14.06	13.83	14.21	14.14	14.39	14.23
15	13.61	13.40	13.17	13.05	13.16	13.55	13.98	13.92	14.44	14.14	14.38	14.23
16	13.66	13.43	12.82	12.98	13.44	14.36	13.92	13.81	14.17	14.14	14.36	14.23
17	13.67	13.33	13.08	12.82	13.24	14.23	13.85	13.79	14.11	14.13	14.34	14.22
18	13.68	13.17	13.33	12.98	13.20	13.92	13.88	13.70	14.06	14.12	14.33	14.21
19	13.73	13.25	13.61	12.66	13.14	13.71	13.82	13.70	14.24	14.11	14.34	14.20
20	13.81	13.18	13.85	12.73	13.05	13.90	13.74	13.99	14.33	14.11	14.35	14.19
21	13.83	12.62	13.96	12.82	13.15	14.14	13.91	14.11	14.38	14.10	14.34	14.17
22	13.88	13.16	14.32	12.87	13.29	12.97	14.26	13.84	14.39	14.09	14.33	14.17
23	13.91	13.51	12.87	12.90	13.33	13.60	13.98	13.96	14.35	14.08	14.32	14.17
24	13.98	12.87	11.90	12.90	13.39	13.85	13.71	14.02	14.11	14.06	14.30	14.18
25	14.05	12.64	12.05	12.81	13.65	14.18	13.70	13.86	14.23	14.06	14.30	14.19
26	14.09	12.92	12.28	12.98	13.45	14.01	13.87	13.97	14.22	14.07	14.28	14.17
27	14.12	13.70	12.72	12.91	14.77	14.11	13.83	14.29	13.94	14.25	14.27	14.17
28	14.15	14.40	13.24	12.87	15.54	14.84	13.73	15.08	14.08	14.26	14.25	14.17
29	14.12	12.57	12.65	12.68	13.93	14.43	13.82	14.22	14.35	14.26	14.26	14.16
30	14.13	12.26	12.68	13.02	---	13.92	12.99	14.09	14.52	14.24	14.29	14.15
31	14.13	---	12.84	12.79	---	13.90	---	14.04	---	14.23	14.28	---
MEAN	14.12	13.56	13.23	12.95	13.26	13.78	13.96	13.89	14.16	14.20	14.33	14.21
MAX	15.32	15.49	14.32	13.27	15.54	14.84	14.51	15.08	14.52	14.50	14.43	14.28
MIN	13.35	12.26	11.90	12.66	12.67	12.97	12.99	13.33	13.93	14.04	14.22	14.15

WTR YR 1984 MEAN 13.81 MAX 15.54 MIN 11.90



## STREAMS TRIBUTARY TO LAKE ERIE

04199170 LAKE ERIE AT HURON, OH

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

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

GAGE.--Water-stage recorder. Datum of gage is 560.00 ft 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 July 29, 1981; minimum recorded gage height, 4.80 ft Jan. 17, 1982.

EXTREMES FOR CURRENT YEAR.--Maximum recorded gage height, 16.05 ft Feb. 27; minimum recorded gage height, 11.38 ft Oct. 14.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.60	13.28	12.42	13.55	13.21	13.28	14.10					
2	13.45	13.26	11.79	13.43	13.19	13.45	14.10					
3	13.25	13.56	11.88	13.18	12.98	13.63	---					
4	13.24	13.59	12.07	13.22	13.16	13.70	---					
5	13.49	13.48	11.75	13.30	13.15	13.40	---					
6	13.32	13.18	12.29	13.34	13.16	13.44	---					
7	13.50	13.28	12.39	13.46	13.14	13.82	---					
8	13.40	13.15	13.60	13.30	13.07	14.37	---					
9	14.06	13.29	13.62	13.62	13.14	13.59	---					
10	13.75	13.38	13.79	13.58	13.16	13.26	---					
11	13.39	13.87	14.34	13.55	13.15	13.24	---					
12	13.52	13.51	13.90	13.76	13.28	13.82	---					
13	13.46	13.50	14.07	13.57	13.30	13.85	---					
14	12.27	13.42	14.03	13.35	13.36	13.57	---					
15	13.48	13.71	13.19	13.48	13.47	13.63	---					
16	13.49	13.53	13.01	13.40	13.76	13.63	---					
17	13.36	13.32	13.41	13.20	13.56	14.22	---					
18	13.49	13.49	13.68	13.38	13.54	14.02	---					
19	13.84	13.60	13.91	13.12	13.48	13.81	---					
20	14.00	13.43	14.25	13.14	13.40	13.99	---					
21	13.89	12.84	14.02	13.34	13.48	13.61	---					
22	13.42	13.54	13.19	13.34	13.60	13.00	---					
23	13.38	13.75	13.22	13.30	13.66	13.73	---					
24	13.83	13.07	12.34	13.29	13.71	13.99	---					
25	13.38	12.76	12.34	13.05	13.77	14.31	---					
26	13.27	12.92	12.80	13.24	13.77	14.14	---					
27	13.17	13.45	13.18	13.23	14.78	14.25	---					
28	12.42	13.62	13.60	13.23	15.35	14.97	---					
29	13.49	12.28	12.99	13.05	14.26	14.60	---					
30	13.34	12.08	13.12	13.48	---	14.05	---					
31	13.36	---	13.23	13.19	---	14.04	---					
MEAN	13.43	13.30	13.14	13.34	13.52	13.82	---					
MAX	14.06	13.87	14.34	13.76	15.35	14.97	---					
MIN	12.27	12.08	11.75	13.05	12.98	13.00	---					

## 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 upstream from Lake Street Bridge and 1,600 ft upstream of confluence with East Branch Black River at Elyria, Ohio.

DRAINAGE AREA.--174 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1980 to current year (discontinued).

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

REMARKS.--Records good except those for the winter period which are 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, 5,520 ft<sup>3</sup>/s Mar. 22, 1984, gage height, 9.94 ft; minimum daily discharge, 2.6 ft<sup>3</sup>/s Aug. 27, 1983.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,800 ft<sup>3</sup>/s and maximums (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Nov. 12	0730	2600	7.36	Mar. 17	1700	3700	8.46
Nov. 29	0100	1820	6.41	Mar. 22	0830	*5520	*9.94
Dec. 5	0500	1840	6.43	May 21	0730	2600	7.36
Feb. 14	1330	3040	7.82				

Minimum daily discharge, 2.8 ft<sup>3</sup>/s Aug. 25-27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.6	21	201	35	60	65	167	85	85	5.3	5.8	5.3
2	5.1	32	127	33	47	60	125	66	61	5.8	6.8	5.1
3	6.0	600	96	30	426	58	111	64	48	5.6	8.3	4.7
4	7.4	461	806	28	1160	56	101	409	42	50	33	4.2
5	644	181	1580	26	508	90	118	439	30	53	58	4.4
6	879	102	845	24	223	317	149	234	78	220	111	5.3
7	228	69	971	24	145	508	174	120	89	321	199	5.1
8	93	51	435	22	112	335	143	199	39	194	99	4.9
9	56	40	237	22	89	209	104	381	25	70	60	5.8
10	37	41	186	20	109	207	78	228	18	42	42	4.7
11	27	1320	237	19	1020	156	62	167	13	27	17	4.9
12	20	2370	708	18	1370	123	53	1320	10	23	13	4.1
13	19	840	480	18	1260	104	50	732	32	17	35	4.4
14	19	409	267	17	2790	107	56	503	116	13	15	7.4
15	19	286	209	16	1660	172	331	251	139	8.6	8.0	13
16	13	811	160	16	579	1630	850	147	64	8.0	5.8	7.7
17	11	1630	106	16	377	3350	397	101	35	6.8	4.9	6.3
18	10	782	62	15	357	1780	431	79	38	6.3	3.9	8.6
19	8.6	397	62	15	373	543	314	73	32	5.3	3.9	6.6
20	9.9	755	50	14	321	1220	194	553	44	5.1	4.1	6.6
21	10	426	50	12	209	4140	114	2120	30	4.4	3.3	5.1
22	15	228	243	11	154	4830	106	1210	19	4.2	3.2	4.4
23	89	156	243	14	123	1140	471	655	13	4.9	3.3	4.4
24	246	274	156	27	106	638	998	385	10	4.4	3.2	4.7
25	154	231	127	174	102	435	746	186	9.6	3.9	2.8	5.8
26	89	141	104	484	94	331	280	112	8.9	8.3	2.8	4.7
27	84	101	59	422	88	243	194	78	7.4	11	2.8	6.0
28	70	1060	44	228	62	215	293	71	7.4	8.3	3.0	8.0
29	48	1370	42	147	67	357	217	215	6.6	6.6	3.7	6.8
30	29	431	41	94	---	377	123	209	5.3	9.9	3.2	5.6
31	25	---	38	64	---	231	---	125	---	6.3	12	---
TOTAL	2977.6	15616	8972	2105	13991	24027	7550	11517	1155.2	1159.0	776.8	174.6
MEAN	96.1	521	289	67.9	482	775	252	372	38.5	37.4	25.1	5.82
MAX	879	2370	1580	484	2790	4830	998	2120	139	321	199	13
MIN	5.1	21	38	11	47	56	50	64	5.3	3.9	2.8	4.1
CFSM	.55	2.99	1.66	.39	2.77	4.45	1.45	2.14	.22	.22	.14	.03
IN.	.64	3.34	1.92	.45	2.99	5.14	1.61	2.46	.25	.25	.17	.04

CAL YR 1983	TOTAL	70919.3	MEAN 194	MAX 3290	MIN 2.6	CFSM 1.12	IN 15.16
WTR YR 1984	TOTAL	90021.2	MEAN 246	MAX 4830	MIN 2.8	CFSM 1.41	IN 19.25

## STREAMS TRIBUTARY TO LAKE ERIE

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 downstream from confluence of East and West Branches.

DRAINAGE AREA.--396 mi<sup>2</sup>.

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 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.--40 years, 332 ft<sup>3</sup>/s, 11.39 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 51,700 ft<sup>3</sup>/s July 6, 1969, gage height, 26.4 ft, (from flood mark), from rating curve extended above 13,000 ft<sup>3</sup>/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<sup>3</sup>/s and maximums (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Nov. 12	1000	4620	9.94	Mar. 17	2100	7320	12.61
Nov. 17	1000	3320	8.37	Mar. 22	0830	*12600	*16.43
Dec. 5	0600	3340	8.39	May 21	0300	4770	10.11
Feb. 14	1030	6150	11.54				

Minimum daily discharge, 7.1 ft<sup>3</sup>/s Aug. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	55	479	75	140	130	490	230	218	17	21	15
2	14	80	301	70	130	120	364	178	158	17	21	11
3	14	849	229	70	751	120	285	169	123	17	67	19
4	18	780	1520	65	2030	120	258	653	97	136	173	23
5	935	419	3070	60	1260	286	290	941	79	137	271	16
6	1000	247	1890	60	564	691	372	579	136	390	131	14
7	292	171	2030	55	346	1060	431	402	144	606	78	12
8	134	127	1090	55	240	846	374	468	76	505	48	11
9	84	97	586	50	210	594	283	1010	56	210	35	9.5
10	58	93	446	50	258	450	209	715	45	110	27	31
11	43	2330	531	48	1750	350	168	451	40	74	24	33
12	35	4370	1160	46	2730	280	142	2510	35	58	25	26
13	40	2000	1110	44	2710	250	133	2000	62	47	68	32
14	37	875	687	42	5780	281	139	1090	193	38	33	32
15	35	646	507	42	4120	427	416	681	377	30	22	24
16	27	1420	382	40	1370	3630	1320	384	160	26	18	20
17	23	3070	268	38	835	6650	897	259	89	22	19	18
18	27	1670	174	38	801	4420	830	205	97	20	13	16
19	24	900	142	38	829	1200	671	182	71	18	15	16
20	24	1320	130	36	739	1410	441	1400	72	16	12	15
21	23	873	220	36	527	8880	301	4470	57	15	11	13
22	38	540	531	34	382	11300	250	2950	42	14	10	11
23	157	384	563	34	304	3110	716	1230	33	14	9.5	12
24	344	528	436	165	261	1270	2060	1070	28	14	10	14
25	248	502	320	508	251	954	1920	540	26	13	9.5	13
26	164	342	250	1310	235	762	786	298	23	20	8.2	18
27	150	247	180	933	224	598	490	206	21	33	9.1	10
28	129	1830	130	585	148	558	656	210	20	21	7.1	9.1
29	94	2610	110	378	140	1600	570	464	19	21	7.8	11
30	66	1010	90	235	---	1370	328	483	17	35	22	9.5
31	57	---	80	160	---	734	---	314	---	25	20	---
TOTAL	4350	30385	19642	5400	30065	54461	16590	26742	2614	2719	1245.2	514.1
MEAN	140	1013	634	174	1037	1757	553	863	87.1	87.7	40.2	17.1
MAX	1000	4370	3070	1310	5780	11300	2060	4470	377	606	271	33
MIN	14	55	80	34	130	120	133	169	17	13	7.1	9.1
CFSM	.35	2.56	1.60	.44	2.62	4.44	1.40	2.18	.22	.22	.10	.04
IN.	.41	2.85	1.85	.51	2.82	5.12	1.56	2.51	.25	.26	.12	.05

CAL YR 1983 TOTAL 148650.5 MEAN 407 MAX 6850 MIN 7.1 CFSM 1.03 IN 13.96  
WTR YR 1984 TOTAL 194727.3 MEAN 532 MAX 11300 MIN 7.1 CFSM 1.34 IN 18.29

## 04201500 ROCKY RIVER NEAR BEREHA, 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 northwest of Berea.

DRAINAGE AREA.--267 mi<sup>2</sup>.

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. WRD-OH-2-1983: 1978-1982(M).

GAGE.--Water-stage recorder. Datum of gage is 649.90 ft 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.--53 years, 269 ft<sup>3</sup>/s, 13.69 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,400 ft<sup>3</sup>/s Jan. 22, 1959, gage height, 14.10 ft, from rating curve extended above 11,000 ft<sup>3</sup>/s on basis of contracted-opening measurement of peak flow; maximum gage height, 18.6 ft June 29, 1924 (backwater caused by tornado); minimum daily discharge, 0.2 ft<sup>3</sup>/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.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 4,000 ft<sup>3</sup>/s and maximums (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 3	2200	5400	5.27	Mar. 21	1930	*10900	*7.49
Feb. 14	1500	6350	5.67	May 12	0930	5270	5.21
Mar. 16	2300	6550	5.75	May 21	0300	5720	5.41

Minimum daily discharge, 23 ft<sup>3</sup>/s Aug. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	44	259	150	320	160	462	225	206	29	30	73
2	28	133	188	140	300	150	354	170	153	28	34	46
3	28	488	166	130	1440	140	294	193	120	27	119	61
4	31	317	1950	130	2330	140	305	980	98	82	463	54
5	230	225	1730	120	810	601	502	859	88	270	194	53
6	111	194	1240	120	413	1020	523	524	117	435	95	43
7	76	118	1460	110	280	779	525	365	95	385	57	35
8	50	87	615	110	242	475	425	787	68	138	46	31
9	50	71	418	100	216	380	291	1540	55	74	42	29
10	40	65	372	100	258	300	231	618	46	55	50	409
11	38	1800	437	95	1640	230	190	526	39	80	41	212
12	43	2060	1140	90	2180	190	157	3840	39	92	37	82
13	60	745	771	90	2210	218	153	1110	54	65	179	55
14	64	502	468	85	5570	256	214	1300	585	53	61	68
15	56	450	360	85	1610	466	401	603	215	45	37	58
16	45	1000	270	85	733	4910	352	370	85	39	33	58
17	38	2000	190	80	541	3220	299	271	63	36	31	42
18	39	1200	162	80	670	1030	537	258	114	45	66	34
19	40	640	323	80	719	618	403	293	229	40	175	32
20	39	900	660	75	554	988	282	1810	126	37	52	62
21	42	500	664	75	371	8300	227	3940	66	33	42	34
22	75	349	992	75	287	4290	208	920	45	27	34	28
23	147	298	631	70	240	1370	517	1180	39	26	33	27
24	142	446	460	649	211	1080	1340	853	36	27	32	32
25	98	310	340	1190	210	974	1120	383	33	29	30	31
26	73	209	260	1410	191	898	498	258	32	51	28	51
27	64	165	220	1220	176	584	411	215	30	214	26	48
28	68	1850	200	855	170	803	665	315	31	124	23	55
29	84	1150	180	647	170	2490	371	737	30	78	46	33
30	62	438	170	450	---	1110	276	443	31	46	210	31
31	43	---	160	350	---	665	---	304	---	36	141	---
TOTAL	2033	18754	17456	9046	25062	38835	12533	26190	2969	2746	2487	1927
MEAN	65.6	625	563	292	864	1253	418	845	99.0	88.6	80.2	54.2
MAX	230	2060	1950	1410	5570	8300	1340	3940	585	435	463	409
MIN	28	44	160	70	170	140	153	170	30	26	23	27
CFSM	.25	2.34	2.11	1.09	3.24	4.69	1.57	3.17	.37	.33	.30	.24
IN.	.28	2.61	2.43	1.26	3.49	5.41	1.75	3.65	.41	.38	.35	.27

CAL YR 1983 TOTAL 135254 MEAN 371 MAX 9360 MIN 21 CFSM 1.39 IN 18.84  
WTR YR 1984 TOTAL 160038 MEAN 437 MAX 8300 MIN 23 CFSM 1.64 IN 22.30



## STREAMS TRIBUTARY TO LAKE ERIE

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 downstream from Black Brook,

DRAINAGE AREA.--151 mi<sup>2</sup>.

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 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 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, 14.6 mi upstream since 1939 and by LaDue Reservoir, usable capacity, 18,110 acre-ft, 9.8 mi upstream since 1961. Water-quality data collected at this site 1965 to 1977.

AVERAGE DISCHARGE.--48 years, 208 ft<sup>3</sup>/s, 18.71 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,670 ft<sup>3</sup>/s Jan. 23, 1959, gage height, 8.11 ft, from rating curve extended above 2,600 ft<sup>3</sup>/s; minimum daily, 6.6 ft<sup>3</sup>/s Sept. 10, 1933.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,890 ft<sup>3</sup>/s Feb. 15, gage height, 5.38 ft; minimum daily, 17 ft<sup>3</sup>/s Oct. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	38	511	75	157	130	800	191	280	30	53	112
2	31	48	514	70	109	120	594	154	245	28	52	96
3	20	80	442	65	112	110	608	109	212	28	67	92
4	17	109	413	65	178	100	527	249	182	36	128	76
5	19	124	461	60	210	145	481	431	159	59	153	62
6	35	139	505	60	180	179	474	630	165	84	152	49
7	42	149	606	60	160	217	491	650	179	114	140	41
8	37	142	642	55	150	190	508	601	185	125	118	35
9	31	123	614	55	150	170	500	598	222	136	103	32
10	26	102	539	55	140	160	448	630	219	143	91	36
11	24	118	446	50	204	150	374	638	180	138	63	40
12	27	165	481	50	399	140	296	824	127	147	44	39
13	36	198	533	50	749	140	229	1170	86	157	36	38
14	48	232	609	48	1300	130	201	1320	123	153	32	104
15	51	254	612	46	1780	130	205	1070	138	131	28	143
16	44	286	537	44	1730	242	224	828	128	100	25	155
17	37	398	425	44	1320	423	222	639	110	73	36	150
18	31	485	318	42	969	595	214	497	114	61	44	125
19	28	615	219	42	760	696	201	400	188	52	52	92
20	35	688	203	42	632	684	193	369	213	51	65	71
21	39	650	193	40	533	839	182	489	213	47	64	58
22	32	590	137	40	439	1230	169	623	183	38	56	44
23	39	522	272	40	363	1510	183	787	145	31	53	42
24	59	444	170	40	293	1260	231	754	118	29	49	44
25	62	363	130	106	235	1000	297	653	91	33	47	44
26	57	285	110	144	196	838	332	563	63	44	45	60
27	56	221	100	158	171	723	332	456	51	59	43	50
28	56	214	90	178	157	682	298	371	55	58	41	43
29	53	281	85	143	140	776	242	336	39	68	46	37
30	47	384	80	128	---	849	199	312	32	61	69	34
31	41	---	75	119	---	883	---	300	---	56	109	---
TOTAL	1210	8447	11072	2214	13916	15441	10355	17642	4446	2380	2104	2034
MEAN	39.0	282	357	71.4	480	498	345	569	148	76.8	67.9	57.8
MAX	62	688	642	178	1780	1510	800	1320	280	157	153	155
MIN	17	38	75	40	109	100	169	109	32	28	25	32
MEAN +	39.6	285	357	71.1	481	498	345	569	148	76.6	67.8	58.0
CFSM +	0.26	1.89	2.36	0.47	3.19	3.30	2.28	3.77	0.98	0.51	0.45	0.45
IN. +	0.30	2.10	2.72	0.54	3.43	3.80	2.55	4.34	1.09	0.58	0.52	0.50
CAL YR 1983 TOTAL	81919			MEAN 224	MAX 1370	MIN 17	MEAN + 224	CFSM + 1.48	IN. + 20.15			
WTR YR 1984 TOTAL	91261			MEAN 249	MAX 1780	MIN 17	MEAN + 250	CFSM + 1.66	IN. + 22.48			

+ 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 upstream from North Portage Path bridge at Old Portage, 1.2 mi downstream from Little Cuyahoga River, and 4 mi northwest of Akron City Hall.

DRAINAGE AREA.--404 mi<sup>2</sup>.

## 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 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 upstream from gage, an average of 72 ft<sup>3</sup>/s was diverted for municipal supply of city of Akron. Sewage from city enters river 2.9 mi 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.--59 years, 428 ft<sup>3</sup>/s.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,880 ft<sup>3</sup>/s May 11, gage height, 8.05 ft; minimum daily, 84 ft<sup>3</sup>/s Aug. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	108	197	591	210	309	338	1610	477	627	141	121	180
2	97	215	657	200	319	320	1440	432	565	136	120	155
3	87	248	696	200	555	320	1230	517	492	132	248	208
4	100	180	1220	190	594	310	1070	1470	454	213	373	198
5	165	196	1150	190	517	473	1040	1080	469	429	548	167
6	114	231	1100	180	488	573	1010	964	418	422	429	147
7	98	242	1180	180	460	520	977	1010	377	408	401	134
8	99	248	1190	170	440	480	923	1350	377	377	328	127
9	95	239	1120	170	430	450	870	1480	347	319	276	120
10	90	248	1060	160	451	440	911	1280	341	298	245	149
11	96	734	1010	160	757	430	739	1330	338	279	226	127
12	176	600	1100	160	950	420	642	2150	306	250	186	120
13	172	454	1170	150	1200	410	583	1990	322	245	153	163
14	167	436	1040	150	2090	410	587	1910	370	245	132	231
15	297	507	1040	140	2230	410	591	1900	175	237	145	149
16	295	696	1060	140	2260	901	609	1650	140	216	123	188
17	299	970	974	130	2220	1220	587	1350	140	196	113	231
18	273	920	795	130	2020	1180	623	1110	306	182	84	203
19	148	896	653	130	1690	1240	612	918	544	138	151	203
20	114	1060	504	130	1360	1380	544	1060	492	129	101	180
21	121	1110	418	120	1120	2190	500	1320	454	120	100	155
22	224	978	673	120	923	2190	507	1170	425	118	216	136
23	297	854	447	120	788	2100	598	1570	347	115	173	123
24	165	728	338	276	676	2200	754	1660	273	115	103	125
25	137	650	303	347	587	2060	757	1370	226	105	101	132
26	141	541	280	377	496	1830	731	1130	198	147	98	188
27	154	458	270	411	440	1520	713	977	165	565	97	129
28	140	773	250	367	408	1410	676	1010	140	231	95	141
29	128	694	240	387	354	1710	623	892	136	188	173	140
30	119	612	230	390	---	1720	555	761	147	151	306	116
31	100	---	220	360	---	1650	---	684	---	127	210	---
TOTAL	4816	16915	22979	6545	27132	32805	23512	37972	10111	6964	6175	4755
MEAN	155	564	741	211	936	1058	784	1225	337	225	199	159
MAX	299	1110	1220	411	2260	2200	1610	2150	627	565	548	231
MIN	87	180	220	120	309	310	500	432	136	105	84	116

CAL YR 1983 TOTAL 174159 MEAN 477 MAX 2140 MIN 72  
WTR YR 1984 TOTAL 200681 MEAN 548 MAX 2260 MIN 84

## STREAMS TRIBUTARY TO LAKE ERIE

04206000 CUYAHOGA RIVER AT OLD PORTAGE, OH--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to 1967, 1969 to September 1984 (discontinued).

## PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1970 to September 1984 (discontinued).

pH: October 1970 to September 1984 (discontinued).

WATER TEMPERATURES: October 1970 to September 1984 (discontinued).

DISSOLVED OXYGEN: October 1970 to September 1984 (discontinued).

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.

DISSOLVED 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 Sept. 14, 1979; minimum daily, 0.15 ton Sept. 10, 1973.

## EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 2,320 micromhos Jan. 24; minimum, 258 micromhos June 18.

pH: Maximum, 9.0 units Mar. 6, May 2; minimum, 7.3 units June 18.

WATER TEMPERATURES: Maximum, 29.0°C Aug. 15; minimum, 0.0°C, Dec. 24.

DISSOLVED OXYGEN: Maximum, 15.3 mg/L Jan. 31; minimum, 2.4 mg/L, Aug. 19.

## STREAMS TRIBUTARY TO LAKE ERIE

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04206000 CUYAHOGA RIVER AT OLD PORTAGE, OH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	798	789	793	798	597	706	444	399	422	855	711	772
2	810	798	805	789	489	739	441	396	412	963	753	804
3	810	750	796	726	516	657	471	438	456	846	753	796
4	834	750	811	744	726	734	525	393	444	858	741	771
5	798	498	709	735	696	714	435	345	386	861	753	797
6	762	708	730	705	678	695	414	351	377	771	738	752
7	816	756	791	693	672	680	498	402	450	762	732	751
8	828	813	822	678	636	663	465	405	430	732	702	716
9	825	810	818	648	621	633	477	396	429	705	681	698
10	831	819	826	624	582	617	453	414	436	747	690	721
11	864	822	833	534	405	475	420	390	401	747	708	722
12	861	720	772	636	546	597	435	405	419	726	711	717
13	822	621	773	600	546	566	411	339	375	729	702	711
14	831	789	813	558	534	544	363	339	349	768	732	746
15	807	777	794	546	507	535	369	360	364	762	735	748
16	780	711	749	516	498	507	387	360	372	759	732	740
17	711	600	642	543	498	515	381	372	378	759	729	741
18	636	606	620	552	483	522	387	372	378	804	729	751
19	672	618	641	486	462	469	420	384	400	798	750	758
20	717	621	675	459	438	448	441	420	430	804	771	786
21	741	690	712	441	426	433	630	438	481	786	765	778
22	723	579	659	435	408	422	1380	618	772	789	756	768
23	654	540	590	423	408	414	687	600	645	804	765	777
24	669	615	650	411	402	406	615	564	598	2320	834	1550
25	693	672	683	411	396	402	570	531	553	1210	1080	1120
26	753	672	709	429	408	418	552	531	543	1150	1080	1110
27	747	732	739	432	426	429	573	540	548	1070	831	967
28	768	747	754	429	321	398	2050	561	1060	819	663	734
29	780	765	769	432	408	425	1560	888	1070	678	627	659
30	798	780	789	447	420	434	885	846	865	756	654	690
31	792	753	778	---	---	---	843	795	814	822	729	774
MONTH	864	498	743	798	321	540	2050	339	518	2320	627	804
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	786	771	778	648	549	582	351	327	340	492	468	477
2	---	---	---	609	576	593	351	333	342	516	492	501
3	---	---	---	639	582	607	357	345	351	525	276	504
4	---	---	---	612	588	599	384	357	369	447	273	399
5	---	---	---	900	579	719	405	384	393	408	384	394
6	---	---	---	771	702	736	411	399	404	414	399	405
7	---	---	---	726	657	702	405	393	398	408	393	399
8	582	576	579	651	597	617	402	384	393	417	363	386
9	663	582	607	657	576	610	399	387	392	387	357	373
10	753	612	640	639	600	620	408	396	401	366	354	360
11	807	672	712	633	600	615	423	408	412	369	267	351
12	666	513	575	612	579	595	441	420	428	324	294	307
13	513	480	497	633	585	600	456	432	440	327	291	304
14	540	426	480	639	624	631	468	450	457	327	297	311
15	420	360	390	717	621	655	477	456	465	300	288	294
16	360	327	343	705	615	655	480	426	459	297	288	293
17	327	300	315	606	483	531	483	441	459	312	297	302
18	330	315	322	480	450	467	498	471	480	327	312	319
19	330	321	326	453	420	438	498	462	478	360	327	339
20	345	330	340	453	411	424	468	459	464	375	294	344
21	363	348	356	459	408	432	474	459	468	351	321	339
22	384	363	374	495	396	439	483	444	470	345	294	329
23	399	384	393	468	417	441	495	465	481	348	300	324
24	420	399	410	411	336	360	486	468	477	315	303	309
25	486	420	454	336	324	331	477	459	469	333	315	325
26	501	471	484	339	330	335	465	435	451	345	333	337
27	498	474	484	357	336	343	450	420	436	372	345	353
28	537	501	519	414	357	372	441	423	429	369	327	357
29	561	522	546	477	372	419	468	429	442	393	348	371
30	---	---	---	378	354	361	474	459	466	396	384	389
31	---	---	---	363	345	353	---	---	---	402	393	398
MONTH	807	300	475	900	324	522	498	327	430	525	267	361



## STREAMS TRIBUTARY TO LAKE ERIE

04206000 CUYAHOGA RIVER AT OLD PORTAGE, OH--Continued  
 SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	420	399	409	693	675	683	735	714	725	810	771	783
2	432	411	420	711	681	698	753	738	745	810	765	788
3	444	423	435	738	717	724	780	384	679	765	564	694
4	480	438	459	759	318	704	756	495	678	732	666	703
5	501	426	465	699	330	594	657	555	618	738	708	723
6	492	426	479	705	330	597	552	510	532	747	708	722
7	507	492	499	606	558	568	525	501	513	738	699	725
8	513	501	507	597	573	586	567	522	540	726	696	711
9	519	510	513	591	564	579	648	414	547	714	699	706
10	534	510	517	594	528	555	606	540	583	705	591	657
11	519	489	508	555	534	544	678	465	596	735	693	713
12	516	489	501	558	543	553	627	597	612	744	702	732
13	513	471	508	567	555	559	669	612	630	750	450	673
14	516	384	474	582	561	570	693	663	671	726	489	652
15	594	522	562	588	570	578	696	663	676	717	672	684
16	609	597	601	600	585	595	744	675	711	684	669	675
17	633	606	616	---	---	---	723	690	711	699	675	680
18	636	258	544	---	---	---	786	645	740	726	711	720
19	579	486	557	---	---	---	726	522	662	714	666	683
20	567	510	540	---	---	---	765	684	721	663	612	628
21	519	492	500	---	---	---	795	756	776	627	603	616
22	543	495	504	---	---	---	816	453	720	636	618	625
23	528	507	516	---	---	---	777	693	735	642	627	635
24	534	504	520	783	723	754	783	729	764	678	645	653
25	540	510	523	780	744	764	783	768	774	681	624	661
26	585	543	560	795	474	759	789	777	785	675	438	583
27	615	585	600	708	261	577	798	771	789	702	627	675
28	711	621	644	744	702	716	810	789	802	744	597	653
29	687	648	664	741	726	731	816	483	719	762	696	735
30	678	639	663	744	705	727	780	483	672	762	708	730
31	---	---	---	738	714	723	780	627	730	---	---	---
MONTH	711	258	527	795	261	643	816	384	682	810	438	687
YEAR	2320	258	579	PH (STANDARD UNITS), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984								

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	8.2	7.8	8.0	7.9	7.7	7.8	8.1	8.0	8.0	8.2	8.0	8.1
2	8.4	7.9	8.1	8.2	7.7	8.0	8.1	8.0	8.0	8.3	8.1	8.1
3	8.4	7.9	8.1	8.0	7.8	7.9	8.1	7.9	8.0	8.2	8.0	8.1
4	8.3	7.7	7.9	8.1	7.9	8.0	8.0	7.9	8.0	8.3	8.0	8.1
5	7.9	7.7	7.8	8.0	7.9	8.0	8.0	7.9	7.9	8.2	8.0	8.1
6	8.2	7.8	8.0	8.2	7.9	8.0	8.0	7.8	7.9	8.2	8.1	8.1
7	8.1	7.9	8.0	8.1	8.0	8.0	8.1	7.9	8.0	8.4	8.2	8.3
8	8.3	7.9	8.0	8.3	8.0	8.1	8.0	7.9	8.0	8.4	8.2	8.3
9	8.3	7.8	8.0	8.3	8.0	8.1	8.0	8.0	8.0	8.4	8.1	8.2
10	8.4	7.9	8.1	8.2	7.9	8.0	8.0	8.0	8.0	8.5	8.1	8.2
11	8.4	7.9	8.1	8.3	7.7	8.0	8.0	8.0	8.0	8.6	8.2	8.3
12	8.2	7.7	8.0	8.2	8.1	8.1	8.0	8.0	8.0	8.6	8.2	8.3
13	8.1	7.7	7.9	8.2	8.1	8.1	8.0	7.9	8.0	8.5	8.1	8.3
14	8.4	7.9	8.1	8.2	8.1	8.1	8.0	7.9	7.9	8.6	8.1	8.2
15	8.2	8.0	8.1	8.1	8.0	8.1	8.0	7.9	8.0	8.7	8.2	8.3
16	8.3	8.0	8.1	8.6	8.0	8.1	8.1	8.0	8.0	8.7	8.1	8.3
17	8.3	8.0	8.1	8.2	8.1	8.1	8.1	8.0	8.0	8.7	8.1	8.3
18	8.2	8.0	8.1	8.1	8.1	8.1	8.1	8.0	8.0	8.7	8.1	8.3
19	8.4	8.0	8.1	8.1	8.0	8.1	8.1	8.0	8.0	8.8	8.2	8.4
20	8.3	7.9	8.0	8.1	8.0	8.0	8.4	8.0	8.1	8.8	8.2	8.4
21	8.4	7.9	8.1	8.1	8.0	8.0	8.1	8.0	8.0	8.8	8.2	8.4
22	8.0	7.9	7.9	8.1	7.9	8.0	8.2	8.0	8.1	8.8	8.2	8.4
23	8.1	7.9	8.0	7.9	7.4	7.9	8.1	8.0	8.1	8.7	8.1	8.3
24	8.2	7.9	8.0	8.0	7.9	7.9	8.1	8.0	8.1	8.3	8.0	8.1
25	8.1	7.9	8.0	8.0	7.9	7.9	8.2	8.0	8.1	8.4	8.1	8.2
26	8.2	7.8	8.0	8.0	7.9	7.9	8.2	8.1	8.1	8.4	8.1	8.2
27	8.3	7.9	8.1	8.0	7.9	7.9	8.2	8.0	8.1	8.3	8.1	8.1
28	8.3	7.9	8.0	8.1	7.8	7.9	8.1	8.0	8.0	8.5	8.1	8.2
29	8.4	7.9	8.1	8.0	7.9	7.9	8.2	8.0	8.1	8.3	8.1	8.2
30	8.4	8.0	8.1	8.1	7.9	8.0	8.2	8.1	8.1	8.3	8.2	8.2
31	8.4	7.9	8.1	---	---	---	8.2	8.1	8.1	8.6	8.2	8.3
MONTH	8.4	7.7	8.0	8.6	7.4	8.0	8.4	7.8	8.0	8.8	8.0	8.2

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04206000 CUYAHOGA RIVER AT OLD PORTAGE, OH--Continued  
PH (STANDARD UNITS), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

## STREAMS TRIBUTARY TO LAKE ERIE

04206000 CUYAHOGA RIVER AT OLD PORTAGE, OH--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	21.0	20.0	20.5	15.0	13.5	14.0	5.5	5.0	5.5	4.0	2.5	3.0
2	21.5	18.5	20.0	16.5	14.5	15.5	5.5	4.5	5.0	4.5	2.0	3.5
3	21.5	18.5	20.0	16.5	14.0	15.5	5.0	4.5	4.5	5.0	4.0	4.5
4	21.5	20.0	20.5	14.0	13.0	13.5	5.0	4.0	4.5	6.0	5.0	5.0
5	22.0	20.5	21.0	14.5	13.0	14.0	5.0	4.0	4.5	5.0	3.5	4.5
6	21.5	19.0	20.0	15.5	13.0	14.5	5.5	4.5	5.0	3.5	3.0	3.5
7	21.5	17.5	19.0	14.0	13.0	13.5	5.0	3.5	4.0	3.5	2.0	2.5
8	21.0	18.0	19.5	14.5	12.0	13.0	4.0	3.0	3.5	3.0	2.0	2.5
9	19.0	17.5	18.5	14.0	11.5	12.5	3.5	3.0	3.5	4.0	2.0	2.5
10	18.5	16.5	17.0	14.0	12.5	13.5	3.5	3.0	3.5	4.0	2.5	3.5
11	18.5	16.0	17.5	13.5	10.5	12.0	4.0	3.0	3.5	4.0	2.5	3.0
12	20.5	17.5	19.0	10.5	9.5	10.0	5.0	4.0	4.5	5.0	3.0	4.0
13	20.0	18.0	19.0	9.0	7.5	8.5	5.0	5.0	5.0	5.5	4.0	4.5
14	17.5	16.0	17.0	9.5	7.0	8.0	5.5	4.5	5.0	5.5	4.5	5.0
15	19.0	16.5	17.5	9.0	8.0	8.0	5.5	4.5	5.0	5.0	3.0	4.0
16	17.0	15.0	15.5	8.0	7.5	7.5	5.0	4.0	4.5	5.0	3.0	4.0
17	17.0	14.5	15.5	7.5	6.5	7.0	4.0	3.0	3.5	5.0	4.5	4.5
18	16.0	15.0	15.5	7.0	6.0	6.5	3.5	2.5	3.0	4.5	2.5	3.5
19	15.5	14.0	15.0	7.5	6.0	6.5	3.0	2.0	2.5	3.5	2.0	3.0
20	15.0	14.0	14.5	7.0	6.5	6.5	3.0	2.0	2.5	2.5	1.5	2.0
21	16.0	15.0	15.5	7.5	6.0	7.0	4.0	2.0	3.0	3.0	1.5	2.0
22	15.0	14.0	14.5	7.0	6.0	6.5	4.0	2.0	3.0	3.5	2.0	2.5
23	15.5	14.0	15.0	7.5	6.5	7.0	2.0	1.5	2.0	4.0	2.0	3.0
24	15.5	14.5	15.0	7.5	7.0	7.5	2.0	.0	1.0	4.5	3.5	4.0
25	15.0	14.5	15.0	7.0	6.0	6.5	2.0	.5	1.5	5.5	4.0	4.5
26	14.5	13.5	14.0	7.5	5.5	6.5	2.0	.5	1.5	5.0	3.5	4.5
27	15.5	13.0	14.0	7.0	6.0	6.5	3.5	2.0	3.0	4.5	3.0	3.5
28	16.5	14.0	15.0	9.5	6.5	8.0	3.5	2.5	3.0	3.5	2.0	3.0
29	15.5	13.5	14.5	9.0	7.0	8.0	3.0	2.5	3.0	3.0	2.0	2.5
30	14.0	12.0	13.0	7.0	5.0	6.0	3.0	2.0	2.5	3.0	1.5	2.5
31	14.5	11.0	12.5	---	---	---	3.5	2.5	3.0	3.5	2.5	3.0
MONTH	22.0	11.0	17.0	16.5	5.0	9.5	5.5	.0	3.5	6.0	1.5	3.5

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

## STREAMS TRIBUTARY TO LAKE ERIE

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04206000 CUYAHOGA RIVER AT OLD PORTAGE, OH--Continued  
TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER				NOVEMBER			DECEMBER			JANUARY		
1	8.6	6.4	7.2	8.6	7.1	8.0	12.4	12.0	12.2	12.9	11.8	12.2
2	10.3	6.6	7.9	9.9	6.8	8.4	12.4	12.0	12.2	12.2	11.2	11.7
3	10.4	6.5	8.0	8.6	7.5	8.1	12.7	11.5	12.2	12.2	11.2	11.6
4	9.5	5.4	7.0	9.3	8.4	8.7	12.5	11.4	12.0	12.0	10.7	11.2
5	7.0	5.5	6.0	8.9	8.2	8.5	12.5	11.8	12.3	12.0	10.8	11.4
6	8.5	6.1	7.1	9.7	8.2	8.7	12.2	11.8	12.0	12.0	11.4	11.6
7	9.0	6.4	7.4	9.7	8.8	9.0	12.7	12.1	12.5	12.9	11.1	11.8
8	9.4	6.4	7.5	10.7	8.8	9.5	13.9	12.0	13.1	12.6	11.7	12.0
9	9.6	6.5	7.6	11.1	9.0	9.7	14.1	13.8	13.9	12.1	10.8	11.7
10	10.2	6.9	8.1	10.1	8.4	9.1	14.2	13.8	14.0	14.0	10.7	12.1
11	10.4	6.7	8.1	9.9	8.1	9.3	14.0	13.5	13.8	14.1	12.0	12.8
12	8.9	6.2	7.4	10.7	10.0	10.3	13.5	12.6	12.9	13.7	11.6	12.4
13	8.8	5.9	7.1	11.5	10.3	10.9	13.3	12.7	13.1	12.8	11.0	11.8
14	10.0	7.2	8.3	11.5	10.4	10.8	13.0	12.2	12.7	13.6	10.9	11.9
15	9.3	7.7	8.3	10.9	10.3	10.6	13.1	12.4	12.8	14.0	11.4	12.2
16	10.0	8.3	9.0	11.0	10.4	10.8	13.2	12.6	13.0	14.1	10.6	12.1
17	10.0	8.4	9.0	11.4	10.8	11.2	13.5	12.6	13.1	13.9	10.5	11.7
18	9.2	8.3	8.7	11.7	11.2	11.4	13.6	13.1	13.3	13.8	11.2	12.0
19	10.8	8.1	9.2	11.7	11.1	11.4	13.4	13.0	13.2	14.6	11.1	12.3
20	10.2	8.1	8.7	11.4	11.1	11.3	13.4	12.2	13.0	13.9	10.9	12.1
21	10.6	7.7	8.7	11.5	11.0	11.3	12.9	12.2	12.5	14.4	11.2	12.2
22	8.8	7.8	8.3	12.4	11.1	11.8	12.8	12.3	12.6	14.5	11.0	12.1
23	9.0	8.2	8.6	12.1	11.0	11.4	13.1	11.9	12.7	14.0	10.3	11.7
24	10.0	7.8	8.7	11.1	10.7	10.9	13.0	11.9	12.4	11.4	10.1	10.8
25	9.3	7.8	8.3	11.2	10.4	10.8	12.8	12.2	12.5	12.6	10.9	11.4
26	9.8	7.6	8.4	11.4	10.6	11.0	13.0	11.7	12.5	12.5	10.6	11.4
27	10.6	8.0	8.9	11.4	10.5	11.1	12.4	11.8	12.0	11.7	10.5	11.2
28	10.5	7.7	8.8	10.8	10.0	10.4	12.1	11.8	11.9	12.8	11.2	11.8
29	11.0	7.7	9.0	11.8	10.3	11.0	12.7	11.5	12.0	12.2	11.3	11.7
30	11.6	8.1	9.5	12.3	11.7	12.0	12.9	11.5	12.1	12.0	10.9	11.5
31	11.9	8.0	9.6	---	---	---	12.8	11.9	12.2	15.3	11.0	12.8
MONTH	11.9	5.4	8.2	12.4	6.8	10.3	14.2	11.4	12.7	15.3	10.1	11.9



## STREAMS TRIBUTARY TO LAKE ERIE

04206000 CUYAHOGA RIVER AT OLD PORTAGE, OH--Continued  
OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	12.8	12.7	12.7	13.6	11.4	12.5	13.3	12.0	12.8	11.6	7.7	9.4
2	---	---	---	13.4	11.4	12.3	12.9	12.0	12.4	13.0	7.9	9.8
3	---	---	---	13.4	11.2	12.3	12.6	11.7	12.2	10.9	7.7	8.9
4	---	---	---	13.7	11.2	12.2	12.5	11.0	11.9	9.7	9.0	9.4
5	---	---	---	11.6	10.9	11.3	11.6	10.1	10.9	10.1	9.7	9.9
6	---	---	---	13.2	11.1	12.0	11.1	10.0	10.6	10.9	9.4	10.1
7	---	---	---	13.1	11.7	12.3	11.7	10.5	11.0	10.1	8.8	9.4
8	14.2	12.7	13.4	13.2	11.8	12.3	12.0	10.6	11.1	9.4	8.8	9.1
9	14.1	12.3	13.0	14.2	11.7	12.8	11.8	10.1	10.9	10.4	9.4	10.1
10	13.2	11.6	12.3	14.1	11.4	12.8	11.9	9.8	10.7	10.9	9.9	10.5
11	13.0	11.5	12.4	14.1	11.4	12.6	12.0	9.7	10.6	10.6	8.7	10.0
12	13.0	12.6	12.8	14.4	11.9	12.9	12.2	9.0	10.4	9.8	9.4	9.6
13	12.9	12.0	12.5	12.6	11.3	12.0	12.2	8.6	9.9	10.1	9.5	9.8
14	13.0	11.7	12.7	14.5	11.7	12.7	10.7	8.6	9.4	10.2	9.5	9.9
15	13.4	13.0	13.3	13.9	10.9	12.1	11.5	8.7	9.8	10.1	9.6	9.8
16	13.4	12.4	13.0	12.6	11.1	12.0	11.3	8.8	9.6	10.3	9.5	9.9
17	13.1	12.4	12.8	13.2	12.6	12.9	11.1	8.8	9.6	10.2	9.4	9.8
18	13.1	12.3	12.9	12.7	12.3	12.6	11.1	9.2	9.9	9.6	9.0	9.3
19	12.7	12.2	12.4	13.1	12.5	12.8	11.7	9.2	9.9	9.7	8.5	9.2
20	12.5	11.7	12.2	12.6	11.5	12.2	12.0	9.2	10.3	9.2	8.5	8.9
21	12.5	11.7	12.3	12.3	11.3	11.9	12.8	9.1	10.6	9.4	8.9	9.2
22	12.8	11.6	12.4	13.5	12.3	13.0	11.4	9.1	9.9	9.2	7.4	8.7
23	12.1	11.6	11.9	13.6	13.2	13.5	10.9	9.1	9.9	8.8	8.1	8.5
24	12.4	11.6	11.9	13.9	13.4	13.6	11.3	9.2	10.2	9.0	8.5	8.7
25	11.9	11.1	11.5	13.4	12.6	13.0	12.3	9.9	11.0	8.8	8.1	8.5
26	13.0	11.8	12.3	13.4	12.6	13.1	12.2	9.4	10.7	8.9	7.9	8.4
27	12.7	11.5	12.1	12.8	12.2	12.5	11.0	9.0	9.8	9.3	8.1	8.6
28	12.1	11.1	11.7	12.7	12.2	12.4	11.6	8.7	9.8	8.9	8.2	8.5
29	13.5	11.9	12.6	12.8	11.9	12.4	12.3	8.5	10.0	9.0	8.5	8.7
30	---	---	---	13.3	12.6	13.0	12.3	7.7	9.4	9.3	8.5	8.9
31	---	---	---	13.4	12.3	12.9	---	---	---	9.6	8.2	9.0
MONTH	14.2	11.1	12.5	14.5	10.9	12.6	13.3	7.7	10.5	13.0	7.4	9.3
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	9.4	8.0	8.7	---	---	---	---	---	---	---	---	---
2	9.6	7.6	8.6	---	---	---	---	---	---	---	---	---
3	10.0	7.6	8.5	---	---	---	---	---	---	---	---	---
4	9.5	7.0	8.2	---	---	---	---	---	---	---	---	---
5	9.5	7.1	8.2	9.9	7.7	8.8	---	---	---	---	---	---
6	8.3	6.2	7.0	8.4	5.6	6.7	---	---	---	8.8	7.0	8.2
7	7.7	6.0	6.8	7.7	5.9	6.4	---	---	---	9.2	6.7	7.8
8	7.7	6.0	6.7	10.8	5.6	7.7	---	---	---	9.1	6.1	7.4
9	7.7	5.8	6.6	9.0	7.0	8.1	---	---	---	8.9	5.8	6.9
10	7.5	5.8	6.6	9.7	7.8	8.8	---	---	---	8.8	5.8	7.8
11	7.5	5.6	6.4	9.8	7.7	9.0	---	---	---	8.6	4.9	6.2
12	7.1	5.3	6.1	9.8	6.8	9.1	---	---	---	8.9	5.8	6.9
13	6.7	5.2	6.1	10.1	8.2	9.2	8.4	5.3	7.2	8.6	5.6	7.0
14	7.3	4.9	6.2	10.1	9.0	9.6	8.1	5.2	6.3	6.4	4.8	5.2
15	7.2	5.5	6.6	9.7	8.8	9.4	8.3	5.2	6.3	6.4	5.1	5.6
16	8.2	5.7	6.7	9.4	8.9	9.1	8.8	5.0	6.5	6.4	5.0	5.5
17	8.3	5.4	6.7	---	---	---	8.9	4.8	6.3	6.8	6.3	6.5
18	7.6	4.6	5.0	---	---	---	9.5	3.1	6.3	6.9	6.1	6.5
19	7.2	6.2	6.7	---	---	---	7.2	2.4	5.2	7.5	5.4	6.3
20	7.1	6.3	6.7	---	---	---	7.7	4.7	5.9	7.2	4.7	5.8
21	7.2	6.3	6.7	---	---	---	8.4	4.9	6.3	7.4	4.6	5.7
22	7.7	6.1	6.8	---	---	---	7.1	4.8	5.3	7.8	4.7	6.1
23	7.0	5.8	6.4	---	---	---	7.7	5.8	7.4	6.7	4.6	5.4
24	---	---	---	8.6	5.5	6.8	8.5	4.3	6.6	7.5	4.5	5.7
25	---	---	---	10.6	7.2	8.7	8.8	6.0	7.1	8.0	5.5	6.5
26	---	---	---	8.1	6.7	7.4	9.0	5.6	7.0	8.6	4.0	6.7
27	---	---	---	8.4	5.7	6.9	9.4	5.4	7.0	8.7	6.4	6.8
28	---	---	---	8.0	6.2	7.1	9.1	5.0	6.7	9.0	6.9	7.7
29	---	---	---	---	---	---	---	---	---	8.7	6.6	7.6
30	---	---	---	---	---	---	---	---	---	8.3	6.1	7.0
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	10.0	4.6	6.9	10.8	5.5	8.2	9.5	2.4	6.5	9.2	4.0	6.6
YEAR	15.3	2.4	9.9									

## STREAMS TRIBUTARY TO LAKE ERIE

73

04206000 CUYAHOGA RIVER AT OLD PORTAGE, OH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	792	710	432	776	780	569	341	474	408	684	726	779
2	806	761	410	777	---	593	342	501	420	696	744	789
3	810	660	459	792	---	608	351	519	435	723	750	753
4	819	735	443	752	---	600	366	405	461	747	713	705
5	735	714	372	795	---	752	395	396	468	645	629	723
6	726	699	387	750	---	744	402	405	483	675	537	720
7	801	678	449	755	---	713	399	399	500	593	513	726
8	822	669	429	714	579	614	393	384	504	584	536	711
9	816	633	431	702	602	608	392	375	513	576	555	705
10	828	621	438	720	635	621	399	360	516	543	581	659
11	831	471	399	720	693	614	411	363	515	546	609	711
12	774	602	420	716	557	591	428	306	500	552	611	734
13	806	561	374	710	498	590	438	303	510	558	626	690
14	816	542	347	747	492	630	456	314	483	570	669	659
15	800	537	363	749	393	644	464	294	553	579	675	678
16	749	507	375	738	342	657	467	294	600	595	714	675
17	626	510	378	735	315	518	453	303	612	---	716	678
18	617	521	377	743	321	471	479	321	620	---	744	720
19	639	468	396	767	327	441	471	339	566	---	680	674
20	675	449	431	786	342	420	462	350	546	---	720	623
21	704	432	456	780	356	434	468	344	497	---	780	618
22	695	423	705	765	375	438	471	330	498	---	788	624
23	581	414	644	776	393	438	483	324	519	---	734	636
24	657	407	599	1560	408	350	477	309	518	754	770	648
25	684	401	554	1120	461	332	468	324	522	765	774	659
26	707	414	543	1110	483	335	450	336	560	783	786	594
27	738	429	543	966	482	342	441	348	600	635	794	681
28	752	414	693	731	518	363	429	357	632	714	804	623
29	771	428	998	665	549	408	438	377	660	729	732	747
30	786	435	864	672	---	357	465	390	660	732	678	723
31	783	---	813	777	---	353	---	399	---	720	746	---
MEAN	747	542	501	802	474	521	430	363	529	654	691	689

WTR YR 1984      MEAN      580      MAX      1560      MIN      294  
PH (STANDARD UNITS), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MEDIAN VALUES

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

WTR YR 1984      MEAN      8.0      MAX      8.3      MIN      7.6

## STREAMS TRIBUTARY TO LAKE ERIE

04206000 CUYAHOGA RIVER AT OLD PORTAGE, OH--Continued  
 TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
 MEDIAN VALUES

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

WTR YR 1984 MEAN 13.0 MAX 26.0 MIN .5

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
 MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.9	7.9	12.1	12.1	12.7	12.2	12.8	8.9	8.7	---	---	---
2	7.4	8.2	12.2	11.8	---	12.0	12.4	9.2	8.5	---	---	---
3	7.3	7.9	12.3	11.5	---	12.0	12.4	8.4	8.1	---	---	---
4	6.3	8.6	12.1	11.1	---	11.7	11.9	9.5	7.9	---	---	---
5	5.9	8.5	12.4	11.4	---	11.3	11.1	9.9	8.4	8.8	---	---
6	6.8	8.7	12.0	11.5	---	11.8	10.6	9.9	6.9	6.6	---	8.4
7	7.0	8.8	12.5	11.8	---	12.1	10.9	9.4	6.7	6.4	---	7.5
8	7.1	9.2	13.5	11.8	13.5	12.2	11.0	9.1	6.5	7.4	---	6.9
9	7.4	9.4	13.9	11.8	12.7	12.5	10.6	10.3	6.5	8.1	---	6.4
10	7.5	9.0	13.9	11.9	12.3	12.5	10.3	10.5	6.4	8.7	---	7.8
11	7.5	9.5	13.8	12.6	12.6	12.4	10.2	10.0	6.1	9.0	---	5.8
12	7.1	10.3	12.8	12.1	12.8	12.5	10.0	9.6	6.0	9.2	---	6.2
13	7.0	10.9	13.1	11.7	12.7	12.0	9.1	9.8	6.0	9.2	7.3	6.4
14	7.9	10.8	12.7	11.6	12.9	12.1	9.1	9.9	6.2	9.7	6.0	5.1
15	8.2	10.6	12.9	11.7	13.3	11.7	9.4	9.8	6.5	9.5	6.0	5.4
16	8.7	10.8	13.1	11.5	13.2	12.3	9.2	9.9	6.5	9.2	5.9	5.1
17	8.8	11.3	13.2	11.2	12.9	12.9	9.3	9.7	6.6	---	5.7	6.5
18	8.6	11.5	13.3	11.5	13.0	12.6	9.6	9.4	5.5	---	5.5	6.6
19	8.7	11.3	13.1	11.7	12.4	12.8	9.6	9.1	6.8	---	5.2	6.1
20	8.4	11.3	13.0	11.6	12.3	12.3	9.7	9.0	6.6	---	5.5	5.7
21	8.2	11.3	12.4	11.5	12.4	12.0	10.0	9.2	6.7	---	5.9	5.5
22	8.3	12.0	12.7	11.4	12.5	13.4	9.6	8.9	6.6	---	5.3	5.8
23	8.6	11.0	12.7	11.1	11.9	13.5	9.7	8.5	6.4	---	7.4	5.1
24	8.4	11.0	12.5	11.0	11.9	13.6	10.2	8.8	---	6.5	6.4	5.3
25	8.0	10.9	12.5	11.1	11.5	12.9	10.7	8.5	---	8.4	6.8	6.4
26	8.2	11.0	12.6	11.3	12.2	13.1	10.3	8.3	---	7.6	6.6	6.7
27	8.3	11.1	12.0	11.4	12.1	12.5	9.4	8.5	---	6.9	6.6	7.0
28	8.3	10.4	11.9	11.5	11.8	12.5	9.4	8.4	---	7.2	6.2	7.4
29	8.6	11.2	12.0	11.6	12.4	12.4	9.3	8.7	---	---	---	7.3
30	9.0	12.0	12.1	11.6	---	13.0	8.6	8.9	---	---	---	6.7
31	9.0	---	12.1	13.0	---	12.9	---	9.0	---	---	---	---
MEAN	7.9	10.2	12.7	11.6	12.5	12.4	10.2	9.3	6.8	8.1	6.1	6.4

WTR YR 1984 MEAN 9.8 MAX 13.9 MIN 5.1

## STREAMS TRIBUTARY TO LAKE ERIE

75

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 upstream from mouth.

DRAINAGE AREA.--83.9 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter periods and those below 30 ft<sup>3</sup>/s after July 16 which are fair. Water-quality data collected at this site 1965 to 1977. Sediment data collected at this site 1974 to 1979.

AVERAGE DISCHARGE.--21 years (1963-84), 129 ft<sup>3</sup>/s, 20.89 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,220 ft<sup>3</sup>/s July 20, 1969, gage height, 10.10 ft, from rating curve extended above 3,400 ft<sup>3</sup>/s on the basis of contracted-opening measurement of peak flow; minimum, 5.2 ft<sup>3</sup>/s Aug. 19, 1963.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft<sup>3</sup>/s and maximums (\*).

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Nov. 16	2000	*1940	*6.45	Mar. 21	0900	1550	6.10
Nov. 14	0200	1820	6.35	May 11	2300	1560	6.11

Minimum discharge, 24 ft<sup>3</sup>/s Oct. 1-4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	44	131	52	60	65	168	72	80	32	28	106
2	24	84	92	50	55	60	135	62	63	31	90	64
3	24	201	83	50	337	58	118	109	56	31	197	81
4	29	117	571	48	262	55	131	582	50	134	217	66
5	100	115	465	48	223	213	212	575	46	245	230	70
6	51	82	508	46	131	268	223	274	57	256	123	47
7	33	59	392	46	98	219	261	160	64	153	55	37
8	27	48	283	44	95	140	159	379	48	69	43	32
9	32	47	188	44	93	110	127	391	38	45	36	31
10	25	66	173	44	120	100	103	285	35	40	33	190
11	25	568	233	42	553	90	85	385	34	66	31	51
12	47	397	437	42	779	85	73	812	33	48	29	35
13	58	278	337	40	900	80	83	641	53	35	28	140
14	48	172	212	40	1170	80	153	392	312	33	33	112
15	38	217	166	40	745	184	139	238	82	31	31	56
16	28	886	129	38	403	927	116	156	45	30	30	46
17	26	877	96	38	257	674	127	110	38	29	29	35
18	28	618	70	38	324	433	151	114	275	42	36	33
19	29	533	79	38	310	254	105	122	229	35	63	32
20	27	446	77	38	231	509	90	633	111	31	32	31
21	26	371	77	36	174	1110	78	582	63	29	30	30
22	50	235	408	36	140	815	113	410	46	28	28	29
23	110	189	213	36	121	535	257	338	39	27	27	28
24	80	176	110	150	105	362	437	394	36	26	27	27
25	51	129	90	140	104	362	301	244	35	26	26	36
26	46	98	75	130	97	329	165	130	33	39	26	45
27	37	84	65	110	87	232	130	93	33	119	25	33
28	30	519	60	90	63	302	117	171	32	72	25	31
29	27	371	58	80	82	468	91	214	37	37	87	28
30	25	215	56	70	---	361	84	142	32	31	417	31
31	25	---	54	65	---	233	---	105	---	29	238	---
TOTAL	1230	8242	5988	1809	8119	9713	4532	9315	2135	1879	2350	1623
MEAN	39.7	275	193	58.4	280	313	151	300	71.2	60.6	75.8	54.1
MAX	110	886	571	150	1170	1110	437	812	312	256	417	190
MIN	24	44	54	36	55	55	73	62	32	26	25	27
CFSM	.47	3.28	2.30	.70	3.34	3.73	1.80	3.58	.85	.72	.90	.65
IN.	.55	3.65	2.65	.80	3.60	4.31	2.01	4.13	.95	.83	1.04	.72

CAL YR 1983	TOTAL	51888	MEAN 142	MAX 1220	MIN 22	CFSM 1.69	IN 23.01
WTR YR 1984	TOTAL	56935	MEAN 156	MAX 1170	MIN 24	CFSM 1.86	IN 25.24



## STREAMS TRIBUTARY TO LAKE ERIE

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 downstream from bridge on Old Rockside Road, 0.8 mi northeast of Independence, and 3.0 mi downstream from Tinkers Creek.

