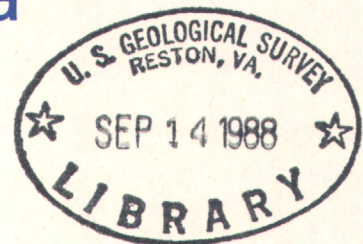


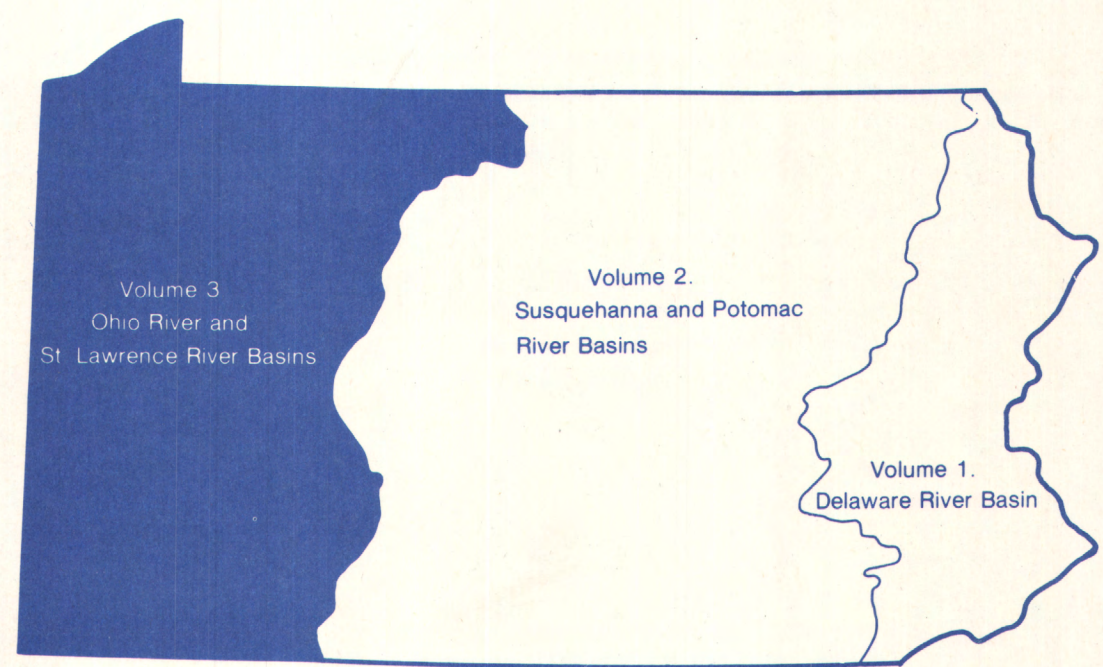
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Water Resources Data Pennsylvania Water Year 1986



Volume 3. Ohio River and St. Lawrence River Basins



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT PA-86-3
Prepared in cooperation with the Pennsylvania Department of
Environmental Resources, the U.S. Army Corps of Engineers,
Pittsburgh District, and with other State, municipal
and Federal agencies

CALENDAR FOR WATER YEAR 1986

1985

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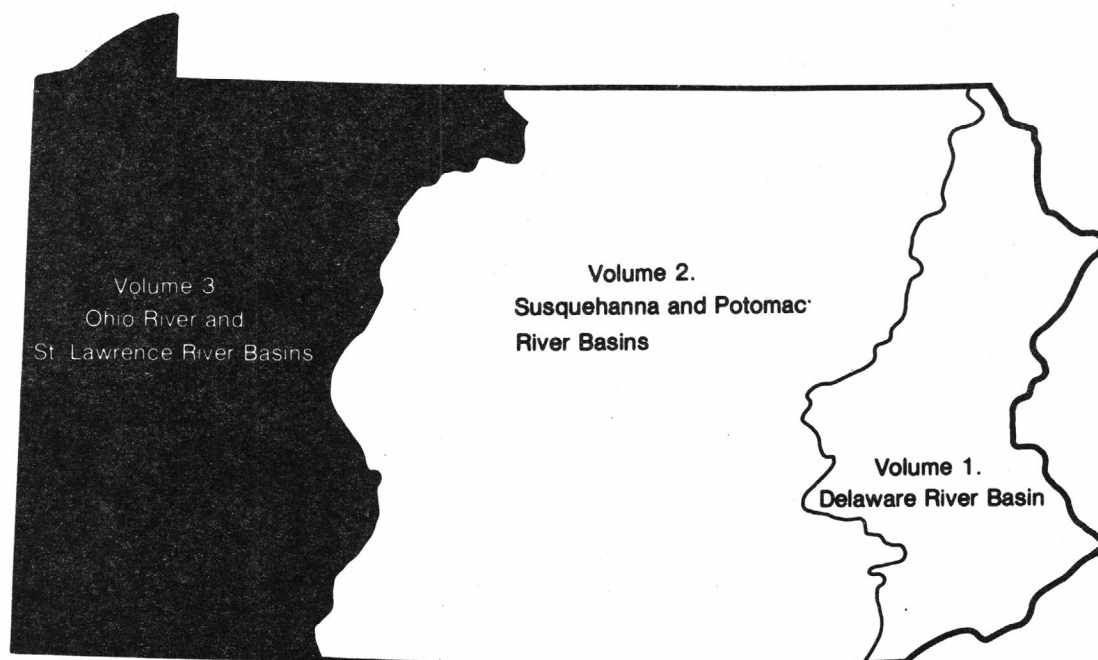
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Water Resources Data Pennsylvania Water Year 1986

Volume 3. Ohio River and St. Lawrence River Basins

by Joseph B. Lescinsky, Martin B. Coll, Jr., Raymond W. Siwicki



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT PA-86-3
Prepared in cooperation with the Pennsylvania Department of
Environmental Resources, the U.S. Army Corps of Engineers,
Pittsburgh District, and with other State, municipal
and Federal agencies

DEPARTMENT OF THE INTERIOR
DONALD PAUL HODEL, Secretary
U. S. GEOLOGICAL SURVEY
Dallas L. Peck, Director

For additional information write to
District Chief, Water Resources Division
U.S. Geological Survey
P.O. Box 1107
Harrisburg, Pennsylvania 17108
1987

PREFACE

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

- Volume 1. Delaware River Basin
- Volume 2. Susquehanna and Potomac River Basins
- Volume 3. Ohio River and St. Lawrence River Basins

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:

Donald R. Williams	Kenn L. Pattison	Michael D. Lichte
Theodore F. Buckwalter	Emitt C. Witt	Thomas M. Noonan
James I. Sams III	Steven R. Frum	Henry J. Oswick Jr.
Gregory M. Wehner	Lonnie Fekula	Michael Janiszewski

Thomas Sinwell typed the text of the report.

This report was prepared in cooperation with the State of Pennsylvania and with other agencies under the general supervision of David E. Click, District Chief.

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16. Abstract (Limit: 200 words) Water resources data for the 1986 water year for Pennsylvania consists of records of discharge and water quality of streams; elevation and contents of lakes and reservoirs; and water levels of observation wells. This volume contains records for water discharge at 82 gaging stations; elevations and contents at 3 lakes and reservoirs; and water levels at 20 observation wells. Also included are data for 4 crest-stage, 5 low-flow stations, and 51 water quality stations. Locations of these sites are shown on figures 4 and 5. Additional water data were collected at various sites not involved in the systematic data-collection program and are published as miscellaneous measurements and analysis. These data together with the data in Volume 1 and 2 represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State, local and Federal agencies in Pennsylvania.			
17. Document Analysis a. Descriptors *Pennsylvania, *Hydrologic data, *Ground water, *Surface water, *Water Quality, Gaging Stations, Streamflow, Flow rates, Lakes, Reservoirs, Chemical analysis, Sediments, Water Temperature, Water Analysis, Water levels, Water wells, Data collection, Sites. b. Identifiers/Open-Ended Terms c. COSATI Field/Group			
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(t) water temperature, (s) sediment, (r) radiochemical)

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INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with State and federal agencies, obtains a large amount of data pertaining to the water resources of Pennsylvania each water year. These data, accumulated during many water years, constitute a valuable data base for developing an improved understanding of the water resources of the State. To make these data readily available to interested parties outside the Geological Survey, the data are published annually in this report series entitled "Water Resources Data - Pennsylvania, Volume 1, 2, and 3."

This report, Volume 3, includes records on both surface and ground water in the Ohio and St. Lawrence River Basins. Specifically, it contains: (1) Discharge records for 82 streamflow-gaging stations, for 7 partial-record or miscellaneous streamflow stations, and for 4 crest-stage, partial-record streamflow stations; (2) elevation and content records for 3 lakes and reservoirs; (3) water-quality records for 6 streamflow-gaging stations, and for 51 ungaged streamsites; and (4) water-level records for 20 observation wells.

This series of annual reports for Pennsylvania began with the 1961 water year 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 format was changed to present, in one volume, data on quantities of surface water, quality of surface and ground-water, and ground-water levels.

Prior to the introduction of this series and for several years concurrent with it, water resources data for Pennsylvania were published in 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," which was released in numbered parts as determined by natural drainage basins. For the 1961 through 1970 water years, the data were published in two 5-year reports. Data prior to 1961 are included in two reports: "Compilation of Records of Surface Waters of the United States through 1950," and "Compilation of Records of Surface Waters of the United States, October 1950 to September 1960." Data for Pennsylvania are published in Parts 1, 3, 4. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States," and 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 PA-86-3." For archiving and general distribution, the reports for 1971-74 water years also are identified as water-data reports. These water-data reports are for sale in paper copy or in microfiche by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

Additional information, including current prices, for ordering specific reports may be obtained from the District Chief at the address given on the back of title page or by contacting the Information Specialist, telephone (717) 782-3851.

COOPERATION

The U.S. Geological Survey and organizations of the Commonwealth of Pennsylvania have had cooperative agreements for the systematic collection of surface-water records during the periods 1919-21 and 1931 to date, water-quality records from 1944 to date, and ground-water records from 1925 to date. Organizations that supplied data are acknowledged in station descriptions. Organizations that assisted in collecting data through cooperative agreement with the Survey are:

The Pennsylvania State Department of Environmental Resources, Arthur A. Davis, Secretary through the following:

- Office of Resources Management, James R. Grace, Deputy Secretary;
- Bureau of Water Resources Management, John E. McSparran, Director;
- Bureau of Topographic and Geologic Survey, Donald M. Hoskins, Director;
- Office of Environmental Protection, Mark McClellan, Deputy Secretary;
- Bureau of Water Quality Management, Daniel B. Drawbaugh, Acting Director;
- Bureau of Mining and Reclamation, Ernest F. Giovannitti, Director.

New York State Department of Environmental Conservation, Henry G. Williams, commissioner.

Assistance in the form of funds or services was given by: Corps of Engineers, U.S. Army, in collecting records for 60 gaging stations. Assistance was also furnished by the National Weather Service, NOAA, U.S. Department of Commerce.

The following organizations aided in collecting records:

Allegheny Power Service Corp.; Greater Johnstown Water Authority; Latrobe Municipal Authority; Manufactures Water Co.; Municipal Authority of Westmoreland County; and Pennsylvania Electric Co.

Streamflow

Streamflow in western Pennsylvania in the Upper Ohio and St. Lawrence River basins was normal. At the index station for the Ohio River basin--Oil Creek at Rouseville--the mean discharge for the 1986 water year was 105 percent of the median discharge for the 1951-80 reference period. The monthly mean streamflow was in the normal range for the months of October, December through February and August, whereas the monthly mean streamflow was excessive for the months of November, June, July, and September. The monthly mean streamflow for March through May was deficient.

A comparison of the monthly and yearly mean discharge for the 1986 water year with that of the 1951-80 reference period for Oil Creek at Rouseville is shown in figure 1.

On November 1 and 2, Hurricane Juan dissipated in the upper Ohio River Valley where rainfall totals exceeding 10 inches were common. The rains caused major floods from November 3 to 7 in eastern West Virginia, the Maryland panhandle, and along the Monongahela River in Pennsylvania.

At two gaging stations, Monongahela River at Greensboro (station 03072500) and Monongahela River at Elizabeth (station 03075070) new peaks of record were recorded.

On May 30, rainfall of as much as 8 inches caused severe flash flooding along Pine Creek and its tributary, Little Pine Creek. The funnel shape of the 5.78 square mile drainage area of Little Pine Creek concentrated the runoff, and the severity of the flood event was aggravated further by the paved surfaces that cover much of the drainage area. Nine lives were lost when motorists were caught in their cars by the flood waters, and then the vehicles were washed off roadways that crossed or bordered the creeks. Damage was estimated at \$23 million, and President Reagan declared the region a national disaster area.

The peak flow of Little Pine Creek near Etna (station 03049800) was 7,190 ft³/s a flow with a recurrence interval greater than 100 years. This is more than 3.5 times higher than the previous peak discharge in the 24-year period of record at this site.

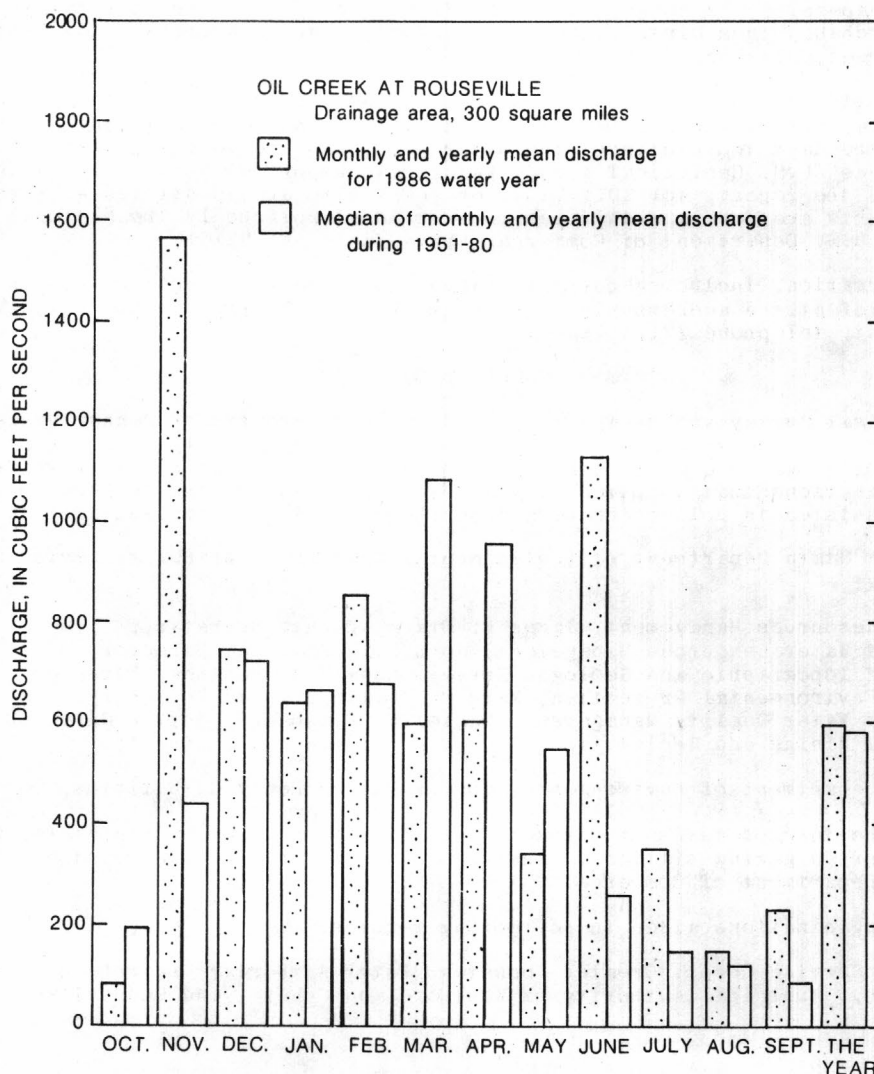


Figure 1.--Comparison of discharge at Oil Creek at Rouseville during 1986 water year with median discharge for period 1951-80.

During the 1986 water year, ground-water levels reached annual highs at most observation wells from, late March through early June. Ground-water levels generally declined during the summer and fall because trees and other plants consumed and transpired large quantities of water from the soil and shallow bedrock. Increased rates of evaporation during the summer decreased the amount of precipitation that infiltrated soils. At most observation wells, ground-water levels reached annual lows during October of 1985 and September of 1986. Most wells in the observation well network tap bedrock which consists mostly of sandstone and shale.

Figure 2 shows the seasonal distribution of normal, below-normal, and above-normal water levels. These maps are based on water-level fluctuations in 16 key wells. The water levels of the 1986 water year are averaged by season and compared to the long-term means for these seasons. Water levels were normal to above normal in the Ohio River Basin for the entire year. The only exception being the water levels in the Greene and Washington county wells which were normal to below normal for the entire year.

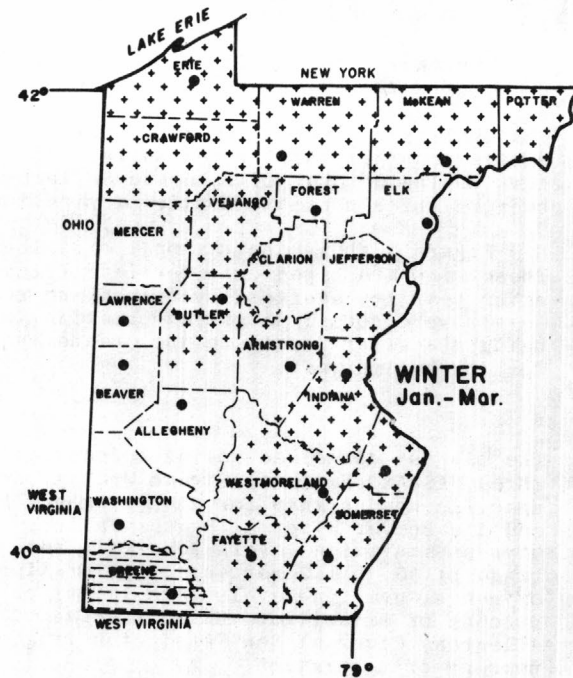
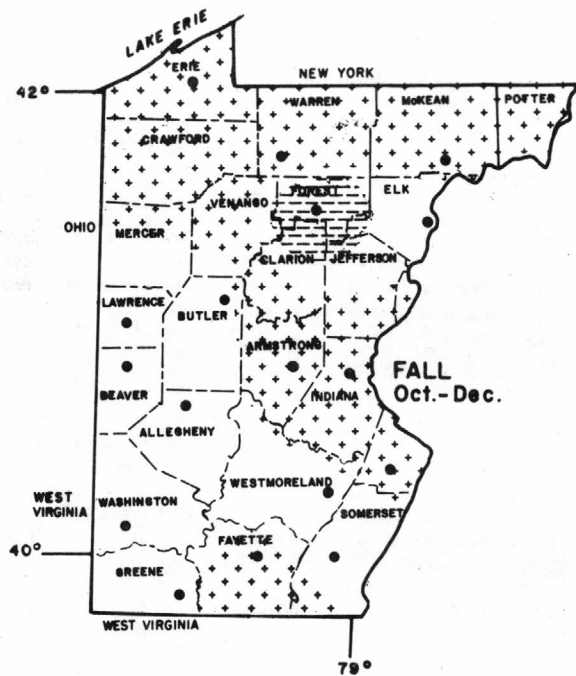
Water-Quality

The highest dissolved-solids concentrations generally occurred during periods of low flow at all three NASQAN (National Stream Quality Accounting Network) sites. The ratios of dissolved solids to specific conductance for the Allegheny River at New Kensington, the Monongahela River at Braddock, and the Beaver River at Beaver Falls averaged 0.56, 0.62 and 0.58, respectively. The dissolved-oxygen saturation levels generally were the highest on the Monongahela River at Braddock, with a range of 45 to 110 percent of saturation and an average of 72 percent of saturation. The dissolved-oxygen saturation levels were lowest on the Beaver River at Beaver Falls with a range of 39 to 85 percent of saturation and an average of 62 percent of saturation. The saturation levels on the Allegheny River at New Kensington ranged from 46 to 104 percent of saturation, with an average of 70 percent of saturation.

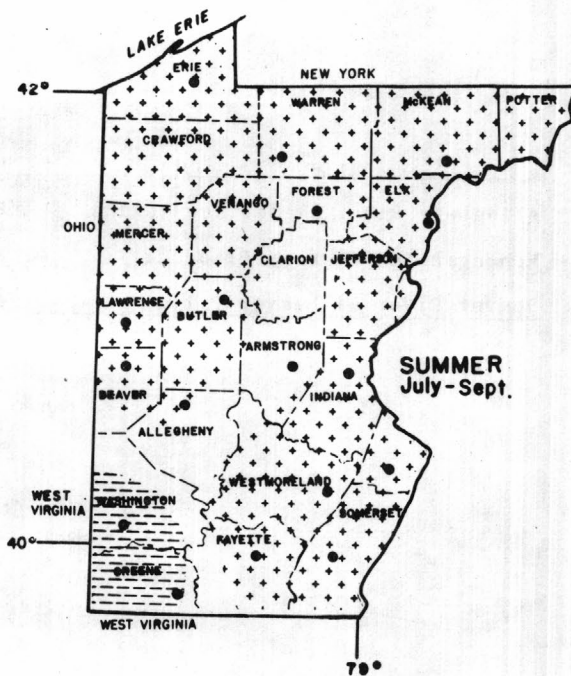
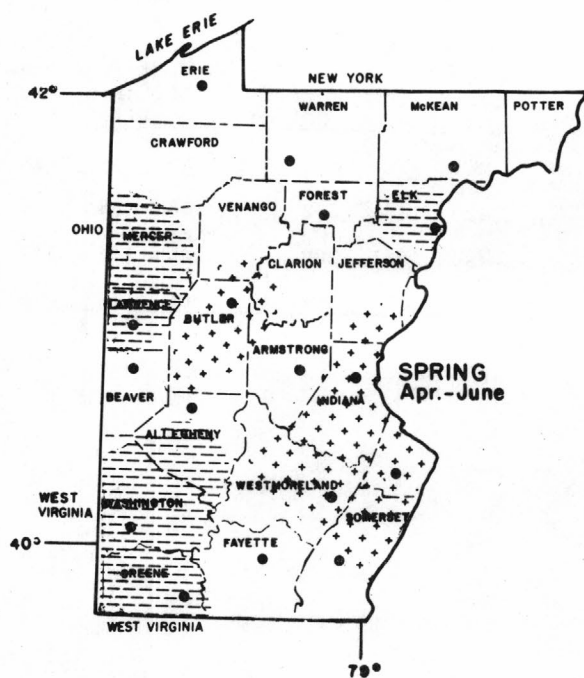
Trace-element analyses of samples collected at the three NASQAN sites indicated that all concentrations of arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver were considerably less than U.S. Environmental Protection Agency recommended limits for domestic water supply. Dissolved-manganese concentrations exceeded the recommended limit of 50 micrograms per liter in all samples collected at all three sites.

The following table gives the range and median pH values and the range and mean values for specific conductance and dissolved-solids concentrations at the three NASQAN sites.

Site	pH			Specific conductance (microsiemens per centimeter at 25° C)			Dissolved solids (milligrams per liter)		
	Max	Min	Median	Max	Min	Mean	Max	Min	Mean
Allegheny River at New Kensington	8.1	7.1	7.6	420	185	262	166	88	120
Monongahela River at Braddock	8.0	7.0	7.5	480	220	339	249	144	182
Beaver River at Beaver Falls	8.1	7.7	7.9	495	300	386	300	173	225



0 25 50 75 100 MILES



EXPLANATION

GROUND-WATER LEVELS



ABOVE AVERAGE—More than one-half standard deviation above long-term mean water level.



NORMAL—Within one-half standard deviation of long-term mean water level.



BELOW NORMAL—More than one-half standard deviation below long-term mean water level.

• Observation well

Figure 2.—Relation between mean 1986 seasonal water levels and long-term water levels.

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.

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

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

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

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

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

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

Fecal coliform bacteria are bacteria that are present in the intestines or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory they are defined as all organisms which produce blue colonies within 24 hours when incubated at 44.5°C $\pm$ 0.2°C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

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

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

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

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

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

Dry mass refers to the mass of residue present after drying in an oven at 60°C for zooplankton and 105°C for 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 ash mass, and represents the actual mass of the living matter. The organic mass is expressed in the same units as for ash mass 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 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 (FT³/s, ft³/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 refers to that material in a representative water sample which passes through a 0.45 um 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.

Diversity index is a numerical expression of evenness of distribution of aquatic organisms. The formula for diversity index is:

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

Where n_i is the number of individuals per taxon, n is the total number of individuals, and s is the total number of taxa in the sample of the community. Diversity index values range from zero, when all the organisms in the sample are the same, to some positive number, when some or all of the organisms in the sample are different.

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

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

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

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate (CaCO₃).

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

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

Micrograms per gram ($\mu\text{g/g}$) is a unit expressing the concentration of a chemical element as the mass (micrograms) of the element sorbed per unit mass (gram) of sediment.

Micrograms per liter ($\mu\text{g/L}$, $\mu\text{g/L}$) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

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

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

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

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per area habitat, usually square meters (m^2), acres, or hectares. Periphyton benthic organisms, and macrophytes are expressed in these terms.

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

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

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

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

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

The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay	0.00024 - 0.004	Sedimentation.
Silt	0.004 - 0.062	Sedimentation.
Sand	0.062 - 2.0	Sedimentation or sieve.
Gravel	2.0 - 64.0	Sieve.

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic material is removed and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native water analysis.

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

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

Picocurie (PC , pCi) is one trillionth (1×10^{-12}) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields 3.7×10^{10} radioactive disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

Plankton is the community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers.

Phytoplankton is the plant part of the plankton. They are usually microscopic and their movement is subject to the water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials to the surrounding water, the phytoplankton have a profound effect upon the quality of the water. They are the primary food producers in the aquatic environment, and are commonly known as algae.

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/mL of sample.

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

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

Polychlorinated biphenyls (PCBs) are industrial chemicals that are mixtures of chlorinated biphenyl compounds having various percentages of chlorine. They are similar in structure to organochlorine insecticides.

Recoverable from bottom material is the amount of a given constituent that is in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of only readily soluble substances. Complete dissolution of all bottom material is not achieved by the digestion treatment and thus the determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

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

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

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

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

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

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

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

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

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

Specific conductance is a measure of the ability of a water to conduct an electrical current. It is expressed in micromhos per centimeter at 25°C (UMHOS). In the future specific conductance will be expressed in microsiemens per centimeter at 25°C ($\mu\text{S}/\text{cm}$). Specific conductance is related to the type and concentration of ions in the 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 lived.

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

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 substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multi-plate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton collection.

Surface area of a lake is that area outlined on the latest USGS 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 that part (0.1 to 0.2 ft) of the bed material that is sampled using U.S. Series Bed-Material Samplers.

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 μ m 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 μ m 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 a hierarchical scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, Hexagenia limbata is the following:

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

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 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 period.

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 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.

Total in bottom material is the total amount of a given constituent in a representative sample of bottom material. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total in bottom material."

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

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 1971.

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

SPECIAL NETWORKS AND PROGRAMS

Hydrologic bench-mark station is one that provides hydrologic data for a basin in which the hydrologic regimen will likely be governed solely by natural conditions. Data collected at a bench-mark station may be used to separate effects of natural from manmade changes in other basins which have been developed and in which the physiography, climate, and geology are similar to those in the undeveloped bench-mark basin.

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

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.

EXPLANATION OF RECORDS

Downstream order and station number

Since October 1, 1950, the order of listing hydrologic-station records in Survey reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a main-stream station are listed before that station. A station on a tributary that enters between two main-stream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary on which a station is situated with respect to the stream to which it is immediately tributary is indicated by an

Numbering system for wells and miscellaneous sites

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

The well and miscellaneous site numbering system of the U.S. Geological Survey is based on the grid system of latitude and longitude. The system provides the geographic location of the well or miscellaneous site and a unique number for each site. The number consists of 15 digits. The first 6 digits denote the degrees, minutes, and seconds of latitude, the next 7 digits denote the degrees, minutes, and seconds of longitude, and the last 2 digits (assigned sequentially) identify the wells or other sites with a 1-second grid. See figure 3 below.

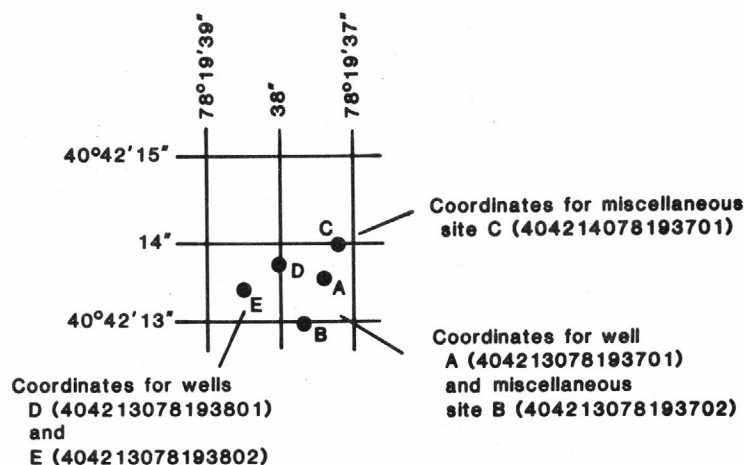


Figure 3.--System for numbering wells and miscellaneous sites (latitude and longitude).