DRAINAGE AREA.--707 mi<sup>2</sup>.

## 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 National Geodetic Vertical Datum of 1929. Sept. 21, 1903 to July 21, 1906, nonrecording gage at bridge 240 ft upstream at present datum. Sept. 28, 1921 to May 30, 1923, nonrecording gage at bridge 240 ft upstream at datum 2.42 ft higher. Sept. 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 upstream at present datum.

REMARKS.--Records fair. 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 upstream from station, bypasses station. These records do not include flow in canal except above about 15,000 ft<sup>3</sup>/s, when channels merge.

AVERAGE DISCHARGE.--53 years (1921-22, 1927-35, 1940-84), 823 ft<sup>3</sup>/s, not including flow in Ohio Canal.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,090 ft<sup>3</sup>/s Mar. 21, gage height, 16.21 ft; minimum daily, 174 ft<sup>3</sup>/s Oct. 3, 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	187	299	1050	440	552	680	2250	863	1050	286	281	548
2	183	511	970	430	587	640	2050	773	930	277	357	428
3	174	1060	1020	420	1740	620	1810	798	835	293	632	485
4	174	612	3570	410	1890	600	1560	3790	739	391	1290	571
5	391	621	2810	400	1330	1080	1830	2660	730	1350	1180	497
6	412	545	2710	390	1020	1720	1790	1940	737	1130	829	397
7	235	494	2650	380	906	1200	1890	1650	672	1120	655	358
8	196	478	2130	370	867	1000	1570	2740	637	683	599	327
9	217	453	1850	370	824	900	1420	2930	582	568	492	279
10	177	452	1740	360	894	850	1280	2290	542	501	476	938
11	177	2790	1760	360	2730	800	1160	2220	531	562	414	456
12	323	2040	2660	360	3570	750	1030	5840	503	525	415	362
13	373	1310	2250	350	3860	750	977	3620	556	438	526	446
14	404	1040	1830	350	7130	750	1220	3330	1550	396	314	851
15	378	1110	1680	350	4210	1030	1290	2710	602	383	279	477
16	426	3300	1570	340	3350	4640	1100	2330	381	377	279	436
17	421	4480	1430	340	3080	3370	1070	2000	346	350	260	446
18	430	2390	1180	340	3150	2530	1260	1810	800	408	239	454
19	404	2370	1030	330	2830	2070	1080	1670	1500	325	409	425
20	256	2220	861	330	2270	2880	1030	3090	885	284	282	410
21	228	2120	725	330	1830	7920	908	4560	727	265	236	378
22	315	1670	2330	330	1550	5710	904	2560	658	247	234	343
23	848	1420	1310	330	1340	3710	1580	3130	589	238	503	327
24	524	1420	808	745	1180	3300	2480	3010	503	245	269	315
25	352	1120	663	928	1080	3270	1990	2380	419	237	241	341
26	303	935	620	894	930	2950	1470	1790	377	274	231	504
27	323	802	560	899	831	2410	1350	1510	344	1240	230	371
28	291	2800	540	708	758	2390	1310	1700	323	659	240	317
29	260	1850	500	663	712	3500	1110	1940	292	475	476	321
30	242	1310	470	650	---	2860	1020	1440	305	364	1430	292
31	239	---	450	638	---	2450	---	1210	---	282	1060	---
TOTAL	9863	44022	45727	14535	57001	69330	42889	74284	19645	15173	15358	13100
MEAN	318	1467	1475	469	1966	2236	1430	2396	655	489	495	437
MAX	848	4480	3570	928	7130	7920	2480	5840	1550	1350	1430	938
MIN	174	299	450	330	552	600	904	773	292	237	230	279
CAL YR 1983	TOTAL	379758	MEAN	1040	MAX	8260	MIN	174				
WTR YR 1984	TOTAL	420927	MEAN	1150	MAX	7920	MIN	174				

## STREAMS TRIBUTARY TO LAKE ERIE

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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 (discontinued).

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 Sept. 14, 1979; minimum daily, 0.25 ton Sept. 4, 1955.

## EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 2,420 micromhos Jan. 25; minimum, 276 micromhos May 14.

pH: Maximum, 8.4 Jan. 4, Aug. 28; minimum, 7.3 units June 19, July 5.

WATER TEMPERATURES: Maximum, 27.0°C Aug. 10; minimum, 0.5°C on several days during winter period.

DISSOLVED OXYGEN: Maximum recorded, 15.1 mg/L Dec. 31; minimum, 2.8 mg/L June 27.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 3,740 mg/L Feb. 14; minimum daily mean, 3 mg/L, July 3.

SEDIMENT LOADS: Maximum daily, 75,700 tons Feb. 14; minimum daily, 2.4 tons July 3.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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 CO)	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 08...	1500	462	50	1	60	<.5	<1	<1	<3	6	22
FEB 14...	1430	7640	<10	1	44	<.5	<1	<1	<3	7	48
MAY 16...	1130	2340	30	1	45	<1	<1	7	<3	11	79
JUL 24...	1430	239	110	4	59	<1	<1	<1	<3	7	17

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 08...	5	<4	52	.2	<10	4	<1	<1	210	<6	19
FEB 14...	1	5	140	.2	<10	5	<1	<1	130	<6	15
MAY 16...	3	7	33	.3	<10	3	<1	<1	120	<6	9
JUL 24...	7	12	9	.7	<10	3	<1	<1	220	<6	27

## STREAMS TRIBUTARY TO LAKE ERIE

04208000 CUYAHOGA RIVER AT INDEPENDENCE, OH--Continued

## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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-4F (COLS./ 100 ML)
NOV 08...	1500	462	845	7.9	16.0	12.5	4.5	9.4	90	4800
FEB 14...	1430	7640	540	7.7	10.0	4.5	170	11.8	94	17000
MAY 16...	1130	2340	430	7.6	10.0	13.0	22	9.4	91	23000
JUL 24...	1430	239	840	8.2	27.0	25.5	4.1	9.1	114	140

DATE	TIME	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- LITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
NOV 08...	700	73	18	65	35	2	5.5	149	110	97	
FEB 14...	10000	37	7.9	55	48	2	3.0	70	48	110	
MAY 16...	6700	39	8.8	29	32	1	2.5	81	50	48	
JUL 24...	50	73	17	69	37	2	5.1	149	100	110	

DATE	TIME	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 08...	.50	9.0	497	3.80	.360	.46	3.2	.440	.300	.300	
FEB 14...	.20	5.8	325	1.10	.470	.61	2.8	.520	.040	.020	
MAY 16...	.30	4.0	292	.950	.240	.31	2.9	.200	.100	.040	
JUL 24...	.40	6.5	585	3.40	.080	.10	1.1	.330	.280	.250	

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, DIS- SUS- PENDED (MG/L)	SEDI- MENT, DIS- SUS- PENDED (T/DAY)
NOV 08...	1500	462	12.5	22	27
FEB 14...	1430	7640	4.5	720	14900
MAY 16...	1130	2340	13.0	116	733
JUL 24...	1430	239	25.5	4	2.6

04208000 CUYAHOGA RIVER AT INDEPENDENCE, OH--Continued

## SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	909	888	897	966	939	953	594	570	587	---	---	---
2	930	897	915	852	729	786	603	582	593	---	---	---
3	912	885	898	786	672	718	747	594	666	---	---	---
4	951	906	914	777	690	742	837	447	605	1190	1120	1150
5	903	747	840	834	780	812	504	465	492	1160	1060	1110
6	846	741	799	831	801	818	507	462	487	1240	996	1160
7	807	705	747	849	816	829	669	480	565	1200	1110	1150
8	864	810	844	846	825	839	708	609	659	1160	1110	1130
9	921	864	892	849	831	840	705	618	647	1120	1040	1070
10	948	894	924	840	765	811	879	708	799	1080	1040	1060
11	930	912	920	744	444	546	762	663	702	1240	1070	1150
12	951	909	925	750	516	637	726	582	628	1170	1090	1120
13	951	777	862	783	741	758	585	525	559	1150	1040	1090
14	861	777	829	738	711	731	540	504	517	1060	1010	1040
15	891	798	835	729	684	718	546	513	525	1120	1040	1080
16	891	855	867	690	411	593	528	504	519	1110	999	1060
17	861	843	853	606	417	522	534	510	522	1050	990	1010
18	843	759	793	603	564	580	534	519	527	1020	984	1010
19	807	747	780	603	546	581	582	525	565	1080	1020	1040
20	780	756	763	558	549	553	654	588	629	1150	1090	1110
21	819	783	809	573	537	554	732	624	663	1150	1110	1130
22	858	804	830	570	549	555	1660	756	1050	1130	1030	1080
23	882	690	781	588	570	575	813	759	786	1040	975	1000
24	753	675	701	600	564	581	798	753	782	1910	1050	1530
25	837	759	805	585	561	577	819	786	804	2420	1720	2100
26	876	840	859	594	561	585	801	756	771	1690	1410	1500
27	921	882	905	630	573	596	774	717	738	1550	1220	1320
28	936	906	920	567	387	444	975	705	822	1190	1110	1090
29	936	930	932	522	432	462	2140	963	1600	1070	999	1030
30	945	930	937	567	528	556	2010	1300	1560	1150	891	1020
31	981	882	948	---	---	---	1290	1110	1150	1170	1040	1080
MONTH	981	675	856	966	387	662	2140	447	726	2420	891	1160
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	1150	1060	1110	822	780	803	462	444	449	---	---	---
2	1340	1160	1220	861	783	825	459	438	445	---	---	---
3	1610	1080	1350	837	795	812	489	456	465	784	663	698
4	1060	891	991	816	765	790	528	495	506	663	360	470
5	1050	933	983	1060	762	907	573	531	553	525	435	470
6	1000	915	955	1030	924	989	561	537	548	543	495	510
7	1040	969	1010	945	915	931	---	---	---	---	---	---
8	1030	963	998	909	771	844	---	---	---	---	---	---
9	1040	915	969	831	753	792	---	---	---	---	---	---
10	1180	1030	1080	900	801	850	---	---	---	---	---	---
11	1230	825	973	834	762	798	687	621	651	---	---	---
12	1020	654	900	819	756	778	720	639	658	---	---	---
13	720	618	676	849	777	804	705	651	683	414	381	393
14	690	546	578	969	846	926	708	678	697	393	276	297
15	564	519	544	1250	969	1050	708	627	656	336	285	314
16	---	---	---	1210	582	784	669	630	648	477	312	359
17	---	---	---	579	555	570	660	606	623	402	297	356
18	---	---	---	552	537	542	678	612	646	444	378	396
19	---	---	---	552	531	542	678	654	664	450	423	432
20	483	471	476	552	468	528	699	630	652	450	315	404
21	495	468	482	462	378	409	669	627	652	426	318	353
22	516	495	501	564	414	489	684	639	656	387	369	376
23	531	516	524	648	549	584	654	579	603	---	---	---
24	555	537	548	627	504	542	588	522	557	---	---	---
25	723	555	664	498	456	468	699	528	588	---	---	---
26	858	708	771	456	432	440	693	630	665	---	---	---
27	801	699	762	480	441	451	---	---	---	---	---	---
28	711	654	689	552	483	506	---	---	---	---	---	---
29	792	708	750	537	480	508	---	---	---	---	---	---
30	---	---	---	537	468	489	---	---	---	---	---	---
31	---	---	---	471	459	462	---	---	---	561	534	545
MONTH	1610	468	820	1250	378	684	720	438	603	784	276	425



## STREAMS TRIBUTARY TO LAKE ERIE

04208000 CUYAHOGA RIVER AT INDEPENDENCE, OH--Continued  
 SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	564	525	552	801	765	777	813	795	803	747	594	668
2	564	531	554	819	768	789	813	555	781	792	753	773
3	624	558	605	819	777	792	759	387	633	825	774	801
4	645	597	625	816	495	756	726	426	594	819	696	789
5	636	600	619	681	465	541	609	522	559	780	690	738
6	672	612	633	708	498	594	627	570	602	801	786	795
7	678	618	648	657	528	589	648	591	630	837	804	818
8	666	627	652	702	606	669	621	591	607	873	843	864
9	678	645	665	756	663	710	672	612	638	867	849	863
10	681	633	661	723	672	701	693	639	667	849	570	683
11	693	654	677	690	621	668	705	615	655	786	732	759
12	699	654	682	708	633	682	732	678	699	822	753	788
13	699	561	677	729	663	695	675	591	651	858	609	830
14	603	489	551	759	702	721	729	672	697	771	516	667
15	630	558	586	726	660	697	744	720	730	732	630	670
16	711	630	679	693	669	680	822	735	758	834	741	792
17	804	714	759	711	678	696	789	732	753	831	786	806
18	807	507	732	---	---	---	840	702	771	813	783	802
19	639	486	559	---	---	---	771	630	719	867	804	831
20	636	579	609	---	---	---	777	654	703	867	822	841
21	651	621	635	---	---	---	849	684	760	846	813	833
22	636	612	627	---	---	---	870	855	866	843	804	827
23	642	603	617	---	---	---	918	672	818	846	825	838
24	684	612	648	---	---	---	810	690	761	867	834	852
25	669	633	648	---	---	---	870	816	854	876	834	856
26	717	624	683	---	---	---	894	870	880	927	831	867
27	762	705	724	---	---	---	900	873	890	882	741	784
28	807	762	790	---	---	---	900	882	890	969	792	863
29	831	747	809	---	---	---	894	711	850	1200	897	1000
30	792	747	775	---	---	---	867	450	640	894	879	886
31	---	---	---	798	771	778	603	546	585	---	---	---
MONTH	831	486	656	819	465	696	918	387	724	1200	516	806
YEAR	2420	276	750									

PH (STANDARD UNITS), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

PH (STANDARD UNITS), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

## STREAMS TRIBUTARY TO LAKE ERIE

04208000 CUYAHOGA RIVER AT INDEPENDENCE, OH--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	19.0	18.5	18.5	11.0	10.5	10.5	5.5	5.0	5.0	---	---	---
2	19.5	17.5	18.5	14.0	14.0	14.0	5.0	4.5	5.0	---	---	---
3	20.0	18.0	19.0	14.0	12.0	13.5	6.0	5.0	5.5	---	---	---
4	20.0	19.0	19.5	12.0	9.5	10.5	5.5	4.5	5.0	4.5	4.5	4.5
5	19.0	18.5	19.0	10.0	9.5	9.5	5.5	5.0	5.0	4.5	4.5	4.5
6	18.5	17.0	18.0	11.0	9.5	10.5	6.5	5.5	6.0	4.5	4.0	4.5
7	17.5	15.5	16.5	12.0	11.0	11.5	5.5	4.0	4.5	4.0	3.0	3.5
8	17.5	16.0	16.5	12.5	11.0	12.0	4.0	3.5	4.0	3.0	2.5	3.0
9	17.0	16.0	16.5	12.5	11.0	11.5	4.0	4.0	4.0	2.5	2.0	2.5
10	16.5	15.0	15.5	12.5	11.0	11.5	4.5	4.0	4.5	2.5	2.0	2.0
11	17.0	15.0	16.0	12.5	8.5	11.0	5.0	4.0	5.0	2.0	1.5	2.0
12	18.5	16.5	17.5	8.5	7.0	7.5	6.0	5.0	5.5	1.0	.5	1.0
13	18.0	16.5	17.5	8.0	7.0	7.5	6.0	6.0	6.0	2.5	1.0	1.5
14	16.5	15.0	15.5	7.5	7.0	7.0	6.5	6.0	6.0	3.0	2.5	3.0
15	15.0	13.5	14.5	7.5	7.0	7.5	6.0	5.0	6.0	2.5	1.0	2.0
16	16.0	14.5	15.5	7.5	5.5	6.5	5.0	4.0	5.0	1.5	.5	1.0
17	16.5	15.5	16.0	6.0	5.0	5.5	4.0	3.5	4.0	2.5	1.5	2.0
18	15.5	14.0	14.5	7.0	5.0	6.0	3.5	3.0	3.0	2.5	1.5	2.0
19	14.0	13.5	14.0	9.0	7.0	8.0	2.5	2.0	2.5	1.5	.5	1.0
20	13.5	13.0	13.0	9.0	8.0	8.5	2.5	1.5	2.0	.5	.5	.5
21	14.0	12.5	13.5	8.5	8.0	8.5	2.5	1.5	2.0	.5	.5	.5
22	13.5	12.5	13.0	8.5	7.5	8.0	3.0	1.5	2.0	.5	.5	.5
23	14.0	13.0	13.5	9.5	8.5	9.0	1.0	.5	.5	1.0	.5	.5
24	14.5	14.0	14.0	9.5	8.0	9.0	.5	.5	.5	2.5	.5	1.0
25	14.5	13.5	14.0	7.5	6.5	7.0	.5	.5	.5	3.5	2.5	3.5
26	13.0	11.5	12.5	7.5	6.5	7.0	.5	.5	.5	4.0	3.0	3.5
27	12.5	11.0	11.5	8.5	7.5	8.0	.5	.5	.5	3.5	3.0	3.0
28	13.5	11.5	12.5	9.0	8.0	8.5	.5	.5	.5	3.0	1.5	2.5
29	13.5	12.5	12.5	8.5	6.5	7.5	1.0	.5	1.0	3.5	2.5	3.0
30	12.5	11.0	11.5	6.5	5.5	6.0	.5	.5	.5	3.0	2.0	2.5
31	11.0	9.5	10.5	---	---	---	.5	.5	.5	3.0	1.5	2.0
MONTH	20.0	9.5	15.0	14.0	5.0	9.0	6.5	.5	3.5	4.5	.5	2.5
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	2.5	1.5	2.0	2.5	1.5	2.0	7.5	5.0	6.5	---	---	---
2	4.0	2.0	3.0	3.0	2.0	2.5	7.5	5.5	7.0	---	---	---
3	4.0	2.5	3.0	3.0	2.0	2.5	8.5	6.5	7.5	14.5	13.0	13.5
4	2.5	2.0	2.5	3.5	2.0	2.5	9.0	8.5	9.0	13.0	11.5	12.0
5	5.0	2.0	3.0	3.5	3.0	3.5	10.0	9.0	9.5	12.5	11.5	12.0
6	2.5	2.0	2.0	4.0	3.0	3.0	9.0	7.5	8.5	14.5	11.5	12.5
7	2.0	1.5	2.0	4.0	2.5	3.0	8.5	7.0	7.5	15.0	13.5	14.0
8	3.0	1.5	2.0	3.0	1.0	2.0	9.5	7.0	8.5	15.5	13.5	14.5
9	3.0	2.0	2.5	3.0	.5	1.5	10.5	8.0	9.5	13.0	11.5	12.0
10	3.5	2.5	3.0	2.5	1.5	2.0	12.0	9.5	10.5	13.5	11.0	12.0
11	5.0	3.0	3.5	3.5	2.5	3.0	12.0	9.5	10.5	15.0	13.0	14.0
12	---	---	---	3.0	1.5	2.5	13.0	10.5	12.0	16.5	14.5	15.5
13	---	---	---	4.0	3.0	3.5	15.0	12.5	13.5	16.0	13.5	14.5
14	---	---	---	5.0	4.0	4.5	13.5	12.5	13.0	15.0	13.0	14.0
15	---	---	---	5.5	4.0	4.5	13.5	12.0	13.0	14.5	13.0	14.0
16	---	---	---	4.0	2.5	3.0	13.0	12.0	12.5	15.5	12.5	14.0
17	---	---	---	3.5	2.0	3.0	12.0	10.5	11.0	16.0	13.0	14.5
18	---	---	---	3.5	3.0	3.0	11.0	9.5	10.0	16.0	14.0	15.0
19	---	---	---	4.5	3.0	4.0	11.0	10.0	10.5	17.5	16.0	16.5
20	6.0	5.0	5.5	6.5	3.5	5.0	12.5	10.5	11.5	17.5	14.5	16.0
21	5.0	4.5	5.0	6.0	4.5	5.0	12.5	10.5	11.5	16.5	14.5	15.0
22	6.0	4.0	5.0	4.0	3.0	3.5	11.5	8.5	10.0	19.5	16.0	17.5
23	7.0	5.0	6.0	4.0	2.5	3.5	10.0	8.5	9.0	19.5	18.0	19.0
24	7.5	6.0	6.5	5.0	3.0	4.0	10.0	9.0	9.5	19.5	17.5	18.5
25	7.0	4.5	5.5	5.5	4.0	5.0	13.0	8.5	11.0	20.0	17.5	19.0
26	5.0	3.5	4.5	6.5	4.0	5.5	15.5	11.5	13.5	20.5	19.0	19.5
27	4.0	2.0	3.5	6.5	5.0	5.5	16.0	14.0	15.0	19.5	17.5	19.0
28	2.5	2.0	2.5	6.5	5.5	6.0	17.0	15.5	16.0	19.0	16.0	17.5
29	2.0	1.5	2.0	5.5	4.5	5.0	17.0	14.5	16.0	16.0	15.0	15.5
30	---	---	---	5.5	4.5	5.0	17.0	14.0	16.5	15.0	14.5	14.5
31	---	---	---	7.0	5.0	6.0	---	---	---	17.5	14.0	15.5
MONTH	7.5	1.5	3.5	7.0	.5	3.5	17.0	5.0	11.0	20.5	11.0	15.0

## STREAMS TRIBUTARY TO LAKE ERIE

83

04208000 CUYAHOGA RIVER AT INDEPENDENCE, OH--Continued  
TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	7.4	5.7	6.9	7.0	5.7	6.4	12.3	11.7	12.0	---	---	---
2	8.0	5.7	6.9	8.4	7.8	8.2	12.2	11.6	11.9	---	---	---
3	8.0	6.0	6.8	7.8	6.5	7.2	11.9	11.3	11.6	---	---	---
4	7.4	6.0	6.7	9.4	7.5	8.3	12.6	11.3	11.8	11.1	10.7	10.9
5	7.4	6.6	7.0	10.0	8.8	9.4	12.1	11.6	11.9	11.2	10.4	10.8
6	7.8	6.3	7.2	9.3	7.5	8.7	11.7	10.6	11.1	11.0	10.4	10.8
7	9.0	7.1	8.0	9.5	6.9	7.8	11.7	10.8	11.3	11.4	9.8	10.5
8	8.7	7.5	7.9	9.7	7.8	8.5	12.1	11.6	11.9	10.4	9.5	10.0
9	7.6	6.6	7.1	9.6	8.1	8.9	12.0	11.6	11.7	10.9	9.4	10.3
10	8.2	6.5	7.3	8.9	7.6	8.3	11.6	11.2	11.4	10.8	9.3	9.9
11	---	---	---	8.4	6.7	7.7	11.6	11.0	11.4	10.6	9.1	9.8
12	---	---	---	9.8	7.9	8.7	11.2	10.3	10.7	11.2	10.0	10.7
13	---	---	---	9.4	8.7	9.1	11.4	10.5	10.9	12.3	10.3	11.3
14	---	---	---	9.8	8.8	9.4	10.9	10.2	10.5	11.6	10.8	11.1
15	---	---	---	9.7	8.6	9.2	11.6	10.0	10.9	11.8	10.6	11.2
16	---	---	---	10.0	8.1	9.0	12.1	11.4	11.7	12.1	10.8	11.6
17	---	---	---	---	---	---	12.4	11.7	12.1	11.6	10.3	11.2
18	---	---	---	---	---	---	12.2	11.6	12.0	11.1	10.0	10.6
19	---	---	---	---	---	---	12.4	11.6	11.9	11.3	10.0	10.8
20	9.5	8.5	9.2	---	---	---	12.2	11.5	11.9	11.4	10.6	11.1
21	9.4	8.0	8.7	---	---	---	12.2	11.2	11.7	11.4	10.7	11.0
22	8.4	7.1	7.8	11.4	9.7	10.6	11.9	10.7	11.4	11.2	10.0	10.5
23	7.8	5.8	6.6	11.3	10.4	10.8	11.6	11.4	11.5	11.5	7.7	10.7
24	7.3	6.2	6.7	10.7	9.4	10.2	11.9	11.1	11.5	10.9	8.5	10.1
25	6.8	6.1	6.5	10.9	10.5	10.7	11.9	11.5	11.7	10.1	8.3	9.3
26	7.4	6.2	6.8	11.4	10.3	10.8	11.8	11.4	11.6	11.4	9.8	10.7
27	7.5	6.5	7.0	10.5	9.7	10.1	11.7	10.7	11.3	11.6	10.8	11.2
28	7.0	5.5	6.3	10.8	9.5	9.9	10.8	9.7	10.2	12.3	11.4	11.6
29	7.0	5.8	6.4	10.5	9.3	9.9	12.2	8.4	10.6	11.8	10.1	11.0
30	7.0	5.9	6.4	11.9	10.1	11.1	13.6	10.2	12.7	11.8	11.1	11.3
31	7.3	6.3	7.0	---	---	---	15.1	9.7	12.6	11.8	10.3	11.0
MONTH	9.5	5.5	7.2	11.9	5.7	9.2	15.1	8.4	11.5	12.3	7.7	10.8



## STREAMS TRIBUTARY TO LAKE ERIE

04208000 CUYAHOGA RIVER AT INDEPENDENCE, OH--Continued  
 OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	11.1	10.5	10.8	12.0	11.3	11.6	12.7	11.5	12.2	---	---	---
2	12.0	10.3	11.3	12.0	11.4	11.6	12.4	11.4	11.9	---	---	---
3	11.2	8.9	10.0	11.6	11.1	11.3	11.7	9.8	11.1	9.5	7.9	8.6
4	9.2	8.1	8.6	11.0	10.6	10.9	10.7	9.2	10.0	8.9	7.0	8.0
5	10.9	8.0	10.7	12.0	10.4	11.3	10.6	8.9	9.9	9.5	8.1	8.9
6	10.8	10.1	10.5	12.8	10.9	12.1	10.7	9.5	10.3	9.1	7.0	8.2
7	10.1	9.1	9.6	12.8	12.4	12.6	11.0	9.8	10.4	8.8	8.3	8.6
8	10.1	8.8	9.4	12.5	12.1	12.3	9.8	8.3	9.1	8.7	7.0	7.7
9	12.2	11.7	10.7	12.4	12.0	12.2	11.1	8.1	10.0	8.3	7.9	8.0
10	12.1	11.2	11.5	12.4	11.4	11.8	10.9	9.4	10.0	8.9	7.6	8.3
11	11.7	11.0	11.3	11.6	10.5	11.0	10.8	9.3	10.3	8.9	7.0	8.0
12	---	---	---	12.6	10.8	11.9	10.7	8.7	9.8	---	---	---
13	---	---	---	12.0	11.1	11.6	9.2	7.7	8.6	---	---	---
14	---	---	---	11.6	11.0	11.4	8.5	7.4	7.7	8.9	7.3	7.8
15	---	---	---	11.5	10.3	11.0	7.4	6.0	7.0	9.7	7.8	9.0
16	---	---	---	12.7	11.0	12.0	8.9	7.2	8.3	9.9	9.1	9.4
17	---	---	---	12.8	11.3	12.1	9.5	6.5	8.1	9.5	8.6	9.2
18	13.1	12.7	12.9	12.2	11.3	11.7	9.5	8.6	9.2	8.3	7.2	8.0
19	12.8	11.4	12.2	12.2	10.6	11.4	10.0	6.4	8.7	7.7	6.4	7.3
20	12.3	11.7	12.0	12.0	10.6	11.3	9.8	9.0	9.4	7.4	6.1	6.9
21	12.1	11.6	11.8	12.1	11.4	11.6	10.2	8.4	9.3	7.8	6.5	7.3
22	12.4	11.8	12.0	13.3	11.5	12.6	8.8	7.2	8.2	8.0	6.2	7.3
23	12.0	10.8	11.5	13.7	12.4	13.2	9.8	6.7	7.9	7.3	5.6	6.0
24	11.0	10.3	10.8	13.3	12.6	13.0	9.8	7.6	9.2	7.0	5.7	6.5
25	11.2	10.2	10.7	12.7	12.0	12.3	10.1	8.1	9.0	7.2	5.6	6.4
26	11.4	10.7	11.0	12.1	10.5	11.5	8.7	6.3	7.7	6.8	4.8	5.7
27	11.6	10.7	11.2	12.0	10.3	11.4	8.5	6.3	7.7	7.0	5.7	6.3
28	11.2	10.0	10.8	12.4	10.4	11.7	8.5	6.9	7.2	7.4	5.7	6.8
29	11.6	10.9	11.2	12.4	11.6	12.0	8.6	6.5	7.8	7.8	6.9	7.2
30	---	---	---	12.8	12.2	12.5	9.0	6.5	7.9	8.3	6.9	7.6
31	---	---	---	12.9	12.3	12.5	---	---	---	8.3	6.4	7.3
MONTH	13.1	8.0	11.0	13.7	10.3	11.9	12.7	6.0	9.1	9.9	4.8	7.6
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	7.9	6.5	7.1	---	---	---	---	---	---	9.3	8.2	8.7
2	---	---	---	---	---	---	---	---	---	10.1	8.5	9.1
3	---	---	---	---	---	---	---	---	---	8.6	7.9	8.2
4	---	---	---	---	---	---	---	---	---	9.5	7.8	8.7
5	---	---	---	---	---	---	---	---	---	9.2	8.0	8.7
6	---	---	---	---	---	---	---	---	---	9.5	8.4	8.9
7	---	---	---	---	---	---	---	---	---	9.6	8.5	9.1
8	---	---	---	---	---	---	---	---	---	9.7	8.5	9.1
9	---	---	---	---	---	---	---	---	---	9.2	8.0	8.6
10	---	---	---	---	---	---	---	---	---	8.5	8.0	8.2
11	---	---	---	---	---	---	---	---	---	8.1	7.2	7.7
12	---	---	---	---	---	---	---	---	---	9.2	7.5	8.0
13	7.9	6.4	7.8	---	---	---	---	---	---	9.4	7.0	8.4
14	6.9	4.5	5.8	---	---	---	---	---	---	7.6	6.1	7.1
15	7.2	5.7	6.6	---	---	---	---	---	---	8.9	6.1	7.7
16	6.6	5.6	6.1	---	---	---	---	---	---	11.1	8.4	10.0
17	5.8	4.6	5.2	---	---	---	---	---	---	11.8	10.4	11.0
18	4.9	3.8	4.4	---	---	---	---	---	---	11.8	9.7	10.6
19	---	---	---	---	---	---	---	---	---	11.1	8.7	9.6
20	5.3	4.0	4.8	---	---	---	---	---	---	11.2	8.2	9.3
21	6.0	3.6	5.5	---	---	---	10.7	8.8	9.9	11.2	7.3	9.3
22	5.6	4.4	4.9	---	---	---	8.8	6.6	8.0	11.9	8.2	9.8
23	5.3	3.9	4.5	---	---	---	7.7	6.9	7.3	8.8	6.9	7.9
24	5.2	3.6	4.2	---	---	---	10.4	6.7	8.2	9.6	6.6	8.0
25	5.0	3.9	4.4	---	---	---	10.3	6.8	8.5	9.4	6.3	7.5
26	5.0	3.0	4.1	---	---	---	10.7	7.4	8.9	8.8	6.5	7.6
27	5.2	2.8	4.1	---	---	---	11.2	7.3	9.0	9.2	6.2	7.8
28	5.3	3.8	4.6	---	---	---	11.6	6.9	9.0	10.4	8.0	9.0
29	5.0	2.9	3.9	---	---	---	9.0	6.8	7.9	10.0	7.5	8.8
30	5.3	2.9	4.1	---	---	---	7.7	6.6	7.2	10.6	8.2	9.5
31	---	---	---	---	---	---	8.2	6.6	7.5	---	---	---
MONTH	7.9	2.8	5.1	---	---	---	11.6	6.6	8.3	11.9	6.1	8.7
YEAR	15.1	2.8	9.4	---	---	---	---	---	---	---	---	---

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

04208000 CUYAHOGA RIVER AT INDEPENDENCE, OH--Continued  
 SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
 MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	897	954	591	---	1110	806	447	---	555	776	804	671
2	915	783	594	---	1210	818	444	---	558	789	809	771
3	900	708	659	---	1330	809	465	696	608	791	663	804
4	909	750	530	1170	992	791	506	428	625	776	654	807
5	861	815	497	1110	980	908	552	449	621	519	555	752
6	803	821	489	1170	950	996	546	507	627	579	600	795
7	735	825	560	1140	1020	932	---	---	645	590	636	819
8	851	842	675	1120	997	855	---	---	657	675	609	864
9	891	840	645	1070	960	782	---	---	668	710	642	857
10	933	815	798	1060	1080	854	---	---	669	705	665	678
11	921	531	702	1140	908	791	648	---	681	668	653	756
12	924	611	608	1120	920	770	656	---	683	690	696	793
13	867	756	560	1060	686	792	686	396	687	698	657	852
14	834	732	513	1040	554	936	699	287	549	719	687	666
15	828	723	522	1060	531	990	650	317	576	698	732	660
16	867	635	522	1060	---	668	647	348	690	680	746	786
17	854	543	522	1010	---	572	618	375	759	696	740	809
18	783	581	528	1010	---	540	639	387	797	---	777	804
19	783	585	572	1030	---	543	660	432	561	---	737	818
20	762	552	630	1120	477	533	550	429	612	---	693	837
21	813	552	654	1130	486	402	651	351	636	---	720	836
22	830	555	956	1080	501	492	657	378	630	---	867	827
23	765	573	782	1000	525	564	600	---	615	---	870	839
24	696	579	788	1610	546	522	558	---	648	---	765	854
25	813	581	804	2180	695	465	584	---	641	---	860	855
26	857	590	768	1490	773	438	663	---	690	---	879	858
27	908	590	734	1300	765	447	---	---	719	---	891	771
28	921	423	791	1130	687	501	---	---	777	---	890	855
29	933	461	1730	1040	744	507	---	---	813	---	872	989
30	936	561	1550	1000	---	476	---	---	777	---	620	885
31	957	---	1130	1060	---	462	---	546	---	774	591	---
MEAN	856	662	723	1160	817	676	601	422	659	696	728	806
WTR YR 1984	MEAN	749		MAX	2180	MIN	287					

PH (STANDARD UNITS), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
 MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.8	7.8	7.8	---	7.9	7.9	7.8	---	7.6	7.5	7.8	7.8
2	7.8	7.7	7.8	---	7.9	7.9	7.8	---	7.7	7.5	7.6	7.9
3	7.9	7.6	7.8	8.1	7.9	7.9	7.7	7.9	7.6	7.5	7.6	7.9
4	7.9	7.7	7.8	8.1	7.8	7.9	7.7	7.6	7.6	7.5	7.6	7.8
5	7.8	7.8	7.7	7.8	7.8	7.9	7.8	7.7	7.7	7.4	7.7	7.9
6	7.7	7.9	7.7	7.8	7.9	7.8	7.8	7.7	7.6	7.5	7.8	7.9
7	7.8	7.8	7.7	7.9	7.9	7.9	7.8	7.8	7.7	7.5	7.8	7.9
8	7.9	7.8	7.8	7.8	7.9	7.9	7.8	7.7	7.8	7.6	7.8	7.9
9	7.9	7.9	7.8	7.9	7.8	7.9	7.8	7.7	7.8	7.7	7.8	8.0
10	7.9	7.8	7.8	7.8	7.8	7.9	7.8	7.8	7.7	7.6	7.7	7.8
11	8.0	7.6	7.8	7.8	7.8	7.9	7.8	7.8	7.8	7.7	7.6	7.8
12	7.9	7.7	7.8	7.8	---	7.9	7.8	7.6	7.8	7.6	7.6	7.8
13	7.8	7.7	7.8	7.9	---	7.9	7.8	7.7	7.6	7.8	7.7	8.0
14	7.9	7.8	7.8	7.8	---	7.9	7.7	7.7	7.5	7.9	7.8	7.7
15	7.9	7.9	7.8	7.9	---	7.9	7.7	7.7	7.7	7.9	7.9	7.8
16	7.9	7.7	7.8	7.9	---	7.9	7.9	7.7	7.6	7.9	8.0	7.9
17	7.9	7.7	7.8	7.9	---	7.8	7.8	7.7	7.6	7.9	8.1	7.9
18	7.9	7.8	7.8	7.9	---	7.8	7.9	7.6	7.5	---	8.1	7.9
19	7.8	7.8	7.8	7.9	7.6	7.8	7.9	7.6	7.5	---	7.8	7.9
20	7.8	7.7	7.8	7.9	7.6	7.8	7.8	7.6	7.6	---	7.8	7.9
21	7.9	7.8	7.8	7.9	7.7	7.8	7.9	7.6	7.6	---	7.9	8.0
22	7.8	7.8	7.8	7.9	7.7	7.7	7.9	7.6	7.6	---	7.9	8.0
23	7.6	7.8	7.8	7.9	7.7	7.8	7.8	7.5	7.6	---	7.7	7.9
24	7.7	7.8	7.8	7.9	7.7	7.7	7.8	7.6	7.6	---	7.9	7.9
25	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.6	7.6	---	7.9	7.9
26	7.8	7.8	7.8	7.9	7.8	7.7	7.8	7.5	7.5	---	8.0	7.9
27	7.8	7.8	7.8	7.9	7.8	7.7	7.7	7.5	7.4	---	8.1	7.8
28	7.9	7.7	7.8	7.9	7.8	7.7	7.7	7.6	7.6	---	8.2	7.9
29	7.8	7.7	7.8	7.9	7.8	7.8	7.8	7.6	7.5	---	8.0	7.9
30	7.8	7.8	7.8	7.9	---	7.8	7.7	7.7	7.5	---	7.6	8.0
31	7.9	---	7.8	7.9	---	7.8	---	7.7	---	---	7.6	---
MEAN	7.8	7.8	7.8	7.9	7.8	7.8	7.8	7.7	7.6	7.7	7.8	7.9
WTR YR 1984	MEAN	7.8		MAX	8.2	MIN	7.4					

## STREAMS TRIBUTARY TO LAKE ERIE

04208000 CUYAHOGA RIVER AT INDEPENDENCE, OH--Continued  
 TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
 MEDIAN VALUES

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

WTR YR 1984 MEAN 12.5 MAX 26.0 MIN .5  
 OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
 MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.9	6.2	12.0	---	10.8	11.5	12.4	---	7.0	---	---	8.7
2	6.9	8.2	11.9	---	11.6	11.6	11.8	---	---	---	---	9.0
3	6.7	7.2	11.7	---	10.0	11.3	11.2	8.5	---	---	---	8.3
4	6.7	8.0	11.8	10.9	8.6	10.9	10.0	8.3	---	---	---	8.7
5	7.0	9.5	11.9	10.9	10.7	11.6	10.2	9.3	---	---	---	8.8
6	7.4	8.7	11.0	10.8	10.6	12.5	10.3	8.3	---	---	---	8.9
7	8.3	7.3	11.4	10.7	9.6	12.6	10.4	8.4	---	---	---	9.2
8	7.8	8.4	11.9	10.0	9.5	12.3	9.3	7.7	---	---	---	9.0
9	7.2	8.9	11.7	10.7	11.7	12.3	10.5	8.0	---	---	---	8.7
10	7.3	8.4	11.4	9.8	11.4	11.9	9.9	8.5	---	---	---	8.1
11	---	7.9	11.4	9.9	11.4	10.9	10.4	8.3	---	---	---	7.8
12	---	8.4	10.6	11.0	---	12.2	10.0	---	---	---	---	7.8
13	---	9.1	10.9	11.5	---	11.6	8.6	---	7.2	---	---	8.7
14	---	9.4	10.5	11.2	---	11.4	7.6	8.4	5.8	---	---	7.2
15	---	9.3	11.1	11.2	---	11.2	7.2	9.3	6.7	---	---	7.9
16	---	8.8	11.8	11.7	---	12.2	8.6	9.4	6.1	---	---	10.2
17	---	---	12.1	11.3	---	12.4	7.9	9.2	5.2	---	---	11.1
18	---	---	12.0	10.7	13.0	11.7	9.2	8.0	4.5	---	---	10.4
19	---	---	11.9	10.9	12.2	11.5	9.6	7.3	---	---	---	9.5
20	9.3	---	11.9	11.3	12.0	11.5	9.4	6.9	5.1	---	---	9.1
21	8.8	---	11.6	11.0	11.9	11.5	9.1	7.4	5.5	---	9.9	9.5
22	7.8	11.1	11.6	10.5	12.0	12.9	8.4	7.4	4.9	---	8.2	9.5
23	6.4	10.9	11.5	11.0	11.6	13.3	7.4	6.0	4.4	---	7.4	8.1
24	6.7	10.2	11.5	10.4	10.8	13.1	9.5	6.4	4.2	---	8.1	7.7
25	6.6	10.7	11.8	9.5	10.8	12.4	9.0	6.4	4.3	---	8.6	7.5
26	6.8	10.8	11.5	11.0	11.0	11.8	7.9	5.6	4.3	---	8.8	7.7
27	7.0	10.1	11.3	11.3	11.2	11.5	7.7	6.3	4.1	---	8.8	7.7
28	6.4	9.7	10.2	11.6	10.9	12.0	7.3	6.8	---	---	9.0	9.1
29	6.5	10.0	10.7	11.1	11.2	12.0	7.9	7.2	4.0	---	8.0	8.9
30	6.5	11.5	12.9	11.3	---	12.4	7.9	7.6	4.1	---	7.2	9.5
31	7.0	---	13.0	10.9	---	12.5	---	7.3	---	---	7.6	---
MEAN	7.2	9.2	11.6	10.9	11.1	12.0	9.2	7.7	5.1	---	8.3	8.7

WTR YR 1984 MEAN 9.5 MAX 13.3 MIN 4.0

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

## STREAMS TRIBUTARY TO LAKE ERIE

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04208000 CUYAHOGA RIVER AT INDEPENDENCE, OH--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	187	16	8.1	299	30	33	1050	25	71
2	183	16	7.9	511	62	93	970	25	65
3	174	17	8.0	1060	122	359	1020	30	83
4	174	17	8.0	612	38	64	3570	700	8360
5	391	57	60	621	27	45	2810	187	1470
6	412	55	51	545	23	34	2710	212	1710
7	235	25	16	494	17	23	2650	137	1010
8	196	17	9.0	478	20	26	2130	81	466
9	217	21	12	453	15	18	1850	64	320
10	177	15	7.2	452	18	22	1740	53	249
11	177	16	7.6	2790	918	8150	1760	58	285
12	323	30	26	2040	231	1360	2660	151	1090
13	373	25	25	1310	54	191	2250	70	425
14	404	38	41	1040	43	121	1830	51	252
15	378	26	27	1110	150	617	1680	44	200
16	426	19	22	3300	956	9730	1570	38	161
17	421	22	25	4480	1420	18300	1430	37	143
18	430	23	27	2390	899	5880	1180	36	115
19	404	23	25	2370	669	4330	1030	30	83
20	256	12	8.3	2220	435	2640	861	27	63
21	228	10	6.2	2120	140	832	725	25	49
22	315	29	25	1670	61	275	2330	272	2020
23	848	141	323	1420	57	219	1310	22	78
24	524	45	64	1420	56	215	808	18	39
25	352	18	17	1120	27	82	663	18	32
26	303	14	11	935	25	63	620	14	23
27	323	14	12	802	19	41	560	8	12
28	291	12	9.4	2800	354	3070	540	12	17
29	260	14	9.8	1850	---	---	500	18	24
30	242	16	10	1310	45	159	470	15	19
31	239	10	6.5	---	---	---	450	15	18
TOTAL	9863	---	925.0	44022	---	56992	45727	---	18952
JANUARY			FEBRUARY			MARCH			
1	440	14	17	552	12	18	680	22	40
2	430	13	15	587	20	32	640	25	43
3	420	12	14	1740	347	2150	620	23	39
4	410	11	12	1890	281	1520	600	22	36
5	400	10	11	1330	105	392	1080	189	801
6	390	10	11	1020	47	129	1720	137	653
7	380	10	10	906	37	91	1200	50	162
8	370	14	14	867	30	70	1000	35	94
9	370	15	15	824	29	65	900	35	85
10	360	16	16	894	48	118	850	36	83
11	360	14	14	2730	638	5290	800	37	80
12	360	13	13	3570	920	9440	750	22	45
13	350	13	12	3860	1750	19000	750	15	30
14	350	12	11	7130	3740	75700	750	13	26
15	350	12	11	4210	590	6780	1030	105	365
16	340	10	9.2	3350	481	4330	4640	960	13600
17	340	8	7.3	3080	799	6670	3370	373	3460
18	340	7	6.4	3150	599	5130	2530	199	1390
19	330	8	7.1	2830	431	3320	2070	58	324
20	330	9	8.0	2270	199	1250	2880	247	2450
21	330	8	7.1	1830	130	642	7920	1240	27300
22	330	7	6.2	1550	100	418	5710	398	6730
23	330	8	7.1	1340	92	333	3710	259	2730
24	745	56	158	1180	65	207	3300	162	1470
25	928	98	246	1080	47	137	3270	105	950
26	894	54	130	930	42	105	2950	125	996
27	899	44	107	831	33	74	2410	95	618
28	708	27	52	758	32	55	2390	146	1050
29	663	20	36	712	30	58	3500	301	2950
30	650	14	25	---	---	---	2860	134	1060
31	638	13	22	---	---	---	2450	96	635
TOTAL	14535	---	1030.4	57001	---	143534	69330	---	70295



## STREAMS TRIBUTARY TO LAKE ERIE

04208000 CUYAHOGA RIVER AT INDEPENDENCE, OH--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL									
1	2250	83	504	863	37	86	1050	53	150
2	2050	79	437	773	17	35	930	47	118
3	1810	82	401	798	50	120	835	34	77
4	1660	67	300	3790	1010	11300	739	44	88
5	1830	76	375	2660	183	1340	730	43	85
6	1790	64	309	1940	96	503	737	54	107
7	1890	53	270	1650	77	343	672	37	67
8	1570	35	148	2740	313	2940	637	26	45
9	1420	31	119	2930	190	1520	582	25	39
10	1280	31	107	2290	110	680	542	23	34
11	1160	34	106	2220	103	745	531	24	34
12	1030	31	86	5840	610	10100	503	29	39
13	977	27	71	3620	186	1830	556	68	135
14	1220	62	232	3330	214	1970	1550	697	3360
15	1290	42	151	2710	138	1010	602	56	95
16	1100	16	48	2330	123	774	381	25	26
17	1070	26	77	2000	122	659	346	15	14
18	1260	30	104	1810	100	489	800	200	971
19	1080	17	50	1670	83	374	1500	384	1730
20	1030	15	42	3090	366	4950	885	74	178
21	908	21	51	4560	331	4340	727	56	110
22	904	40	115	2560	140	968	658	48	85
23	1580	152	663	3130	356	3350	589	37	59
24	2480	274	1850	3010	190	1550	503	25	34
25	1990	97	512	2380	130	835	419	14	16
26	1470	69	274	1790	97	469	377	17	17
27	1350	74	276	1510	77	314	344	28	26
28	1310	61	216	1700	153	764	323	12	10
29	1110	56	168	1940	173	931	292	8	6.3
30	1020	60	165	1440	78	303	305	10	8.2
31	---	---	---	1210	55	180	---	---	---
TOTAL	42889	---	8227	74284	---	55772	19645	---	7763.5
JULY									
1	286	12	9.3	281	9	6.8	548	58	86
2	277	5	3.7	357	108	168	428	33	38
3	293	3	2.4	632	279	453	485	57	75
4	391	66	194	1290	319	1300	571	30	46
5	1350	335	1500	1180	152	484	497	47	63
6	1130	152	601	829	82	184	397	13	14
7	1120	140	470	655	40	71	358	7	6.8
8	683	67	124	599	43	70	327	10	8.8
9	568	44	67	492	27	36	279	12	9.0
10	501	25	34	476	38	49	938	240	748
11	562	24	38	414	13	15	456	28	34
12	525	36	51	415	18	20	362	10	9.8
13	438	14	17	526	68	173	446	74	213
14	396	19	20	314	13	11	851	278	634
15	383	15	16	279	9	6.8	477	43	57
16	377	6	6.1	279	9	6.8	436	13	15
17	350	5	4.7	260	6	4.2	446	8	9.6
18	408	25	28	239	8	5.2	454	13	16
19	325	22	19	409	27	30	425	12	14
20	284	10	7.7	282	12	9.1	410	10	11
21	265	7	5.0	236	10	6.4	378	7	7.1
22	247	5	3.3	234	7	4.4	343	8	7.4
23	238	4	2.6	503	25	34	327	5	4.4
24	245	9	6.0	269	10	7.3	315	5	4.3
25	237	9	5.8	241	9	5.9	341	7	6.4
26	274	10	8.3	231	8	5.0	504	23	31
27	1240	224	837	230	6	3.7	371	10	10
28	659	63	112	240	4	2.6	317	4	3.4
29	475	29	37	476	54	85	321	8	6.9
30	364	11	11	1430	350	1950	292	8	6.3
31	282	10	7.6	1060	153	507	---	---	---
TOTAL	15173	---	4248.5	15358	---	5714.2	13100	---	2195.2
YEAR	420927	---	375648.8						

STREAMS TRIBUTARY TO LAKE ERIE

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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 downstream from footbridge in Brookside Park, 0.2 mi upstream from bridge on Fulton Road and 2.5 mi upstream from mouth.

DRAINAGE AREA.--35.3 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

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

AVERAGE DISCHARGE.--12 years, 57.5 ft<sup>3</sup>/s, 22.12 in./yr.

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

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 2,700 ft<sup>3</sup>/s and maximums (\*): Revised.

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 5	1145	3630	10.24	July 6	1330	2880	8.75
Feb. 13	2400	2780	8.53	Aug. 13	1200	*5140	*12.55
July 4	2100	3200	9.41				

Minimum daily discharge, 9.1 ft<sup>3</sup>/s Oct. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	19	27	18	20	22	42	26	28	22	24	24
2	9.1	106	26	18	19	22	38	23	25	22	29	22
3	11	125	29	18	163	20	39	93	24	22	76	38
4	30	35	240	17	62	20	62	103	23	398	71	30
5	540	40	74	17	37	203	98	48	22	62	31	54
6	60	24	166	16	30	152	71	29	27	343	27	23
7	26	20	93	16	29	115	78	27	32	49	26	21
8	40	18	58	16	15	60	45	199	23	30	26	21
9	42	18	56	15	30	44	39	56	21	28	26	23
10	16	31	67	15	43	38	34	34	20	27	24	138
11	14	388	84	15	115	34	31	200	19	31	24	30
12	39	170	109	15	93	30	30	500	18	29	23	24
13	58	62	64	14	303	30	39	230	70	26	746	30
14	26	42	46	14	600	28	56	110	170	24	86	37
15	17	91	37	14	142	186	34	70	50	24	29	27
16	15	315	30	14	103	668	30	60	19	24	26	24
17	17	178	28	14	98	128	62	50	15	24	24	20
18	28	58	26	14	138	84	54	52	140	27	199	21
19	18	131	27	14	128	69	80	54	110	23	64	20
20	14	80	27	13	93	159	31	350	44	23	25	20
21	14	56	28	13	65	1000	26	320	24	24	23	20
22	115	32	260	13	50	235	58	170	23	24	23	20
23	86	62	40	13	42	109	106	130	24	24	22	23
24	31	40	30	155	36	84	195	180	24	27	21	21
25	22	28	26	66	32	78	58	100	23	23	21	28
26	24	28	24	56	28	67	42	52	23	115	21	35
27	24	28	23	42	26	58	58	38	23	131	21	19
28	16	230	21	29	24	221	38	80	23	84	21	19
29	15	54	20	26	24	199	29	110	30	34	48	19
30	15	30	20	23	---	71	37	60	24	28	190	21
31	14	---	19	21	---	56	---	34	---	29	31	---
TOTAL	1406.1	2539	1825	764	2588	4290	1640	3588	1141	1791	2048	882
MEAN	45.4	84.6	58.9	24.6	89.2	138	54.7	116	38.0	57.8	66.1	29.4
MAX	540	388	260	155	600	1000	195	500	170	388	746	138
MIN	9.1	18	19	13	15	20	26	23	15	22	21	19
CFSM	1.29	2.40	1.67	.70	2.53	3.91	1.55	3.29	1.08	1.64	1.87	.83
IN.	1.48	2.68	1.92	.81	2.73	4.52	1.73	3.78	1.20	1.89	2.16	.93

CAL YR 1983	TOTAL	23974.1	MEAN 65.7	MAX 1420	MIN 9.1	CFSM 1.86	IN 25.26
WTR YR 1984	TOTAL	24502.1	MEAN 66.9	MAX 1000	MIN 9.1	CFSM 1.90	IN 25.82

## STREAMS TRIBUTARY TO LAKE ERIE

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 upstream from mouth, and 1.2 mi downstream from turning basin.

DRAINAGE AREA.--798 mi<sup>2</sup>.

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, 192 micromhos May 22, 1984.

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, 15.7 mg/L Mar. 31, 1984; minimum, 0.0 mg/L on many days during 1967, 1968, 1971 to 1974, 1977 to 1984.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 2,480 micromhos Jan. 25; minimum, 192 micromhos May 22.

pH: Maximum, 8.1 units Nov. 25, Feb. 14, Apr. 4; minimum, 6.8 units Sept. 13.

WATER TEMPERATURES: Maximum, 29.5°C Aug. 11, 12; minimum, 2.0°C Dec. 25, 26.

DISSOLVED OXYGEN: Maximum, 15.7 mg/L Mar. 31; minimum, 0.0 mg/L on several days during year.

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

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	909	900	903	912	903	909	594	546	576	1690	1290	1470
2	915	903	909	921	888	910	627	597	615	1290	1120	1200
3	915	906	911	885	609	736	690	612	646	1180	1110	1130
4	909	897	904	678	600	647	837	426	642	1350	1190	1260
5	897	480	767	747	660	700	477	390	437	1360	1320	1340
6	564	438	492	786	747	770	513	465	488	1460	1350	1420
7	747	567	647	801	783	791	699	420	527	1440	1320	1370
8	789	708	737	801	783	792	840	720	811	1340	1290	1320
9	819	792	812	822	801	806	798	717	745	1310	1230	1290
10	831	813	821	843	831	838	1000	762	890	1230	1210	1220
11	834	816	825	849	390	562	1030	759	915	1220	1190	1200
12	909	834	870	681	402	554	777	603	701	1220	1200	1210
13	933	876	912	732	690	721	603	567	581	1250	1230	1240
14	897	873	886	741	690	727	576	552	562	1230	1180	1210
15	876	810	833	723	690	709	558	540	549	1170	1120	1140
16	846	816	830	723	438	620	558	531	543	1170	1140	1150
17	873	846	854	528	351	411	549	528	536	1170	1150	1160
18	861	843	847	564	543	554	552	528	543	1170	1080	1120
19	849	834	843	591	561	571	561	540	555	1100	1010	1070
20	831	804	814	552	498	516	633	558	599	1120	933	1090
21	828	804	816	546	519	528	729	639	680	1160	1110	1140
22	858	831	842	540	519	530	1860	735	1170	1180	1120	1160
23	861	687	772	579	537	560	918	804	845	1170	1110	1150
24	717	642	685	603	552	574	819	780	804	1840	1060	1210
25	663	654	658	573	561	570	870	819	835	2480	1990	2250
26	747	669	704	594	573	580	915	870	895	2210	1850	2060
27	807	747	781	612	570	590	888	831	861	1840	1480	1600
28	843	810	827	609	375	478	828	780	808	1480	1320	1410
29	867	846	858	489	393	433	1330	813	1010	1320	1220	1260
30	894	870	883	540	492	518	1800	1330	1530	1220	1120	1160
31	912	897	904	---	---	---	1940	1740	1860	1360	1140	1210
MONTH	933	438	811	921	351	640	1940	390	766	2480	933	1300

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	1520	1350	1410	1100	945	1030	582	516	532	798	750	783
2	1580	1510	1530	1130	987	1060	534	480	513	870	798	840
3	1960	1490	1670	1170	1000	1090	552	516	527	867	846	857
4	1520	1020	1220	1160	1060	1110	672	540	599	903	420	659
5	1250	1060	1170	1380	987	1100	753	663	707	549	480	527
6	1180	1090	1140	1550	1280	1420	750	690	711	585	546	562
7	1160	1050	1100	1310	1150	1230	756	720	741	630	591	614
8	1380	1160	1280	1290	1120	1230	729	690	705	657	519	618
9	1390	1260	1350	1210	1020	1120	705	690	698	528	480	502
10	1340	1210	1270	1160	996	1100	705	687	695	558	525	543
11	1560	1030	1300	1250	1110	1170	711	696	705	591	537	556
12	996	783	869	1120	990	1070	741	690	729	489	375	408
13	822	648	708	1110	978	1050	771	720	756	477	420	434
14	861	576	657	1410	1070	1230	837	780	808	492	420	462
15	660	576	603	1520	1280	1440	840	759	793	495	450	483
16	600	543	569	1680	672	1130	777	750	765	501	450	490
17	540	462	521	720	660	694	798	768	787	525	480	502
18	573	486	548	735	651	684	849	780	808	606	477	540
19	612	549	579	705	645	677	783	750	772	630	558	599
20	609	549	579	780	663	704	801	768	789	612	234	544
21	609	531	581	663	387	481	801	780	793	450	240	384
22	627	570	609	711	426	564	807	750	787	516	192	460
23	663	588	632	855	690	743	798	720	757	552	393	511
24	675	633	654	891	663	787	723	642	691	465	375	443
25	735	651	686	669	549	603	669	621	636	492	306	456
26	1050	759	911	594	513	536	726	669	705	609	390	530
27	1180	960	1070	549	516	530	756	720	744	633	528	604
28	1160	990	1050	618	531	576	786	603	743	648	510	609
29	1000	873	971	696	567	602	738	723	731	600	558	571
30	---	---	---	618	564	594	768	720	747	615	561	585
31	---	---	---	723	534	554	---	---	---	681	621	659
MONTH	1960	462	939	1680	387	900	849	480	716	903	192	559



## STREAMS TRIBUTARY TO LAKE ERIE

04208506 CUYAHOGA RIVER AT WEST THIRD STREET BRIDGE, IN CLEVELAND, OH--Continued  
 SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	699	627	683	987	960	975	927	885	900	690	612	656
2	720	669	707	1010	960	998	978	924	951	765	663	712
3	738	654	708	1020	987	1000	1000	864	966	879	705	818
4	753	720	735	993	936	985	846	621	720	876	864	873
5	777	720	755	912	486	597	726	564	623	870	768	855
6	801	750	773	693	393	575	690	606	654	843	780	812
7	813	777	793	666	489	597	732	654	694	891	780	840
8	813	780	796	729	660	693	789	726	757	954	882	924
9	819	771	800	822	732	785	783	750	768	999	939	974
10	852	756	814	837	816	827	810	780	792	1010	573	759
11	861	828	842	885	834	864	849	810	828	678	573	619
12	852	780	836	876	846	861	864	843	852	843	657	769
13	879	831	845	843	813	828	855	363	703	900	831	858
14	795	546	624	855	825	840	618	360	521	966	867	921
15	720	591	663	942	840	871	735	582	654	861	681	783
16	786	690	737	897	879	885	861	720	808	822	771	806
17	873	780	828	888	864	877	957	861	916	861	813	839
18	939	735	884	882	861	874	1020	951	973	939	864	891
19	681	594	641	930	876	898	960	720	854	927	855	910
20	702	648	670	936	900	917	765	729	747	936	891	921
21	783	690	747	948	927	935	849	732	802	987	933	956
22	816	780	797	975	948	959	936	846	901	1010	918	972
23	825	813	816	1000	960	981	999	936	959	1020	912	994
24	828	819	823	1010	999	1010	1010	987	998	1030	960	1000
25	843	819	830	1010	987	991	1010	960	997	1010	930	984
26	906	831	866	1010	909	978	978	972	976	975	906	946
27	906	873	892	933	660	768	999	960	982	948	873	925
28	924	693	905	783	627	719	1010	999	1000	963	861	932
29	963	930	952	678	624	658	1010	915	976	975	909	963
30	966	951	960	765	660	704	966	546	790	1020	924	992
31	---	---	---	888	762	821	630	480	527	---	---	---
MONTH	966	546	791	1020	393	847	1020	360	825	1030	573	873
YEAR	2480	192	831									

PH (STANDARD UNITS), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

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

## STREAMS TRIBUTARY TO LAKE ERIE

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	23.5	22.5	23.0	17.0	16.5	17.0	8.5	8.0	8.0	5.0	4.5	4.5
2	24.5	23.5	23.5	17.5	17.0	17.0	8.0	7.5	7.5	6.0	5.0	5.5
3	24.0	23.5	23.5	16.5	15.0	16.0	8.0	7.5	8.0	7.0	6.0	6.5
4	24.0	23.5	24.0	15.0	14.0	14.5	8.5	5.5	7.0	7.5	7.0	7.0
5	24.0	20.0	22.5	14.0	13.0	13.5	7.0	5.5	6.0	8.0	7.5	7.5
6	20.0	19.5	20.0	13.0	12.5	13.0	8.0	6.5	7.0	8.0	7.5	8.0
7	21.0	19.5	20.5	13.5	13.0	13.5	7.5	6.0	6.5	8.0	7.5	8.0
8	21.0	20.5	20.5	15.0	13.5	14.5	6.0	5.5	6.0	8.0	7.0	7.5
9	21.0	20.5	20.5	15.5	15.0	15.5	6.0	5.5	6.0	7.0	7.0	7.0
10	21.5	20.5	20.5	16.0	15.5	15.5	6.5	6.0	6.0	7.0	6.5	7.0
11	20.5	20.5	20.5	16.0	10.0	13.0	7.0	6.5	6.5	6.5	6.0	6.5
12	21.0	20.5	21.0	10.0	8.5	9.0	7.0	6.5	7.0	6.5	6.0	6.5
13	21.5	21.0	21.0	9.0	8.5	9.0	7.5	7.0	7.5	6.5	6.0	6.0
14	21.0	20.0	20.5	10.0	9.0	9.5	8.0	7.0	7.5	6.0	6.0	6.0
15	20.0	19.0	19.5	10.0	9.5	9.5	8.5	8.0	8.0	7.0	6.0	6.5
16	19.0	18.5	19.0	10.0	7.0	9.0	8.0	6.5	7.0	7.0	6.5	6.5
17	19.0	18.5	18.5	6.5	6.0	6.5	6.5	5.5	6.0	6.5	6.0	6.0
18	19.5	18.5	19.0	7.0	6.5	6.5	6.0	5.5	5.5	7.0	6.0	6.5
19	19.0	18.0	18.5	9.5	7.5	8.5	5.5	5.0	5.0	7.0	6.5	7.0
20	18.0	17.5	18.0	9.5	9.0	9.5	5.5	4.5	5.0	7.0	6.0	6.5
21	18.0	17.5	18.0	10.0	9.5	9.5	5.5	4.5	5.0	6.0	5.5	5.5
22	18.5	17.5	18.0	10.0	9.5	10.0	5.5	3.0	4.5	5.5	5.0	5.5
23	18.5	15.5	17.0	11.0	10.0	10.5	3.5	3.0	3.0	6.0	5.0	5.5
24	16.0	15.5	16.0	11.5	11.0	11.5	3.0	2.5	3.0	6.5	5.5	6.0
25	16.5	16.0	16.5	11.0	9.5	10.5	3.0	2.0	2.5	6.0	4.0	5.0
26	17.0	16.5	17.0	10.0	9.5	9.5	3.0	2.0	2.5	6.5	5.0	6.0
27	17.0	16.5	16.5	10.5	9.5	10.0	4.0	2.5	3.0	6.5	6.0	6.5
28	16.5	16.5	16.5	11.0	9.5	10.0	5.0	4.0	4.5	6.5	6.0	6.0
29	16.5	16.0	16.0	10.0	9.0	9.5	5.0	4.5	4.5	6.5	6.0	6.0
30	17.5	16.0	16.5	9.0	8.0	8.5	4.5	4.5	4.5	7.0	6.0	6.0
31	17.5	16.5	17.0	---	---	---	4.5	3.5	4.0	6.5	6.0	6.5
MONTH	24.5	15.5	19.5	17.5	6.0	11.5	8.5	2.0	5.5	8.0	4.0	6.5

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

## STREAMS TRIBUTARY TO LAKE ERIE

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04208506 CUYAHOGA RIVER AT WEST THIRD STREET BRIDGE, IN CLEVELAND, OH--Continued  
TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	18.0	16.0	17.0	26.0	25.5	25.5	27.0	25.5	26.0	24.0	23.0	23.5
2	19.0	17.0	18.5	26.5	25.5	26.0	27.5	26.5	27.0	24.5	24.0	24.0
3	20.5	16.0	19.5	26.5	26.0	26.0	27.5	26.5	27.5	25.5	24.5	25.0
4	21.5	18.0	21.0	26.5	26.0	26.5	26.5	24.5	25.5	25.0	24.5	25.0
5	22.0	20.5	21.5	25.5	22.5	23.0	24.5	24.0	24.5	24.5	23.5	24.0
6	22.5	21.0	21.5	23.5	20.5	22.0	26.0	24.5	25.5	23.5	23.0	23.0
7	22.5	21.5	22.0	21.5	20.5	21.0	27.0	26.0	26.5	23.5	23.0	23.0
8	---	---	---	22.5	21.0	22.0	28.5	27.0	27.5	24.0	23.0	23.5
9	---	---	---	23.0	22.0	23.0	28.5	27.5	28.0	24.0	23.0	23.5
10	---	---	---	24.0	23.0	23.5	28.5	28.0	28.5	24.5	21.5	23.0
11	---	---	---	25.5	24.0	24.5	29.5	28.5	29.0	23.0	21.5	22.5
12	---	---	---	26.0	25.0	26.0	29.5	28.5	28.5	25.0	22.5	24.0
13	---	---	---	27.0	25.0	26.0	29.0	24.0	27.0	25.5	24.0	24.5
14	23.5	22.0	23.0	28.0	26.0	27.5	25.5	24.0	25.0	25.0	24.0	25.0
15	23.5	21.5	23.0	29.0	27.5	28.0	26.5	25.5	26.0	24.0	23.0	23.5
16	23.0	22.5	23.0	28.5	28.0	28.0	28.0	26.5	27.5	23.5	22.5	23.0
17	23.5	22.5	23.0	28.0	27.5	27.5	29.0	27.5	28.0	23.0	22.0	22.5
18	---	---	---	28.0	26.5	27.0	29.0	28.0	28.5	22.5	21.5	22.0
19	---	---	---	27.0	26.5	26.5	28.5	26.0	27.5	22.5	22.0	22.0
20	---	---	---	26.5	26.0	26.0	26.0	25.5	25.5	23.0	22.0	22.5
21	---	---	---	26.5	26.0	26.0	26.5	25.5	26.0	24.0	23.0	23.5
22	---	---	---	27.5	26.5	27.0	26.5	26.0	26.0	25.5	23.5	24.5
23	---	---	---	28.0	27.0	27.5	26.5	26.0	26.5	25.5	24.5	25.0
24	---	---	---	28.5	28.0	28.5	26.0	25.0	25.5	26.0	25.0	25.5
25	---	---	---	29.0	28.0	28.5	25.5	25.0	25.5	26.0	24.5	25.5
26	---	---	---	28.5	26.5	28.0	26.5	25.5	26.0	25.0	24.0	24.5
27	26.5	26.0	26.0	26.5	21.5	23.0	27.0	26.0	26.5	24.0	22.5	23.0
28	26.5	25.0	26.0	23.0	21.0	22.0	27.5	26.5	27.0	23.0	22.0	22.5
29	26.0	25.5	26.0	23.5	23.0	23.0	28.0	27.0	27.5	22.0	20.5	21.5
30	25.5	25.5	25.5	24.0	23.0	23.5	27.0	22.5	25.5	21.0	20.5	20.5
31	---	---	---	25.5	24.0	24.5	23.0	21.0	22.5	---	---	---
MONTH	26.5	16.0	22.5	29.0	20.5	25.5	29.5	21.0	26.5	26.0	20.5	23.5
YEAR	29.5	2.0	14.5									

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	2.7	1.5	2.0	4.6	4.1	4.4	8.4	8.0	8.2	9.1	8.8	8.9
2	2.6	1.3	1.6	4.8	4.4	4.5	8.5	7.8	8.2	8.9	8.6	8.8
3	1.7	1.0	1.3	5.8	4.2	4.9	8.5	7.9	8.2	8.7	6.6	8.3
4	2.8	1.5	2.0	5.9	5.2	5.7	9.8	8.2	9.0	8.3	7.9	8.1
5	3.7	1.8	2.8	6.4	5.7	6.1	9.6	9.3	9.4	8.0	6.2	7.8
6	4.1	2.4	3.2	6.7	6.1	6.4	9.4	8.8	9.1	7.9	7.4	7.6
7	4.1	2.8	3.4	6.5	5.9	6.2	9.5	9.0	9.2	7.8	7.7	7.8
8	3.4	2.3	2.7	6.0	4.9	5.5	9.8	9.2	9.6	8.0	7.5	7.7
9	3.6	2.3	2.8	5.2	3.7	4.9	9.7	9.1	9.6	7.8	7.0	7.3
10	4.2	2.2	3.4	4.9	4.4	4.7	9.7	9.2	9.4	7.6	7.2	7.4
11	2.9	2.2	2.6	7.7	4.6	6.4	9.5	9.0	9.3	8.3	7.5	7.9
12	3.0	2.2	2.8	8.5	7.7	8.2	9.5	8.8	9.3	7.7	7.1	7.4
13	3.4	2.3	2.8	8.6	8.1	8.4	9.3	9.0	9.1	---	---	---
14	4.0	3.2	3.6	8.3	7.7	8.0	9.1	6.8	8.7	---	---	---
15	4.1	2.8	3.1	8.0	7.7	7.8	8.4	7.7	8.2	---	---	---
16	4.9	4.0	4.5	9.3	8.1	8.5	8.8	7.9	8.4	---	---	---
17	5.8	4.7	5.3	9.5	9.2	9.3	9.1	8.6	8.9	---	---	---
18	6.0	5.0	5.7	9.6	9.3	9.4	9.1	9.0	9.0	---	---	---
19	6.2	5.0	5.6	9.2	8.4	9.0	9.3	9.0	9.1	---	---	---
20	5.7	5.0	5.3	8.9	8.4	8.7	9.3	9.0	9.1	---	---	---
21	5.6	4.8	5.1	8.7	8.4	8.5	9.1	8.8	9.0	---	---	---
22	5.0	4.6	4.8	8.6	7.6	8.4	9.7	8.8	9.3	---	---	---
23	6.4	4.7	5.4	8.6	7.9	8.2	9.6	8.5	9.5	---	---	---
24	6.5	5.6	6.0	7.9	7.0	7.5	9.6	7.6	9.4	---	---	---
25	5.6	4.6	5.3	7.9	7.1	7.4	9.5	8.4	9.3	---	---	---
26	5.6	4.8	5.2	8.0	7.8	7.9	9.5	7.9	9.3	10.7	10.1	10.3
27	5.2	4.4	4.8	7.9	7.4	7.7	9.4	7.6	9.1	10.5	4.8	9.0
28	5.3	4.8	5.1	8.5	6.1	7.8	9.2	8.5	9.0	10.0	4.0	7.8
29	5.1	4.7	4.9	8.0	7.4	7.8	8.9	8.4	8.7	10.6	9.9	10.3
30	5.2	4.4	4.8	8.4	7.9	8.1	8.8	6.0	8.4	10.2	9.2	9.9
31	4.9	4.1	4.4	---	---	---	8.9	6.6	8.4	9.8	9.2	9.5
MONTH	6.5	1.0	4.0	9.6	3.7	7.2	9.8	6.0	9.0	10.7	4.0	8.4



OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	10.5	9.4	10.0	11.3	10.8	11.1	12.7	12.2	12.4	5.4	4.8	5.1
2	10.7	9.9	10.2	11.5	11.2	11.4	12.8	11.8	12.2	5.1	3.6	4.5
3	11.4	10.3	10.8	11.4	11.0	11.2	12.3	10.4	11.8	6.2	3.9	5.1
4	11.8	11.2	11.5	11.4	11.0	11.2	12.2	10.8	11.5	8.3	5.4	6.9
5	12.1	11.7	11.8	11.5	10.9	11.1	11.8	10.7	11.0	8.8	8.4	8.6
6	12.0	11.6	11.8	11.5	11.1	11.3	---	---	---	8.9	8.4	8.7
7	12.1	11.9	12.0	11.8	11.2	11.5	---	---	---	8.7	7.7	8.2
8	12.2	11.2	11.6	11.8	9.7	11.3	10.4	10.2	10.3	8.5	7.5	7.8
9	11.7	11.2	11.5	11.8	10.8	11.3	10.4	9.5	10.2	9.0	8.3	8.6
10	11.6	11.0	11.2	11.4	10.7	11.0	10.2	9.3	9.9	9.4	9.0	9.3
11	12.1	11.0	11.7	10.8	10.3	10.5	9.8	9.2	9.5	9.5	7.6	8.8
12	12.9	12.2	12.6	10.5	9.8	10.1	9.5	8.9	9.2	8.7	7.6	8.5
13	12.9	12.5	12.7	9.9	9.2	9.6	9.2	7.8	8.5	9.3	8.5	8.8
14	12.2	11.8	12.0	9.2	8.4	8.7	7.6	6.8	7.1	9.8	9.3	9.5
15	12.6	11.9	12.3	---	---	---	7.8	6.8	7.4	9.8	8.9	9.4
16	12.7	12.4	12.5	---	---	---	7.9	6.7	7.4	9.7	9.2	9.5
17	12.5	12.2	12.3	---	---	---	8.0	7.0	7.6	9.6	8.6	9.2
18	12.2	11.9	12.0	---	---	---	8.7	6.7	7.8	9.3	8.0	8.6
19	12.2	11.8	12.0	---	---	---	8.7	7.5	8.3	8.4	4.1	6.9
20	11.8	11.5	11.7	---	---	---	8.7	7.7	8.4	8.7	5.4	6.6
21	11.8	11.4	11.6	---	---	---	8.7	7.1	8.0	8.8	8.1	8.3
22	11.8	11.4	11.6	12.7	12.2	12.4	8.2	7.2	7.8	8.1	6.6	7.6
23	11.7	11.2	11.5	13.1	12.6	12.9	9.1	7.6	8.3	7.6	6.4	7.0
24	11.4	10.5	10.9	13.2	12.9	13.1	9.2	8.0	8.9	7.8	6.5	7.3
25	10.6	10.4	10.4	13.1	12.7	13.0	9.5	8.3	9.1	7.7	6.9	7.3
26	11.1	10.4	10.7	12.9	12.5	12.7	9.1	7.5	8.3	7.3	6.4	6.8
27	11.1	10.7	10.9	12.9	12.0	12.4	7.5	6.2	6.9	7.8	5.8	7.0
28	11.4	10.8	11.1	12.8	11.8	12.2	6.9	6.1	6.5	7.6	6.4	7.2
29	11.4	10.8	11.1	12.9	12.0	12.2	6.4	4.0	5.5	8.0	7.4	7.8
30	---	---	---	14.0	12.4	12.7	6.1	4.5	5.5	8.2	7.5	8.0
31	---	---	---	15.7	12.2	12.9	---	---	---	8.0	6.5	7.6
MONTH	12.9	9.4	11.5	15.7	8.4	11.6	12.8	4.0	8.8	9.8	3.6	7.8
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	7.9	5.6	6.8	.1	.0	.0	3.1	1.6	2.2	4.9	3.5	4.0
2	7.0	5.6	6.3	.0	.0	.0	2.3	.8	1.6	3.9	3.0	3.4
3	5.8	2.4	4.4	.0	.0	.0	2.9	1.4	1.9	4.0	3.0	3.4
4	4.7	2.6	3.8	1.8	.0	.1	5.0	2.6	3.3	3.7	3.1	3.5
5	4.8	3.6	4.4	4.7	.8	4.0	5.5	4.5	4.9	4.0	3.4	3.8
6	5.3	3.9	4.5	7.1	3.6	5.1	5.6	4.3	4.8	4.0	3.2	3.7
7	4.0	2.6	3.5	6.4	5.0	5.6	5.8	4.3	4.9	4.0	3.3	3.6
8	5.4	2.2	4.1	5.7	4.2	4.7	5.9	3.9	4.8	4.2	2.9	3.5
9	4.3	2.4	3.4	5.3	4.4	4.9	5.6	2.6	3.6	4.2	3.1	3.7
10	5.0	1.1	3.4	5.0	3.9	4.3	3.2	1.7	2.7	5.5	3.2	4.7
11	2.8	.3	1.8	4.7	3.2	4.0	6.4	2.0	4.1	5.5	4.1	4.9
12	3.3	.5	2.0	4.1	3.3	3.7	5.1	2.0	3.2	4.6	2.9	4.1
13	2.4	.0	1.3	3.3	2.1	2.8	5.0	1.9	3.9	4.0	2.3	3.2
14	4.4	2.1	3.2	4.0	1.8	2.5	4.5	2.6	3.6	4.2	2.0	3.3
15	3.8	2.0	3.1	3.8	1.3	2.3	3.0	1.6	2.2	4.1	3.3	3.9
16	2.8	1.8	2.3	2.2	1.1	1.6	2.2	.9	1.5	3.9	2.9	3.5
17	2.7	.0	1.4	1.7	.6	1.3	3.0	.6	1.6	4.2	2.9	3.7
18	3.5	.0	.5	2.0	.6	1.3	2.9	.9	1.7	4.7	3.7	4.2
19	4.7	1.4	3.2	1.9	.8	1.2	2.8	1.5	2.0	4.4	3.3	3.9
20	3.0	2.2	2.6	1.3	.3	.9	2.9	.8	1.4	4.5	3.2	3.9
21	3.6	2.5	3.0	2.4	1.0	1.6	1.9	.6	1.1	3.8	2.7	3.2
22	3.3	2.6	2.9	3.3	1.4	2.2	1.9	.6	1.2	3.4	2.1	2.8
23	2.7	.9	2.1	4.0	1.2	2.2	1.9	1.0	1.4	3.6	1.9	2.7
24	.8	.0	.3	2.0	.8	1.3	2.0	.2	1.5	2.9	1.4	2.3
25	2.4	.6	1.4	2.7	.8	1.3	2.1	1.4	1.7	2.6	1.3	2.1
26	.9	.0	.5	1.7	.3	.7	2.2	1.4	1.7	2.4	1.0	1.5
27	.0	.0	.0	5.7	2.3	3.9	2.3	1.4	1.8	2.6	.8	2.0
28	.3	.0	.0	5.5	3.6	4.5	2.7	1.0	1.6	3.0	2.0	2.7
29	.6	.0	.2	4.9	3.8	4.1	2.1	1.6	1.8	2.9	2.1	2.7
30	1.4	.0	.3	4.8	3.9	4.3	4.6	1.1	2.7	2.7	1.7	2.4
31	---	---	---	3.9	3.0	3.5	4.8	4.2	4.3	---	---	---
MONTH	7.9	.0	2.6	7.1	.0	2.6	6.4	.2	2.6	5.5	.8	3.3
YEAR	15.7	.0	6.4									

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

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	903	909	581	1460	1390	1020	531	789	690	977	900	657
2	909	909	618	1190	1530	1060	513	846	711	999	951	713
3	912	717	642	1120	1590	1090	527	858	714	1010	977	827
4	906	650	689	1250	1170	1110	600	654	732	993	698	873
5	825	690	435	1350	1190	1070	717	536	750	582	590	861
6	486	777	486	1440	1140	1410	705	555	777	597	657	810
7	644	792	510	1360	1100	1230	741	615	791	600	695	833
8	729	791	824	1330	1310	1240	702	633	798	687	753	924
9	813	804	732	1290	1350	1110	696	501	800	789	768	958
10	822	839	881	1230	1270	1100	696	543	813	828	792	663
11	825	456	929	1200	1310	1160	704	561	840	867	831	615
12	873	560	722	1210	848	1080	735	404	840	864	851	783
13	915	726	585	1240	699	1050	761	432	840	825	846	855
14	890	729	561	1220	618	1220	807	461	605	840	543	926
15	825	711	548	1140	600	1440	782	485	660	875	556	789
16	831	620	543	1150	567	1040	770	492	731	885	830	813
17	852	402	536	1160	522	696	788	508	830	878	921	843
18	846	555	543	1120	563	684	798	531	905	876	968	891
19	843	570	558	1070	578	675	777	590	635	903	875	918
20	816	513	602	1100	576	698	794	605	666	920	747	921
21	816	525	672	1140	582	444	792	375	749	933	794	954
22	842	528	1040	1160	612	556	786	483	794	960	911	978
23	779	563	815	1150	633	722	758	528	816	981	957	1000
24	687	570	806	1110	651	786	693	444	825	1010	999	1010
25	657	570	828	2250	689	603	635	470	830	990	1000	990
26	699	579	900	2090	933	536	707	534	870	987	975	948
27	789	590	864	1580	1080	528	747	600	891	729	981	924
28	830	419	807	1410	1040	585	744	612	918	722	1000	929
29	860	432	971	1250	974	578	732	567	953	668	972	966
30	882	518	1490	1150	---	599	747	581	960	708	795	993
31	903	---	1860	1160	---	549	---	663	---	822	521	---
MEAN	813	634	761	1290	935	893	716	563	791	849	831	873

WTR YR 1984      MEAN      829      MAX      2250      MIN      375  
PH (STANDARD UNITS), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.4	---	7.7	7.8	7.7	7.8	---	7.6	7.6	7.5	7.6	7.1
2	7.4	---	7.6	7.7	7.6	7.9	---	7.6	7.6	7.5	7.6	7.1
3	7.4	7.5	7.6	7.7	7.6	7.8	---	7.6	7.5	7.4	7.7	7.1
4	7.5	7.7	7.6	7.6	7.8	7.8	8.0	7.6	7.4	7.4	7.7	7.1
5	7.5	7.7	7.7	7.6	7.7	7.7	7.8	7.7	7.4	7.5	7.7	7.2
6	7.4	7.8	7.7	7.6	7.6	7.6	7.8	7.6	7.4	7.5	7.7	7.2
7	7.5	7.8	7.8	7.6	7.8	7.6	7.8	7.6	7.4	7.5	7.7	7.2
8	7.5	7.8	7.8	7.7	7.7	7.5	7.8	7.6	7.5	7.6	7.7	7.1
9	7.5	7.8	7.8	7.7	7.8	7.5	7.8	7.6	7.4	7.6	7.5	7.0
10	7.5	7.8	7.7	7.7	7.8	7.6	7.8	7.7	7.3	7.6	7.4	7.0
11	7.5	7.8	7.7	7.7	7.8	7.5	7.8	7.6	7.4	7.6	7.2	6.9
12	7.5	7.8	7.7	7.7	7.8	7.5	7.8	7.6	7.5	7.6	7.2	7.0
13	7.5	7.8	7.6	7.7	7.8	7.6	7.7	7.6	7.4	7.6	7.3	7.0
14	7.5	7.8	7.6	7.7	7.9	7.5	7.7	7.7	7.4	7.6	7.2	7.1
15	7.5	7.8	7.6	7.7	7.8	7.5	7.7	7.7	7.6	7.6	7.0	7.2
16	7.6	7.9	7.6	7.7	7.8	7.7	7.7	7.7	7.6	7.6	7.1	7.3
17	7.6	7.9	7.7	7.7	7.8	7.6	7.7	7.6	7.6	7.6	7.1	7.3
18	7.7	7.9	7.6	7.7	7.7	7.6	7.7	7.6	7.5	7.7	7.1	7.3
19	7.6	7.8	7.7	7.6	7.7	7.6	7.7	7.5	7.6	7.8	7.1	7.2
20	---	7.9	7.7	7.6	7.7	7.5	7.7	7.5	7.5	7.7	7.1	7.1
21	---	7.8	7.6	7.7	7.7	---	7.7	7.7	7.6	7.7	7.1	7.1
22	---	7.8	7.7	7.8	7.7	---	7.7	7.5	7.6	7.7	7.2	7.2
23	---	7.7	7.7	7.8	7.7	---	7.6	7.5	7.5	7.7	7.2	7.1
24	---	7.8	7.6	7.8	7.6	---	7.7	7.6	7.5	7.7	7.2	7.1
25	---	8.0	7.7	7.9	7.6	---	7.7	7.6	7.5	7.7	7.2	7.1
26	---	7.8	7.7	7.8	7.7	---	7.7	7.5	7.5	7.7	7.1	7.1
27	---	7.7	7.7	7.6	7.7	---	7.6	7.6	7.6	7.8	7.1	7.3
28	---	7.7	7.7	7.6	7.8	---	7.6	7.6	7.5	7.8	7.1	7.5
29	---	7.8	7.7	7.6	7.9	---	7.6	7.7	7.5	7.6	7.1	7.5
30	---	7.8	7.7	7.7	---	---	7.6	7.8	7.5	7.6	7.1	7.4
31	---	---	7.7	7.6	---	---	---	7.8	---	7.6	7.3	---
MEAN	7.5	7.8	7.7	7.7	7.7	7.6	7.7	7.6	7.5	7.6	7.3	7.2

WTR YR 1984      MEAN      7.6      MAX      8.0      MIN      6.9

## STREAMS TRIBUTARY TO LAKE ERIE

04208506 CUYAHOGA RIVER AT WEST THIRD STREET BRIDGE, IN CLEVELAND, OH--Continued  
 TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
 MEDIAN VALUES

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

WTR YR 1984 MEAN 14.5 MAX 29.0 MIN 2.5

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
 MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	4.4	8.2	9.0	10.1	11.2	12.4	5.2	6.7	.0	2.0	3.9
2	1.5	4.5	8.2	8.8	10.3	11.4	12.2	4.6	6.3	.0	1.6	3.4
3	1.3	4.9	8.3	7.3	10.9	11.3	11.8	5.2	4.6	.0	1.8	3.4
4	2.0	5.7	9.0	8.1	11.6	11.2	11.7	7.0	3.7	.0	3.1	3.6
5	3.0	6.2	9.4	7.9	11.8	11.1	11.0	8.6	4.4	4.3	4.8	3.8
6	3.2	6.4	9.1	7.6	11.8	11.3	---	8.7	4.6	4.7	4.8	3.8
7	3.4	6.2	9.2	7.8	12.0	11.5	---	8.3	3.7	5.5	4.9	3.6
8	2.6	5.5	9.6	7.7	11.5	11.3	10.3	7.9	3.8	4.4	4.9	3.4
9	2.8	4.9	9.6	7.3	11.5	11.3	10.2	8.5	3.6	4.9	3.3	3.7
10	3.6	4.7	9.4	7.5	11.3	11.0	10.0	9.3	3.6	4.2	2.8	5.0
11	2.6	6.3	9.3	7.8	11.8	10.5	9.5	8.9	1.9	4.0	4.6	4.9
12	2.8	8.3	9.3	7.4	12.6	10.0	9.2	8.5	2.1	3.7	2.8	4.1
13	2.7	8.4	9.1	---	12.7	9.6	8.5	8.8	1.3	2.9	4.4	3.5
14	3.6	7.9	8.8	---	12.0	8.7	7.1	9.5	3.3	2.2	3.7	3.5
15	3.0	7.8	8.3	---	12.3	---	7.4	9.3	3.3	2.3	2.2	3.9
16	4.6	8.6	8.5	---	12.5	---	7.4	9.5	2.4	1.6	1.5	3.5
17	5.3	9.4	8.9	---	12.3	---	7.7	9.2	1.2	1.3	1.4	3.8
18	5.8	9.4	9.1	---	12.0	---	7.8	8.6	.0	1.3	1.7	4.2
19	5.7	9.0	9.1	---	12.0	---	8.3	8.1	3.3	1.2	2.1	3.9
20	5.3	8.7	9.1	---	11.7	---	8.4	5.9	2.7	1.0	1.1	3.8
21	5.1	8.5	9.1	---	11.6	---	8.0	8.2	3.0	1.4	1.1	3.2
22	4.7	8.5	9.2	---	11.6	12.3	7.9	7.6	2.9	2.1	1.1	2.8
23	5.1	8.1	9.5	---	11.5	13.0	8.3	7.0	2.3	1.7	1.4	2.8
24	6.0	7.6	9.5	---	11.0	13.0	9.0	7.3	.3	1.2	1.8	2.4
25	5.3	7.4	9.3	---	10.4	13.0	9.2	7.3	1.4	1.2	1.7	2.1
26	5.2	7.9	9.4	10.2	10.7	12.7	8.3	6.8	.6	.6	1.7	1.5
27	4.8	7.7	9.3	9.7	10.9	12.4	7.0	7.1	.0	3.4	1.7	2.0
28	5.1	7.9	9.1	8.6	11.1	12.2	6.4	7.3	.0	4.3	1.5	2.8
29	4.9	7.8	8.7	10.3	11.2	12.2	5.5	7.8	.1	4.1	1.8	2.7
30	4.8	8.1	8.6	10.0	---	12.5	5.7	8.0	.2	4.2	2.2	2.4
31	4.4	---	8.4	9.5	---	12.7	---	7.6	---	3.5	4.3	---
MEAN	3.9	7.2	9.0	8.5	11.5	11.6	8.8	7.8	2.6	2.5	2.6	3.4

WTR YR 1984 MEAN 6.4 MAX 13.0 MIN .0

## STREAMS TRIBUTARY TO LAKE ERIE

99

04208690 EUCLID CREEK NEAR EUCLID, OH

LOCATION.--Lat 41°34'28", long 81°32'51", Cuyahoga County, Hydrologic Unit 04110003, on right bank 150 ft upstream from St. Clair Avenue bridge, 0.3 mi downstream from city of Cleveland waterworks, 1.6 mi upstream from mouth.

DRAINAGE AREA.--22.6 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1977 to September 1980, October 1983 to current year.

GAGE.--Water-stage recorder. Datum of gage is 600.26 ft National Geodetic Vertical Datum of 1929, city of Cleveland bench mark.

REMARKS.--Records poor. Diurnal fluctuation caused by water plant upstream from gage. Sediment data collected July 1977 to September 1978.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,410 ft<sup>3</sup>/s Aug. 2, 1980, gage height, 8.93 ft from rating curve extended above 1,500 ft<sup>3</sup>/s on basis of contracted-opening measurement of peak flow and a slope area measurement at a lower stage; minimum daily, 2.0 ft<sup>3</sup>/s Oct. 2, 1983.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of August 31, 1975 reached a stage of 15.06 ft, from floodmark, discharge, 7,440 ft<sup>3</sup>/s on basis of contracted-opening measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft<sup>3</sup>/s and maximums (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 5	1145	2090	6.50	May 12	0215	*2370	*7.01
Mar. 21	0830	1510	5.36	Aug. 13	unknown	2100	unknown

Minimum daily discharge, 2.0 ft<sup>3</sup>/s Oct. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	12	21	11	14	17	49	18	23	15	8.2	12
2	2.0	98	20	10	13	16	38	18	19	15	41	10
3	3.4	123	22	9.8	140	15	30	32	80	15	24	27
4	4.8	32	170	9.4	60	14	57	111	25	270	45	15
5	400	55	70	9.0	35	150	153	54	26	60	15	42
6	59	28	130	8.8	25	120	173	31	96	230	11	14
7	15	17	70	8.5	22	90	177	24	56	45	9.0	12
8	24	15	45	8.2	13	50	54	205	22	22	8.5	12
9	36	15	40	8.0	21	40	39	77	20	21	8.5	16
10	15	16	47	7.8	32	30	27	45	17	20	8.0	92
11	13	679	60	7.6	80	25	24	106	16	21	7.8	18
12	27	150	80	7.2	70	22	14	596	15	20	8.0	15
13	48	54	50	7.0	220	21	20	75	50	18	480	34
14	27	35	35	7.0	420	20	44	41	120	16	40	20
15	15	70	26	7.0	130	314	31	26	50	16	14	22
16	10	250	22	7.0	80	633	21	12	16	16	12	12
17	13	130	20	7.0	75	145	27	7.9	12	16	10	8.9
18	9.9	50	19	6.8	110	73	49	26	98	23	130	9.6
19	11	100	20	6.8	100	55	22	28	78	6.7	35	7.6
20	11	60	20	6.8	70	249	20	536	32	6.1	14	8.6
21	14	40	22	6.8	50	1160	16	308	16	4.9	12	7.0
22	28	25	200	6.6	40	194	31	106	15	6.7	10	8.6
23	73	50	25	6.6	32	103	146	574	16	7.0	9.5	11
24	25	32	18	130	27	93	319	126	16	5.6	9.0	10
25	36	25	17	60	23	114	90	60	15	5.8	8.8	27
26	38	21	15	45	21	67	42	56	15	18	8.5	35
27	22	21	14	30	19	47	36	40	15	55	8.5	10
28	12	180	13	20	18	81	28	100	15	7.9	8.5	9.6
29	11	50	12	18	18	177	24	130	21	6.4	23	7.9
30	9.8	25	12	16	---	98	26	70	16	6.1	136	8.6
31	10	---	11	14	---	73	---	35	---	6.7	23	---
TOTAL	1025.6	2458	1346	513.7	1978	4306	1827	3673.9	1031	1001.9	1185.8	562.4
MEAN	33.1	81.9	43.4	16.6	68.2	139	60.9	119	34.4	32.3	38.3	18.7
MAX	400	679	200	130	420	1160	319	596	120	270	480	92
MIN	2.0	12	11	6.6	13	14	14	7.9	12	4.9	7.8	7.0
CFSM	1.47	3.62	1.92	.74	3.02	6.15	2.70	5.27	1.52	1.43	1.70	.83
IN.	1.69	4.05	2.22	.85	3.26	7.09	3.01	6.05	1.70	1.65	1.95	.93

WTR YR 1984 TOTAL 20909.3 MEAN 57.1 MAX 1160 MIN 2.0 CFSM 2.53 IN 34.42



## STREAMS TRIBUTARY TO LAKE ERIE

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 bank, 150 ft downstream from city waterworks dam, 800 ft downstream from East Branch, 1.0 mi southeast of Willoughby, and 5.0 mi upstream from mouth.

DRAINAGE AREA.--246 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1925 to November 1935, October 1939 to current year (discontinued) [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 National Geodetic Vertical Datum of 1929. Prior to Dec.20, 1939, nonrecording gage at site 150 ft upstream at datum 7 ft higher.

REMARKS.--Records poor. Water diverted 200 ft 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.--55 years, 336 ft<sup>3</sup>/s, 18.55 in/yr, adjusted for diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,000 ft<sup>3</sup>/s Mar. 22, 1948, gage height, 17.95 ft (from high-water mark in well), from rating curve extended above 14,000 ft<sup>3</sup>/s on basis of contracted-opening measurements of peak flow; minimum daily, 3.0 ft<sup>3</sup>/s July 25, 1934.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a stage of 10.3 ft, from floodmark, former site and datum, discharge, 24,500 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,000 ft<sup>3</sup>/s and maximums (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Nov. 16	2330	5580	8.24	Mar. 21	1230	4930	7.69
Feb. 11	2200	7250	9.58	May 12	0500	*7630	*9.87
Feb. 14	0930	5370	8.06	May 20	2200	4510	7.32
Mar. 16	1230	4740	7.52	June 6	2200	7190	9.53

Minimum daily discharge, 37 ft<sup>3</sup>/s Oct. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	84	399	150	170	190	639	203	374	69	51	200
2	47	121	319	150	190	180	492	187	316	61	69	120
3	37	437	291	150	800	170	388	192	423	64	107	150
4	42	349	1570	140	1200	170	367	1690	272	107	516	130
5	405	399	1200	140	1000	355	624	1070	247	693	272	120
6	222	331	1070	140	700	902	670	580	1490	548	114	90
7	100	235	1190	140	450	626	1040	353	1130	631	80	70
8	75	170	637	140	350	473	609	1070	548	192	72	66
9	95	139	463	130	270	360	423	1130	468	122	61	64
10	75	121	418	130	1040	320	332	685	236	96	56	400
11	70	1720	424	130	2140	280	253	616	187	86	51	110
12	84	1310	1460	130	2560	260	236	4630	167	96	47	90
13	105	734	985	130	2890	240	230	1420	154	80	47	200
14	127	581	581	130	3820	230	332	1190	717	72	47	508
15	95	637	444	120	1480	681	508	725	236	66	45	203
16	75	2800	355	120	806	3090	395	516	145	64	45	133
17	66	3480	291	120	603	1670	324	409	532	61	41	93
18	70	1260	195	120	644	882	438	416	219	103	49	83
19	70	1370	222	120	630	540	324	616	717	90	111	77
20	66	1690	215	120	517	1080	279	1690	236	64	58	69
21	66	1370	308	120	431	3790	241	2260	150	58	49	69
22	70	651	1210	110	392	1980	236	908	118	56	45	66
23	201	483	595	110	367	1100	891	1190	96	58	47	66
24	201	497	300	350	343	717	1250	899	86	56	47	59
25	127	405	240	450	343	856	985	540	77	54	46	80
26	152	343	220	380	325	1040	532	416	72	58	44	154
27	158	285	200	380	314	740	374	347	93	158	42	86
28	116	1580	190	300	249	670	316	446	80	100	42	72
29	100	1300	170	250	210	1680	253	934	72	129	160	56
30	84	630	160	220	---	1010	230	580	74	69	800	64
31	75	---	160	220	---	798	---	476	---	56	400	---
TOTAL	3329	25512	16482	5540	25234	27080	14211	28384	9732	4217	3661	3768
MEAN	107	850	532	179	870	874	474	916	324	136	118	126
MAX	405	3480	1570	450	3820	3790	1250	4630	1490	693	800	508
MIN	37	84	160	110	170	170	230	187	72	54	41	64
MEAN +	112	855	536	184	875	878	478	920	329	140	123	128
CFSM +	0.46	3.48	2.18	0.75	3.56	3.57	1.94	3.74	1.34	0.57	0.50	0.52
IN. +	0.52	3.87	2.51	0.86	3.83	4.11	2.17	4.31	1.49	0.66	0.57	0.58

CAL YR 1983 TOTAL 138090 MEAN 378 MAX 4230 MIN 21 MEAN + 383 CFSM + 1.56 IN. + 21.10  
WTR YR 1984 TOTAL 167150 MEAN 457 MAX 4630 MIN 37 MEAN + 461 CFSM + 1.87 IN. + 25.48  
+ Adjusted for municipal supply diversion of city of Willoughby.

## STREAMS TRIBUTARY TO LAKE ERIE

101

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 downstream from Big Creek in Painesville.

DRAINAGE AREA.--685 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is 620.37 ft National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--10 years, 1,037 ft<sup>3</sup>/s, 20.55 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,900 ft<sup>3</sup>/s Dec. 25, 1979, gage height, 13.16 ft; minimum, 11 ft<sup>3</sup>/s Sept. 14, 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 6,500 ft<sup>3</sup>/s and maximums (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 12	2000	ice jam	*9.49	Mar. 21	1330	*9910	9.03
Feb. 14	0900	9610	8.88	June 6	2230	9650	8.90
Mar. 16	1030	7080	7.48				

Minimum discharge, 22 ft<sup>3</sup>/s Aug. 28, 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	134	1750	320	480	320	3740	355	854	50	57	43
2	38	128	1230	300	500	290	2940	292	600	49	49	42
3	34	590	983	280	1400	280	1940	285	536	49	60	301
4	50	1170	1930	270	2000	270	1270	2970	435	48	57	296
5	295	1060	3170	260	2500	713	1810	3930	370	75	58	214
6	263	1170	3210	250	1500	1370	2750	2670	1900	121	290	120
7	173	900	3720	240	1000	1970	3910	1840	2650	288	318	84
8	119	632	3020	230	800	2100	2840	2160	1170	572	270	64
9	85	453	2200	220	750	1300	1900	4540	700	444	255	50
10	70	343	1640	210	900	950	1250	3210	407	972	175	94
11	59	2060	1240	210	1500	700	958	2280	269	3600	117	96
12	56	4210	3080	200	3000	600	628	3940	196	1890	86	104
13	80	3030	4540	200	5000	550	520	4570	154	972	66	100
14	298	1870	3180	190	8300	500	489	3720	241	661	54	609
15	355	1390	2360	190	7230	611	562	3220	229	385	48	868
16	249	3860	1980	180	5390	4090	583	2530	214	241	42	526
17	170	5050	1410	180	4090	5140	639	1510	396	158	38	324
18	125	3880	915	180	3410	3940	643	949	382	134	40	209
19	91	2470	808	180	2760	2900	643	978	604	117	128	140
20	70	2350	560	180	2020	3610	608	1850	587	96	53	102
21	57	2510	832	170	1470	8720	584	3650	489	98	38	76
22	48	2050	1200	170	1170	7330	555	3310	330	76	36	61
23	87	1370	727	170	940	5060	1290	2770	212	64	36	51
24	204	1040	600	400	762	3870	1710	3110	152	55	36	46
25	303	788	550	700	663	3720	2010	2540	111	46	31	44
26	276	626	480	1300	585	3200	1410	1810	89	40	27	241
27	405	506	450	1100	523	2270	1030	1300	76	63	25	125
28	409	2470	420	800	443	1880	755	881	82	55	22	92
29	344	4010	380	650	345	2810	551	1660	66	46	78	69
30	238	2890	360	550	---	3370	443	1590	59	50	63	58
31	172	---	340	500	---	3570	---	1150	---	63	73	---
TOTAL	5266	55010	49265	10980	61431	78004	40861	71570	14559	11568	2726	5249
MEAN	170	1834	1589	354	2118	2516	1362	2309	485	373	87.9	175
MAX	409	5050	4540	1300	8300	8720	3910	4570	2650	3600	318	868
MIN	34	128	340	170	345	270	443	285	59	40	22	42
CFSM	.25	2.68	2.32	.52	3.09	3.67	1.99	3.37	.71	.55	.13	.26
IN.	.29	2.99	2.68	.60	3.34	4.24	2.22	3.89	.79	.63	.15	.29

CAL YR 1983 TOTAL 297838 MEAN 816 MAX 5050 MIN 12 CFSM 1.19 IN 16.17  
WTR YR 1984 TOTAL 406489 MEAN 1111 MAX 8720 MIN 22 CFSM 1.62 IN 22.07

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 Dec. 25, 1979; minimum daily, 0.09 ton Oct. 26, 27, 1982

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 477 mg/L Mar. 16; minimum daily mean, 2 mg/L Oct. 10, 21, 22, 31.

SEDIMENT LOADS: Maximum daily, 10,400 tons Feb. 14; minimum daily, 0.26 ton Oct. 22.

## SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER				NOVEMBER			DECEMBER		
1	43	8	.93	134	3	1.1	1750	32	151
2	38	8	.82	128	8	3.0	1230	24	80
3	34	7	.64	590	81	133	983	22	58
4	50	15	2.0	1170	96	289	1930	82	489
5	295	74	77	1060	35	100	3170	64	548
6	263	53	38	1170	31	98	3210	51	442
7	173	19	8.9	900	19	46	3720	43	432
8	119	11	3.5	632	13	22	3020	33	269
9	85	7	1.6	453	8	9.8	2200	24	143
10	70	2	.38	343	8	7.4	1640	20	89
11	59	6	.96	2060	285	2830	1240	13	44
12	56	7	1.1	4210	214	2440	3080	100	832
13	80	13	2.8	3030	60	491	4540	110	1350
14	298	23	19	1870	31	157	3180	41	352
15	355	17	16	1390	25	92	2360	37	236
16	249	8	5.4	3860	124	1530	1980	25	134
17	170	7	3.2	5050	93	1280	1410	23	88
18	125	7	2.4	3880	52	545	915	18	44
19	91	7	1.7	2470	27	180	808	11	24
20	70	4	.76	2350	25	159	560	8	12
21	57	2	.31	2510	30	203	832	55	124
22	48	2	.26	2050	27	149	1200	14	45
23	87	5	1.2	1370	22	81	727	8	16
24	204	10	5.5	1040	18	51	600	9	15
25	303	17	14	788	17	36	550	9	13
26	276	8	6.0	626	13	22	480	9	12
27	405	21	23	506	10	14	450	7	8.5
28	409	12	13	2470	265	2050	420	7	7.9
29	344	12	11	4010	110	1250	380	5	5.1
30	238	6	3.9	2890	52	406	360	8	7.8
31	172	2	.93	---	---	---	340	12	11
TOTAL	5266	---	266.19	55010	---	14675.3	49265	---	6082.3

## STREAMS TRIBUTARY TO LAKE ERIE

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04212100 GRAND RIVER NEAR PAINESVILLE, OH--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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	320	13	11	480	10	13	320	6	5.2
2	300	15	12	500	10	13	290	12	9.4
3	280	15	11	1400	105	397	280	17	13
4	270	14	10	2000	100	540	270	17	12
5	260	15	11	2500	36	243	713	48	92
6	250	12	8.1	1500	14	57	1370	140	518
7	240	5	3.2	1000	8	22	1970	64	340
8	230	5	3.1	800	7	15	2100	33	187
9	220	7	4.2	750	9	18	1300	23	81
10	210	7	4.0	900	10	24	950	22	56
11	210	7	4.0	1500	160	648	700	24	45
12	200	8	4.3	3000	340	2750	600	20	32
13	200	9	4.9	5000	160	2160	550	11	16
14	190	10	5.1	8300	465	10400	500	15	20
15	190	12	6.2	7230	215	4200	611	45	77
16	180	13	6.3	5390	122	1780	4090	477	5090
17	180	8	3.9	4090	90	994	5140	327	4550
18	180	8	3.9	3410	68	626	3940	159	1760
19	180	10	4.9	2760	58	432	2900	87	681
20	180	10	4.9	2020	51	278	3610	88	1000
21	170	10	4.6	1470	41	163	8720	409	9490
22	170	10	4.6	1170	30	95	7330	164	3250
23	170	10	4.6	940	23	58	5060	102	1390
24	400	17	18	762	17	35	3870	74	773
25	700	48	91	663	23	41	3720	67	673
26	1300	13	46	585	19	30	3200	62	536
27	1100	10	30	523	13	18	2270	55	337
28	800	10	22	443	8	9.6	1880	48	235
29	650	10	18	345	7	6.5	2810	91	636
30	550	10	15	---	---	---	3370	62	564
31	500	10	13	---	---	---	3570	60	578
TOTAL	10980	---	392.8	61431	---	26066.1	78004	---	33046.6
APRIL				MAY				JUNE	
1	3740	41	414	355	9	8.6	854	20	46
2	2940	32	254	292	7	5.5	600	22	36
3	1940	26	136	285	6	4.6	536	31	45
4	1270	22	75	2970	233	2100	435	13	15
5	1810	44	215	3930	123	1420	370	13	13
6	2750	60	445	2670	59	425	1900	247	4570
7	3910	70	739	1840	34	169	2650	389	3010
8	2840	47	360	2160	64	459	1170	124	392
9	1900	28	144	4540	194	2360	700	62	117
10	1250	26	88	3210	58	548	407	28	31
11	858	25	58	2280	34	209	269	16	12
12	628	17	29	3940	129	1370	196	14	7.4
13	520	8	11	4570	114	1410	154	13	5.4
14	489	7	9.2	3720	77	773	241	52	34
15	562	7	11	3220	68	591	228	23	14
16	583	8	13	2530	52	355	214	21	12
17	639	7	12	1510	41	167	396	83	109
18	643	5	8.7	949	27	69	382	63	65
19	643	3	5.2	978	26	69	604	72	117
20	608	4	6.6	1850	157	1270	587	71	113
21	584	5	7.9	3650	261	2540	489	49	65
22	555	5	7.5	3310	77	688	330	41	37
23	1290	57	196	2770	65	486	212	39	22
24	1710	86	467	3110	84	705	152	35	14
25	2010	55	298	2540	57	391	111	30	9.0
26	1410	28	107	1810	49	239	89	27	6.5
27	1030	14	39	1300	41	144	76	23	4.7
28	755	8	16	881	33	79	82	21	4.6
29	551	8	12	1660	64	286	66	17	3.0
30	443	7	8.4	1590	51	219	59	22	3.5
31	---	---	---	1150	31	96	---	---	---
TOTAL	40861	---	4192.5	71570	---	19655.7	14559	---	8933.1



04212100 GRAND RIVER NEAR PAINESVILLE. OH--Continued

## SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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	50	21	2.8	57	9	1.4	43	28	3.3
2	49	23	3.0	49	13	1.7	42	18	2.0
3	49	18	2.4	60	19	3.1	301	86	108
4	48	13	1.7	57	11	1.7	296	90	72
5	75	20	4.1	58	12	1.9	214	54	31
6	121	37	14	290	40	31	120	23	7.5
7	288	67	52	318	31	27	84	20	4.5
8	572	74	114	270	25	18	64	16	2.8
9	444	60	72	255	25	17	50	17	2.3
10	972	293	971	175	15	7.1	94	32	8.1
11	3600	344	3240	117	16	5.1	96	24	6.2
12	1890	115	587	86	20	4.6	104	25	7.0
13	972	79	207	66	21	3.7	100	24	11
14	661	43	77	54	21	3.1	609	153	252
15	385	34	35	48	20	2.6	868	133	312
16	241	20	13	42	35	4.0	526	40	57
17	158	14	6.0	38	34	3.5	324	18	16
18	134	15	5.4	40	25	2.6	209	12	6.8
19	117	36	11	128	125	39	140	8	3.0
20	96	20	5.2	53	38	5.4	102	7	1.9
21	88	15	3.6	38	21	2.2	76	7	1.4
22	76	12	2.5	36	23	2.2	61	8	1.3
23	64	11	1.9	36	23	2.2	51	9	1.2
24	55	7	1.0	36	21	2.0	46	9	1.1
25	46	15	1.9	31	20	1.7	44	10	1.2
26	40	10	1.1	27	20	1.5	241	91	59
27	63	19	3.2	25	17	1.1	125	22	7.4
28	55	10	1.5	22	20	1.2	92	10	2.5
29	46	8	.99	78	64	13	69	9	1.7
30	50	12	1.6	63	47	8.0	58	8	1.3
31	63	9	1.5	73	50	9.9	---	---	---
TOTAL	11568	---	5444.39	2726	---	228.5	5249	---	992.5
YEAR	406489		119975.98						

## STREAMS TRIBUTARY TO LAKE ERIE

04212200 GRAND RIVER AT PAINESVILLE, OH  
(National stream-quality accounting network station)

LOCATION.--Lat 41°44'09", long 81°15'59", in T.11 N., R.8 W., Lake County, Hydrologic Unit 04110004, at bridge on State Highway 535 in Painesville, 2.2 mi upstream from mouth, and 8.0 mi downstream from Kellogg Creek.

DRAINAGE AREA.--701 mi.

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 1983 TO SEPTEMBER 1984

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 08...	1130	626	20	1	53	.5	<1	<1	<3	8	92
FEB 14...	1100	8470	<10	1	32	<.5	<1	<1	<3	15	29
MAY 16...	0830	2700	10	1	35	<1	<1	20	<3	31	94
JUL 24...	1030	55	80	1	100	<10	2	8	2	8	10

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 08...	5	<4	31	.1	<10	<1	<1	<1	140	<6	10
FEB 14...	2	5	18	.3	<10	3	<1	3	200	<6	12
MAY 16...	4	<4	18	.4	<10	3	<1	<1	77	<6	32
JUL 24...	6	10	70	.6	1	1	<1	<1	390	--	<10

## STREAMS TRIBUTARY TO LAKE ERIE

04212200 GRAND RIVER AT PAINESVILLE, OH--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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 08...	1130	626	565	7.7	6.0	9.0	8.2	11.0	97	160
FEB 14...	1100	8470	215	7.4	3.5	2.0	130	11.0	82	1000
MAY 16...	0830	2700	250	7.3	3.0	11.0	30	9.6	89	80
JUL 24...	1030	55	2030	8.0	26.0	25.5	7.0	7.8	98	9200

DATE	TIME	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- LINEITY LAB (MG/L CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
NOV 08...	190	55	8.3	36	31	1	3.9	57	49	110	
FEB 14...	10000	32	7.1	6.5	11	.3	2.9	29	26	31	
MAY 16...	560	24	4.5	15	29	.8	2.0	35	25	35	
JUL 24...	600	200	10	140	36	3	4.5	75	54	550	

DATE	TIME	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SI02)	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, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTH0, DIS- SOLVED (MG/L AS P)
NOV 08...	.30	5.9	348	.580	.250	.32	2.1	.080	.040	.040
FEB 14...	.10	4.3	128	.660	.150	.19	1.3	.250	.030	<.010
MAY 16...	.20	4.4	214	.250	.210	.27	3.7	.090	.030	<.010
JUL 24...	.20	2.3	1680	.350	.130	.17	.80	.140	.010	<.010

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
NOV 08...	1130	626	9.0	15	25
FEB 14...	1100	8470	2.0	436	9970
MAY 16...	0830	2700	11.0	56	408
JUL 24...	1030	55	25.5	20	3.0

STREAMS TRIBUTARY TO LAKE ERIE

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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 upstream from mouth.

DRAINAGE AREA.--3.63 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1983 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April 1983 to current year.

pH: April 1983 to current year.

WATER TEMPERATURES: April 1983 to current year.

DISSOLVED OXYGEN: April 1983 to current year.

INSTRUMENTATION.--Water-quality monitor.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 11,700 micromhos Sept. 7, 1984; minimum, 610 micromhos June 25, 1983.

pH: Maximum, 9.6 units Feb. 24, 1984; minimum, 2.7 units Oct. 28, 1984.

WATER TEMPERATURES: Maximum, 32.5°C July 20,21, 1983; minimum, 1.5°C Dec. 24, 25, 1983.

DISSOLVED OXYGEN: Maximum, 12.2 mg/L Feb. 12, 1984; minimum, 1.7 mg/L Aug. 24, 1983.

EXTREMES FOR CURRENT YEAR. --

SPECIFIC CONDUCTANCE: Maximum, 11,700 micromhos Sept. 7; minimum, 760 micromhos May 4.

pH: Maximum recorded, 9.6 units Feb. 24; minimum recorded, 2.7 units on Oct. 28.

WATER TEMPERATURES: Maximum, 32.0°C Aug, 8, 9, 10; minimum, 1.5°C Dec. 24, 25.

DISSOLVED OXYGEN: Maximum recorded, 12.2 mg/L Feb. 12; minimum recorded, 4.6 mg/L Oct. 13.