A local well number is also assigned to the wells and consists of a 2-letter abbreviation of the county in which the well is located and a sequential number assigned at the time the well was scheduled.

Records of Stage and Water Discharge

Records of stage and water discharge may be continuous or partial. Continuous 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. Because daily mean discharges and end-of-day contents commonly are published for such stations, they are referred to as "daily stations" or "continuous record 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 the 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 continuous-record and partial record stations for which data are given in this report are shown in figures 4 and 5.

Data Collection and Computation

The data obtained at a continuous-record gaging station on a stream consist 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.

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 curves 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 relations 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 gives the contents from which daily, monthly, or yearly changes then are determined. If the stage-content relationship changes because of deposition of sediment in the 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. Information explaining how estimated daily-discharge values are identified in station records is included in the next two sections, "Data Presentation" (REMARKS paragraph) and "Identifying Estimated Daily Discharge."

Data Presentation

The records published for each gaging station and reservoir 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 of maps available varies from one drainage basin to another, the accuracy of drainage areas likewise varies. Drainage areas are updated as better maps become available.

PERIOD OF RECORD.--This 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 RECORD.--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 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 Definition of Terms), and a condensed history of the types, locations, and datums of previous gages are given under this heading.

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

COOPERATION.--Records provided by a cooperating organization or obtained for the 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 a 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. The median of yearly mean discharges also is given under this heading for stations having 10 or more water years of record, if the median differs from the average given by more than 10 percent.

EXTREMES FOR PERIOD OF RECORD.--Extremes may include maximum and minimum stages and maximum and minimum discharges or content. 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 the 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 published following discovery of the error.

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

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 also is usually expressed in cubic feet per second per square mile (line headed "CFSM"), or in inches (line headed "IN"), or in acre-feet (line headed "AC-FT"). 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 a symbol and corresponding footnote.

Data collected at partial-record stations follow the information for continuous-record sites. Data for partial-record discharge stations are presented in two tables. The first is a table of annual maximum stage and discharge at crest-stage stations, and the second 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 times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Identifying Estimated Daily Discharge

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

Accuracy of the Records

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

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

Daily mean discharges in this report are given to the nearest hundredth of a cubic foot per second for values less than 1 ft³/s; to the nearest tenth between 1.0 and 10 ft³/s; to whole numbers between 10 and 1,000 ft³/s; and to 3 significant figures for more than 1,000 ft³/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 to other factors. For such stations, figures of cubic feet per second per square mile and of runoff, in inches, are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

Other Records Available

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

Information on the availability of unpublished data or statistical analyses may be obtained from the district office (telephone number: 717-782-3851).

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 recordings; however, because of costs, most data are obtained only monthly or less frequently. Location of stations for which records on the quality of surface water appear in this report are shown in figures

Arrangement of Records

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

On-site Measurements and Sample Collection

In obtaining water-quality data, a major concern 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 onsite 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 samples 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 a following page in 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 determined from data recorded at 15, 30, or 60 minute intervals for each day. 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 temperature

Water temperatures are measured at most of the water-quality stations. At stations where recording instruments are used, maximum, minimum and mean temperatures for each day are published. In addition, water temperatures are taken at time of discharge measurements for water-discharge stations and are on file in the District office. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at about the same time each day. Large streams have a small diurnal temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

Sediment

Suspended-sediment concentrations are determined from samples collected by hand or by pumping samplers. Samples are collected by hand using depth-integrating samplers at single or multiple verticals in the cross section. Samples are collected by pumping samplers using an intake set to a fixed location in the cross section. The intake is located at a site that best represents the entire cross section based on simultaneous samples collected at various stages by the pumping sampler and by hand. During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, every 15 minutes). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided-day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided-day method. For periods when no samples were collected, daily discharges of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

At other stations, suspended-sediment samples 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 suspended-sediment discharge, records of the periodic measurements of the particle-size distribution of the suspended sediment and bed material are included for some stations.

Laboratory Measurements

Sediment samples, samples for biochemical-oxygen demand (BOD), samples for indicator bacteria, 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 records.

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 or minimums may not have been sampled. Extremes, when given, are provided 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.

The surface-water-quality records for partial-record stations and miscellaneous sampling sites are published in separate tables following the table of discharge measurements at miscellaneous sites. No descriptive statements are given for these records. Each station is published with its own station number and name in the regular downstream-order sequence.

Remark Codes

The following remark codes may appear with the water-quality data in this report:

<u>PRINTED OUTPUT</u>	<u>REMARK</u>
E	Estimated value
>	Actual value is known to be greater than the value shown
<	Actual value is known to be less than the value shown
K	Results based on colony count outside the acceptance range (non-ideal colony count)
L	Biological organism count less than 0.5 percent (organism may be observed rather than counted)
D	Biological organism count equal to or greater than 15 percent (dominant)
&	Biological organism estimated as dominant

Records of Ground-Water Levels

Ground-water level data from a basic network of observation wells and from ground-water projects are published herein. Location of observation wells in the basic network and observation wells for projects are shown in figure 4.

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 the 15-digit number that appears in the upper left corner of the table. The secondary identification number is the local well number, an alphanumeric number, derived from the county location of the well.

Water-level records are obtained from direct measurements with a steel tape or from the graph or punched tape of a water-stage recorder. The water-level measurements in this report are given in feet with reference to land-surface datum (lsd). Land-surface datum is a datum plane that is approximately at land surface at each well. If known, the elevation of the land-surface datum is given in the well description. The height of the measuring point (MP) above or below land-surface datum is given in each well description. Water levels in wells equipped with recording gages are reported for each day.

Water levels are reported to as many significant figures as can be justified by the local conditions. Accordingly, most measurements are reported to a hundredth of a foot, but some are given to a tenth of a foot or a larger unit.

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); the hydrologic-unit number; a geographic point of reference; and the owner's name.

AQUIFER.--This entry designates by name (if a name exists) and geologic age the aquifer(s) open to the well.

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.

INSTRUMENTATION.--This paragraph provides information on both the frequency of measurement and the collection method used, allowing the user to better evaluate the reported water-level extremes by knowing whether they are based on weekly, monthly, or some other frequency of measurement.

DATUM.--This entry describes both the measuring point and the land-surface elevation 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 elevation of the land-surface datum 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 also are water-quality observation wells, and may be used to acknowledge the assistance of local (non-Survey) observers.

PERIOD OF 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 and the words "to current year" if the records are to be continued into the following year. Periods for which water-level records are available, but are not published by the Geological Survey, may be noted.

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

A table of water levels follows the station description for each well. Water levels are reported in feet below land-surface datum. Wells equipped with recording gages have water levels reported for each day. Missing records are indicated by dashes in place of the water level.

Records of Ground-Water Quality

Records of ground-water quality are obtained at wells and springs included in ground-water projects. Records of ground-water quality in this report may involve a variety of types of data and measurement frequencies.

Data Collection and Computation

The records of ground-water quality in this report were obtained mostly as a 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 a 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.

A variety of sampling techniques are used for collecting ground-water samples for chemical analyses. Techniques for sampling springs are the same as those used for sampling surface water. An appropriate well-sampling technique is selected at each site so that the chemical samples are representative of the water in the aquifer. Wells are pumped, when possible, until a constant water temperature, specific conductance, and pH are obtained before collecting water samples. Pumping rate, length of pumping, and sampling depth depend on the characteristics of the well and aquifer being sampled. Samples are collected either by a submersible pump or a bailer.

Data Presentation

Ground-water-quality data are published with ground-water-level data at stations where level data is collected. Data collected at partial-record stations and miscellaneous sites follow the information for continuous ground-water record stations. Data for each section are listed alphabetically by county, and are identified by well number. The prime identification number for wells sampled is the 15-digit number derived from the latitude-longitude locations. No descriptive statements are given for ground-water-quality records; however, the well number, depth of well, date of sampling, and other pertinent data are given in the table containing the chemical analyses of the ground water. The REMARK codes listed for surface-water-quality records are also applicable to ground-water-quality records.

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

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

The reports listed below are for sale by the U.S. Geological Survey, Books and Open-File Reports Section, Federal Center, Box 25425, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be sent by check or money order payable to the U.S. Geological Survey. Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and "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-A10. *Discharge ratings at gaging stations*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A10. 1984. 59 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-A13. *Computation of continuous records of streamflow*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A13. 1983. 53 pages.
- 3-A14. *Use of flumes in measuring discharge*, by F. A. Kilpatrick and V. R. Schneider: USGS--TWRI Book 3, Chapter A14. 1983. 46 pages.
- 3-A15. *Computation of water-surface profiles in open channels*, by Jacob Davidian: USGS--TWRI Book 3, Chapter A15. 1984. 48 pages.
- 3-B1. *Aquifer-test design, observation, and data analysis*, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages.
- 3-B2. *Introduction to ground-water hydraulics, a programed text for self-instruction*, by G. D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.
- 3-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J. E. Reed: USGS--TWRI Book 3, Chapter B3. 1980. 106 pages.

- 3-C1. *Fluvial sediment concepts* by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.
- 3-C2. *Field methods for measurement of fluvial sediment* by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.
- 3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages.
- 4-A1. *Some statistical tools in hydrology*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages.
- 4-A2. *Frequency curves*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages.
- 4-B1. *Low-flow investigations*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages.
- 4-B2. *Storage analyses for water supply*, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.
- 4-B3. *Regional analyses of streamflow characteristics*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages.
- 4-D1. *Computation of rate and volume of stream depletion by wells* by C. T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages.
- 5-A1. *Methods for determination of inorganic substances in water and fluvial sediments* by M. W. Skougstad and others, editors: USGS--TWRI Book 5, Chapter A1. 1979. 626 pages.
- 5-A2. *Determination of minor elements in water by emission spectroscopy*, by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages.
- 5-A3. *Methods for analysis of organic substances in water*, by D. F. Goerlitz and Eugene Brown: USGS--TWRI Book 5, Chapter A3. 1972. 40 pages.
- 5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples* edited by P. E. Greenson, T. A. Ehlke, G. A. Irwin, B. W. Lium, and K. V. Slack: USGS--TWRI Book 5, Chapter A4. 1977. 332 pages.
- 5-A5. *Methods for determination of radioactive substances in water and fluvial sediments*, by L. L. Thatcher, V. J. Janzer, and K. W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages.
- 5-A6. *Quality assurance practices for the chemical and biological analyses of water and fluvial sediments*, by L. C. Friedman and D. E. Erdmann: USGS--TWRI Book 5, Chapter A6. 1982. 181 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-A2. *Installation and service manual for U.S. Geological Survey manometers* by J. D. Craig: USGS--TWRI Book 8, Chapter A2. 1983. 57 pages.
- 8-B2. *Calibration and maintenance of vertical-axis type current meters*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages.

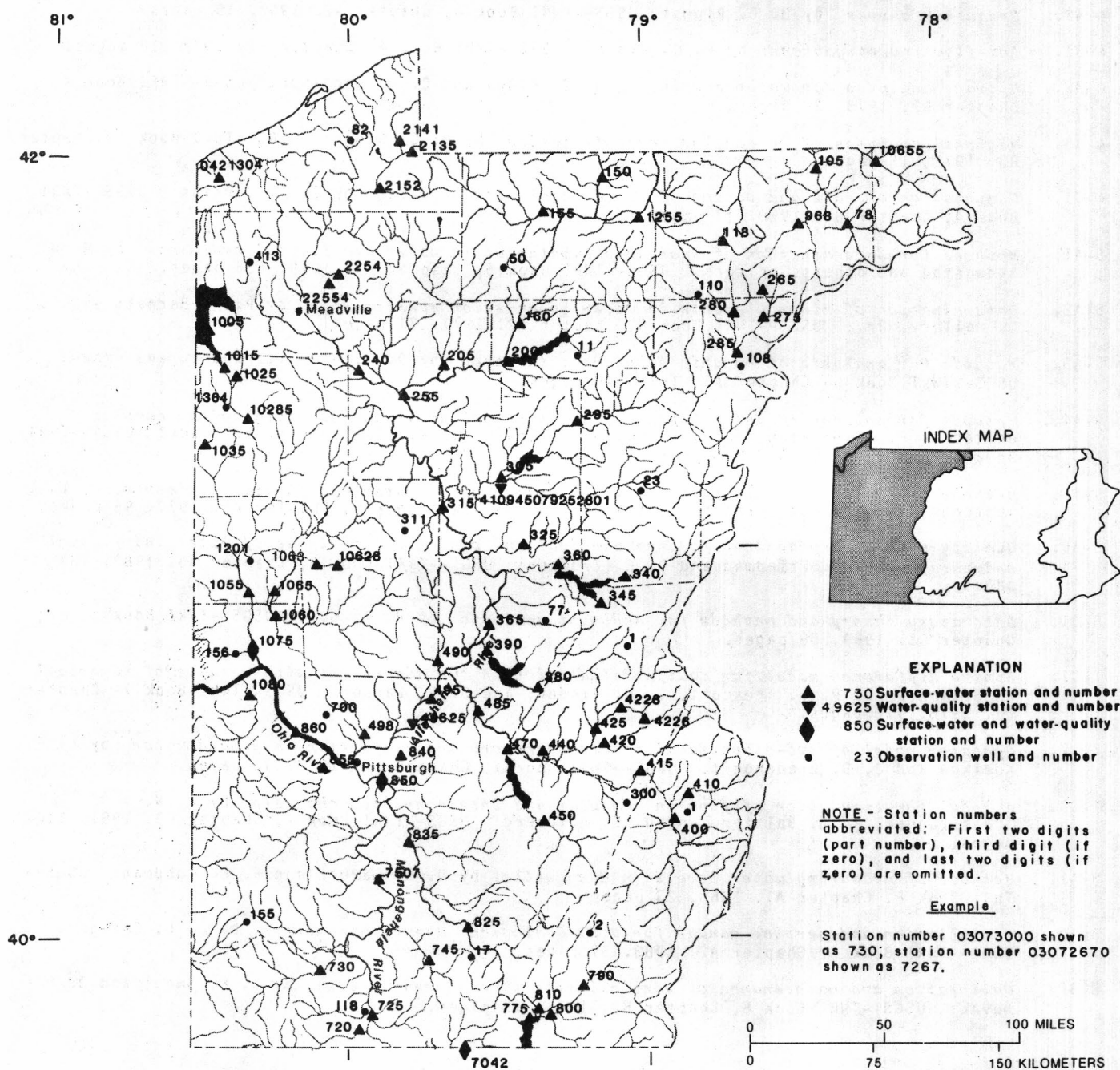


Figure 4.—Locations of data-collection stations and observation wells.

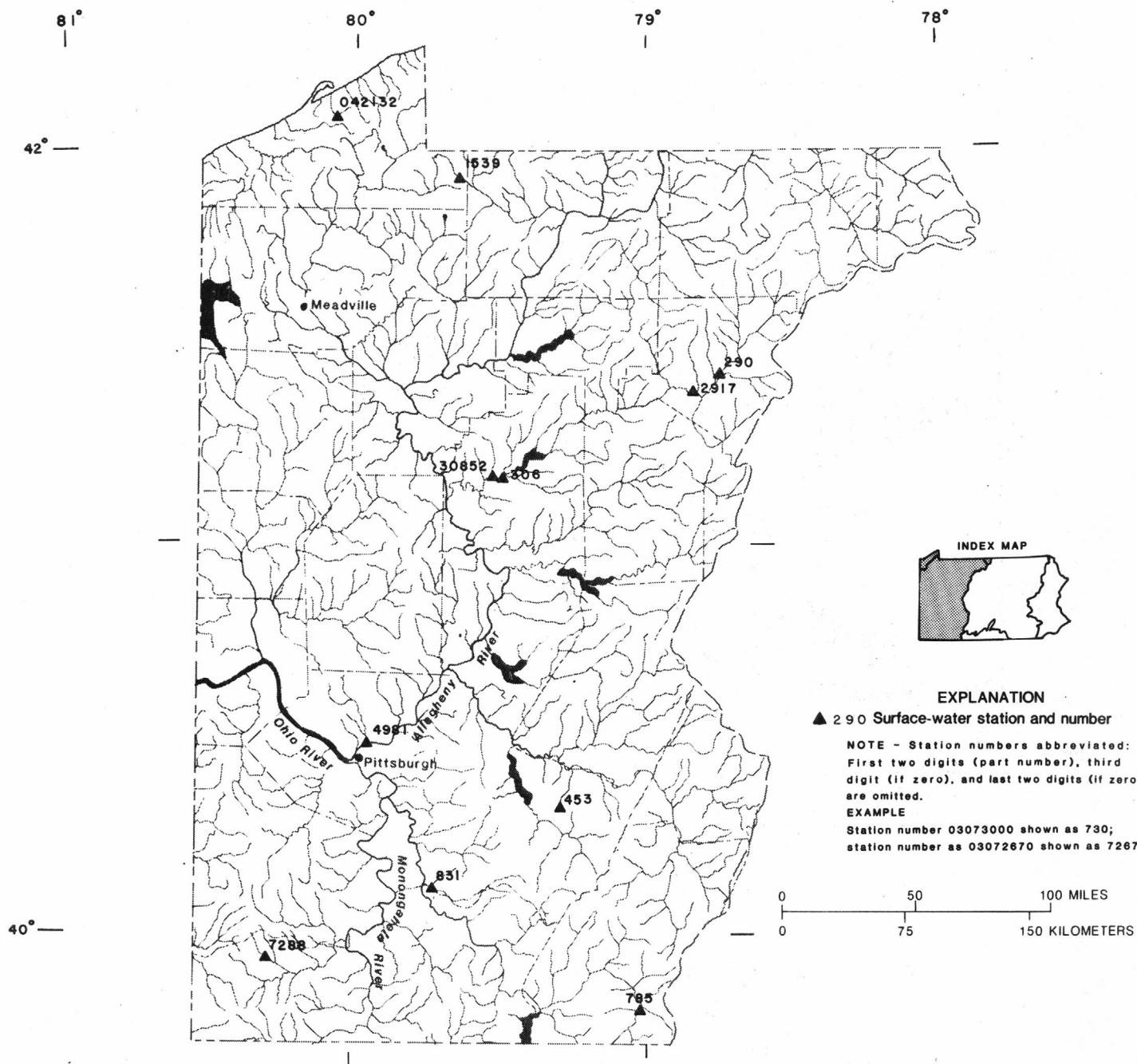


Figure 5.--Locations of partial-record data-collection stations.

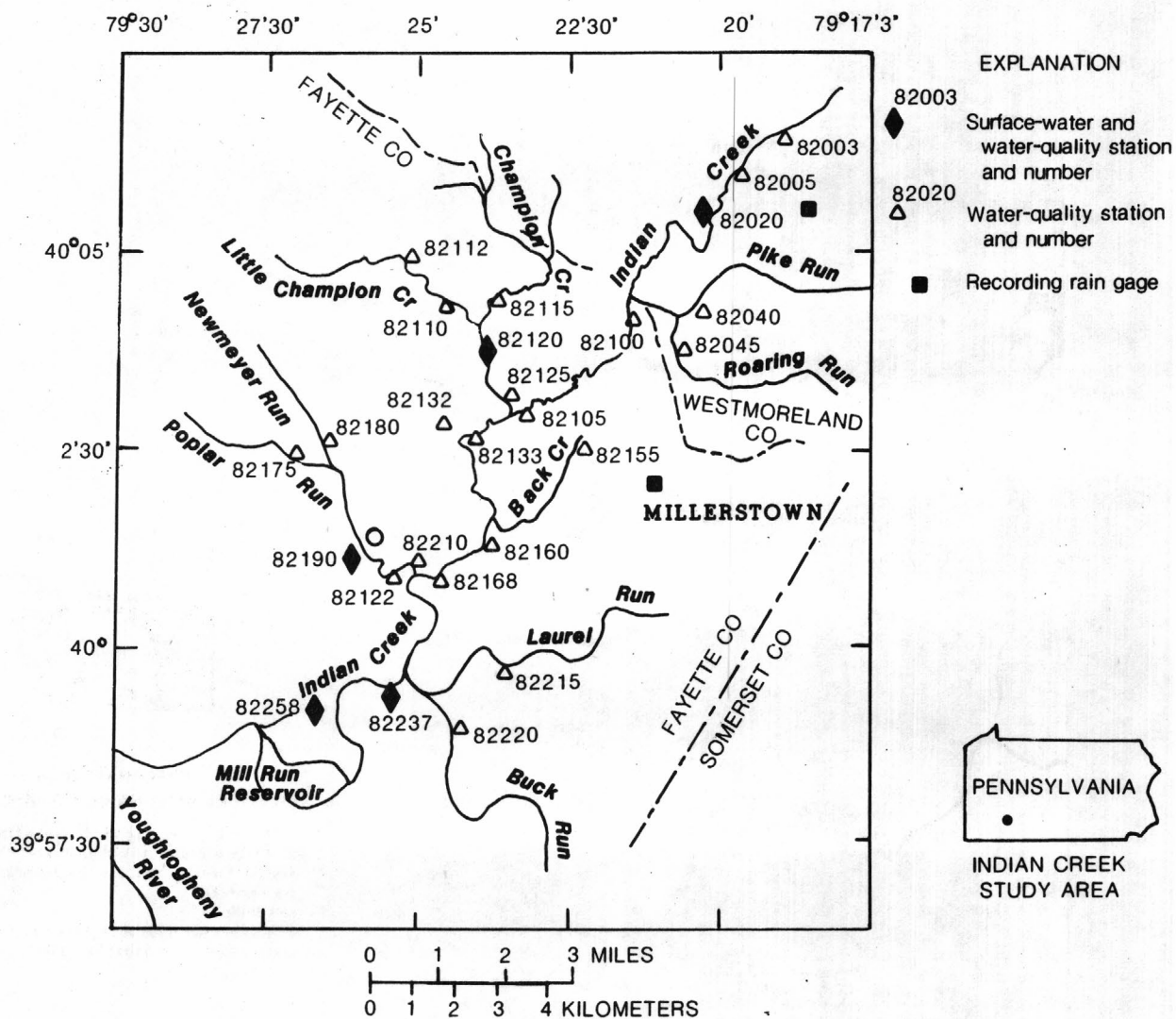


Figure 6.—Locations of data-collection stations for Indian Creek study area.

03007800 ALLEGHENY RIVER AT PORT ALLEGANY, PA

LOCATION.--Lat 41°49'07", long 78°17'35", McKean County, Hydrologic Unit 05010001, on right bank 40 ft upstream from bridge on U.S. Highway 6 at Port Allegany, 1.1 mi upstream from Twomile Creek, 1.4 mi downstream from Allegheny Portage Creek, and at mile 285.5.

DRAINAGE AREA.--248 mi².

PERIOD OF RECORD.--October 1974 to current year. Discharge measurements obtained by Corps of Engineers since March 1971.

GAGE.--Water-stage recorder. Datum of gage is 1,454.88 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, Dec. 20 to Jan. 20, Jan. 26 to Feb. 4, Feb. 13-21, and Mar. 4-9, which are fair. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--12 years, 477 ft³/s, 26.12 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,900 ft³/s, Feb. 14, 1984, gage height, 12.93 ft; minimum, 16 ft³/s, Sept. 13, 14, 1982, gage height, 1.49 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 23, 1972, reached a stage of at least 17.5 ft, discharge, 21,700 ft³/s, from Corps of Engineers discharge measurement.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 17	0430	3250	8.56	June 5	2300	2720	7.88
Jan. 20	2100	*5380	*10.98	June 8	0700	3970	9.46
Mar. 16	0100	4150	9.69				

Minimum discharge, 41 ft³/s, Sept. 15, 16, 18, gage height, 1.68 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	107	1260	180	220	437	289	291	112	147	175	79
2	60	100	1980	170	180	380	276	275	117	241	210	75
3	57	106	1820	160	190	352	260	246	98	194	158	71
4	52	232	1400	160	340	300	255	227	89	153	139	69
5	52	302	1100	150	864	250	263	210	721	136	124	73
6	56	312	920	150	759	220	382	197	2030	122	114	72
7	55	308	743	140	665	200	546	195	1770	111	109	62
8	49	326	617	140	605	170	539	176	3730	111	123	57
9	44	295	529	140	516	150	546	163	2430	227	159	53
10	44	474	462	135	460	351	532	152	1400	236	124	51
11	47	967	511	130	411	1080	511	142	1260	178	206	49
12	46	1210	736	130	359	974	478	133	1840	192	139	49
13	43	1350	717	130	320	1050	423	124	1690	206	117	50
14	48	1320	759	125	290	1440	388	116	1360	213	108	45
15	64	1320	665	120	250	3620	391	115	1070	183	103	41
16	80	1690	604	120	220	3680	620	112	903	194	158	45
17	59	2950	542	120	200	2320	1190	105	979	203	133	46
18	51	2210	462	180	180	1560	1310	99	691	902	145	42
19	57	1530	397	400	360	1450	1200	150	569	727	122	50
20	89	1130	330	3300	780	1250	1050	277	518	861	106	52
21	70	884	290	4170	1500	1030	1000	309	407	806	101	57
22	61	724	250	2350	1690	898	829	272	338	606	99	48
23	60	623	220	1520	1420	783	682	263	311	463	101	73
24	89	508	200	1090	1100	663	574	238	269	374	199	99
25	255	435	170	894	900	548	507	213	238	374	127	62
26	172	1150	200	660	731	482	458	189	205	321	116	59
27	157	2130	260	520	626	460	410	173	191	286	115	128
28	146	2190	250	400	501	400	369	179	209	249	108	116
29	131	1740	210	340	---	357	334	152	192	218	97	87
30	123	1350	200	300	---	328	306	134	168	197	90	83
31	116	---	180	260	---	305	---	124	---	189	84	---
TOTAL	2487	29973	18984	18784	16637	27488	16918	5751	25905	9620	4009	1943
MEAN	80.2	999	612	606	594	887	564	186	863	310	129	64.8
MAX	255	2950	1980	4170	1690	3680	1310	309	3730	902	210	128
MIN	43	100	170	120	180	150	255	99	89	111	84	41
CFSM	.32	4.03	2.47	2.44	2.40	3.58	2.27	.75	3.48	1.25	.52	.26
IN.	.37	4.50	2.85	2.82	2.50	4.12	2.54	.86	3.89	1.44	.60	.29

CAL YR 1985 TOTAL 148143 MEAN 406 MAX 3640 MIN 43 CFSM 1.64 IN. 22.22
WTR YR 1986 TOTAL 178499 MEAN 489 MAX 4170 MIN 41 CFSM 1.97 IN. 26.78

POTATO CREEK BASIN

03009680 POTATO CREEK AT SMETHPORT, PA

LOCATION.--Lat 41°48'35", long 78°25'50", McKean County, Hydrologic Unit 05010001, on left bank 30 ft upstream from U.S. Highway 6 at east borough limits of Smethport, and 500 ft downstream from Marvin Creek.

DRAINAGE AREA.--160 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 1,454.84 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, Dec. 20 to Jan. 20, Jan. 25 to Feb. 5, Feb. 10-21, and Mar. 6-9, which are fair. Several observations of water temperature were made during the year. Gage-height telemeter at station.

AVERAGE DISCHARGE.--12 years, 309 ft³/s, 26.23 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,350 ft³/s, Feb. 14, 1984, gage height, 11.29 ft; minimum, 12 ft³/s, Sept. 7, 1982, gage height, 1.87 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 22, 1972, reached a stage of 15.54 ft, discharge, 12,800 ft³/s, on basis of contracted-opening measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 17	0230	*2800	9.00	June 6	0130	2690	8.86
Nov. 26	2230	2520	8.65	June 12	0800	2600	8.75
Jan. 20	----	ice jam	*9.42				

Minimum daily discharge, 22 ft³/s, Sept. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	80	928	150	130	293	168	189	40	85	120	35
2	44	75	1270	145	115	257	158	172	47	161	178	35
3	42	84	914	140	100	225	146	150	39	110	103	33
4	38	258	734	130	220	208	148	137	35	82	86	35
5	43	360	604	130	970	193	159	127	893	73	78	44
6	48	273	522	125	845	160	327	122	1490	66	72	35
7	43	222	436	120	677	145	419	139	823	59	70	30
8	38	251	379	120	585	140	315	116	1100	55	95	37
9	35	205	343	115	478	130	293	106	654	141	97	27
10	35	524	310	115	350	298	300	98	464	104	74	26
11	38	1030	428	110	280	892	311	92	645	72	110	24
12	39	946	651	110	220	525	300	87	2030	92	75	26
13	37	957	519	110	190	676	273	82	1180	122	63	26
14	45	920	495	105	160	984	257	79	819	137	58	24
15	62	1090	438	105	135	1780	279	79	602	87	57	22
16	74	1400	390	105	115	1400	580	81	503	90	123	23
17	49	2170	351	105	94	1000	972	73	551	101	85	26
18	42	1230	304	200	150	762	742	68	339	1090	85	24
19	52	884	262	500	300	826	632	74	281	814	63	32
20	101	682	240	1600	600	682	564	97	278	782	55	40
21	66	526	200	1720	1250	513	708	94	201	708	51	59
22	56	442	190	1060	1100	446	541	77	165	416	51	38
23	53	406	170	788	892	402	455	72	161	300	60	94
24	87	334	150	568	688	354	400	68	132	229	108	89
25	284	283	140	400	546	306	352	62	118	202	59	50
26	134	1350	180	320	446	276	314	55	103	184	52	61
27	112	2060	230	270	396	279	276	53	104	158	54	187
28	101	1600	210	210	319	238	244	64	118	132	48	93
29	92	1230	180	180	---	211	218	51	101	117	42	71
30	88	975	170	160	---	194	197	45	95	109	40	75
31	85	---	160	140	---	180	---	42	---	102	37	---
TOTAL	2104	22847	12498	10156	12351	14975	11048	2851	14111	6980	2349	1421
MEAN	67.9	762	403	328	441	483	368	92.0	470	225	75.8	47.4
MAX	284	2170	1270	1720	1250	1780	972	189	2030	1090	178	187
MIN	35	75	140	105	94	130	146	42	35	55	37	22
CFSM	.42	4.76	2.52	2.05	2.76	3.02	2.30	.57	2.94	1.41	.47	.30
IN.	.49	5.31	2.91	2.36	2.87	3.48	2.57	.66	3.28	1.62	.55	.33

CAL YR 1985 TOTAL 106769 MEAN 293 MAX 2550 MIN 20 CFSM 1.83 IN. 24.83
WTR YR 1986 TOTAL 113691 MEAN 311 MAX 2170 MIN 22 CFSM 1.95 IN. 26.43

OHIO RIVER MAIN STEM

27

03010500 ALLEGHENY RIVER AT ELDRED, PA

LOCATION.--Lat 41°57'48", long 78°23'11", McKean County, Hydrologic Unit 05010001, on right bank at site of former highway bridge, 600 ft upstream from bridge on State Highway 346, 1,000 ft upstream from Knapp Creek, 0.5 mi north of Eldred, and at mile 267.8.