## STREAMS TRIBUTARY TO LAKE ERIE

04212680 FIELDS BROOK AT ASHTABULA, OH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	2520	2070	2260	2670	1870	2110	2360	2180	2240	2150	1950	2040
2	3040	2520	2750	2580	1390	2090	2400	2150	2270	5470	1900	2280
3	3020	2550	2810	1970	1150	1430	2270	2130	2200	2670	2310	2530
4	4040	2350	2760	2450	1530	1790	2190	940	1390	2690	2520	2610
5	3680	1210	2070	2260	2030	2130	1860	1230	1550	2890	2630	2770
6	2450	1560	2060	2730	2280	2450	2680	1320	1710	2760	2290	2530
7	2710	2020	2320	2570	2390	2490	3520	1310	1690	2620	2280	2360
8	2770	2340	2490	2980	2290	2650	3300	1940	2240	2360	2130	2260
9	2740	2410	2510	2890	2500	2660	6820	2130	2580	5490	2090	2490
10	2780	2530	2660	3130	2860	2980	2660	2420	2550	2580	2310	2450
11	3200	2700	2790	3070	1120	1890	2610	2310	2490	3470	2280	2530
12	3010	2580	2740	1810	1150	1510	2650	1860	2380	4700	2320	2590
13	2740	1670	2280	2400	1840	2110	4300	1520	1830	2440	2170	2280
14	2740	2130	2400	6630	2430	2840	2390	1890	2070	2800	2200	2530
15	4160	2730	2980	3070	1630	2330	3080	2030	2260	3050	2450	2660
16	3970	2530	2730	1810	1240	1420	2670	2250	2300	4020	2380	2650
17	2870	2430	2640	1670	1340	1420	2440	2290	2370	2850	2490	2640
18	3780	2380	2650	4280	1750	2210	2850	2450	2610	4270	2170	2450
19	8310	2430	3650	2600	2400	2470	2980	2540	2710	3140	2200	2390
20	2840	2600	2710	4110	2240	2580	2930	2600	2740	2900	2310	2550
21	6570	2410	3080	2790	2190	2360	2900	2390	2730	7030	2580	2920
22	4140	2470	2710	2600	2040	2320	2740	2110	2450	7850	2790	3070
23	2580	1720	1960	4230	2580	3030	4060	2010	2370	3090	2600	2780
24	2060	1810	1930	3170	2820	2900	2060	1970	2020	4040	2070	2460
25	2480	2030	2170	5010	2860	3080	6750	1880	2550	2140	1570	1820
26	3740	1020	1920	3560	2760	2910	5910	1980	2470	1780	1570	1640
27	1720	1110	1420	4130	2580	2760	5810	2090	2390	1880	1640	1710
28	5030	1690	2050	2540	910	1470	2240	1950	2130	1890	1700	1820
29	2520	2090	2300	1570	950	1250	3860	1920	2080	2060	1870	1990
30	5430	2250	2720	2340	1540	1930	2130	1900	2010	2270	2070	2180
31	2380	2060	2240	---	---	---	7010	1920	2410	2260	2070	2150
MONTH	8310	1020	2480	6630	910	2250	7010	940	2250	7850	1570	2390

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	2160	2070	2110	3360	2880	3100	2520	1620	2170	3220	2180	2730
2	3280	2090	2260	3100	2760	2910	2900	2540	2660	3120	2500	2720
3	2410	1060	1470	3420	2900	3090	3120	2780	2980	3220	1940	2870
4	1510	1210	1380	4060	2580	3030	3340	2780	3090	1680	760	1070
5	1820	1480	1570	2740	2060	2380	2580	2060	2270	1760	1200	1520
6	1840	1660	1740	2220	1760	1960	2400	1360	1990	2280	1800	2020
7	2120	1870	2000	2580	1920	2360	2320	1320	1750	2760	2000	2260
8	2300	1940	2060	2800	2140	2500	3160	2360	2860	2660	1120	1740
9	2640	2090	2340	3480	2700	3030	3620	2940	3120	1680	1320	1550
10	2440	1860	2200	3660	3460	3600	4120	3400	3700	1700	1420	1580
11	1700	930	1170	3920	3540	3700	4360	3180	3800	3360	1680	2140
12	1180	830	1000	5100	4040	4240	3800	3160	3430	2440	2040	2220
13	1190	840	1040	4220	3640	3930	8200	3420	3800	2720	2400	2550
14	1280	1010	1110	9460	3520	4920	3520	3020	3240	2700	2380	2520
15	1450	1290	1400	3820	2120	3250	3160	2880	2990	3220	2600	2810
16	1900	890	1740	1960	920	1180	3260	2840	3040	3180	2180	2790
17	2080	1840	1960	2220	1320	1740	3620	2760	3250	3760	2500	2750
18	2060	1960	2020	2940	2280	2770	4120	2800	3070	2980	1360	2680
19	2140	2000	2070	2840	2500	2670	3120	2800	2950	1900	1320	1550
20	2400	1980	2080	3120	1320	2420	3020	2820	2920	2000	1020	1560
21	2760	2200	2400	1800	1220	1420	2940	2580	2750	1800	900	1220
22	3260	2440	2710	2120	1860	2030	2700	2080	2520	2360	1800	2080
23	6320	2480	2960	2460	2160	2290	2200	2000	2120	2500	1600	1960
24	2780	2360	2630	3060	2480	2820	1840	1000	1230	3480	1960	2230
25	3120	2520	2750	3180	2660	2910	2200	1340	1790	4000	2340	2670
26	2900	2560	2750	3340	2820	3080	2620	1800	2310	3200	2800	2960
27	2980	2740	2850	3640	2960	3180	2800	2480	2610	3480	2900	3120
28	3080	2760	2960	3900	3120	3590	2900	2520	2680	3300	2540	2990
29	4260	2780	3130	4080	2160	2760	2920	2560	2770	2720	2360	2490
30	---	---	---	2180	1480	1890	3060	2720	2920	2620	2320	2460
31	---	---	---	2000	1540	1720	---	---	---	3200	2600	2790
MONTH	6320	830	2060	9460	920	2790	8200	1000	2760	4000	760	2280

04212680 FIELDS BROOK AT ASHTABULA, OH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	3120	2600	2880	3620	3360	3530	4760	3120	3730	4100	3520	3830
2	3220	2920	3040	3720	3380	3520	4660	3180	3890	4300	3380	3950
3	3400	2780	3030	4580	3340	3820	5040	4050	4740	4440	1380	3100
4	3760	2760	3240	4820	3700	4300	5160	3980	4490	6200	3200	4130
5	3620	2600	2920	4760	4080	4350	5600	5060	5290	3740	2420	3330
6	3500	2200	2830	4180	3140	3860	5940	4440	5340	4720	3220	4030
7	3640	2880	3140	4120	3740	3920	4680	4080	4460	11700	3580	4100
8	4280	3280	3630	3960	3620	3790	4820	4260	4590	4340	3780	4000
9	3800	3220	3410	9280	3160	4340	4660	3320	3960	4600	4280	4470
10	3620	3220	3480	5620	1140	2990	4160	3300	3620	4580	4140	4380
11	3420	2820	3170	3400	1500	2580	4000	3580	3800	5320	3740	4700
12	4780	3360	3570	3620	2780	3130	3880	3300	3610	4560	3500	3950
13	3320	2320	3090	3620	3360	3460	4480	3340	4000	4020	2680	3620
14	3880	2620	3140	3820	3300	3530	3960	3280	3660	4300	3000	3380
15	3900	2800	3150	3740	3380	3590	4780	3580	3940	3620	2480	3260
16	4060	3400	3580	3720	2560	3220	4140	3180	3580	4540	3440	3810
17	3740	2300	3160	3720	2620	3180	3820	3440	3640	5180	3580	4270
18	3480	2980	3240	4200	3140	3650	4140	1500	3690	4200	3060	3710
19	3620	2800	3190	4360	3620	4030	4780	3460	4390	3580	3240	3440
20	3400	3080	3170	4580	3780	4150	4840	3840	4310	3540	3180	3370
21	4020	3280	3480	5500	3780	4030	4740	3480	4260	3620	3400	3540
22	3520	3200	3310	4040	3740	3920	4780	4200	4520	4560	3380	3650
23	3760	3200	3440	4200	3220	3840	7480	4260	4740	3880	3580	3720
24	3820	3160	3410	5380	3200	3640	4620	4080	4400	3920	3120	3530
25	6540	2920	3510	4700	3340	3960	4940	4520	4700	4080	2480	3570
26	4080	3880	3970	6400	3860	4340	5180	4460	4750	3280	2360	2810
27	8760	2620	4200	5420	3800	4520	5620	4360	5120	3060	2160	2510
28	4180	3680	3960	4440	3740	3980	4480	3240	3920	3300	2900	3100
29	3620	3220	3460	4600	3760	4120	3460	3180	3290	3740	3100	3490
30	3360	3200	3260	5420	3800	4340	3860	3140	3500	3920	3620	3760
31	---	---	---	4940	3520	4290	3880	3420	3700	---	---	---
MONTH	8760	2200	3340	9280	1140	3800	7480	1500	4180	11700	1380	3680
YEAR	11700	760	2860									

PH (STANDARD UNITS), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	8.1	3.6	6.9	7.9	7.4	7.8	8.0	7.9	8.0	8.1	8.0	8.0
2	8.1	8.0	8.1	7.6	7.4	7.5	8.0	7.9	8.0	8.1	7.8	8.0
3	8.1	6.6	7.8	7.6	7.4	7.5	8.0	7.8	7.9	8.0	7.8	8.0
4	7.9	6.7	7.4	7.7	7.6	7.7	7.9	7.5	7.6	8.0	8.0	8.0
5	7.8	4.7	7.2	7.7	7.6	7.7	7.8	7.5	7.6	8.1	7.9	8.0
6	7.9	7.6	7.8	7.8	7.7	7.7	7.8	7.5	7.6	8.0	7.5	7.9
7	8.0	7.3	7.8	7.8	7.5	7.7	7.8	7.2	7.6	8.0	7.9	7.9
8	8.1	7.7	7.9	7.8	7.6	7.7	7.9	7.6	7.8	8.1	8.0	8.0
9	7.9	7.8	7.9	7.8	7.7	7.7	7.9	7.4	7.7	8.0	7.6	8.0
10	7.9	7.3	7.8	7.9	7.6	7.8	7.9	7.6	7.8	8.0	6.5	7.5
11	8.0	7.7	7.8	7.9	7.4	7.6	7.9	7.8	7.9	7.9	7.7	7.8
12	7.9	7.5	7.8	7.7	7.4	7.5	7.9	7.1	7.6	8.1	7.8	8.0
13	7.8	7.3	7.6	7.8	7.7	7.7	7.6	7.2	7.5	8.1	7.7	8.0
14	7.8	7.1	7.7	7.9	7.7	7.8	7.8	7.5	7.7	8.0	7.8	8.0
15	7.9	7.8	7.9	7.9	7.6	7.8	7.8	7.4	7.8	8.2	8.0	8.0
16	8.0	7.9	7.9	7.7	7.4	7.5	8.0	5.3	7.7	8.2	7.9	8.1
17	7.9	7.5	7.8	7.6	7.4	7.5	8.0	7.4	7.9	8.2	7.9	8.1
18	7.9	7.5	7.8	8.0	7.5	7.7	8.1	8.0	8.1	8.1	7.1	7.9
19	7.9	7.6	7.8	7.8	7.7	7.8	8.1	8.0	8.1	8.0	7.0	7.7
20	8.0	7.7	7.9	7.8	7.5	7.8	8.1	7.6	8.1	8.1	7.7	8.0
21	8.0	7.6	7.9	7.8	7.6	7.7	8.1	7.9	8.0	8.2	4.3	7.9
22	8.1	7.6	7.9	7.9	7.7	7.8	8.1	7.8	8.0	8.3	8.2	8.2
23	7.8	7.6	7.7	7.9	7.7	7.8	8.0	4.7	7.7	8.2	8.1	8.1
24	7.8	7.2	7.6	7.9	7.8	7.9	8.2	8.0	8.1	8.9	7.9	8.1
25	7.8	6.1	7.6	7.9	7.8	7.9	8.1	7.9	8.0	8.0	7.9	7.9
26	7.9	7.4	7.6	7.9	7.8	7.9	8.1	7.9	8.0	7.9	7.9	7.9
27	7.7	7.3	7.6	7.8	7.7	7.8	8.2	8.0	8.1	7.9	7.9	7.9
28	7.8	2.7	7.4	7.7	7.4	7.5	8.1	8.0	8.0	8.0	8.0	8.0
29	7.9	7.6	7.8	7.8	7.4	7.6	8.0	7.8	7.9	8.0	7.9	8.0
30	7.9	7.8	7.9	7.9	7.8	7.8	8.0	7.9	8.0	8.1	7.7	8.0
31	7.9	7.5	7.8	---	---	---	8.1	7.8	8.0	8.1	8.0	8.0
MONTH	8.1	2.7	7.7	8.0	7.4	7.7	8.2	4.7	7.9	8.9	4.3	8.0





## STREAMS TRIBUTARY TO LAKE ERIE

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04212680. FIELDS BROOK AT ASHTABULA, OH--Continued  
TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	24.0	23.0	23.0	17.0	14.5	15.5	9.0	8.0	8.5	8.5	7.0	7.5
2	24.5	22.0	23.0	16.5	14.5	15.5	9.0	8.5	8.5	8.5	8.0	8.0
3	25.0	21.5	23.5	14.5	12.0	13.5	9.5	8.5	9.0	8.5	7.5	8.0
4	25.5	24.0	24.0	12.0	11.0	11.5	8.5	5.0	6.0	9.5	8.0	9.0
5	24.0	19.0	20.5	12.5	11.0	11.5	9.5	6.0	8.0	9.5	8.5	9.0
6	21.0	18.5	20.0	14.0	12.5	13.5	9.5	7.5	9.0	8.5	6.5	8.0
7	22.0	19.0	20.5	16.0	13.5	15.0	7.0	5.0	5.5	6.5	5.5	6.0
8	21.5	19.5	20.5	16.5	15.0	15.5	8.0	5.5	7.0	7.0	5.0	5.5
9	19.5	18.5	19.0	17.5	15.0	16.0	9.0	7.5	8.0	7.0	5.5	6.0
10	21.0	18.5	19.5	17.5	16.0	16.5	9.0	8.5	9.0	8.0	6.5	7.5
11	21.5	19.0	20.0	17.0	7.5	12.5	9.0	7.5	8.0	8.0	6.0	6.5
12	21.5	19.5	20.5	8.0	6.5	7.5	9.0	7.0	8.0	8.0	6.0	6.5
13	23.0	17.5	20.0	11.0	8.5	10.0	9.0	7.5	8.5	8.5	7.0	6.5
14	18.0	16.0	17.5	12.5	10.5	11.5	10.0	9.0	9.5	9.0	8.0	8.5
15	19.5	17.5	18.0	12.0	9.0	11.0	11.0	9.5	10.5	9.0	6.5	7.0
16	20.0	17.0	18.5	9.0	7.5	8.0	10.0	9.0	9.5	8.5	6.0	7.0
17	20.5	18.0	19.0	8.0	7.0	7.5	9.0	7.5	8.0	9.0	8.0	8.5
18	19.5	18.0	19.0	11.0	8.0	10.0	8.0	7.5	7.5	8.5	6.5	7.0
19	19.0	17.0	18.0	12.5	11.5	12.0	8.0	6.5	7.0	6.5	5.5	6.0
20	18.0	16.5	17.0	13.0	12.0	12.5	7.5	6.5	7.0	6.5	5.0	6.0
21	19.0	16.5	17.5	13.0	11.5	12.5	8.0	6.5	7.0	6.5	4.5	5.0
22	16.5	13.5	15.5	14.5	12.5	13.5	8.5	6.0	7.5	7.0	5.0	6.0
23	15.5	13.5	14.5	15.5	14.0	15.0	6.0	3.0	4.5	9.0	6.0	7.5
24	16.5	15.5	16.0	15.0	12.0	13.5	3.0	1.5	2.0	8.5	6.0	7.0
25	17.5	15.0	16.5	12.0	10.5	11.0	4.0	1.5	2.5	6.0	5.0	5.5
26	15.5	9.5	12.5	12.5	10.5	11.5	5.5	4.5	5.0	6.0	5.0	5.5
27	13.0	10.0	12.0	13.5	12.5	13.0	8.0	6.0	7.0	6.5	5.5	6.0
28	16.5	13.0	15.0	12.5	9.0	10.5	8.5	6.5	7.5	7.0	5.0	6.0
29	15.0	13.5	14.5	10.0	8.5	9.0	6.5	5.0	6.0	7.5	6.5	7.0
30	15.0	13.0	14.0	8.5	8.0	8.5	5.5	4.5	5.0	8.0	7.0	7.5
31	16.0	13.0	14.5	---	---	---	7.0	4.5	6.0	8.0	7.0	7.5
MONTH	25.5	9.5	18.0	17.5	6.5	12.0	11.0	1.5	7.0	9.5	4.5	7.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	9.5	7.0	8.5	8.0	6.0	7.0	12.5	6.5	9.5	18.5	14.0	16.0
2	10.5	8.0	9.0	8.5	7.0	7.5	14.0	8.5	11.5	20.0	14.0	16.5
3	8.0	4.0	5.0	9.5	6.5	8.0	15.0	10.0	12.5	18.0	13.0	16.5
4	5.0	4.0	4.5	9.5	6.5	8.0	14.0	10.5	13.0	11.5	10.0	11.0
5	6.0	4.5	5.0	8.5	6.0	7.5	11.5	9.5	10.5	17.5	11.5	14.5
6	6.5	5.0	6.0	7.5	5.5	6.0	10.0	6.0	8.5	18.5	14.5	16.5
7	7.0	5.5	6.0	7.5	5.0	6.0	9.0	5.5	7.0	19.5	15.5	17.5
8	8.5	6.5	7.5	6.0	4.0	5.0	13.0	7.5	10.0	18.5	12.5	15.5
9	10.0	7.5	8.5	8.5	4.0	6.0	15.0	9.5	11.5	13.5	12.5	13.0
10	10.5	7.5	9.0	8.5	6.0	7.0	15.0	10.0	12.0	19.5	13.0	16.0
11	6.5	3.5	4.5	8.0	6.0	6.5	16.5	10.5	13.0	19.0	15.5	17.5
12	6.0	3.5	4.5	10.0	6.0	7.5	18.0	12.0	14.5	21.5	16.5	18.5
13	8.0	4.5	6.5	9.5	7.5	8.5	18.5	14.0	15.5	17.5	14.5	16.0
14	9.0	7.5	8.0	10.5	9.0	9.5	15.0	13.0	14.5	19.0	14.0	16.0
15	9.5	7.5	8.0	10.5	5.5	8.5	17.0	13.5	15.0	18.0	14.5	16.0
16	10.0	8.0	9.0	5.5	2.5	3.0	14.0	13.0	13.5	21.0	14.0	17.0
17	12.0	9.0	10.5	5.5	3.0	4.0	14.0	11.5	12.5	21.0	15.5	18.0
18	11.0	9.5	10.0	6.5	4.5	6.0	12.5	10.5	11.0	20.5	17.0	18.5
19	12.0	9.5	10.5	9.5	6.5	7.5	11.5	10.5	11.0	20.0	16.5	18.0
20	10.0	8.5	9.0	9.5	5.5	7.5	15.5	11.0	12.5	19.0	15.5	17.5
21	9.5	8.5	9.0	6.0	5.0	5.5	15.5	11.5	13.0	20.5	14.5	17.5
22	11.5	8.0	9.5	5.5	4.5	5.0	13.0	10.5	12.0	24.5	19.5	22.0
23	13.0	9.0	10.5	7.0	4.5	5.5	12.5	10.0	11.5	22.5	18.0	20.5
24	13.5	10.5	12.0	10.5	5.0	7.5	10.5	9.0	9.5	24.0	18.0	21.0
25	11.5	8.5	9.5	11.5	7.5	9.0	16.5	9.5	12.5	23.5	20.0	21.5
26	11.0	8.0	9.5	13.0	8.0	10.0	20.0	13.0	16.0	24.5	21.0	22.0
27	9.0	5.0	8.0	12.0	9.0	10.0	20.5	16.5	18.0	24.0	20.0	21.5
28	6.5	4.0	5.5	10.0	6.0	9.0	21.0	17.5	19.0	21.0	16.0	19.0
29	7.5	5.0	6.0	6.5	5.5	6.0	21.0	16.0	18.0	17.5	16.0	16.5
30	---	---	---	7.5	5.5	6.0	20.5	15.5	18.0	18.5	17.0	17.5
31	---	---	---	9.5	5.5	7.5	---	---	---	23.0	17.0	19.5
MONTH	13.5	3.5	8.0	13.0	2.5	7.0	21.0	5.5	13.0	24.5	10.0	17.5



## STREAMS TRIBUTARY TO LAKE ERIE

04212680 FIELDS BROOK AT ASHTABULA, OH--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	24.5	19.5	21.5	27.5	24.5	25.5	30.5	27.0	28.5	27.0	25.5	26.0
2	24.5	19.5	22.0	27.5	24.5	25.5	29.0	27.5	28.0	29.0	25.5	27.0
3	25.0	20.5	22.5	29.5	24.5	27.0	29.5	27.5	28.0	26.5	21.5	24.0
4	25.5	20.5	23.0	27.0	26.0	26.5	29.0	27.5	28.0	25.5	21.0	24.0
5	26.5	21.5	23.5	27.5	25.5	26.5	30.5	27.5	28.5	24.5	20.0	23.0
6	26.5	22.5	24.0	26.0	23.0	24.5	30.5	27.5	29.0	25.0	23.0	24.0
7	27.0	22.5	25.0	25.0	23.0	24.0	31.5	28.5	29.5	25.5	22.5	24.0
8	28.0	24.0	26.0	27.0	22.5	24.0	32.0	28.5	30.0	26.5	23.5	25.0
9	28.5	24.5	26.5	27.0	23.0	25.0	32.0	28.5	30.0	26.0	23.0	24.5
10	29.5	25.0	27.0	26.0	20.0	24.0	32.0	29.0	30.5	26.5	24.0	25.0
11	28.5	25.0	26.5	28.0	25.5	26.0	30.0	29.0	29.5	26.0	24.0	25.5
12	29.5	23.5	26.5	29.0	25.0	27.0	29.5	27.5	29.0	26.5	23.5	25.0
13	30.5	24.5	27.5	31.0	26.5	28.5	29.5	28.0	28.5	28.0	24.5	26.0
14	26.0	24.0	25.0	31.5	27.5	29.0	30.0	28.0	28.5	25.5	24.0	24.5
15	25.5	23.0	24.0	30.0	28.0	29.0	31.0	27.5	29.0	24.0	21.0	22.0
16	27.5	22.5	24.5	30.5	27.0	28.5	31.5	28.0	29.5	24.0	21.5	22.5
17	24.5	21.5	23.0	29.5	26.5	27.5	30.5	28.0	29.0	24.5	21.5	23.0
18	28.0	23.5	25.5	28.5	26.0	27.0	30.0	22.5	27.5	25.5	22.5	23.5
19	29.5	25.0	27.0	29.0	25.0	26.5	28.0	25.0	27.0	26.0	23.0	24.5
20	29.0	25.0	26.5	29.0	26.0	27.5	28.0	25.0	26.5	26.5	24.5	25.0
21	28.5	24.5	26.0	30.0	26.5	28.0	29.0	24.5	26.5	26.5	23.5	25.0
22	28.5	23.5	25.5	30.5	26.5	28.5	27.0	26.0	26.5	27.0	23.5	25.0
23	26.5	24.0	24.5	30.5	27.5	29.0	28.0	26.0	27.0	25.5	25.0	25.5
24	26.0	22.5	24.0	30.0	27.0	28.5	28.5	25.5	26.5	27.5	25.0	26.0
25	26.5	22.0	24.0	29.5	26.0	27.5	29.0	25.0	26.5	26.0	23.0	25.0
26	27.5	22.0	24.5	28.5	26.0	27.0	29.0	25.0	26.5	22.5	20.5	21.0
27	25.0	23.0	24.0	29.0	25.0	27.0	29.5	25.5	27.5	21.5	20.0	21.0
28	27.5	23.0	25.0	30.0	26.0	27.5	29.0	27.5	28.0	22.0	19.5	21.0
29	27.0	24.5	25.5	29.5	25.5	27.0	29.5	26.0	28.0	22.5	21.0	21.5
30	27.0	24.0	25.5	29.5	25.5	27.0	28.5	26.0	27.0	22.5	21.0	21.5
31	---	---	---	29.5	26.0	27.5	28.0	25.5	26.5	---	---	---
MONTH	30.5	19.5	25.0	31.5	20.0	27.0	32.0	22.5	28.0	29.0	19.5	24.0
YEAR	32.0	1.5	16.0									

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	6.9	6.4	6.6	8.1	7.6	7.8	12.1	11.3	11.6	10.3	9.9	10.0
2	6.8	6.4	6.6	8.0	7.4	7.8	11.7	10.3	11.0	10.2	9.9	10.1
3	7.0	6.1	6.5	8.6	7.9	8.2	10.3	9.6	10.0	10.6	10.1	10.3
4	6.5	5.8	6.1	8.9	8.7	8.8	11.8	10.1	11.2	11.5	10.5	10.8
5	7.1	5.8	6.6	8.9	8.4	8.7	11.6	10.1	10.9	10.6	10.4	10.5
6	7.1	6.5	6.8	8.5	8.1	8.3	10.4	9.9	10.2	10.9	10.4	10.6
7	6.9	6.1	6.5	8.5	8.0	8.3	12.2	10.8	11.7	11.4	11.0	11.2
8	6.5	6.0	6.2	8.5	8.1	8.3	11.7	10.4	10.9	11.4	11.2	11.3
9	6.3	6.0	6.1	8.5	8.0	8.3	10.6	9.7	10.2	11.4	11.0	11.2
10	6.1	5.4	5.7	8.6	8.2	8.4	9.8	9.5	9.6	11.0	10.6	10.8
11	5.8	5.0	5.4	11.1	8.4	9.6	10.2	9.8	10.0	11.1	10.7	11.0
12	5.1	4.7	4.9	12.0	11.3	11.7	9.8	9.2	9.4	11.3	10.8	11.1
13	5.2	4.6	4.9	11.7	10.5	11.1	9.3	9.1	9.2	11.0	10.8	10.9
14	5.8	5.3	5.6	10.8	9.9	10.4	9.3	8.9	9.2	10.7	10.3	10.4
15	5.7	5.5	5.6	10.8	10.0	10.3	9.0	8.5	8.7	11.1	10.4	10.8
16	5.7	5.0	5.3	11.2	10.8	11.0	9.2	8.5	8.9	10.8	10.4	10.7
17	5.3	4.7	5.1	11.5	11.1	11.3	9.7	9.0	9.3	10.6	10.1	10.3
18	6.0	5.2	5.6	11.1	9.9	10.5	9.6	9.2	9.5	11.1	10.4	10.8
19	6.8	6.1	6.5	10.0	9.2	9.6	9.6	9.3	9.5	11.1	10.9	11.0
20	7.1	6.5	6.8	9.5	8.9	9.2	9.6	9.3	9.5	11.2	10.9	11.0
21	6.9	6.4	6.7	9.3	8.9	9.1	9.6	8.3	9.1	11.5	11.0	11.1
22	7.6	6.9	7.4	9.5	9.0	9.3	8.6	8.0	8.2	11.4	10.7	11.1
23	7.5	7.1	7.3	9.8	8.9	9.3	9.2	8.7	9.0	11.0	10.0	10.6
24	7.2	6.8	7.0	10.1	9.3	9.8	9.8	9.2	9.6	11.0	10.0	10.6
25	6.8	6.5	6.7	10.3	10.0	10.2	9.9	9.2	9.6	11.3	10.9	11.1
26	8.3	6.8	7.4	10.2	8.3	9.2	9.1	8.8	9.0	11.3	10.9	11.1
27	8.3	7.3	7.8	8.2	7.2	7.6	8.9	8.2	8.6	10.9	10.7	10.8
28	8.4	7.6	8.0	8.9	7.5	8.4	9.3	8.1	8.7	10.9	10.3	10.7
29	8.5	8.0	8.3	9.9	8.3	8.9	10.0	9.5	9.7	10.3	10.0	10.2
30	8.6	8.1	8.4	11.8	10.2	10.9	10.4	10.0	10.3	10.3	9.9	10.0
31	8.5	7.9	8.1	---	---	---	10.6	9.9	10.3	10.5	10.1	10.3
MONTH	8.6	4.6	6.5	12.0	7.2	9.3	12.2	8.0	9.8	11.5	9.9	10.7

04212680 FIELDS BROOK AT ASHTABULA, OH--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	10.4	9.7	10.0	10.7	10.2	10.5	---	---	---	7.8	6.9	7.3
2	10.2	9.6	9.8	10.5	10.2	10.3	---	---	---	7.7	6.4	7.0
3	11.4	9.9	10.8	10.5	10.1	10.3	---	---	---	7.5	6.2	6.8
4	11.3	10.9	11.1	10.5	10.1	10.3	---	---	---	7.8	7.5	7.7
5	10.9	10.8	10.8	11.3	10.0	10.6	---	---	---	7.7	6.8	7.3
6	10.8	10.4	10.6	11.3	11.1	11.2	---	---	---	7.3	6.5	6.9
7	11.6	10.9	11.2	11.4	11.0	11.2	---	---	---	7.2	6.0	6.6
8	11.0	10.5	10.7	11.3	10.9	11.2	---	---	---	7.4	6.0	6.8
9	10.7	9.9	10.3	11.3	10.5	10.9	---	---	---	7.7	7.2	7.5
10	10.3	9.8	10.0	10.8	10.4	10.6	---	---	---	9.7	7.2	8.1
11	12.0	10.6	11.5	10.7	10.4	10.5	---	---	---	8.7	7.5	8.2
12	12.2	11.3	11.7	10.6	9.9	10.2	---	---	---	8.2	7.4	7.9
13	11.6	10.2	11.0	10.0	9.3	9.6	---	---	---	8.8	8.2	8.4
14	10.5	9.9	10.2	9.7	9.1	9.4	---	---	---	9.0	7.9	8.5
15	10.6	10.2	10.4	9.6	9.1	9.4	---	---	---	8.7	8.1	8.3
16	10.8	10.2	10.4	---	---	---	---	---	---	8.7	7.7	8.2
17	10.3	9.4	9.9	---	---	---	---	---	---	8.5	7.6	8.0
18	10.2	9.7	10.0	---	---	---	---	---	---	8.2	7.2	7.7
19	10.0	9.5	9.8	---	---	---	---	---	---	8.2	7.5	7.8
20	10.4	9.8	10.1	---	---	---	---	---	---	8.3	7.5	8.0
21	10.3	10.0	10.2	---	---	---	---	---	---	8.8	7.3	8.2
22	10.5	9.8	10.1	---	---	---	---	---	---	7.6	6.6	7.2
23	10.1	9.3	9.7	---	---	---	---	---	---	8.0	6.9	7.4
24	9.4	9.0	9.2	---	---	---	---	---	---	8.2	7.1	7.6
25	10.2	9.3	9.9	---	---	---	9.1	8.8	8.9	7.7	7.1	7.3
26	10.3	10.0	10.2	---	---	---	9.2	8.0	8.6	7.7	7.0	7.2
27	10.8	10.2	10.4	---	---	---	8.4	7.6	8.1	7.9	7.1	7.4
28	11.0	10.5	10.8	---	---	---	8.2	7.5	7.8	8.2	7.1	7.7
29	10.8	10.6	10.7	---	---	---	8.5	7.3	7.9	8.3	7.9	8.1
30	---	---	---	---	---	---	7.8	7.1	7.4	8.2	7.6	7.9
31	---	---	---	---	---	---	---	---	---	8.0	6.9	7.5
MONTH	12.2	9.0	10.4	11.4	9.1	10.4	9.2	7.1	8.1	9.7	6.0	7.6
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	---	---	---	---	---	---	7.2	5.0	5.7	9.0	7.5	7.8
2	---	---	---	---	---	---	6.6	5.0	5.6	9.0	7.1	7.9
3	---	---	---	---	---	---	---	---	---	8.6	7.2	7.8
4	---	---	---	---	---	---	---	---	---	9.4	8.0	8.3
5	---	---	---	---	---	---	---	---	---	9.3	8.2	8.6
6	---	---	---	---	---	---	---	---	---	8.3	7.6	8.0
7	---	---	---	---	---	---	---	---	---	8.3	7.4	7.9
8	---	---	---	---	---	---	---	---	---	8.2	7.2	7.7
9	---	---	---	---	---	---	---	---	---	8.2	6.9	7.5
10	---	---	---	---	---	---	---	---	---	7.5	6.5	6.9
11	---	---	---	---	---	---	---	---	---	7.2	6.5	6.8
12	---	---	---	---	---	---	---	---	---	7.4	7.0	7.2
13	---	---	---	---	---	---	---	---	---	7.3	6.5	7.0
14	---	---	---	---	---	---	---	---	---	7.3	6.9	7.1
15	---	---	---	---	---	---	---	---	---	7.8	7.2	7.6
16	---	---	---	---	---	---	---	---	---	7.7	7.3	7.5
17	---	---	---	---	---	---	---	---	---	7.7	7.0	7.3
18	---	---	---	---	---	---	---	---	---	7.1	5.8	6.6
19	---	---	---	7.4	6.0	6.5	---	---	---	---	---	---
20	---	---	---	7.4	5.7	6.5	---	---	---	---	---	---
21	---	---	---	7.6	5.4	6.4	---	---	---	---	---	---
22	---	---	---	7.5	5.3	6.2	---	---	---	---	---	---
23	---	---	---	7.2	5.3	6.1	---	---	---	---	---	---
24	---	---	---	7.3	5.3	6.1	---	---	---	---	---	---
25	---	---	---	7.1	5.2	6.0	---	---	---	---	---	---
26	---	---	---	6.8	5.2	5.7	---	---	---	7.8	7.7	7.8
27	---	---	---	6.9	5.3	5.8	---	---	---	7.9	7.6	7.8
28	---	---	---	7.0	5.3	6.0	---	---	---	7.9	7.5	7.7
29	---	---	---	7.3	5.5	6.2	8.3	7.4	7.8	7.6	7.4	7.5
30	---	---	---	7.4	4.9	6.1	8.2	7.2	7.6	7.6	7.2	7.4
31	---	---	---	7.0	5.0	5.8	9.5	7.6	8.2	---	---	---
MONTH				7.6	4.9	6.1	9.5	5.0	7.0	9.4	5.8	7.6
YEAR	12.2	4.6	8.8									

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

## STREAMS TRIBUTARY TO LAKE ERIE

04212680 FIELDS BROOK AT ASHTABULA, OH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2240	2130	2230	2050	2110	3090	2210	2720	2880	3560	3420	3850
2	2740	2230	2270	2080	2230	2940	2660	2680	3020	3520	3700	3910
3	2820	1400	2180	2550	1320	3080	2960	2920	3010	3600	4810	2970
4	2650	1770	1150	2610	1410	2900	3080	970	3140	4210	4420	3750
5	1720	2120	1600	2790	1570	2330	2220	1590	2790	4340	5300	3380
6	2120	2420	1630	2510	1750	1930	2180	2010	2860	4000	5510	3920
7	2310	2500	1590	2360	2010	2380	1710	2220	3040	3920	4480	3730
8	2450	2680	2210	2220	2030	2520	2890	1540	3590	3800	4590	3920
9	2520	2640	2210	2480	2360	2900	3020	1590	3370	4030	3910	4480
10	2660	2950	2560	2460	2190	3620	3680	1580	3510	2820	3470	4380
11	2760	1660	2520	2490	1130	3670	3860	2060	3160	2780	3800	4650
12	2730	1540	2560	2440	995	4200	3350	2190	3510	3000	3660	3850
13	2130	2110	1690	2270	1040	3940	3600	2580	3150	3430	4180	3680
14	2360	2630	2070	2540	1080	3670	3200	2480	3160	3480	3590	3250
15	2920	2470	2250	2600	1400	3520	2970	2760	3120	3600	3900	3340
16	2690	1320	2280	2590	1790	1020	3020	2840	3560	3310	3580	3720
17	2690	1410	2370	2650	1960	1780	3270	2740	3110	3170	3620	4480
18	2620	2170	2600	2360	2020	2830	2960	2850	3260	3510	3860	3800
19	2700	2470	2710	2340	2060	2670	2930	1540	3230	4000	4420	3450
20	2710	2490	2780	2590	2080	2850	2920	1670	3140	4180	4440	3360
21	2750	2400	2800	2720	2360	1390	2750	1190	3460	3980	4300	3550
22	2640	2310	2500	2890	2720	2060	2600	2110	3280	3920	4550	3560
23	1800	3040	2240	2780	2680	2280	2140	1810	3440	3940	4560	3740
24	1880	2870	2020	2330	2650	2780	1140	2190	3400	3580	4410	3520
25	2110	2960	1980	1790	2730	2960	1890	2610	3280	3990	4670	3640
26	1790	2910	2110	1630	2750	3110	2340	2910	3990	4120	4730	2790
27	1450	2660	2130	1700	2850	3150	2600	3130	4000	4470	5400	2460
28	2030	1350	2130	1840	2960	3620	2680	3050	3940	3950	4050	3070
29	2340	1240	2010	2040	3120	2650	2780	2500	3470	4090	3270	3540
30	2480	1900	2010	2200	---	2060	2940	2460	3250	4360	3560	3770
31	2240	---	1950	2140	---	1650	---	2770	---	4180	3700	---
MEAN	2390	2230	2170	2360	2050	2760	2750	2270	3300	3770	4190	3650
WTR YR 1984	MEAN	2830	MAX	5510	MIN	970						

PH (STANDARD UNITS), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.0	7.8	8.0	8.0	8.0	8.0	7.9	8.1	8.0	8.2	8.2	8.2
2	8.1	7.6	8.0	8.0	8.0	8.0	7.9	8.0	8.0	8.2	8.1	8.2
3	8.0	7.5	7.9	8.0	7.7	8.2	8.0	8.1	8.1	8.2	8.1	8.1
4	7.5	7.7	7.5	8.0	7.7	8.2	---	8.0	8.1	8.2	8.0	8.1
5	7.6	7.7	7.6	8.0	7.8	8.1	---	7.9	8.0	8.1	8.1	8.1
6	7.8	7.7	7.6	7.9	7.8	7.9	---	8.0	8.0	8.1	8.2	8.1
7	7.8	7.7	7.6	7.9	7.9	7.8	---	8.1	8.0	8.1	8.2	8.2
8	8.0	7.7	7.8	8.0	7.9	7.9	---	7.9	8.1	8.1	8.2	8.2
9	7.9	7.7	7.8	8.0	8.0	8.0	---	7.9	8.2	8.0	8.3	8.2
10	7.8	7.8	7.8	7.5	7.9	8.2	---	7.9	8.2	7.8	8.3	8.1
11	7.9	7.6	7.9	7.8	7.7	8.2	---	7.9	8.1	7.7	8.3	8.1
12	7.8	7.5	7.5	8.0	7.7	8.2	---	7.8	8.1	7.8	8.3	8.2
13	7.6	7.7	7.5	8.0	7.7	8.2	---	8.1	8.0	8.0	8.3	8.2
14	7.7	7.8	7.7	8.0	7.6	8.0	---	8.1	7.9	8.0	8.2	8.3
15	7.9	7.9	7.8	8.0	7.8	7.9	---	8.2	8.1	8.0	8.3	8.3
16	7.9	7.5	7.9	8.1	8.0	7.8	---	8.1	8.2	8.0	8.3	8.3
17	7.9	7.5	8.0	8.1	8.0	7.9	---	8.1	8.1	8.2	8.3	8.3
18	7.9	7.7	8.1	8.1	8.0	8.0	---	8.1	8.1	7.8	8.3	8.3
19	7.8	7.8	8.1	7.7	7.9	8.1	---	7.9	8.1	8.1	8.2	8.3
20	7.9	7.8	8.1	8.0	8.0	7.9	---	7.9	8.1	8.2	8.3	8.4
21	7.9	7.7	8.0	7.9	8.1	7.7	---	7.9	8.2	8.2	8.3	8.4
22	7.9	7.8	8.0	8.2	8.2	7.7	---	7.9	8.2	8.2	8.2	8.4
23	7.7	7.8	7.9	8.1	8.2	7.9	---	7.9	8.2	8.3	8.1	8.4
24	7.7	7.9	8.1	8.1	8.3	8.0	---	8.0	8.2	8.3	8.2	8.4
25	7.7	7.9	8.0	7.9	8.2	8.0	7.9	8.0	8.2	8.2	8.2	8.4
26	7.6	7.9	8.0	7.9	8.1	8.0	8.0	8.1	8.2	8.2	8.2	8.3
27	7.6	7.8	8.1	7.9	8.2	8.0	8.0	8.1	8.2	8.2	8.2	8.4
28	7.7	7.5	8.0	8.0	8.3	8.1	8.1	8.1	8.1	8.2	8.2	8.3
29	7.8	7.6	7.9	8.0	8.2	8.1	8.1	8.0	8.2	8.3	8.2	8.3
30	7.9	7.8	8.0	8.0	---	8.0	8.1	8.1	8.2	8.2	8.1	8.3
31	7.8	---	8.0	8.0	---	7.9	---	8.1	---	8.2	8.2	---
MEAN	7.8	7.7	7.9	8.0	8.0	8.0	8.0	8.0	8.1	8.1	8.2	8.3
WTR YR 1984	MEAN	8.0	MAX	8.4	MIN	7.5						

04212680 FIELDS BROOK AT ASHTABULA, OH--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.0	15.5	8.5	8.0	8.5	7.5	9.5	15.5	21.5	25.5	28.0	26.0
2	23.0	15.0	8.5	8.0	9.0	7.5	11.5	16.5	22.0	25.5	28.0	26.5
3	24.0	14.0	9.0	8.0	4.5	7.5	13.0	16.5	22.0	27.0	28.0	23.5
4	24.0	11.5	5.5	9.0	4.5	8.5	12.5	11.0	22.5	26.5	28.0	23.5
5	19.5	12.0	8.0	9.0	5.0	8.0	10.5	15.0	24.0	26.5	28.5	23.5
6	20.0	14.0	8.5	8.0	6.0	6.0	9.0	16.5	23.5	25.0	29.0	24.0
7	20.5	15.5	5.5	6.0	6.5	5.5	6.5	18.5	25.0	24.0	29.5	24.0
8	20.5	15.5	7.5	5.5	7.5	4.5	10.0	14.5	25.5	23.5	30.0	24.5
9	19.5	16.0	8.0	6.0	9.0	6.5	11.0	13.0	26.5	25.5	30.0	24.5
10	19.5	17.0	9.0	7.5	8.5	6.5	11.5	16.5	27.0	25.0	30.0	25.0
11	20.5	12.0	8.0	6.5	4.5	6.5	12.5	17.5	26.0	26.0	29.5	25.5
12	21.0	7.5	8.5	6.5	4.5	7.5	14.5	18.0	26.5	27.5	29.0	25.0
13	20.0	10.5	8.5	6.5	6.5	9.0	15.0	16.5	26.5	28.0	28.5	25.5
14	17.5	11.5	9.5	8.5	8.0	9.5	14.5	16.0	25.0	29.0	28.5	24.5
15	17.5	11.5	10.5	7.0	8.0	8.5	14.5	15.5	24.0	28.5	28.5	22.0
16	19.0	8.0	9.5	6.5	9.0	2.5	13.5	17.0	24.5	28.0	29.0	22.5
17	19.0	7.5	8.0	8.5	11.0	4.5	12.5	18.5	23.5	27.0	28.5	23.0
18	18.5	10.0	7.5	7.0	10.0	6.0	11.0	18.0	25.5	27.0	28.0	23.5
19	18.0	12.5	7.0	6.0	10.0	7.5	11.5	19.0	26.5	26.5	26.5	24.5
20	17.0	12.5	7.0	6.0	9.0	7.0	12.5	17.0	26.0	27.5	26.0	25.0
21	17.5	12.0	7.0	5.0	8.5	5.5	12.5	19.0	25.5	28.0	26.0	24.5
22	16.0	13.5	8.0	5.0	9.5	5.0	11.5	22.5	25.0	28.5	27.0	25.5
23	14.5	15.0	5.0	7.0	11.0	5.5	12.0	21.0	24.5	29.0	26.5	25.5
24	16.0	13.5	2.0	6.5	12.0	8.0	9.5	21.0	23.5	28.5	26.0	26.0
25	16.5	11.5	2.5	5.5	9.0	8.5	12.5	21.5	23.5	27.5	26.0	25.0
26	12.5	12.0	5.0	5.0	9.0	9.5	17.0	21.5	24.5	26.5	26.5	21.0
27	13.0	13.0	7.0	6.0	8.5	10.0	18.5	21.0	24.0	27.0	27.0	20.5
28	15.5	10.5	7.5	6.5	5.5	9.5	18.5	19.0	24.5	27.0	28.0	21.0
29	14.5	8.5	6.0	7.0	6.0	6.0	18.0	17.0	25.5	27.0	28.0	21.0
30	14.0	8.5	5.0	7.5	---	6.0	17.5	17.5	25.0	27.0	27.0	21.5
31	14.5	---	6.5	7.0	---	8.0	---	20.0	---	27.5	26.5	---
MEAN	18.5	12.5	7.0	7.0	8.0	7.0	13.0	17.5	24.5	27.0	28.0	24.0

WTR YR 1984 MEAN 16.0 MAX 30.0 MIN 2.0  
 OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
 MEDIAN VALUES

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

WTR YR 1984 MEAN 8.8 MAX 11.9 MIN 4.8

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



## STREAMS TRIBUTARY TO LAKE ERIE

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 upstream from mouth.

DRAINAGE AREA.--175 mi<sup>2</sup>.

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 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 the winter period, which are poor. Water-quality data collected at this site 1965 to 1977. Sediment data collected 1970 to 1974.

AVERAGE DISCHARGE.--47 years, 268 ft<sup>3</sup>/s, 20.80 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,000 ft<sup>3</sup>/s Jan. 22, 1959, gage height, 11.70 ft; maximum gage height, 12.94 ft Mar. 4, 1934 (backwater from ice); minimum discharge, 0.2 ft<sup>3</sup>/s July 31, Aug. 1, 1933, Aug. 1, 2, 1934.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,900 ft<sup>3</sup>/s and maximums (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 13	1300	2,920	6.12	Feb. 13	1800	* 5,560	7.68
Feb. 5	1200	ice jam	* 7.82	July 11	2200	3,100	6.25

minimum daily discharge, 14 ft<sup>3</sup>/s Aug. 27, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	59	359	110	110	175	1120	93	175	52	24	27
2	24	74	239	110	120	150	1090	80	130	44	22	22
3	21	799	202	110	500	140	611	75	111	39	22	65
4	20	1290	444	100	600	140	383	743	117	38	51	65
5	61	477	1260	100	400	231	622	1430	101	39	106	66
6	78	432	779	95	250	516	1010	626	86	40	69	52
7	66	346	1000	95	210	633	1350	313	518	140	54	42
8	45	218	661	95	180	443	786	591	461	240	83	34
9	37	155	380	90	160	300	393	2190	170	97	80	25
10	30	123	298	90	190	250	251	868	97	377	47	27
11	27	404	286	90	777	210	184	445	70	2320	34	33
12	34	1530	1050	90	2230	180	151	998	56	983	29	31
13	44	1010	2530	90	3420	170	134	1170	52	209	31	36
14	196	428	784	85	3080	160	138	440	62	112	30	124
15	208	327	474	85	2440	150	146	359	55	77	27	285
16	102	899	438	85	695	1410	391	251	53	60	26	159
17	66	1770	280	85	411	2460	448	184	55	52	23	125
18	49	1690	185	85	371	1230	346	148	185	50	22	76
19	40	711	134	85	411	523	326	198	286	47	24	53
20	34	681	97	85	389	680	245	335	152	50	21	42
21	30	698	119	85	298	1840	222	818	80	47	19	33
22	30	585	166	85	243	1640	180	621	56	41	19	27
23	107	319	232	85	230	747	182	461	60	40	19	25
24	237	232	200	150	223	461	352	1360	213	35	17	23
25	189	195	180	350	192	583	542	474	324	33	15	23
26	166	160	160	300	173	596	388	225	104	31	15	53
27	292	134	150	300	159	389	217	152	64	34	14	82
28	313	387	140	250	133	277	159	138	67	32	14	81
29	164	1260	130	170	69	501	130	518	108	32	16	53
30	102	853	120	140	---	897	109	583	67	31	18	40
31	74	---	120	120	---	768	---	279	---	27	24	---
TOTAL	2912	18246	13597	3895	18664	18850	12606	17166	4135	5449	1015	1829
MEAN	93.9	608	439	126	644	608	420	554	138	176	32.7	61.0
MAX	313	1770	2530	350	3420	2460	1350	2190	518	2320	106	285
MIN	20	59	97	85	69	140	109	75	52	27	14	22
CFSM	.54	3.47	2.51	.72	3.68	3.47	2.40	3.17	.79	1.01	.19	.35
IN.	.62	3.88	2.89	.83	3.97	4.01	2.68	3.65	.88	1.16	.22	.39

CAL YR 1983 TOTAL 91865 MEAN 252 MAX 2530 MIN 11 CFSM 1.44 IN 19.53  
WTR YR 1984 TOTAL 118364 MEAN 323 MAX 3420 MIN 14 CFSM 1.85 IN 25.16

## 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 1984

Station No.	Station name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Date	Annual maximum	
						Gage height (feet)	Dis- charge (ft <sup>3</sup> /s)
Streams tributary to Lake Erie							
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 up- stream of an unnamed tributary and 2.27 mi east of New Bremen	*1.16	1982-84	4-22-84	11.83	47
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 south of Middle Fork Gordon Creek, 0.9 mi north of Hicksville.	0.34	1978-84	4-22-84	14.90	87
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 north of U.S. Highway 20 in Fayette.	2.58	1978-84	5-26-84	97.72	315
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 south of U.S. Highway 20, and 2.3 mi southeast of Fayette.	0.56	1978-83 1978-84	5- 2-83 3-16-84	15.89 14.09	*75 20
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 east of State Highway 15, and 4.7 mi east of Montpelier.	0.40	1978-84	3-16-84	99.73	135
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 east of Spencerville.	0.51	1978-84	4-23-84	98.92	94
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 west of Allen-Hardin County line, 2.2 mi (3.5 km) northeast of Harrod.	0.53	1966-84	4-22-84	22.30	153
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	1978-84	4-22-84	22.69	128
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 south of Ottoville.	1.04	1978-84	4-22-84	98.31	63
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.	*1.26	1982-84	4-22-84	12.32	37

## CREST-STAGE PARTIAL-RECORD STATIONS--Continued

Station No.	Station name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Date	Gage height (feet)	Dis- charge (ft <sup>3</sup> /s)
Streams tributary to Lake Erie--Continued							
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 northeast of Junction.	1.66	1978-84	4-23-84	100.44	107
04192900	Reitz Run at Waterville, OH	Lat 41°29'50", long 83°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.	*0.98	1966-84	4-27-84	18.59	39
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	1982-84	11-28-83	13.04	68
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 Runm 1.1 mi north of Pontiac, and 2.4 mi south of Monroeville.	1.76	1982-84	5-20-84	12.75	80
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 up- stream of West Branch Rocky River, and about .5 mi east of Valley City.	0.45	1982-84	5-20-84	12.13	31
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 up- stream of LaDue Reservoir, and .4 mi north of U.S. Highway 422 in Auburn Corners.	*0.24	1982-84	5- 4-84	11.45	21
04210100	Hoskins Creek at Hartsgrrove, 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 Hartsgrrove.	5.42	1982-84	5- 4-84	7.42	125

\* Revised

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.

## GROUND-WATER RECORDS

119

## 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, depth 54 ft, cased.

DATUM.--Altitude of land-surface datum is 1039.13 ft. Measuring point: Floor of instrument shelter 3.50 ft 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 Dec. 11, 1962; minimum daily low, 16.78 ft Apr. 24-25, 1984.

EXTREMES FOR CURRENT YEAR.--Maximum daily low, 21.32 ft Oct. 1; minimum daily low, 16.78 ft Apr. 24-25,

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.32	19.93	18.41	18.51	19.54	19.25	17.46	16.90	17.47	18.69	19.40	19.25
2	21.28	19.88	18.36	18.46	19.53	19.31	17.51	16.91	17.45	18.69	19.43	19.19
3	21.22	19.70	18.37	18.42	19.39	19.39	17.51	16.79	17.55	18.67	19.38	19.22
4	21.21	19.59	18.13	18.42	19.36	19.37	17.32	16.96	17.60	18.60	19.37	19.25
5	21.12	19.49	18.05	18.33	19.42	19.14	17.13	17.07	17.63	18.56	19.39	19.33
6	21.06	19.50	17.89	18.51	19.62	19.14	17.26	17.24	17.68	18.57	19.37	19.38
7	21.08	19.56	17.97	18.40	19.73	19.55	17.44	17.13	17.72	18.66	19.41	19.52
8	21.05	19.61	17.97	18.56	19.74	19.35	17.47	17.10	17.75	---	19.31	19.57
9	21.08	19.59	17.97	19.62	19.61	19.34	17.33	17.21	18.05	---	19.22	19.42
10	21.03	19.43	18.07	20.42	19.57	19.22	17.35	17.26	17.90	---	19.27	19.75
11	21.13	19.30	17.99	20.52	19.55	19.26	17.31	17.17	17.97	---	19.31	19.96
12	21.01	19.26	17.72	20.14	19.51	19.30	17.27	17.07	17.97	---	19.32	20.07
13	20.84	19.16	17.69	19.81	19.35	19.18	17.30	17.03	18.51	---	19.57	20.15
14	20.85	19.07	17.54	19.73	20.07	19.29	17.31	17.05	18.22	---	19.49	20.22
15	20.85	18.95	17.74	19.54	19.60	19.18	17.29	17.10	18.25	---	19.50	20.20
16	20.76	18.92	17.98	19.62	19.23	18.82	17.25	17.16	18.44	---	19.48	20.00
17	20.78	18.97	18.05	19.57	19.06	18.61	17.37	17.18	18.29	18.80	19.45	20.21
18	20.77	18.92	18.04	19.35	19.10	18.28	17.76	17.12	18.21	18.90	19.40	20.32
19	20.80	18.86	18.07	19.63	18.97	18.24	17.69	17.02	18.29	20.28	19.52	20.33
20	20.75	18.76	18.09	19.60	19.53	18.03	17.76	17.44	18.35	20.00	19.56	20.38
21	20.65	18.91	18.05	19.50	19.34	17.73	17.79	17.55	18.30	19.47	19.58	20.31
22	20.34	18.91	17.98	19.60	19.20	17.51	17.68	17.29	18.23	19.40	19.54	20.26
23	19.93	18.80	17.99	19.58	19.08	17.63	17.04	17.40	18.21	19.35	19.57	20.24
24	19.68	18.69	17.84	19.34	19.00	17.71	16.78	17.39	18.24	19.39	19.64	20.11
25	19.60	18.61	17.77	19.40	19.24	17.38	16.78	17.21	18.27	19.37	19.69	20.16
26	19.49	18.68	17.74	19.41	19.32	17.31	16.81	17.61	18.29	19.31	19.67	20.30
27	19.48	18.68	17.99	19.41	19.27	17.19	16.83	17.57	18.32	19.31	19.59	20.25
28	19.72	18.43	18.14	19.38	19.04	17.07	16.85	17.41	18.35	19.37	19.58	20.25
29	19.95	18.25	18.27	19.40	19.21	17.32	16.89	17.45	19.15	19.39	19.42	20.17
30	19.96	18.34	18.21	19.51	---	17.42	16.85	17.45	18.78	19.38	19.43	20.18
31	19.91	---	18.43	19.57	---	17.46	---	17.46	---	19.34	19.40	---
MAX	21.32	19.93	18.43	20.52	20.07	19.55	17.79	17.61	19.15	20.28	19.69	20.38
WTR YR 1984	MEAN	18.83		HIGH	16.78		LOW	21.32				



## GROUND-WATER RECORDS

## GEAUGA COUNTY

412518081221500. Local number, GE-3A.

LOCATION.--Lat 41°25'18", long 81°22'15", Hydrologic Unit 04110003, 1.2 mi southeast of Chagrin Falls.

Owner: City of Chagrin Falls.

AQUIFER.--Sandstone of Pennsylvanian Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in, depth drilled 120 ft, present depth 89 ft, cased.

DATUM.--Altitude of land-surface datum is 1130 ft, from topographic map. Measuring point: Floor of instrument shelter 3.00 ft 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 Oct. 2, 1965; minimum daily low, 8.70 ft May 17, 1973.

EXTREMES FOR CURRENT YEAR.--Maximum recorded daily low, 42.39 ft Aug. 10-11; minimum recorded daily low, 33.43 ft Sept. 30.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---				---	40.20	40.54	40.69	40.36	40.22	42.08	37.76
2	---				---	40.27	40.56	40.69	40.36	40.33	42.12	37.47
3	---				---	40.36	40.56	40.64	40.42	40.42	42.14	37.23
4	---				---	40.37	40.38	40.69	40.49	40.50	42.19	37.05
5	---				---	40.15	40.23	40.76	40.53	40.63	42.22	35.88
6	---				---	40.29	40.41	40.76	40.58	40.75	42.23	35.74
7	---				---	40.38	40.64	40.70	40.60	40.90	42.25	35.51
8	---				---	40.44	40.65	40.65	40.60	40.93	42.28	35.31
9	---				---	40.49	40.57	40.74	40.63	40.98	42.35	36.05
10	---				39.93	40.40	40.53	40.78	40.69	40.98	42.39	35.85
11	---				39.98	40.53	40.45	40.70	40.79	41.10	42.39	35.67
12	---				39.97	40.59	40.44	39.91	40.79	41.16	41.73	35.58
13	---				39.87	40.41	40.48	39.15	40.84	41.25	41.12	35.42
14	---				39.91	40.59	40.46	39.56	40.92	41.30	40.64	35.23
15	---				39.97	40.50	40.39	39.87	40.97	41.28	41.25	35.16
16	---				39.94	40.64	40.35	40.01	40.93	41.33	41.46	35.14
17	---				39.88	40.56	40.39	40.07	40.90	41.37	41.57	35.03
18	---				39.96	---	40.59	40.05	40.95	41.54	41.73	34.80
19	36.34				39.83	---	40.61	40.04	41.04	41.58	41.87	34.53
20	36.37				39.93	---	40.66	40.12	39.97	41.59	41.96	34.34
21	36.40				39.98	---	40.72	40.14	39.18	41.54	42.00	34.41
22	36.38				39.97	40.39	40.70	40.12	38.88	41.71	42.01	34.31
23	---				39.90	40.57	40.37	40.22	38.05	41.72	41.59	34.15
24	---				39.89	40.55	40.40	40.24	37.54	41.81	40.53	34.05
25	---				40.17	40.42	---	40.12	37.25	41.83	40.11	33.95
26	---				40.21	40.43	40.58	40.38	38.38	41.82	39.70	34.05
27	---				40.20	40.38	40.65	40.41	39.22	41.93	39.27	33.92
28	---				39.91	40.24	40.74	40.33	39.59	41.99	38.89	33.65
29	---				40.16	40.42	40.78	40.37	39.82	42.01	38.56	33.54
30	---				---	40.51	40.65	40.37	40.01	42.01	38.24	33.43
31	---				---	40.55	---	40.34	---	42.03	38.01	---
MAX	36.40				40.21	40.64	40.78	40.78	41.04	42.03	42.39	37.76
WTR YR 1984	MEAN	39.82			HIGH	33.43		LOW	42.39			

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

## GROUND-WATER RECORDS

121

## 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, depth 51 ft cased.

DATUM.--Altitude of land-surface datum is 945 ft, from topographic map. Measuring point: Floor of instrument shelter 2.88 ft above land-surface datum.

REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--December 1954 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 15.86 ft Jan. 20, 21, 1965; minimum daily low, 5.46 ft Mar. 21, 1984.

EXTREMES FOR CURRENT YEAR.--Maximum daily low, 11.04 ft Oct. 19; minimum daily low, 5.46 ft Mar. 21.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.32	10.50	7.45	6.89	7.16	6.47	6.12	6.04	6.20	6.43	6.56	7.43
2	10.26	10.43	7.41	6.79	7.13	6.49	6.09	6.04	6.13	6.45	6.61	7.30
3	10.23	10.21	7.22	6.72	6.94	6.62	6.10	5.90	6.25	6.43	6.58	7.25
4	10.20	10.21	6.91	6.49	6.88	6.61	5.86	5.95	6.28	6.36	6.56	7.46
5	10.38	9.96	6.91	6.41	6.87	6.24	5.62	6.12	6.28	6.30	6.58	7.57
6	10.66	9.86	6.69	6.48	7.21	6.35	5.80	6.17	6.31	6.29	6.54	7.56
7	10.73	9.79	6.84	6.75	7.51	6.50	6.10	6.15	6.34	6.43	6.48	7.66
8	10.80	9.78	6.86	6.83	7.54	6.53	6.18	6.11	6.31	6.48	6.53	7.63
9	10.90	9.72	6.86	7.00	7.38	6.64	6.06	6.16	6.36	6.48	6.58	7.62
10	10.91	9.34	6.94	6.98	7.24	6.54	6.01	6.24	6.37	6.41	6.66	7.45
11	10.80	9.32	6.82	7.06	7.13	6.51	5.96	6.19	6.53	6.23	6.73	7.39
12	10.69	9.41	6.44	7.16	7.13	6.58	5.90	6.25	6.53	6.33	6.77	7.66
13	10.56	9.33	6.43	7.09	6.97	6.38	5.78	6.30	6.47	6.38	6.80	7.71
14	10.82	9.05	6.07	7.20	6.95	6.58	5.89	6.30	6.45	6.45	6.82	7.59
15	10.99	8.80	6.43	7.25	7.07	6.52	5.80	6.38	6.59	6.47	6.87	7.70
16	10.96	8.60	6.78	7.04	7.04	6.45	5.74	6.42	6.57	6.32	6.86	7.93
17	10.94	8.67	6.85	7.04	6.69	6.46	5.77	6.38	6.47	6.29	6.80	9.05
18	10.94	8.58	6.83	7.07	6.74	6.08	6.04	6.31	6.28	6.28	6.73	9.08
19	11.04	8.38	6.76	7.07	6.50	6.08	6.10	6.04	6.50	6.54	6.88	7.96
20	11.03	7.97	6.73	7.24	6.58	5.80	6.19	6.06	6.52	6.54	7.01	7.79
21	10.95	8.11	6.57	7.38	6.50	5.46	6.23	6.11	6.58	6.51	7.04	7.75
22	10.91	8.16	6.51	7.30	6.50	5.97	6.11	6.15	6.54	6.56	6.99	7.86
23	10.53	7.91	6.51	7.27	6.43	6.21	5.53	6.24	6.43	6.57	7.05	7.95
24	10.60	7.80	6.49	7.00	6.25	6.14	5.70	6.29	6.34	6.56	7.16	7.98
25	10.60	7.69	6.50	6.94	6.53	5.86	5.84	6.16	6.35	6.57	7.27	7.98
26	10.59	7.73	6.45	6.99	6.72	5.87	5.88	6.31	6.34	6.58	7.26	9.21
27	10.60	7.71	6.44	6.97	6.72	5.78	5.88	6.41	6.28	6.49	7.16	9.31
28	10.42	7.20	6.44	7.00	6.14	5.59	6.09	6.31	6.34	6.58	7.04	9.30
29	10.83	7.21	6.85	6.88	6.39	5.87	6.12	6.27	6.38	6.68	7.08	9.22
30	10.83	7.39	7.03	7.01	---	6.06	5.94	6.27	6.39	6.66	7.15	9.23
31	10.65	---	7.02	7.18	---	6.15	---	6.22	---	6.59	7.27	---
MAX	11.04	10.50	7.45	7.38	7.54	6.64	6.23	6.42	6.59	6.68	7.27	9.31
WTR YR 1984	MEAN	7.17		HIGH	5.46		LOW	11.04				

## GROUND-WATER RECORDS

## HENRY COUNTY

412123083574000. Local number, HY-2.

LOCATION.--Lat 41°21'23", long 83°57'40", Hydrologic Unit 04100009, 1.4 mi southwest of McClure.

Owner: State of Ohio.

AQUIFER.--Limestone of Silurian Age.

WELL CHARACTERISTICS.--Drilled test artesian well, diameter 12 in, depth 300 ft, cased to 43 ft.

DATUM.--Altitude of land-surface datum is 680 ft, from topographic map. Measuring point: Floor of instrument shelter 3.00 ft above land-surface datum.

PERIOD OF RECORD.--June 1971 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 22.76 ft May 30, 1977; minimum daily low, 14.55 ft Mar. 22, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum daily low, 21.55 ft Sept. 6; minimum daily low, 17.19 ft May 4.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.96	19.54	18.59	18.55	18.38	19.52	19.04	17.38	18.72	20.87	21.01	21.30
2	19.92	19.49	18.58	---	18.39	19.45	19.03	17.36	18.74	20.67	21.26	21.31
3	19.79	19.45	18.50	---	18.88	19.47	19.04	17.26	18.67	20.82	21.34	21.39
4	19.80	19.45	18.41	---	19.16	19.46	18.87	17.19	18.63	20.84	21.44	21.44
5	20.12	19.24	18.41	---	19.18	19.21	18.64	17.36	18.60	20.88	21.26	21.52
6	20.46	19.06	18.32	---	19.17	19.23	18.68	17.37	18.71	20.75	20.86	21.55
7	20.55	18.89	18.21	---	19.04	19.31	18.90	17.38	18.70	20.35	20.59	21.41
8	20.81	18.80	18.16	---	18.92	19.38	18.92	17.39	18.61	20.11	20.28	21.11
9	20.89	18.74	18.18	---	18.61	19.44	18.87	17.63	18.63	19.93	20.07	20.84
10	20.91	18.54	18.36	---	18.49	19.42	18.89	17.75	18.66	20.19	19.99	20.52
11	20.84	18.41	18.35	---	18.35	19.44	18.87	17.81	18.83	20.51	20.18	20.72
12	20.79	18.49	18.02	---	18.30	19.40	18.84	18.12	19.17	20.78	20.51	20.35
13	20.58	18.47	17.99	---	18.15	19.00	18.69	18.12	19.43	20.98	20.77	20.86
14	20.43	18.34	17.73	---	18.11	18.85	18.67	18.22	19.79	21.19	20.80	20.91
15	20.38	18.25	17.64	---	18.16	18.73	18.35	18.32	20.00	21.16	20.79	21.07
16	20.10	18.16	17.84	---	18.16	18.49	18.08	18.22	20.12	21.23	20.76	21.17
17	19.78	18.39	17.90	---	17.99	18.49	17.86	18.35	20.09	21.19	20.83	21.22
18	19.73	18.47	17.89	---	17.97	18.44	17.83	18.54	20.19	21.28	20.98	21.16
19	19.78	18.47	17.90	---	18.20	18.37	17.85	18.89	20.39	21.38	21.25	20.96
20	19.81	18.41	18.04	---	18.47	18.16	17.85	19.04	20.51	21.40	21.34	20.58
21	20.01	18.41	18.05	---	18.69	18.08	17.86	19.17	20.55	21.29	21.22	20.43
22	20.06	18.52	18.02	---	18.69	18.48	17.79	19.14	20.57	21.25	21.07	20.31
23	20.21	18.52	18.06	---	18.66	18.73	17.32	18.83	20.53	21.09	20.97	20.24
24	20.29	18.37	18.05	---	18.75	18.75	17.29	18.62	20.62	21.16	20.95	20.16
25	20.25	18.30	18.07	17.85	19.13	18.76	17.37	18.36	20.72	21.13	20.96	20.06
26	19.86	18.43	18.07	17.99	19.43	18.81	17.37	18.13	20.77	21.01	20.88	20.12
27	19.51	18.47	18.16	18.12	19.42	18.80	17.34	18.13	20.80	21.07	20.77	20.18
28	19.39	18.29	18.11	18.12	19.32	18.70	17.45	17.99	20.99	21.08	20.69	20.42
29	19.63	18.39	18.40	18.35	19.52	19.09	17.51	17.88	21.00	21.09	20.88	20.55
30	19.67	18.54	18.48	18.37	---	19.08	17.35	18.06	21.01	21.00	21.04	20.76
31	19.61	---	18.49	18.38	---	19.09	---	18.40	---	20.96	21.21	---
MAX	20.91	19.54	18.59	18.55	19.52	19.52	19.04	19.17	21.01	21.40	21.44	21.55
WTR YR 1984	MEAN	19.36		HIGH	17.19		LOW	21.55				

## GROUND-WATER RECORDS

123

## 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, depth drilled 525 ft, present depth 523.0 ft, cased to 93 ft.

DATUM.--Altitude of land-surface datum is 624 ft, from topographic map. Measuring point: Floor of instrument shelter 2.98 ft above land-surface datum (Revised from 1978 and 1979).

REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water. Prior to Aug. 23, 1978, measuring point was 3.10 ft above land-surface datum. Reported in 1979 as 3.00 ft above land-surface datum.

PERIOD OF RECORD.--March 1946 to September 1982 continuous, periodic thereafter.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 117.25 ft Sept. 18, 1957; minimum daily low, 65.40 ft Sept. 21, 1983.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL
Apr. 19, 1984	61.72



## GROUND-WATER RECORDS

## 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, depth 65 ft, cased.

DATUM.--Altitude of land-surface datum is 910 ft, from topographic map. Measuring point: Floor of instrument shelter 1.90 ft above land-surface datum.

REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--September 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 39.33 ft July 21, 1983; minimum daily low, 7.60 ft July 6, 1969.

EXTREMES FOR CURRENT YEAR.--Maximum recorded daily low, 34.48 ft Aug. 24; minimum recorded daily low, 23.07 ft Apr. 28.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							---	27.33	27.10	24.29	32.58	28.74
2							---	27.54	27.14	25.96	32.64	26.62
3							---	31.77	25.93	30.12	33.69	27.03
4							---	27.34	29.07	25.44	30.43	27.92
5							---	25.65	28.19	24.56	27.99	31.22
6							---	23.75	28.40	32.05	30.48	32.13
7							---	26.43	33.70	24.75	30.68	33.69
8							---	26.28	30.78	24.17	29.96	29.63
9							---	29.78	29.41	27.70	33.62	27.04
10							---	28.42	26.46	29.11	30.13	30.14
11							---	25.50	30.74	29.40	28.49	30.07
12							---	27.71	31.61	33.69	26.62	29.76
13							---	24.24	31.24	26.75	27.40	33.69
14							---	26.96	29.87	28.53	29.06	28.52
15							---	26.77	33.70	25.59	28.51	27.16
16							---	27.47	27.01	29.19	33.69	25.73
17							---	29.77	25.40	28.71	30.10	28.97
18							---	28.27	30.15	28.55	28.58	28.64
19							---	26.18	31.14	29.55	26.92	30.16
20							---	24.28	30.85	33.69	28.82	33.31
21							---	26.44	28.68	29.41	31.15	26.22
22							---	28.17	33.70	26.07	30.43	25.95
23							---	31.86	29.05	31.88	31.19	24.24
24							---	27.17	25.90	33.15	34.48	29.41
25							---	27.41	30.08	33.39	30.85	28.94
26							25.34	26.98	29.46	32.31	28.95	28.99
27							25.31	23.90	30.12	34.14	33.30	33.10
28							23.07	24.19	33.70	27.58	32.85	25.58
29							25.96	28.71	30.69	27.73	32.28	25.14
30							25.52	33.69	25.84	28.51	33.69	24.26
31							---	27.98	---	30.28	30.62	---
MAX							25.96	33.69	33.70	34.14	34.48	33.69

WTR YR 1984 MEAN 28.90 HIGH 23.07 LOW 34.48

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

## GROUND-WATER RECORDS

125

## 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, depth 72 ft, cased.

DATUM.--Altitude of land-surface datum is 1040 ft, from topographic Map. Measuring point: Top of platform 4.50 ft 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 Feb. 22, 1977; minimum daily low, 14.28 ft May 5, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum recorded daily low, 24.18 ft Nov. 17-22; minimum recorded daily low, 18.23 ft June 1.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.52	23.77	23.98	22.17				---	18.23	18.34	19.51	20.85
2	22.56	23.80	23.95	22.08				---	---	18.35	19.54	20.86
3	22.60	23.84	23.92	22.01				---	---	18.39	19.58	---
4	22.65	23.87	23.87	21.93				---	---	18.42	19.62	---
5	22.71	23.89	23.85	21.88				---	---	18.44	19.66	---
6	22.76	23.93	23.78	21.80				---	---	18.46	19.68	---
7	22.79	23.96	23.78	21.78				---	---	18.51	19.74	---
8	22.85	23.99	23.73	21.72				---	---	18.55	19.76	---
9	22.89	24.00	23.69	21.69				---	---	18.56	19.83	---
10	22.93	24.02	23.63	21.63				---	---	18.57	19.88	---
11	22.96	24.08	23.57	21.59				---	---	18.58	19.92	---
12	22.99	24.10	23.48	---				---	---	18.63	19.94	---
13	23.05	24.11	23.45	---				---	---	18.65	19.99	---
14	23.10	24.13	23.37	---				---	---	18.69	20.03	---
15	23.14	24.13	23.32	---				---	---	18.72	20.07	---
16	23.16	24.16	23.28	---				---	---	18.72	20.11	---
17	23.21	24.18	23.22	---				---	---	18.76	20.18	---
18	23.26	24.18	23.14	---				---	---	18.80	20.21	---
19	23.30	24.18	23.07	---				---	---	18.88	20.29	---
20	23.34	24.18	23.01	---				---	---	18.92	20.33	---
21	23.37	24.18	22.97	---				---	---	18.96	20.37	---
22	23.39	24.18	22.84	---				---	---	18.99	20.39	---
23	23.44	24.16	22.80	---				---	---	19.03	20.45	---
24	23.48	24.15	22.72	---				18.71	---	19.08	20.49	---
25	23.52	24.12	22.64	---				18.67	---	19.13	20.55	---
26	23.56	24.11	22.60	---				---	---	19.18	20.58	---
27	23.59	24.09	22.56	---				---	---	19.19	20.63	---
28	23.66	24.03	22.40	---				---	---	19.27	20.66	---
29	23.69	24.01	22.38	---				---	18.30	19.33	20.72	---
30	23.71	24.00	22.32	---				---	18.31	19.40	20.77	22.23
31	23.74	---	22.26	---				18.25	---	19.48	20.81	---
MAX	23.74	24.18	23.98	22.17				18.71	18.31	19.48	20.81	22.23
WTR YR 1984	MEAN	21.73		HIGH	18.23		LOW	24.18				

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

## GROUND-WATER RECORDS

## 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, depth 110 ft, cased.

DATUM.--Altitude of land-surface datum is 770 ft, from topographic map. Measuring point: Floor of instrument shelter 3.00 ft 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 Aug. 24, 1962; minimum daily low, 9.50 ft Jan. 5, 1950.

EXTREMES FOR CURRENT YEAR.--Maximum daily low, 17.93 ft Sept. 6; minimum daily low, 10.16 ft Mar. 21.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.93	13.94	10.84	13.22	---	11.75	10.55	10.71	11.22	14.08	14.87	13.75
2	15.79	14.07	10.97	12.61	12.16	11.47	10.75	10.84	12.54	13.95	14.11	13.98
3	15.63	13.72	10.98	11.97	13.22	13.00	11.94	11.88	11.04	13.00	15.03	14.19
4	16.76	13.95	10.92	13.15	11.83	11.15	11.17	11.18	11.66	13.92	14.74	15.65
5	16.46	13.85	10.87	11.85	---	11.30	10.58	11.06	12.76	12.95	13.45	14.79
6	15.60	13.82	10.73	11.91	---	12.55	11.62	12.01	11.35	12.37	14.82	17.93
7	16.68	13.72	10.68	13.41	---	11.18	10.40	10.90	11.78	13.55	14.80	16.43
8	15.77	13.87	10.82	12.06	---	12.45	10.58	10.98	13.06	13.85	14.84	15.51
9	15.52	13.60	10.72	12.02	13.31	12.53	11.96	12.21	12.59	12.51	14.73	14.58
10	16.78	13.62	10.98	13.22	11.98	11.10	10.51	10.97	12.20	14.16	14.23	15.29
11	15.78	13.67	10.50	12.23	12.06	11.36	10.78	11.06	13.81	12.01	13.67	15.24
12	15.31	13.26	10.78	12.21	13.07	12.68	11.99	12.93	11.84	12.83	13.55	14.45
13	16.40	13.18	10.47	13.26	11.44	12.61	11.90	11.12	12.52	14.38	15.08	15.76
14	15.44	12.97	10.64	13.58	11.47	11.30	10.81	11.41	13.47	14.02	14.73	14.19
15	15.41	12.41	10.76	12.10	12.60	11.13	11.77	12.55	12.94	13.16	13.66	15.94
16	16.56	12.37	10.52	13.41	11.22	10.97	10.41	11.27	12.21	14.86	15.13	15.35
17	15.54	12.16	10.92	12.08	11.23	10.81	10.45	11.64	13.47	12.95	14.68	15.54
18	15.25	12.03	10.93	11.91	12.55	10.60	11.73	12.94	13.54	13.64	14.41	15.01
19	16.48	11.91	11.22	13.26	12.06	11.94	10.55	11.24	13.00	14.85	14.99	15.94
20	15.32	11.95	11.05	12.24	11.43	10.28	10.80	11.58	14.32	15.14	15.25	15.36
21	15.00	11.46	11.14	12.46	12.46	10.16	12.30	12.61	13.70	13.61	14.04	14.55
22	16.05	11.67	11.03	13.68	11.59	11.45	10.34	10.94	13.06	15.42	14.97	15.17
23	14.80	11.30	11.39	---	11.26	11.39	10.42	11.25	13.85	15.20	15.02	14.10
24	14.61	11.41	11.56	---	12.34	10.52	11.70	12.33	13.36	15.26	14.09	14.91
25	15.18	11.27	11.90	13.29	12.69	11.55	11.39	10.71	12.52	15.27	15.01	15.94
26	14.52	11.35	11.93	12.06	12.51	11.25	10.67	11.10	14.00	14.99	14.79	15.25
27	14.20	11.20	13.10	---	11.02	10.28	11.77	12.28	13.95	13.83	14.11	15.46
28	14.28	11.07	12.05	---	11.05	11.39	10.50	10.63	12.82	15.26	15.29	15.92
29	14.28	10.89	12.10	---	12.47	12.06	10.79	10.85	12.78	15.21	15.25	15.00
30	14.19	11.11	13.46	---	---	10.65	12.00	12.20	12.88	15.01	14.35	14.72
31	14.29	---	12.23	---	---	12.09	---	10.63	---	15.61	15.59	---
MAX	16.93	14.07	13.46	13.68	13.31	13.00	12.30	12.94	14.32	15.61	15.59	17.93
WTR YR 1984	MEAN	12.93		HIGH	10.16		LOW	17.93				

## GROUND-WATER RECORDS

127

## 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, depth 150 ft, cased.

DATUM.--Altitude of land-surface datum is 1080 ft, from topographic map. Measuring point: Floor of instrument shelter 3.17 ft 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 Feb. 12, 1981; minimum daily low, 23.68 ft June 15, 23, 1947.

EXTREMES FOR CURRENT YEAR.--Maximum daily low, 34.41 ft Oct. 30; minimum daily low, 30.59 ft June 2.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33.88	34.17	33.60	34.15	33.99	33.35	32.26	31.46	30.66	31.79	32.24	32.55
2	33.79	34.15	33.54	33.98	33.93	33.42	32.26	31.38	30.59	31.88	32.25	32.37
3	33.70	34.08	33.38	33.96	33.70	33.58	32.20	31.21	30.76	31.88	32.23	32.37
4	33.66	34.05	33.26	33.64	33.67	33.60	31.79	31.17	30.96	31.75	32.12	32.54
5	33.80	33.88	33.26	33.60	33.69	33.17	31.48	31.38	31.01	31.63	32.08	32.57
6	34.05	33.87	33.03	33.63	34.04	33.34	31.71	31.33	30.94	31.61	32.01	32.69
7	34.08	33.91	33.34	33.78	34.30	33.47	32.10	31.29	30.91	31.78	32.02	32.55
8	34.22	33.85	33.44	33.90	34.34	33.47	32.14	31.12	30.75	31.75	32.05	32.61
9	34.25	33.90	33.45	33.93	34.12	33.62	32.01	31.23	30.91	31.70	32.17	32.49
10	34.16	33.72	33.54	33.89	34.04	33.49	31.94	31.26	30.86	31.46	32.23	32.37
11	34.09	33.80	33.49	34.10	34.00	33.53	31.81	31.08	31.09	31.48	32.26	32.56
12	33.89	34.04	33.18	34.14	33.99	33.56	31.69	31.33	31.01	31.59	32.30	32.69
13	33.87	34.08	33.17	34.01	33.83	33.31	31.56	31.25	31.05	31.65	32.31	32.41
14	34.11	33.86	32.82	34.19	33.91	33.48	31.50	31.27	31.10	31.75	32.34	32.55
15	34.21	33.79	32.91	34.17	34.05	33.35	31.40	31.28	31.20	31.67	32.40	32.69
16	34.19	33.64	33.44	33.89	33.93	33.44	31.30	31.29	31.06	31.67	32.35	32.83
17	34.19	33.77	33.54	33.96	33.91	33.37	31.32	31.26	30.93	31.62	32.37	32.90
18	34.24	33.76	33.52	34.01	33.89	33.04	31.64	31.04	30.90	31.72	32.25	32.78
19	34.36	33.66	33.45	33.97	33.64	33.01	31.69	30.80	31.04	31.80	32.27	32.70
20	34.32	33.39	33.49	34.19	33.69	32.67	31.82	30.79	31.13	31.67	32.40	32.54
21	34.28	33.59	33.49	34.27	33.67	32.24	31.89	30.84	31.16	31.99	32.41	32.78
22	34.13	33.68	33.43	34.25	33.64	32.63	31.76	30.83	30.92	32.03	32.31	32.77
23	33.85	33.56	33.46	34.30	33.47	32.86	31.20	30.97	31.08	32.11	32.33	32.80
24	34.07	33.48	33.47	33.84	33.26	32.80	31.37	30.98	31.05	32.32	32.42	32.72
25	34.08	33.48	33.71	33.84	33.56	32.48	31.58	30.76	31.11	32.27	32.53	32.71
26	34.01	33.55	33.53	33.84	33.71	32.41	31.53	31.00	31.17	32.22	32.48	33.02
27	34.09	33.57	33.62	33.84	33.61	32.27	31.50	31.00	31.36	32.08	32.33	32.95
28	33.97	33.23	33.57	33.82	32.97	31.93	31.69	30.80	31.73	32.24	32.34	32.83
29	34.40	33.30	33.99	33.77	33.29	32.07	31.71	30.79	31.74	32.27	32.32	32.72
30	34.41	33.47	34.23	33.86	---	32.25	31.50	30.76	31.71	32.18	32.31	32.69
31	34.20	---	34.22	33.98	---	32.33	---	30.74	---	32.19	32.45	---
MAX	34.41	34.17	34.23	34.30	34.34	33.62	32.26	31.46	31.74	32.32	32.53	33.02
WTR YR 1984	MEAN	32.73		HIGH	30.59		LOW	34.41				



## GROUND-WATER RECORDS

## SANDUSKY COUNTY

411914083045300. Local number, S-3.

LOCATION.--Lat 41°19'14", long 83°04'53", Hydrologic Unit 04100011, 2.6 mi southeast of Fremont Post Office.  
Owner: State of Ohio.

AQUIFER.--Limestone of Silurian Age.

WELL CHARACTERISTICS.--Drilled test artesian well, diameter 12 in, depth 121 ft, cased to 93 ft.

DATUM.--Altitude of land-surface datum is 627 ft, from topographic map. Measuring point: Floor of instrument shelter 3.00 ft above land-surface datum.

PERIOD OF RECORD.--December 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 24.18 ft Aug. 2, 1975; minimum daily low, 14.02 ft Mar. 24, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum daily low, 22.84 ft Aug. 2; minimum recorded daily low, 14.50 ft Apr. 5.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.76	16.94	16.02	15.74			---	14.89	15.12	22.35	22.57	19.59
2	17.70	16.87	16.00	15.62			---	14.89	15.13	21.06	22.84	19.31
3	18.40	16.77	15.88	15.62			---	14.78	15.21	21.16	21.51	19.10
4	18.03	16.76	15.71	15.40			14.63	14.76	15.26	22.14	20.70	19.37
5	17.74	16.65	15.76	15.36			14.50	14.92	15.36	22.37	20.24	20.55
6	17.74	16.63	15.67	15.24			14.61	16.65	15.48	20.93	19.89	21.45
7	17.75	16.60	15.59	15.42			14.87	17.22	15.57	20.11	19.62	20.65
8	17.69	16.66	15.66	15.47			14.92	16.25	15.57	19.70	19.46	19.89
9	17.74	16.61	15.75	15.54			14.88	15.76	15.71	19.33	19.26	19.44
10	17.68	16.42	15.77	15.52			14.86	15.70	15.81	18.95	19.19	19.09
11	17.57	16.31	15.75	15.61			14.82	15.54	16.46	18.69	19.06	19.88
12	17.41	16.49	15.49	15.61			14.77	15.52	18.48	18.60	18.99	19.84
13	17.35	16.46	15.51	15.54			14.62	15.51	19.35	18.53	18.84	19.70
14	17.32	16.42	15.29	15.65			14.63	15.48	19.55	18.48	18.74	19.54
15	17.40	16.32	15.39	15.64			14.60	15.45	20.33	18.32	18.98	19.49
16	17.30	16.20	15.64	15.46			14.59	15.45	20.56	18.21	20.90	19.54
17	17.29	16.32	15.73	15.44			14.58	15.39	19.19	19.53	21.32	19.60
18	17.25	16.32	15.74	15.49			14.76	15.26	19.94	20.14	21.16	19.46
19	17.27	16.26	15.69	15.41			14.93	15.15	19.98	20.14	21.58	19.26
20	17.19	16.09	15.72	15.49			14.99	15.10	19.60	21.47	20.54	18.10
21	17.12	16.15	15.73	15.58			15.07	15.06	18.64	21.85	19.99	18.18
22	17.04	16.22	15.43	15.58			15.02	15.07	19.54	20.68	20.77	19.77
23	16.80	16.18	15.55	15.60			14.58	15.14	20.46	22.16	19.93	20.82
24	16.85	16.07	15.43	15.29			14.64	15.21	19.98	22.56	19.65	20.38
25	16.91	16.07	15.47	15.57			14.76	15.07	20.19	22.23	21.02	19.38
26	16.85	16.12	15.46	15.52			14.82	15.22	21.20	22.82	22.15	19.00
27	16.85	16.17	15.48	15.50			14.81	15.26	21.39	21.67	22.68	19.89
28	16.73	15.91	15.40	---			14.90	15.22	20.19	20.87	21.76	18.63
29	17.05	15.89	15.68	---			14.99	15.17	21.37	20.46	20.71	18.47
30	17.06	16.00	15.79	---			14.78	15.15	22.16	20.12	20.22	19.43
31	17.03	---	15.78	---			---	15.15	---	21.35	19.83	---
MAX	18.40	16.94	16.02	15.74			15.07	17.22	22.16	22.82	22.84	21.45
WTR YR 1984	MEAN	17.42		HIGH	14.50		LOW	22.84				

## GROUND-WATER RECORDS

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## 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 depth 198 ft cased.

DATUM.--Altitude of land-surface datum is 635 ft 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 Jan. 29, 1982; minimum daily low, 18.60 ft May 6, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum recorded daily low, 72.31 ft Oct. 18; minimum recorded daily low, 24.28 ft Apr. 26.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	27.95	---	---	34.83	---	27.63	29.99	---	---	---
2	---	---	---	---	---	---	40.33	29.15	---	---	---	---
3	---	---	29.46	---	---	---	---	29.87	30.28	---	---	---
4	---	---	30.03	---	---	40.13	38.26	29.95	---	---	---	---
5	---	---	37.94	---	---	---	37.32	32.14	---	---	---	---
6	---	---	29.88	---	---	41.18	---	29.64	---	---	---	---
7	69.43	---	28.27	---	---	42.56	---	30.68	34.85	---	---	---
8	---	---	26.71	---	---	38.25	---	---	35.04	---	---	---
9	---	---	26.51	---	---	---	46.03	---	36.16	---	---	---
10	---	---	27.77	---	---	---	37.14	---	34.81	55.38	---	---
11	---	---	29.29	---	---	---	31.99	---	39.01	---	---	---
12	---	---	29.22	---	---	60.27	31.70	---	41.26	57.03	---	---
13	---	---	26.96	---	---	---	35.02	34.31	42.36	57.90	---	60.10
14	---	---	25.84	---	---	---	---	34.64	44.97	58.80	---	---
15	---	---	26.13	---	31.20	---	38.77	---	---	58.80	---	---
16	---	---	26.81	---	---	54.58	36.44	---	49.88	58.41	---	---
17	---	---	28.92	---	---	---	---	---	46.79	61.95	---	---
18	72.31	---	30.10	---	---	30.28	35.16	35.51	49.60	57.72	---	---
19	---	---	29.77	---	32.96	29.16	---	---	57.56	61.20	---	---
20	---	---	30.61	---	---	28.46	39.56	39.29	---	62.34	---	---
21	---	---	29.48	---	---	27.53	39.02	37.88	---	63.05	---	---
22	---	---	38.31	---	30.61	26.62	---	29.47	---	59.45	---	---
23	---	---	35.73	---	---	25.72	30.28	27.78	---	62.30	---	---
24	---	---	33.88	---	---	25.18	27.71	25.80	---	61.91	---	---
25	---	29.37	38.30	---	---	25.17	26.07	25.41	---	60.31	---	---
26	---	40.15	38.42	---	---	25.39	24.28	25.90	---	61.00	---	---
27	---	38.32	40.49	---	---	25.68	25.57	26.98	---	---	---	---
28	---	---	42.33	---	---	26.53	26.64	26.73	---	---	---	---
29	---	---	48.27	---	33.20	26.63	26.23	28.51	---	---	---	---
30	---	27.67	---	---	---	26.72	27.47	28.10	---	---	---	---
31	---	---	---	---	---	28.64	---	29.17	---	---	---	---
MAX	72.31	40.15	48.27	---	33.20	60.27	46.03	39.29	57.56	63.05	---	60.10
WTR YR 1984	MEAN	37.17	---	HIGH	24.28	---	LOW	72.31	---	---	---	---

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

## GROUND-WATER RECORDS

## 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 depth 250 ft, cased.

DATUM.--Altitude of land-surface datum is 740 ft, from topographic map. Measuring point: Floor of instrument shelter 0.50 ft above land-surface datum.

REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 23.76 ft Nov. 22, 1964; minimum daily low, 14.48 ft Mar. 22, 1984.

EXTREMES FOR CURRENT YEAR.--Maximum daily low, 21.59 ft Sept. 26-27; minimum daily low, 14.48 ft Mar. 22.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.88	20.12	16.62	18.20	19.15	17.98	15.99	15.90	16.77	19.72	20.43	21.08
2	20.87	20.07	16.63	18.20	19.15	18.12	16.26	16.08	16.83	19.78	20.50	20.86
3	20.79	19.85	16.74	18.17	18.81	18.28	16.28	16.00	17.17	19.76	20.49	20.90
4	20.80	19.83	16.37	18.06	18.49	18.28	16.06	16.37	17.34	19.68	20.53	21.05
5	20.87	19.52	16.25	18.07	18.38	17.78	15.91	16.78	17.47	19.66	20.55	21.15
6	20.93	19.46	15.85	18.41	18.75	17.80	16.32	16.88	17.66	19.61	20.52	21.18
7	20.93	19.51	15.30	18.54	19.00	17.93	16.79	16.93	17.80	19.76	20.46	21.12
8	20.81	19.57	15.32	18.81	19.04	17.91	16.87	17.00	17.93	19.88	20.45	21.08
9	20.85	19.60	15.37	18.84	18.80	18.01	16.81	17.28	18.08	19.80	20.47	20.93
10	20.80	19.33	15.80	18.89	18.74	17.89	16.91	17.42	18.22	19.67	20.48	20.90
11	20.59	18.93	15.79	19.10	18.47	18.00	16.93	17.36	18.54	19.66	20.51	21.09
12	20.46	18.70	15.26	19.12	18.33	18.06	16.91	17.76	18.58	19.81	20.56	21.19
13	20.32	18.48	15.26	19.00	17.83	17.88	17.06	17.74	18.57	19.92	20.58	21.03
14	20.25	18.16	15.02	19.29	17.51	18.06	17.11	17.84	18.75	20.02	20.59	21.01
15	20.37	17.99	15.61	19.21	17.49	17.95	17.06	17.96	18.90	19.90	20.63	21.24
16	20.21	17.69	16.48	18.93	17.44	17.18	16.99	18.08	18.82	19.90	20.60	21.32
17	20.22	17.54	16.81	19.22	17.24	16.71	17.12	18.11	18.65	19.88	20.59	21.39
18	20.25	17.49	16.87	19.22	17.34	15.51	17.48	17.95	18.71	20.12	20.51	21.23
19	20.34	17.34	17.02	19.22	17.20	15.35	17.55	17.82	18.96	20.24	20.73	21.07
20	20.29	17.04	17.22	19.49	17.36	15.09	17.66	17.84	19.08	20.21	20.86	21.00
21	20.25	17.30	17.23	19.51	17.47	14.54	17.75	17.53	19.15	20.28	20.90	21.24
22	20.19	17.42	17.02	19.45	17.49	14.48	17.59	17.04	19.11	20.38	20.79	21.31
23	19.81	17.40	17.13	19.45	17.43	14.66	16.33	16.70	19.05	20.39	20.73	21.37
24	19.80	17.12	17.12	18.92	17.50	14.57	15.35	16.39	19.18	20.45	20.93	21.30
25	19.82	17.02	17.15	18.94	17.92	14.50	15.21	15.91	19.23	20.50	21.09	21.30
26	19.79	17.20	17.15	18.90	18.11	14.63	15.22	16.42	19.24	20.37	21.03	21.59
27	19.90	17.30	17.42	18.90	18.05	14.63	15.26	16.66	19.23	20.41	20.88	21.59
28	19.87	16.92	17.35	18.85	17.56	14.59	15.41	16.59	19.40	20.53	20.80	21.43
29	20.33	16.22	17.35	18.84	17.90	15.07	15.51	16.59	19.55	20.57	20.85	21.36
30	20.34	16.45	17.35	19.03	---	15.40	15.50	16.64	19.61	20.48	20.92	21.33
31	20.18	---	17.35	19.15	---	15.76	---	16.73	---	20.40	20.98	---
MAX	20.93	20.12	17.42	19.51	19.15	18.28	17.75	18.11	19.61	20.57	21.09	21.59
WTR YR 1984	MEAN	18.55		HIGH	14.48		LOW	21.59				

## GROUND-WATER RECORDS

131

## 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, depth 89 ft, cased.

DATUM.--Altitude of land-surface datum is 1000 ft from topographic map. Measuring point: Floor of instrument shelter 2.63 ft above land-surface datum.

REMARKS.--Station operated by Ohio Department of Natural Resources, 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 Oct. 18, 1947; minimum daily low, 11.95 ft April 9, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum daily low, 24.60 ft Nov. 18; minimum daily low, 11.98 ft May 28.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.70	24.09	17.06	13.49	13.13	12.90	12.28	12.39	12.08	12.82	13.19	13.40
2	22.68	24.14	16.89	13.41	13.11	12.90	12.26	12.43	12.09	12.87	13.22	13.35
3	22.73	24.16	16.71	13.34	13.03	12.89	12.27	12.40	12.07	12.98	13.22	13.30
4	22.78	24.20	16.50	13.32	12.94	12.89	12.28	12.20	12.12	12.87	13.21	13.29
5	22.83	24.25	16.24	13.32	12.93	12.89	12.32	12.23	12.19	12.73	13.01	13.36
6	22.92	24.26	16.01	13.34	13.01	12.73	12.37	12.21	12.22	12.75	13.07	13.36
7	22.99	24.27	15.87	13.35	13.06	12.78	12.41	12.20	12.23	12.78	13.11	13.38
8	23.06	24.33	15.72	13.32	13.06	12.81	12.40	12.19	12.23	12.78	13.13	13.35
9	23.06	24.37	15.59	13.26	13.04	12.82	12.35	12.15	12.22	12.84	13.17	13.31
10	23.10	24.45	15.49	13.27	13.03	12.81	12.36	12.18	12.16	12.88	13.21	13.26
11	23.17	24.48	15.35	13.28	12.96	12.82	12.39	12.18	12.27	12.95	13.22	13.33
12	23.21	24.48	15.12	13.33	12.91	12.80	12.41	12.06	12.32	12.99	13.20	13.36
13	23.25	24.47	15.02	13.31	12.85	12.80	12.49	12.02	12.40	13.00	13.22	13.40
14	23.32	24.46	14.86	13.29	12.81	12.82	12.48	12.07	12.46	13.00	13.26	13.39
15	23.37	24.52	14.77	13.31	12.85	12.78	12.44	12.17	12.48	12.96	13.30	13.42
16	23.43	24.58	14.72	13.25	12.84	12.69	12.33	12.21	12.49	12.95	13.30	13.39
17	23.52	24.59	14.66	13.15	12.88	12.62	12.40	12.23	12.45	12.98	13.30	13.36
18	23.56	24.60	14.57	13.18	12.88	12.59	12.42	12.22	12.42	13.05	13.30	13.40
19	23.60	24.58	14.41	13.18	12.82	12.57	12.41	12.16	12.49	13.07	13.24	13.44
20	23.66	21.45	14.34	13.16	12.78	12.57	12.46	12.10	12.58	13.08	13.31	13.48
21	23.71	20.22	14.24	13.15	12.83	12.52	12.46	11.99	12.62	13.10	13.32	13.49
22	23.75	19.62	14.11	13.18	12.83	12.40	12.39	12.06	12.64	13.07	13.31	13.53
23	23.75	19.20	14.06	13.07	12.83	12.44	12.30	12.06	12.64	13.06	13.35	13.46
24	23.75	18.86	13.98	13.02	12.83	12.44	12.34	12.07	12.61	13.13	13.38	13.45
25	23.79	18.55	13.86	13.07	12.86	12.34	12.41	12.04	12.70	13.15	13.38	13.47
26	23.84	18.23	13.75	13.05	12.85	12.39	12.40	12.05	12.75	13.15	13.34	13.52
27	23.89	17.94	13.69	13.11	12.79	12.39	12.41	12.05	12.82	13.04	13.27	13.52
28	23.93	17.67	13.66	13.11	12.77	12.32	12.42	11.98	12.84	13.03	13.33	13.51
29	23.97	17.43	13.66	13.04	12.87	12.32	12.39	12.02	12.85	13.03	13.37	13.45
30	23.98	17.24	13.62	13.08	---	12.32	12.34	12.08	12.84	13.07	13.37	13.40
31	24.02	---	13.57	13.12	---	12.30	---	12.09	---	13.13	13.39	---
MAX	24.02	24.60	17.06	13.49	13.13	12.90	12.49	12.43	12.85	13.15	13.39	13.53
WTR YR 1984	MEAN	14.67		HIGH	11.98		LOW	24.60				



## 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, depth 100 ft, cased.

DATUM.--Altitude of land-surface datum is 994 ft, from topographic map. Measuring point: Floor of instrument shelter 5.00 ft above land-surface datum.

REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--August 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 44.19 ft Sept. 7, 1971; minimum daily low, 0.34 ft Mar. 17, 1982.

EXTREMES FOR CURRENT YEAR.--Maximum daily low, 31.53 ft Nov. 9; minimum daily low, 3.55 ft May 16.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28.96	31.46	26.96	19.40	28.41	17.17	3.55	17.93	11.17	20.87	25.30	28.45
2	28.99	31.47	25.86	19.65	28.58	17.64	3.95	18.11	11.56	21.09	25.81	28.32
3	29.06	31.41	24.54	19.98	28.90	18.04	5.10	18.22	12.19	21.46	25.83	28.18
4	29.25	31.38	23.80	20.40	29.14	18.34	6.22	18.20	12.81	21.71	25.98	28.20
5	29.29	31.34	21.87	20.69	29.40	18.71	7.14	17.98	13.01	21.32	26.02	28.20
6	29.28	31.24	20.05	21.06	29.68	19.11	8.00	17.83	13.62	21.73	26.43	28.06
7	29.28	31.21	18.88	21.37	29.90	19.44	8.67	17.71	14.17	21.78	26.06	28.03
8	29.33	31.27	17.74	21.62	30.01	19.78	9.24	17.75	15.05	21.62	26.38	27.89
9	29.37	31.53	16.63	21.97	30.13	20.14	9.85	17.72	15.63	21.35	26.27	27.99
10	29.37	31.48	15.70	22.28	30.26	20.41	10.48	17.50	16.28	21.55	26.27	27.83
11	29.42	31.47	15.04	22.66	30.34	20.68	11.12	17.36	16.96	21.57	26.24	27.72
12	29.52	31.47	14.62	22.95	30.36	20.98	11.82	17.14	17.35	21.51	25.82	27.61
13	29.54	31.42	14.18	23.20	30.30	21.27	12.45	13.89	17.73	21.71	25.93	27.49
14	29.50	31.40	13.47	23.40	29.96	21.51	13.03	7.70	18.09	21.91	26.08	27.57
15	29.44	31.37	13.53	23.76	28.51	21.73	13.51	4.98	18.36	21.98	26.26	27.57
16	29.13	31.38	13.77	23.96	23.97	21.93	13.98	3.55	18.43	22.35	26.50	27.48
17	28.77	31.32	14.08	24.20	14.79	21.93	14.53	4.89	18.65	22.51	26.74	27.42
18	28.62	31.03	14.27	24.63	10.42	21.81	15.02	6.11	18.89	22.54	27.33	27.36
19	28.86	30.81	14.66	24.83	9.33	21.74	15.36	7.05	19.16	22.60	27.26	27.46
20	29.07	30.51	14.97	25.25	10.75	22.17	15.75	7.67	19.16	22.82	27.92	27.21
21	29.22	30.01	15.54	25.59	11.93	22.23	16.08	7.81	19.26	23.01	28.03	26.48
22	29.37	29.57	15.95	25.93	12.91	20.69	16.38	7.95	18.99	23.32	28.15	25.55
23	29.46	29.30	16.22	26.21	13.41	14.39	16.59	7.95	18.95	23.77	28.24	24.73
24	29.61	28.93	16.57	26.55	13.91	10.18	16.83	7.38	18.80	23.98	28.28	25.14
25	30.06	28.66	17.04	26.90	14.56	6.96	17.00	6.28	19.09	24.31	28.28	25.24
26	30.36	28.32	17.28	27.10	15.23	5.35	17.18	7.46	19.20	24.36	28.30	25.86
27	30.51	28.07	17.60	27.44	15.77	5.11	17.31	8.17	19.77	24.93	28.40	26.12
28	30.62	27.92	18.06	27.71	16.25	5.78	17.38	8.45	20.01	25.03	28.55	25.93
29	30.80	27.72	18.47	27.91	16.71	5.47	17.48	9.02	20.37	25.04	28.59	25.80
30	30.97	27.59	18.81	28.09	---	4.80	17.69	9.57	20.68	25.26	28.61	25.93
31	31.22	---	19.09	28.26	---	3.75	---	10.87	---	25.34	28.62	---
MAX	31.22	31.53	26.96	28.26	30.36	22.23	17.69	18.22	20.68	25.34	28.62	28.45
WTR YR 1984	MEAN	21.53		HIGH	3.55		LOW	31.53				

## GROUND-WATER RECORDS

133

## 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, depth 340 ft, cased.

DATUM.--Altitude of land-surface datum is 790.37 ft. Measuring point: Floor of instrument shelter 6.15 ft 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 Mar. 2, 1977; minimum daily low, 18.85 ft Mar. 6, 1959.

EXTREMES FOR CURRENT YEAR.--Maximum daily low 28.00 ft Sept. 26,27; minimum daily low 25.95 ft Oct 3,4.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26.15	27.00	27.35	27.55	27.30	27.30	27.15	26.80	26.75	27.15	27.30	27.65
2	26.05	26.95	27.30	27.40	27.25	27.40	27.15	26.75	26.65	27.15	27.35	27.50
3	25.95	26.95	27.25	27.35	27.05	27.55	27.15	26.55	26.75	27.15	27.30	27.50
4	25.95	26.95	27.10	27.05	27.00	27.55	26.85	26.50	26.75	27.00	27.30	27.65
5	26.05	26.85	27.10	27.00	27.20	27.15	26.55	26.65	26.70	26.95	27.30	27.75
6	26.25	26.80	27.00	26.95	27.45	27.25	26.80	26.70	26.80	26.95	27.25	27.75
7	26.30	26.85	27.10	27.10	27.65	27.40	27.05	26.65	26.85	27.10	27.15	27.70
8	26.35	26.90	27.25	27.20	27.70	27.45	27.15	26.60	26.75	27.20	27.15	27.55
9	26.50	26.90	27.30	27.25	27.50	27.55	27.00	26.70	26.85	27.10	27.20	27.55
10	26.50	26.70	27.45	27.30	27.40	27.50	27.00	26.75	26.80	27.00	27.30	27.45
11	26.30	26.80	27.35	27.40	27.35	27.55	26.90	26.65	27.00	26.90	27.40	27.50
12	26.20	27.00	27.10	27.45	27.35	27.55	26.85	26.80	27.00	27.05	27.45	27.65
13	26.10	26.95	27.10	27.40	27.15	27.45	26.65	26.85	26.95	27.15	27.45	27.55
14	26.35	26.85	26.85	27.55	27.30	27.60	26.65	27.00	27.00	27.25	27.45	27.55
15	26.50	26.75	26.90	27.60	27.40	27.55	26.55	27.10	27.15	27.15	27.45	27.70
16	26.45	26.80	27.35	27.35	27.40	27.50	26.45	27.20	27.10	27.10	27.40	27.85
17	26.55	26.95	27.50	27.30	27.25	27.50	26.45	27.15	27.00	27.10	27.35	27.95
18	26.55	26.95	27.55	27.45	27.25	27.25	26.70	27.05	26.80	27.15	27.30	27.80
19	26.70	26.90	27.55	27.35	27.10	27.25	26.80	26.85	27.00	27.30	27.40	27.70
20	26.65	26.75	27.50	27.50	27.20	27.00	26.95	26.75	27.05	27.30	27.50	27.50
21	26.65	26.95	27.50	27.60	27.15	26.65	27.00	26.70	27.15	27.35	27.55	27.65
22	26.60	27.00	27.20	27.55	27.15	27.00	26.85	26.70	27.10	27.40	27.45	27.75
23	26.30	26.95	27.30	27.55	27.05	27.25	26.35	26.80	27.05	27.40	27.50	27.80
24	26.45	26.95	27.25	27.45	27.00	27.25	26.45	26.90	27.05	27.45	27.60	27.75
25	26.60	27.05	27.25	27.15	27.35	27.10	26.60	26.70	27.10	27.45	27.65	27.65
26	26.60	27.15	27.25	27.15	27.45	27.05	26.65	26.90	27.10	27.35	27.60	28.00
27	26.70	27.20	27.10	27.25	27.50	26.90	26.65	27.00	26.95	27.30	27.50	28.00
28	26.65	26.80	27.05	27.20	27.00	26.75	26.90	26.85	27.05	27.45	27.40	27.95
29	27.05	27.05	27.45	27.10	27.25	26.95	26.95	26.85	27.10	27.50	27.35	27.90
30	27.10	27.25	27.65	27.25	---	27.10	26.75	26.85	27.15	27.40	27.45	27.90
31	27.00	---	27.60	27.30	---	27.15	---	26.80	---	27.30	27.55	---
MAX	27.10	27.25	27.65	27.60	27.70	27.60	27.15	27.20	27.15	27.50	27.65	28.00
WTR YR 1984	MEAN	27.12		HIGH	25.95		LOW	28.00				

## 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 east of Blakeslee.

Owner: State of Ohio.

AQUIFER.--Sand and gravel of Pleistocene Age.

WELL CHARACTERISTICS.--Drilled test artesian well, diameter 10 in, depth 115 ft, cased to 115 ft, screened 85 ft to 115 ft.

DATUM.--Altitude of land-surface datum is 830 ft, from topographic map. Measuring point: Floor of instrument shelter 1.50 ft above land-surface datum.

REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--1974 to September 1982 continuous, periodic thereafter.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 10.56 ft Feb. 6-7, 1977; minimum daily low, 3.83 ft Mar. 17, 1982.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Oct. 25, 1983	9.95	Apr. 19, 1984	6.43	Aug. 22, 1984	10.17

## GROUND-WATER RECORDS

135

## 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, depth 90 ft, cased.

DATUM.--Altitude of land-surface datum is 850 ft, from topographic map. Measuring point: Floor of instrument shelter 3.00 ft above land-surface datum.

REMARKS.--Station operated by Ohio Department of Natural Resources, Division of Water.

PERIOD OF RECORD.--September 1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 40.90 ft July 12, 15, 17, 21, Aug. 26, 1961; minimum daily low, 25.75 ft Apr. 16, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum daily low, 31.89 ft Sept. 7-8; minimum daily low, 26.04 ft Apr. 24.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30.34	28.41	29.35	28.81	29.60	29.35	27.10	26.86	28.42	30.07	31.47	31.69
2	29.31	29.53	29.27	28.10	29.47	29.22	27.70	26.90	28.40	30.66	31.47	30.75
3	29.80	30.53	29.18	28.95	29.31	28.86	28.17	27.14	28.00	30.88	31.60	30.26
4	30.64	30.81	28.41	29.11	29.00	27.91	28.18	27.25	28.81	30.99	31.60	31.03
5	30.52	30.76	28.97	29.19	28.07	27.51	28.33	27.08	29.24	30.80	31.39	31.54
6	30.52	29.27	28.87	29.14	29.26	27.20	28.35	26.62	29.24	31.13	31.47	31.66
7	30.62	29.74	28.95	28.62	29.64	27.55	28.10	27.46	29.34	31.23	31.53	31.89
8	30.24	30.07	28.99	27.99	29.72	29.23	27.10	27.49	29.55	31.21	31.24	31.89
9	29.29	30.41	29.31	28.84	29.29	29.30	27.97	27.23	29.70	31.12	31.55	31.06
10	29.76	30.34	29.22	29.26	29.06	28.91	28.31	26.93	29.67	31.21	31.62	31.29
11	30.22	30.21	28.14	29.10	28.73	27.83	28.33	27.58	30.22	31.22	31.62	31.48
12	30.16	30.11	28.19	29.50	28.10	28.66	28.42	27.53	30.23	31.14	30.69	31.70
13	30.29	29.10	28.58	29.43	28.95	28.93	28.49	27.46	30.47	31.37	31.17	31.95
14	30.33	29.61	28.67	28.96	28.79	29.25	28.27	27.74	30.17	31.35	31.22	31.96
15	29.93	29.78	28.54	28.25	28.98	29.25	27.34	27.72	30.54	30.74	31.32	31.82
16	29.02	30.39	29.19	28.68	28.98	28.99	27.61	28.03	30.54	30.55	31.43	30.91
17	29.73	30.41	29.06	29.11	28.58	28.50	28.06	28.46	29.81	31.25	31.37	31.20
18	30.04	30.27	28.21	28.84	28.36	27.49	27.82	28.38	30.14	31.27	31.37	31.20
19	30.23	29.59	29.34	29.41	27.63	27.90	27.07	28.26	30.14	31.45	30.59	30.94
20	30.40	28.61	29.97	29.55	28.30	27.73	26.80	27.96	30.34	31.50	31.22	31.49
21	30.59	28.89	29.99	29.22	28.89	27.27	26.80	28.46	30.67	31.44	31.61	31.49
22	30.51	29.03	29.49	28.53	28.84	27.92	26.63	28.74	30.64	31.08	31.68	31.48
23	29.02	28.96	29.36	28.91	28.75	28.37	26.11	28.51	30.64	31.12	31.67	30.83
24	29.35	28.92	28.92	29.37	28.69	28.10	26.04	28.82	30.19	31.27	31.60	31.56
25	29.29	28.64	27.83	28.91	28.31	27.08	26.33	28.92	30.49	31.64	31.61	31.46
26	29.75	28.65	27.51	29.07	27.78	27.70	26.50	28.80	30.80	31.67	30.79	31.36
27	29.80	28.19	28.56	29.40	28.63	28.13	26.69	28.62	30.79	31.62	31.29	30.50
28	29.77	28.94	29.13	29.24	28.59	27.95	26.88	28.10	30.43	31.53	31.52	30.49
29	29.51	28.87	29.86	28.24	28.93	27.89	26.88	28.05	30.69	30.87	31.65	30.16
30	28.82	29.16	29.88	29.07	---	28.00	26.81	27.79	30.68	31.14	31.71	29.42
31	28.46	---	29.73	29.72	---	27.75	---	27.75	---	31.26	31.70	---
MAX	30.64	30.81	29.99	29.72	29.72	29.35	28.49	28.92	30.80	31.67	31.71	31.99
WTR YR 1984	MEAN	29.46		HIGH	26.04		LOW	31.89				



The following tables contain ground water-level measurements, chemical analyses from a network of wells, and miscellaneous chemical analyses of surface water, bottom materials and soil cores in Southern Franklin County. The data were collected as part of a cooperative study with the city of Columbus. The objective of the study is to evaluate the effects of several landfills on the chemical quality of the ground-water and surface water systems and to evaluate the effects of infiltration induced by the city of Columbus' collector-well system. Analyses for selected base/neutral- and acid-extractable organic compounds were performed on two soil test cores and bottom material from surface water sites 395530083001400, 395251083010700, 03229500, and 395000082592500. Detection levels for acid-extractable compounds were 20  $\mu\text{g}/\text{Kg}$ . Base/neutral-extractable compounds were detectable at concentrations greater than 10  $\mu\text{g}/\text{Kg}$ . The analyses are capable of identifying the organic Priority Toxic Pollutants listed below. The chemical quality records for the individual sites include only those organic compounds found to be present in amounts above analytical detection levels.

#### Base/neutral-extractable compounds

Acenaphthene	Di -n- butylphthalate
Acenaphthylene	2,4 Dinitrotoluene
Anthracene	2,6 Dinitrotoluene
Benzo (a) anthracene	Di -n- octylphthalate
Benzo (b) fluoranthene	bis (2- Ethylhexyl) phthalate
Benzo (k) fluoranthene	Fluoranthene
Benzo (g,h,i) perylene	Fluorene
Benzo (a) pyrene	Hexachlorobenzene
4- Bromophenyl phenyl ether	Hexachlorobutadiene
Butyl benzyl phthalate	Hexachlorocyclopentadiene
bis (2- chloroethoxy) methane	Hexachloroethane
bis (2- chloroethyl) ether	Indeno (1,2,3-cd) pyrene
bis (2- chloroisopropyl) ether	Isophorone
2- chloronaphthalene	Naphthalene
4- chlorophenyl phenyl ether	Nitrobenzene
Chrysene	n- Nitrosodimethylamine
Dibenzo (a,h) anthracene	n- Nitrosodi-n-propylamine
1,2- Dichlorobenzene	n- Nitrosodiphenylamine
1,3- Dichlorobenzene	Phenanthrene
1,4- Dichlorobenzene	Pyrene
Diethyl phthalate	1,2,4- Trichlorobenzene
Dimethyl phthalate	

#### Acid-extractable compounds

4- Chloro-3-methylphenol	2- Nitrophenol
2- Chlorophenol	4- Nitrophenol
2,4- Dichlorophenol	Pentachlorophenol
2,4- Dimethylphenol	Phenol
4,6- Dinitro-2-methylphenol	2,4,6- Trichlorophenol
2,4- Dinitrophenol	

Ten wells (FR Nos. 36, 73, 120, 145, 151, 209, 246, 256, 260, and 262) and surface water sites 395530083001400, 395251083010700, 03229500, and 395000082592500 were analyzed for volatile organic compounds listed below, the detection levels for which were 3.0  $\mu\text{g}/\text{L}$ . The chemical quality records for the individual sites include only those organic compounds found to be present in amounts above analytical detection levels.

#### Volatile organic compounds

Benzene	1,2- Dichloropropane
Bromoform	1,3- Dichloropropene
Carbon tetrachloride	Ethylbenzene
Chlorobenzene	Methylbromide
Chloroethane	Methylene chloride
2- Chloroethyl vinyl ether	1,1,2,2- Tetrachloroethane
Chloroform	Tetrachloroethylene
Dibromochloromethane	Toluene
Dichlorobromomethane	1,1,1- Trichloroethane
1,1- Dichloroethane	1,1,2- Trichloroethane
1,2- Dichloroethane	Trichloroethylene
1,1- Dichloroethylene	Vinyl chloride
1,2- trans-Dichloroethylene	

## SURFACE-WATER RECORDS

395317083013400 LANDFILL TRIBUTARY AT SCIOTO BIG RUN, COLUMBUS, OH

LOCATION.--Lat 39°53'17", long 83°01'34", Franklin County, Hydrologic Unit 05060001, 300 ft upstream from confluence with Scioto Big Run at Columbus.

PERIOD OF RECORD.--October 1983 to September 1984.

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 1983 TO SEPTEMBER 1984

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HYDRO- GEN SULFIDE TOTAL (MG/L AS H2S)	COLI- FORM, FECAL, JM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
JUN 06...	1330	1170	7.5	26.0	--	.0	2300	360	24
SEP 04...	0950	1250	7.9	16.5	7.0	.0	4400	320	76

DATE	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- LINEITY FIELD (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)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
JUN 06...	88	35	100	3.3	340	21	120	140	.40
SEP 04...	80	29	150	4.9	244	5.9	130	220	.50

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS TOTAL (UG/L)
JUN 06...	6.3	700	3.00	.690	<100	59	59	6.3	<1
SEP 04...	8.8	840	5.00	3.00	<100	27	31	8.9	1

## GROUND-WATER RECORDS IN FRANKLIN COUNTY--Continued

## SURFACE-WATER RECORDS

03229500 BIG WALNUT CREEK AT REES, OH

LOCATION.--Lat 39°51'24", long 82°57'26", in NE 1/4 sec. 26, T.4 N., R.22 W., Franklin County, Hydrologic Unit 05060001, on right bank at downstream side of bridge on Reese Road, 0.5 mi southwest of Rees, 4.2 mi downstream from Alum Creek, and 10.5 mi upstream from mouth.

DRAINAGE AREA.--544 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1983 to September 1984.

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 1983 TO SEPTEMBER 1984

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ANTI- MONY, DIS- SOLVED (UG/L AS SB)	ARSENIC DIS- SOLVED (UG/L AS AS)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CO)
JUN 05...	1000	660	7.4	21.5	7.2	20	<1	2	<10	<1

DATE	TIME	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	LEAD, DIS- SOLVED (UG/L AS PB)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	ZINC, DIS- SOLVED (UG/L AS ZN)	CYANIDE TOTAL (MG/L AS CN)
JUN 05...	<10	7	2	.3	2	<1	1	470	15	<.01	

DATE	TIME	ANTI- MONY, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BERYL- LIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)
JUN 05...	1000	<1	10	<1	3	10	80	90	1.6

DATE	NICKEL, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS NI)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	CYANIDE TOTAL IN BOT- TOM MA- TERIAL (UG/G AS CN)	FLUOR- ENE BOT.MAT (UG/L)	PHENAN- THRENE BOT.MAT (UG/KG)	PYRENE BOT.MAT (UG/KG)	DI-N- OCTYL PHTHAL- ATE BOT.MAT (UG/KG)
JUN 05...	30	<1	200	<.5	570	420	420	1600

## SURFACE-WATER RECORDS

395251083010700 SCIOTO RIVER AT I-270 SOUTH, AT COLUMBUS, OH

LOCATION.--Lat 39°52'51", long 83°01'07", Franklin County, Hydrologic Unit 05060001, at I-270 bridge, 150 ft upstream of Scioto Big Run, 1.9 mi downstream of Kian Run and 3.2 mi east of Obetz.

DRAINAGE AREA.--1,640 mi.

PERIOD OF RECORD.--October 1979 to September 1980, October 1983 to September 1984.

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 1983 TO SEPTEMBER 1984

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	ALUMINUM, DIS-SOLVED (UG/L AS AL)	ANTIMONY, DIS-SOLVED (UG/L AS SB)	ARSENIC, DIS-SOLVED (UG/L AS AS)	BERYLLIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM, DIS-SOLVED (UG/L AS CD)
JUN 05...	1315	730	7.3	23.0	7.6	20	1	1	<10	<1

DATE	TIME	CHROMIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	LEAD, DIS-SOLVED (UG/L AS PB)	MERCURY, DIS-SOLVED (UG/L AS HG)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELENIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRONTIUM, DIS-SOLVED (UG/L AS SR)	ZINC, DIS-SOLVED (UG/L AS ZN)	CYANIDE TOTAL (MG/L AS CN)
JUN 05...	10		8	4	.5	6	<1	2	1500	27	<.01

DATE	TIME	ANTIMONY, TOTAL IN BOTTOM MATERIAL (UG/G AS CU)	ARSENIC, TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BERYLLIUM, RECOV. FM BOTTOM MATERIAL (UG/G AS BE)	CADMIUM, RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G AS CR)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MERCURY, RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS SE)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)
JUN 05...	1315	2	10	1	6	110	110	470	2.2	60	<1	870

DATE	CYANIDE TOTAL IN BOTTOM MATERIAL (UG/G AS CN)	BENZO B FLUORANTHENE BOT.MAT (UG/KG)	BENZO K FLUORANTHENE BOT.MAT (UG/KG)	BENZO A PYRENE BOT.MAT (UG/KG)	CHRYSENE BOT.MAT (UG/KG)	FLUORENE BOT.MAT (UG/L)	PHENANTHRENE BOT.MAT (UG/KG)	PYRENE BOT.MAT (UG/KG)	BENZO A ANTHRACENE, 2-BENZANTHRACENE BOT.MAT (UG/KG)	DI-N-OCTYL PHTHALATE BOT.MAT (UG/KG)	PHENOL (C6H5OH) BOT.MAT (UG/KG)
JUN 05...	<.5	150	380	190	230	560	260	570	300	630	180



## GROUND-WATER RECORDS FOR FRANKLIN COUNTY PROJECT--Continued

## SURFACE-WATER RECORDS

395027082592500 BIG WALNUT CREEK AT SITE 115 NEAR COLUMBUS, OH

LOCATION.--Lat 39°50'27", long 82°59'25", Franklin County, Hydrologic Unit 05060001, on right bank adjacent to City Columbus Radial Collector Well No. 115, 0.6 mi north of state route 317 and 1.2 mi northeast of Shadeville.

PERIOD OF RECORD.--October 1983 to September 1984.

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 1983 TO SEPTEMBER 1984

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HYDRO- GEN SULFIDE TOTAL (MG/L AS H2S)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
MAR 12...	1500	790	6.7	3.0	12.8	.0	270	110	72	23
DATE	AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (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)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)
MAR 12...	77	2.9	169	65	82	130	.20	3.5	490	.020
DATE	AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	PHENOLS TOTAL (UG/L)
MAR 12...	1.60	.110	.69	.80	.030	200	29	53	5.2	<1

## SURFACE-WATER RECORDS

395114083010401 SCIOTO RIVER AT SITE 101 NEAR COLUMBUS, OH

LOCATION.--Lat 39°51'14", long 83°01'04", Franklin County, Hydrologic Unit 05060001, on left bank adjacent to City of Columbus Radial Collector Well No. 101, 2000 ft upstream of Grant Run, 2.5 mi downstream of Scioto Big Run, and 1.4 mi northwest of Shadeville.

PERIOD OF RECORD.--October 1979 to September 1980, October 1980 to September 1981, October 1983 to September 1984.

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 1983 TO SEPTEMBER 1984

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	HARDNESS (MG/L AS CaCO3)	HARDNESS, NONCARBONATE (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg)
JAN 27...	1130	725	6.7	.5	13.7	.0	300	110	78	25
DATE	SODIUM, DIS-SOLVED (MG/L AS Na)	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY (MG/L AS CaCO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	NITROGEN, NITRITE DIS-SOLVED (MG/L AS N)
JAN 27...	32	3.9	190	73	110	59	.30	6.8	450	.100
DATE	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITROGEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS-SOLVED (MG/L AS N)	PHOSPHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	ALUMINUM, DIS-SOLVED (UG/L AS AL)	IRON, DIS-SOLVED (UG/L AS FE)	MANGANESE, DIS-SOLVED (UG/L AS MN)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	PHENOLS TOTAL (UG/L)
JAN 27...	4.40	.610	1.1	1.7	.120	<100	39	31	6.5	<1

## SURFACE-WATER RECORDS

395046083003200 SCIOTO RIVER AT SITE 103 NEAR COLUMBUS, OH

LOCATION.--Lat 39°50'46", long 83°00'32", Franklin County, Hydrologic Unit 05060001, on left bank adjacent to City of Columbus Radial Collector Well No. 103, 0.5 mi downstream of Grant Run, and 0.9 mi northwest of Shadeville.

PERIOD OF RECORD.--October 1983 to September 1984.

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 1983 TO SEPTEMBER 1984

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HYDRO- GEN SULFIDE TOTAL (MG/L AS H2S)	COLI- FORM, FECAL, 0.7 JM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L AS CAC03)
JUN 06...	1030	765	7.0	21.5	6.3	.0	180	290	96

DATE	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- LINEITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
JUN 06...	77	24	35	4.8	196	38	120	55	.50

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS TOTAL (UG/L)
JUN 06...	4.3	440	4.30	.720	<100	25	26	5.5	<1

## SURFACE-WATER RECORDS

395317083013300 SCIOTO BIG RUN ABOVE LANDFILL TRIBUTARY AT COLUMBUS, OH

LOCATION.--Lat 39°53'17", long 83°01'33", Franklin County, Hydrologic Unit 05060001, right bank, 0.78 mi downstream at Marsh Run and 0.73 mi upstream from confluence with Scioto River at Columbus.

PERIOD OF RECORD.--October 1983 to September 1984.

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 1983 TO SEPTEMBER 1984

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HYDRO- GEN SULFIDE TOTAL (MG/L AS H2S)	COLI- FORM, FECAL, 0.7 JM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)
JUN 06...	1300	1140	7.4	24.0	8.8	.0	210	500	160
SEP 04...	1030	1200	7.8	18.0	7.5	.0	190	540	210

DATE	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 FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
JUN 06...	130	42	48	4.7	338	26	190	90	.30
SEP 04...	140	47	47	6.0	329	10	250	89	.30

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS TOTAL (UG/L)
JUN 06...	10	720	.760	<.010	<100	12	66	3.0	<1
SEP 04...	11	790	2.50	.070	200	11	37	3.1	<1



## GROUND-WATER RECORDS IN FRANKLIN COUNTY--Continued

## SURFACE-WATER RECORDS

395530083001400 SCIOTO RIVER BELOW GREENLAWN AVENUE AT COLUMBUS, OH

LOCATION.--Lat 39°55'30", long 83°00'14", Franklin County, Hydrologic Unit 05060001, right bank, 0.6 mi south of Greenlawn Ave. and 1.5 upstream from U.S.G.S. gaging station 03227500 at Columbus.

PERIOD OF RECORD.--October 1982 to September 1983, October 1983 to September 1984.

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 1983 TO SEPTEMBER 1984

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ANTI- MONY, DIS- SOLVED (UG/L AS SB)	ARSENIC DIS- SOLVED (UG/L AS AS)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CO)
JUN 05...	1500	588	7.9	23.5	12.7	10	<1	1	<10	<1

DATE	TIME	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	LEAD, DIS- SOLVED (UG/L AS PB)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	ZINC, DIS- SOLVED (UG/L AS ZN)	CYANIDE TOTAL (MG/L AS CN)
JUN 05...	10	11	3	.3	3	<1	1	1500	45	<.01	

DATE	TIME	ANTI- MONY, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BERYL- LIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/L AS HG)	NICKEL, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS NI)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)
JUN 05...	1500	<1	20	<1	9	90	200	530	2.8	40	2

DATE	TIME	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	CYANIDE TOTAL IN BOT- TOM MA- TERIAL (UG/G AS CN)	BENZO B FLUOR- AN- THENE BOT.MAT (UG/KG)	BENZO K FLUOR- AN- THENE BOT.MAT (UG/KG)	CHRY- SENE BOT.MAT (UG/KG)	FLUOR- ANTHENE BOT.MAT (UG/KG)	PHENAN- THRENE BOT.MAT (UG/KG)	PYRENE BOT.MAT (UG/KG)	BENZO A ANTHRAC- ENE1,2- BENZANT HRACENE BOT.MAT (UG/KG)	BIS(2- ETHYL- HEXYL) PHTHAL- ATE BOT.MAT (UG/KG)
JUN 05...		490	<.5	210	280	350	650	390	750	380	2800

## SURFACE-WATER RECORDS

395000082592500 BIG WALNUT CREEK AT STATE ROUTE 317 NEAR COLUMBUS, OH

LOCATION.--Lat 39°50'00", long 82°59'25", Franklin County, Hydrologic Unit 05060001, 100 ft north of state route 317 bridge, 6.5 mi upstream from mouth and 0.5 mi east of Shadeville.