DRAINAGE AREA.--550 mi².

PERIOD OF RECORD.--July 1939 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,416.53 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, Dec. 20 to Jan. 21, Jan. 30 to Feb. 4, Feb. 15-22, and Mar. 3-9, which are fair. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--47 years, 951 ft³/s, 23.48 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 65,400 ft³/s, June 23, 1972, gage height, 29.05 ft from flood-mark, from rating curve extended above 21,000 ft³/s on basis of slope-area measurement at gage height 27.6 ft; minimum, 22 ft³/s, Sept. 29, 30, 1959, gage height, 1.27 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 22	0300	*7000	*14.91	No other peak greater than base discharge.			

Minimum discharge, 82 ft³/s, Sept. 16, 17, gage height, 1.95 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	111	239	2970	430	430	992	627	633	191	320	366	157
2	108	222	3150	410	390	891	600	610	193	463	443	148
3	115	217	3410	380	450	760	562	544	187	512	393	142
4	105	380	3020	360	800	700	532	487	156	355	323	136
5	101	745	2300	350	2370	640	560	450	254	302	286	142
6	112	783	1860	340	2740	580	680	422	2470	273	262	161
7	119	651	1530	330	2010	540	1120	418	2680	251	246	136
8	107	663	1290	320	1670	500	1040	407	2840	234	258	119
9	96	621	1150	310	1410	480	996	360	3240	365	320	110
10	88	801	1010	310	1200	660	989	334	2610	574	305	103
11	88	1800	1050	300	1030	2250	992	312	1880	369	333	98
12	94	2210	1810	300	855	1990	993	296	3010	441	340	95
13	93	2540	1760	300	766	1830	887	281	3710	651	255	96
14	91	2480	1690	280	698	2570	846	264	3530	687	227	95
15	124	2620	1440	270	600	3430	826	256	2460	497	213	87
16	192	2660	1330	270	500	4260	1230	258	1990	425	306	82
17	175	3580	1190	280	450	4720	2620	253	2010	470	346	86
18	129	4070	1020	420	370	3980	2720	231	1450	2520	689	88
19	138	3910	858	900	700	2900	2400	242	1110	3610	404	94
20	215	2810	740	2500	1900	2610	2040	297	1030	2940	301	109
21	237	1870	620	5200	2800	1950	2080	494	821	2670	257	121
22	172	1450	560	6620	3500	1640	1890	407	672	1800	239	137
23	151	1280	500	4900	3390	1460	1520	380	600	1250	234	126
24	152	1080	460	3030	2610	1280	1290	355	533	922	330	281
25	384	905	410	1850	1940	1090	1130	327	459	818	327	202
26	445	1350	380	1530	1480	959	1000	298	405	688	247	154
27	340	3400	520	1350	1340	909	891	273	368	649	234	242
28	309	4010	560	995	1270	852	810	277	394	545	227	353
29	285	4090	520	824	---	765	742	265	401	462	206	247
30	263	3640	480	620	---	711	683	227	355	421	184	203
31	250	---	450	520	---	667	---	206	---	400	170	---
TOTAL	5389	57077	40038	36799	39669	49566	35296	10864	42009	26864	9271	4350
MEAN	174	1903	1292	1187	1417	1599	1177	350	1400	867	299	145
MAX	445	4090	3410	6620	3500	4720	2720	633	3710	3610	689	353
MIN	88	217	380	270	370	480	532	206	156	234	170	82
CFSM	.32	3.46	2.35	2.16	2.58	2.91	2.14	.64	2.55	1.58	.54	.26
IN.	.36	3.86	2.71	2.49	2.68	3.35	2.39	.73	2.84	1.82	.63	.29

CAL YR 1985 TOTAL 308348 MEAN 845 MAX 5960 MIN 88 CFSM 1.54 IN. 20.86
WTR YR 1986 TOTAL 357192 MEAN 979 MAX 6620 MIN 82 CFSM 1.78 IN. 24.15

OSWAYO CREEK BASIN

03010655 OSWAYO CREEK AT SHINGLEHOUSE, PA

LOCATION.--Lat 41°57'42", long 78°11'54", Potter County, Hydrologic Unit 05010001, on right bank 200 ft upstream from bridge on State Highway 44 at Shinglehouse and 0.7 mi upstream from Honeoye Creek.

DRAINAGE AREA.--98.7 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 1,460.34 ft above National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

REMARKS.--Records good except for estimated daily discharges, Dec. 19 to Jan. 20, Jan. 28 to Feb. 4, Feb. 13-21, and Mar. 6-9, which are fair. Several observations of water temperature were made during the year. Gage-height telemeter at station.

AVERAGE DISCHARGE.--12 years, 163 ft³/s, 22.43 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,300 ft³/s, Oct. 28, 1981, gage height, 11.05 ft; maximum gage height, 11.82 ft, Jan. 20, 1986 (backwater from ice); minimum discharge, 5.1 ft³/s, Oct. 10, 1980, gage height, 3.12 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 20	2000	*2270	a*11.82	Mar. 16	0045	1040	7.54

(a) Ice jam.

Minimum daily discharge, 10 ft³/s, Oct. 9, 10, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	17	355	130	100	160	97	105	43	46	50	33
2	12	15	521	125	88	138	93	97	47	76	54	31
3	11	18	509	115	70	125	88	87	39	55	44	28
4	11	37	433	105	110	118	86	79	36	45	39	27
5	12	44	361	96	256	106	87	71	61	39	36	28
6	13	46	302	90	245	98	104	68	130	36	34	26
7	13	44	243	82	232	90	117	68	152	35	46	23
8	12	49	208	80	216	84	121	60	518	41	42	22
9	10	45	184	78	189	74	132	56	404	148	57	21
10	10	77	162	76	167	106	141	51	293	83	46	20
11	10	150	179	74	147	256	148	48	269	64	65	19
12	11	181	270	72	131	263	148	46	458	89	54	19
13	11	217	289	72	120	314	134	43	502	162	50	19
14	12	249	308	70	110	399	126	41	443	159	47	17
15	19	270	269	76	98	890	134	40	354	126	44	17
16	21	372	237	84	86	924	203	39	306	123	62	18
17	14	554	212	74	78	650	401	37	296	102	56	17
18	13	456	192	150	64	491	485	41	218	285	264	17
19	18	366	180	300	100	448	454	57	192	276	102	21
20	26	291	160	1300	220	392	394	83	174	252	74	19
21	20	229	140	1660	600	331	364	84	138	209	58	19
22	16	193	130	843	632	293	306	83	114	166	49	17
23	15	169	115	553	535	259	251	83	102	129	96	28
24	20	143	100	416	424	224	217	79	88	103	153	32
25	30	122	90	339	341	191	196	73	77	89	86	22
26	22	208	120	292	272	169	178	66	66	91	71	26
27	21	363	200	247	229	161	157	63	63	78	63	74
28	19	418	180	210	189	139	139	63	63	67	52	53
29	18	388	170	180	---	123	126	55	55	59	45	43
30	17	354	160	150	---	112	113	50	51	55	39	39
31	17	---	140	120	---	103	---	46	---	55	35	---
TOTAL	485	6085	7119	8259	6049	8231	5740	1962	5752	3343	2013	795
MEAN	15.6	203	230	266	216	266	191	63.3	192	108	64.9	26.5
MAX	30	554	521	1660	632	924	485	105	518	285	264	74
MIN	10	15	90	70	64	74	86	37	36	35	34	17
CFSM	.16	2.06	2.33	2.70	2.19	2.69	1.94	.64	1.94	1.09	.66	.27
IN.	.18	2.29	2.68	3.11	2.28	3.10	2.16	.74	2.17	1.26	.76	.30

CAL YR 1985 TOTAL 48779 MEAN 134 MAX 1490 MIN 10 CFSM 1.35 IN. 18.38
WTR YR 1986 TOTAL 55833 MEAN 153 MAX 1660 MIN 10 CFSM 1.55 IN. 21.03

03011020 ALLEGHENY RIVER AT SALAMANCA, NY

LOCATION.--Lat 42°09'23", long 78°42'56", Cattaraugus County, Hydrologic Unit 05010001, on left bank 230 ft upstream from Main Street bridge in Salamanca, 1.3 mi downstream from Great Valley Creek, and 1.6 mi upstream from Little Valley Creek.

DRAINAGE AREA.--1,608 mi².

PERIOD OF RECORD.--September 1903 to current year. Monthly discharge only for some periods, published in WSP 1305. Prior to October 1964, published as "at Red House."

REVISED RECORDS.--WSP 1385: 1907, 1909-12, 1913(M), 1914-15, 1916-17(M), 1925, 1927. WSP 1907: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,358.00 ft above National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to Sept. 3, 1917, nonrecording gage and Sept. 4, 1917 to Sept. 30, 1964, water-stage recorder at site 7.5 mi downstream at different datum. Oct. 1, 1964 to Sept. 30, 1967, at present site at datum 0.04 ft lower.

REMARKS.--Estimated daily discharges: Dec. 21 to Jan. 21, Jan. 29 to Feb. 3, Feb. 14-17, and Feb. 27 to Mar. 7. Records good except for estimated daily discharges, which are fair. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite and gage height telemeters at station.

AVERAGE DISCHARGE.--83 years, 2,784 ft³/s, 23.51 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 73,000 ft³/s June 23, 1972, gage height, 24.01 ft from flood-marks; minimum daily, 79 ft³/s Sept. 10, 11, 1971.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 17,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Jan. 21	0300	*16,100	*a9.69	No peak greater than base discharge.			

a Ice Jam.

Minimum discharge, 206 ft³/s Oct. 12-13, gage height, 2.78 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	265	471	7570	980	1600	2400	1740	1710	560	912	1150	446
2	245	451	8890	960	1800	2100	1630	1610	559	1230	1530	421
3	233	461	8500	940	2300	1900	1510	1450	548	1440	1620	402
4	231	1170	7310	940	2630	1700	1420	1310	494	1090	1190	390
5	246	3020	5940	920	7680	1600	1480	1210	942	878	947	389
6	262	4230	4940	900	9420	1500	1870	1130	3600	783	817	396
7	262	2970	4190	900	6460	1300	2630	1100	4580	716	864	387
8	258	2360	3570	880	5060	1200	2970	1050	5250	705	885	358
9	243	1960	3180	860	4270	1360	2950	968	6150	1110	1330	334
10	225	2850	2980	840	3580	1920	2930	891	5200	1520	1310	315
11	218	5540	3410	820	3000	7730	3000	837	4530	1180	2160	304
12	210	5890	6300	800	2590	6950	3090	799	9640	1260	1640	299
13	218	7200	6380	800	2100	5630	2940	765	11000	2820	1160	292
14	231	8590	5450	800	1700	7670	3150	741	8850	4180	900	291
15	328	9030	4480	800	1600	10100	3180	722	6590	2980	797	277
16	599	7830	3930	800	1500	10700	4230	757	6260	2020	1020	275
17	467	12400	3530	1600	1400	9930	8580	793	7200	1850	1130	273
18	390	9920	2940	2800	1920	8680	8200	772	5300	7180	1230	281
19	574	8320	2520	5000	3600	7540	6750	818	3830	9890	1350	286
20	1130	6780	1960	11000	7570	6980	5740	1280	3240	8010	880	309
21	801	4890	1700	15000	10500	5390	6690	1610	2610	7970	734	357
22	631	3810	1500	14000	10800	4470	6110	1540	2030	5850	657	358
23	523	3470	1300	11700	8860	4010	4980	1300	1760	3880	621	428
24	599	3050	1200	7910	7030	3530	4090	1180	1510	2850	763	639
25	881	2560	1100	5330	5370	3070	3520	1050	1300	2220	808	607
26	982	2990	1100	4300	4160	2770	3090	911	1130	1880	688	540
27	863	9200	1100	3770	3500	2750	2720	827	1020	1650	614	1890
28	685	9520	1000	2750	3000	2620	2390	787	1160	1450	588	2140
29	601	8550	1000	2100	---	2290	2130	737	1190	1370	560	1240
30	544	7760	1000	1900	---	2070	1890	677	1060	1220	513	1270
31	507	---	1000	1700	---	1900	---	608	---	1170	471	---
TOTAL	14452	157243	110970	104800	125000	133760	107600	31940	109093	83264	30927	16194
MEAN	466	5241	3580	3381	4464	4315	3587	1030	3636	2686	998	540
MAX	1130	12400	8890	15000	10800	10700	8580	1710	11000	9890	2160	2140
MIN	210	451	1000	800	1400	1200	1420	608	494	705	471	273
CFSM	.29	3.26	2.23	2.10	2.78	2.68	2.23	.64	2.26	1.67	.62	.34
IN.	0.33	3.64	2.57	2.42	2.89	3.09	2.49	0.74	2.52	1.93	0.72	0.37

CAL YR 1985	TOTAL	884510	MEAN	2423	MAX	21500	MIN	210	CFSM	1.51	IN.	20.46
WTR YR 1986	TOTAL	1025243	MEAN	2809	MAX	15000	MIN	210	CFSM	1.75	IN.	23.72

KINZUA CREEK BASIN

03011800 KINZUA CREEK NEAR GUFFEY, PA

LOCATION.--Lat 41°45'59", long 78°43'08", McKean County, Hydrologic Unit 05010001, in Allegheny National Forest, on right bank 130 ft upstream from bridge on U.S. Highway 219, 0.2 mi upstream from Wintergreen Run, 1.0 mi downstream from Pine Run, and 1.5 mi west of Guffey.

DRAINAGE AREA.--46.4 mi².

PERIOD OF RECORD.--Occasional low-flow measurements, published as "at Tallyho," water years 1959-65. October 1965 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,540 ft above National Geodetic Vertical Datum of 1929, from topographic map

REMARKS.--Records good except for estimated daily discharges, Dec. 18 to Jan. 20, Jan. 25 to Feb. 5, Feb. 8-18, and Mar. 1-9, which are fair. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--21 years, 78.5 ft³/s, 22.98 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 5,220 ft³/s, June 22, 1972, gage height, 8.99 ft, from rating curve extended above 1,300 ft³/s on basis of slope-area measurement at gage height 8.33 ft; minimum, 2.0 ft³/s, July 29, 1978, minimum gage height, 1.82 ft, Sept. 11, 12, 13, 14, 1982.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 16	2100	597	4.49	Feb. 5	----	----	ice jam
Nov. 26	1730	745	4.79	June 5	2130	1080	5.36
Jan. 20	----	ice jam	*5.77	June 12	0500	*1200	5.53

Minimum discharge, 7.9 ft³/s, Oct. 1, 9, 10, gage height, 1.88 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.5	18	202	46	31	70	48	56	14	32	29	17
2	9.6	19	273	42	29	60	46	53	19	50	31	16
3	8.6	24	191	39	27	54	42	47	15	45	24	16
4	8.4	70	151	37	25	50	43	43	14	32	21	16
5	11	88	128	35	330	46	47	40	342	27	19	19
6	12	64	110	34	241	42	100	38	335	24	17	19
7	11	45	93	33	173	40	127	41	184	22	18	17
8	8.8	50	82	32	120	38	85	35	171	21	24	15
9	8.1	41	76	31	100	36	78	32	118	48	37	14
10	8.5	148	72	31	80	79	84	30	86	49	25	14
11	11	236	123	30	62	215	86	28	194	30	38	12
12	10	174	200	29	50	108	82	26	760	42	25	14
13	11	181	136	29	40	125	82	25	387	77	19	15
14	12	205	120	28	36	205	92	25	244	58	17	13
15	18	210	108	28	31	305	91	25	174	38	16	12
16	15	327	92	31	28	232	165	28	149	38	47	12
17	11	360	83	33	26	174	238	25	195	42	42	11
18	11	229	70	80	70	141	162	25	112	35	87	11
19	16	172	66	200	180	166	138	31	94	49	50	14
20	20	135	58	490	253	142	145	39	100	125	34	19
21	16	106	54	287	337	105	243	35	74	105	29	25
22	14	90	50	220	249	92	163	28	62	64	27	16
23	14	83	47	167	195	84	134	26	62	51	28	28
24	22	70	45	128	149	77	115	23	53	43	46	40
25	26	61	42	96	123	71	102	22	45	39	29	25
26	20	416	50	80	106	66	91	20	40	35	25	33
27	17	454	70	66	91	70	80	19	40	34	25	57
28	16	305	76	50	80	62	71	21	47	31	24	35
29	16	230	66	40	---	57	64	18	39	28	21	27
30	16	191	58	37	---	53	58	16	36	28	20	27
31	16	---	50	33	---	50	---	15	---	28	18	---
TOTAL	422.5	4802	3042	2542	3262	3115	3102	935	4205	1370	912	609
MEAN	13.6	160	98.1	82.0	116	100	103	30.2	140	44.2	29.4	20.3
MAX	26	454	273	490	337	305	243	56	760	125	87	57
MIN	8.1	18	42	28	25	36	42	15	14	21	16	11
CFSM	.29	3.45	2.11	1.77	2.51	2.17	2.23	.65	3.02	.95	.63	.44
IN.	.34	3.85	2.44	2.04	2.62	2.50	2.49	.75	3.37	1.10	.73	.49

CAL YR 1985 TOTAL 25710.5 MEAN 70.4 MAX 651 MIN 8.1 CFSM 1.52 IN. 20.61
WTR YR 1986 TOTAL 28318.5 MEAN 77.6 MAX 760 MIN 8.1 CFSM 1.67 IN. 22.72

OHIO RIVER MAIN STEM

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03012550 ALLEGHENY RIVER AT KINZUA DAM, PA

LOCATION.--Lat 41°50'29", long 79°00'44", Warren County, Hydrologic Unit 05010001, in Allegheny National Forest, on left bank 0.5 mi downstream from Kinzua Dam, 2.5 mi east of Hemlock, and at mile 197.6.

DRAINAGE AREA.--2,180 mi².

PERIOD OF RECORD.--October 1935 to current year. Published as "near Kinzua" (station 03012500) prior to October 1968 and as "at Warren" (station 03012600) October 1968 to September 1972.

REVISED RECORDS.--WSP 1275: 1936-37. WDR PA-73-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,192.55 ft above National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to Nov. 1, 1964, water-stage recorder at site 1.0 mi upstream at different datum. Nov. 1, 1964, to Aug. 4, 1966, non-recording gage, and Aug. 5, 1966, to Sept. 30, 1972, water-stage recorder at site 6.4 mi downstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since October 1965 by Allegheny Reservoir, 0.5 mi upstream. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--51 years, 3,831 ft³/s, 23.86 in/yr, adjusted for storage since October 1965.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 60,500 ft³/s, Mar. 8, 1956, gage height, 19.95 ft, site and datum then in use; minimum not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 19,100 ft³/s, June 19, gage height, 13.19 ft; minimum daily, 570 ft³/s, Nov. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3320	570	10800	3320	7070	6190	1880	3930	1290	1330	1920	1290
2	4040	638	12500	3440	5820	4420	699	2250	981	1060	1920	1310
3	4490	648	14500	3480	3870	2500	699	2240	652	1220	1920	1620
4	4850	607	17400	3330	3180	1310	700	2250	654	1640	1910	1920
5	4650	603	18100	3340	3200	1300	692	1980	665	1640	1890	1910
6	4600	590	17900	3390	3160	1320	695	1480	663	1650	1860	1880
7	4700	599	17800	3480	5270	1330	696	1600	668	1520	1860	1870
8	4190	593	17600	3320	7270	1320	708	1320	1530	1150	1830	2000
9	3170	604	17300	3370	7250	1290	717	855	4710	1000	1820	2210
10	2990	665	17100	3400	7240	1310	721	719	5960	996	1800	2250
11	2190	594	17000	3300	7190	1320	713	714	2900	1300	1780	2110
12	1860	597	16800	3310	7200	1330	718	711	1760	1810	1760	2140
13	1840	616	14200	3420	7180	1340	710	710	3630	1710	1710	2500
14	1860	612	11800	3280	7050	1350	721	695	9160	1140	1610	2480
15	1880	904	10800	2770	5600	1370	716	674	14600	1190	1300	2160
16	1860	1500	8980	3320	4000	1960	725	731	16100	1600	934	2000
17	1070	2130	6680	3370	2990	3630	723	683	16000	2390	820	1770
18	621	1470	4060	3330	1860	3520	1120	677	16700	4130	1220	2000
19	651	3310	2660	3350	905	3520	1680	678	17200	6060	1510	2080
20	638	6830	2760	3410	960	5230	2630	679	14700	6180	1280	2390
21	628	7470	2720	5170	1910	7100	5350	676	12400	7840	1190	2370
22	588	8610	2710	9480	2590	8480	9900	933	8910	11100	1230	2070
23	647	10400	2770	14300	3250	8340	12600	1290	4160	12000	1060	2080
24	660	12000	1500	16500	5580	8540	10400	1290	2700	12000	1050	2380
25	656	12900	687	16300	8890	8090	6970	1310	2680	10600	1030	2010
26	649	11800	703	16200	9620	7950	5170	1310	2650	8280	1020	1550
27	644	6960	701	16100	9490	6710	5070	1310	2630	5800	1030	1400
28	608	4250	707	15400	8260	4440	5190	1310	2630	2770	964	1400
29	588	7080	1550	14500	---	3120	5090	1180	2610	1930	1110	730
30	597	10400	3010	12700	---	2730	5180	1210	2230	1940	1490	1500
31	586	---	3410	9260	---	2740	---	1200	---	1930	1300	---
TOTAL	62321	116550	277208	212640	147855	115100	89583	38595	174123	116906	45128	57380
MEAN	2010	3885	8942	6859	5281	3713	2986	1245	5804	3771	1456	1913
MAX	4850	12900	18100	16500	9620	8540	12600	3930	17200	12000	1920	2500
MIN	586	570	687	2770	905	1290	692	674	652	996	820	730
†	-1290	+4130	-3480	-2000	+1420	+2190	+1940	+228	-90.8	-48.8	+169	-1060
MEAN†	720	8015	5462	4860	6701	5903	4926	1473	5713	3725	1625	853
CFSM†	.33	3.68	2.51	2.23	3.07	2.71	2.26	.68	2.62	1.71	.75	.39
IN.†	.38	4.11	2.89	2.57	3.20	3.12	2.52	.78	2.92	1.97	.86	.44

CAL YR 1985 TOTAL 1342000 MEAN 3677 MAX 18100 MIN 570 ADJ -176 MEAN† 3501 CFSM† 1.61 IN.† 21.80
WTR YR 1986 TOTAL 1453390 MEAN 3982 MAX 18100 MIN 570 ADJ +126 MEAN† 4108 CFSM† 1.88 IN.† 25.76

† Change in contents, equivalent in cubic feet per second, in Allegheny Reservoir.

‡ Adjusted for change in reservoir contents.

CONEWANGO CREEK BASIN
03015000 CONEWANGO CREEK AT RUSSELL, PA

LOCATION.--Lat 41°56'17", long 79°08'00", Warren County, Hydrologic Unit 05010002, on left bank at highway bridge at Russell, 0.5 mi upstream from Akeley Run, and 8.0 mi upstream from mouth.

DRAINAGE AREA.--816 mi².

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for October, November 1939, published in WSP 1305.

REVISED RECORDS.--WSP 1083: 1936 (M).

GAGE.--Water-stage recorder. Datum of gage is 1,221.77 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 10, 1941, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, Dec. 20-26, Dec. 31 to Jan. 6, Jan. 30 to Feb. 4, Feb. 16, 17, Mar. 2-9, and July 27-30, which are fair. Flow regulated by Chautauqua Lake. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--47 years, 1,527 ft³/s, 25.41 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,400 ft³/s, Apr. 7, 1947, gage height, 10.69 ft; minimum not determined; minimum daily, 57 ft³/s, Oct. 17, 1960.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1936 reached a stage of 10.9 ft from floodmark, discharge, 14,600 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,210 ft³/s, Nov. 17, gage height, 7.91 ft; minimum daily, 136 ft³/s, Oct. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	150	303	3330	1250	1000	1550	1180	741	331	799	1450	260
2	150	276	3420	1200	920	1400	942	705	308	810	1910	246
3	150	281	3300	1100	840	1200	852	650	267	917	2550	236
4	150	981	3070	1050	1300	1050	798	556	344	722	2870	235
5	158	3340	2680	1000	3850	960	772	486	2310	448	2540	278
6	167	4020	2310	1050	4010	900	888	453	2440	379	1720	266
7	173	4220	2080	1200	3880	860	1310	483	3700	345	1160	238
8	170	4520	1910	1260	3810	780	1400	489	3840	703	986	220
9	161	4590	1810	1430	3470	1000	1310	437	3800	1010	1320	213
10	147	4780	1840	1250	2840	1360	1360	394	4240	1810	1490	207
11	141	5060	2230	1250	2200	3270	1540	365	6140	3030	2700	204
12	136	5070	3040	1180	1780	3600	1660	340	6320	2800	2600	220
13	138	5250	3160	1180	1550	4200	1740	321	6120	2270	1930	227
14	145	5550	3110	1100	1380	4780	2030	309	5930	1580	1210	222
15	194	5960	2780	1240	1370	5090	2250	301	5710	1410	749	218
16	326	6180	2080	1280	1200	5390	2790	298	5380	3150	907	218
17	316	6750	1880	1080	1100	5540	3530	310	4960	5140	1130	217
18	281	6590	1770	1530	1710	5360	3660	308	4590	5960	1010	217
19	326	6200	1630	2990	3130	5020	3660	402	3910	5830	849	222
20	1140	5790	1500	4190	3730	4550	3450	1310	3040	5280	583	233
21	1130	5190	1400	4380	4100	4150	3260	2010	2320	4370	455	268
22	837	4520	1350	4330	4280	3800	3030	2000	1900	3060	384	314
23	560	3770	1300	4350	4310	3230	2730	1770	1700	2220	361	509
24	444	3070	1250	4190	4200	2560	2140	1530	1580	1860	452	552
25	627	2510	1200	3870	3810	2090	1500	1020	1470	1680	373	467
26	991	2500	1200	3340	3020	1850	1230	575	1010	1550	348	820
27	829	3730	1350	2640	2300	1880	1080	470	654	1500	352	2330
28	590	3810	1480	1960	1820	1890	979	445	951	1450	369	2790
29	452	3740	1600	1480	---	1690	893	437	1390	1400	459	2800
30	378	3560	1520	1300	---	1510	808	398	1140	1400	329	2510
31	334	---	1350	1100	---	1390	---	357	---	1530	283	---
TOTAL	11891	122111	63930	61750	72910	83900	54772	20670	87795	66413	35829	17957
MEAN	384	4070	2062	1992	2604	2706	1826	667	2926	2142	1156	599
MAX	1140	6750	3420	4380	4310	5540	3660	2010	6320	5960	2870	2800
MIN	136	276	1200	1000	840	780	772	298	267	345	283	204
†	+113	+173	-263	+8.7	+104	-30.4	+103	+4.4	+9.0	+36.9	-87.0	+96.6
MEAN‡	497	4243	1799	2001	2708	2676	1929	671	2936	2179	1069	696
CFSM‡	.61	5.20	2.20	2.45	3.32	3.28	2.36	.82	3.60	2.67	1.31	.85
IN.‡	.70	5.80	2.54	2.82	3.46	3.78	2.63	.95	4.02	3.08	1.51	.95

CAL YR 1985 TOTAL 553948 MEAN 1518 MAX 8790 MIN 129 ADJ -17.4 MEAN‡ 1501 CFSM‡ 1.84 IN.‡ 25.52
WTR YR 1986 TOTAL 699928 MEAN 1918 MAX 6750 MIN 136 ADJ +20.8 MEAN‡ 1938 CFSM‡ 2.38 IN.‡ 32.24

† Change in contents, equivalent in cubic feet per second, in Chautauqua Lake.