PERIOD OF RECORD.--October 1983 to September 1984.

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 1983 TO SEPTEMBER 1984

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HYDRO- GEN SULFIDE TOTAL (MG/L AS H2S)	COLI- FORM, FECAL, 0.7 UM-4F (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	
JUN 07...	1015	695	7.4	23.5	7.9	.0	120	300	71	80	25	
DATE	TIME	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINEITY FIELD (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)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	
JUN 07...	25		3.0	233	18	83	47	.20	3.6	410	.160	
DATE	TIME	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ANTI- MONY, DIS- SOLVED (UG/L AS SB)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	
JUN 07...		<.010	30	<1	1	100	1	<10	5	<3	2	
DATE	TIME	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS TOTAL (UG/L)	
JUN 07...		13	.3	4	<1	3	540	20	3.8	<.01	<1	
DATE	TIME	ANTI- MONY, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BERYL- LIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/L AS HG)	NICKEL, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS NI)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)
JUN 07...	1015	<1	28	<1	3	20	70	90	1.2	40	<1	210
DATE	TIME	CYANIDE TOTAL IN BOT- TOM MA- TERIAL (UG/G AS CN)	ACE- NAPHTH- ENE BOT.MAT (UG/KG)	ANTHRA- CENE BOT.MAT (UG/KG)	CHRY- SENE BOT.MAT (UG/KG)	FLUOR- ANTHENE BOT.MAT (UG/KG)	FLUOR- ENE BOT.MAT (UG/L)	NAPHTH- ALENE BOT.MAT (UG/KG)	PHENAN- THRENE BOT.MAT (UG/KG)	PYRENE BOT.MAT (UG/KG)	BENZO A ANTHRAC- ENE1,2- BENZANTH- RACENE BOT.MAT (UG/KG)	DI-N- BUTYL PHTHAL- ATE BOT.MAT (UG/KG)
JUN 07...		<.5	390	350	410	1500	610	290	2200	1700	330	1100

## FRANKLIN COUNTY

395324083001500. Local number, FR-263.

LOCATION.--Lat 39°53'24", long 83°00'15", Hydrologic Unit 05060001, 500 ft E of Scioto River and 1.0 mi 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, depth 50 ft, cased to 40 ft, finish is 5 ft of 0.010 in well screen from 40 ft to 45 ft.

DATUM.--Altitude of land-surface datum is 691.2 ft. Measuring point: base of instrument shelter 3.0 ft above land-surface datum.

PERIOD OF RECORD.--May 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.38 ft below land surface datum, Mar. 25-31, 1984; lowest, 16.52 ft below land surface datum, Sept. 26, 1982.

HIGHEST WATER LEVEL 4.38 FEET BELOW LAND SURFACE DATUM MAR 25-31, 1984.

LOWEST WATER LEVEL 15.10 FEET BELOW LAND SURFACE DATUM OCT 4, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 20, 1984	4.87	MAY 22, 1984	9.35	JUL 17, 1984	13.53

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.95	12.72	7.11	11.05	11.11	10.45	4.53	7.61	9.99	12.48		
2	15.00	12.81	7.64	11.13	11.21	10.58	5.06	7.92	10.17	12.58		
3	15.06	12.63	8.11	11.17	11.14	10.69	5.61	8.05	10.34	12.69		
4	15.10	12.28	8.11	11.27	10.06	10.71	5.95	7.81	10.49	12.76		
5	15.02	11.36	7.43	11.29	9.15	10.71	5.88	8.16	10.63	12.73		
6	14.69	11.08	6.83	11.45	9.36	10.39	4.96	8.35	10.76	12.42		
7	14.59	11.08	6.26	11.52	9.89	10.07	4.85	8.58	10.87	12.47		
8	14.67	11.46	6.00	11.64	10.26	9.63	4.84	8.60	10.96	12.59		
9	14.77	11.66	6.33	11.67	10.52	9.50	5.15	8.54	11.06	12.68		
10	14.85	11.72	7.05	11.76	10.66	9.73	5.81	8.76	11.17	12.68		
11	14.94	11.23	7.46	11.84	10.63	9.95	6.44	8.92	11.27	12.76		
12	15.00	10.35	7.57	11.90	9.72	10.06	6.92	9.08	11.39	12.84		
13	15.03	9.64	7.14	12.00	9.05	10.21	7.23	9.22	11.51	12.91		
14	14.83	9.55	6.51	12.07	7.94	10.30	7.58	9.34	11.51	13.00		
15	14.53	9.22	7.00	12.11	6.16	10.30	7.83	9.38	11.57	13.08		
16	14.52	9.17	7.57	12.20	5.78	10.00	7.98	9.50	11.69	13.16		
17	14.63	9.15	8.10	12.29	6.10	6.63	7.96	9.73	11.77	13.22		
18	14.68	8.90	8.57	12.35	6.86	5.43	7.80	9.85	11.87	---		
19	14.63	8.81	8.98	12.44	7.67	5.16	7.69	10.00	11.91	---		
20	14.47	8.75	9.40	12.52	8.07	4.96	7.72	10.13	11.91	---		
21	14.21	8.89	9.58	12.59	8.43	4.39	7.85	9.74	11.99	---		
22	13.94	8.99	9.63	12.65	8.89	4.39	7.88	9.51	12.07	---		
23	13.24	9.12	9.82	12.69	9.25	4.39	7.22	8.85	12.16	---		
24	12.82	8.77	10.13	12.69	9.54	4.39	6.49	7.68	12.16	---		
25	11.90	8.30	10.41	11.82	9.83	4.38	5.37	8.00	12.05	---		
26	11.28	8.47	10.55	11.52	10.00	4.38	5.15	8.73	11.96	---		
27	11.33	8.64	10.66	10.95	10.01	4.38	5.22	9.18	12.03	---		
28	11.69	8.38	10.66	10.53	10.04	4.38	5.78	9.30	12.11	---		
29	11.96	7.00	10.68	10.34	10.26	4.38	6.43	9.45	12.24	---		
30	12.24	6.93	10.86	10.58	---	4.38	7.16	9.56	12.36	---		
31	12.52	---	10.95	10.84	---	4.38	---	9.77	---	---		
MAX	15.10	12.81	10.95	12.69	11.21	10.71	7.98	10.13	12.36	13.22		
WTR YR 1984	MEAN	9.92		HIGH	4.38		LOW	15.10				

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

## 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, depth 140.52 ft, cased to 15.0 ft.

DATUM.--Altitude of land-surface datum is 659 ft. Measuring point: base of instrument shelter 0.0 ft above land-surface datum.

PERIOD OF RECORD.--July 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 56.28 ft below land-surface datum, Jan 10, 1984; lowest, 62.19 ft below land-surface datum, Sept. 21, 1983.

HIGHEST WATER LEVEL 56.28 FEET BELOW LAND SURFACE DATUM JAN 10, 1984.

LOWEST WATER LEVEL 61.98 FEET BELOW LAND SURFACE DATUM OCT 23, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 20, 1984	59.95	MAY 22, 1984	59.82	JUL 17, 1984	59.85

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60.05	59.11	59.56	57.89								
2	60.03	60.37	59.57	57.77								
3	59.95	60.50	59.51	57.51								
4	60.83	59.11	59.64	57.21								
5	60.31	58.92	59.46	57.12								
6	60.04	58.71	59.37	57.10								
7	60.10	58.54	59.28	56.65								
8	60.04	58.22	59.29	56.42								
9	59.72	58.17	59.26	56.38								
10	59.50	60.44	59.27	56.28								
11	59.42	60.66	59.32	56.31								
12	59.30	59.19	59.32	57.09								
13	59.58	58.87	59.23	58.38								
14	59.32	58.71	59.20	56.39								
15	59.15	58.79	59.17	56.35								
16	59.09	58.51	59.16	56.35								
17	59.10	58.33	59.15	56.42								
18	59.22	58.12	59.14	56.42								
19	59.11	58.05	59.10	56.40								
20	60.94	58.30	59.07	---								
21	60.86	58.13	59.05	---								
22	61.96	57.87	59.10	---								
23	61.98	59.36	58.99	---								
24	61.03	58.98	58.85	---								
25	60.53	58.11	58.42	---								
26	60.31	58.21	58.99	---								
27	60.10	59.14	58.68	---								
28	59.86	59.85	58.14	---								
29	59.62	59.75	58.14	---								
30	59.20	59.59	58.11	---								
31	59.20	---	57.94	---								
MAX	61.98	60.66	59.64	58.38								
WTR YR 1984	MEAN	58.91	HIGH	56.28	LOW	61.98						

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



## GROUND-WATER RECORDS IN FRANKLIN COUNTY

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, depth 68 ft.

DATUM.--Altitude of land-surface datum is 683 ft.

PERIOD OF RECORD.--August 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.66 ft below land-surface datum, May 4, 1983; lowest, 17.37 ft below land-surface datum, Sept. 21, 27, 1984.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.23	9.56	5.17	11.93	15.08	8.28	---	---	10.36	---	16.28	12.47
2	10.23	9.68	5.54	12.29	14.84	8.39	---	---	10.51	---	16.69	14.36
3	12.83	9.63	6.06	12.63	14.46	8.48	3.55	---	10.79	---	16.38	14.48
4	10.31	9.63	6.07	12.93	13.40	8.50	3.88	---	11.06	---	16.84	14.49
5	10.28	9.32	5.22	13.18	12.25	8.49	3.70	---	10.39	---	12.54	14.50
6	10.38	9.29	5.00	13.46	11.63	8.42	2.78	---	9.89	---	16.79	12.43
7	10.48	9.42	4.33	13.68	11.45	8.33	1.79	---	9.53	---	16.93	12.02
8	10.51	9.63	3.74	13.89	11.67	8.11	2.15	---	9.19	---	17.20	14.19
9	10.51	9.77	4.08	14.12	11.83	8.09	2.83	---	9.18	---	17.31	12.06
10	10.50	9.83	4.68	14.31	11.91	8.22	2.86	---	9.19	---	17.24	11.76
11	10.50	9.63	5.08	14.49	11.91	8.36	---	---	9.20	---	13.00	11.53
12	10.51	9.14	5.14	14.72	11.16	8.43	---	---	9.21	---	16.52	11.48
13	10.52	8.55	4.90	14.91	10.60	8.49	---	---	9.22	---	16.86	13.90
14	10.44	8.46	4.33	15.09	9.91	8.56	---	---	9.22	---	17.07	16.38
15	10.41	8.18	4.74	15.26	3.99	8.53	---	---	---	---	14.93	16.61
16	10.39	8.01	5.25	15.43	3.82	8.32	---	---	---	---	14.72	16.91
17	10.36	7.96	5.79	15.60	4.50	3.44	---	10.44	---	---	12.59	17.11
18	10.36	7.73	6.25	15.78	5.28	1.80	---	10.66	---	---	14.38	17.27
19	10.29	7.66	6.68	15.94	5.79	---	---	10.85	---	10.95	14.45	17.29
20	10.24	7.48	7.06	16.11	6.12	---	---	8.76	---	10.93	14.42	17.19
21	10.10	7.55	7.33	16.27	6.52	---	---	10.61	---	10.82	14.51	17.37
22	10.10	7.59	7.52	16.45	6.95	---	---	10.58	---	10.77	14.54	15.15
23	9.40	7.66	7.79	16.59	7.23	---	---	9.61	---	13.13	14.44	14.96
24	9.42	7.42	8.34	16.62	7.45	---	---	9.39	---	15.30	14.45	14.91
25	9.14	6.99	8.89	16.37	7.70	---	---	9.43	---	16.05	14.55	14.80
26	8.87	6.99	9.40	16.39	7.87	---	---	9.86	---	16.73	12.43	17.15
27	8.94	7.07	9.92	16.22	7.93	---	---	7.92	---	16.92	14.19	17.37
28	9.10	6.99	10.19	15.93	8.00	---	---	10.15	---	16.59	14.30	13.20
29	9.23	5.17	10.68	15.80	8.14	---	---	10.26	---	12.40	14.43	12.49
30	9.33	5.03	11.13	15.53	---	---	---	8.17	---	16.33	14.50	16.88
31	9.43	---	11.54	15.30	---	---	---	10.03	---	16.73	14.56	---
MAX	12.83	9.83	11.54	16.62	15.08	8.56	3.88	10.85	11.06	16.92	17.31	17.37
WTR YR 1984	MEAN	10.83		HIGH	1.79		LOW	17.37				

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

## GROUND-WATER RECORDS IN FRANKLIN COUNTY

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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, depth 116 ft.

DATUM.--Altitude of land-surface datum is 721 ft.

PERIOD OF RECORD.--August 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 27.21 ft below land-surface datum, May 3, 1984; lowest, 41.43 ft below land-surface datum, Mar. 16, 1984.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30.78	30.44	29.49	29.61	35.71	38.91	37.78	27.36	29.72	32.63	31.65	31.28
2	30.52	30.42	29.42	29.63	35.81	39.13	37.84	27.29	29.79	32.87	31.96	32.04
3	30.43	30.33	29.43	29.64	35.14	39.29	35.53	27.21	30.12	31.90	32.41	32.14
4	30.45	30.14	29.27	29.67	34.84	39.40	33.26	28.11	30.27	31.48	32.20	32.17
5	30.52	30.03	28.99	29.70	35.75	39.69	31.90	28.21	30.09	30.37	31.13	32.24
6	30.43	30.02	28.88	29.76	35.99	39.95	30.96	28.11	30.35	31.27	31.94	31.40
7	30.46	30.08	28.88	---	35.72	40.14	30.14	28.11	30.44	31.34	31.99	30.98
8	30.53	30.95	28.75	---	33.93	40.39	29.56	28.12	30.48	30.33	32.11	32.06
9	30.58	30.22	28.72	---	32.96	40.48	29.10	28.15	30.53	31.28	32.23	31.18
10	30.60	30.21	28.80	---	32.50	40.59	28.90	29.63	30.63	31.33	32.18	30.86
11	30.64	30.19	28.77	---	32.14	40.82	28.80	29.39	30.57	30.99	31.19	30.75
12	30.67	30.05	28.71	---	31.80	40.89	28.73	29.84	30.54	31.47	31.61	30.77
13	30.75	30.09	28.70	---	31.48	41.09	28.67	29.74	30.68	31.58	31.69	33.16
14	30.73	30.15	28.65	---	31.25	41.19	28.60	29.80	30.85	31.64	31.69	33.43
15	30.78	30.15	28.83	---	30.93	41.26	28.51	29.52	30.90	31.39	31.63	33.75
16	30.80	30.17	28.95	---	30.77	41.43	28.39	29.87	30.93	31.29	31.57	33.97
17	30.87	30.19	29.00	---	30.63	41.38	28.32	30.02	30.94	31.50	30.52	34.07
18	30.91	30.18	29.03	---	30.59	41.31	28.30	30.10	30.99	31.67	31.33	34.20
19	30.91	30.20	29.09	---	30.55	41.29	28.28	30.10	31.03	30.71	31.59	34.24
20	30.94	30.29	29.13	30.39	30.55	41.26	28.20	28.92	31.12	30.22	31.64	34.00
21	30.88	30.32	29.13	30.39	30.47	41.14	28.17	29.92	31.15	30.03	31.84	34.29
22	30.85	30.36	29.22	30.43	34.18	40.51	28.05	30.04	31.15	29.94	31.92	34.43
23	30.60	30.27	30.64	30.45	35.79	39.91	27.63	29.97	31.18	29.89	31.99	34.52
24	30.59	30.19	29.54	30.41	36.64	39.20	27.42	29.59	31.23	30.98	32.05	34.57
25	30.59	30.11	29.41	30.25	37.26	38.66	27.24	29.72	31.13	31.54	32.15	34.69
26	30.53	30.11	29.40	30.28	37.65	38.34	27.25	30.02	31.22	31.57	31.13	34.86
27	30.52	30.17	29.45	30.24	37.90	37.93	27.28	28.82	31.06	31.72	30.62	34.86
28	30.42	29.97	29.51	30.24	38.42	37.80	27.34	29.67	31.10	31.84	31.79	33.53
29	30.50	29.52	29.56	34.23	38.55	37.72	27.31	29.85	31.21	30.87	32.01	32.57
30	30.46	29.53	29.61	35.16	---	37.68	27.34	28.63	31.33	31.66	32.10	34.31
31	30.42	---	29.58	35.41	---	37.69	---	29.42	---	31.90	32.23	---
MAX	30.94	30.95	30.64	35.41	38.55	41.43	37.84	30.10	31.33	32.87	32.41	34.86
WTR YR 1984	MEAN	31.71		HIGH	27.21		LOW	41.43				

## GROUND-WATER RECORDS IN FRANKLIN COUNTY

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, depth 64 ft.

DATUM.--Altitude of land-surface datum is 707 ft.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 11.50 ft below land-surface datum, June 15, 1981; lowest, 31.87 ft below land-surface datum, Mar. 17, 1984.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.38	16.79	15.76	15.96	24.53	28.98	27.49	---	16.98	20.31	18.55	18.27
2	16.89	16.79	15.70	15.98	24.57	29.21	27.57	---	16.89	20.58	19.18	19.10
3	16.78	16.72	15.66	15.99	23.36	29.38	23.82	---	17.33	19.45	19.45	19.28
4	16.77	16.47	15.58	16.02	23.13	29.54	20.47	16.44	17.48	18.72	19.40	19.23
5	16.89	16.31	15.29	16.04	24.50	29.80	18.62	16.50	17.15	17.32	18.21	19.35
6	16.78	16.28	15.19	16.17	24.74	30.19	---	16.66	17.55	18.58	19.13	19.32
7	16.78	16.33	15.13	16.21	24.41	30.45	---	16.82	17.65	18.52	19.16	17.62
8	16.84	17.12	15.01	16.28	21.72	30.65	---	16.80	17.71	17.22	19.30	19.06
9	16.91	16.52	14.98	16.29	20.17	30.84	---	16.64	17.74	18.39	19.45	19.02
10	16.94	16.49	15.00	16.34	19.40	30.98	14.86	16.95	17.86	18.56	19.40	17.43
11	16.98	16.49	14.99	16.39	18.87	31.15	14.81	16.39	17.69	18.01	18.19	17.25
12	17.00	16.33	14.97	16.42	18.47	31.29	14.72	17.09	17.68	18.65	18.69	17.20
13	17.06	16.35	14.96	16.46	18.09	31.44	14.66	16.99	17.95	18.78	18.82	20.57
14	17.08	16.41	14.88	16.52	17.83	31.59	14.61	16.83	18.13	18.85	18.88	21.02
15	17.12	16.44	15.04	16.53	17.44	31.73	14.54	16.52	18.18	18.56	18.80	21.34
16	17.15	16.47	15.18	16.57	17.21	31.86	14.44	17.06	18.21	18.23	18.74	21.66
17	17.21	16.48	15.27	16.64	17.01	31.87	14.39	17.30	18.25	18.73	17.36	21.88
18	17.28	16.46	15.32	16.68	16.94	31.84	14.39	17.37	18.28	18.88	18.32	22.00
19	17.30	16.49	15.39	16.79	16.83	31.79	14.38	17.29	18.22	17.63	18.63	21.99
20	17.32	16.55	15.45	16.79	16.83	31.74	14.31	15.57	18.40	16.86	18.66	21.69
21	17.31	16.59	15.45	16.82	16.77	31.67	14.28	17.19	18.45	16.59	18.95	22.09
22	17.26	16.66	15.54	16.84	21.99	31.10	14.22	17.26	18.46	16.46	19.07	22.26
23	17.11	16.56	17.44	16.87	24.69	30.09	14.21	17.33	18.46	16.39	19.15	22.34
24	16.97	16.47	16.00	16.86	25.96	29.05	---	17.03	18.49	17.85	19.24	22.49
25	16.97	16.39	15.75	16.75	26.88	28.40	---	16.99	18.36	18.65	19.33	22.55
26	16.91	16.39	15.73	16.73	27.44	28.03	---	17.26	18.49	18.80	18.13	22.79
27	16.86	16.44	15.77	16.70	27.79	27.61	---	15.52	18.24	18.94	17.27	22.75
28	16.79	16.30	15.81	16.70	28.35	27.39	---	17.03	18.34	19.08	18.83	21.25
29	16.83	15.81	15.87	22.32	28.78	27.26	---	17.05	18.52	17.85	19.19	19.76
30	16.81	15.81	15.93	23.93	---	27.27	---	15.32	18.59	18.85	19.24	21.86
31	16.77	---	15.92	24.16	---	27.38	---	16.38	---	19.07	19.37	---
MAX	17.38	17.12	17.44	24.16	28.78	31.87	27.57	17.37	18.59	20.58	19.45	22.79
WTR YR 1984	MEAN	19.02		HIGH	14.21		LOW	31.87				

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, depth 38 ft.

DATUM.--Altitude of land-surface datum is 718 ft.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 20.77 ft below land-surface datum, July 1, 1981; lowest, 26.04 ft below land-surface datum, Apr. 2, 1984.

HIGHEST WATER LEVEL 23.52 FEET BELOW LAND SURFACE DATUM JUL 17, 1984.

LOWEST WATER LEVEL 26.18 FEET BELOW LAND SURFACE DATUM MAR 22, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1983	24.95	JAN 27, 1984	24.48	MAR 22, 1984	26.18	MAY 21, 1984	23.60
NOV 22	25.18	FEB 21	25.10	APR 02	26.04	JUL 17	23.52

395045083002500. Local number, FR 103, TH 11.

LOCATION.--Lat 39°50'45", long 83°00'25", Hydrologic Unit 05060001, near Columbus.

AQUIFER.--Glacial sand and gravel of Quaternary Age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in, depth 93 ft.

DATUM.--Altitude of land-surface datum is 699 ft.

PERIOD OF RECORD.--August 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 18.00 ft below land-surface datum, May 9, 1983; lowest, 74.70 ft below land-surface datum, Jan. 25, 1984.

HIGHEST WATER LEVEL 22.62 FEET BELOW LAND SURFACE DATUM MAR 26, 1984.

LOWEST WATER LEVEL 74.70 FEET BELOW LAND SURFACE DATUM JAN 25, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1983	38.10	JAN 06, 1984	62.80	MAR 06, 1984	30.20	JUL 18, 1984	31.90
NOV 22	38.37	25	74.70	26	22.62		
DEC 23	39.75	FEB 01	39.42	MAY 21	29.32		

395021083003100. Local number, FR 104, TH 18.

LOCATION.--Lat 39°50'21", long 83°00'31", Hydrologic Unit 05060001, near Columbus.

AQUIFER.--Glacial sand and gravel of Quaternary Age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 12 in, depth 76 ft.

DATUM.--Altitude of land-surface datum is 691 ft.

PERIOD OF RECORD.--September 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 9.17 ft below land-surface datum, Mar. 26, 1984; lowest, 26.33 ft below land-surface datum, Jan. 20, 1984.

HIGHEST WATER LEVEL 9.17 FEET BELOW LAND SURFACE DATUM MAR 26, 1984.

LOWEST WATER LEVEL 26.33 FEET BELOW LAND SURFACE DATUM JAN 20, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1983	18.34	JAN 20, 1984	26.33	MAR 06, 1984	16.62	MAY 21, 1984	18.50
NOV 22	15.98	FEB 15	15.79	26	9.17	JUL 18	19.44



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, depth 62 ft.  
 DATUM.--Altitude of land-surface datum is 725 ft.  
 PERIOD OF RECORD.--April 1982 to current year.  
 EXTREMES FOR PERIOD OF RECORD.--Highest water level, 21.48 ft below land-surface datum, Mar. 26, 1984; lowest, 25.61 ft below land-surface datum, Nov. 3, 1982.

HIGHEST WATER LEVEL 21.48 FEET BELOW LAND SURFACE DATUM MAR 26, 1984.

LOWEST WATER LEVEL 25.30 FEET BELOW LAND SURFACE DATUM OCT 07, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1983	25.30	JAN 06, 1984	23.17	MAR 26, 1984	21.48	JUL 17, 1984	23.80
NOV 22	24.42	MAR 06	22.96	MAY 21	22.13		

395016083010300. Local number, FR-117, M2.  
 LOCATION.--Lat 39°50'16", long 83°01'03", Hydrologic Unit 05060001, near Shadeville.  
 AQUIFER.--Glacial clay, sand, and gravel of Quaternary Age.  
 WELL CHARACTERISTICS.--Drilled observation well, diameter 2 in, depth 45 ft.  
 DATUM.--Altitude of land-surface datum is 705 ft.  
 PERIOD OF RECORD.--October 1979 to current year.  
 EXTREMES FOR PERIOD OF RECORD.--Highest water level, 13.02 ft below land-surface datum, June 17, 1981; lowest, 16.65 ft below land-surface datum, Dec. 21, 1981.

HIGHEST WATER LEVEL 13.19 FEET BELOW LAND SURFACE DATUM MAR 26, 1984.

LOWEST WATER LEVEL 15.99 FEET BELOW LAND SURFACE DATUM OCT 07, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1983	15.99	MAR 01, 1984	14.51	MAY 21, 1984	13.55	JUL 17, 1984	14.87
JAN 06, 1984	14.75	MAR 26	13.19				

395123083003300. 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, depth 45 ft.  
 DATUM.--Altitude of land-surface datum is 690 ft.  
 PERIOD OF RECORD.--October 1979 to current year.  
 EXTREMES FOR PERIOD OF RECORD.--Highest water level, 5.01 ft below land-surface datum, Mar. 24, 1984; lowest, 17.94 ft below land-surface datum, Feb. 1, 1984.

HIGHEST WATER LEVEL 5.01 FEET BELOW LAND SURFACE DATUM MAR 24, 1984.

LOWEST WATER LEVEL 17.94 FEET BELOW LAND SURFACE DATUM FEB 01, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1983	14.17	JAN 27, 1984	17.51	MAR 06, 1984	11.07	MAY 21, 1984	10.90
JAN 20, 1984	16.74	FEB 01	17.94	24	5.01	JUL 17	13.30

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, depth 104 ft.  
 DATUM.--Altitude of land-surface datum is 730 ft.  
 PERIOD OF RECORD.--October 1979 to current year.  
 EXTREMES FOR PERIOD OF RECORD.--Highest water level, 30.15 ft below land-surface datum, May 19, 1981; lowest, 94.64 ft below land-surface datum, Mar. 2, 1982.

HIGHEST WATER LEVEL 36.98 FEET BELOW LAND SURFACE DATUM OCT 07, 1983.

LOWEST WATER LEVEL 38.10 FEET BELOW LAND SURFACE DATUM MAR 24, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1983	36.98	JAN 27, 1984	37.50	MAR 24, 1984	38.10	JUL 17, 1984	37.53
DEC 23	37.19	MAR 06	37.88	MAY 21	37.98		

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, depth 36.5 ft.  
 DATUM.--Altitude of land-surface datum is 710 ft.  
 PERIOD OF RECORD.--April 1982 to current year.  
 EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.06 ft below land-surface datum, June 9, 1982; lowest, 10.23 ft below land-surface datum, Nov. 22, 1983.

HIGHEST WATER LEVEL 8.17 FEET BELOW LAND SURFACE DATUM MAY 21, 1984.

LOWEST WATER LEVEL 10.23 FEET BELOW LAND SURFACE DATUM NOV 22, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1983	10.07	JAN 27, 1984	9.36	MAR 22, 1984	10.03	MAY 21, 1984	8.17
NOV 22	10.23	MAR 01	9.96	APR 02	9.80	JUL 17	8.80

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, depth 122 ft.  
 DATUM.--Altitude of land-surface datum is 703 ft.  
 PERIOD OF RECORD.--October 1979 to current year.  
 EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.96 ft below land-surface datum, June 17, 1981; lowest, 20.43 ft below land-surface datum, June 9, 1982.

HIGHEST WATER LEVEL 12.18 FEET BELOW LAND SURFACE DATUM APR 02, 1984.

LOWEST WATER LEVEL 20.02 FEET BELOW LAND SURFACE DATUM OCT 07, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1983	20.02	MAR 01, 1984	18.90	APR 02, 1984	12.18	JUL 17, 1984	16.48

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, depth 53 ft.

DATUM.--Altitude of land-surface datum is 727 ft.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 37.77 ft below land-surface datum, July 1, 1981; lowest, 44.45 ft below land-surface datum, Dec. 3, 1982.

HIGHEST WATER LEVEL 40.54 FEET BELOW LAND SURFACE DATUM MAY 21, 1984.

LOWEST WATER LEVEL 44.02 FEET BELOW LAND SURFACE DATUM NOV 22, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1983	43.73	JAN 06, 1984	43.06	MAR 26, 1984	41.86	JUL 17, 1984	41.52
NOV 22	44.02	MAR 06	43.02	MAY 21	40.54		

395218083023900. Local number, FR-133.

LOCATION.--Lat 39°52'18", long 83°02'39", Hydrologic Unit 05060001, 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, depth 82 ft, cased to 82 ft finish: 4.0 ft of 0.80 in well screen.

DATUM.--Altitude of land-surface datum is 680 ft. Measuring point: Top of casing, 0.0 ft above land-surface datum.

PERIOD OF RECORD.--April 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level 49.05 ft below land surface datum, April 1, 1980; lowest, 56.64 ft below land-surface datum, July 17, 1984.

HIGHEST WATER LEVEL 55.43 FEET BELOW LAND SURFACE DATUM MAY 23, 1984.

LOWEST WATER LEVEL 56.64 FEET BELOW LAND SURFACE DATUM JUL 17, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 21, 1984	55.78	MAY 23, 1984	55.43	JUL 17, 1984	56.64

395108083010600. Local number, FR 147.

LOCATION.--Lat 39°51'08", long 83°01'06", Hydrologic Unit 05060001, near Columbus.

AQUIFER.--Glacial sand and gravel of Quaternary Age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in, depth 79 ft.

DATUM.--Altitude of land-surface datum is 685 ft.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.54 ft below land-surface datum, May 19, 1981; lowest, 13.01 ft below land-surface datum, Sept. 9, 1982.

HIGHEST WATER LEVEL 3.17 FEET BELOW LAND SURFACE DATUM APR 02, 1984.

LOWEST WATER LEVEL 10.13 FEET BELOW LAND SURFACE DATUM OCT 07, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1983	10.13	NOV 22, 1983	7.01	MAR 06, 1984	7.57	APR 02, 1984	3.17

## FRANKLIN COUNTY

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, depth 220 ft, cased to 139 ft.

DATUM.--Altitude of land-surface datum is 752 ft. Measuring point: Top of casing, 1.17 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 66.17 ft below land-surface datum, June 25, 1979; lowest, 96.50 ft below land-surface datum, July 19, 1984.

HIGHEST WATER LEVEL 76.09 FEET BELOW LAND SURFACE DATUM MAR 21, 1984.

LOWEST WATER LEVEL 96.50 FEET BELOW LAND SURFACE DATUM JUL 19, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 21, 1984	76.09	MAY 23, 1984	76.73	JUL 19, 1984	96.50

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, depth 97 ft, cased to 97 ft.

DATUM.--Altitude of land-surface datum is 732 ft. Measuring point: Top of casing, 0.8 ft above land-surface datum.

PERIOD OF RECORD.--June 1982.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 71.38 ft below land-surface datum, June 8, 1982; lowest, 76.32 ft below land-surface datum, July 19, 1984.

HIGHEST WATER LEVEL 75.68 FEET BELOW LAND SURFACE DATUM MAY 23, 1984.

LOWEST WATER LEVEL 76.32 FEET BELOW LAND SURFACE DATUM JUL 19, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 21, 1984	75.98	MAY 23, 1984	75.68	JUL 19, 1984	76.32

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, depth 93 ft, cased to 93 ft.

DATUM.--Altitude of land-surface is 712 ft. Measuring point: Top of casing, 1.12 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 36.38 ft below land-surface datum, July 1, 1979; lowest, 64.03 ft below land-surface datum, Mar. 21, 1984.

HIGHEST WATER LEVEL 62.19 FEET BELOW LAND SURFACE DATUM MAY 23, 1984.

LOWEST WATER LEVEL 64.03 FEET BELOW LAND SURFACE DATUM MAR 21, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 21, 1984	64.03	MAY 23, 1984	62.19	JUL 17, 1984	63.15



## GROUND-WATER RECORDS

## FRANKLIN COUNTY

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, depth 78 ft, cased to 78 ft.

DATUM.--Altitude of land-surface datum is 721 ft. Measuring point: Top of casing, 0.69 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 44.72 ft below land-surface datum, July 11, 1979; lowest, 72.00 ft below land-surface datum, July 19, 1984.

HIGHEST WATER LEVEL 70.74 FEET BELOW LAND SURFACE DATUM MAY 23, 1984.

LOWEST WATER LEVEL 72.00 FEET BELOW LAND SURFACE DATUM JUL 19, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 21, 1984	71.89	MAY 23, 1984	70.74	JUL 19, 1984	72.00

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, depth 260 ft, cased to 93 ft.

DATUM.--Altitude of land-surface datum is 748 ft. Measuring point: Top of casing, 1.56 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 61.98 ft below land-surface datum, July 11, 1979; lowest, 70.29 ft below land-surface datum, Sept. 16, 1982.

HIGHEST WATER LEVEL 70.02 FEET BELOW LAND SURFACE DATUM JUL 19, 1984.

LOWEST WATER LEVEL 72.94 FEET BELOW LAND SURFACE DATUM MAR 21, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 21, 1984	72.94	MAY 23, 1984	70.99	JUL 19, 1984	70.02

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, depth unknown.

DATUM.--Altitude of land-surface datum is 760 ft. Measuring point: Top of casing, 1.2 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 69.50 ft below land-surface datum, July 11, 1979; lowest, 76.73 ft below land-surface datum, Sept. 17, 1982.

HIGHEST WATER LEVEL 78.36 FEET BELOW LAND SURFACE DATUM MAR 21, 1984.

LOWEST WATER LEVEL 79.78 FEET BELOW LAND SURFACE DATUM JUL 19, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 21, 1984	78.36	MAY 23, 1984	79.03	JUL 19, 1984	79.78

## FRANKLIN COUNTY

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. Riegler.

AQUIFER.--Sand and gravel of Quaternary Age.

WELL CHARACTERISTICS.--Drilled domestic water well, diameter 4.25 in, depth 95 ft, cased to 95 ft.

DATUM.--Altitude of land-surface datum is 718 ft. Measuring point: Top of casing, 1.05 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 53.99 ft below land-surface datum, Mar. 21, 1984; lowest, 58.42 ft below land-surface datum, Sept. 16, 1982.

HIGHEST WATER LEVEL 53.99 FEET BELOW LAND SURFACE DATUM MAR 21, 1984.

LOWEST WATER LEVEL 58.79 FEET BELOW LAND SURFACE DATUM JUL 19, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 21, 1984	53.99	MAY 23, 1984	56.49	JUL 19, 1984	58.79

395319083014100. Local number, FR-242.

LOCATION.--Lat 39°53'19", long 83°01'41", 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, depth 68 ft, cased to 68 ft.

DATUM.--Altitude of land-surface datum is 705 ft. Measuring point: Top of casing, 0.94 ft above land-surface datum.

PERIOD OF RECORD.--May 1982 to September 1982.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 53.44 ft below land-surface datum, April 13, 1982; lowest, 56.63 ft below land-surface datum, July 18, 1984.

HIGHEST WATER LEVEL 55.58 FEET BELOW LAND SURFACE DATUM MAY 22, 1984.

LOWEST WATER LEVEL 56.63 FEET BELOW LAND SURFACE DATUM JUL 18, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 21, 1984	56.46	MAY 22, 1984	55.58	JUL 18, 1984	56.63

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, depth 75 ft, cased to 55 ft, finish is 20.0 ft of slotted screen.

DATUM.--Altitude of land-surface datum is 700 ft. Measuring point: Top of casing, 3.63 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 41.89 ft below land surface datum, Oct. 18, 1979; lowest, 64.50 ft below land surface datum, Mar. 21, 1984.

HIGHEST WATER LEVEL 62.67 FEET BELOW LAND SURFACE DATUM MAY 22, 1984.

LOWEST WATER LEVEL 64.50 FEET BELOW LAND SURFACE DATUM MAR 21, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 21, 1984	64.50	MAY 22, 1984	62.67	JUL 17, 1984	63.84

## FRANKLIN COUNTY

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, depth 63 ft, cased to 63 ft.

DATUM.--Altitude of land-surface datum is 698 ft Measuring point: Top of casing, 3.21 ft below land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 24.23 ft below land-surface datum, Aug. 21, 1979; lowest, 38.91 ft below land-surface datum, Sept. 16, 1982.

HIGHEST WATER LEVEL 37.41 FEET BELOW LAND SURFACE DATUM MAY 23, 1984.

LOWEST WATER LEVEL 40.45 FEET BELOW LAND SURFACE DATUM MAR 21, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 21, 1984	40.45	MAY 23, 1984	37.41	JUL 17, 1984	39.89

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, depth 50 ft, cased to 40 ft finish is 10 ft 0.010 in slot screen.

DATUM.--Altitude of land-surface datum is 688 ft. Measuring point: Top of casing, 3.0 ft above land-surface datum.

PERIOD OF RECORD.--May 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.51 ft below land-surface datum, Mar. 30, 1984; lowest, 26.85 ft below land-surface datum, July 17, 1984.

HIGHEST WATER LEVEL 15.51 FEET BELOW LAND SURFACE DATUM MAR 20, 1984.

LOWEST WATER LEVEL 26.85 FEET BELOW LAND SURFACE DATUM JUL 17, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 20, 1984	15.51	MAY 22, 1984	24.02	JUL 17, 1984	26.85

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, depth 35 ft, cased to 30 ft finish is 5 ft of 0.10 in well screen.

DATUM.--Altitude of land-surface datum is 691.20 ft. Measuring point: Top of casing, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--May 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 28.33 ft below land-surface datum, May 7, 1982; lowest, 31.74 ft below land-surface datum, July 15, 1982.

HIGHEST WATER LEVEL 20.52 FEET BELOW LAND SURFACE DATUM MAY 22, 1984.

LOWEST WATER LEVEL 22.45 FEET BELOW LAND SURFACE DATUM JUL 17, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 20, 1984	21.38	MAY 22, 1984	20.52	JUL 17, 1984	22.45

## 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 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, depth 40 ft, cased to 35 ft finish is 5 ft of 0.010 in well screen.

DATUM.--Altitude of land-surface datum is 710 ft. Measuring point: Top of casing, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--May 1982 to September 1982.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 21.63 ft below land-surface datum, Mar. 20, 1984; lowest, 25.61 ft below land-surface datum, Sept. 16, 1982.

HIGHEST WATER LEVEL 21.63 FEET BELOW LAND SURFACE DATUM MAR 20, 1984.

LOWEST WATER LEVEL 24.60 FEET BELOW LAND SURFACE DATUM JUL 17, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 20, 1984	21.63	MAY 22, 1984	22.33	JUL 17, 1984	24.60

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, depth 50 ft, cased to 40 ft, finish is 5 ft of 0.010 in well screen from 40 ft to 45 ft.

DATUM.--Altitude of land-surface datum is 713 ft. Measuring point: Top of casing, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--May 1982 to September 1982.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 23.87 ft below land-surface datum, Mar. 20, 1984; lowest, 30.76 ft below land-surface datum, Aug. 13, 1982.

HIGHEST WATER LEVEL 23.87 FEET BELOW LAND SURFACE DATUM MAR 20, 1984.

LOWEST WATER LEVEL 30.35 FEET BELOW LAND SURFACE DATUM JUL 17, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 20, 1984	23.87	MAY 22, 1984	27.50	JUL 17, 1984	30.35



## 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, depth 50 ft, cased to 45 ft finish is 5 ft of 0.010 in well screen.

DATUM.--Altitude of land-surface is 725 ft. Measuring point: Top of casing, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--May 1982 to September 1982.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 43.60 ft below land-surface datum, May 18, 1982; lowest, 46.72 ft below land-surface datum, Aug. 13, 1982.

HIGHEST WATER LEVEL 41.84 FEET BELOW LAND SURFACE DATUM JUL 17, 1984.

LOWEST WATER LEVEL 42.72 FEET BELOW LAND SURFACE DATUM MAR 20, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 20, 1984	42.72	MAY 22, 1984	42.21	JUL 17, 1984	41.84

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, depth 45 ft, cased to 40 ft finish is 5 ft of 0.010 in well screen.

DATUM.--Altitude of land-surface datum is 720 ft. Measuring point: Top of casing, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--May 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 31.97 ft below land-surface datum, Jan. 13, 1983; lowest, 41.88 ft below land-surface datum, July 2, 1982.

HIGHEST WATER LEVEL 32.45 FEET BELOW LAND SURFACE DATUM MAR 21, 1984.

LOWEST WATER LEVEL 35.82 FEET BELOW LAND SURFACE DATUM MAY 22, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 21, 1984	32.45	MAY 22, 1984	35.82	JUL 17, 1984	34.16

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, depth 85 ft.

DATUM.--Altitude of land-surface datum is 700 ft.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 11.10 ft below land-surface datum, June 17, 1981; lowest, 38.19 ft below land-surface datum, Jan. 27, 1984.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	18.79	---	---	19.66	13.35	17.61	18.53	21.38	21.31	23.01
2		---	18.57	---	34.56	19.67	13.56	17.72	18.62	21.44	21.49	22.94
3		---	17.03	---	34.26	19.74	14.05	17.77	18.78	21.47	21.62	22.95
4		---	16.63	---	32.70	19.75	14.42	17.99	18.92	21.47	21.63	23.06
5		---	16.31	---	31.90	19.67	14.47	18.21	19.00	21.46	21.61	23.13
6		---	19.19	30.89	30.90	19.77	14.53	18.41	19.14	21.24	21.54	23.13
7		---	19.19	31.29	30.80	19.82	14.66	18.57	19.28	21.29	21.71	23.06
8		---	19.06	31.69	29.70	19.87	14.73	18.73	19.41	21.29	21.89	22.93
9		---	18.84	32.14	29.39	19.89	14.92	18.78	19.53	21.19	21.99	22.91
10		---	18.44	32.50	29.39	19.89	14.92	18.90	19.66	21.24	21.99	22.91
11		---	18.32	32.84	29.37	20.00	15.06	18.95	19.77	21.24	21.97	22.97
12		---	18.33	33.18	---	20.04	15.42	19.11	19.83	21.34	21.83	23.04
13		---	18.10	33.49	---	20.10	15.74	19.22	19.92	21.45	21.97	23.06
14		---	17.60	33.79	---	20.19	16.07	19.37	20.11	21.55	22.12	23.06
15		---	17.57	34.16	---	20.19	16.42	19.37	20.24	21.56	22.28	23.00
16		---	17.77	34.46	26.30	20.10	16.75	19.32	20.37	21.56	22.39	22.77
17		---	18.03	34.69	24.70	20.00	17.04	19.15	20.48	21.80	22.40	22.59
18		---	18.27	35.01	23.60	19.06	17.27	19.07	20.60	21.93	22.31	22.44
19		---	18.53	35.27	22.79	18.04	17.38	19.06	20.75	22.12	22.41	22.30
20		---	18.76	35.54	21.92	17.17	17.56	19.06	20.84	22.25	22.51	22.16
21		---	18.97	35.79	21.38	16.46	17.71	18.91	20.93	22.30	22.55	22.07
22		21.76	19.19	36.05	21.08	15.46	17.72	18.91	20.97	22.33	22.66	22.03
23		21.76	19.66	36.29	20.67	14.58	17.59	18.91	21.05	22.33	22.76	21.97
24		21.70	21.02	36.54	20.34	14.11	17.59	18.91	21.15	22.33	22.80	21.92
25		21.31	22.19	36.66	20.16	---	17.59	18.76	21.18	22.17	22.86	21.93
26		21.06	23.19	---	20.14	---	17.52	18.73	21.19	21.96	22.86	21.76
27		21.01	24.10	38.19	20.05	13.37	17.37	18.73	21.23	21.72	22.79	21.75
28		20.91	24.94	38.04	19.87	13.10	17.19	18.56	21.23	21.62	22.77	21.69
29		20.56	25.59	37.90	19.84	12.98	17.22	18.66	21.26	21.54	22.85	21.64
30		19.80	25.66	---	---	13.03	17.44	18.66	21.32	21.44	22.94	21.60
31		---	---	---	---	13.15	---	18.53	---	21.35	22.99	---
MAX		21.76	25.66	38.19	34.56	20.19	17.72	19.37	21.32	22.33	22.99	23.13
WTR YR 1984	MEAN	21.53		HIGH	12.98		LOW	38.19				

## GROUND-WATER RECORDS

## FRANKLIN COUNTY

395058083002400. Local number, FR-119, M5--Continued

## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HYDRO- GEN SULFIDE TOTAL (MG/L AS H2S)	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)
JAN 27...	0930	870	6.5	10.0	2.7	.2	480	81	120	44

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (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)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)
JAN 27...	4.2	1.5	400	245	110	23	.30	11	570	<.010

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	PHENOLS TOTAL (UG/L)
JAN 27...	<.100	.180	.80	<.010	<100	11000	440	5.2	<1

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, depth 72 ft.

DATUM.--Altitude of land-surface datum is 685 ft.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.36 ft above land-surface datum, Mar. 21, 1984; lowest, 10.54 ft below land-surface datum, Sept. 21, 1982.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.24	5.72	.61	4.23	8.13	3.33	1.33	1.13	5.27	7.90	7.57	7.58
2	6.24	5.73	.83	4.35	8.26	3.45	-0.60	1.40	5.48	7.94	8.35	9.54
3	6.25	5.62	1.16	4.41	7.89	3.58	-0.28	1.51	5.84	8.09	8.35	9.76
4	6.24	5.54	1.16	4.53	6.93	3.60	-0.02	1.38	6.02	8.70	8.48	9.74
5	6.32	5.14	.50	4.59	6.52	3.59	-0.22	1.68	6.03	6.65	8.35	---
6	6.27	5.01	.25	4.81	6.58	3.50	-1.04	1.79	6.31	7.81	9.31	---
7	6.26	5.03	-0.40	4.89	5.40	3.30	-2.02	1.97	6.49	7.90	8.37	---
8	6.30	5.18	-0.95	5.03	5.51	3.01	-1.74	1.99	6.65	6.61	8.39	---
9	6.32	5.23	-0.67	5.06	5.61	2.95	-1.06	1.93	6.76	7.92	8.48	---
10	6.32	5.24	-0.14	5.17	5.66	3.06	-0.34	2.09	6.90	7.96	8.55	---
11	6.32	5.06	.08	5.31	5.66	3.28	.19	2.21	6.97	7.76	7.06	---
12	6.31	4.67	.17	5.37	5.04	3.34	.61	2.43	7.00	8.04	6.78	---
13	6.30	4.21	.09	5.49	4.52	3.45	1.03	2.53	7.15	8.11	6.67	---
14	6.24	4.11	-0.33	5.59	3.75	3.51	1.37	3.20	7.19	8.19	6.62	---
15	6.28	3.89	.08	5.62	-1.03	3.45	1.63	4.32	7.35	8.19	8.10	---
16	6.29	3.77	.56	5.72	-1.70	3.05	1.77	4.65	7.41	8.23	8.28	---
17	6.32	3.74	1.05	5.83	-1.22	-1.01	1.77	5.11	7.51	8.30	7.04	---
18	6.32	3.53	1.45	5.89	-0.74	-2.49	1.64	5.40	7.55	7.01	8.21	---
19	6.28	3.41	1.84	5.99	-0.12	-2.68	1.55	5.58	7.63	6.72	8.39	---
20	6.27	3.19	2.22	6.09	.27	-2.62	1.49	4.22	7.65	7.30	8.42	---
21	6.13	3.24	2.36	6.14	.73	-3.36	1.58	5.41	7.69	7.30	8.53	---
22	6.58	3.31	2.56	6.22	1.27	-3.26	1.60	5.32	7.73	7.31	8.58	---
23	6.03	3.29	2.69	6.27	1.71	-2.70	.90	4.26	7.81	7.31	8.47	---
24	6.18	3.04	3.04	6.27	2.05	-2.63	.32	4.04	7.77	7.31	8.58	---
25	5.51	2.67	3.28	5.76	2.45	-2.66	-0.64	4.07	7.64	7.31	8.62	---
26	5.22	2.64	3.43	5.73	2.70	-2.86	-0.89	4.62	7.66	7.33	7.45	---
27	5.23	2.70	3.58	5.47	2.73	-3.01	-0.95	3.44	7.62	7.32	8.44	---
28	5.35	2.62	3.58	5.25	2.92	-2.89	-0.48	4.96	7.64	7.33	8.56	---
29	5.51	.86	3.83	6.91	3.16	-2.68	.03	5.08	7.74	7.33	8.66	---
30	5.55	.60	4.01	7.65	---	-2.16	.75	3.75	7.83	7.33	8.70	---
31	5.64	---	4.10	8.04	---	-1.81	---	4.99	---	7.57	8.77	---
MAX	5.22	.60	-.95	4.23	-1.70	-3.36	-2.02	1.13	5.27	6.61	6.62	7.58
WTR YR 1984	MEAN	4.38		HIGH	-3.36		LOW	9.31				



## GROUND-WATER RECORDS

## FRANKLIN COUNTY

395117083011600. Local number, FR-120, M6--Continued

## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HYDRO- GEN SULFIDE TOTAL (MG/L AS H2S)	COLI- FORM, FECAL, 0.7 UM-4F (COLS./ 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
JUN 12...	0930	555	6.9	12.5	.2	.0	<1	360	48	93	31
SEP 04...	1345	645	7.2	11.5	1.4	.0	<1	360	43	93	30

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINIT FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	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, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)
JUN 12...	4.1	1.4	314	77	70	11	.30	14	420	.180	<.010
SEP 04...	3.9	1.3	313	38	65	12	.40	13	410	<.100	<.010

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ANTI- MONY, DIS- SOLVED (UG/L AS SB)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
JUN 12...	<10	<1	3	300	1	<10	<1	2200	3	44
SEP 04...	<100	--	--	--	--	--	--	2200	--	53

DATE	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS TOTAL (UG/L)	METHYL- ENE CHLO- RIDE TOTAL (UG/L)
JUN 12...	.2	2	<1	1	1100	40	1.2	<.01	<1	3.8
SEP 04...	--	--	--	--	--	--	.90	--	<1	--

## GROUND-WATER RECORDS IN FRANKLIN COUNTY

165

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, depth 31 ft.

DATUM.--Altitude of land-surface datum is 717 ft.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 10.63 ft below land-surface datum, Oct. 17, 1979; lowest, 15.16 ft below land-surface datum, Nov. 18, 1981.

HIGHEST WATER LEVEL 11.92 FEET BELOW LAND SURFACE DATUM MAY 21, 1984.

LOWEST WATER LEVEL 14.60 FEET BELOW LAND SURFACE DATUM AUG 31, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1983	13.79	JAN 06, 1984	13.33	MAR 15, 1984	13.65	JUL 17, 1984	13.25
NOV 04	13.59	27	13.42	APR 02	11.98	AUG 31	14.60
DEC 06	12.36	MAR 01	13.72	MAY 21	11.92		

## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	COLIFORM, FECAL, 0.7 UM-4F (COLS./100 ML)	HARDNESS (MG/L AS CAC03)	HARDNESS, NONCARBONATE (MG/L AS CAC03)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNESIUM DIS-SOLVED (MG/L AS MG)
JUN 07...	1410	872	6.8	12.5	--	--	--	--	--	--	--
AUG 31...	1040	825	7.0	12.0	1.5	.0	<1	490	100	130	41

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	PHOSPHORUS, ORTHO, DIS-SOLVED (MG/L AS P)
JUN 07...	--	--	--	--	--	--	--	--	--	--	--
AUG 31...	4.3	1.6	392	76	120	28	.20	12	580	<.100	<.010

DATE	ALUMINUM, DIS-SOLVED (UG/L AS AL)	ANTIMONY, DIS-SOLVED (UG/L AS SB)	ARSENIC, DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM, DIS-SOLVED (UG/L AS CD)	CHROMIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGANESE, DIS-SOLVED (UG/L AS MN)
JUN 07...	<10	<1	5	74	1	<10	3	--	1	--
AUG 31...	<100	--	--	--	--	--	--	3300	--	94

DATE	MERCURY, DIS-SOLVED (UG/L AS HG)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELENIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRONTIUM, DIS-SOLVED (UG/L AS SR)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS TOTAL (UG/L)	METHYLENE CHLORIDE TOTAL (UG/L)
JUN 07...	.5	3	<1	3	110	490	--	<.01	--	3.1
AUG 31...	--	--	--	--	--	--	1.0	--	<1	--

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, depth unknown.

DATUM.--Altitude of land-surface datum is 735 ft.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 39.38 ft below land-surface datum, July 1, 1981; lowest, 43.86 ft below land-surface datum, Mar. 3, 1984.

HIGHEST WATER LEVEL 40.14 FEET BELOW LAND SURFACE DATUM MAY 21, 1984.

LOWEST WATER LEVEL 43.86 FEET BELOW LAND SURFACE DATUM MAR 03, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1983	43.29	MAR 03, 1984	43.86	MAY 21, 1984	40.14	JUL 17, 1984	42.51
JAN 06, 1984	43.45	MAR 26	43.29				

## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HYDRO- GEN SULFIDE TOTAL (MG/L AS H2S)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
JUN 12...	1215	650	7.0	12.5	1.8	.0	<1	370	38	96	32
SEP 04...	1245	665	7.1	15.0	3.1	.0	<1	380	59	99	32

DATE	AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SI02)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, N02+N03 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, P0R4O, DIS- SOLVED (MG/L AS P)
JUN 12...	2.8	1.1	334	65	62	5.0	.30	14	410	<.100	<.010
SEP 04...	2.8	1.0	320	49	73	5.3	.30	13	420	<.100	<.010

DATE	AS AL)	ANTI- MONY, DIS- SOLVED (UG/L AS SB)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
JUN 12...	50	<1	1	300	1	<10	6	450	1	36
SEP 04...	<100	--	--	--	--	--	--	36	--	18

DATE	AS HG)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS TOTAL (UG/L)	METHYL- ENE CHLO- RIDE TOTAL (UG/L)
JUN 12...	.2	3	<1	<1	240	50	1.0	<.01	<1	4.1
SEP 04...	--	--	--	--	--	--	1.2	--	<1	--

## GROUND-WATER RECORDS IN FRANKLIN COUNTY

167

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, depth 60 ft.

DATUM.--Altitude of land-surface datum is 720 ft.

PERIOD OF RECORD.--July 1983 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 24.30 ft below land-surface datum, May 21, 1984; lowest, 30.85 ft below land-surface datum, Mar. 15, 1984.

HIGHEST WATER LEVEL 24.30 FEET BELOW LAND SURFACE DATUM MAY 21, 1984.

LOWEST WATER LEVEL 30.85 FEET BELOW LAND SURFACE DATUM MAR 15, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1983	25.96	MAR 01, 1984	28.69	APR 02, 1984	28.18	JUN 12, 1984	24.60
NOV 22	25.72	15	30.85	MAY 21	24.30	JUL 17	25.43
JAN 27, 1984	25.76						

## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	HARDNESS, NONCARBONATE (MG/L AS CaCO3)	HARDNESS, CARBONATE (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)
MAR 13...	1000	825	7.0	12.0	2.1	.0	--	420	86	110	35	8.5
JUN 12...	1345	700	6.9	14.5	1.6	.0	1	390	77	100	33	8.5

DATE	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY FIELD (MG/L AS CaCO3)	CARBON DIOXIDE, DIS-SOLVED (MG/L AS CO2)	SULFATE, DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	NITROGEN, NITRITE, DIS-SOLVED (MG/L AS N)	NITROGEN, NO2+NO3, DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA, DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC, DIS-SOLVED (MG/L AS N)
MAR 13...	1.4	333	64	77	36	.10	11	480	<.010	.580	.140	.30
JUN 12...	1.4	309	75	85	36	.20	10	460	--	.170	--	--

DATE	PHOSPHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	ALUMINUM, DIS-SOLVED (UG/L AS AL)	ANTIMONY, DIS-SOLVED (UG/L AS Sb)	ARSENIC, DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM, DIS-SOLVED (UG/L AS Cd)	CHROMIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS Pb)	MANGANESE, DIS-SOLVED (UG/L AS Mn)
MAR 13...	<.010	100	--	--	--	--	--	--	990	--	40
JUN 12...	.020	30	<1	1	100	1	10	<1	1000	3	40

DATE	MERCURY, DIS-SOLVED (UG/L AS Hg)	NICKEL, DIS-SOLVED (UG/L AS Ni)	SELENIUM, DIS-SOLVED (UG/L AS Se)	SILVER, DIS-SOLVED (UG/L AS Ag)	STRONTIUM, DIS-SOLVED (UG/L AS Sr)	ZINC, DIS-SOLVED (UG/L AS Zn)	CARBON, ORGANIC, TOTAL (MG/L AS C)	CARBON, ORGANIC, DIS-SOLVED (MG/L AS C)	CYANIDE, TOTAL (MG/L AS CN)	PHENOLS, TOTAL (UG/L)	METHYLENE CHLORIDE, TOTAL (UG/L)
MAR 13...	--	--	--	--	--	--	--	1.0	--	<1	--
JUN 12...	.4	1	<1	<1	130	30	.80	--	<.01	<1	4.2



## GROUND-WATER RECORDS

## 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 depth unknown.

DATUM.--Altitude of land-surface datum is 700 ft. Measuring point: Top of casing, 0.72 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.51 ft below land-surface datum, May 23, 1984; lowest, 15.52 ft below land-surface datum, Sept. 17, 1982.

HIGHEST WATER LEVEL 12.51 FEET BELOW LAND SURFACE DATUM MAY 23, 1984.

LOWEST WATER LEVEL 14.48 FEET BELOW LAND SURFACE DATUM JUL 19, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 21, 1984	13.92	MAY 23, 1984	12.51	JUN 14, 1984	13.26	JUL 19, 1984	14.48

## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HYDRO- GEN SULFIDE TOTAL (MG/L AS H2S)	COLI- FORM, FECAL, 0.7 UM-4F (COLS./ 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
JUN 14...	1015	830	6.9	12.5	.1	.0	<1	410	49	96	38
AUG 31...	1230	755	6.8	12.5	2.9	.0	<1	410	52	98	39

DATE	TIME	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
JUN 14...	15	1.7	360	88	100	18	1.3	16	520	<.100	
AUG 31...	15	1.6	354	109	98	16	1.2	16	500	<.100	

DATE	TIME	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ANTI- MONY, DIS- SOLVED (UG/L AS SB)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
JUN 14...		<.010	20	<1	6	51	<1	10	2	2800	4
AUG 31...		<.010	<100	--	--	--	--	--	--	3500	--

DATE	TIME	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS TOTAL (UG/L)
JUN 14...		32	.2	2	<1	<1	12000	26	--	<.01	--
AUG 31...		37	--	--	--	--	--	--	.80	--	<1

## 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, depth 142 ft, cased to 89 ft.

DATUM.--Altitude of land-surface datum is 722 ft. Measuring point: Top of casing, 0.0 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 104.40 ft below land-surface datum, Oct. 18, 1979; lowest, 117.30 ft below land-surface datum, July 18, 1984.

HIGHEST WATER LEVEL 115.35 FEET BELOW LAND SURFACE DATUM MAY 25, 1984.

LOWEST WATER LEVEL 117.30 FEET BELOW LAND SURFACE DATUM JUL 18, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 21, 1984	116.66	MAY 25, 1984	115.35	JUL 18, 1984	117.30

## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	HARDNESS, NONCARBONATE (MG/L AS CAC03)	HARDNESS, CARBONATE (MG/L AS CAC03)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNESIUM DIS-SOLVED (MG/L AS MG)
JUN 14...	0845	1280	6.6	14.5	.1	.0	<1	610	55	160	47
AUG 31...	1330	1130	6.6	14.5	3.3	.0	<1	570	74	150	48

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS-SOLVED (MG/L AS C02)	SULFATE DIS-SOLVED (MG/L AS S04)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SI02)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)
JUN 14...	34	2.5	554	269	150	43	.90	18	810	<.100
AUG 31...	36	2.7	499	243	160	40	1.1	17	760	<.100

DATE	PHOSPHORUS, ORTHO, DIS-SOLVED (UG/L AS P)	ALUMINUM, DIS-SOLVED (UG/L AS AL)	ANTIMONY, DIS-SOLVED (UG/L AS SB)	ARSENIC, DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM, DIS-SOLVED (UG/L AS CD)	CHROMIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)
JUN 14...	<.010	<10	<1	3	140	<1	<10	1	4500	5
AUG 31...	.020	<100	--	--	--	--	--	--	3400	--

DATE	MANGANESE, DIS-SOLVED (UG/L AS MN)	MERCURY, DIS-SOLVED (UG/L AS HG)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELENIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRONTIUM, DIS-SOLVED (UG/L AS SR)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOL, TOTAL (UG/L)
JUN 14...	610	.3	3	<1	1	15000	150	1.8	<.01	<1
AUG 31...	310	--	--	--	--	--	--	1.7	--	<1

## GROUND-WATER RECORDS

## 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 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, depth 40 ft, cased to 30 ft finish is 10 ft of 0.010 in well screen.