‡ Adjusted for change in reservoir contents.

03015500 BROKENSTRAW CREEK AT YOUNGSVILLE, PA

LOCATION.--Lat 41°51'09", long 79°19'03", Warren County, Hydrologic Unit 05010001, on right bank 150 ft downstream from bridge on Main Street at Youngsville, 500 ft upstream from Matthews Run, and 3.7 mi upstream from mouth. Records include flow of Matthews Run.

DRAINAGE AREA.--321 mi², including that of Matthews Run.

PERIOD OF RECORD.--October 1909 to current year. Monthly discharge only for some periods, published in WSP 1305. Flow of Matthews Run included in records since October 1938.

REVISED RECORDS.--WSP 743: Drainage area. WSP 1083: 1913 (M). WSP 1275: 1920, 1932, 1936. WSP 1305: 1910-15, 1928-29.

GAGE.--Water-stage recorder. Datum of gage is 1,186.92 ft above National Geodetic Vertical Datum, adjustment of 1907. Prior to Sept. 30, 1933, nonrecording gage at site 150 ft upstream at datum 2.00 ft higher. Oct. 1, 1933, to June 15, 1939, nonrecording gage at site 150 ft upstream, and June 16, 1939, to Sept. 30, 1961, water-stage recorder at present site, both at datum 1.00 ft higher.

REMARKS.--Records good except for estimated daily discharges, Dec. 16 to Jan. 1, Jan. 4-19, Jan. 28 to Feb. 4, Feb. 11-19, and Feb. 26 to Mar. 9, which are fair. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--77 years, 587 ft³/s, 24.84 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 18,000 ft³/s, Mar. 25, 1913, gage height, 14.2 ft, present datum; minimum observed, 19 ft³/s, Oct. 14, 1934.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 16	2130	4570	7.02	June 8	0130	4770	7.15
Nov. 26	2300	4890	7.28	June 13	0730	5860	7.88
Jan. 20	1200	5100	7.37	July 19	0500	8190	9.34
Feb. 5	0830	5400	7.57	July 20	1500	*8610	*9.59
June 5	2130	5970	7.95				

Minimum discharge, 69 ft³/s, Oct. 4, 10, gage height, 1.58 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	75	116	1180	300	300	320	273	241	134	211	177	126
2	76	112	1330	457	290	290	242	231	143	388	166	116
3	73	153	1090	358	280	280	224	223	129	334	173	109
4	70	861	850	320	800	270	220	209	114	254	152	107
5	77	2880	733	300	4440	250	227	190	2860	199	135	137
6	81	3570	677	280	3870	250	282	184	3640	171	127	145
7	81	2850	624	260	2200	250	464	251	2750	155	146	132
8	78	1740	580	250	1090	280	427	275	3380	146	227	111
9	74	1000	556	240	783	380	369	212	2000	213	326	104
10	70	1760	582	230	625	550	387	183	1370	412	489	97
11	74	2660	1050	220	480	2440	478	164	1660	283	1700	93
12	76	2700	1810	210	420	2390	536	153	4980	343	1440	109
13	83	2410	1490	200	380	2100	596	142	5480	702	532	142
14	96	2380	1020	300	340	2560	797	135	3310	929	294	134
15	187	2510	701	400	310	2830	868	132	1520	722	219	113
16	261	3020	560	300	290	2000	1210	146	1600	382	454	104
17	198	3290	490	230	280	1250	1980	148	1770	358	752	102
18	143	2560	450	440	370	829	1590	142	1210	299	393	109
19	160	1470	420	1000	1200	841	899	376	793	6590	242	111
20	393	864	390	4420	2920	888	653	970	791	7550	183	137
21	324	678	380	3540	3010	645	850	1120	620	5490	157	142
22	203	573	360	2390	2150	499	830	694	470	2670	140	148
23	155	618	350	1470	1470	464	648	456	487	908	134	505
24	204	552	340	875	860	432	528	338	381	540	189	475
25	381	440	340	711	640	395	451	269	318	415	195	304
26	463	2300	330	599	480	370	395	222	271	344	150	535
27	251	3890	320	504	400	403	348	202	252	304	182	1770
28	182	3000	320	420	360	389	311	262	269	260	177	1310
29	153	2140	310	380	---	341	280	215	251	228	169	654
30	138	1410	310	350	---	309	250	168	219	215	150	792
31	125	---	300	320	---	282	---	145	---	196	137	---
TOTAL	5005	54507	20243	22274	31038	25777	17613	8798	43172	32211	10107	8973
MEAN	161	1817	653	719	1108	832	587	284	1439	1039	326	299
MAX	463	3890	1810	4420	4440	2830	1980	1120	5480	7550	1700	1770
MIN	70	112	300	200	280	250	220	132	114	146	127	93
CFSM	.50	5.66	2.03	2.24	3.45	2.59	1.83	.88	4.48	3.24	1.02	.93
IN.	.58	6.32	2.35	2.58	3.60	2.99	2.04	1.02	5.00	3.73	1.17	1.04

CAL YR 1985 TOTAL 239744 MEAN 657 MAX 9320 MIN 70 CFSM 2.05 IN. 27.79
WTR YR 1986 TOTAL 279718 MEAN 766 MAX 7550 MIN 70 CFSM 2.39 IN. 32.42

OHIO RIVER MAIN STEM

03016000 ALLEGHENY RIVER AT WEST HICKORY, PA

LOCATION.--Lat 41°34'15", long 79°24'29", Forest County, Hydrologic Unit 05010003, on right bank at downstream side of bridge on State Highway 127 at West Hickory, 0.6 mi upstream from Siggins Run, 0.8 mi downstream from East Hickory Creek, and at mile 158.9.

DRAINAGE AREA.--3,660 mi².

PERIOD OF RECORD.--October 1941 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,059.90 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 12, 1941, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, Dec. 20 to Jan. 12, Jan. 28 to Feb. 4, Feb. 15-23, and Mar. 5-10, which are fair. Flow regulated by Allegheny Reservoir 39 mi upstream since October 1965 and since 1949 by Chautauqua Lake. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--45 years, 6,661 ft³/s, 24.71 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 101,000 ft³/s, Mar. 8, 1956, gage height, 17.20 ft; maximum gage height, 17.83 ft, Jan. 25, 1964 (backwater from ice); minimum discharge not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 29,100 ft³/s, July 20, gage height, 9.30 ft; minimum daily, 1,120 ft³/s, Nov. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3440	1180	17400	5000	8600	10100	4560	6660	2020	3440	3790	1780
2	4110	1120	18600	5000	7200	9140	2570	3790	2060	3030	3870	1730
3	4690	1290	19900	5000	5200	5900	2090	3420	1500	2690	4670	1730
4	5170	3600	21400	5000	6000	3600	1990	3330	1260	2830	5060	2220
5	5260	8430	23000	5000	16200	2800	1970	3220	3920	2890	5110	2450
6	5090	10800	22200	5000	14600	2800	2110	2740	10900	2570	4530	2370
7	5090	9520	21500	5000	12500	2800	2940	2660	8190	2460	3740	2310
8	5080	8560	21000	5000	14200	2800	3200	2760	9030	2160	3320	2230
9	3970	7550	20500	5000	13200	2800	3020	2180	10600	2050	3370	2450
10	3680	9110	20200	5000	12300	2800	2890	1780	13800	2670	3810	2550
11	3080	12100	20900	5000	11100	7900	3140	1650	11400	2520	5640	2460
12	2340	10900	23900	5000	10300	8660	3430	1620	17000	3070	6530	2500
13	2260	10800	23900	5090	10200	9060	3570	1580	16800	5060	5150	2670
14	2270	11000	18500	5150	10100	10800	3990	1580	19200	6260	3980	2870
15	2600	11500	16700	5060	6200	11600	4500	1580	23200	5380	3200	2690
16	2800	13500	14400	4620	4500	10800	5450	1620	26000	4850	2620	2510
17	2650	16700	11900	5060	2700	11300	8000	1710	26400	4470	3450	2180
18	1420	13600	9090	5270	1500	11600	7810	1650	24300	5040	3150	2110
19	1290	11400	5900	9260	1500	10300	7530	1830	24200	19000	3300	2490
20	1790	14800	5000	16800	1500	11400	7560	2980	21200	21900	2900	2610
21	2550	15100	5000	15200	2300	12200	10100	4680	17100	22900	2150	2810
22	2140	14500	5000	17300	3500	14000	13800	4690	14400	21400	2000	2750
23	1730	15500	5000	20300	6600	13500	17700	4650	8800	20100	1740	3170
24	1690	16000	5000	23000	10900	12600	16100	4230	5170	18100	1740	3730
25	1830	16800	3000	22300	14000	11600	11600	3770	4780	15900	1740	3360
26	2260	20800	1800	21500	14500	10900	7950	3030	4510	12500	1640	2640
27	2190	24300	1200	20400	13400	10500	7450	2620	3970	10100	1720	5380
28	1840	15200	1700	18000	12000	4710	7210	2570	3820	6150	1650	5800
29	1530	13800	3000	16000	---	6140	7010	2410	4150	4090	1560	5400
30	1350	16800	5000	15000	---	5000	6780	2140	4340	3900	1900	5330
31	1270	---	5000	12000	---	4770	---	1970	---	3900	2000	---
TOTAL	88460	356260	396590	317310	246800	254880	188020	87100	344020	243380	101030	87280
MEAN	2854	11880	12790	10240	8814	8222	6267	2810	11470	7851	3259	2909
MAX	5260	24300	23900	23000	16200	14000	17700	6660	26400	22900	6530	5800
MIN	1270	1120	1200	4620	1500	2800	1970	1580	1260	2050	1560	1730
†	-1180	+4300	-3740	-1990	+1520	+2160	+2040	+232	-81.8	-11.9	+82.0	-963
MEAN†	1674	16180	9050	8250	10334	10382	8308	3042	11388	7842	3341	1946
CFSM†	.46	4.42	2.47	2.25	2.82	2.84	2.27	.83	3.11	2.14	.91	.53
IN.†	.53	4.93	2.85	2.59	2.94	3.27	2.53	.96	3.47	2.47	1.05	.59

CAL YR 1985 TOTAL 2450690 MEAN 6714 MAX 29400 MIN 943 ADJ -193 MEAN† 6522 CFSM† 1.78 IN.† 24.32
WTR YR 1986 TOTAL 2711130 MEAN 7428 MAX 26400 MIN 1120 ADJ +147 MEAN† 7575 CFSM† 2.07 IN.† 28.18

† Change in contents, equivalent in cubic feet per second, in Allegheny Reservoir and Chautauqua Lake.

‡ Adjusted for change in reservoir contents.

TIONESTA CREEK BASIN

35

03020000 TIONESTA CREEK AT TIONESTA DAM, PA

LOCATION.--Lat 41°28'44", long 79°26'26", Forest County, Hydrologic Unit 05010003, on left bank 100 ft downstream from outlet tunnel at Tionesta Dam, 1.5 mi southeast of Tionesta, and 1.2 mi upstream from mouth.

DRAINAGE AREA.--479 mi².

PERIOD OF RECORD.--June 1940 to current year. Prior to October 1970, published as "at Tionesta Creek Dam."

GAGE.--Water-stage recorder. Datum of gage is 1,043.43 ft above National Geodetic Vertical Datum of 1929, unadjusted. July 1, 1954, to Dec. 6, 1960, water-stage recorder at present site and at datum 1.5 ft higher. See WSP 1305 or 1725 for history of changes prior to July 1, 1954.

REMARKS.--No estimated daily discharges. Records good. Flow completely regulated since 1941 by Tionesta Lake 0.2 mi upstream. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station

AVERAGE DISCHARGE.--46 years, 888 ft³/s, 25.17 in/yr, adjusted for storage since January 1941.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 13,500 ft³/s, Mar. 12, 1964; maximum gage height, 11.31 ft, Mar. 13, 1964 (backwater from Allegheny River); minimum daily discharge, 0.4 ft³/s, Feb. 28, 29, May 22 to June 16, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,200 ft³/s, Nov. 19, gage height, 6.65 ft; minimum daily, 59 ft³/s, Sept. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	126	523	3660	548	518	795	526	532	244	251	314	126
2	126	517	3600	544	527	795	526	534	246	428	246	126
3	126	513	3530	540	549	794	461	535	245	436	246	126
4	126	552	3430	536	568	650	393	532	243	249	231	126
5	126	629	3320	532	1040	552	393	394	387	249	180	126
6	126	1260	3150	528	1490	552	397	257	575	249	150	126
7	126	2190	2970	389	2290	552	471	581	769	249	150	125
8	126	3150	1940	249	3660	548	685	838	1270	249	150	124
9	179	3540	804	249	3580	544	840	834	2150	249	150	93
10	254	3450	816	249	3500	544	849	688	2500	435	150	60
11	252	3550	842	251	3390	692	848	541	1940	542	119	60
12	252	3640	884	251	3240	867	848	539	1470	535	185	60
13	192	3680	1400	253	3050	883	847	399	2370	535	206	60
14	122	4240	1990	254	2040	906	842	257	3070	539	204	60
15	122	4800	1970	254	833	949	839	329	2930	539	203	59
16	122	3330	1920	254	829	1290	838	403	2230	539	203	71
17	124	1680	1870	254	822	2520	1070	403	1860	545	240	78
18	124	3960	1320	255	820	2720	1810	403	1260	539	346	78
19	125	5050	803	260	834	2130	2400	402	906	561	397	78
20	126	4940	469	584	1440	2720	1840	403	900	597	395	78
21	188	4790	258	1620	2660	2980	1840	432	892	1230	298	77
22	255	4660	262	2930	3350	2360	2310	522	674	2110	147	109
23	255	4440	414	4120	3370	1800	2740	519	535	2060	147	117
24	256	4210	571	4360	3920	1150	1850	385	538	1980	202	349
25	442	3070	573	4130	4150	746	1060	248	535	1400	254	523
26	552	1900	569	3380	3410	604	1070	248	393	866	253	517
27	549	1380	565	2050	2180	515	1060	249	249	655	252	515
28	546	1020	562	1040	1310	519	929	320	251	456	173	667
29	541	2200	558	644	---	522	800	393	251	383	129	601
30	535	3710	555	515	---	523	666	391	251	383	126	384
31	529	---	552	518	---	526	---	319	---	380	126	---
TOTAL	7650	86574	46127	32541	59370	34248	32048	13830	32134	20418	6572	5699
MEAN	247	2886	1488	1050	2120	1105	1068	446	1071	659	212	190
MAX	552	5050	3660	4360	4150	2980	2740	838	3070	2110	397	667
MIN	122	513	258	249	518	515	393	248	243	249	119	59
†	+3.2	+365	-361	-21.0	+16.0	-4.9	+1.7	+19.5	-11.8	-8.1	+6.5	-5.0
MEAN†	250	3251	1127	1029	2136	1100	1070	466	1059	651	218	185
CFSM†	.52	6.79	2.35	2.15	4.46	2.30	2.23	.97	2.21	1.36	.46	.39
IN.†	.60	7.58	2.71	2.48	4.64	2.65	2.49	1.12	2.47	1.57	.53	.44

CAL YR 1985 TOTAL 380507 MEAN 1042 MAX 5050 MIN 122 ADJ -27.8 MEAN† 1014 CFSM† 2.12 IN.† 28.75
WTR YR 1986 TOTAL 377211 MEAN 1033 MAX 5050 MIN 59 ADJ -1.1 MEAN† 1032 CFSM† 2.15 IN.† 29.28

† Change in contents, equivalent in cubic feet per second, in Tionesta Lake.

‡ Adjusted for change in reservoir contents.

OIL CREEK BASIN

03020500 OIL CREEK AT ROUSEVILLE, PA

LOCATION.--Lat 41°28'54", long 79°41'44", Venango County, Hydrologic Unit 05010003, on right bank 100 ft downstream from bridge on State Highway 8, about 300 ft upstream from Cherrytree Run, and 1 mi north of Rouseville. Records include flow of Cherrytree Run.

DRAINAGE AREA.--300 mi², including that of Cherrytree Run.

PERIOD OF RECORD.--June 1932 to current year.

REVISED RECORDS.--WSP 743: Drainage area. WSP 1053: 1936-37(M), 1943(M).

GAGE.--Water-stage recorder. Datum of gage is 1,028.32 ft above National Geodetic Vertical Datum of 1929. Prior to June 9, 1941, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, Dec. 17 to Feb. 19, and Feb. 27 to Mar. 5, which are fair. Several observations of water temperature were made during the year. Corps of Engineers satellite tele-meter at station.

AVERAGE DISCHARGE.--54 years, 537 ft³/s, 24.31 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,000 ft³/s, Jan. 22, 1959, gage height, 11.97 ft; minimum observed, 22 ft³/s, July 29, Sept. 5, 7, 1934; minimum gage height, 1.48 ft, Aug. 20, 1971.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 26	2200	*5680	7.50	Feb. 5	----	----	ice jam
Jan. 20	----	ice jam	*11.63	June 6	1630	5210	7.24

Minimum discharge, 52 ft³/s, Oct. 10, gage height, 1.65 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	76	943	1200	280	300	243	295	198	225	140	88
2	60	90	1070	900	290	280	231	278	206	325	131	85
3	58	153	840	700	440	260	221	263	173	300	133	83
4	56	869	697	540	740	250	215	245	158	236	128	85
5	57	3500	630	470	1300	240	220	232	725	196	115	134
6	58	3110	615	410	1000	314	336	238	4160	175	109	140
7	58	1450	565	360	800	270	1010	634	4240	163	113	102
8	57	1090	531	340	600	240	625	441	2810	157	143	90
9	54	747	520	330	500	288	465	331	1210	223	134	84
10	53	1400	571	320	430	329	427	289	662	202	119	78
11	58	2920	1600	300	380	1910	468	258	1800	169	642	76
12	57	1800	2040	360	340	976	531	236	3470	228	355	82
13	62	1670	1460	460	310	1320	610	216	3130	342	196	98
14	67	1620	1100	410	290	2330	608	204	1320	616	144	89
15	91	1790	800	380	280	1640	578	196	869	294	127	80
16	139	2170	637	340	270	1140	1510	208	1590	296	244	86
17	93	3430	460	360	320	832	1950	220	1870	490	210	81
18	75	1570	400	700	430	668	1150	178	931	363	170	78
19	87	1020	350	3300	1600	655	774	296	689	1100	129	84
20	107	815	320	2000	2530	646	629	919	820	1240	112	87
21	111	669	310	1100	2320	440	901	1040	578	1230	106	97
22	89	561	300	740	1700	350	880	522	442	526	100	107
23	79	616	290	600	1120	384	682	403	474	340	104	500
24	110	516	270	540	820	351	541	329	392	276	152	764
25	213	419	260	470	639	325	454	280	317	229	112	318
26	150	2640	260	400	482	313	411	244	288	212	98	264
27	112	4640	280	350	400	331	361	233	259	193	150	1700
28	97	2570	330	320	330	338	336	552	272	171	142	638
29	88	1730	700	300	---	298	328	391	265	158	110	357
30	82	1160	1900	290	---	274	303	265	241	153	99	449
31	79	---	1700	290	---	255	---	219	---	148	92	---
TOTAL	2616	46811	22749	19580	20941	18547	17998	10655	34559	10976	4859	7004
MEAN	84.4	1560	734	632	748	598	600	344	1152	354	157	233
MAX	213	4640	2040	3300	2530	2330	1950	1040	4240	1240	642	1700
MIN	53	76	260	290	270	240	215	178	158	148	92	76
CFSM	.28	5.20	2.45	2.11	2.49	1.99	2.00	1.15	3.84	1.18	.52	.78
IN.	.32	5.80	2.82	2.43	2.60	2.30	2.23	1.32	4.29	1.36	.60	.87

CAL YR 1985 TOTAL 211847 MEAN 580 MAX 6340 MIN 53 CFSM 1.93 IN. 26.25
WTR YR 1986 TOTAL 217295 MEAN 595 MAX 4640 MIN 53 CFSM 1.98 IN. 26.94

FRENCH CREEK BASIN

37

03021350 FRENCH CREEK NEAR WATTSBURG, PA

LOCATION.--Lat 42°00'55", long 79°46'58", Erie County, Hydrologic Unit 05010004, on right bank at downstream side of bridge on Tanner Road, 1,200 ft east of State Highway 74, 1.1 mi west of Pennsylvania-New York border, 1.5 mi northwest of Wattsburg, and 2.4 mi above confluence with West Branch French Creek.

DRAINAGE AREA.--92.0 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 1,304.84 ft above National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

REMARKS.--Records good except for estimated daily discharges, Dec. 19 to Jan. 20, Jan. 29 to Feb. 5, Feb. 8-21, Mar. 6-9, and Aug. 19 to Sept. 4, which are fair. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--12 years, 232 ft³/s, 34.25 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,350 ft³/s, Sept. 14, 1979, gage height, 11.95 ft; minimum, 6.0 ft³/s, July 24, 1979, gage height, 2.95 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 5	1645	3400	8.88	June 8	0100	3010	8.44
Feb. 5	1545	2690	8.09	June 11	2115	4530	10.12
Mar. 11	1015	3150	8.60	July 19	1530	*5760	*11.36

Minimum daily discharge, 13 ft³/s, Oct. 4, 5, Sept. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	40	415	78	84	103	67	57	28	59	36	19
2	15	38	588	90	82	101	62	56	29	169	45	17
3	14	50	329	150	80	96	57	51	26	190	36	16
4	13	641	228	145	200	108	55	47	24	82	28	15
5	13	2850	189	140	2100	105	59	43	360	55	23	22
6	20	2100	177	130	1120	95	119	46	958	44	19	24
7	24	592	166	125	370	85	160	114	691	38	19	18
8	22	511	156	115	250	78	113	83	2370	35	27	16
9	18	294	152	110	190	100	114	57	1010	312	42	16
10	16	1190	199	100	150	666	181	47	227	172	51	14
11	19	1320	488	92	130	2480	205	41	1630	80	100	13
12	20	671	688	88	115	598	224	36	3580	192	67	18
13	24	998	374	84	100	1080	312	34	1140	639	38	25
14	29	1150	238	76	92	1440	550	32	361	549	26	23
15	68	825	169	72	82	1160	767	32	215	186	36	18
16	89	848	160	68	78	624	982	37	300	133	259	24
17	51	1190	140	130	74	350	982	39	246	126	141	26
18	38	417	130	300	130	267	407	35	150	89	80	21
19	312	268	120	850	850	546	226	116	120	3370	52	22
20	415	220	120	1800	1000	484	183	702	165	1600	31	25
21	135	189	110	1040	1180	230	283	379	111	1310	27	29
22	69	184	105	570	558	173	228	161	83	266	23	31
23	51	271	105	403	336	168	166	98	81	148	22	47
24	162	187	100	255	236	149	128	72	69	104	31	81
25	472	141	98	210	181	133	104	57	58	82	32	54
26	173	393	94	181	144	143	88	48	50	69	25	645
27	91	1280	90	142	131	150	77	49	47	65	31	1620
28	62	531	88	107	109	123	69	58	53	55	29	279
29	50	353	86	96	---	102	62	44	61	43	28	132
30	43	340	84	90	---	88	58	36	66	41	24	154
31	39	---	82	86	---	75	---	31	---	43	21	---
TOTAL	2583	20082	6268	7923	10152	12100	7088	2738	14309	10346	1449	3464
MEAN	83.3	669	202	256	363	390	236	88.3	477	334	46.7	115
MAX	472	2850	688	1800	2100	2480	982	702	3580	3370	259	1620
MIN	13	38	82	68	74	75	55	31	24	35	19	13
CFSM	.91	7.28	2.20	2.78	3.94	4.24	2.57	.96	5.18	3.63	.51	1.26
IN.	1.04	8.12	2.53	3.20	4.10	4.89	2.87	1.11	5.79	4.18	.59	1.40

CAL YR 1985 TOTAL 78387 MEAN 215 MAX 3300 MIN 11 CFSM 2.33 IN. 31.68
WTR YR 1986 TOTAL 98502 MEAN 270 MAX 3580 MIN 13 CFSM 2.93 IN. 39.82

FRENCH CREEK BASIN

03021410 WEST BRANCH FRENCH CREEK NEAR LOWVILLE, PA

LOCATION.-- Lat 42°04'54", long 79°51'02", Erie County, Hydrologic Unit 05010004, on left bank on upstream side of highway bridge on Knoyle Road, 1,000 ft downstream from Townley Run, 2.5 mi southwest of Hornby, and 4.2 mi northwest of Lowville.

DRAINAGE AREA.--52.3 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 1,300 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, Dec. 15 to Jan. 19, Jan. 28 to Feb. 6, Feb. 10-19, Mar. 6-8, and Aug. 18 to Sept. 4, which are fair. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--12 years, 133 ft³/s, 34.53 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,390 ft³/s, Mar. 21, 1978, Aug. 5, 1983, gage height, 10.81 ft; minimum observed, 2.4 ft³/s, June 27, 1979, gage height, 2.96 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft³/s (revised) and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 5	1845	2360	10.27	Mar. 11	0245	1610	10.02
Jan. 20	1100	2300	10.25	June 8	0730	2300	10.25
Feb. 5	---	---	ice jam	June 12	0915	*3270	*10.53

Minimum daily discharge, 3.5 ft³/s, Sept. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.4	21	251	70	48	87	33	28	16	42	20	6.0
2	5.4	19	270	68	44	78	30	29	15	76	29	5.6
3	5.7	25	165	68	39	61	28	26	15	118	24	5.2
4	5.3	372	115	70	110	68	28	24	15	43	19	4.7
5	5.6	2060	97	66	250	68	33	22	382	29	17	5.6
6	8.7	1390	94	68	540	68	74	29	876	23	15	6.0
7	14	571	90	70	479	60	101	127	367	20	15	5.4
8	11	375	84	64	292	80	63	64	1370	19	16	4.8
9	7.9	219	83	62	234	126	60	37	831	213	20	4.4
10	7.0	655	127	62	170	509	106	40	156	130	22	3.9
11	9.8	794	286	62	130	1340	116	25	1240	46	35	3.5
12	12	471	384	60	95	516	132	21	2820	72	27	4.0
13	17	749	238	62	80	637	210	19	1440	420	23	7.9
14	22	811	154	60	66	890	312	18	455	493	18	9.3
15	86	525	105	60	56	868	309	18	115	153	16	8.6
16	100	531	90	58	44	447	471	19	228	75	27	9.3
17	55	649	82	62	46	239	505	19	157	81	23	10
18	68	282	76	250	150	183	223	20	62	51	17	9.3
19	339	153	72	740	800	385	103	147	54	146	12	11
20	369	131	70	1970	821	371	89	543	92	284	9.0	12
21	191	115	66	1130	883	163	180	290	53	233	8.0	12
22	89	143	64	549	525	115	151	108	41	73	6.8	12
23	62	212	62	348	281	118	109	59	44	57	6.0	28
24	119	125	62	240	171	107	77	42	40	40	8.0	46
25	284	84	62	186	137	93	53	33	35	32	8.4	20
26	142	228	64	130	128	97	46	27	29	28	6.6	291
27	83	762	70	109	94	96	39	24	25	27	8.4	492
28	53	369	68	80	87	74	34	34	35	25	8.0	158
29	30	208	66	70	---	58	31	25	33	23	7.8	49
30	25	215	72	60	---	44	28	21	53	23	7.2	167
31	23	---	72	54	---	37	---	18	---	22	6.4	---
TOTAL	2254.8	13264	3661	7008	6800	8083	3774	1956	11094	3117	485.6	1411.5
MEAN	72.7	442	118	226	243	261	126	63.1	370	101	15.7	47.0
MAX	369	2060	384	1970	883	1340	505	543	2820	493	35	492
MIN	5.3	19	62	54	39	37	28	18	15	19	6.0	3.5
CFSM	1.39	8.45	2.26	4.32	4.64	4.99	2.41	1.21	7.07	1.92	.30	.90
IN.	1.60	9.43	2.60	4.98	4.84	5.75	2.68	1.39	7.89	2.22	.35	1.00

CAL YR 1985 TOTAL 47061.0 MEAN 129 MAX 2760 MIN 4.0 CFSM 2.47 IN. 33.47
WTR YR 1986 TOTAL 62908.8 MEAN 172 MAX 2820 MIN 3.5 CFSM 3.30 IN. 44.73

03021520 FRENCH CREEK NEAR UNION CITY, PA

LOCATION.--Lat 41°54'28", long 79°53'49", Erie County, Hydrologic Unit 05010004, on left bank at upstream side of bridge on State Highway 97, 0.4 mi upstream from South Branch French Creek, 0.9 mi downstream from Union City Dam, and 3.2 mi west of Union City.

DRAINAGE AREA.--221 mi².

PERIOD OF RECORD.--October 1909 to current year. Published as North Branch French Creek at Kimmeytown May 1910 to September 1914, as "at Kimmeytown" October 1915 to September 1932, and as "at Carters Corners" (station 03021500) October 1932 to September 1971. Monthly discharge only for some periods published in WSP 1305.