DATUM.--Altitude of land-surface datum is 710 ft. Measuring point: top of casing, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--May 1982 to September 1982.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 18.66 ft below land-surface datum, Mar. 20, 1984; lowest, 24.97 ft below land-surface datum, Sept. 16, 1982.

HIGHEST WATER LEVEL 18.66 FEET BELOW LAND SURFACE DATUM MAR 20, 1984.

LOWEST WATER LEVEL 24.10 FEET BELOW LAND SURFACE DATUM JUL 17, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 20, 1984	18.66	MAY 22, 1984	21.00	JUN 13, 1984	23.32	JUL 17, 1984	24.10

## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HYDRO- GEN SULFIDE TOTAL (MG/L AS H2S)	COLI- FORM, FECAL, 0.7 UM-4F (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
JUN 13...	1400	1680	6.5	17.0	.0	.6	<1	630	0	110	85

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY FIELD (MG/L CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	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 SI02)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
JUN 13...	91	23	728	446	69	120	.20	25	970	<.100

DATE	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ANTI- MONY, DIS- SOLVED (UG/L AS SB)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
JUN 13...	<.010	10	<1	6	1200	1	10	<1	10000	5

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS TOTAL (UG/L)
JUN 13...	37	.7	13	<1	3	2700	12	18	<.01	<1

## 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 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, depth 60 ft, cased to 55 ft finish is 5 ft of 0.010 in well screen.

DATUM.--Altitude of land-surface datum is 713 ft. Measuring point: Top of casing, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--May 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 27.82 ft below land-surface datum, May 10, 1983; lowest, 43.35 ft below land-surface datum, July 14, 1982.

HIGHEST WATER LEVEL 28.52 FEET BELOW LAND SURFACE DATUM MAR 20, 1984.

LOWEST WATER LEVEL 33.33 FEET BELOW LAND SURFACE DATUM SEP 04, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 20, 1984	28.52	JUN 13, 1984	31.26	JUL 17, 1984	31.50	SEP 04, 1984	33.33
MAY 22	30.20						

## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HYDRO- GEN SULFIDE TOTAL (MG/L AS H2S)	COLI- FORM, FECAL, 0.7 UM-4F (COLS./ 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
JUN 13...	1100	790	7.0	18.5	.6	.0	<1	260	0	67	22
SEP 04...	0900	710	6.5	14.0	1.8	.0	<1	250	4	65	22

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
JUN 13...	39	7.7	260	50	87	53	.80	16	450	<.100
SEP 04...	38	7.7	249	152	76	53	.80	15	430	.380

DATE	PHOS- PHORUS, ORTHO, DIS- SOLVED (UG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ANTI- MONY, DIS- SOLVED (UG/L AS SB)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
JUN 13...	<.010	10	<1	1	92	<1	10	<1	1300	1
SEP 04...	<.010	<100	--	--	--	--	--	--	1200	--

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOL'S TOTAL (UG/L)
JUN 13...	19	.3	2	<1	<1	1300	10	3.9	<.01	<1
SEP 04...	17	--	--	--	--	--	--	4.4	--	<1



## FRANKLIN COUNTY

395255083003000. Local number, FR-262.

LOCATION.--Lat 39°52'55", long 83°00'30", Hydrologic Unit 05060001, 0.4 mi of I-270, 0.4 mi 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, depth 50 ft, cased to 45 ft, finish is 5 ft of 0.010 in well screen.

DATUM.--Altitude of land-surface datum is 691.8 ft. Measuring point: Top of casing, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--May 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level 9.12 ft below land-surface datum May 10, 1983; lowest, 18.82 ft below land-surface datum, Sept. 4, 1984.

HIGHEST WATER LEVEL 9.60 FEET BELOW LAND SURFACE DATUM MAR 20, 1984.

LOWEST WATER LEVEL 18.82 FEET BELOW LAND SURFACE DATUM SEP 04, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 20, 1984	9.60	JUN 13, 1984	14.51	JUL 17, 1984	16.57	SEP 04, 1984	18.82
MAY 22	13.00						

## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HYDRO- GEN SULFIDE TOTAL (MG/L AS H2S)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
JUN 13...	1630	810	6.4	14.0	.1	--	--	--	--	--	--
SEP 04...	1200	825	7.1	11.5	1.6	.0	<1	450	120	120	37

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY FIELD (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)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
JUN 13...	--	--	--	--	--	--	--	--	--	--
SEP 04...	9.2	1.2	333	51	110	36	.20	11	530	<.100

DATE	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ANTI- MONY, DIS- SOLVED (UG/L AS SB)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
JUN 13...	--	20	<1	1	300	<1	10	3	--	3
SEP 04...	<.010	--	--	--	--	--	--	--	570	--

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOL'S TOTAL (UG/L)
JUN 13...	--	.1	<1	<1	3	380	10	--	<.01	--
SEP 04...	190	--	--	--	--	--	--	1.3	--	<1

## GROUND-WATER RECORDS

173

## FRANKLIN COUNTY

395046083003105. Local number, FR-103-CW.  
 LOCATION.--Lat 39°50'46", long 83°00'31", Hydrologic Unit 05060001.  
 AQUIFER.--Glacial sand and gravel of Quaternary Age.  
 WELL CHARACTERISTICS.--Radial collector well, diameter 20 ft, depth 109 ft.  
 DATUM.--Altitude of land-surface datum is 710 ft.  
 PERIOD OF RECORD.--October 1983 to September 1984.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HYDRO- GEN SULFIDE TOTAL (MG/L AS H2S)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
JAN 25...	1545	865	6.9	11.5	.6	1.9	440	96	110	39

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	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 SI02)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)
JAN 25...	16	1.5	340	83	110	42	.60	12	540	<.010

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	PHENOLS TOTAL (UG/L)
JAN 25...	<.100	.120	.40	<.010	<100	670	68	1.6	2

## GROUND-WATER RECORDS

## FRANKLIN COUNTY

395030082590200. Local number, FR-115-CW.

LOCATION.--Lat 39°50'30", long 82°59'02", Hydrologic Unit 05060001.

AQUIFER.--Glacial sand and gravel of Quarternary Age.

WELL CHARACTERISTICS.--Radial collector well, diameter 20 ft, depth 68 ft.

DATUM.--Altitude of land-surface datum is 699 ft.

PERIOD OF RECORD.--October 1983 to September 1984.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HYDRO- GEN SULFIDE TOTAL (MG/L AS H2S)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
MAR 13...	1200	645	6.9	11.0	.3	.0	420	94	110	35

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LILITY FIELD (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)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)
MAR 13...	6.4	1.3	325	79	94	25	.20	13	480	<.010

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	PHENOLS TOTAL (UG/L)
MAR 13...	<.100	.090	.40	<.010	100	2700	67	1.6	<1

## GROUND-WATER RECORDS

175

## FRANKLIN COUNTY

395017083010700. Local number, FR-145.

LOCATION.--Lat 39°50'17", long 83°01'07", Hydrologic Unit 05060001, near Columbus.

AQUIFER.--Glacial clay, sand, and gravel of Quarternary Age.

WELL CHARACTERISTICS.--Drilled domestic well, diameter 6 ft, depth unknown.

DATUM.--Altitude of land-surface datum is 720 ft.

PERIOD OF RECORD.--October 1979 to September 1980, June 1984 to September 1984.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HYDRO- GEN SULFIDE TOTAL (MG/L AS H2S)	COLI- FORM, FECAL, 0.7 UM-4F (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
JUN 14...	1115	700	6.7	13.5	.0	.0	<1	360	85	93	32
AUG 31...	1130	655	6.9	13.5	3.1	.0	<1	370	100	97	31

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (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)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
JUN 14...	2.1	1.4	279	108	110	16	.20	11	440	<.100
AUG 31...	2.1	1.4	270	66	100	16	.20	11	420	<.100

DATE	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ANTI- MONY, DIS- SOLVED (UG/L AS SB)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
JUN 14...	<.010	<10	<1	1	100	<1	10	<1	2100	2
AUG 31...	<.010	<100	--	--	--	--	--	--	2000	--

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS TOTAL (UG/L)
JUN 14...	43	.3	3	<1	<1	170	75	.40	<.01	<1
AUG 31...	43	--	--	--	--	--	--	.50	--	<1



## GROUND-WATER RECORDS IN FRANKLIN COUNTY--Continued

## SOIL CORE TEST RECORDS

## 395117083004400 SOIL TEST SITE 1

LOCATION.--Lat 39°51'17", long 83°00'44", Franklin County, Hydrologic Unit 05060001, Hartman Farms 1500 ft east of City of Columbus Collector Well No. 101, near Columbus.

PERIOD OF RECORD.--October 1983 to September 1984.

REMARKS.--Site was flooded by Scioto River in March 1984 and is not under cultivation.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	ANTI-MONY, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G) AS AS	BERYL- LIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G) AS CD	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G) AS CU	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G) AS CU	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G) AS PB
JUN 08...	1100	<1	10	<1	2	20	70	80

DATE	TIME	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/L) AS HG	NICKEL, RECOV. FM BOT- TOM MA- TERIAL (UG/G) AS NI	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G) AS ZN	CYANIDE TOTAL IN BOT- TOM MA- TERIAL (UG/G) AS CN	DIETHYL PHTHAL- ATE BOT.MAT (UG/KG)	DI-N- BUTYL PHTHAL- ATE BOT.MAT (UG/KG)
JUN 08...		.88	30	<1	120	<.5	200	1300

## 395115083011500 SOIL TEST SITE 2

LOCATION.--Lat 39°51'15", long 83°01'15", Franklin County, Hydrologic Unit 05060001, 400 ft west of Scioto River and 200 ft south of well FR-120, M6 near Columbus.

PERIOD OF RECORD.--October 1983 to September 1984.

REMARKS.--Site was flooded by Scioto River in March 1984 and is not under cultivation.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	ANTI-MONY, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G) AS AS	BERYL- LIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G) AS CD	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G) AS CU	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G) AS PB
JUN 08...	1300	<1	10	<1	2	30	60	120

DATE	TIME	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/L) AS HG	NICKEL, RECOV. FM BOT- TOM MA- TERIAL (UG/G) AS NI	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G) AS ZN	CYANIDE TOTAL IN BOT- TOM MA- TERIAL (UG/G) AS CN	FLUOR- ANTHENE BOT.MAT (UG/KG)	PYRENE BOT.MAT (UG/KG)	DI-N- BUTYL PHTHAL- ATE BOT.MAT (UG/KG)
JUN 08...		.72	20	<1	180	<.5	180	200	450

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.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	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- LITY LAB (MG/L AS CAC03)
NOV											
10...	1230	5.4	414	<10	160	48	46	12	15	2.2	117
10...	1240	12	374	<10	160	58	45	12	13	2.3	104
10...	1305	21	284	14	120	37	34	7.7	8.3	2.3	80
10...	1505	18	134	11	58	21	18	3.1	3.0	1.3	37
10...	1705	15	139	<10	61	16	19	3.4	2.9	1.3	45
10...	1825	47	132	20	52	0	17	2.4	2.5	1.4	57
10...	2225	15	247	<10	110	34	33	7.1	6.0	1.6	78
APR											
22...	0900	12	583	13	200	66	55	16	32	1.7	138
22...	1005	21	179	20	61	--	18	3.9	9.0	.80	--
22...	1015	32	153	23	56	--	17	3.4	6.9	.80	--
22...	1030	45	125	13	49	--	15	2.8	5.8	.80	--
22...	1120	27	120	10	46	0	14	2.7	5.4	.90	53
22...	1355	4.9	330	<10	130	30	36	8.8	16	1.5	96
MAY											
22...	2345	4.6	432	18	170	50	46	13	16	1.9	119
23...	0225	11	176	13	64	13	19	4.1	6.0	1.0	51
23...	0330	52	170	18	51	0	16	2.6	4.7	1.1	67
23...	0420	34	128	10	42	0	13	2.3	3.6	1.2	53
23...	0710	12	226	18	85	14	25	5.4	8.1	1.7	71
JUN											
13...	1720	--	708	75	240	87	55	25	41	4.5	154
13...	2310	--	329	97	110	38	32	7.4	13	3.3	73
13...	2315	--	319	97	100	12	31	6.5	10	4.1	92
14...	0115	--	154	28	54	13	17	2.8	4.5	1.6	41
23...	1620	21	402	33	140	0	38	11	16	2.8	141
23...	1630	41	281	27	85	--	25	5.4	8.1	2.5	--
23...	1640	84	227	28	68	--	21	3.7	5.6	2.9	--
23...	1720	36	165	23	57	5	18	3.0	4.6	1.8	52
23...	1835	8.3	178	20	66	22	20	3.9	6.0	1.9	44
24...	0445	4.6	177	27	63	16	19	3.7	7.6	1.5	47
24...	0510	37	179	23	68	12	21	3.8	6.3	1.5	56
24...	0525	65	142	12	50	3	16	2.5	4.9	1.3	47
24...	0635	29	110	12	44	11	14	2.2	4.7	1.2	33
24...	0930	5.7	214	15	83	23	25	5.0	8.2	1.7	60

## 03226890 Turkey Run at Upper Arlington, Ohio--Continued

## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	SULFATE DIS- SOLVED (MG/L AS SO <sub>4</sub> )	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, NO <sub>2</sub> +NO <sub>3</sub> TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO <sub>3</sub> )	PHOS- PHORUS, TOTAL (MG/L AS P)
NOV											
10...	43	30	241	46	.800	.190	2.0	2.2	3.0	13	.290
10...	39	26	241	55	.900	.230	3.0	3.2	4.1	18	.280
10...	30	18	164	227	.700	.280	2.6	2.9	3.6	16	.220
10...	14	7.1	95	50	.300	.250	4.5	4.7	5.0	22	.170
10...	15	5.8	93	44	.500	.200	1.0	1.2	1.7	7.5	.160
10...	11	3.9	80	429	.500	.240	3.3	3.5	4.0	18	.390
10...	25	10	174	18	1.90	.360	2.4	2.8	4.7	21	.130
APR											
22...	58	60	357	304	1.90	.280	4.9	5.2	7.1	31	.580
22...	16	12	110	297	.700	.190	3.7	3.9	4.6	20	.430
22...	16	10	95	537	.600	.170	2.6	2.8	3.4	15	.510
22...	14	7.1	80	995	.500	.300	4.5	4.8	5.3	23	.920
22...	13	6.8	79	370	.500	.170	2.9	3.1	3.6	16	.590
22...	29	23	198	117	1.30	.170	2.2	2.4	3.7	16	.270
MAY											
22...	43	32	315	128	1.30	.240	.46	.70	2.0	8.9	.250
23...	16	9.1	132	82	.800	.270	--	<1.3	--	--	.200
23...	13	6.8	110	391	.600	.310	2.2	2.5	3.1	14	.510
23...	8.6	4.6	93	171	.600	.310	.19	.50	1.1	4.9	.300
23...	17	11	173	57	.900	.260	.84	1.1	2.0	8.9	.170
JUN											
13...	85	81	525	154	1.20	.200	4.0	4.2	5.4	24	.280
13...	38	21	264	144	1.80	.860	4.4	5.3	7.1	31	.500
13...	36	19	246	352	1.80	.650	6.3	6.9	8.7	39	.550
14...	18	7.1	121	50	1.10	.540	1.7	2.2	3.3	15	.140
23...	41	32	273	578	1.00	.360	.14	.50	1.5	6.6	.950
23...	24	16	165	1180	.900	.640	3.2	3.8	4.7	21	1.30
23...	22	12	130	1170	.800	.470	.73	1.2	2.0	8.9	.800
23...	20	8.4	110	111	1.20	.420	.00	.42	1.6	7.2	.400
23...	22	11	116	40	1.20	.340	.76	1.1	2.3	10	.220
24...	20	12	124	68	1.10	.400	.90	1.3	2.4	11	.130
24...	20	11	119	171	1.00	.370	.73	1.1	2.1	9.3	.250
24...	16	6.1	91	338	.900	.360	.44	.80	1.7	7.5	.260
24...	12	4.7	79	70	.900	.380	.92	1.3	2.2	9.7	.090
24...	22	12	144	16	1.00	.110	.59	.70	1.7	7.5	.100

## 03226890 Turkey Run at Upper Arlington, Ohio--Continued

## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	PHOS- PHORUS TOTAL (MG/L AS P04)	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										
10...	.89	1	<1	20	16	2200	35	6	130	9.2
10...	.86	1	1	30	16	3900	50	10	200	11
10...	.67	1	1	30	22	9500	69	16	230	12
10...	.52	1	1	20	10	2200	40	7	100	6.5
10...	.49	1	1	20	9	1600	23	4	90	5.9
10...	1.2	1	1	20	19	4600	70	12	160	12
10...	.40	1	1	30	7	1400	10	6	100	6.9
APR										
22...	1.8	3	2	10	19	4700	90	14	210	7.0
22...	1.3	2	2	20	25	4500	200	11	260	4.9
22...	1.6	2	2	20	25	7100	200	3	290	4.3
22...	2.8	2	3	30	33	12000	200	25	380	4.7
22...	1.8	1	2	20	16	5100	98	13	170	5.1
22...	.83	1	1	10	10	4400	20	9	90	5.5
MAY										
22...	--	1	5	<10	23	2700	45	11	180	5.8
23...	--	1	4	10	13	1400	39	7	90	5.5
23...	--	2	6	10	28	10000	100	15	230	6.0
23...	--	1	1	10	12	2800	45	9	110	4.2
23...	--	1	1	10	9	2000	14	10	90	5.2
JUN										
13...	--	3	1	10	2	4200	47	13	140	22
13...	--	2	1	20	26	2400	56	10	160	26
13...	--	3	2	<10	39	5000	100	19	250	31
14...	--	1	<1	10	15	910	27	6	70	8.1
23...	--	3	3	10	46	8300	200	22	380	14
23...	--	4	6	40	100	19000	500	48	510	7.6
23...	--	3	4	30	90	20000	400	40	590	11
23...	--	2	2	10	68	4300	85	16	180	8.3
23...	--	2	1	<10	150	1200	20	6	40	6.9
24...	--	1	1	10	12	930	42	5	110	8.1
24...	--	1	2	10	18	3700	62	59	240	8.6
24...	--	2	1	10	24	5900	84	14	150	6.3
24...	--	2	1	<10	9	1900	16	4	60	4.7
24...	--	2	<1	10	11	560	4	4	70	4.9



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 north of Old State Route 161 at Columbus.

DRAINAGE AREA--1.96 mi.

PERIOD OF RECORD--May 1983 to current year.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS)	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)	HARD- NESS (MG/L AS CAC03)
OCT										
04...	1335	15	419	--	--	58	--	--	--	160
04...	1340	48	487	--	--	67	--	--	--	190
04...	1540	20	147	--	--	40	--	--	--	59
05...	1235	7.2	176	18.5	8.2	36	3.6	10000	230000	72
22...	0405	5.5	290	--	--	30	--	--	--	120
22...	0425	16	225	--	--	26	--	--	--	95
22...	0435	30	202	--	--	30	--	--	--	84
22...	0450	49	183	--	--	21	--	--	--	74
22...	0605	25	132	--	--	21	--	--	--	54
NOV										
10...	1220	6.0	822	--	--	20	--	--	--	350
10...	1230	19	609	--	--	14	--	--	--	250
10...	1235	57	620	--	--	11	--	--	--	260
10...	1245	84	492	--	--	24	--	--	--	210
10...	1540	63	179	--	--	11	--	--	--	75
APR										
22...	0900	7.2	732	--	--	12	--	--	--	280
22...	0910	21	658	--	--	27	--	--	--	250
22...	1020	38	216	--	--	43	--	--	--	74
22...	1040	94	182	--	--	17	--	--	--	66
22...	1135	50	149	--	--	18	--	--	--	51
22...	1230	18	202	--	--	27	--	--	--	69
MAY										
20...	1655	8.6	633	--	--	44	--	--	--	220
20...	1700	27	589	--	--	56	--	--	--	230
20...	1830	48	233	--	--	56	--	--	--	82
20...	1925	104	138	--	--	17	--	--	--	50
20...	2010	56	130	--	--	14	--	--	--	47
21...	0010	12	213	--	--	14	--	--	--	75
JUN										
13...	2330	--	622	--	--	37	--	--	--	220
13...	2335	--	639	--	--	70	--	--	--	210
14...	0135	--	235	--	--	52	--	--	--	80
18...	1900	15	564	--	--	33	--	--	--	200
18...	1905	35	563	--	--	47	--	--	--	200
18...	2105	24	225	--	--	43	--	--	--	80
18...	2110	49	232	--	--	37	--	--	--	82
18...	2155	18	201	--	--	53	--	--	--	73
23...	1640	14	291	--	--	23	--	--	--	100
23...	1655	41	403	--	--	32	--	--	--	140
23...	1750	12	213	--	--	33	--	--	--	81
24...	0510	9.5	262	--	--	18	--	--	--	92
24...	0525	76	228	--	--	23	--	--	--	75

## URBAN HYDROLOGY PROJECT

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03228900 Casto Creek at Columbus, Ohio

## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	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 LA3 (MG/L AS CAC03)	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)
OCT									
04...	76	45	12	19	2.9	86	67	35	252
04...	93	53	14	23	3.2	97	80	42	295
04...	19	18	3.4	5.0	1.4	40	22	7.4	85
05...	21	22	4.1	7.6	1.2	51	22	9.4	100
22...	50	37	7.5	7.8	1.5	73	47	12	176
22...	36	29	5.4	6.1	1.3	59	35	11	134
22...	29	26	4.7	5.4	1.3	55	30	7.9	119
22...	22	23	4.0	4.8	1.4	52	26	8.0	112
22...	15	17	2.7	3.6	1.2	39	18	5.3	76
NOV									
10...	170	95	27	29	3.0	179	130	62	518
10...	98	70	19	20	2.5	155	90	41	385
10...	100	72	20	21	2.5	160	92	42	389
10...	80	58	15	15	2.5	127	72	30	324
10...	22	23	4.3	4.4	1.5	53	24	8.2	115
APR									
22...	110	74	22	37	2.1	169	90	74	464
22...	100	69	20	31	2.0	154	82	63	441
22...	--	22	4.6	12	1.1	--	25	17	136
22...	--	20	3.8	8.8	1.0	--	20	13	109
22...	--	16	2.8	8.3	.90	--	18	11	89
22...	9	21	4.1	12	1.2	60	22	15	126
MAY									
20...	73	58	19	30	3.4	150	88	68	475
20...	59	59	19	28	3.3	167	79	53	400
20...	--	25	4.7	9.9	2.0	--	27	16	167
20...	--	16	2.4	6.0	1.2	--	14	9.0	100
20...	0	15	2.3	6.8	1.1	56	13	9.0	80
21...	13	23	4.3	11	1.5	62	21	15	142
JUN									
13...	89	58	18	32	4.0	130	98	64	470
13...	83	53	18	31	3.7	124	96	62	467
14...	33	24	4.8	9.4	2.2	47	31	14	175
18...	46	52	16	28	2.9	150	71	58	407
18...	69	52	16	28	3.1	127	75	59	401
18...	22	25	4.2	7.4	2.0	58	24	11	161
18...	0	26	4.2	6.5	2.0	85	24	10	156
18...	12	23	3.8	6.9	1.7	61	22	11	137
23...	43	30	7.2	12	2.7	62	38	24	174
23...	42	40	9.7	15	3.3	98	53	31	236
23...	25	25	4.6	7.6	2.0	56	29	13	155
24...	20	27	6.0	11	1.8	72	33	20	177
24...	--	23	4.2	8.1	2.0	--	25	11	143

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## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (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,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS P04)
OCT									
04...	6	.900	.250	2.2	2.4	3.3	15	.210	.54
04...	32	1.00	.250	2.4	2.6	3.6	16	.310	.95
04...	12	.600	.130	1.1	1.2	1.8	8.0	.170	.52
05...	9	.500	.030	.57	.60	1.1	4.9	.090	.28
22...	--	1.50	.080	.82	.90	2.4	11	.090	.28
22...	--	1.10	.090	.61	.70	1.8	8.0	.120	.37
22...	--	.900	.100	.60	.70	1.6	7.1	.150	.46
22...	--	.800	.240	1.1	1.3	2.1	9.3	.210	.64
22...	--	.600	.340	.86	1.2	1.8	8.0	.180	.55
NOV									
10...	12	.300	.200	1.6	1.8	2.1	9.3	.090	.28
10...	12	.600	.220	2.3	2.5	3.1	14	.110	.34
10...	11	.400	.180	3.9	4.1	4.5	20	.150	.46
10...	15	.500	.210	1.5	1.7	2.2	9.7	.290	.89
10...	49	.400	.260	2.8	3.1	3.5	15	.130	.40
APR									
22...	41	.600	.050	.65	.70	1.3	5.8	.120	.37
22...	160	.700	.070	3.3	3.4	4.1	18	.210	.64
22...	465	.500	.140	4.7	4.8	5.3	23	.500	1.5
22...	1180	.400	.120	4.8	4.9	5.3	23	.810	2.5
22...	15300	.300	.170	3.2	3.4	3.7	16	.540	1.7
22...	476	.500	.200	3.0	3.2	3.7	16	.300	.92
MAY									
20...	78	1.10	.530	3.9	4.4	5.5	24	.350	1.1
20...	450	1.40	.520	4.2	4.7	6.1	27	.650	2.0
20...	428	1.40	.590	4.2	4.8	6.2	27	.400	1.2
20...	604	.500	.210	3.5	3.7	4.2	19	.270	.83
20...	438	.500	.430	1.7	2.1	2.6	12	.300	.92
21...	120	.600	.150	.65	.80	1.4	6.2	.090	.28
JUN									
13...	249	1.40	.430	3.1	3.5	4.9	22	.120	--
13...	403	1.60	.600	9.3	9.9	12	51	.320	--
14...	66	1.50	.660	2.4	3.1	4.6	20	.210	--
18...	236	.800	.110	3.0	3.1	3.9	17	.070	--
18...	457	.700	.060	4.1	4.2	4.9	22	.060	--
18...	172	1.00	.200	3.0	3.2	4.2	19	.090	--
18...	439	.800	.180	3.4	3.6	4.4	19	.090	--
18...	208	1.00	.190	3.1	3.3	4.3	19	.140	--
23...	158	.800	.450	4.2	4.6	5.4	24	.260	--
23...	438	.900	.090	1.1	1.2	2.1	9.3	.080	--
23...	171	1.30	.290	1.2	1.5	2.8	12	.220	--
24...	132	.900	.280	.72	1.0	1.9	8.4	.130	--
24...	550	.900	.250	2.8	3.0	3.9	17	.310	--

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## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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)
OCT									
04...	3	1	<10	10	2500	33	17	80	16
04...	3	2	10	20	6400	66	17	140	17
04...	2	1	<10	10	2100	28	11	70	12
05...	2	1	10	10	880	38	8	40	15
22...	--	--	--	--	--	--	--	--	7.4
22...	--	--	--	--	--	--	--	--	5.3
22...	--	--	--	--	--	--	--	--	8.0
22...	--	--	--	--	--	--	--	--	10
22...	--	--	--	--	--	--	--	--	7.5
NOV									
10...	1	<1	20	15	1700	15	8	120	5.2
10...	1	<1	20	10	2700	17	8	140	7.1
10...	1	<1	20	12	3400	18	9	160	5.7
10...	1	<1	20	11	3600	21	10	130	10
10...	1	<1	30	9	1900	23	9	80	7.8
APR									
22...	1	2	10	9	1100	23	10	180	5.4
22...	2	2	20	12	3700	86	8	190	6.8
22...	2	3	20	25	7000	200	19	310	5.4
22...	4	--	30	--	25000	--	--	490	5.0
22...	4	4	40	62	61000	400	98	650	4.3
22...	2	1	20	15	7100	62	17	180	4.4
MAY									
20...	1	1	10	22	4800	200	15	160	12
20...	1	2	10	28	6900	200	20	240	16
20...	1	1	20	30	6800	200	20	250	14
20...	2	2	40	36	14000	300	32	280	9.6
20...	1	1	20	22	12000	69	19	150	7.4
21...	1	<1	10	9	2100	26	7	50	4.5
JUN									
13...	3	1	<10	24	4900	60	12	200	12
13...	3	2	20	28	7500	80	20	210	19
14...	1	1	10	16	1500	34	9	100	12
18...	2	2	40	26	9300	83	21	20	11
18...	4	5	20	29	12000	100	25	320	13
18...	2	5	60	20	4400	100	15	150	12
18...	3	5	30	29	10000	200	24	70	12
18...	2	3	20	21	5500	100	16	40	12
23...	2	2	<10	16	3100	45	1	90	7.0
23...	3	3	10	26	7200	84	22	190	13
23...	2	2	10	17	3200	51	9	120	7.0
24...	2	1	<10	11	1700	43	6	60	8.3
24...	3	3	10	29	8800	200	20	250	9.0



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## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE LAB (UMHOS)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	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- LITY LAB (MG/L AS CAC03)
JUN											
24...	0535	117	242	20	81	0	25	4.5	7.3	1.8	81
24...	0620	65	151	12	50	0	16	2.4	7.1	1.5	55
24...	0835	6.9	208	15	75	21	23	4.2	9.9	1.7	54

DATE	SULFATE DIS- SOLVED (MG/L AS S04)	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- PENDE (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+AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N03)
JUN										
24...	25	13	138	960	1.10	.390	1.0	1.4	2.5	11
24...	16	9.3	91	439	.800	.350	1.6	1.9	2.7	12
24...	22	14	146	99	.800	.180	.52	.70	1.5	6.6

DATE	PHOS- PHORUS, TOTAL (MG/L AS P)	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										
24...	.650	3	4	10	41	16000	200	34	370	20
24...	.100	2	1	10	18	6300	42	12	110	7.7
24...	.090	1	1	<10	10	1800	8	4	40	64

The following table contains water level measurements and chemical analyses from observation wells located in a small watershed affected by coal mining. The data will be used to document ground-water flow and water quality during post-mining conditions.

## JEFFERSON COUNTY

401011080521602. Local number, J11 P1-1.

LOCATION.--Lat 40°10'11", long 80°52'16", Hydrologic unit 05030106, near Harrisville.

AQUIFER.--Overburden spoils, replaced after mining.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 5 in, depth 39 ft, cased to 39 ft, bottom 10 ft slotted.

DATUM.--Altitude of land-surface datum is 1,236.2 ft. Measuring point: Top of casing, 3.0 ft above land-surface datum.

PERIOD OF RECORD.--March 1981 to September 1982, January 1984 to May 1984.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 30.78 ft below land-surface datum, May 31, 1984; lowest measured, Mar. 13, 1981 and Mar. 16, 1981.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	DEPTH OF WELL, TOTAL (FEET)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HYDRO- GEN SULFIDE TOTAL (MG/L AS H2S)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA	
JAN 17...	1105	39.26	1236.00	1500	6.8	11.0	2.7	.0	830	530	230	
MAY 31...	1120	39.26	1236.00	1760	6.8	14.0	.0	.0	960	660	260	
		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 FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	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)
JAN 17...	63	30	7	.5	3.4	308	95	530	70	.10	12	
MAY 31...	74	29	6	.4	3.5	298	91	700	68	.20	12	
		SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS TOTAL (UG/L)	
JAN 17...	1100	1.5	.030	40	59	850	830	46	1.3	<1		
MAY 31...	1300	1.8	<.010	<100	46	2000	930	9	.20	<1		

## GROUND-WATER RECORDS IN STRIP MINES

## JEFFERSON COUNTY--Continued

401011080521603. Local number, J11 P2-2.

LOCATION.--Lat 40°10'11", long 80°52'16", Hydrologic unit 05030106, near Harrisville.

AQUIFER.--Sand, shales and coals of Middle Pennsylvanian Age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in, depth 187 ft, cased to 46 ft.

DATUM.--Altitude of land-surface datum is 1,236.2 ft. Measuring point: Top of casing, 2.7 ft above land-surface datum.

PERIOD OF RECORD.--March 1981 to April 1983, January 1984 to May 1984.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 33.64 ft below land-surface datum, May 31, 1984; lowest measured, 40.40 ft below land-surface datum, Mar. 13, 1981.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	DEPTH OF WELL, TOTAL (FEET)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HYDRO- GEN SULFIDE TOTAL (MG/L AS H2S)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)
JAN 17...	1020	187	1236.00	1700	7.2	11.0	5.8	.0	1000	660	270
MAY 31...	1145	187	1236.00	2070	6.4	13.5	--	.5	1100	840	300

DATE	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 FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	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)
JAN 17...	81	33	7	.5	3.5	350	43	650	70	.20	14
MAY 31...	92	31	6	.4	3.9	287	221	900	62	.10	15

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS TOTAL (UG/L)
JAN 17...	1300	1.8	.010	280	3700	1300	2200	68	1.3	<1
MAY 31...	1600	2.1	<.010	<100	900	2500	2000	30	.60	<1

## GROUND-WATER RECORDS IN STRIP MINES

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## JEFFERSON COUNTY--Continued

401002080521800. Local number, J11 W4-1.

LOCATION.--Lat 40°10'02", long 80°52'18", Hydrologic Unit 05030106, near Harrisville.

AQUIFER.--Sand, shales and coals of Middle Pennsylvanian Age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in, depth 60 ft, cased to 18.80 ft.

DATUM.--Altitude of land-surface datum is 1251.37 ft. Measuring point: Top of casing, 1.2 ft above land-surface datum.

PERIOD OF RECORD.--May 1976 to September 1982, January 1984 to May 1984.

EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 42.88 ft below land-surface datum, May 29, 1979; lowest, 56.51 ft below land-surface datum, Nov. 18, 1980.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	DEPTH OF WELL, TOTAL (FEET)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HYDRO- GEN SULFIDE TOTAL (MG/L AS H2S)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)
JAN 17...	1610	60.00	1251.00	768	7.1	10.5	2.4	.0	370	150	110
MAY 31...	1615	60.00	1251.00	525	7.1	--	--	.0	250	70	75

DATE	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 FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	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)
JAN 17...	22	13	7	.3	1.7	220	34	170	22	.30	12
MAY 31...	15	12	9	.3	1.7	180	28	80	19	.10	14

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS TOTAL (UG/L)
JAN 17...	480	.66	.010	80	390	46	380	110	1.4	1
MAY 31...	330	.44	<.010	100	26	7	250	38	.80	1



## GROUND-WATER RECORDS IN STRIP MINES

## JEFFERSON COUNTY--Continued

401004080521900. Local number, J11 W6-1.

LOCATION.--Lat 40°10'04", long 80°52'19", Hydrologic Unit 05030106, near Harrisville.

AQUIFER.--Sand, shales and coals of Middle Pennsylvanian Age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in, depth 46 ft, cased to 17.8 ft.

DATUM.--Altitude of land-surface datum is 1237.36 ft. Measuring point: Top of casing, 3.2 ft above land-surface datum.

PERIOD OF RECORD.--May 1976 to September 1982, January 1984 to May 1984.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 28.60 ft below land-surface datum, Feb. 26, 1979; lowest, 45.61 ft below land-surface datum, Jan. 19-28, 1981.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	DEPTH OF WELL, TOTAL (FEET)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	HARDNESS (MG/L AS CaCO3)	HARDNESS, NONCARBONATE (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)
JAN 17...	1500	46.00	1237.00	380	7.2	11.0	1.5	.0	210	120	65
MAY 31...	1650	46.00	1237.00	287	6.9	11.5	1.8	.0	150	75	44

DATE	MAGNESIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY FIELD (MG/L AS CaCO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)
JAN 17...	11	8.0	8	.3	1.3	92	11	120	10	.20	19
MAY 31...	9.3	6.1	8	.2	1.1	74	18	98	6.9	.20	17

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	PHOSPHORUS, DIS-SOLVED (MG/L AS P)	ALUMINUM, DIS-SOLVED (UG/L AS AL)	IRON, DIS-SOLVED (UG/L AS FE)	MANGANESE, DIS-SOLVED (UG/L AS MN)	STRONTIUM, DIS-SOLVED (UG/L AS SR)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS TOTAL (UG/L)
JAN 17...	290	.39	.040	30	130	370	290	27	.90	<1
MAY 31...	230	.31	<.010	<100	36	120	180	45	.30	<1

## GROUND-WATER RECORDS IN STRIP MINES

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## JEFFERSON COUNTY--Continued

401004080521901. Local number, J11 W7-2.

LOCATION.--Lat 40°10'04", long 80°52'19", Hydrologic Unit 05030106, near Harrisville.

AQUIFER.--Sand, shales and coals of Middle Pennsylvanian Age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in, depth 192 ft, cased to 53.8 ft.

DATUM.--Altitude of land-surface datum is 1,237.25 ft. Measuring point: Top of casing, 3.0 ft above land-surface datum.

PERIOD OF RECORD.--May 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 60.45 ft below land-surface datum, Jan. 16, 1980; lowest measured, 170.11 ft below land-surface datum, Nov. 19, 1979.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	DEPTH OF WELL, TOTAL (FEET)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HYDROGEN SULFIDE TOTAL (MG/L AS H2S)	HARDNESS (MG/L AS CaCO3)	HARDNESS, NONCARBONATE (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)
JAN 17...	1800	192	1237.00	1100	7.9	8.0	5.5	.0	29	0	7.9

DATE	MAGNESIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY FIELD (MG/L AS CaCO3)	CARBON DIOXIDE, DIS-SOLVED (MG/L AS CO2)	SULFATE, DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)
JAN 17...	2.2	260	95	22	1.0	510	12	24	55	.90	6.9

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	PHOSPHORUS, DIS-SOLVED (MG/L AS P)	ALUMINUM, DIS-SOLVED (UG/L AS AL)	IRON, DIS-SOLVED (UG/L AS FE)	MANGANESE, DIS-SOLVED (UG/L AS MN)	STRONTIUM, DIS-SOLVED (UG/L AS SR)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS TOTAL (UG/L)
JAN 17...	660	.90	.020	90	29	6	340	93	1.8	<1

## GROUND-WATER RECORDS IN STRIP MINES

## JEFFERSON COUNTY--Continued

401007080522400. Local number J11 W8-2.

LOCATION.--Lat 40°10'07", long 80°52'24", Hydrologic Unit 05030106, near Harrisville.

AQUIFER.--Sand, shales and coals of Middle Pennsylvanian Age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in, depth 105 ft, cased to 20.43 ft.

DATUM.--Altitude of land-surface datum is 1,156.67 ft. Measuring point: Top of casing, 0.57 ft above land-surface datum.

PERIOD OF RECORD.--May 1976 to August 1982, January 1984 to May 1984.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 27.28 ft below land-surface datum, May 30, 1984; lowest measured, 37.23 ft below land-surface datum, June 18, 1976.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	DEPTH OF WELL, TOTAL (FEET)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	HYDRO- GEN SULFIDE TOTAL (MG/L AS H2S)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
JAN 16...	1625	105	1157.00	1750	7.0	11.0	.0	950	390	250	79
MAY 30...	1525	105	1157.00	1780	6.8	12.0	.0	970	420	250	83

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	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)
JAN 16...	37	8	.5	2.7	560	108	500	18	.20	15
MAY 30...	33	7	.5	2.8	553	170	580	19	.20	15

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS TOTAL (UG/L)
JAN 16...	1200	1.7	.040	10	4	1400	3000	70	2.6	<1
MAY 30...	1300	1.8	<.010	100	33	2200	3000	44	1.7	<1

## JEFFERSON COUNTY--Continued

401009080521500. Local number, J11 P10-1.

LOCATION.--Lat 40°10'09", long 80°52'15", Hydrologic Unit 05010306, near Harrisville.

AQUIFER.--Overburden spoils, replaced after mining.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 5 in, depth 39.3 ft, cased to 39.0 ft.

DATUM.--Altitude of land-surface datum is 1236.1 ft. Measuring point: Top of casing, 3.0 ft above land-surface datum.

PERIOD OF RECORD.--March 1981 to August 1982, January 1984 to May 1984.

EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 31.24 ft below land-surface datum, May 31, 1984; lowest measured, dry, prior to January 1982.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	DEPTH OF WELL, TOTAL (FEET)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (STAND-ARD UNITS)	OXYGEN, DIS-SOLVED (MG/L)	HYDRO-GEN SULFIDE TOTAL (MG/L AS H2S)	HARD-NESS (MG/L AS CAC03)	HARD-NESS, NONCAR-BONATE (MG/L AS CAC03)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
JAN 17...	1725	39.30	1236.00	1100	6.7	.8	.0	610	340	170	45
MAY 31...	1420	39.30	1236.00	1170	7.0	.0	.0	590	320	160	46

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	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 SI02)
JAN 17...	20	7	.4	2.7	270	104	330	46	.20	11
MAY 31...	18	6	.3	2.7	274	53	360	42	.20	12

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS TOTAL (UG/L)
JAN 17...	790	1.1	.010	10	99	600	580	34	1.0	1
MAY 31...	810	1.1	.020	<100	48	590	600	7	.50	<1



## WAYNE COUNTY

The following tables contain water-level measurements and miscellaneous low flow measurements in Wayne County. The data was collected as part of the Northeast Buried Valley Aquifer project to study the hydraulic properties near a stream and the nature of ground-water flow from a stream to pumping wells.

404802081583102. Local number, WN-T2.

LOCATION.--Lat 40°48'02", long 81°58'31", Hydrologic Unit 05040003, near Wooster.

AQUIFER.--Glacial sand and gravel of Quaternary Age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 2 in, depth 61 ft.

DATUM.--Altitude of land-surface datum is 859 ft. Measuring point: Floor of instrument shelter 2.62 ft above land-surface datum.

PERIOD OF RECORD.--July 26, 1984 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily low, 34.96 ft, Sept. 27, 1984; minimum daily low, 30.88 ft, Aug. 5, 1984.

EXTREMES FOR CURRENT YEAR.-- Maximum daily low, 34.96 ft, Sept. 27, 1984; minimum daily low, 30.88 ft, Aug. 5.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984  
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										---	32.21	33.72
2										---	32.35	32.62
3										---	32.33	32.36
4										---	31.80	33.15
5										---	30.88	33.27
6										---	31.84	33.43
7										---	32.02	33.65
8										---	32.45	33.64
9										---	32.58	33.25
10										---	32.59	33.39
11										---	32.57	33.88
12										---	31.61	33.83
13										---	32.12	34.11
14										---	32.46	34.21
15										---	32.87	34.21
16										---	33.08	34.19
17										---	33.08	33.87
18										---	33.00	33.93
19										---	32.84	34.22
20										---	32.74	34.42
21										---	33.27	34.51
22										---	33.45	34.49
23										---	33.55	33.88
24										---	33.64	34.27
25										---	33.24	34.52
26										32.09	32.69	34.63
27										32.33	33.03	34.96
28										31.73	33.57	34.57
29										31.16	33.82	34.29
30										31.71	33.87	34.10
31										31.90	33.85	---
MAX										32.33	33.87	34.96
WTR YR 1984	MEAN	33.19		HIGH	30.88		LOW	34.96				

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

## WAYNE COUNTY

404801081583500. Local number, WN-T1.

LOCATION.--Lat 40°48'01", long 81°58'35", Hydrologic Unit 05040003, near Wooster.

AQUIFER.--Glacial sand and gravel of Quaternary Age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 2 in, depth 71 ft.

DATUM.--Altitude of land-surface datum is 856 ft.

HIGHEST WATER LEVEL 24.17 FEET BELOW LAND SURFACE DATUM JUL 19, 1984.

LOWEST WATER LEVEL 26.42 FEET BELOW LAND SURFACE DATUM AUG 30, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JUL 19, 1984	24.17	AUG 08, 1984	25.31	AUG 30, 1984	26.42	SEP 04, 1984	26.04
JUL 26	25.08						

404802081583103. Local number, WN-T3.

LOCATION.--Lat 40°48'02", long 81°58'31", Hydrologic Unit 05040003, near Wooster.

AQUIFER.--Glacial sand and gravel of Quaternary Age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 2 in, depth 34 ft.

DATUM.--Altitude of land-surface datum is 859 ft.

HIGHEST WATER LEVEL 30.77 FEET BELOW LAND SURFACE DATUM JUL 19, 1984.

LOWEST WATER LEVEL WELL DRY SEP 04, 1984; SEP 10, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JUL 19, 1984	30.77	AUG 08, 1984	32.40	SEP 04, 1984	DRY	SEP 10, 1984	DRY
JUL 26	32.29						

404800081584500. Local number, WN-T4.

LOCATION.--Lat 40°48'00", long 81°58'45", Hydrologic Unit 05040003, near Wooster.

AQUIFER.--Glacial sand and gravel of Quaternary Age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 2 in, depth 78 ft.

DATUM.--Altitude of land-surface datum is 856 ft.

HIGHEST WATER LEVEL 20.99 FEET BELOW LAND SURFACE DATUM JUL 19, 1984.

LOWEST WATER LEVEL 23.23 FEET BELOW LAND SURFACE DATUM SEP 12, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JUL 19, 1984	20.99	AUG 08, 1984	22.07	SEP 04, 1984	22.90	SEP 12, 1984	23.23
JUL 26	21.67	AUG 30	23.01				

## WAYNE COUNTY

404800081584501. Local number, WN-T5.

LOCATION.--Lat 40°48'00", long 81°58'45", Hydrologic Unit 05040003, near Wooster.

AQUIFER.--Glacial sand and gravel of Quaternary Age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 2 in, depth 35 ft.

DATUM.--Altitude of land-surface datum is 855 ft.

HIGHEST WATER LEVEL 20.69 FEET BELOW LAND SURFACE DATUM JUL 19, 1984.

LOWEST WATER LEVEL 22.93 FEET BELOW LAND SURFACE DATUM SEP 12, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JUL 19, 1984	20.69	AUG 08, 1984	21.75	SEP 04, 1984	22.42	SEP 12, 1984	22.93
JUL 26	21.31	AUG 30	21.20				

404839081590900. Local number, WN-T6.

LOCATION.--Lat 40°48'39", long 81°59'09", Hydrologic Unit 05040003, near Wooster.

AQUIFER.--Glacial sand and gravel of Quaternary Age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 2 in, depth 61 ft.

DATUM.--Altitude of land-surface datum is 857 ft.

HIGHEST WATER LEVEL 4.52 FEET BELOW LAND SURFACE DATUM AUG 08, 1984.

LOWEST WATER LEVEL 5.47 FEET BELOW LAND SURFACE DATUM SEP 10, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JUL 18, 1984	4.63	AUG 08, 1984	4.52	SEP 04, 1984	5.37	SEP 10, 1984	5.47
JUL 26	4.84	AUG 30	5.04				

404807081582000. Local number, WN-T7.

LOCATION.--Lat 40°48'07", long 81°58'20", Hydrologic Unit 05040003, near Wooster.

AQUIFER.--Glacial sand and gravel of Quaternary Age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 2 in, depth 23 ft.

DATUM.--Altitude of land-surface datum is 856 ft.

HIGHEST WATER LEVEL 17.84 FEET BELOW LAND SURFACE DATUM JUL 18, 1984.

LOWEST WATER LEVEL 20.69 FEET BELOW LAND SURFACE DATUM SEP 10, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JUL 18, 1984	17.84	AUG 08, 1984	19.40	SEP 04, 1984	20.64	SEP 10, 1984	20.69
JUL 26	18.53	AUG 30	20.22				

## WAYNE COUNTY

404805081582600. Local number, WN-T8.

LOCATION.--Lat 40°48'05", long 81°58'26", Hydrologic Unit 05040003, near Wooster.

AQUIFER.--Glacial sand and gravel of Quaternary Age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 2 in, depth 32 ft.

DATUM.--Altitude of land-surface datum is 857 ft.

HIGHEST WATER LEVEL 22.07 FEET BELOW LAND SURFACE DATUM JUL 18, 1984.

LOWEST WATER LEVEL 24.76 FEET BELOW LAND SURFACE DATUM SEP 12, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JUL 18, 1984	22.07	AUG 08, 1984	23.39	SEP 04, 1984	24.47	SEP 12, 1984	24.76
JUL 26	22.66	AUG 30	24.38				

404805081582601. Local number, WN-T9.

LOCATION.--Lat 40°48'05", long 81°58'26", Hydrologic Unit 05040003, near Wooster.

AQUIFER.--Glacial sand and gravel of Quaternary Age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 2 in, depth 64 ft.

DATUM.--Altitude of land-surface datum is 857 ft.

HIGHEST WATER LEVEL 27.24 FEET BELOW LAND SURFACE DATUM JUL 19, 1984.

LOWEST WATER LEVEL 29.70 FEET BELOW LAND SURFACE DATUM AUG 30, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JUL 19, 1984	27.24	AUG 08, 1984	28.65	SEP 04, 1984	28.81	SEP 12, 1984	29.41
JUL 26	28.63	AUG 30	29.70				

404752081583400. Local number, WN-T10.

LOCATION.--Lat 40°47'52", long 81°58'34", Hydrologic Unit 05040003, near Wooster.

AQUIFER.--Glacial sand and gravel of Quaternary Age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 2 in, depth 61 ft.

DATUM.--Altitude of land-surface datum is 857 ft.

HIGHEST WATER LEVEL 28.51 FEET BELOW LAND SURFACE DATUM JUL 19, 1984.

LOWEST WATER LEVEL 31.42 FEET BELOW LAND SURFACE DATUM AUG 30, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JUL 19, 1984	28.51	AUG 08, 1984	29.82	SEP 04, 1984	30.70	SEP 10, 1984	30.29
JUL 26	29.75	AUG 30	31.42				



## WAYNE COUNTY

404752081583401. Local number, WN-T11.

LOCATION.--Lat 40°47'52", long 81°58'34", Hydrologic Unit 05040003, near Wooster.

AQUIFER.--Glacial sand and gravel of Quaternary Age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 2 in, depth 30 ft.

DATUM.--Altitude of land-surface datum is 857 ft.

HIGHEST WATER LEVEL 26.73 FEET BELOW LAND SURFACE DATUM JUL 19, 1984.

LOWEST WATER LEVEL 29.41 FEET BELOW LAND SURFACE DATUM AUG 30, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JUL 19, 1984	26.73	AUG 08, 1984	28.04	SEP 04, 1984	28.93	SEP 10, 1984	29.13
JUL 26	27.63	AUG 30	29.41				

404744081582100. Local number, WN-T12.

LOCATION.--Lat 40°47'44", long 81°58'21", Hydrologic Unit 05040003, near Wooster.

AQUIFER.--Glacial sand and gravel of Quaternary Age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 2 in, depth 59 ft.

DATUM.--Altitude of land-surface datum is 857 ft.

HIGHEST WATER LEVEL 24.56 FEET BELOW LAND SURFACE DATUM JUL 19, 1984.

LOWEST WATER LEVEL 27.05 FEET BELOW LAND SURFACE DATUM AUG 30, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JUL 19, 1984	24.56	AUG 08, 1984	25.91	SEP 04, 1984	26.82	SEP 10, 1984	26.99
JUL 26	25.35	AUG 30	27.05				

404806081590200. Local number, WN-T13.

LOCATION.--Lat 40°48'06", long 81°59'02", Hydrologic Unit 05040003, near Wooster.

AQUIFER.--Glacial sand and gravel of Quaternary Age.

WELL CHARACTERISTICS.--Drilled observation well, diameter 2 in, depth 23 ft.

DATUM.--Altitude of land-surface datum is 858 ft.

HIGHEST WATER LEVEL 8.07 FEET BELOW LAND SURFACE DATUM JUL 19, 1984.

LOWEST WATER LEVEL 8.95 FEET BELOW LAND SURFACE DATUM SEP 04, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JUL 19, 1984	8.07	AUG 08, 1984	8.24	AUG 30, 1984	8.81	SEP 04, 1984	8.95
JUL 26	8.18						

## GROUND-WATER LEVELS AT MISCELLANEOUS SITES

The following tables contain water-level measurements in the vicinity of Lake Erie from Cleveland to Conneaut. The data was collected as part of the Northeast Buried Valley Aquifer project.

Site No.	Local No.	Location		County	Date	Water-Level
414334080342700	AB-10	Lat	414334 long	803427	Ashtabula	09/10/84 2.35
414253080341500	AB-11	Lat	414253 long	803415	Ashtabula	09/10/84 7.01
414322080315900	AB-12	Lat	414322 long	803159	Ashtabula	09/10/84 18.90
414511080334800	AB-13	Lat	414511 long	803348	Ashtabula	09/10/84 5.80
414528080365800	AB-14	Lat	414528 long	803658	Ashtabula	09/10/84 10.42
414655080325800	AB-15	Lat	414655 long	803258	Ashtabula	09/10/84 10.68
414658080393700	AB-16	Lat	414658 long	803937	Ashtabula	09/10/84 12.55
414647080413800	AB-17	Lat	414647 long	804138	Ashtabula	09/10/84 5.29
414611080420400	AB-18	Lat	414611 long	804204	Ashtabula	09/10/84 5.01
415132080543100	AB-19	Lat	415132 long	805431	Ashtabula	09/10/84 1.90
415139080543200	AB-20	Lat	415139 long	805432	Ashtabula	09/10/84 6.41
415136080543200	AB-21	Lat	415136 long	805432	Ashtabula	09/10/84 .50
415032080553800	AB-22	Lat	415032 long	805538	Ashtabula	09/10/84 6.94
414930080561100	AB-23	Lat	414930 long	805611	Ashtabula	09/10/84 5.16
414933080561100	AB-24	Lat	414933 long	805611	Ashtabula	09/10/84 15.35
414801080581000	AB-25	Lat	414801 long	805810	Ashtabula	09/10/84 10.85
414759080581700	AB-26	Lat	414759 long	805817	Ashtabula	09/10/84 6.20
414811080575500	AB-27	Lat	414811 long	805755	Ashtabula	09/10/84 6.25
414821080575800	AB-28	Lat	414821 long	805758	Ashtabula	09/10/84 3.71
414747080545500	AB-29	Lat	414747 long	805455	Ashtabula	09/10/84 55.95
414820080535900	AB-30	Lat	414820 long	805359	Ashtabula	09/10/84 22.42
414511080465100	AB-31	Lat	414511 long	804651	Ashtabula	09/10/84 5.06
414457080435600	AB-32	Lat	414457 long	804356	Ashtabula	09/10/84 5.47
414420080432300	AB-33	Lat	414420 long	804323	Ashtabula	09/10/84 7.00
414348080455000	AB-34	Lat	414348 long	804550	Ashtabula	09/10/84 5.72
414302080462000	AB-35	Lat	414302 long	804620	Ashtabula	09/10/84 7.43
414518080465200	AB-36	Lat	414518 long	804652	Ashtabula	09/10/84 10.23
414608080452200	AB-37	Lat	414608 long	804522	Ashtabula	09/10/84 7.40
414620080505500	AB-38	Lat	414620 long	805055	Ashtabula	09/10/84 19.65
415526080310300	AB-39	Lat	415526 long	803103	Ashtabula	09/11/84 14.00
415545080312600	AB-40	Lat	415545 long	803126	Ashtabula	09/11/84 8.49
415401080312600	AB-41	Lat	415401 long	803126	Ashtabula	09/11/84 30.38
415327080340200	AB-42	Lat	415327 long	803402	Ashtabula	09/11/84 27.60
415306080332200	AB-43	Lat	415306 long	803322	Ashtabula	09/11/84 2.50
415312080322900	AB-44	Lat	415312 long	803229	Ashtabula	09/11/84 37.58
415245080313100	AB-45	Lat	415245 long	803131	Ashtabula	09/11/84 24.62
415358080343800	AB-46	Lat	415358 long	803438	Ashtabula	09/11/84 59.28
415351080361100	AB-47	Lat	415351 long	803611	Ashtabula	09/11/84 68.69
415518080360300	AB-48	Lat	415518 long	803603	Ashtabula	09/11/84 9.06
415508080351000	AB-49	Lat	415508 long	803510	Ashtabula	09/11/84 4.49
415427080412900	AB-50	Lat	415427 long	804129	Ashtabula	09/11/84 spring
415429080431600	AB-51	Lat	415429 long	804316	Ashtabula	09/11/84 -.38
415437080433500	AB-52	Lat	415437 long	804335	Ashtabula	09/11/84 5.02
415438080433600	AB-53	Lat	415438 long	804336	Ashtabula	09/11/84 1.43
415443080433400	AB-54	Lat	415443 long	804334	Ashtabula	09/11/84 4.79
415429080431900	AB-55	Lat	415429 long	804319	Ashtabula	09/11/84 1.72
415624080384700	AB-56	Lat	415624 long	803847	Ashtabula	09/11/84 10.29
415025080513500	AB-57	Lat	415025 long	805135	Ashtabula	09/11/84 9.00
415114080495800	AB-58	Lat	415114 long	804958	Ashtabula	09/11/84 8.54
415153080494900	AB-59	Lat	415153 long	804949	Ashtabula	09/11/84 5.63
415152080510800	AB-60	Lat	415152 long	805108	Ashtabula	09/11/84 1.40
415251080495500	AB-61	Lat	415251 long	804955	Ashtabula	09/11/84 5.48
415240080514300	AB-62	Lat	415240 long	805143	Ashtabula	09/11/84 2.75
415212080534000	AB-63	Lat	415212 long	805340	Ashtabula	09/11/84 3.05
415157080515100	AB-64	Lat	415157 long	805151	Ashtabula	09/11/84 3.70
415157080525600	AB-65	Lat	415157 long	805256	Ashtabula	09/11/84 .80
415115080531400	AB-66	Lat	415115 long	805314	Ashtabula	09/11/84 2.40
414924080530500	AB-67	Lat	414924 long	805305	Ashtabula	09/11/84 5.36
414918080524200	AB-68	Lat	414918 long	805242	Ashtabula	09/11/84 4.10
414721080535200	AB-69	Lat	414721 long	805352	Ashtabula	09/11/84 70.42
414715080535600	AB-70	Lat	414715 long	805356	Ashtabula	09/11/84 77.83
414806080535400	AB-71	Lat	414806 long	805354	Ashtabula	09/11/84 flowing
414824080534400	AB-72	Lat	414824 long	805344	Ashtabula	09/11/84 18.34
414914080504200	AB-73	Lat	414914 long	805042	Ashtabula	09/11/84 26.53
414747080510300	AB-74	Lat	414747 long	805103	Ashtabula	09/11/84 72.00
415219080332300	AB-75	Lat	415219 long	803323	Ashtabula	09/12/84 12.00
415155080313400	AB-76	Lat	415155 long	803134	Ashtabula	09/12/84 5.42
415039080335500	AB-77	Lat	415039 long	803355	Ashtabula	09/12/84 2.60
415038080335600	AB-78	Lat	415038 long	803356	Ashtabula	09/12/84 11.18
415050080365300	AB-79	Lat	415050 long	803653	Ashtabula	09/12/84 6.68
415214080365900	AB-80	Lat	415214 long	803659	Ashtabula	09/12/84 14.62
415148080392300	AB-81	Lat	415148 long	803923	Ashtabula	09/12/84 42.85
415130080411200	AB-82	Lat	415130 long	804112	Ashtabula	09/12/84 43.67
415147080423200	AB-83	Lat	415147 long	804232	Ashtabula	09/12/84 13.73
415043080393100	AB-84	Lat	415043 long	803931	Ashtabula	09/12/84 15.75
414925080390100	AB-85	Lat	414925 long	803901	Ashtabula	09/12/84 9.42
414909080411000	AB-86	Lat	414909 long	804110	Ashtabula	09/12/84 4.70
415014080391600	AB-87	Lat	415014 long	803916	Ashtabula	09/12/84 10.28
415129080381200	AB-88	Lat	415129 long	803812	Ashtabula	09/12/84 61.29

1/ Depth of water level below land surface, in feet.