REVISED RECORDS.--WSP 743: Drainage area. WSP 1275: 1934, 1936-37 (M), 1939 (M), 1942 (M). WSP 1305: 1910-11, 1913, 1914 (M), 1915-16, 1925. 1928. WDR PA-79-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,191.16 ft above National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to Dec. 22, 1948, nonrecording gage at site 4.5 mi upstream at datum 43.4 ft higher. Dec. 22, 1948, to Sept. 30, 1971, water-stage recorder at site 4.6 mi upstream at datum 43.4 ft higher. Oct. 1, 1971 to Oct. 10, 1974, at present site at different datum. Oct. 11, 1974 to Nov. 4, 1977 at site 0.7 mi upstream at different datum.

REMARKS.--Records good except for estimated daily discharges, Oct. 1-14, Dec. 18 to Jan. 17, Mar. 6, 7, and Aug. 19 to Sept. 25, which are fair. Flood flow regulated beginning October 1971 by Union City Reservoir 0.9 mi upstream, serving as a retarding basin. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--77 years, 438 ft³/s, 26.92 in/yr, adjusted for storage since 1971.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,000 ft³/s, Apr. 5, 1947, gage height, 13.50 ft, site and datum then in use, by slope-area measurement of peak flow; maximum gage height observed, 16.0 ft, Feb. 20, 1918 (backwater from ice), site and datum then in use; minimum discharge observed, 3.9 ft³/s, Aug. 15, 18-21, 1930.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,700 ft³/s, June 13, gage height, 6.76 ft; minimum daily, 30 ft³/s, Sept. 11-22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	98	1220	320	632	954	199	188	99	162	81	31
2	38	97	1210	320	597	840	180	188	96	237	78	31
3	38	113	1200	320	772	618	167	173	82	374	87	31
4	38	318	1170	330	822	439	161	157	75	292	72	31
5	38	1050	1130	340	1110	342	165	147	257	149	67	31
6	38	1410	1080	330	1240	260	205	162	970	109	67	31
7	38	1750	1030	320	1260	260	391	401	1130	92	70	31
8	38	1770	954	310	1250	290	405	441	1290	83	76	31
9	38	1630	871	300	1230	321	323	286	1400	202	110	31
10	38	1640	758	310	1210	533	360	207	1440	500	108	31
11	38	1910	756	310	1170	1120	471	192	1490	351	219	30
12	38	1940	904	310	1130	1230	528	163	2260	224	154	30
13	38	1910	957	290	1080	1290	582	151	2650	503	101	30
14	38	2020	943	290	1000	1520	770	146	2580	889	77	30
15	92	2110	872	290	915	1780	886	146	2320	922	68	30
16	255	2080	774	290	771	1800	1010	159	2140	796	317	30
17	195	2210	621	290	533	1660	1110	165	1880	531	338	30
18	131	2070	430	440	541	1480	1150	152	1590	335	149	30
19	245	1840	370	800	947	1380	1140	298	1360	606	70	30
20	706	1590	340	1220	1110	1340	1100	835	1280	1210	34	30
21	750	1380	330	1230	1200	1280	1060	995	1300	1260	31	30
22	565	1280	320	1240	1240	1240	1020	963	1260	1250	31	30
23	288	1260	340	1250	1230	1200	969	859	1210	1200	32	40
24	219	1220	360	1240	1210	1170	892	621	1150	1130	34	50
25	616	1190	350	1220	1180	1130	746	330	1060	1020	34	46
26	675	1210	340	1180	1140	1070	519	181	921	799	34	257
27	509	1250	330	1150	1090	1010	307	167	615	377	34	1040
28	273	1260	320	1100	1040	932	232	268	239	121	32	1160
29	165	1240	330	1030	---	818	211	191	144	100	32	1130
30	124	1230	340	957	---	567	194	136	131	91	31	1040
31	110	---	350	853	---	309	---	123	---	88	31	---
TOTAL	6450	42076	21300	20180	28650	30183	17453	9591	34419	16003	2699	5433
MEAN	208	1403	687	651	1023	974	582	309	1147	516	87.1	181
MAX	750	2210	1220	1250	1260	1800	1150	995	2650	1260	338	1160
MIN	38	97	320	290	533	260	161	123	75	83	31	30
†	+0.2	+185	-176	+17.6	+45.9	-61.5	+3.1	-3.5	+0.4	-0.4	0	+39.0
MEAN‡	208	1588	511	669	1068	912	585	306	1147	516	87.2	220
CFSM‡	.94	7.19	2.31	3.03	4.83	4.13	2.65	1.38	5.19	2.33	.39	1.00
IN.‡	1.08	8.02	2.66	3.49	5.03	4.76	2.96	1.59	5.79	2.69	.45	1.12

CAL YR 1985 TOTAL 203828 MEAN 558 MAX 3420 MIN 36 ADJ -18.9 MEAN‡ 539 CFSM‡ 2.44 IN.‡ 33.14
WTR YR 1986 TOTAL 234437 MEAN 642 MAX 2650 MIN 30 ADJ +3.2 MEAN‡ 645 CFSM‡ 2.92 IN.‡ 39.64

† Change in contents, equivalent in cubic feet per second, in Union City Reservoir.

‡ Adjusted for change in reservoir contents.

FRENCH CREEK BASIN

03022540 WOODCOCK CREEK AT BLOOMING VALLEY, PA

LOCATION.--Lat 41°41'26", long 80°02'54", Crawford County, Hydrologic Unit 05010004, on left bank at upstream side of bridge, 0.7 mi northeast of Blooming Valley, and 3.4 mi upstream from Woodcock Creek Dam.

DRAINAGE AREA.--31.1 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 1,200 ft, above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, Dec. 15 to Jan. 5-20, Jan. 26 to Feb. 5, Feb. 10-19, and Feb. 25 to Mar. 8, which are fair. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--12 years, 58.2 ft³/s, 25.41 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,980 ft³/s, Feb. 17, 1976, gage height, 11.48 ft, from rating curve extended above 600 ft³/s on basis of slope-area measurement of peak flow; maximum gage height, 12.27 ft, Feb. 25, 1977 (backwater from ice); minimum daily discharge, 2.4 ft³/s, Aug. 27, 1983.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 5	0515	972	8.67	June 12	1730	918	8.58
June 6	2215	*1210	*9.06				

Minimum discharge, 3.3 ft³/s, Sept. 11, gage height, 5.77 ft; minimum gage height, 5.74 ft, Oct. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.7	9.3	74	33	23	33	23	23	17	21	6.2	4.4
2	7.1	10	99	43	22	31	22	22	18	40	6.4	4.1
3	6.6	34	66	57	60	30	20	20	18	27	11	3.9
4	6.6	227	57	75	140	32	21	18	16	20	8.8	3.8
5	6.7	849	53	54	570	31	23	17	193	17	6.2	7.0
6	7.7	364	55	41	181	32	53	22	417	15	5.2	8.2
7	8.2	130	53	35	96	36	91	100	522	13	9.1	5.4
8	7.5	118	50	30	77	40	45	42	223	13	17	4.5
9	7.1	67	51	28	67	66	35	27	82	20	9.3	4.1
10	7.3	242	55	27	50	132	40	24	50	19	18	3.7
11	8.3	288	169	25	42	224	51	21	472	17	36	3.5
12	8.6	163	224	24	36	84	69	17	646	21	14	13
13	10	143	108	23	31	281	77	16	273	38	9.6	11
14	11	159	73	22	28	201	54	14	117	33	7.6	7.6
15	22	172	60	22	25	130	78	14	99	19	6.9	5.7
16	15	283	56	21	22	86	254	18	253	33	36	6.5
17	11	286	50	32	20	66	215	15	283	37	18	5.9
18	9.7	109	47	60	22	55	98	14	102	22	11	6.0
19	13	77	45	190	60	62	64	42	81	17	8.1	7.8
20	18	66	43	390	192	54	58	64	95	15	6.5	12
21	13	56	40	167	214	38	95	45	56	13	5.7	9.9
22	11	54	38	107	130	36	82	30	43	11	5.1	18
23	10	59	37	77	89	36	58	23	64	9.5	5.9	35
24	31	45	35	55	65	34	46	20	38	8.6	7.9	33
25	25	39	39	46	49	31	38	17	31	8.4	6.5	20
26	15	416	36	37	45	30	34	15	27	8.2	7.3	61
27	12	485	35	33	37	35	30	20	27	7.9	19	117
28	11	225	34	31	34	31	28	57	27	7.2	12	45
29	10	151	33	28	---	29	25	30	24	6.8	7.9	26
30	9.6	93	33	26	---	26	24	20	22	7.4	6.6	104
31	9.4	---	33	24	---	23	---	17	---	6.6	5.5	---
TOTAL	355.1	5419.3	1881	1863	2427	2055	1851	844	4336	551.6	340.3	597.0
MEAN	11.5	181	60.7	60.1	86.7	66.3	61.7	27.2	145	17.8	11.0	19.9
MAX	31	849	224	390	570	281	254	100	646	40	36	117
MIN	6.6	9.3	33	21	20	23	20	14	16	6.6	5.1	3.5
CFSM	.37	5.81	1.95	1.93	2.79	2.13	1.98	.88	4.65	.57	.35	.64
IN.	.42	6.48	2.25	2.23	2.90	2.46	2.21	1.01	5.19	.66	.41	.71

CAL YR 1985 TOTAL 23216.1 MEAN 63.6 MAX 849 MIN 6.0 CFSM 2.04 IN. 27.76
WTR YR 1986 TOTAL 22520.2 MEAN 61.7 MAX 849 MIN 3.5 CFSM 1.98 IN. 26.93

FRENCH CREEK BASIN

41

03022554 WOODCOCK CREEK AT WOODCOCK CREEK DAM, PA

LOCATION.--Lat 41°41'45", long 80°06'30", Crawford County, Hydrologic Unit 05010004, on left bank 0.5 mi downstream from Woodcock Creek Dam, 2.6 mi southeast of Saegertown, and 3.0 mi upstream from mouth.

DRAINAGE AREA.--45.6 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 1,126.92 ft above National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to Nov. 4, 1976, water-stage recorder at site 0.5 mi downstream at datum 10.08 ft lower.

REMARKS.--No estimated daily discharges. Records good except those below 10 ft³/s, which are fair. Flow completely regulated by Woodcock Creek Lake 0.5 mi upstream. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--12 years, 88.8 ft³/s, 26.45 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,040 ft³/s, June 17, 1986, gage height, 5.41 ft; minimum daily, 4.2 ft³/s, Apr. 21, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,040 ft³/s, June 17, gage height, 5.41 ft; minimum daily, 5.8 ft³/s, July 30, 31, Aug. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	102	301	51	116	97	11	34	36	17	5.8	7.2
2	15	80	300	51	125	64	5.9	36	18	26	7.2	7.2
3	15	68	293	51	136	49	6.0	35	17	36	7.2	7.2
4	15	68	286	51	109	49	6.2	34	17	42	7.2	7.2
5	15	110	277	52	158	49	6.2	27	26	42	7.2	7.2
6	15	150	269	52	215	49	6.5	21	34	42	7.2	7.2
7	15	244	260	52	205	49	6.3	23	51	30	7.2	7.2
8	15	299	191	52	285	49	6.2	21	120	17	7.2	7.2
9	15	296	125	52	279	49	6.5	22	270	17	7.2	7.2
10	15	296	124	51	273	52	6.6	22	353	17	7.2	7.2
11	15	301	128	51	265	54	7.0	22	217	17	7.2	7.2
12	15	301	133	51	240	54	7.6	22	83	17	17	7.2
13	15	299	193	52	170	60	6.9	13	325	17	28	7.2
14	15	297	266	51	139	59	6.8	8.0	725	22	28	7.2
15	15	297	258	51	122	94	7.6	8.9	827	31	21	7.2
16	32	297	143	51	113	133	8.9	10	826	31	16	7.2
17	50	304	51	52	87	217	76	10	914	43	23	7.2
18	50	424	51	57	92	204	190	12	986	61	28	7.2
19	50	490	51	60	121	128	216	42	743	61	21	7.2
20	50	479	51	64	188	212	214	102	503	60	16	7.2
21	49	468	51	97	262	263	169	229	397	60	16	7.2
22	49	456	51	222	265	248	111	218	181	39	12	17
23	49	442	51	302	261	206	111	56	62	14	7.2	28
24	80	428	51	297	244	103	74	29	61	9.9	7.2	37
25	110	295	51	289	176	37	27	20	60	9.2	7.2	44
26	109	141	51	280	146	27	20	18	40	9.2	7.2	44
27	108	149	51	274	131	27	20	18	17	9.2	7.2	44
28	107	152	51	265	115	21	20	18	17	9.2	7.2	55
29	106	228	51	204	---	17	27	39	17	6.9	7.2	88
30	105	307	51	152	---	17	34	62	17	5.8	7.2	109
31	104	---	51	128	---	17	---	62	---	5.8	7.2	---
TOTAL	1433	8268	4312	3565	5038	2754	1421.2	1293.9	7960	824.2	368.6	617.2
MEAN	46.2	276	139	115	180	88.8	47.4	41.7	265	26.6	11.9	20.6
MAX	110	490	301	302	285	263	216	229	986	61	28	109
MIN	15	68	51	51	87	17	5.9	8.0	17	5.8	5.8	7.2
†	-31.6	+22.5	-35.6	+1.3	-1.4	+11.7	+46.6	+8.1	-3.9	-4.9	0	+7.1
MEAN‡	14.6	298	103	116	179	100	94.0	49.8	261	21.7	11.9	27.7
CFSM‡	.32	6.54	2.26	2.54	3.92	2.19	2.06	1.09	5.72	.48	.26	.61
IN.‡	.37	7.30	2.61	2.93	4.08	2.52	2.30	1.26	6.38	.55	.30	.68

CAL YR 1985 TOTAL 36840.6 MEAN 101 MAX 532 MIN 7.2 ADJ -2.8 MEAN‡ 98.2 CFSM‡ 2.15 IN.‡ 29.22
WTR YR 1986 TOTAL 37854.9 MEAN 104 MAX 986 MIN 5.8 ADJ +1.5 MEAN‡ 106 CFSM‡ 2.32 IN.‡ 31.28

† Change in contents, equivalent in cubic feet per second, in Woodcock Creek Lake.

‡ Adjusted for change in reservoir contents.

FRENCH CREEK BASIN

03024000 FRENCH CREEK AT UTICA, PA

LOCATION.--Lat 41°21'15", long 79°57'22", Venango County, Hydrologic Unit 05010004, on right bank at upstream side of bridge on Legislative Route 60019 at Utica and 2,000 ft upstream from Mill Creek.

DRAINAGE AREA.--1,028 mi².

PERIOD OF RECORD.--August 1932 to current year.

REVISED RECORDS.--WSP 743: Drainage area. WSP 823: 1936 (M). WSP 1275: 1933, 1936.

GAGE.--Water-stage recorder. Datum of gage is 1,019.44 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 27, 1933, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, Dec. 21-29, Jan. 9-12, Jan. 29 to Feb. 3, Feb. 11-18, and Feb. 27 to Mar. 9, which are fair. Flow regulated since 1971 by Union City Reservoir 50 mi upstream, serving as a retarding basin, and since January 1974 by Woodcock Creek Lake, 25 mi upstream. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--54 years, 1,833 ft³/s, 24.21 in/yr, adjusted for storage since 1971.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,800 ft³/s, Mar. 7, 1964, gage height, 13.2 ft, from floodmark in gage well; minimum, 43 ft³/s, July 30, 1934, gage height, 1.03 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1912, 15.7 ft in March 1913, discharge 35,600 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,600 ft³/s, Nov. 7, gage height, 9.61 ft; minimum daily, 148 ft³/s, Oct. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	158	521	4700	1470	1400	1900	1240	928	759	841	364	227
2	152	490	4390	1470	1700	1700	968	869	703	1060	363	208
3	151	673	4160	1480	2500	1500	819	820	608	1270	365	194
4	158	2140	3770	1550	3480	1300	763	759	550	1210	326	185
5	153	9580	3450	1620	7700	1200	754	709	848	1030	305	206
6	148	11800	3240	1610	8890	1050	895	670	6230	796	280	195
7	149	12200	3100	1480	8090	940	1290	1310	8070	656	309	183
8	158	9790	2930	1380	5350	800	1530	1730	8220	585	340	179
9	170	6740	2700	1250	4220	1050	1320	1570	7500	982	341	168
10	171	6420	2580	1150	3580	1790	1210	1140	5270	801	474	159
11	173	8030	3250	1100	3000	4310	1450	893	6170	990	796	153
12	173	7720	4600	1000	2700	5080	1790	767	9850	1100	1050	170
13	182	7150	4450	1370	2300	5640	2160	680	12300	1210	760	178
14	199	7180	3970	1320	2100	6880	2470	598	11400	1700	524	175
15	241	7300	3440	1210	1800	6730	2700	553	9150	1680	427	175
16	352	7910	2910	1190	1600	5960	3370	569	7750	1580	407	176
17	621	9070	2540	1210	1400	5070	4910	556	7450	1590	655	165
18	642	8540	2210	2260	1700	4290	4740	541	6170	1370	793	162
19	630	7070	1870	4620	4690	3650	3830	795	4700	1120	576	167
20	778	5450	1540	8320	6150	3390	3170	2400	4070	1600	417	164
21	1250	4410	1400	8960	6560	3180	3110	3940	3680	1920	342	177
22	1380	3740	1300	7690	6450	2870	3190	3470	3030	1850	297	206
23	1160	3510	1150	5910	5220	2690	2870	2860	2930	1660	285	603
24	1020	3340	1050	4510	4290	2530	2500	2220	2570	1530	289	1020
25	1210	3090	900	3770	3500	2290	2170	1660	2260	1420	255	961
26	1440	4300	940	3300	2980	2150	1890	1250	2020	1310	272	719
27	1500	8450	1050	3010	2500	2100	1590	995	1780	1130	312	1480
28	1250	9120	1200	2540	2200	2040	1310	1250	1550	839	308	2490
29	964	7770	1350	2100	---	1900	1110	1540	1230	562	318	2190
30	717	5770	1500	1900	---	1740	997	1200	962	441	286	2250
31	594	---	1490	1600	---	1540	---	907	---	389	253	---
TOTAL	18044	189274	79130	83350	108050	89260	62116	40149	139780	36222	13089	15685
MEAN	582	6309	2553	2689	3859	2879	2071	1295	4659	1168	422	523
MAX	1500	12200	4700	8960	8890	6880	4910	3940	12300	1920	1050	2490
MIN	148	490	900	1000	1400	800	754	541	550	389	253	153
†	-31.4	+208	-212	+18.9	+44.5	-49.8	+49.7	+4.6	-3.5	-5.3	0	+7.9
MEAN†	551	6517	2341	2710	3904	2823	2121	1300	4656	1163	422	531
CFSM†	.54	6.34	2.28	2.64	3.80	2.75	2.06	1.26	4.53	1.13	.41	.52
IN.†	.62	7.07	2.63	3.04	3.96	3.17	2.30	1.45	5.05	1.30	.47	.58

CAL YR 1985 TOTAL 803961 MEAN 2203 MAX 16500 MIN 148 ADJ -21.7 MEAN† 2181 CFSM† 2.12 IN.† 28.80
WTR YR 1986 TOTAL 874149 MEAN 2395 MAX 12300 MIN 148 ADJ +1.6 MEAN† 2397 CFSM† 2.33 IN.† 31.64

† Change in contents, equivalent in cubic feet per second, in Union City Reservoir and Woodcock Creek Lake.

‡ Adjusted for change in reservoir contents.

03025500 ALLEGHENY RIVER AT FRANKLIN, PA

LOCATION.--Lat 41°23'22", long 79°49'14", Venango County, Hydrologic Unit 05010003, on right bank at upstream side of Eighth Street bridge on U.S. Highway 322 at Franklin, 1,000 ft downstream from French Creek, and at mile 124.4.

DRAINAGE AREA.--5,982 mi².

PERIOD OF RECORD.--October 1914 to current year. Monthly discharge only for some periods, published in WSP 1305. Gage-height records collected at same site since April 1905 are contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 743: Drainage area. WSP 783: 1913 (M). WSP 1003: 1920 (M). WSP 1305: 1926 (M) 1928-29 (M). WSP 1385: 1920, 1932.

GAGE.--Water-stage recorder. Datum of gage is 955.84 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 16, 1932, nonrecording gage, and Sept. 16-30, 1932, water-stage recorder, at present site at datum 2.00 ft higher.

REMARKS.--Due to construction at gage site, during the current water year, daily discharge is estimated for the entire period. Records fair. Flow regulated by Allegheny Reservoir 74 mi upstream since 1965, by Chautauqua Lake since 1949, by Tionesta Lake since 1940, by Union City Reservoir since 1971, and by Woodcock Creek Lake since January 1974. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--72 years, 10,540 ft³/s, 23.93 in/yr, adjusted for storage 1940-75.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 138,000 ft³/s, Mar. 13, 1920; maximum gage height observed, 26.0 ft, Feb. 27, 1917 (backwater from ice) and Feb. 26, 1926 (backwater from ice); minimum discharge, 334 ft³/s, July 30, 1934, gage height, 1.63 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 17, 1865, reached a stage of 25.0 ft, and that of Mar. 26, 1913, a stage of 24.6 ft, from graph based on gage readings, discharge, 196,000 ft³/s and 191,000 ft³/s, respectively, from rating curve extended above 120,000 ft³/s. Maximum discharge since at least 1864 is that of Mar. 17, 1865.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 46,700 ft³/s, Nov. 27; minimum daily, 2,280 ft³/s, Oct. 19, Sept. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3880	2430	28300	10300	11300	13600	6990	8920	3560	5140	4850	2370
2	4550	2370	29500	9470	10200	12400	4690	5950	3570	5400	4840	2300
3	5120	2890	29900	8970	9170	8900	3970	5490	2820	5210	5640	2280
4	5610	8660	30500	8560	12100	6230	3730	5290	2480	4930	5960	2760
5	5690	28900	31500	8430	28500	5200	3720	4960	7130	4700	5910	3150
6	5520	32400	30300	8250	27700	5260	4310	4310	29000	4090	5260	3070
7	5520	30300	29100	7850	25100	5030	7450	6280	28500	3810	4510	2900
8	5520	26900	27300	7550	24800	4800	7120	6530	26200	3420	4200	2780
9	4470	23500	25400	7400	22400	5180	6450	5480	23500	3890	4230	2340
10	4250	22700	25100	7270	20500	6030	6110	4390	23400	4460	4760	2980
11	3660	32700	29300	7170	18500	18100	6710	3770	24400	4510	8300	2880
12	2920	30500	34900	7230	17200	17300	7520	3570	37800	5320	8730	2950
13	2800	29200	33700	7690	16400	19200	8240	3250	40000	7740	6650	3170
14	2770	28200	27500	7840	15000	24900	8950	2990	37300	10200	5100	3350
15	3210	30600	24300	7560	9590	23700	9610	3000	37600	8400	4180	3140
16	3650	32100	21000	6990	7660	21200	13700	3160	40300	7780	3890	2990
17	3650	36800	17600	5780	5790	21100	19300	3270	40800	7940	4920	2640
18	2390	30400	13700	9740	5190	20400	17500	3080	34300	7940	4750	2560
19	2280	26300	9510	22200	11400	17900	15900	3830	31700	23700	4620	2960
20	2980	27400	7860	31100	15900	19300	14200	8280	28400	27500	4020	3090
21	4290	26100	7490	28300	17800	18900	17500	11900	23200	29400	3080	3330
22	4020	24400	7360	29900	17900	18900	21700	10100	19300	26000	2720	3360
23	3360	25000	7330	37400	18200	18700	25200	9120	13600	24800	2460	5250
24	3260	25000	7330	33300	21300	17900	21900	7730	9340	22400	2640	7170
25	4060	24100	5160	31500	23400	16100	15300	6440	8440	19300	2550	5710
26	4660	34200	3990	32900	22200	14500	12000	5200	7710	15200	2430	4590
27	4540	46700	3550	26400	19200	14000	11600	4500	6700	12400	2690	12000
28	3900	32300	4330	22400	16400	8190	10900	5610	6360	7910	2520	10700
29	3270	28500	6780	22300	---	9370	10200	5410	6350	5470	2310	14600
30	2820	29400	12200	18200	---	8010	9710	4450	6210	5140	2580	9180
31	2610	---	10300	14900	---	7540	---	3790	---	5070	2630	---
TOTAL	121230	780950	582090	495350	470800	427840	332180	170050	609970	329170	133930	132550
MEAN	3911	26030	18780	15980	16810	13800	11070	5485	20330	10620	4320	4418
MAX	5690	46700	34900	37400	28500	24900	25200	11900	40800	29400	8730	14600
MIN	2280	2370	3550	5780	5190	4800	3720	2990	2480	3420	2310	2280

CAL YR 1985 TOTAL 4247510 MEAN 11640 MAX 62100 MIN 1510
WTR YR 1986 TOTAL 4586110 MEAN 12560 MAX 46700 MIN 2280

CLARION RIVER BASIN

03026500 SEVENMILE RUN NEAR RASSELAS, PA

LOCATION.--Lat 41°37'52", long 78°34'37", McKean County, Hydrologic Unit 05010005, on right bank 300 ft upstream from highway bridge, 600 ft upstream from Fivemile Run, and 3.2 mi northeast of Rasselas.

DRAINAGE AREA.--7.84 mi².

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,690.73 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, Dec. 19 to Jan. 20, Jan. 25 to Feb. 20, and Mar. 8, 9, which are fair. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--35 years, 14.6 ft³/s, 25.29 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,620 ft³/s, Sept. 28, 1967, from rating curve extended above 200 ft³/s on basis of slope-area measurement at gage height 4.60 ft; maximum gage height, 4.98 ft, Aug. 8, 1979; minimum discharge, 0.07 ft³/s, Sept. 21, 1955.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 16	2000	270	4.04	June 5	2045	294	4.13
Nov. 26	2100	204	3.72	July 20	1615	*788	*4.73
Jan. 20	0845	772	4.72				

Minimum discharge, 0.42 ft³/s, Sept. 16, gage height, 1.68 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	5.8	42	4.5	4.1	14	7.9	9.8	1.6	3.1	4.3	.97
2	1.8	5.1	55	4.3	3.7	12	7.1	8.7	1.7	6.6	4.1	.97
3	1.6	6.8	39	4.2	3.4	11	6.5	7.7	1.5	4.4	3.5	.92
4	1.5	27	31	3.9	11	9.8	6.5	6.8	1.4	3.2	2.9	1.0
5	2.0	28	26	3.8	48	8.9	6.8	6.2	143	2.7	2.6	1.1
6	2.1	22	22	3.7	34	8.4	12	5.9	95	2.4	2.4	.89
7	1.9	19	19	3.6	24	7.5	14	7.4	61	2.2	2.3	.83
8	1.6	21	17	3.6	17	7.0	12	5.7	66	2.0	2.6	.72
9	1.4	17	15	3.5	13	7.1	11	5.0	41	4.1	2.2	.72
10	1.4	49	15	3.4	11	14	11	4.6	27	2.7	2.2	.62
11	1.7	91	24	3.4	8.8	53	12	4.0	39	2.5	2.4	.61
12	1.5	74	34	3.4	7.0	30	11	3.7	99	3.9	1.8	.61
13	1.8	69	27	3.4	5.6	36	12	3.4	55	7.5	1.6	.61
14	2.0	75	24	3.5	4.8	60	13	3.3	37	7.1	1.6	.52
15	3.4	76	20	3.9	4.2	113	14	3.3	27	4.4	1.6	.50
16	3.5	132	18	4.6	3.9	68	26	3.6	21	4.8	4.7	.49
17	1.9	123	16	5.2	3.5	46	38	3.0	17	4.8	2.1	.61
18	1.7	61	15	6.0	4.3	36	29	2.7	13	3.7	2.0	.54
19	3.5	44	13	35	15	41	24	2.8	12	8.1	1.7	.80
20	6.7	35	11	120	30	33	23	4.1	11	125	1.4	.85
21	4.1	27	10	59	94	25	38	3.6	8.7	61	1.4	1.4
22	3.5	23	9.6	41	61	21	29	3.0	7.3	30	1.4	1.4
23	3.1	21	9.0	31	44	18	24	3.4	7.4	20	1.9	1.6
24	13	17	8.2	23	34	16	21	3.1	5.9	15	3.4	2.6
25	24	15	7.6	17	27	14	18	2.5	5.2	12	1.7	2.1
26	13	82	7.2	13	22	13	16	2.2	4.4	11	1.4	1.9
27	11	123	6.6	10	18	13	14	2.1	4.4	8.9	1.6	34
28	9.3	88	6.2	8.0	16	11	13	2.3	5.0	7.4	1.4	11
29	8.0	60	5.8	6.2	---	10	11	1.9	4.8	6.3	1.2	7.2
30	7.3	47	5.4	5.2	---	9.3	10	1.7	3.4	5.8	1.1	6.6
31	6.4	---	5.0	4.5	---	8.5	---	1.6	---	5.1	1.0	---
TOTAL	147.4	1483.7	563.6	444.8	572.3	774.5	490.8	129.1	826.7	387.7	67.5	84.68
MEAN	4.75	49.5	18.2	14.3	20.4	25.0	16.4	4.16	27.6	12.5	2.18	2.82
MAX	24	132	55	120	94	113	38	9.8	143	125	4.7	34
MIN	1.4	5.1	5.0	3.4	3.4	7.0	6.5	1.6	1.4	2.0	1.0	.49
CFSM	.61	6.31	2.32	1.83	2.61	3.19	2.09	.53	3.51	1.60	.28	.36
IN.	.70	7.04	2.67	2.11	2.72	3.67	2.33	.61	3.92	1.84	.32	.40

CAL YR 1985 TOTAL 5982.29 MEAN 16.4 MAX 266 MIN .80 CFSM 2.09 IN. 28.39
WTR YR 1986 TOTAL 5972.71 MEAN 16.4 MAX 143 MIN .49 CFSM 2.09 IN. 28.33

CLARION RIVER BASIN

45

03027500 EAST BRANCH CLARION RIVER AT EAST BRANCH CLARION RIVER DAM, PA

LOCATION.--Lat 41°33'11", long 78°35'47", Elk County, Hydrologic Unit 05010005, on left bank 700 ft upstream from Middle Fork, 0.5 mi downstream from East Branch Clarion River Dam, and 1.2 mi northeast of Glen Hazel.