## GROUND-WATER LEVELS AT MISCELLANEOUS SITES

Site No.	Local No.	Location	County	Date	Water-Level
415257080400400	AB-89	Lat 415257 long 804004	Ashtabula	09/12/84	25.28
415317080395800	AB-90	Lat 415317 long 803958	Ashtabula	09/12/84	13.40
415345080432600	AB-91	Lat 415345 long 804326	Ashtabula	09/12/84	5.06
414745080493200	AB-92	Lat 414745 long 804932	Ashtabula	09/12/84	14.97
414907080474100	AB-93	Lat 414907 long 804741	Ashtabula	09/12/84	74.66
414738080480100	AB-94	Lat 414738 long 804801	Ashtabula	09/12/84	29.67
414749080471100	AB-95	Lat 414749 long 804711	Ashtabula	09/12/84	13.51
414750080452300	AB-96	Lat 414750 long 804523	Ashtabula	09/12/84	11.55
414752080452300	AB-97	Lat 414752 long 804523	Ashtabula	09/12/84	14.17
415322080441000	AB-98	Lat 415322 long 804410	Ashtabula	09/12/84	1.29
415234080433600	AB-99	Lat 415234 long 804336	Ashtabula	09/12/84	8.00
415240080433600	AB-100	Lat 415240 long 804336	Ashtabula	09/12/84	2.81
415211080444600	AB-101	Lat 415211 long 804446	Ashtabula	09/12/84	12.60
415258080451700	AB-102	Lat 415258 long 804517	Ashtabula	09/12/84	2.45
415342080430800	AB-103	Lat 415342 long 804308	Ashtabula	09/12/84	23.76
415503080431900	AB-104	Lat 415503 long 804319	Ashtabula	09/12/84	5.42
415455080443900	AB-105	Lat 415455 long 804439	Ashtabula	09/12/84	6.72
415412080430400	AB-106	Lat 415412 long 804304	Ashtabula	09/12/84	4.48
415012080464200	AB-107	Lat 415012 long 804642	Ashtabula	09/12/84	26.39
414707080505300	AB-108	Lat 414707 long 805053	Ashtabula	09/13/84	64.30
414353080523700	AB-109	Lat 414353 long 805237	Ashtabula	09/13/84	15.68
414526080532600	AB-110	Lat 414526 long 805326	Ashtabula	09/13/84	9.20
414527080540700	AB-111	Lat 414527 long 805407	Ashtabula	09/13/84	24.26
414655080541900	AB-112	Lat 414655 long 805419	Ashtabula	09/13/84	11.22
414602080572600	AB-115	Lat 414602 long 805726	Ashtabula	09/13/84	33.08
414535080562200	AB-116	Lat 414535 long 805622	Ashtabula	09/13/84	5.14
414602080542700	AB-117	Lat 414602 long 805427	Ashtabula	09/13/84	81.77
414501080561600	AB-118	Lat 414501 long 805616	Ashtabula	09/13/84	15.72
414228080560900	AB-119	Lat 414228 long 805609	Ashtabula	09/13/84	37.86
413716080560500	AB-120	Lat 413716 long 805605	Ashtabula	09/13/84	9.73
413236080540502	AB-121	Lat 413236 long 805405	Ashtabula	09/13/84	26.95
413236080540501	AB-122	Lat 413236 long 805405	Ashtabula	09/13/84	50.32
413132080591600	AB-123	Lat 413132 long 805916	Ashtabula	09/13/84	6.60
415040080581601	AB-124S	Lat 415040 long 805816	Ashtabula	09/19/84	2.20
415040080581602	AB-124D	Lat 415040 long 805816	Ashtabula	09/19/84	8.73
413336081242700	CU-11	Lat 413336 long 812427	Cuyahoga	09/14/84	14.02
413249081242401	CU-12S	Lat 413249 long 812424	Cuyahoga	09/14/84	7.12
413249081242402	CU-12D	Lat 413249 long 812424	Cuyahoga	09/14/84	45.09
413145081241300	CU-13	Lat 413145 long 812413	Cuyahoga	09/14/84	23.04
413122081235400	CU-14	Lat 413122 long 812354	Cuyahoga	09/14/84	41.44
413115081235900	CU-15	Lat 413115 long 812359	Cuyahoga	09/14/84	57.68
413020081241301	CU-16A	Lat 413020 long 812413	Cuyahoga	09/14/84	25.35
413020081241302	CU-16B	Lat 413020 long 812413	Cuyahoga	09/14/84	25.95
413019081241200	CU-17	Lat 413019 long 812412	Cuyahoga	09/14/84	7.95
413808081172100	GE-131	Lat 413808 long 811721	Geauga	09/18/84	23.27
414730081025600	L-11	Lat 414730 long 810256	Lake	09/11/84	4.37
414736081023400	L-12	Lat 414736 long 810234	Lake	09/11/84	7.68
414735081023500	L-13	Lat 414735 long 810235	Lake	09/11/84	6.74
414734081023700	L-14	Lat 414734 long 810237	Lake	09/11/84	6.49
414721081002400	L-15	Lat 414721 long 810024	Lake	09/11/84	14.22
414658081051200	L-16	Lat 414658 long 810512	Lake	09/11/84	7.77
414753081043600	L-17	Lat 414753 long 810436	Lake	09/11/84	17.95
414811081024500	L-18	Lat 414811 long 810245	Lake	09/11/84	8.70
414910081011900	L-19	Lat 414910 long 810119	Lake	09/11/84	4.86
414916081052000	L-20	Lat 414916 long 810520	Lake	09/11/84	31.11
414450081034900	L-21	Lat 414450 long 810349	Lake	09/11/84	45.95
414447081034800	L-22	Lat 414447 long 810348	Lake	09/11/84	20.29
414334081023400	L-23	Lat 414334 long 810234	Lake	09/11/84	21.50
414321081043201	L-24	Lat 414321 long 810432	Lake	09/11/84	2.15
414321081043202	L-25	Lat 414321 long 810432	Lake	09/11/84	8.66
414424081011200	L-26	Lat 414424 long 810112	Lake	09/11/84	9.65
414844081060100	L-27	Lat 414844 long 810601	Lake	09/12/84	8.63
414829081072300	L-28	Lat 414829 long 810723	Lake	09/12/84	11.70
414656081072500	L-29	Lat 414656 long 810725	Lake	09/12/84	16.14
414618081093600	L-30	Lat 414618 long 810936	Lake	09/12/84	12.70
414553081093600	L-31	Lat 414553 long 810936	Lake	09/12/84	6.17
414723081093900	L-32	Lat 414723 long 810939	Lake	09/12/84	12.48
414718081093800	L-33	Lat 414718 long 810938	Lake	09/12/84	11.09
414247081111100	L-34	Lat 414247 long 811111	Lake	09/12/84	61.32
414349081093800	L-35	Lat 414349 long 810938	Lake	09/12/84	57.10
414421081071700	L-36	Lat 414421 long 810717	Lake	09/12/84	68.10
414528081061200	L-37	Lat 414528 long 810612	Lake	09/12/84	8.65
414548081072400	L-38	Lat 414548 long 810724	Lake	09/12/84	7.87
414322081073100	L-39	Lat 414322 long 810731	Lake	09/12/84	18.36
414203081084800	L-40	Lat 414203 long 810848	Lake	09/12/84	15.69
414303081103900	L-41	Lat 414303 long 811039	Lake	09/12/84	3.05
414302081103800	L-42	Lat 414302 long 811038	Lake	09/12/84	16.70
414019081092300	L-43	Lat 414019 long 810923	Lake	09/12/84	3.01
413948081090500	L-44	Lat 413948 long 810905	Lake	09/12/84	3.83
414111081062600	L-45	Lat 414111 long 810626	Lake	09/12/84	15.89
414524081111400	L-46	Lat 414524 long 811114	Lake	09/13/84	6.36
413914081191600	L-47	Lat 413914 long 811916	Lake	09/13/84	65.80
414129081175300	L-48	Lat 414129 long 811753	Lake	09/13/84	28.65
414314081190000	L-49	Lat 414314 long 811900	Lake	09/13/84	9.59

1/ Depth of water level below land surface, in feet.



## GROUND-WATER RECORDS FOR THE NORTHEAST BURIED VALLEY AQUIFER PROJECT

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## GROUND-WATER LEVELS AT MISCELLANEOUS SITES

<u>Site No.</u>	<u>Local No.</u>	<u>Location</u>	<u>County</u>	<u>Date</u>	<u>Water-Level</u>
414306081191300	L-50	Lat 414306 long 811913	Lake	09/13/84	9.41
414014081243700	L-51	Lat 414014 long 812437	Lake	09/13/84	27.05
414012081243800	L-52	Lat 414012 long 812438	Lake	09/13/84	2.01
414127081242000	L-53	Lat 414127 long 812420	Lake	09/13/84	1.90
414045081230400	L-54	Lat 414045 long 812304	Lake	09/13/84	5.47
414153081233400	L-55	Lat 414153 long 812334	Lake	09/13/84	4.27
413726081234201	L-56S	Lat 413726 long 812342	Lake	09/13/84	3.76
413726081234202	L-56D	Lat 413726 long 812342	Lake	09/13/84	5.79
413659081240800	L-57	Lat 413659 long 812408	Lake	09/13/84	2.55
413643081251500	L-58	Lat 413643 long 812515	Lake	09/13/84	16.15
413629081200600	L-59	Lat 413629 long 812006	Lake	09/14/84	21.59
413535081191300	L-60	Lat 413535 long 811913	Lake	09/14/84	62.48
413435081211000	L-61	Lat 413435 long 812110	Lake	09/14/84	99.78
414216081133200	L-62	Lat 414216 long 811332	Lake	09/14/84	6.24
413839081142400	L-63	Lat 413839 long 811424	Lake	09/14/84	8.14
414204081151100	L-64	Lat 414204 long 811511	Lake	09/14/84	5.14
413755081183500	L-65	Lat 413755 long 811835	Lake	09/14/84	6.33
413620081241200	L-66	Lat 413620 long 812412	Lake	09/14/84	3.39
413551081231500	L-67	Lat 413551 long 812315	Lake	09/14/84	6.28
413512081205100	L-68	Lat 413512 long 812051	Lake	09/18/84	2.01
413549081175800	L-69	Lat 413549 long 811758	Lake	09/18/84	71.42
413643081172900	L-70	Lat 413643 long 811729	Lake	09/18/84	2.85
414059081182900	L-71	Lat 414059 long 811829	Lake	09/18/84	10.59
413921081155500	L-72	Lat 413921 long 811555	Lake	09/18/84	31.80
414037081151901	L-73D	Lat 414037 long 811519	Lake	09/18/84	48.43
414037081151902	L-73S	Lat 414037 long 811519	Lake	09/18/84	3.72
414039081151900	L-74	Lat 414039 long 811519	Lake	09/18/84	7.80
414339081131600	L-75	Lat 414339 long 811316	Lake	09/19/84	8.38
414344081131800	L-76	Lat 414344 long 811318	Lake	09/19/84	6.08
414356081171600	L-77	Lat 414356 long 811716	Lake	09/18/84	1.82
414638081115200	L-78	Lat 414638 long 811152	Lake	09/18/84	1.72
414637081114200	L-79	Lat 414637 long 811142	Lake	09/18/84	4.39
414623081112800	L-80	Lat 414623 long 811128	Lake	09/18/84	2.85
414622081113300	L-81	Lat 414622 long 811133	Lake	09/18/84	9.66
414636081113900	L-82	Lat 414636 long 811139	Lake	09/18/84	2.79
414644081113600	L-83	Lat 414644 long 811136	Lake	09/18/84	3.28
414647081113900	L-84	Lat 414647 long 811139	Lake	09/18/84	4.50
414627080594101	L-85D	Lat 414627 long 805941	Lake	09/13/84	31.26
414627080594102	L-85S	Lat 414627 long 805941	Lake	09/13/84	2.00

1/ Depth of water level below land surface, in feet.



MISCELLANEOUS LOW FLOW MEASUREMENTS FOR THE NORTHEAST BURIED VALLEY AQUIFER PROJECT  
WAYNE COUNTY

<u>Site Number</u>	<u>Station Name</u>	<u>Date</u>	<u>Discharge</u> (cfs)
404908081585700	Killbuck Creek above Little Killbuck Creek near Wooster	6-12-84	17.77
		6-12-84	17.90
		9-18-84	10.72
		9-18-84	11.20
404857081585400	Killbuck Creek below Little Killbuck Creek near Wooster	6-12-84	21.00
		6-12-84	20.78
		9-18-84	11.27
		9-18-84	11.45
404803081583000	Killbuck Creek near Wooster (03138800)	6-12-84	23.86
		6-12-84	23.42
		9-18-84	12.07
404757081582500	Killbuck Creek at SR 30A Bridge near Wooster	6-12-84	24.23
		6-12-84	27.04
		9-18-84	11.76
		9-18-84	11.30
404735081580200	Killbuck Creek at SR 30 near Wooster	6-12-84	26.95
		6-12-84	27.10
		9-18-84	12.40

## WOOD COUNTY

The following tables contain ground water-level measurements, chemical analyses from a network of wells, and miscellaneous chemical analyses of surface water and bottom materials in Northern Wood County. The data was collected as part of a cooperative study with the city of Northwood. The objective of the study is to evaluate the chemical quality and interaction of the carbonate aquifer and surface-water systems near the Evergreen hazardous waste landfill.

Analyses for selected base/neutral- and acid-extractable organic compounds were performed on ground water from wells WO-102, WO-107MW5, WO-112MW11, and WO-119. Surface water and bottom material from sites 413630083302500, 413513083304500, and 413617083304800 were also analyzed for organic compounds. Detection levels for acid-extractable compounds were 1  $\mu\text{g/L}$  and 20  $\mu\text{g/Kg}$  in water and bottom material, respectively. Base/neutral-extractable organic compounds were detectable at concentrations greater than 1  $\mu\text{g/L}$  in water and greater than 10  $\mu\text{g/Kg}$  in bottom material. The analyses are capable of identifying the organic Priority Toxic Pollutants listed below. The chemical quality records for the individual sites include only those organic compounds found to be above analytical detection levels.

Base/neutral-extractable compounds

Acenaphthene	Di -n- butylphthalate
Acenaphthylene	2,4 Dinitrotoluene
Anthracene	2,6 Dinitrotoluene
Benzo (a) anthracene	Di -n- octylphthalate
Benzo (b) fluoranthene	bis (2- Ethylhexyl) phthalate
Benzo (k) fluoranthene	Fluoranthene
Benzo (g,h,i) perylene	Fluorene
Benzo (a) pyrene	Hexachlorobenzene
4- Bromophenyl phenyl ether	Hexachlorobutadiene
Butyl benzyl phthalate	Hexachlorocyclopentadiene
bis (2- chloroethoxy) methane	Hexachloroethane
bis (2- chloroethyl) ether	Indeno (1,2,3-cd) pyrene
bis (2- chloroisopropyl) ether	Isophorone
2- chloronaphthalene	Naphthalene
4- chlorophenyl phenyl ether	Nitrobenzene
Chrysene	n- Nitrosodimethylamine
Dibenzo (a,h) anthracene	n- Nitrosodi-n-propylamine
1,2- Dichlorobenzene	n- Nitrosodiphenylamine
1,3- Dichlorobenzene	Phenanthrene
1,4- Dichlorobenzene	Pyrene
Diethyl phthalate	1,2,4- Trichlorobenzene
Dimethyl phthalate	

Acid-extractable compounds

4- Chloro-3-methylphenol	2- Nitrophenol
2- Chlorophenol	4- Nitrophenol
2,4- Dichlorophenol	Pentachlorophenol
2,4- Dimethylphenol	Phenol
4,6- Dinitro-2-methylphenol	2,4,6- Trichlorophenol
2,4- Dinitrophenol	

## GROUND-WATER RECORDS

## WOOD COUNTY

## SURFACE-WATER RECORDS

413513083304500. Dry Creek near Walbridge, Ohio.

LOCATION.--Lat 41°35'13", long 83°30'45", Hydrologic Unit 04100010, 30 ft upstream of bridge at East Broadway near Walbridge, Ohio.

PERIOD OF RECORD.--April 1984 to September 1984.

REMARKS.--This site is used for chemical quality sampling as part of a cooperative study with the city of Northwood.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARDNESS (MG/L AS CAC03)	HARDNESS, NONCARBONATE (MG/L AS CAC03)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNESIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
APR 10...	0955	685	8.1	4.5	15.5	290	88	80	22	28
DATE	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS-SOLVED (MG/L AS C02)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS S04)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SI02)	NITROGEN, NITRITE DIS-SOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)
APR 10...	1.9	203	3.1	.0	84	57	.20	3.6	.030	2.70
DATE	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHORUS, DIS-SOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	ALUMINUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL IN BOT-TOM MATERIAL (UG/G AS AS)	BERYLLIUM, RECOV. FM BOT-TOM MATERIAL (UG/G)	CADMIUM RECOV. FM BOT-TOM MATERIAL (UG/G AS CD)	CHROMIUM, RECOV. FM BOT-TOM MATERIAL (UG/G)	COPPER, RECOV. FM BOT-TOM MATERIAL (UG/G AS CU)
APR 10...	.070	.40	.020	<.010	100	1	<10	<1	<1	0
DATE	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, RECOV. FM BOT-TOM MATERIAL (UG/G AS PB)	MANGANESE, DIS-SOLVED (UG/L AS MN)	MERCURY RECOV. FM BOT-TOM MATERIAL (UG/L AS HG)	NICKEL, RECOV. FM BOT-TOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL IN BOT-TOM MATERIAL (UG/G)	ZINC, RECOV. FM BOT-TOM MATERIAL (UG/G AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CYANIDE TOTAL IN BOT-TOM MATERIAL (UG/G AS CN)
APR 10...	37	<10	45	2.4	<10	<1	<1	4.5	4.5	<.5

## GROUND-WATER RECORDS

203

## WOOD COUNTY

## SURFACE-WATER RECORDS

413617083304800. Otter Creek Tributary at Northwood, Ohio.

LOCATION.--Lat 41°36'17", long 83°30'48", Hydrologic Unit 04100010, 30 ft upstream of culvert directly west of East Broadway and east of Whitmore Railyard at Northwood, Ohio.

PERIOD OF RECORD.--April 1984 to September 1984.

REMARKS.--This site is used for chemical quality sampling as part of a cooperative study with the city of Northwood.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	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)
APR 09...	1500	649	8.0	10.5	19.4	310	95	83	25	15	2.8

DATE	ALKA- LINITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS V)
APR 09...	216	4.2	.0	110	32	.20	5.7	<.010	1.10	.210

DATE	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BERYL- LIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
APR 09...	.40	.010	<.010	100	1	<10	<1	<1	0	30

DATE	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/L AS HG)	NICKEL, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS NI)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CYANIDE TOTAL IN BOT- TOM MA- TERIAL (UG/G AS CN)	FLUOR- ANTHENE BOT.MAT (UG/KG)	PYRENE BOT.MAT (UG/KG)
APR 09...	<10	49	.84	<10	<1	<1	5.9	<.5	68.0	90.0



## GROUND-WATER RECORDS

## WOOD COUNTY

## SURFACE-WATER RECORDS

413630083302500. Otter Creek Tributary at Northwood, Ohio.

LOCATION.--Lat 41°36'30", long 83°30'25", Hydrologic Unit 04100010, 15 ft upstream of culvert on Wales Road north of Evergreen Landfill at Northwood, Ohio.

PERIOD OF RECORD.--April 1984 to September 1984.

REMARKS.--This site is used for chemical quality sampling as part of a cooperative study with the city of Northwood. An automatic sampler is also used for chemical quality sampling.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARDNESS (MG/L AS CaCO3)	HARDNESS, NONCARBONATE (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)
APR 09...	1800	797	8.0	8.0	11.9	380	130	97	33	21
SEP 25...	2120	--	--	--	--	150	--	43	10	12
25...	2315	--	--	--	--	82	14	25	4.8	6.0

DATE	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY FIELD (MG/L AS CaCO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	NITROGEN, NITRITE DIS-SOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)
APR 09...	3.6	246	4.7	.0	150	37	.30	5.4	.010	1.00
SEP 25...	5.3	--	--	--	81	23	--	3.0	--	--
25...	2.5	--	--	--	38	11	--	2.3	--	--

DATE	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS-SOLVED (MG/L AS N)	PHOSPHORUS, DIS-SOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	ALUMINUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BERYLLIUM, RECOVERED FM BOTTOM MATERIAL (UG/G AS B)	CADMIUM RECOVERED FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, RECOVERED FM BOTTOM MATERIAL (UG/G AS CR)	COPPER, RECOVERED FM BOTTOM MATERIAL (UG/G AS CU)
APR 09...	.210	.40	<.010	<.010	<100	2	<10	<1	2	0
SEP 25...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--

DATE	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, RECOVERED FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, DIS-SOLVED (UG/L AS MN)	MERCURY RECOVERED FM BOTTOM MATERIAL (UG/L AS HG)	NICKEL, RECOVERED FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, RECOVERED FM BOTTOM MATERIAL (UG/G AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CYANIDE TOTAL IN BOTTOM MATERIAL (UG/G AS CN)
09...	59	<10	150	1.1	<10	<1	<1	7.1	7.1	<.5
SEP 25...	10	--	2	--	--	--	--	--	6.4	--
25...	34	--	2	--	--	--	--	--	3.0	--

## GROUND-WATER RECORDS

205

## WOOD COUNTY

413512083320900. Local number, WO-100.

LOCATION.--Lat 41°35'12", long 83°32'09", Hydrologic Unit 04100010, on Walbridge Road near Walbridge, OH.

Owner: C. Biniker.

AQUIFER.--Dolomite of Upper Silurian Age.

WELL CHARACTERISTICS.--Drilled domestic water well, diameter 4.25 in, depth 139 ft. Cased to 58 ft.

DATUM.--Altitude of land-surface datum is 620 ft. Measuring point: top of casing, 1.60 ft above land-surface datum.

PERIOD OF RECORD.--November 1983 to September 1984.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 53.52 ft below land-surface datum, May 22, 1984;

lowest, 54.02 ft below-land surface datum, Nov. 16, 1983.

EXTREMES FOR PERIOD NOVEMBER 1983 TO SEPTEMBER 1984.--Highest water level, 53.52 ft below land-surface datum, May 22, 1984; lowest, 54.02 ft below land-surface datum, Nov. 16, 1983.

HIGHEST WATER LEVEL 53.52 FEET BELOW LAND SURFACE DATUM MAY 22, 1984.

LOWEST WATER LEVEL 54.02 FEET BELOW LAND SURFACE DATUM NOV 16, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 16, 1983	54.02	MAY 22, 1984	53.52	JUL 31, 1984	53.73	SEP 24, 1984	53.69
MAR 27, 1984	53.54						

## GROUND-WATER RECORDS

## WOOD COUNTY

413631083314200. Local number, WO-101.

LOCATION.--Lat 41°36'31", long 83°31'42", Hydrologic Unit 04100010, 2500 Tracy Road at Northwood, OH.

Owner: Unknown.

AQUIFER.--Dolomite of Upper Silurian Age.

WELL CHARACTERISTICS.--Drilled domestic water well, diameter 6.0 in, depth 125.21 ft.

DATUM.--Altitude of land-surface datum is 617 ft. Measuring point: top of casing, 3.80 ft below land-surface datum.

PERIOD OF RECORD.--November 1983 to September 1984.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 62.02 ft below land-surface datum, Sept. 25, 1984;

lowest, 67.79 ft below land-surface datum, May 22, 1984.

EXTREMES FOR PERIOD NOVEMBER 1983 TO SEPTEMBER 1984.--Highest water level, 62.02 ft below land-surface datum, Sept. 25, 1984; lowest, 67.79 ft below land-surface datum, May 22, 1984.

HIGHEST WATER LEVEL 62.02 FEET BELOW LAND SURFACE DATUM SEP 25, 1984.

LOWEST WATER LEVEL 67.79 FEET BELOW LAND SURFACE DATUM MAY 22, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 17, 1983	65.42	MAY 22, 1984	67.79	AUG 23, 1984	62.33	SEP 25, 1984	62.02
MAR 27, 1984	66.65	JUL 31	63.06				

## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	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)	ALKA- LITY FIELD (MG/L AS CAC03)
APR 10...	1445	1010	7.4	11.0	.0	99	39	56	2.1	119

DATE	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFIDE TOTAL (MG/L AS S)	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, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)
APR 10...	9.2	.0	430	7.9	1.7	8.1	720	.010	<.100	.380

DATE	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	PHENOLS TOTAL (UG/L)
APR 10...	1.1	<.010	<.010	<100	42	53	1.7	1.4	<1

## WOOD COUNTY

413635083293400. Local number, WO-102.

LOCATION.--Lat 41°36'35", long 83°29'34", Hydrologic Unit 04100010, 2187 Droulliard Road at Northwood, OH.

Owner: R. Conley.

AQUIFER.--Dolomite of Upper Silurian Age.

WELL CHARACTERISTICS.--Drilled domestic water well, diameter 6.0 in, depth 149 ft. Cased to 76 ft.

DATUM.--Altitude of land-surface datum is 613.75 ft. Measuring point: top of casing, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--November 1983 to September 1984.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 64.27 ft below land-surface datum, Sept. 25, 1984; lowest, 69.82 ft below land-surface datum, May 22, 1984.

EXTREMES FOR PERIOD NOVEMBER 1983 TO SEPTEMBER 1984.--Highest water level, 64.27 ft below land-surface datum, Sept. 25, 1984; lowest, 69.82 ft below land-surface datum, May 22, 1984.

HIGHEST WATER LEVEL 64.27 FEET BELOW LAND SURFACE DATUM SEP 25, 1984.

LOWEST WATER LEVEL 69.82 FEET BELOW LAND SURFACE DATUM MAY 22, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 17, 1983	64.43	MAY 22, 1984	69.82	JUL 31, 1984	67.34	SEP 25, 1984	64.27
MAR 27, 1984	66.38						

## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	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)	ALKA- LITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)
APR 11...	0930	984	7.4	11.5	.0	89	37	57	2.2	108	8.3

DATE	SULFIDE TOTAL (MG/L AS S)	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, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)
APR 11...	.0	440	17	.30	8.2	740	<.010	<.100	.330	3.1	<.010

DATE	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ANTI- MONY, DIS- SOLVED (UG/L AS SB)	ARSENIC DIS- SOLVED (UG/L AS AS)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
APR 11...	<.010	10	<1	1	<.5	1	10	1	23	6

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STROV- TIUM, DIS- SOLVED (UG/L AS SR)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS TOTAL (UG/L)
APR 11...	1	2	<1	<1	20000	110	1.7	1.3	<.01	<1



## GROUND-WATER RECORDS

## WOOD COUNTY

413551083293900. Local number, WO-103.

LOCATION.--Lat 41°35'51", long 83°29'39", Hydrologic Unit 04100010, 30733 Droulliard Road near Walbridge, OH.

Owner: C. Adkins.

AQUIFER.--Dolomite of Upper Silurian Age.

WELL CHARACTERISTICS.--Drilled commercial water well, diameter 5.0 in, depth 250 ft. Cased to 74.33 ft.

DATUM.--Altitude of land-surface datum is 615 ft. Measuring point: top of casing, 1.70 ft above land-surface datum.

PERIOD OF RECORD.--November 1983 to September 1984.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 64.50 ft below land-surface datum, May 22, 1984; lowest, 67.84 ft below land-surface datum, Nov. 17, 1983.

EXTREMES FOR PERIOD NOVEMBER 1983 TO SEPTEMBER 1984.--Highest water level, 64.50 ft below land-surface datum, May 22, 1984; lowest, 67.84 ft below land-surface datum, Nov. 17, 1983.

HIGHEST WATER LEVEL 64.50 FEET BELOW LAND SURFACE DATUM MAY 22, 1984.

LOWEST WATER LEVEL 67.84 FEET BELOW LAND SURFACE DATUM NOV 17, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 17, 1983	67.84	MAY 22, 1984	64.50	JUL 31, 1984	66.03	SEP 25, 1984	65.35
MAR 27, 1984	65.73						

413620083304100. Local number, WO-104.

LOCATION.--Lat 41°36'20", long 83°30'41", Hydrologic Unit 04100010, 2625 East Broadway at Northwood, OH.

Owner: Waste Management Inc.

AQUIFER.--Dolomite of Upper Silurian Age.

WELL CHARACTERISTICS.--Drilled commercial water well, diameter 7.0 in, depth 155 ft. Cased to 74 ft.

DATUM.--Altitude of land-surface datum is 617.33 ft. Measuring point: top of casing, 2.50 ft above land-surface datum.

PERIOD OF RECORD.--November 1983 to September 1984.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 62.25 ft below land-surface datum, May 23, 1984; lowest, 64.55 ft below land-surface datum, Nov. 16, 1983.

EXTREMES FOR PERIOD NOVEMBER 1983 TO SEPTEMBER 1984.--Highest water level, 62.25 ft below land-surface datum, May 23, 1984; lowest, 64.55 ft below land-surface datum, Nov. 16, 1983.

HIGHEST WATER LEVEL 62.25 FEET BELOW LAND SURFACE DATUM MAY 23, 1984.

LOWEST WATER LEVEL 64.55 FEET BELOW LAND SURFACE DATUM NOV 16, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 16, 1983	64.55	MAY 23, 1984	62.25	JUL 31, 1984	62.79	SEP 25, 1984	62.81
MAR 26, 1984	62.95						

## GROUND-WATER RECORDS

209

## WOOD COUNTY

413532083295800. Local number, WO-105; MW1.

LOCATION.--Lat 41°35'32", long 83°29'58", Hydrologic Unit 04100010, Evergreen Landfill at Northwood, OH.

Owner: Waste Management Inc.

AQUIFER.--Dolomite of Upper Silurian Age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.0 in, depth 100 ft. Cased to 66.7 ft, finish is 33.3 ft of 0.020 in wellscreen.

DATUM.--Altitude of land-surface datum is 618.42 ft. Measuring point: top of steel casing, 2.20 ft above land-surface datum.

PERIOD OF RECORD.--November 1983 to September 1984.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 62.84 ft below land-surface datum, Sept. 25, 1984; lowest, 64.36 ft below land-surface datum, Nov. 15, 1983.

EXTREMES FOR PERIOD NOVEMBER 1983 TO SEPTEMBER 1984.--Highest water level, 62.84 ft below land-surface datum, Sept. 25, 1984; lowest, 64.36 ft below land-surface datum, Nov. 15, 1983.

HIGHEST WATER LEVEL 62.84 FEET BELOW LAND SURFACE DATUM SEP 25, 1984.

LOWEST WATER LEVEL 64.36 FEET BELOW LAND SURFACE DATUM NOV 15, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 15, 1983	64.36	MAY 22, 1984	63.08	JUL 30, 1984	63.21	SEP 25, 1984	62.84
MAR 26, 1984	63.70						

413604083300100. Local number, WO-106; MW2.

LOCATION.--Lat 41°36'04", long 83°30'01", Hydrologic Unit 04100010, Evergreen Landfill at Northwood, OH.

Owner: Waste Management Inc.

AQUIFER.--Dolomite of Upper Silurian Age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.0 in, depth 94 ft. Cased to 75.0 ft, finish is 19.0 ft of 0.020 in wellscreen.

DATUM.--Altitude of land-surface datum is 615.53 ft. Measuring point: top of steel casing, 2.40 ft above land-surface datum.

PERIOD OF RECORD.--November 1983 to September 1984.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 62.10 ft below land-surface datum, Nov. 15, 1983; lowest, 63.81 ft below land-surface datum, Sept. 25, 1984.

EXTREMES FOR PERIOD NOVEMBER 1983 TO SEPTEMBER 1984.--Highest water level, 62.10 ft below land-surface datum, Nov. 15, 1983; lowest, 63.81 ft below land-surface datum, Sept. 25, 1984.

HIGHEST WATER LEVEL 62.10 FEET BELOW LAND SURFACE DATUM NOV 15, 1983.

LOWEST WATER LEVEL 63.81 FEET BELOW LAND SURFACE DATUM SEP 25, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 15, 1983	62.10	MAY 22, 1984	62.72	JUL 30, 1984	63.27	SEP 25, 1984	63.81
MAR 26, 1984	63.70						

## GROUND-WATER RECORDS

## WOOD COUNTY

413626083302900. Local number, WO-107; MW5.

LOCATION.--Lat 41°36'26", long 83°30'29", Hydrologic Unit 04100010, Evergreen Landfill at Northwood, OH.

Owner: Waste Management Inc.

AQUIFER.--Dolomite of Upper Silurian Age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.0 in, depth 123 ft. Cased to 85.0 ft, finish is 38.0 ft of 0.020 in wellscreen.

DATUM.--Altitude of land-surface datum is 618.84 ft. Measuring point: top of steel casing, 2.45 ft above land-surface datum.

PERIOD OF RECORD.--November 1983 to September 1984.

EXTREMES FOR OF RECORD.--Highest water level, 65.09 ft below land-surface datum, May 22, 1984; lowest, 67.99 ft below land-surface datum, Nov. 15, 1983.

EXTREMES FOR PERIOD NOVEMBER 1983 TO SEPTEMBER 1984.--Highest water level, 65.09 ft below land-surface datum, May 22, 1984; lowest, 67.99 ft below land-surface datum, Nov. 15, 1983.

HIGHEST WATER LEVEL 65.09 FEET BELOW LAND SURFACE DATUM MAY 22, 1984.

LOWEST WATER LEVEL 67.99 FEET BELOW LAND SURFACE DATUM NOV 15, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 15, 1983	67.99	MAY 22, 1984	65.09	JUL 30, 1984	66.10	SEP 25, 1984	66.73
MAR 26, 1984	65.90						

## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	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)	ALKA- LITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)
APR 05...	1500	971	7.8	11.0	1.7	76	33	68	1.9	109	3.3
AUG 01...	1510	912	7.4	12.5	1.2	71	32	--	--	108	8.3

DATE	SULFIDE TOTAL (MG/L AS S)	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)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)
APR 05...	.2	390	10	.20	6.7	--	670	<.010	<.100	.400	.90
AUG 01...	--	400	--	--	--	716	--	--	--	--	--

DATE	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ANTI- MONY, DIS- SOLVED (UG/L AS SB)	ARSENIC DIS- SOLVED (UG/L AS AS)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
APR 05...	<.010	<.010	30	<1	1	<.5	<1	10	1	110	1
AUG 01...	--	--	--	--	--	--	--	--	--	80	--

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS TOTAL (UG/L)	BIS(2- ETHYL HEXYL) PHTHAL- ATE TOTAL (UG/L)
APR 05...	9	1	<1	<1	20000	4	1.3	1.0	<.01	<1	8.0
AUG 01...	7	--	--	--	--	--	1.0	--	--	--	--

## GROUND-WATER RECORDS

211

## WOOD COUNTY

413625083303500. Local number, WO-108; MW6.

LOCATION.--Lat 41°36'25", long 83°30'35", Hydrologic Unit 04100010, Evergreen Landfill at Northwood, OH.

Owner: Waste Management Inc.

AQUIFER.--Dolomite of Upper Silurian Age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.0 in, depth 100 ft. Cased to 74.2 ft, finish is 25.8 ft of 0.020 in wellscreen.

DATUM.--Altitude of land-surface datum is 610.30 ft. Measuring point: top of steel casing, 2.30 ft above land-surface datum.

PERIOD OF RECORD.--November 1983 to September 1984.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 56.45 ft below land-surface datum, May 22, 1984; lowest, 59.33 ft below land-surface datum, Nov. 15, 1983.

EXTREMES FOR PERIOD NOVEMBER 1983 TO SEPTEMBER 1984.--Highest water level, 56.45 ft below land-surface datum, May 22, 1984; lowest, 59.33 ft below land-surface datum, Nov. 15, 1983.

HIGHEST WATER LEVEL 56.45 FEET BELOW LAND SURFACE DATUM MAY 22, 1984.

LOWEST WATER LEVEL 59.33 FEET BELOW LAND SURFACE DATUM NOV 15, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 15, 1983	59.33	MAY 22, 1984	56.45	JUL 30, 1984	57.40	SEP 25, 1984	57.98
MAR 26, 1984	57.22						

## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	CALCIUM, DIS-SOLVED (MG/L AS CA)	MAGNESIUM, DIS-SOLVED (MG/L AS MG)
AUG 01...	1700	1260	7.4	12.0	3.9	110	40

DATE	ALKALINITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE, DIS-SOLVED (MG/L AS C02)	SULFATE, DIS-SOLVED (MG/L AS S04)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	IRON, DIS-SOLVED (UG/L AS FE)	MANGANESE, DIS-SOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
AUG 01...	192	15	500	912	64	54	1.3



## GROUND-WATER RECORDS

## WOOD COUNTY

413616083302300. Local number, WO-109; MW8.

LOCATION.--Lat 41°36'16", long 83°30'23", Hydrologic Unit 04100010, Evergreen Landfill at Northwood, OH.

Owner: Waste Management Inc.

AQUIFER.--Dolomite of Upper Silurian Age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.0 in, depth 109 ft. Cased to 76.0 ft, finish is 33.0 ft of 0.020 in wellscreen.

DATUM.--Altitude of land-surface datum is 619.21 ft. Measuring point: top of steel casing, 2.10 ft above land-surface datum.

PERIOD OF RECORD.--November 1983 to September 1984.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 65.16 ft below land-surface datum, May 22, 1984; lowest, 67.72 ft below land-surface datum, Nov. 16, 1983.

EXTREMES FOR PERIOD NOVEMBER 1983 TO SEPTEMBER 1984.--Highest water level, 65.16 ft below land-surface datum, May 22, 1984; lowest, 67.72 ft below land-surface datum, Nov. 16, 1983.

HIGHEST WATER LEVEL 65.16 FEET BELOW LAND SURFACE DATUM MAY 22, 1984.

LOWEST WATER LEVEL 67.72 FEET BELOW LAND SURFACE DATUM NOV 16, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 16, 1983	67.72	MAY 22, 1984	65.16	JUL 30, 1984	65.99	SEP 25, 1984	66.04
MAR 26, 1984	65.98						

## WOOD COUNTY

413608083303400. Local number, WO-110; MW9.

LOCATION.--Lat 41°36'08", long 83°30'34", Hydrologic Unit 04100010, Evergreen Landfill at Northwood, OH.

Owner: Waste Management Inc.

AQUIFER.--Dolomite of Upper Silurian Age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.0 in, depth 120 ft. Cased to 87.1 ft, finish is 32.9 ft of 0.020 in wellscreen.

DATUM.--Altitude of land-surface datum is 618.09 ft. Measuring point: top of steel casing, 2.85 ft above land-surface datum.

PERIOD OF RECORD.--November 1983 to September 1984.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 63.03 ft below land-surface datum, May 22, 1984; lowest, 65.18 ft below land-surface datum, Nov. 15, 1983.

EXTREMES FOR PERIOD NOVEMBER 1983 TO SEPTEMBER 1984.--Highest water level, 63.03 ft below land-surface datum, May 22, 1984; lowest, 65.18 ft below land-surface datum, Nov. 15, 1983.

HIGHEST WATER LEVEL 63.03 FEET BELOW LAND SURFACE DATUM MAY 22, 1984.

LOWEST WATER LEVEL 65.18 FEET BELOW LAND SURFACE DATUM NOV 15, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 15, 1983	65.18	MAY 22, 1984	63.03	JUL 30, 1984	63.63	SEP 25, 1984	63.71
MAR 26, 1984	63.85						

## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	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)	ALKA- LITY FIELD (MG/L AS CACO3)
APR 05...	1600	1040	11.5	11.0	1.9	100	2.0	27	3.6	223
AUG 02...	1100	667	9.4	12.0	2.4	67	13	--	--	30

DATE	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFIDE TOTAL (MG/L AS S)	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)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
APR 05...	.0	.5	200	26	.20	3.8	--	500	<.010	<.100
AUG 02...	.0	.0	340	--	--	--	546	--	--	--

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	PHENOLS TOTAL (UG/L)
APR 05...	.280	.30	<.010	<.010	300	12	<1	2.4	2.4	<1
AUG 02...	--	--	--	--	--	<3	<1	1.5	--	--

## GROUND-WATER RECORDS

## WOOD COUNTY

413614083302300. Local number, WO-111; MW10.

LOCATION.--Lat 41°36'14", long 83°30'23", Hydrologic Unit 04100010, Evergreen Landfill at Northwood, OH.

Owner: Waste Management Inc.

AQUIFER.--Dolomite of Upper Silurian Age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.0 in, depth 110 ft. Cased to 76.7 ft, finish is 33.3 ft of 0.020 in wellscreen.

DATUM.--Altitude of land-surface datum is 617.02. Measuring point: top of steel casing, 2.10 ft above land-surface datum.

PERIOD OF RECORD.--November 1983 to September 1984.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 62.78 ft below land-surface datum, May 22, 1984; lowest, 65.16 ft below land-surface datum, Nov. 16, 1983.

EXTREMES FOR PERIOD NOVEMBER 1983 TO SEPTEMBER 1984.--Highest water level, 62.78 ft below land-surface datum, May 22, 1984; lowest, 65.16 ft below land-surface datum, Nov. 16, 1983.

HIGHEST WATER LEVEL 62.78 FEET BELOW LAND SURFACE DATUM MAY 22, 1984.

LOWEST WATER LEVEL 65.16 FEET BELOW LAND SURFACE DATUM NOV 16, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 16, 1983	65.16	MAY 22, 1984	62.78	JUL 30, 1984	63.41	SEP 25, 1984	63.71
MAR 26, 1984	63.71						

## WOOD COUNTY

413618083302300. Local number, WO-112; MW11.

LOCATION.--Lat 41°36'18", long 83°30'23", Hydrologic Unit 04100010, Evergreen Landfill at Northwood, OH.

Owner: Waste Management Inc.

AQUIFER.--Dolomite of Upper Silurian Age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.0 in, depth 109 ft. Cased to 75.7 ft, finish is 33.3 ft of 0.020 in wellscreen.

DATUM.--Altitude of land-surface datum is 613.24 ft. Measuring point: top of steel casing, 2.60 ft above land-surface datum.

PERIOD OF RECORD.--November 1983 to September 1984.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 59.07 ft below land-surface datum, May 22, 1984; lowest, 61.76 ft below land-surface datum, Nov. 16, 1983.

EXTREMES FOR PERIOD NOVEMBER 1983 TO SEPTEMBER 1984.--Highest water level, 59.07 ft below land-surface datum, May 22, 1984; lowest, 61.76 ft below land-surface datum, Nov. 16, 1983.

HIGHEST WATER LEVEL 59.07 FEET BELOW LAND SURFACE DATUM MAY 22, 1984.

LOWEST WATER LEVEL 62.20 FEET BELOW LAND SURFACE DATUM AUG 01, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 16, 1983	61.76	APR 05, 1984	59.15	AUG 01, 1984	62.20	SEP 23, 1984	60.27
MAR 26, 1984	59.81	MAY 22	59.07				

## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	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)	ALKA- LINITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)
APR 05...	1100	1560	6.7	11.0	.0	170	68	69	2.8	492	190
AUG 01...	1015	1360	6.6	11.5	.0	140	56	--	--	413	201

DATE	SULFIDE TOTAL (MG/L AS S)	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)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)
APR 05...	.4	450	17	.80	20	--	1100	<.010	<.100	.630	.80
AUG 01...	--	330	--	--	--	1130	--	--	--	--	--

DATE	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ANTI- MONY, DIS- SOLVED (UG/L AS SB)	ARSENIC DIS- SOLVED (UG/L AS AS)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
APR 05...	<.010	<.010	30	4	1	<.5	<1	10	1	2300	1
AUG 01...	--	--	--	--	--	--	--	--	--	2100	--

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS TOTAL (UG/L)	DI-N- BUTYL PHTHAL- ATE TOTAL (UG/L)
APR 05...	550	2	<1	<1	18000	30	8.7	3.6	<.01	<1	2.0
AUG 01...	320	--	--	--	--	--	3.5	--	--	--	--



## GROUND-WATER RECORDS

## WOOD COUNTY

413605083302300. Local number, WO-114.

LOCATION.--Lat 41°36'05", long 83°30'23", Hydrologic Unit 04100010, Evergreen Landfill at Northwood, OH.

Owner: Waste Management Inc.

AQUIFER.--Dolomite of Upper Silurian Age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.25 in, depth 200 ft. Cased to 80.0 ft.

DATUM.--Altitude of land-surface datum is 616.75 ft. Measuring point: top of casing, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--November 1983 to September 1984.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 63.03 ft below land-surface datum, July 30, 1984; lowest, 64.76 ft below land-surface datum, Nov. 15, 1983.

EXTREMES FOR PERIOD NOVEMBER 1983 TO SEPTEMBER 1984.--Highest water level, 63.03 ft below land-surface datum, July 30, 1984; lowest, 64.76 ft below land-surface datum, Nov. 15, 1983.

HIGHEST WATER LEVEL 63.03 FEET BELOW LAND SURFACE DATUM JUL 30, 1984.

LOWEST WATER LEVEL 64.76 FEET BELOW LAND SURFACE DATUM NOV 15, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 15, 1983	64.76	MAY 22, 1984	64.43	JUL 30, 1984	63.03	SEP 25, 1984	63.34
MAR 26, 1984	63.39						

## WOOD COUNTY

413630083302300. Local number, WO-115.

LOCATION.--Lat 41°36'30", long 83°30'23", Hydrologic Unit 04100010, on Wales Road at Northwood, OH.

Owner: Waste Management Inc.

AQUIFER.--Dolomite of Upper Silurian Age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 2.0 in, depth 83 ft. Cased to 77.5 ft, finish is 5 ft 0.010 in wellscreen.

DATUM.--Altitude of land-surface datum is 612.7 ft. Measuring point: top of plastic casing, 1.60 ft above land-surface datum.

PERIOD OF RECORD.--January 1984 to September 1984.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 59.25 ft below land-surface datum, May 22, 1984; lowest, 61.50 ft below land-surface datum, Jan. 8, 1984.

EXTREMES FOR PERIOD JANUARY 1984 TO SEPTEMBER 1984.--Highest water level, 59.25 ft below land-surface datum, May 22, 1984; lowest, 61.50 ft below land-surface datum, Jan. 8, 1984.

HIGHEST WATER LEVEL 59.25 FEET BELOW LAND SURFACE DATUM MAY 22, 1984.

LOWEST WATER LEVEL 61.50 FEET BELOW LAND SURFACE DATUM JAN 08, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 08, 1984	61.50	MAY 22, 1984	59.25	JUL 30, 1984	60.25	SEP 25, 1984	60.78
MAR 26	60.07						

## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNESIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY FIELD (MG/L AS CAC93)
APR 04...	1540	979	7.7	11.0	.0	56	23	100	2.6	107

DATE	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	NITROGEN, NITRITE DIS-SOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N)
APR 04...	4.1	.1	420	8.6	.20	7.5	680	<.010	<.100	.400

DATE	NITROGEN, AMMONIA + ORGANIC DIS-SOLVED (MG/L AS N)	PHOSPHORUS, DIS-SOLVED (MG/L AS P)	PHOSPHORUS, ORTHO DIS-SOLVED (MG/L AS P)	ALUMINUM, DIS-SOLVED (UG/L AS AL)	IRON, DIS-SOLVED (UG/L AS FE)	MANGANESE, DIS-SOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	PHENOLS TOTAL (UG/L)
APR 04...	.40	<.010	<.010	300	25	2	1.9	1.6	<1

## GROUND-WATER RECORDS

## WOOD COUNTY

413630083301200. Local number, WO-116.

LOCATION.--Lat 41°36'30", long 83°30'12", Hydrologic Unit 04100010, on Wales Road at Northwood, OH.

Owner: Waste Management Inc.

AQUIFER.--Dolomite of Upper Silurian Age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 2.0 in, depth 90.0 ft. Cased to 85.0 ft, finish is 5 ft 0.010 in wellscreen.

DATUM.--Altitude of land-surface datum is 615.36 ft. Measuring point: top of plastic casing, 1.85 ft above land-surface datum.

PERIOD OF RECORD.--January 1984 to September 1984.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 60.84 ft below land-surface datum, May 22, 1984; lowest, 64.24 ft below land-surface datum, Jan. 5, 1984.

EXTREMES FOR PERIOD JANUARY 1984 TO SEPTEMBER 1984.--Highest water level, 60.84 ft below land-surface datum, May 22, 1984; lowest, 64.24 ft below land-surface datum, Jan. 5, 1984.

HIGHEST WATER LEVEL 60.84 FEET BELOW LAND SURFACE DATUM MAY 22, 1984.

LOWEST WATER LEVEL 64.24 FEET BELOW LAND SURFACE DATUM JAN 05, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 05, 1984	64.24	MAY 22, 1984	60.84	JUL 30, 1984	62.49	SEP 25, 1984	63.14
MAR 26	61.55						

413635083313900. Local number, WO-117.

LOCATION.--Lat 41°36'35", long 83°31'39", Hydrologic Unit 04100010, 30840 Tracy Road near Northwood, OH.

Owner: Unknown.

AQUIFER.--Dolomite of Upper Silurian Age.

WELL CHARACTERISTICS.--Drilled domestic water well, diameter 4.5 in, depth 102.0 ft. Cased to 45.0 ft.

DATUM.--Altitude of land-surface datum is 618 ft. Measuring point: top of casing, 1.10 ft below land-surface datum.

PERIOD OF RECORD.--July 1984 to September 1984.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 60.99 ft below land-surface datum, Sept. 25, 1984; lowest, 62.99 ft below land-surface datum, July 31, 1984.

EXTREMES FOR PERIOD JULY 1984 TO SEPTEMBER 1984.--Highest water level, 60.99 ft below land-surface datum, Sept. 25, 1984; lowest, 62.99 ft below land-surface datum, July 31, 1984.

HIGHEST WATER LEVEL 60.49 FEET BELOW LAND SURFACE DATUM SEP 25, 1984.

LOWEST WATER LEVEL 60.91 FEET BELOW LAND SURFACE DATUM JUL 31, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL
JUL 31, 1984	60.91	SEP 25, 1984	60.49

## WOOD COUNTY

413515083304300. Local number, WO-118.

LOCATION.--Lat 41°35'15", long 83°30'43", Hydrologic Unit 04100010, 5949 Walbridge Road near Walbridge, OH.

OWNER: R. Elvey.

AQUIFER.--Dolomite of Upper Silurian Age.

WELL CHARACTERISTICS.--Drilled domestic water well, diameter 6.0 in, depth 160.0 ft. Cased to 65.8 ft.

DATUM.--Altitude of land-surface datum is 618 ft. Measuring point: top of casing, 0.8 ft above land-surface datum.

PERIOD OF RECORD.--January 1984 to September 1984.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 58.09 ft below land-surface datum, May 22, 1984; lowest, 59.28 ft below land-surface datum, Sept. 24, 1984.

EXTREMES FOR PERIOD JANUARY 1984 TO SEPTEMBER 1984.--Highest water level, 58.09 ft below land-surface datum, May 22, 1984; lowest, 59.28 ft below land-surface datum, Sept. 24, 1984.

HIGHEST WATER LEVEL 58.09 FEET BELOW LAND SURFACE DATUM MAY 22, 1984.

LOWEST WATER LEVEL 59.28 FEET BELOW LAND SURFACE DATUM SEP 24, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 05, 1984	59.18	MAY 22, 1984	58.09	JUL 31, 1984	58.33	SEP 24, 1984	59.28
MAR 27	58.38						

## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (STANDARD UNITS)	TEMPERATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNESIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY FIELD (MG/L AS CAC03)
APR 11...	1800	1530	7.0	11.0	.0	150	82	59	2.3	168

DATE	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFIDE TOTAL (MG/L AS S)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	NITROGEN, NITRITE DIS-SOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N)
APR 11...	33	.0	750	9.2	1.7	8.5	1200	<.010	<.100	.420

DATE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOSPHORUS, DIS-SOLVED (MG/L AS P)	PHOSPHORUS, ORTHO DIS-SOLVED (MG/L AS P)	ALUMINUM, DIS-SOLVED (UG/L AS AL)	IRON, DIS-SOLVED (UG/L AS FE)	MANGANESE, DIS-SOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	PHENOLS TOTAL (UG/L)
APR 11...	.50	<.010	<.010	100	150	5	1.7	1.7	<1



## GROUND-WATER RECORDS

## WOOD COUNTY

413515083313700. Local number, WO-119.

LOCATION.--Lat 41°35'15", long 83°31'37", Hydrologic Unit 04100010, 6787 Walbridge Road near Walbridge, OH.

OWNER: R. Siewert.

AQUIFER.--Dolomite of Upper Silurian Age.

WELL CHARACTERISTICS.--Drilled domestic water well, diameter 4.5 in, depth 132.0 ft. Cased to 55.0 ft.

DATUM.--Altitude of land-surface datum is 621 ft. Measuring point: top of casing, 0.75 ft above land-surface datum.

PERIOD OF RECORD.--January 1984 to September 1984.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 54.81 ft below land-surface datum, May 22, 1984; lowest, 55.48 ft below land-surface datum, July 31, 1984.

EXTREMES FOR PERIOD JANUARY 1984 TO SEPTEMBER 1984.--Highest water level, 54.81 ft below land-surface datum, May 22, 1984; lowest, 55.48 ft below land-surface datum, July 31, 1984.

HIGHEST WATER LEVEL 54.81 FEET BELOW LAND SURFACE DATUM MAY 22, 1984.

LOWEST WATER LEVEL 55.48 FEET BELOW LAND SURFACE DATUM JUL 31, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 05, 1984	55.43	MAY 22, 1984	54.81	JUL 31, 1984	55.48	SEP 24, 1984	55.10
MAR 27	55.05						

## WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	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)	ALKA- LITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)
APR 10...	1330	1100	7.0	11.0	.0	120	57	29	2.4	187	36
AUG 02...	1400	1060	7.0	12.0	.0	110	56	--	--	175	34

DATE	SULFIDE TOTAL (MG/L AS S)	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)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN+AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)
APR 10...	.0	480	3.3	1.6	11	--	840	<.010	<.100	.450	6.2
AUG 02...	.4	460	--	--	--	892	--	--	--	--	--

DATE	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ANTI- MONY, DIS- SOLVED (UG/L AS SB)	ARSENIC DIS- SOLVED (UG/L AS AS)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
APR 10...	<.010	<.010	<10	<1	1	<.5	<1	10	2	64	5
AUG 02...	--	--	--	--	--	--	--	--	--	68	--

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS TOTAL (UG/L)
APR 10...	1	4	<1	<1	20000	35	2.7	1.7	<.01	<1
AUG 02...	2	--	--	--	--	--	1.6	--	--	--

## WOOD COUNTY

413633083304700. Local number, WO-120.

LOCATION.--Lat 41°36'33", long 83°30'47", Hydrologic Unit 04100010, on East Broadway near Northwood, OH.

OWNER: J. Hirzel.

AQUIFER.--Unknown.

WELL CHARACTERISTICS.--Drilled domestic water well, diameter 4.0 in, depth unknown, cased to unknown depth.

DATUM.--Altitude of land-surface datum is 616.5 ft. Measuring point: top of casing, 4.50 ft below land-surface datum.

PERIOD OF RECORD.--July 1984 to September 1984.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 61.68 ft below land-surface datum, Aug. 23, 1984; lowest, 62.86 ft below land-surface datum, July 31, 1984.

EXTREMES FOR PERIOD JULY 1984 TO SEPTEMBER 1984.--Highest water level, 61.68 ft below land-surface datum, Aug. 23, 1984; lowest, 62.86 ft below land-surface datum, July 31, 1984.

HIGHEST WATER LEVEL 61.68 FEET BELOW LAND SURFACE DATUM AUG 23, 1984.

LOWEST WATER LEVEL 62.86 FEET BELOW LAND SURFACE DATUM JUL 31, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JUL 31, 1984	62.86	AUG 23, 1984	61.68	SEP 25, 1984	62.32

413629083304400. Local number, WO-121.

LOCATION.--Lat 41°36'29", long 83°30'44", Hydrologic Unit 04100010, 6585 Wales Road at Northwood, OH.

OWNER: Waste Management Inc.

AQUIFER.--Dolomite of Upper Silurian Age.

WELL CHARACTERISTICS.--Drilled domestic water well, diameter 6.0 in, depth 188.51 ft, cased to unknown depth.

DATUM.--Altitude of land-surface datum is 607.67 ft. Measuring point: top of casing, 4.40 ft below land-surface datum.

PERIOD OF RECORD.--August 1984 to September 1984.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 62.23 ft below land-surface datum, Aug. 22, 1984; lowest, 62.83 ft below land-surface datum, Sept. 24, 1984.

EXTREMES FOR PERIOD AUGUST 1984 TO SEPTEMBER 1984.--Highest water level, 62.23 ft below land-surface datum, Aug. 22, 1984; lowest, 62.83 ft below land-surface datum, Sept. 24, 1984.

HIGHEST WATER LEVEL 62.23 FEET BELOW LAND SURFACE DATUM AUG 22, 1984.

LOWEST WATER LEVEL 62.83 FEET BELOW LAND SURFACE DATUM SEP 24, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
AUG 22, 1984	62.23	AUG 28, 1984	62.35	SEP 24, 1984	62.83

## GROUND-WATER RECORDS

## WOOD COUNTY

413631083315800. Local number, WO-122.

LOCATION.--Lat 41°36'31", long 83°31'58", Hydrologic Unit 04100010, on Wales Road at Northwood, OH.

OWNER: J. Sobecki.

AQUIFER.--Unknown.

WELL CHARACTERISTICS.--Drilled commercial water well, diameter 8.0 in, depth unknown, cased to unknown depth.

DATUM.--Altitude of land-surface datum is 619.0 ft. Measuring point: top of casing vent plug, 2.10 ft above land-surface datum.

PERIOD OF RECORD.--August 1984 to September 1984.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 62.04 ft below land-surface datum, Sept. 25, 1984; lowest, 62.86 ft below land-surface datum, Aug. 23, 1984.

EXTREMES FOR PERIOD AUGUST 1984 TO SEPTEMBER 1984.--Highest water level, 62.04 ft below land-surface datum, Sept. 25, 1984; lowest, 62.86 ft below land-surface datum, Aug. 23, 1984.

HIGHEST WATER LEVEL 62.04 FEET BELOW LAND SURFACE DATUM SEP 25, 1984.

LOWEST WATER LEVEL 62.86 FEET BELOW LAND SURFACE DATUM AUG 23, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
AUG 23, 1984	62.86	AUG 28, 1984	62.07	SEP 25, 1984	62.04

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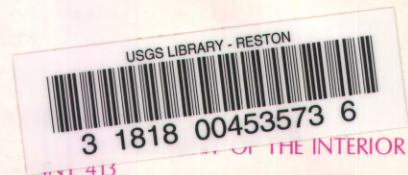
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## FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

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
<i>Length</i>		
inches (in)	$2.54 \times 10^1$ $2.54 \times 10^{-2}$	millimeters (mm) meters (m)
feet (ft)	$3.048 \times 10^{-1}$	meters (m)
miles (mi)	$1.609 \times 10^0$	kilometers (km)
<i>Area</i>		
acres	$4.047 \times 10^3$ $4.047 \times 10^{-1}$ $4.047 \times 10^{-3}$	square meters (m <sup>2</sup> ) square hectometers (hm <sup>2</sup> ) square kilometers (km <sup>2</sup> )
square miles (mi <sup>2</sup> )	$2.590 \times 10^0$	square kilometers (km <sup>2</sup> )
<i>Volume</i>		
gallons (gal)	$3.785 \times 10^0$ $3.785 \times 10^0$ $3.785 \times 10^{-3}$	liters (L) cubic decimeters (dm <sup>3</sup> ) cubic meters (m <sup>3</sup> )
million gallons	$3.785 \times 10^3$ $3.785 \times 10^{-3}$	cubic meters (m <sup>3</sup> ) cubic hectometers (hm <sup>3</sup> )
cubic feet (ft <sup>3</sup> )	$2.832 \times 10^1$ $2.832 \times 10^{-2}$	cubic decimeters (dm <sup>3</sup> ) cubic meters (m <sup>3</sup> )
cfs-days	$2.447 \times 10^3$ $2.447 \times 10^{-3}$	cubic meters (m <sup>3</sup> ) cubic hectometers (hm <sup>3</sup> )
acre-feet (acre-ft)	$1.233 \times 10^3$ $1.233 \times 10^{-3}$ $1.233 \times 10^{-6}$	cubic meters (m <sup>3</sup> ) cubic hectometers (hm <sup>3</sup> ) cubic kilometers (km <sup>3</sup> )
<i>Flow</i>		
cubic feet per second (ft <sup>3</sup> /s)	$2.832 \times 10^1$ $2.832 \times 10^1$ $2.832 \times 10^{-2}$	liters per second (L/s) cubic decimeters per second (dm <sup>3</sup> /s) cubic meters per second (m <sup>3</sup> /s)
gallons per minute (gal/min)	$6.309 \times 10^{-2}$ $6.309 \times 10^{-2}$ $6.309 \times 10^{-5}$	liters per second (L/s) cubic decimeters per second (dm <sup>3</sup> /s) cubic meters per second (m <sup>3</sup> /s)
million gallons per day	$4.381 \times 10^1$ $4.381 \times 10^{-2}$	cubic decimeters per second (dm <sup>3</sup> /s) cubic meters per second (m <sup>3</sup> /s)
<i>Mass</i>		
tons (short)	$9.072 \times 10^{-1}$	megagrams (Mg) or metric tons





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