DRAINAGE AREA.--73.2 mi².

PERIOD OF RECORD.--October 1948 to current year.

REVISED RECORDS.--WSP 1235: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,517.58 ft above National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

REMARKS.--No estimated daily discharges. Records fair. Flow completely regulated since June 1952 by East Branch Clarion River Lake 0.5 mi upstream. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--38 years, 138 ft³/s, 25.60 in/yr, adjusted for storage since 1952.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,590 ft³/s, May 10, 1957, gage height, 7.25 ft; minimum, 0.20 ft³/s, July 25, 1969, gage height, 1.06 ft; minimum daily, 0.40 ft³/s, July 24-27, 1969.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 28, 1946, reached a stage of 8.3 ft, from graph based on gage readings at site 1,000 ft downstream and at different datum, discharge, 4,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 563 ft³/s, June 13, gage height, 3.77 ft; maximum gage height, 3.81 ft, June 16, (backwater from Middle Fork); minimum daily discharge, 25 ft³/s, May 2-5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	230	57	533	118	75	76	79	26	93	205	202	193
2	230	57	534	118	75	76	79	25	99	205	186	193
3	191	57	527	118	75	75	79	25	99	180	166	190
4	165	58	522	118	75	75	58	25	99	203	166	190
5	167	60	517	118	75	75	42	25	99	203	145	191
6	166	60	513	88	76	75	42	33	99	203	130	190
7	165	60	509	55	76	74	43	46	180	202	131	189
8	165	61	505	55	76	75	44	46	190	203	131	188
9	146	60	503	55	75	75	44	45	288	202	131	188
10	126	61	499	55	73	75	44	45	286	202	131	168
11	126	61	504	55	72	75	44	49	285	204	131	156
12	126	61	508	55	72	76	44	53	280	208	130	156
13	126	62	507	55	72	76	44	53	450	208	130	155
14	126	62	505	55	72	76	44	53	562	210	130	154
15	126	62	502	55	72	76	45	53	558	210	130	154
16	126	63	499	55	72	78	45	53	547	213	131	155
17	125	65	495	41	71	78	45	53	546	211	131	154
18	124	168	493	35	70	78	46	53	397	211	130	155
19	125	260	488	35	70	78	46	64	215	210	130	154
20	125	259	488	35	70	78	46	70	213	210	143	154
21	124	254	484	35	70	78	46	62	212	212	152	154
22	124	375	481	116	71	78	46	62	210	230	152	154
23	116	507	366	255	71	78	47	62	211	273	150	154
24	109	505	245	255	71	80	47	62	209	273	150	154
25	77	501	242	192	72	80	135	62	208	273	198	157
26	58	415	170	135	72	80	159	62	208	273	198	157
27	58	198	120	135	73	80	47	76	208	273	197	159
28	57	154	120	103	75	80	46	86	207	354	195	158
29	57	290	120	75	---	80	46	86	205	403	195	158
30	57	537	120	75	---	79	32	86	205	337	194	158
31	57	---	118	75	---	79	---	86	---	229	193	---
TOTAL	3900	5450	12737	2825	2039	2392	1654	1687	7668	7233	4809	4990
MEAN	126	182	411	91.1	72.8	77.2	55.1	54.4	256	233	155	166
MAX	230	537	534	255	76	80	159	86	562	403	202	193
MIN	57	57	118	35	70	74	32	25	93	180	130	154
†	-91.1	+235	-211	-56.9	+203	+150	+111	-6.5	-26.9	-91.1	-102	-123
MEAN†	34.9	417	200	34.2	276	227	166	47.9	229	142	53.0	43.0
CFSM†	.48	5.70	2.73	.47	3.77	3.10	2.27	.65	3.13	1.94	.72	.59
IN.†	.55	6.36	3.15	.54	3.93	3.57	2.53	.75	3.49	2.24	.83	.66

CAL YR 1985 TOTAL 57399 MEAN 157 MAX 537 MIN 30 ADJ -11.7 MEAN† 145 CFSM† 1.98 IN.† 31.02
WTR YR 1986 TOTAL 57384 MEAN 157 MAX 562 MIN 25 ADJ +7.0 MEAN† 164 CFSM† 2.24 IN.† 28.59

† Change in contents, equivalent in cubic feet per second, in East Branch Clarion River Lake.

‡ Adjusted for change in reservoir contents.

CLARION RIVER BASIN

03028000 WEST BRANCH CLARION RIVER AT WILCOX, PA

LOCATION.--Lat 41°34'31", long 78°41'33", Elk County, Hydrologic Unit 05010005, on right bank 20 ft downstream from highway bridge at Wilcox, 100 ft downstream from Wilson Run, and 0.1 mi upstream from Penn Central Railroad bridge.

DRAINAGE AREA.--63.0 mi².

PERIOD OF RECORD.--October 1953 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,502.02 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 18, 1953, nonrecording gage at site 20 ft upstream at same datum. Nov. 18 to Dec. 8, 1953, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, Dec. 20-26, Dec. 29 to Jan. 20, Jan. 25 to Feb. 21, and Mar. 3-9, which are fair. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--33 years, 126 ft³/s, 27.16 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,490 ft³/s, Sept. 28, 1967, gage height, 10.01 ft, from rating curve extended above 3,000 ft³/s; minimum, 4.2 ft³/s, Sept. 21, 1955, gage height, 1.27 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 14	2100	1090	4.56	Jan. 20	----	----	ice jam
Nov. 16	2030	1640	5.65	June 5	1230	1510	5.39
Nov. 26	2000	1010	4.38	July 20	2000	*1680	*5.75

Minimum discharge, 12 ft³/s, Sept. 15, 18, gage height, 1.31 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	42	354	52	45	122	74	89	21	42	57	19
2	22	39	419	50	40	108	71	79	23	80	51	19
3	20	61	312	48	37	90	66	70	20	51	45	18
4	20	221	266	46	120	80	65	64	19	41	39	19
5	22	208	229	45	420	70	69	59	731	37	35	20
6	22	190	200	44	300	64	121	56	633	33	33	17
7	21	176	171	42	210	60	132	74	532	31	33	16
8	19	177	152	42	160	58	115	55	512	30	42	16
9	18	150	140	41	120	54	115	50	330	144	32	15
10	17	368	138	41	92	120	118	45	235	72	31	14
11	21	623	190	40	78	309	120	42	273	68	40	14
12	18	566	261	40	64	204	112	40	574	89	27	15
13	22	529	235	40	56	274	103	37	351	121	25	15
14	22	612	221	40	49	410	100	37	279	107	23	13
15	30	675	185	40	42	649	112	37	223	84	22	12
16	27	944	173	42	38	509	192	39	201	93	61	15
17	21	981	153	45	35	371	247	34	192	85	36	13
18	20	607	127	56	60	297	220	33	141	73	55	16
19	31	411	107	120	130	335	202	42	128	232	30	21
20	38	310	90	530	200	260	205	47	121	510	25	16
21	26	241	78	513	630	197	329	40	97	438	24	23
22	24	203	70	358	568	172	261	34	84	269	23	19
23	24	180	60	277	419	158	236	37	92	198	54	56
24	96	153	54	215	310	142	203	33	73	157	69	38
25	135	134	50	140	245	127	179	29	63	129	32	22
26	79	512	66	110	197	118	158	26	56	110	29	32
27	68	717	80	90	173	120	139	27	57	95	32	198
28	59	734	69	70	142	100	121	30	60	82	27	76
29	54	534	62	62	---	91	107	24	55	71	24	56
30	62	409	58	56	---	85	93	22	45	66	22	62
31	56	---	54	50	---	79	---	22	---	60	20	---
TOTAL	1135	11707	4824	3385	4980	5833	4385	1353	6221	3698	1098	905
MEAN	36.6	390	156	109	178	188	146	43.6	207	119	35.4	30.2
MAX	135	981	419	530	630	649	329	89	731	510	69	198
MIN	17	39	50	40	35	54	65	22	19	30	20	12
CFSM	.58	6.19	2.47	1.73	2.82	2.99	2.32	.69	3.29	1.89	.56	.48
IN.	.67	6.91	2.85	2.00	2.94	3.44	2.59	.80	3.67	2.18	.65	.53

CAL YR 1985 TOTAL 50646 MEAN 139 MAX 1500 MIN 15 CFSM 2.20 IN. 29.92
WTR YR 1986 TOTAL 49524 MEAN 136 MAX 981 MIN 12 CFSM 2.15 IN. 29.23

CLARION RIVER BASIN

47

03028500 CLARION RIVER AT JOHNSONBURG, PA

LOCATION.--Lat 41°29'10", long 78°40'43", Elk County, Hydrologic Unit 05010005, on left bank at downstream side of highway bridge at Johnsonburg, 0.1 mi downstream from Johnson Run, and 0.4 mi downstream from confluence of East and West Branches.

DRAINAGE AREA.--204 mi².

PERIOD OF RECORD.--October 1945 to current year.

REVISED RECORDS.--WSP 1235: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,423.03 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 8, 1951, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, Dec. 27 to Jan. 7, Jan. 15-20, Jan. 30 to Feb. 21, and Mar. 2-9, which are fair. Flow regulated since June 1952 by East Branch Clarion River Lake 7.9 mi upstream and at low flow by industrial plants above station. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--41 years, 384 ft³/s, 25.56 in/yr, adjusted for storage since 1952.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,700 ft³/s, May 28, 1946, gage height, 9.2 ft, from graph based on gage readings; maximum gage height, 9.94 ft, June 22, 1972; minimum discharge, 6 ft³/s, Sept. 18, 1952, gage height, 0.68 ft, result of regulation above station; minimum daily, 20 ft³/s, Oct. 5, 1948, Nov. 6, 1951.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in July 1942 reached a stage of 16.7 ft, from floodmark.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,840 ft³/s, Nov. 16, gage height, 6.40 ft; minimum daily, 105 ft³/s, Jan. 17, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	254	121	1230	170	170	315	220	194	133	263	308	228
2	255	116	1310	160	150	280	212	177	147	356	297	226
3	224	139	1130	150	130	250	202	163	138	284	253	224
4	191	404	1040	140	250	220	193	152	137	269	240	225
5	196	409	969	135	740	200	172	145	841	254	216	232
6	196	364	918	130	600	190	277	143	1020	247	194	233
7	191	326	857	120	430	180	338	189	838	240	198	223
8	187	346	815	142	340	170	275	158	968	238	243	220
9	175	289	785	138	260	160	265	148	808	483	231	216
10	152	650	772	145	220	296	268	142	661	336	206	215
11	155	1310	914	139	190	727	271	138	669	308	262	189
12	152	1180	1070	138	170	487	263	139	1060	380	207	190
13	156	1140	1010	136	160	633	246	135	935	586	192	192
14	160	1100	981	117	150	847	233	132	972	502	188	189
15	167	1230	903	110	130	1230	254	132	897	408	185	187
16	168	1900	868	110	120	1030	420	135	853	421	220	187
17	157	2070	823	105	110	812	556	127	945	401	224	187
18	154	1300	774	105	130	668	487	124	697	362	275	185
19	161	1060	725	290	300	713	451	140	453	730	210	199
20	185	870	700	1170	600	590	437	164	441	967	199	196
21	164	735	714	1140	1300	460	667	148	384	1040	208	192
22	160	749	669	886	1160	411	530	135	353	748	206	194
23	153	859	603	825	917	381	477	133	366	648	202	205
24	214	804	432	697	717	349	422	128	327	550	394	366
25	296	770	401	574	570	320	428	123	306	492	281	250
26	167	1290	298	464	468	303	469	119	293	461	261	221
27	151	1530	240	422	419	307	301	128	287	427	260	253
28	141	1660	220	318	354	273	267	148	296	455	254	437
29	133	1390	200	263	---	253	242	137	282	496	242	279
30	138	1350	190	220	---	240	213	132	267	447	237	248
31	136	---	180	190	---	230	---	130	---	333	231	---
TOTAL	5489	27461	22741	9849	11255	13525	10056	4438	16774	14132	7324	6788
MEAN	177	915	734	318	402	436	335	143	559	456	236	226
MAX	296	2070	1310	1170	1300	1230	667	194	1060	1040	394	437
MIN	133	116	180	105	110	160	172	119	133	238	185	185
†	-91.1	+235	-211	-56.9	+203	+150	+111	-6.5	-26.9	-91.1	-102	-123
MEAN†	85.9	1150	522	261	605	586	446	136	532	365	134	103
CFSM†	.42	5.64	2.56	1.28	2.96	2.87	2.19	.67	2.61	1.79	.66	.50
IN.†	.48	6.29	2.95	1.48	3.08	3.31	2.44	.77	2.91	2.06	.76	.56

CAL YR 1985 TOTAL 150286 MEAN 412 MAX 2820 MIN 96 ADJ -11.7 MEAN† 400 CFSM† 1.96 IN.† 28.07
WTR YR 1986 TOTAL 149832 MEAN 410 MAX 2070 MIN 105 ADJ +7.0 MEAN† 417 CFSM† 2.04 IN.† 27.09

† Change in contents, equivalent in cubic feet per second, in East Branch Clarion River Lake.

‡ Adjusted for change in reservoir contents.

CLARION RIVER BASIN

03029500 CLARION RIVER AT COOKSBURG, PA

LOCATION.--Lat 41°19'50", long 79°12'33", Jefferson County, Hydrologic Unit 05010005, on left bank at downstream side of bridge on State Highway 36 at Cooksburg, 300 ft downstream from Toms Run, and 2.7 mi upstream from Cathers Run.

DRAINAGE AREA.--807 mi².

PERIOD OF RECORD.--October 1938 to current year. Monthly discharge only for October, November 1938, published in WSP 1305.

REVISED RECORDS.--WSP 1305: 1939 (M). WDR PA-85-3: 1979 (M).

GAGE.--Water-stage recorder. Datum of gage is 1,147.00 ft above National Geodetic Vertical Datum of 1929. Prior to May 17, 1939, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, Dec. 21 to Jan. 20, Jan. 29 to Feb. 3, Feb. 12-18, and Mar. 3-9, which are fair. Flow regulated by East Branch Clarion River Lake since June 1952 and at low flow by industrial plants above station. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--48 years, 1,460 ft³/s, 24.57 in/yr, adjusted for storage since 1952.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 53,300 ft³/s, June 23, 1972, gage height, 18.84 ft; minimum, 41 ft³/s, Aug. 30, 1939, gage height, 1.22 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1935, 19 ft, Mar. 17, 1936, from floodmarks, discharge, about 56,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 17	0700	*16900	*11.16	Jan. 20	2100	13900	10.23
Nov. 28	2300	11800	9.55	Feb. 5	1600	12100	9.64

Minimum discharge, 270 ft³/s, Sept. 15, 16, 17, 18, gage height, 2.07 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	377	337	4410	500	640	1400	851	961	387	573	660	362
2	380	314	4400	480	580	1260	813	897	390	734	619	352
3	387	341	3860	460	1000	1100	772	813	402	915	604	346
4	369	1830	3110	450	1720	900	740	741	358	653	503	344
5	318	2550	2730	430	8920	820	742	688	833	556	463	359
6	329	1730	2500	420	8110	740	881	661	3400	506	432	375
7	331	1280	2230	410	5190	660	1890	1380	4170	472	399	358
8	316	1220	2000	410	3860	620	1690	1310	3690	452	534	330
9	305	1120	1850	400	2970	560	1420	981	2700	526	720	319
10	298	1370	1750	390	2420	866	1310	857	1930	1560	594	312
11	277	5480	2200	380	2030	2780	1300	784	1560	847	663	308
12	273	5010	4010	380	1600	2720	1300	722	2360	762	784	283
13	278	5220	3600	360	1300	2320	1230	672	3320	1050	523	280
14	280	4160	3250	350	1100	3560	1120	626	2550	1450	446	279
15	302	4970	2740	340	900	5500	1060	592	2500	1060	415	272
16	322	5880	2410	330	800	5060	1400	611	2220	908	421	270
17	347	13900	2190	330	700	3810	2930	579	3540	1320	517	270
18	298	6970	1940	380	1000	3030	2670	520	2730	1020	557	277
19	288	4660	1650	1500	1990	2760	2270	515	1970	2560	657	306
20	396	3560	1420	7400	4320	2860	2050	661	1700	2470	456	353
21	468	2860	1250	8900	6550	2160	3200	769	1390	2060	396	328
22	383	2350	1100	4980	7440	1780	3320	634	1120	1980	392	317
23	372	2360	960	3990	4960	1610	2640	542	1070	1520	386	354
24	407	2140	840	3040	3710	1470	2240	499	1030	1210	561	927
25	792	1890	780	2500	2900	1310	1930	470	852	1020	679	689
26	800	2560	720	2120	2310	1210	1810	440	764	909	491	506
27	517	8120	660	1870	2030	1180	1590	417	698	860	454	586
28	430	8390	620	1480	1670	1140	1300	575	680	754	447	955
29	378	8950	580	1180	---	1030	1170	588	677	726	421	633
30	340	5660	540	940	---	960	1050	469	623	731	392	515
31	328	---	520	800	---	902	---	417	---	752	377	---
TOTAL	11686	117182	62820	47900	82720	58078	48689	21391	51614	32916	15963	12165
MEAN	377	3906	2026	1545	2954	1873	1623	690	1720	1062	515	405
MAX	800	13900	4410	8900	8920	5500	3320	1380	4170	2560	784	955
MIN	273	314	520	330	580	560	740	417	358	452	377	270
†	+91.1	+235	-211	-56.9	+203	+150	+111	-6.5	-26.9	-91.1	-102	-123
MEAN†	286	4142	1815	1488	3157	2023	1735	684	1693	971	413	283
CFSM†	.35	5.13	2.25	1.84	3.91	2.51	2.15	.85	2.10	1.20	.51	.35
IN.†	.40	5.72	2.59	2.12	4.07	2.89	2.40	.98	2.34	1.38	.59	.39

CAL YR 1985 TOTAL 549695 MEAN 1506 MAX 13900 MIN 273 ADJ -11.7 MEAN† 1494 CFSM† 1.85 IN.† 25.48
WTR YR 1986 TOTAL 563124 MEAN 1543 MAX 13900 MIN 270 ADJ +7.0 MEAN† 1550 CFSM† 1.92 IN.† 25.87

† Change in contents, equivalent in cubic feet per second, in East Branch Clarion River Lake.

‡ Adjusted for change in reservoir contents.

CLARION RIVER BASIN

49

03030500 CLARION RIVER NEAR PINEY, PA

LOCATION.--Lat 41°11'33", long 79°26'25", Clarion County, Hydrologic Unit 05010005, on left bank 0.2 mi downstream from hydroelectric plant of Pennsylvania Electric Co., 2.3 mi northeast of Piney, 2.4 mi upstream from Piney Creek, and 3 mi southwest of Clarion.

DRAINAGE AREA.--951 mi².

PERIOD OF RECORD.--October 1944 to current year (monthly discharge only October 1944 to September 1947).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,002.06 ft above National Geodetic Vertical Datum of 1929 (Pennsylvania Electric Co. bench mark). Prior to Dec. 23, 1947, records from hydroelectric plant 0.2 mi upstream.

REMARKS.--No estimated daily discharges. Records fair. Flow regulated by East Branch Clarion River Lake since June 1952 and by hydroelectric plant at Piney Dam 0.2 mi upstream since 1924, combined capacity of reservoirs, 113,200 acre-ft. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--42 years, 1,784 ft³/s, 25.48 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 74,500 ft³/s, June 23, 1972, gage height, 28.24 ft, from flood-mark, from rating curve extended above 17,000 ft³/s on basis of slope-area measurement at gage height 20.70 ft, in gage well, 21.8 ft, from outside high-water profile; minimum not determined.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Mar. 18, 1936 reached a discharge of 50,000 ft³/s, as determined by Pennsylvania Electric Co., elevation, 1,028.5 ft, at lower pool of dam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 20,000 ft³/s, Nov. 17, gage height, 13.68 ft; minimum daily, 36 ft³/s, Nov. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	433	511	5580	64	616	1120	277	1170	64	782	789	63
2	437	36	5860	1040	1750	1010	1010	1270	916	398	650	1660
3	430	50	5970	1240	2820	1600	1250	853	501	1310	419	1430
4	549	2680	4600	874	3410	1220	2260	466	468	544	893	262
5	72	3700	3120	665	11000	1400	127	1280	1210	901	759	57
6	67	2940	3340	1170	10100	1840	1220	851	3680	421	442	57
7	418	1830	3000	842	6520	1970	3150	1500	5130	863	416	57
8	559	1900	2130	1190	4850	40	1180	2340	5060	920	416	449
9	751	344	3020	282	3990	40	3060	1650	3130	1300	409	61
10	731	1700	2310	590	3270	2600	1140	467	2560	1720	702	59
11	753	6930	3760	54	3000	3780	1670	467	2260	960	838	457
12	124	6830	3580	342	2090	3050	1750	1690	2890	1090	828	672
13	56	6770	4320	1450	2050	2870	1440	410	4690	1140	830	861
14	686	5200	3810	1030	2430	4080	2260	1140	3370	1830	396	72
15	700	6490	4050	480	979	5920	1230	1640	3170	1710	774	458
16	343	8350	3690	460	1300	5980	1680	887	2940	1310	429	317
17	328	16500	2610	779	1000	5070	1980	62	4800	1350	88	446
18	323	8760	2860	368	2350	4310	4950	62	3510	1530	896	313
19	57	4640	2390	1360	3470	3280	2940	842	2680	3830	869	737
20	40	5470	2230	7850	5370	3310	2090	406	2170	4300	858	339
21	985	4780	1400	11800	6460	3170	3830	1320	1760	4840	496	50
22	629	3220	1690	7250	9340	2020	4500	891	1290	3010	402	583
23	565	2880	1720	6010	6370	1460	3140	755	1640	2450	488	703
24	505	1490	2150	4750	5320	2450	2990	108	1280	1900	71	564
25	718	2700	1190	2930	3880	1420	3120	687	1280	1700	1070	1380
26	710	4050	1710	2150	3080	2020	1650	458	1040	1480	824	705
27	42	9310	877	2890	2540	2020	1240	868	883	1290	642	567
28	626	11300	80	1550	3480	1960	2040	1150	489	1320	389	1200
29	791	11500	1030	1250	---	816	1600	861	525	1140	457	970
30	1270	7540	1070	2360	---	57	1220	847	1280	916	66	554
31	967	---	1840	1120	---	1440	---	479	---	1090	472	---
TOTAL	15665	150401	86987	66190	112835	73323	61994	27877	66666	49345	18078	16103
MEAN	505	5013	2806	2135	4030	2365	2066	899	2222	1592	583	537
MAX	1270	16500	5970	11800	11000	5980	4950	2340	5130	4840	1070	1660
MIN	40	36	80	54	616	40	127	62	64	398	66	50
†	-114	+288	-268	-58.3	+181	+195	+109	-5.8	-21.5	-90.8	-92.9	-151
MEAN†	391	5301	2538	2077	4211	2560	2175	893	2200	1501	490	386
CFSM†	.41	5.57	2.67	2.18	4.43	2.69	2.29	.94	2.31	1.58	.52	.41
IN.†	.47	6.21	3.08	2.51	4.61	3.10	2.55	1.08	2.58	1.82	.60	.46

CAL YR 1985 TOTAL 680087 MEAN 1863 MAX 16500 MIN 36 ADJ -16.3 MEAN† 1847 CFSM† 1.94 IN.† 26.67
WTR YR 1986 TOTAL 745464 MEAN 2042 MAX 16500 MIN 36 ADJ +5.4 MEAN† 2047 CFSM† 2.15 IN.† 29.07

† Change in contents, equivalent in cubic feet per second, in East Branch Clarion River Lake and Piney Reservoir. Records of contents in Piney Reservoir furnished by Pennsylvania Electric Co.

‡ Adjusted for change in reservoir contents.

LOCATION.--Lat 41°06'02", long 79°40'53", Armstrong County, Hydrologic Unit 05010006, on right bank 500 ft downstream from bridge on State Highway 368 at Parker, 1.1 mi downstream from Clarion River, and at mile 83.4.

PERIOD OF RECORD.--October 1932 to current year. Prior to October 1963, published as "at Parkers Landing."
Gage-height records collected at same site since 1885 are contained in reports of U.S. Weather Bureau.

REMARKS.--Records good except for estimated daily discharges, Dec. 27 to Jan. 21, which are fair. Flow regulated since 1965 by Allegheny Reservoir, since 1949 by Chautauqua Lake, since 1941 by Tionesta Lake, since 1971 by Union City Reservoir, since 1974 by Woodcock Creek Lake, since 1952 by East Branch Clarion River Lake, and since 1924 by Piney Reservoir. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 175,000 ft³/s, Jan. 22, 1959; maximum gage height, 29.60 ft, Jan. 21, 1959 (backwater from ice); minimum discharge, 409 ft³/s, July 30, 1934, gage height, 0.67 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 71,800 ft³/s, Nov. 17, gage height, 13.35 ft, maximum gage height, 18.12 ft, Jan. 20, (backwater from ice); minimum discharge, 2,700 ft³/s, Aug. 30, gage height, 1.80 ft.

CAL	YR 1985	TOTAL	5445210	MEAN	14920	MAX	79700	MIN	2120
WTR	YR 1986	TOTAL	5800120	MEAN	15890	MAX	66900	MIN	2730

REDBANK CREEK BASIN

51

03032500 REDBANK CREEK AT ST. CHARLES, PA

LOCATION.--Lat 40°59'40", long 79°23'40", Armstrong County, Hydrologic Unit 05010006, on left bank 400 ft down-stream from highway bridge on Legislative Route 03117 at St. Charles, 0.3 mi downstream from Leatherwood Creek, and 3 mi west of New Bethlehem.

DRAINAGE AREA.--528 mi².

PERIOD OF RECORD.--Annual maximums, water years 1910-18. October 1918 to current year. Monthly discharge only for some periods, published in WSP 1305. Figures of daily discharge for November 1920 to June 1921, published in WSP 523, are unreliable and should not be used.

REVISED RECORDS.--WSP 743: Drainage area. WSP 1385: 1919, 1936-39, WDR PA-72-1: 1923 (M), 1926 (M), 1928 (M), 1936, 1937 (M), 1938 (M), 1943, 1945 (P), 1952 (M), 1953 (M), 1955 (M), 1956 (P), 1958 (M), 1959 (M), 1964, 1966 (M). See also PERIOD OF RECORD.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 973.14 ft above National Geodetic Vertical Datum of 1912. Prior to July 10, 1940, nonrecording gage at site 500 ft upstream at datum 3.10 ft higher.

REMARKS.--Records good except for estimated daily discharges, Dec. 21 to Jan. 20, Jan. 30 to Feb. 4, Feb. 15-19, and Mar. 2-9, which are fair. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--68 years, 871 ft³/s, 22.40 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 50,000 ft³/s, Mar. 18, 1936, gage height, 18.60 ft, from flood-marks, site and datum then in use; minimum observed, 19 ft³/s, Oct. 1, 1918.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 7,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 16	2330	13400	12.74	Feb. 5	0730	9960	11.30
Nov. 28	1800	9000	10.85	June 12	0630	10200	11.39
Jan. 20	1530	*14200	*13.04				

Minimum discharge, 82 ft³/s, Oct. 10, 11, 12, gage height, 2.40 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	103	129	2500	300	360	877	457	520	160	331	339	150
2	107	129	2390	290	600	760	423	488	154	1310	308	142
3	109	186	1920	280	1200	660	394	438	169	1070	282	137
4	105	1880	1470	280	2000	580	374	394	149	659	255	132
5	105	1720	1260	270	8400	520	367	365	196	462	227	130
6	109	989	1170	270	5540	480	439	343	1020	370	204	126
7	102	700	1070	260	3470	420	1420	387	1740	313	234	120
8	95	658	966	250	2470	360	1260	464	1230	277	273	113
9	88	598	891	250	1880	350	952	365	873	2270	340	107
10	83	662	860	240	1490	747	831	314	604	1890	370	101
11	84	2470	2180	240	1250	2120	769	286	746	1110	749	99
12	83	3260	4110	230	1050	1890	724	264	8380	918	653	98
13	85	3410	3040	230	863	1760	660	243	5830	1070	381	98
14	91	2670	2520	230	705	2630	580	229	3260	1490	277	93
15	129	3350	1830	230	620	4010	541	223	2760	1030	231	86
16	147	6060	1470	240	540	3230	764	227	2100	886	351	86
17	144	8580	1270	260	470	2410	1820	252	2630	1100	431	94
18	124	4560	1040	400	800	1810	1620	226	1930	927	859	112
19	113	2770	699	800	1800	1600	1260	240	1330	1900	510	172
20	116	1970	631	7100	4280	1500	1110	296	1120	2730	345	172
21	108	1480	580	6090	4900	1020	1720	332	915	3210	273	147
22	113	1200	540	3850	4780	888	1820	304	693	1880	241	135
23	120	1100	480	2790	3380	907	1420	251	921	1250	390	475
24	159	963	450	2010	2470	836	1180	231	843	957	955	512
25	348	830	420	1550	1860	752	1030	217	610	770	460	697
26	323	1230	380	1330	1440	731	908	193	483	748	326	1290
27	222	4060	360	1200	1280	698	802	185	416	780	272	2630
28	170	6140	350	782	1050	628	706	231	385	589	235	1220
29	145	5600	330	604	---	575	632	259	411	484	200	745
30	130	3600	330	470	---	531	566	238	390	421	176	718
31	127	---	310	390	---	495	---	187	---	379	159	---
TOTAL	4087	72954	37817	33716	60948	36775	27549	9192	42448	33581	11306	10937
MFAN	132	2432	1220	1088	2177	1186	918	297	1415	1083	365	365
MAX	348	8580	4110	7100	8400	4010	1820	520	8380	3210	955	2630
MIN	83	129	310	230	360	350	367	185	149	277	159	86
CFSM	.25	4.61	2.31	2.06	4.12	2.25	1.74	.56	2.68	2.05	.69	.69
IN.	.29	5.14	2.66	2.38	4.29	2.59	1.94	.65	2.99	2.37	.80	.77

CAL YR 1985 TOTAL 342753 MFAN 939 MAX 8580 MIN 76 CFSM 1.78 IN. 24.17
WTR YR 1986 TOTAL 381310 MEAN 1045 MAX 8580 MIN 83 CFSM 1.98 IN. 26.87

03034000 MAHONING CREEK AT PUNXSUTAWNEY, PA

LOCATION.--Lat 40°56'21", long 79°00'31", Jefferson County, Hydrologic Unit 05010006, on right bank 75 ft downstream from Williams Run, 1.9 mi downstream from Sawmill Run, and 2 mi west of Punxsutawney.

DRAINAGE AREA.--158 mi².

PERIOD OF RECORD.--October 1938 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,206.14 ft above National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to Oct. 1, 1946, at site 2.9 mi upstream at datum 13.30 ft higher.

REMARKS.--Records good except for estimated daily discharges, Dec. 20 to Jan. 20, Jan. 26 to Feb. 3, Feb. 12-21, and Mar. 2-9, which are fair. Diurnal fluctuations at low flow by mine pumpage into stream above station. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--48 years, 276 ft³/s, 23.72 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,300 ft³/s, June 23, 1972, gage height, 15.94 ft, from floodmark in gage well, from rating curve extended above 4,300 ft³/s on basis of slope-area measurement at gage height 13.01 ft; maximum gage height, 16.22 ft, July 20, 1977; minimum discharge, 2.6 ft³/s, Sept. 26, 1939.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 18, 1936, reached a stage of 15.6 ft, from floodmark at former site and datum, discharge, 12,500 ft³/s, from rating curve extended above 4,300 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft³/s and maximum (*).

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 16	2400	*4800	*8.27	Feb. 5	0830	3530	7.03
Nov. 28	1600	4270	7.77	June 12	1100	3110	6.57
Jan. 20	1330	4690	8.17				

Minimum discharge, 36 ft³/s, Oct. 9, 10, gage height, 1.00 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	43	805	98	80	297	161	178	56	117	130	72
2	51	41	744	92	120	250	153	167	52	906	130	70
3	47	58	552	86	300	210	144	152	51	540	121	71
4	44	198	453	84	838	190	139	142	47	320	104	73
5	43	202	401	80	3190	170	137	135	64	233	96	76
6	42	180	373	78	1780	150	166	127	194	193	90	66
7	40	143	332	74	1070	140	338	140	218	165	97	62
8	38	143	296	70	746	120	244	123	208	153	105	60
9	37	120	269	68	564	189	212	110	142	1190	108	55
10	37	139	260	64	465	255	200	104	101	800	164	48
11	41	224	586	62	404	837	197	98	137	528	502	48
12	40	560	1210	60	290	538	196	93	2000	480	186	47
13	39	660	935	58	240	677	178	89	1340	476	135	46
14	43	582	773	55	190	935	164	90	720	508	114	43
15	62	745	562	54	160	1600	169	92	757	377	102	41
16	55	1940	476	52	130	1120	295	98	508	425	108	44
17	43	3040	418	50	100	782	660	89	696	453	99	41
18	40	1310	350	70	140	595	546	82	443	348	96	53
19	42	793	304	400	300	559	446	80	345	700	83	93
20	46	572	260	2250	700	470	394	97	296	1280	77	63
21	43	441	230	2000	1170	370	464	98	232	1170	74	62
22	41	365	210	1100	1610	324	422	83	198	643	75	59
23	44	323	190	815	1080	301	365	79	246	445	125	181
24	73	267	170	599	766	271	320	79	189	347	545	276
25	97	233	150	489	587	242	290	72	153	279	182	178
26	59	575	140	330	476	226	263	66	135	239	138	201
27	49	1230	135	270	428	223	237	70	124	212	121	777
28	44	2850	125	220	350	205	219	96	119	187	107	417
29	41	2270	120	170	---	192	202	75	191	170	92	252
30	41	1200	110	130	---	180	186	63	135	155	84	201
31	42	---	105	100	---	169	---	58	---	143	78	---
TOTAL	1449	21447	12044	10128	18274	12787	8107	3125	10097	14182	4268	3776
MEAN	46.7	715	389	327	653	412	270	101	337	457	138	126
MAX	97	3040	1210	2250	3190	1600	660	178	2000	1280	545	777
MIN	37	41	105	50	80	120	137	58	47	117	74	41
CFSM	.30	4.52	2.46	2.07	4.13	2.61	1.71	.64	2.13	2.90	.87	.80
IN.	.34	5.05	2.84	2.38	4.30	3.01	1.91	.74	2.38	3.34	1.00	.89

CAL YR 1985 TOTAL 98138 MEAN 269 MAX 3040 MIN 28 CFSM 1.70 IN. 23.11
WTR YR 1986 TOTAL 119684 MEAN 328 MAX 3190 MIN 37 CFSM 2.08 IN. 28.18

MAHONING CREEK BASIN

53

03034500 LITTLE MAHONING CREEK AT McCORMICK, PA

LOCATION.--Lat 40°50'10", long 79°06'37", Indiana County, Hydrologic Unit 05010006, on left bank 200 ft upstream from highway bridge at McCormick, 1 mi west of Georgeville, 1.7 mi upstream from Ross Run, and 4 mi southeast of Smicksburg.

DRAINAGE AREA.--87.4 mi².

PERIOD OF RECORD.--October 1939 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,164.88 ft above National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to May 10, 1940, nonrecording gage at site 200 ft upstream at same datum.

REMARKS.--Records good except for estimated daily discharges, Dec. 19 to Jan. 20, Jan. 29 to Feb. 5, Feb. 13-20, and Feb. 27 to Mar. 9, which are fair. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--47 years, 153 ft³/s, 23.77 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,200 ft³/s, June 23, 1972, maximum gage height, 14.03 ft, Feb. 25, 1977 (backwater from ice); minimum discharge, 0.3 ft³/s, Sept. 28, 1959.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 17	0300	*3020	*9.73	Feb. 5	---	---	ice jam
Nov. 28	1830	2790	9.40	June 12	1100	2920	9.58
Jan. 20	1430	2470	8.91				

Minimum daily discharge, 5.9 ft³/s, Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.9	21	338	52	43	100	61	47	23	40	29	26
2	6.5	22	298	50	70	94	59	45	21	275	27	26
3	7.7	30	217	48	200	86	56	44	21	125	26	25
4	6.3	88	173	46	700	80	53	49	18	71	23	25
5	6.1	66	151	43	1900	74	53	45	21	55	20	27
6	6.1	67	148	41	1110	68	75	44	164	48	21	28
7	6.0	46	134	40	604	64	359	42	250	43	40	26
8	6.1	44	124	38	385	62	200	45	262	39	37	25
9	6.0	38	120	37	269	58	148	42	124	131	36	24
10	6.4	41	118	36	214	121	125	39	80	126	126	23
11	9.1	71	303	35	182	577	116	37	268	149	485	23
12	15	510	803	35	148	297	116	35	2220	270	128	31
13	17	379	536	33	110	395	100	32	892	247	84	33
14	17	243	450	33	96	578	89	35	428	239	67	32
15	23	353	278	32	82	968	86	38	343	145	59	30
16	19	1140	225	31	70	590	204	40	225	150	63	31
17	17	1720	191	34	60	377	428	38	450	205	58	34
18	15	548	148	100	50	262	315	34	217	127	56	36
19	15	310	135	280	150	252	219	32	153	251	46	55
20	20	219	125	1600	400	218	206	41	125	461	41	47
21	24	166	115	849	1060	152	247	44	94	465	39	41
22	23	136	105	532	769	128	205	38	75	223	39	40
23	23	128	98	438	505	121	200	34	107	139	38	138
24	31	107	90	301	339	108	162	34	74	96	41	249
25	42	92	84	240	249	94	104	31	60	75	38	89
26	27	380	78	210	199	89	89	28	51	66	33	83
27	22	885	72	184	140	86	103	28	46	55	32	319
28	20	1830	68	117	120	79	89	43	45	45	33	114
29	18	1110	64	90	---	73	63	34	46	39	30	81
30	18	544	60	70	---	69	50	28	41	36	28	72
31	20	---	54	60	---	66	---	26	---	35	27	---
TOTAL	498.2	11334	5903	5735	10224	6386	4380	1172	6944	4471	1850	1833
MEAN	16.1	378	190	185	365	206	146	37.8	231	144	59.7	61.1
MAX	42	1830	803	1600	1900	968	428	49	2220	465	485	319
MIN	5.9	21	54	31	43	58	50	26	18	35	20	23
CFSM	.18	4.32	2.18	2.12	4.18	2.36	1.67	.43	2.65	1.65	.68	.70
IN.	.21	4.82	2.51	2.44	4.35	2.72	1.86	.50	2.96	1.90	.79	.78

CAL YR 1985 TOTAL 52069.3 MEAN 143 MAX 2270 MIN 4.5 CFSM 1.63 IN. 22.15
WTR YR 1986 TOTAL 60730.2 MEAN 166 MAX 2220 MIN 5.9 CFSM 1.90 IN. 25.84

MAHONING CREEK BASIN

03036000 MAHONING CREEK AT MAHONING CREEK DAM, PA

LOCATION.--Lat 40°55'39", long 79°17'29", Armstrong County, Hydrologic Unit 05010006, on left bank at downstream side of highway bridge at McCrea Furnace, 700 ft downstream from Camp Run, 0.9 mi downstream from Mahoning Creek Dam, 1 mi southwest of Eddyville, and 2.1 upstream from Pine Run.

DRAINAGE AREA.--344 mi².

PERIOD OF RECORD.--August 1938 to current year. Monthly discharge only for August 1938, published in WSP 1305.

REVISED RECORDS.--WSP 1305: 1941 (adjusted monthly runoff).

GAGE.--Water-stage recorder. Datum of gage is 1,003.39 ft above National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to Feb. 1, 1940, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Jan. 18-20. Records good. Flow completely regulated since 1941 by Mahoning Creek Lake 0.9 mi upstream. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--48 years, 599 ft³/s, 23.65 in/yr, adjusted for storage since June 1941.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,400 ft³/s, Mar. 8, 1942, gage height, 8.10 ft; minimum daily, 4.6 ft³/s, July 26, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,860 ft³/s, Nov. 19, gage height, 6.28 ft; minimum daily, 33 ft³/s, Oct. 1-5, May 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	276	2770	281	505	1120	273	364	81	316	264	73
2	33	219	2730	281	514	774	231	301	82	966	219	73
3	33	187	2660	281	529	758	179	300	74	1700	198	73
4	33	399	2570	281	619	631	180	250	81	953	176	73
5	33	528	2450	281	925	500	182	197	85	315	150	91
6	53	521	1920	281	1050	497	187	197	99	313	92	103
7	79	416	1210	282	1890	389	194	199	341	311	91	103
8	79	289	788	280	2830	272	357	200	738	252	122	103
9	79	285	773	275	2780	275	548	149	873	519	188	103
10	79	291	762	273	2730	389	545	79	727	1310	219	103
11	79	301	788	269	2650	684	542	79	517	1270	540	73
12	79	361	867	269	2580	822	540	62	615	1090	969	51
13	79	367	1300	275	2450	856	536	33	1580	1220	825	51
14	79	639	1790	271	1980	898	530	63	3260	1090	440	51
15	81	955	2110	214	1160	954	525	81	3630	956	293	51
16	81	1080	2030	173	655	972	529	93	3070	731	295	51
17	81	1330	1620	112	507	1910	670	130	2170	710	292	51
18	81	2340	1190	73	532	2280	1090	157	1750	850	269	52
19	81	3450	612	73	599	1870	1410	160	1310	738	221	66
20	81	3710	509	508	763	2260	1120	159	692	602	206	111
21	139	3580	505	1750	1430	2130	821	181	455	802	173	137
22	203	3400	398	3190	1110	1300	827	206	316	1420	107	106
23	200	2540	278	3560	1040	849	832	207	445	1790	107	119
24	204	1220	282	3410	2930	837	828	206	580	1570	107	293
25	260	909	296	2830	3620	825	709	134	392	970	193	578
26	299	909	337	1980	3480	811	560	80	223	576	289	574
27	297	974	283	1570	3270	796	495	82	229	422	289	706
28	293	1130	284	950	2290	778	426	116	230	316	286	986
29	290	1870	286	366	---	646	426	186	231	315	234	848
30	286	2800	303	277	---	507	424	206	284	323	126	359
31	282	---	282	388	---	367	---	134	---	313	73	---
TOTAL	4089	37276	34983	25304	47418	28957	16716	4991	25160	25029	8053	6212
MEAN	132	1243	1128	816	1693	934	557	161	839	807	260	207
MAX	299	3710	2770	3560	3620	2280	1410	364	3630	1790	969	986
MIN	33	187	278	73	505	272	179	33	74	252	73	51
CFSM	.38	3.61	3.28	2.37	4.92	2.72	1.62	.47	2.44	2.35	.76	.60
IN.	.44	4.03	3.78	2.74	5.13	3.13	1.81	.54	2.72	2.71	.87	.67
†	-61.3	+328	-312	-10.6	+29.0	-31.4	+47.9	+27.6	-1.5	-1.6	+3.3	-1.3
MEAN†	70.7	1571	816	805	1723	903	605	189	838	805	263	206
CFSM†	.21	4.57	2.37	2.34	5.01	2.62	1.76	.55	2.44	2.34	.76	.60
IN.†	.24	5.10	2.73	2.70	5.22	3.02	1.96	.63	2.72	2.70	.88	.67

CAL YR 1985 TOTAL 220759 MEAN 605 MAX 3790 MIN 33 ADJ -9.5 MEAN† 596 CFSM† 1.73 IN.† 23.50
WTR YR 1986 TOTAL 264188 MEAN 724 MAX 3710 MIN 33 ADJ +.06 MEAN† 724 CFSM† 2.10 IN.† 28.57

† Change in contents, equivalent in cubic feet per second, in Mahoning Creek Lake.

‡ Adjusted for change in reservoir contents.

OHIO RIVER MAIN STEM

55

03036500 ALLEGHENY RIVER AT KITTANNING, PA

LOCATION.--Lat 40°49'13", long 79°31'54", Armstrong County, Hydrologic Unit 05010006, on right bank 600 ft upstream from dam at lock 7 at Kittanning, 5.7 mi upstream from Crooked Creek, 9.7 mi downstream from Mahoning Creek, and at mile 45.8.

DRAINAGE AREA.--8,973 mi².

PERIOD OF RECORD.--August 1904 to September 1928, October 1934 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 873: Drainage area. WSP 1305: 1906 (M), 1914, 1925. WSP 1435: 1936-37, 1939.

GAGE.--Water-stage recorder and concrete dam control. Datum of gage is 771.32 ft above National Geodetic Vertical Datum, adjustment of 1912. Prior to Sept. 30, 1928, nonrecording gage at site 4,000 ft downstream at different datum. Oct. 1, 1934, to Apr. 19, 1939, nonrecording gage at present site and datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since 1965 by Allegheny Reservoir, since 1949 by Chautauqua Lake, since 1941 by Tionesta Lake, since 1971 by Union City Reservoir, since 1974 by Woodcock Creek Lake, since 1952 by East Branch Clarion River Lake, since 1924 by Piney Reservoir, and since 1941 by Mahoning Creek Lake. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--76 years (1904-28, 1934-86), 15,800 ft³/s, 23.91 in/yr, adjusted for storage 1940-75.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 269,000 ft³/s, Mar. 26, 1913, gage height, 30.7 ft, from flood-mark, site and datum then in use; minimum observed, 570 ft³/s, Sept. 15-17, 1913.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 124,000 ft³/s, Jan. 21, gage height, 21.38 ft; minimum, 2,630 ft³/s, Aug. 31, gage height, 11.74 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5390	4510	43700	11900	20200	24100	10800	12700	5380	9070	7700	3700
2	4960	4090	42000	10700	19800	18700	9450	12100	4580	14700	7260	3220
3	5160	3870	41600	11600	23700	16400	8180	9710	5390	13900	6750	4410
4	5880	10500	40200	12100	26000	14600	7070	8130	4650	10900	7060	4360
5	6590	30400	38400	11400	58700	11800	7620	7410	5100	7730	7960	3370
6	6540	38000	38100	10600	66600	10900	6250	7860	15000	7570	7850	3650
7	6260	34800	36300	9880	49400	11100	10400	8030	35800	6490	7210	3810
8	6480	31400	34100	9440	41800	9400	13900	10900	34500	6320	6530	3590
9	6760	27400	31400	8340	37900	7900	11800	10700	30100	9650	6150	3840
10	6270	22900	30600	8110	34000	9020	12200	8900	27700	15600	6120	3480
11	5430	41400	35100	9740	30800	16300	10400	6690	28100	11900	7760	3590
12	5410	47600	48800	9930	27500	28200	11100	5730	58300	10500	10300	4030
13	4090	45500	47100	10000	25600	24400	11900	6310	55000	11000	11200	4080
14	3670	40100	43700	9360	22400	32600	12100	4960	47900	13700	9540	4300
15	4060	44700	36500	7960	22000	38400	13100	5260	47200	15200	7280	3900
16	4230	50900	33500	7460	17400	37200	16300	5640	45700	13600	6930	4280
17	4500	80500	28400	7620	15900	33500	23300	5100	51600	13100	6250	3880
18	4590	58500	24300	9530	16200	32900	28000	4360	46400	12700	6250	3990
19	4260	46400	18100	14300	25000	30000	25400	4320	39600	13900	7670	3740
20	3130	40700	12700	43200	40400	27600	23400	5460	36100	31600	6660	4130
21	3350	39000	12200	77100	43600	28500	22700	8300	31500	39800	6240	4170
22	5160	35700	10400	51500	51800	27200	29300	12400	26500	35100	5120	4110
23	5580	33000	10800	47700	42000	25800	29800	11400	23500	32900	4350	5300
24	5230	31100	13300	45700	37200	24000	31500	10300	18400	29200	5040	8100
25	5310	29000	12800	42800	34900	22800	27900	8680	13400	26400	4290	9370
26	6200	30500	8740	39500	35000	20200	22100	7800	11600	22900	4740	10300
27	6090	57500	6790	36000	32100	19400	16700	6790	10600	18800	4730	10000
28	5810	65900	7520	32200	28900	18900	15200	6710	9410	15700	4150	13900
29	5660	60800	6000	26000	---	16300	14700	7670	8520	11700	4090	14000
30	5050	48200	6660	24200	---	12700	13700	7300	8190	8930	3670	11800
31	5060	---	7420	23900	---	10600	---	6340	---	7810	3000	---
TOTAL	162160	1134870	807230	679770	926800	661420	496270	243960	785720	498370	199850	168400
MEAN	5231	37830	26040	21930	33100	21340	16540	7870	26190	16080	6447	5613
MAX	6760	80500	48300	77100	66600	38400	31500	12700	58300	39800	11200	14000
MIN	3130	3870	6000	7460	15900	7900	6250	4320	4580	6320	3000	3220

CAL YR 1985 TOTAL 6137020 MEAN 16810 MAX 89700 MIN 2180
WTR YR 1986 TOTAL 6764820 MEAN 18530 MAX 80500 MIN 3000

CROOKED CREEK BASIN

03038000 CROOKED CREEK AT IDAHO, PA

LOCATION.--Lat 40°39'17", long 79°20'56", Armstrong County, Hydrologic Unit 05010006, on right bank at downstream end of old bridge abutment at Idaho, 0.4 mi downstream from Keystone Generation Station, 1.5 mi downstream from Plum Creek, and 2.4 mi west of Shelocta.

DRAINAGE AREA.--191 mi².

PERIOD OF RECORD.--October 1937 to current year. Monthly discharge only for some periods published in WSP 1305.

REVISED RECORDS.--WSP 1385: 1938, 1945.

GAGE.--Water-stage recorder and concrete weir control. Datum of gage is 961.04 ft above National Geodetic Vertical Datum of 1929 (Baltimore and Ohio Railroad bench mark).

REMARKS.--Records good except for estimated daily discharges, Dec. 20 to Jan. 3, Jan. 10-20, Jan. 29 to Feb. 3, and Feb. 14-19, which are fair. Flow regulated to some extent since March 1968 by Keystone Lake 7 mi upstream, usable capacity, 22,010 acre-ft. Evaporation from operation of steam-electric plant 0.4 mi upstream, which began during July 1967, can amount to as much as 30 ft³/s. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--49 years, 294 ft³/s, 20.90 in/yr, adjusted for storage since March 1968.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,200 ft³/s, June 23, 1972, gage height, 15.93 ft; minimum daily, 1.0 ft³/s, Oct. 22, 1966, result of abnormal regulation.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1936 reached a stage of 18.6 ft, from floodmark, discharge, 19,400 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 17	0230	4820	9.39	Feb. 5	1230	*5750	*10.50
Nov. 28	1930	4780	9.33	Feb. 19	2330	3320	7.27
Jan. 20	1530	2880	6.72	Mar. 15	0730	2680	6.48

Minimum daily discharge, 18 ft³/s, June 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	21	774	70	190	251	108	130	30	33	33	32
2	33	23	663	64	400	217	93	129	33	191	44	26
3	44	35	445	80	600	203	79	104	25	95	33	23
4	31	300	338	140	2220	193	75	85	18	44	31	29
5	26	198	298	169	5370	188	82	74	39	26	27	27
6	24	165	308	144	2880	187	137	62	390	33	30	35
7	26	104	303	114	1350	165	459	137	335	28	33	33
8	24	90	282	97	889	124	317	91	209	33	29	32
9	23	70	262	93	671	161	256	65	149	1120	221	24
10	21	105	253	74	516	236	235	57	102	514	277	26
11	26	238	578	68	413	947	226	50	100	355	1160	25
12	24	1050	1760	64	329	712	210	42	532	552	391	36
13	26	1060	1270	62	259	861	189	32	380	706	205	25
14	26	760	1130	60	210	1240	168	36	241	523	140	27
15	29	893	778	58	180	2350	173	39	514	290	105	26
16	28	2370	619	56	150	1400	441	40	532	261	107	28
17	22	3600	483	74	250	902	881	66	668	267	148	26
18	29	1080	335	140	600	672	766	46	335	198	347	31
19	26	658	247	220	1200	628	597	47	225	214	147	42
20	23	417	200	2300	2570	480	461	93	237	203	98	27
21	32	296	170	1520	2000	325	653	105	149	208	78	22
22	29	237	150	1020	1600	273	667	74	110	138	62	26
23	28	197	140	927	1090	249	562	71	108	103	54	40
24	34	169	125	737	811	214	403	77	85	80	125	266
25	41	145	115	606	635	184	331	68	47	69	61	78
26	26	743	100	510	477	165	277	57	34	77	43	76
27	21	1980	92	433	403	169	227	61	35	79	40	39
28	23	3750	86	249	307	143	192	97	35	52	42	28
29	28	2740	80	290	---	127	162	64	31	41	30	26
30	24	1120	76	260	---	115	140	54	28	42	25	25
31	24	---	72	220	---	102	---	35	---	38	29	---
TOTAL	860	24614	12532	10919	28570	14183	9567	2188	5756	6613	4195	1206
MEAN	27.7	820	404	352	1020	458	319	70.6	192	213	135	40.2
MAX	44	3750	1760	2300	5370	2350	881	137	668	1120	1160	266
MIN	21	21	72	56	150	102	75	32	18	26	25	22

CAL YR 1985 TOTAL 108163 MEAN 296 MAX 5190 MIN 17
WTR YR 1986 TOTAL 121203 MEAN 332 MAX 5370 MIN 18

CROOKED CREEK BASIN

57

03039000 CROOKED CREEK AT CROOKED CREEK DAM, PA

LOCATION.--Lat 40°43'13", long 79°30'42", Armstrong County, Hydrologic Unit 05010006, on right bank 0.4 mi downstream from Crooked Creek Dam, 3.5 mi south of Ford City, and 6.7 mi upstream from mouth.

DRAINAGE AREA.--278 mi².

PERIOD OF RECORD.--October 1909 to current year. Published as "at Hileman's Farm" 1910-29 and as "near Ford City" 1930-39. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 743: Drainage area. WSP 1305: 1910-12, 1915-16, 1917 (M), 1918, 1922-27, 1928 (M), 1930 (M). WSP 1435: 1919-21, 1932-33, 1935.

GAGE.--Water-stage recorder. Datum of gage is 799.51 ft above National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Aug. 1, 1933, nonrecording gage at site 2 mi downstream at different datum. July 31, 1933, to Dec. 5, 1939, nonrecording gage at site 1.5 mi downstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Flow completely regulated since 1940 by Crooked Creek Lake 0.4 mi upstream and since 1968 by Keystone Lake, combined capacity, 115,910 acre-ft. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--77 years, 422 ft³/s, 20.61 in/yr, adjusted for storage from May 1940 to September 1968.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,000 ft³/s, Mar. 18, 1936, gage height, 17.86 ft, from flood-mark, site and datum then in use, from rating curve extended above 8,000 ft³/s on basis of contracted-opening measurement of peak flow; minimum observed, 0.1 ft³/s, Sept. 8, 11, 20, 25, 26, 1932.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,360 ft³/s, Mar. 17, gage height, 5.53 ft; minimum daily, 14 ft³/s, July 30, 31, Aug. 1, Sept. 3, 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	58	2100	212	429	1700	148	218	74	30	14	47
2	29	58	2050	169	436	1000	106	218	57	148	23	32
3	29	59	1980	125	455	400	98	218	45	326	38	14
4	29	283	1900	125	517	220	98	167	45	217	44	14
5	29	438	1810	125	1380	220	98	115	43	28	53	15
6	29	434	1710	180	1040	220	99	116	51	29	64	15
7	27	325	1120	236	2200	230	236	118	251	21	63	30
8	29	214	427	234	2160	230	439	118	682	16	64	47
9	29	121	424	233	2100	330	435	118	708	394	270	47
10	26	58	421	180	2040	433	431	118	330	948	368	47
11	27	60	425	123	1980	552	426	91	218	1090	486	47
12	27	62	457	125	1910	635	328	48	219	1080	956	47
13	27	66	784	155	1810	647	227	25	566	993	944	47
14	26	276	1190	181	1710	674	227	19	573	872	591	39
15	27	505	1500	177	1500	723	228	40	328	775	364	32
16	27	648	1760	105	1100	762	406	64	575	285	115	32
17	27	837	1690	68	600	1540	856	66	903	164	179	32
18	27	1150	1340	68	600	1780	1160	96	1070	314	372	32
19	28	1810	767	68	660	1180	1140	125	569	314	458	32
20	29	2160	365	457	940	1560	828	126	128	314	312	32
21	46	2090	209	1020	1600	1740	453	179	66	314	212	32
22	62	2000	209	1680	800	1370	404	331	133	203	165	32
23	61	1920	210	1780	700	829	794	256	179	113	115	32
24	60	1820	213	1730	1700	506	785	65	178	113	115	61
25	60	1700	215	1650	1900	434	514	65	176	113	115	179
26	60	1320	215	1140	1850	429	430	64	105	113	115	230
27	60	882	215	713	2000	319	344	65	29	113	90	172
28	60	751	215	314	2000	206	218	97	29	113	63	62
29	60	1360	215	215	---	204	218	149	29	50	63	26
30	60	2140	214	218	---	203	218	149	30	14	62	26
31	59	---	212	407	---	203	---	91	---	14	53	---
TOTAL	1205	25605	26562	14213	38117	21479	12392	3735	8389	9631	6946	1532
MEAN	38.9	853	857	458	1361	693	413	120	280	311	224	51.1
MAX	62	2160	2100	1780	2200	1780	1160	331	1070	1090	956	230
MIN	26	58	209	68	429	203	98	19	29	14	14	14

CAL YR 1985 TOTAL 149040 MEAN 408 MAX 2320 MIN 25
WTR YR 1986 TOTAL 169806 MEAN 465 MAX 2200 MIN 14

KISKIMINETAS RIVER BASIN

03040000 STONYCREEK RIVER AT FERNDAL, PA

LOCATION.--Lat 40°17'08", long 78°55'15", Cambria County, Hydrologic Unit 05010007, on right bank 50 ft upstream from highway bridge at Ferndale, 0.4 mi downstream from Bens Creek, 1.2 mi upstream from Johnstown city limits, and 5.2 mi upstream from confluence with Little Conemaugh River.

DRAINAGE AREA.--451 mi².

PERIOD OF RECORD.--October 1913 to March 1936, October 1938 to current year. Monthly discharge only for some periods, published in WSP 1305. Monthly figures adjusted for storage and diversion for October 1918 to September 1921, published in WSP 503, 523, have been found in error and should not be used. Published as "at Johnstown" 1914-36, and as "Stony Creek at Ferndale" 1938-79. Gage-height records collected in this vicinity since 1885 are contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 743: Drainage area. WSP 1305: 1915, 1918, 1923-26. WSP 1435: 1920-21, 1932, 1941 (M), 1943 (M), 1945-46 (M). WDR PA-78-3: 1977 (M). See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 1,184.06 ft above National Geodetic Vertical Datum of 1929. Prior to Mar. 19, 1936, nonrecording gage at site 3.5 mi downstream at different datum. Dec. 8, 1938, to Jan. 30, 1940, nonrecording gage at site 50 ft downstream at present datum.

REMARKS.--Records good except for estimated daily discharges, Dec. 20 to Feb. 5, Feb. 14-17, and Mar. 5-8, which are fair. Regulation by mine pumpage and reservoirs and diversion above station; the four largest reservoirs have a combined capacity of 42,360 acre-ft. Figures of daily discharge do not include diversion from Stonycreek River and Quemahoning Creek Reservoir to plants of Bethlehem Steel Co., and from Mill Creek, Dalton Run, and North Fork Bens Creek Reservoirs for water supply of city of Johnstown. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--48 years, 773 ft³/s, 23.28 in/yr, adjusted for storage and diversion 1938-81.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 59,000 ft³/s, Mar. 18, 1936, gage height, 30.26 ft, from high-water mark, site and datum then in use, from rating curve extended above 13,000 ft³/s on the basis of slope-area and contracted-opening measurements of peak flow; minimum observed, 5 ft³/s, Sept. 8, 1929.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13,000 ft³/s, Feb. 5, gage height, 10.34 ft; minimum, 48 ft³/s, Sept. 15, gage height, 2.10 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	73	107	2480	230	280	960	431	389	259	118	92	58
2	87	85	2220	220	500	866	404	353	229	137	122	56
3	95	120	1710	210	1000	775	369	314	206	130	105	56
4	91	817	1390	210	1700	675	352	287	191	107	90	58
5	84	3360	1220	200	9000	600	330	275	195	95	86	64
6	77	1810	1150	200	8490	520	374	261	194	88	88	66
7	74	1000	1030	190	4070	430	822	321	199	85	138	60
8	71	783	949	190	2660	370	750	270	296	102	110	61
9	70	659	883	180	2000	534	582	241	371	397	118	60
10	70	587	887	210	1610	1340	550	230	230	370	94	59
11	76	749	1060	230	1400	3670	558	223	221	210	138	56
12	74	1260	1610	210	1170	2410	548	212	280	202	128	59
13	75	1420	1610	200	962	2230	682	203	246	208	102	55
14	81	1150	1780	190	800	3170	640	276	212	199	92	49
15	85	1210	1300	190	700	8810	600	273	189	158	84	48
16	114	3640	1090	190	640	4490	1170	270	171	139	84	94
17	175	4490	948	190	580	2830	1620	242	197	128	84	152
18	181	2900	797	210	2370	2130	1670	245	169	183	82	165
19	180	1990	577	410	5160	1860	1290	319	150	257	80	165
20	200	1520	500	1100	6500	1560	1100	721	193	324	73	115
21	255	1190	430	1000	5210	1230	1110	857	166	486	73	80
22	294	1330	380	820	4260	1050	1060	625	142	263	84	58
23	275	1740	350	700	2960	956	910	485	134	219	90	67
24	305	1290	320	600	2260	856	764	429	130	173	88	184
25	359	1040	300	500	1840	757	679	369	132	152	78	734
26	252	2010	290	400	1520	693	627	325	126	133	69	315
27	211	6510	280	380	1350	652	566	325	119	128	67	759
28	205	8430	270	350	1120	612	514	460	131	122	71	148
29	191	6370	260	330	---	549	471	387	129	110	69	122
30	153	3400	250	310	---	498	408	314	119	100	64	100
31	117	---	240	290	---	454	---	287	---	98	59	---
TOTAL	4650	62967	28561	10840	72112	48537	21951	10788	5726	5621	2802	4123
MEAN	150	2099	921	350	2575	1566	732	348	191	181	90.4	137
MAX	359	8430	2480	1100	9000	8810	1670	857	371	486	138	759
MIN	70	85	240	180	280	370	330	203	119	85	59	48

CAL YR 1985 TOTAL 290718 MEAN 796 MAX 8650 MIN 67
WTR YR 1986 TOTAL 278678 MEAN 764 MAX 9000 MIN 48

KISKIMINETAS RIVER BASIN

59

03041000 LITTLE CONEMAUGH RIVER AT EAST CONEMAUGH, PA

LOCATION.--Lat 40°20'37", long 78°53'07", Cambria County, Hydrologic Unit 05010007, on right bank 100 ft downstream from bridge on State Highway 271 at East Conemaugh, 0.3 mi downstream from Clapboard Run, and 2.5 mi upstream from confluence with Stonycreek River.

DRAINAGE AREA.--183 mi².

PERIOD OF RECORD.--April 1939 to current year.

REVISED RECORDS.--WSP 1305: 1939-50 (adjusted monthly runoff). WDR PA-78-3: 1977 (M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,211.29 ft above National Geodetic Vertical Datum of 1929. Prior to February 1, 1940, July 21, 1977 to December 13, 1979, and February 7, 1984 to September 30, 1984, nonrecording gage at site 100 ft upstream at datum 3.0 ft lower. February 2, 1940 to July 20, 1977, December 14, 1979 to February 6, 1984 and October 1, 1984 to current year, water-stage recorder at same site and datum.

REMARKS.--Estimated daily discharges: Oct. 1-7, Dec. 20 to Mar. 10, and Mar. 16 to Apr. 11. Records fair. Flow regulated by reservoirs and diversion above station; the two most effective reservoirs have a combined capacity of 5,640 acre-ft. Figures of daily discharge do not include diversion at South Fork intake to Cambria plant of Bethlehem Steel Co., from Saltlick Run Reservoir to city of Johnstown, and from Wilmore Reservoir, capacity 3,145 acre-ft, to Franklin plant of Bethlehem Steel Co. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--47 years, 328 ft³/s, 24.34 in/yr, adjusted for storage and diversion 1940-81.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,000 ft³/s, July 20, 1977, gage height, 18.85 ft, from high-water mark, from rating curve extended above 5,200 ft³/s on basis of slope-area measurements of peak flow and at gage height 8.86 ft; minimum, 3.4 ft³/s, Sept. 28, Oct. 8, 9, 11, 1963, gage height, 1.08 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 17, 18, 1936, reached a discharge of 28,800 ft³/s, by slope-area measurement.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,900 ft³/s, Mar. 15, gage height, 6.27 ft³/s; minimum daily, 41 ft³/s, Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	59	881	96	110	390	180	231	254	101	75	61
2	50	58	847	92	150	340	170	212	101	99	99	63
3	60	64	626	88	400	310	160	190	92	100	105	63
4	58	171	525	84	800	290	150	175	92	83	80	63
5	56	657	469	82	1650	250	140	172	92	82	76	65
6	52	370	441	90	1600	230	250	166	99	77	75	65
7	50	239	386	170	1300	200	420	209	96	71	88	63
8	49	191	350	140	1100	180	330	166	154	70	80	63
9	48	152	325	120	900	300	280	102	110	252	78	62
10	48	155	316	115	740	500	240	127	94	131	77	61
11	52	234	418	110	600	1080	220	166	155	82	77	59
12	52	467	808	105	470	611	206	167	370	89	75	57
13	50	467	740	100	390	939	251	113	296	108	71	58
14	52	581	699	100	330	2110	295	138	187	119	70	57
15	56	642	563	98	300	5870	283	164	144	88	69	56
16	54	1310	471	96	260	1600	627	203	122	82	92	56
17	53	1710	414	96	230	1200	846	211	201	81	77	55
18	53	1120	348	94	900	980	860	219	144	81	72	57
19	53	778	281	160	1800	800	666	192	120	124	68	81
20	54	599	240	800	2700	640	571	266	120	127	66	64
21	58	505	220	680	2000	540	551	246	121	277	64	60
22	59	517	200	580	1500	470	495	201	113	131	65	60
23	59	525	170	470	1100	410	426	167	126	102	67	64
24	70	397	160	400	860	370	371	182	121	89	73	86
25	84	329	140	350	600	340	331	295	103	83	68	172
26	68	804	130	300	560	310	307	367	101	81	64	84
27	62	1740	120	250	500	280	287	266	101	81	63	70
28	61	1860	115	210	430	250	281	310	104	80	62	65
29	61	1610	110	180	---	210	252	207	104	79	60	63
30	59	1160	105	160	---	200	234	146	103	76	60	61
31	59	---	98	140	---	190	---	199	---	75	61	---
TOTAL	1741	19471	11716	6556	24280	22390	10680	6175	4140	3201	2277	2014
MEAN	56.2	649	378	211	867	722	356	199	138	103	73.5	67.1
MAX	84	1860	881	800	2700	5870	860	367	370	277	105	172
MIN	41	58	98	82	110	180	140	102	92	70	60	55

CAL YR 1985 TOTAL 113720 MEAN 312 MAX 4200 MIN 28
WTR YR 1986 TOTAL 114641 MEAN 314 MAX 5870 MIN 41

KISKIMINETAS RIVER BASIN

03041500 CONEMAUGH RIVER AT SEWARD, PA

LOCATION.--Lat 40°25'09", long 79°01'35", Westmoreland County, Hydrologic Unit 05010007, on left bank at upstream side of bridge on State Highway 56 at Seward, 2.0 mi downstream from Findley Run, and 9 mi northwest of Johnstown.

DRAINAGE AREA.--715 mi².

PERIOD OF RECORD.--May 1938 to current year.

REVISED RECORDS.--WDR PA-78-3: 1936 (M), 1977 (M).

GAGE.--Water-stage recorder. Datum of gage is 1,076.01 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, Dec. 20 to Jan. 19, Jan. 23 to Feb. 5, Feb. 15-19, and Feb. 21 to Mar. 4, which are fair. Flow regulated by steel mills and reservoirs above station, the eight most effective reservoirs have a combined capacity of 51,850 acre-ft. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--48 years, 1,281 ft³/s, 24.33 in/yr, adjusted for storage 1938-75.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 115,000 ft³/s, July 20, 1977, gage height, 27.06 ft, from high-water mark, from slope-area measurement of peak flow; minimum not determined; minimum daily, 105 ft³/s, Dec. 28, 29, 31, 1938.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 18, 1936 reached a stage of 26.4 ft, from floodmarks, discharge, 75,000 ft³/s, by contracted-opening measurement at site 6.7 mi downstream, adjusted for inflow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,600 ft³/s, Feb. 5, Mar. 15, gage height, 10.43 ft; minimum, 175 ft³/s, Sept. 15, gage height, 2.04 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	203	244	3450	360	350	1500	810	802	543	314	273	195
2	227	223	3120	350	700	1350	768	761	507	378	265	211
3	228	263	2470	340	1700	1200	720	688	462	350	375	219
4	226	913	2040	330	3500	1100	698	627	435	289	270	219
5	211	4100	1810	320	11000	1040	657	610	462	241	267	238
6	199	2730	1730	310	11500	1000	725	595	472	225	268	220
7	202	1590	1560	300	5750	927	1280	740	445	202	366	201
8	200	1200	1420	330	3820	725	1230	634	570	220	317	197
9	201	1010	1330	490	2890	867	982	565	651	892	320	210
10	198	938	1320	400	2360	1490	944	532	502	840	271	211
11	231	1200	1600	320	2070	4910	1000	508	612	471	299	204
12	201	2010	2620	280	1770	3360	1020	492	1110	460	318	209
13	192	2430	2590	260	1490	3220	1180	480	911	517	276	204
14	215	2210	2730	250	1330	4440	1240	618	652	541	261	186
15	231	2440	2080	240	1100	13200	1190	604	536	434	254	185
16	238	6240	1800	240	960	6600	1990	610	476	378	283	208
17	289	7520	1580	230	840	4300	2730	541	631	356	258	304
18	314	4310	1350	220	1800	3300	2870	562	501	368	246	364
19	312	2990	954	450	3500	2970	2320	679	422	565	244	435
20	339	2320	800	1700	9060	2570	2030	1150	477	692	229	313
21	390	1890	700	1300	8000	2080	2010	1400	442	1140	231	236
22	458	1940	620	1000	6400	1790	1890	1130	375	712	243	224
23	446	2370	560	800	5000	1630	1660	920	385	526	250	237
24	519	1860	540	720	3500	1490	1440	830	375	436	265	371
25	589	1520	500	640	3000	1340	1280	727	355	381	243	1330
26	451	2730	470	560	2500	1230	1190	648	333	341	230	765
27	370	8690	450	520	2000	1170	1080	642	325	317	231	428
28	346	11200	420	480	1700	1100	1020	858	333	303	231	333
29	332	8500	400	440	---	1000	950	762	321	303	226	291
30	312	4710	390	410	---	922	850	639	311	294	209	272
31	259	---	370	380	---	855	---	585	---	290	199	---
TOTAL	9129	92291	43774	14970	99590	74676	39754	21939	14932	13776	8218	9220
MEAN	294	3076	1412	483	3557	2409	1325	708	498	444	265	307
MAX	589	11200	3450	1700	11500	13200	2870	1400	1110	1140	375	1330
MIN	192	223	370	220	350	725	657	480	311	202	199	185

CAL YR 1985 TOTAL 466061 MEAN 1277 MAX 11300 MIN 186

WTR YR 1986 TOTAL 442269 MEAN 1212 MAX 13200 MIN 185

KISKIMINETAS RIVER BASIN

61

03042000 BLACKLICK CREEK AT JOSEPHINE, PA

LOCATION.--Lat 40°28'24", long 79°11'01", Indiana County, Hydrologic Unit 05010007, on right bank on upstream side of old concrete dam at Josephine, 0.9 mi upstream from Two Lick Creek, and 5 mi northeast of Blairsville.

DRAINAGE AREA.--192 mi².

PERIOD OF RECORD.--January 1952 to current year.

REVISED RECORDS.--WSP 1385: 1952-54 (M). WDR PA-78-3: 1977 (M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 975.82 ft above National Geodetic Vertical Datum of 1912. Prior to Aug. 25, 1953, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, Oct. 1-12, Dec. 19 to Jan. 20, Jan. 25 to Feb. 5, Feb. 10-19, Feb. 25 to Mar. 10, and Mar. 19 to June 16, which are fair. Some regulation at low flow by mine pumpage above station. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--34 years, 372 ft³/s, 26.31 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 45,700 ft³/s, July 20, 1977, gage height, 19.89 ft, from floodmark in gage well, from rating curve extended above 16,000 ft³/s on basis of contracted-opening measurement at gage height 11.35 ft in gage well, 12.67 ft from outside floodmark and slope-area measurement at gage height 10.93 ft; minimum, 19 ft³/s, Sept. 14, 1952, Nov. 4, 1953; minimum gage height, 3.15 ft, Oct. 15, 1969.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,700 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 16	2130	*7610	*8.18	Feb. 5	1500	5780	7.38
Nov. 27	0130	3880	6.44	Feb. 19	2200	4100	6.55
Nov. 28	1600	4140	6.57	Mar. 15	0700	5090	7.04
Jan. 20	---	---	ice jam				

Minimum daily discharge, 31 ft³/s, Oct. 8, 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	47	790	125	110	330	150	115	50	72	104	70
2	48	51	616	120	160	310	140	100	46	99	95	71
3	43	63	451	115	360	290	135	115	43	114	90	69
4	35	139	378	110	1200	270	125	110	41	86	83	67
5	34	285	368	105	4570	260	120	100	60	77	80	72
6	33	366	365	100	3400	240	440	96	120	73	77	75
7	32	219	355	96	1810	230	1400	94	210	71	77	67
8	31	164	335	92	996	220	470	96	340	73	76	64
9	31	124	317	90	694	210	350	92	240	593	110	62
10	32	158	302	86	540	220	300	86	190	464	123	57
11	32	293	377	84	410	1630	270	80	500	221	182	57
12	36	517	1240	84	330	757	250	76	1200	291	111	58
13	45	652	903	82	270	1010	240	72	840	848	84	57
14	53	1020	939	80	220	1630	230	76	560	610	76	55
15	62	1490	576	80	180	3940	210	82	330	327	73	59
16	50	3520	475	78	150	1850	1800	84	230	245	73	60
17	44	3580	401	88	120	971	800	80	302	256	104	59
18	43	1460	352	140	300	723	640	72	248	211	82	64
19	48	924	320	300	1100	580	560	80	179	321	74	126
20	52	629	290	480	3220	480	500	88	176	464	75	90
21	53	506	270	895	2850	420	680	100	153	804	79	73
22	52	453	240	640	2010	360	600	88	118	423	82	67
23	55	449	220	675	1160	320	490	74	143	295	81	72
24	75	438	200	573	741	290	400	70	110	263	100	76
25	114	406	190	460	540	260	300	66	93	237	87	135
26	74	896	180	350	450	240	230	62	87	189	78	101
27	59	2970	170	270	420	210	250	78	84	168	77	114
28	52	3370	160	220	380	190	200	100	85	147	77	80
29	48	2440	150	170	---	180	160	76	85	127	70	72
30	47	1300	140	140	---	170	130	64	74	120	65	63
31	51	---	130	110	---	160	---	56	---	115	66	---
TOTAL	1504	28929	12200	7038	28691	18951	12570	2628	6937	8404	2711	2212
MEAN	48.5	964	394	227	1025	611	419	84.8	231	271	87.5	73.7
MAX	114	3580	1240	895	4570	3940	1800	115	1200	848	182	135
MIN	31	47	130	78	110	160	120	56	41	71	65	55
CFSM	.25	5.02	2.05	1.18	5.34	3.18	2.18	.44	1.20	1.41	.46	.38
IN.	.29	5.60	2.36	1.36	5.56	3.67	2.44	.51	1.34	1.63	.53	.43

CAL YR 1985 TOTAL 141873 MEAN 389 MAX 4540 MIN 31 CFSM 2.02 IN. 27.47
WTR YR 1986 TOTAL 132775 MEAN 364 MAX 4570 MIN 31 CFSM 1.89 IN. 25.72

KISKIMINETAS RIVER BASIN

03042260 YELLOW CREEK LAKE AT YELLOW CREEK STATE PARK, PA

LOCATION.--Lat 40°35'27", long 79°03'11", Indiana County, Hydrologic Unit 05010007, in gatehouse at right end of dam on Yellow Creek, at Yellow Creek State Park, 3 mi southwest of Penn Run.

DRAINAGE AREA.--52.5 mi².

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

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical datum of 1929 (Pennsylvania Department of Environmental Resources bench mark).

REMARKS.--Lake is formed by an earthfill dam with concrete spillway. Storage began July 11, 1971. Usable capacity, 13,800 acre-ft between elevation 1,245.5 ft, sill of 4-foot and 1.5 foot outlet gates, and 1,280.00 (spillway crest). No dead storage. Figures given herein represent usable contents. Lake is used for recreation. Dam built by Pennsylvania Department of Forests and Waters and now maintained by Pennsylvania Department of Environmental Resources.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 24,100 acre-ft, July 20, 1977, elevation, 1,290.29 ft; minimum (after first filling), 2,810 acre-ft, Apr. 14, 1975, elevation, 1,261.47 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 15,920 acre-ft, Feb. 5, elevation, 1,282.35 ft; minimum, 12,230 acre-ft, Dec. 30, elevation, 1,278.16 ft.

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

Date	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in cfs)
<u>03042260 Yellow Creek Lake</u>			
Sept. 30	1278.83	12790	-
Oct. 31	1278.72	12680	- 1.3
Nov. 30	1280.95	14660	+ 33.3
Dec. 31	1279.51	13360	- 21.1
CAL YR 1985	-	-	- 1.1
Jan. 31	1279.83	13650	+ 4.7
Feb. 28	1280.08	13870	+ 4.0
Mar. 31	1279.62	13460	- 6.7
Apr. 30	1279.67	13500	+ 0.7
May 31	1279.38	13240	- 4.3
June 30	1279.33	13200	- 0.7
July 31	1279.38	13240	+ 0.6
Aug. 31	1279.06	12950	- 4.7
Sept. 30	1279.15	13040	+ 1.5
WTR YR 1986	-	-	+ 0.3

KISKIMINETAS RIVER BASIN

63

03042280 YELLOW CREEK NEAR HOMER CITY, PA

LOCATION.--Lat 40°34'18", long 79°06'13", Indiana County, Hydrologic Unit 0510007, on left bank 0.3 mi upstream from Central Indiana County Water Authority dam, 0.4 mi upstream from Ferrier Run, which has been diverted, and 3.5 mi northeast of Homer City.

DRAINAGE AREA.--57.4 mi², excludes that of Ferrier Run.

PERIOD OF RECORD.--October 1967 to current year.

REVISED RECORDS.--WDR PA-76-3: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,140 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, Oct. 1-21, Dec. 19 to Jan. 20, and Jan. 27 to Mar. 5, which are fair. Flow regulated since 1971 by Yellow Creek Lake (station 03042260) 4.2 mi upstream. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--19 years, 108 ft³/s, 25.55 in/yr, adjusted for storage beginning June 1971.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,000 ft³/s, July 20, 1977, gage height 12.60 ft, from rating curve extended above 810 ft³/s on basis of computation of peak flow over dam and flow over dam measurement at gage height 7.46 ft; minimum, 1.4 ft³/s, July 19, 1969, gage height, 1.99 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,710 ft³/s, Feb. 5, gage height, 5.45 ft; minimum daily, 8.0 ft³/s, Oct. 7-9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	12	349	37	58	115	50	63	22	19	24	8.9
2	12	13	264	35	68	105	44	56	19	22	22	8.9
3	11	15	203	34	92	98	40	49	17	23	20	8.9
4	9.6	19	159	32	240	90	36	42	16	20	18	8.9
5	8.4	18	136	30	1430	80	34	36	14	18	16	8.9
6	8.2	20	122	29	800	72	38	32	42	16	16	8.9
7	8.0	28	107	27	600	69	49	41	98	16	15	8.9
8	8.0	36	95	26	400	70	54	43	114	17	15	8.9
9	8.0	39	86	25	250	56	54	39	110	136	19	8.9
10	8.2	49	83	23	170	68	52	33	92	181	20	8.9
11	9.2	70	109	22	130	223	52	28	94	94	30	8.9
12	8.4	130	258	21	100	275	54	24	133	77	30	8.9
13	8.8	198	324	20	90	312	58	22	148	145	25	8.9
14	11	211	338	19	86	419	62	23	144	323	22	8.9
15	9.0	262	258	19	72	757	68	22	143	377	19	8.9
16	8.8	719	220	18	90	581	91	23	128	157	18	8.9
17	8.4	1290	184	18	150	394	154	24	258	18	18	8.9
18	9.0	605	157	17	300	289	202	23	265	24	16	9.9
19	9.0	356	130	40	600	246	209	23	140	47	15	11
20	9.4	250	110	110	960	216	188	31	63	69	14	9.4
21	10	185	96	286	680	173	181	42	63	77	14	9.2
22	11	147	84	275	480	145	174	43	58	72	13	8.9
23	11	126	78	279	350	128	150	42	53	64	13	8.9
24	14	104	70	249	250	112	142	40	46	60	14	9.6
25	12	89	64	205	180	97	127	36	37	65	13	9.7
26	12	157	58	180	150	86	113	32	29	63	13	9.4
27	12	537	54	140	130	80	99	31	24	55	12	9.4
28	12	1140	50	120	120	73	89	38	23	49	12	9.1
29	12	1050	45	100	---	66	78	37	21	40	10	9.4
30	12	536	41	82	---	60	69	31	19	34	9.9	9.2
31	12	---	40	70	---	57	---	24	---	29	9.4	---
TOTAL	314.4	8411	4372	2588	9026	5612	2811	1073	2433	2407	525.3	274.4
MEAN	10.1	280	141	83.5	322	181	93.7	34.6	81.1	77.6	16.9	9.15
MAX	14	1290	349	286	1430	757	209	63	265	377	30	11
MIN	8.0	12	40	17	58	56	34	22	14	16	9.4	8.9
MEAN†	8.9	314	120	88.2	326	174	94.5	30.3	80.4	78.3	12.2	10.7
CFSM†	.16	5.47	2.09	1.54	5.68	3.03	1.65	.53	1.40	1.36	.21	.19
IN.†	.18	6.10	2.41	1.78	5.91	3.49	1.84	.61	1.56	1.57	.24	.21

CAL YR 1985 TOTAL 39603.3 MEAN 109 MAX 1290 MIN 8.0 ADJ -1.1 MEAN† 108 CFSM† 1.88 IN.† 25.41
WTR YR 1986 TOTAL 39847.0 MEAN 109 MAX 1430 MIN 8.0 ADJ +0.4 MEAN† 109 CFSM† 1.90 IN.† 25.90

† Adjusted for change in contents in Yellow Creek Lake.

KISKIMINETAS RIVER BASIN

03042500 TWO LICK CREEK AT GRACETON, PA

LOCATION.--Lat 40°31'02", long 79°10'19", Indiana County, Hydrologic Unit 05010007, on right bank 0.8 mi upstream from highway bridge on road leading west from Graceton, 1.1 mi downstream from Tearing Run, 1.5 mi upstream from Cherry Run, and 8 mi northeast of Blairsville.

DRAINAGE AREA.--171 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 981.63 ft above National Geodetic Vertical Datum of 1929.

REVISED RECORDS.--WDR PA-78-3: 1977 (M).

REMARKS.--Records good except for estimated daily discharges, Dec. 25 to Jan. 2, Jan. 26 to Feb. 4, and Feb. 11-18, which are fair. Diurnal fluctuation caused by mine pumpage and by sewage-disposal plant above station. Flow regulated since December 1968 by Two Lick Creek Reservoir 10 mi upstream, capacity, 16,240 acre-ft and since July 1971 by Yellow Creek Lake (station 03042260) 11 mi upstream. Several observations of water temperature were made during the year. Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--35 years, 283 ft³/s, 22.47 in/yr, adjusted for storage since December 1968.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,000 ft³/s, July 20, 1977, gage height, 18.65 ft (backwater), from highwater mark, from rating curve extended above 4,500 ft³/s on basis of slope-area measurement of peak flow and contracted-opening measurement at gage height 12.71 ft at site 1.6 mi above gage, adjusted to gage site; minimum, 2.0 ft³/s, Sept. 14, 15, 1952, gage height, 1.27 ft; minimum daily, 8.7 ft³/s, Sept. 14, 1952.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,190 ft³/s, Feb. 5, gage height, 8.28 ft; minimum daily, 40 ft³/s, Oct. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	97	41	901	90	140	283	117	129	63	62	82	64
2	94	42	611	88	135	262	111	109	61	111	78	67
3	77	67	447	134	260	390	106	99	56	108	75	75
4	50	135	330	148	550	238	102	91	54	93	64	72
5	49	107	300	120	3670	229	108	85	55	57	56	67
6	50	80	294	114	3140	227	141	81	236	55	62	65
7	48	69	272	110	1510	214	224	113	292	54	71	65
8	48	74	257	105	994	202	207	93	207	65	63	69
9	48	70	243	107	728	203	200	87	169	681	115	85
10	48	107	249	112	566	237	199	81	139	415	84	94
11	54	186	373	99	374	705	205	74	161	196	224	94
12	48	484	657	97	300	778	202	70	423	319	122	93
13	52	386	951	106	250	951	187	66	351	486	80	88
14	64	427	990	127	210	1430	140	76	302	561	67	69
15	46	439	727	154	180	1810	180	71	409	488	71	74
16	43	1470	592	159	150	1510	331	70	391	337	77	90
17	42	1580	463	145	200	953	699	79	496	183	66	97
18	46	772	320	144	830	492	490	71	372	178	75	103
19	46	473	291	161	1890	450	470	83	285	279	59	90
20	48	342	264	737	2430	397	455	101	146	375	51	58
21	46	269	242	1020	2320	500	481	99	123	358	130	58
22	47	232	232	892	1760	466	461	90	169	267	141	77
23	56	199	210	788	1120	282	429	86	109	127	133	94
24	70	172	159	577	680	262	396	81	97	162	82	83
25	53	149	145	393	453	245	372	77	87	154	66	81
26	43	558	135	310	390	233	314	74	77	212	84	59
27	42	2210	120	260	356	217	319	88	66	167	118	65
28	40	3010	115	210	313	150	249	117	85	111	47	81
29	41	2600	105	180	---	140	201	88	66	98	54	79
30	41	1430	98	150	---	131	161	71	63	93	59	77
31	43	---	96	145	---	124	---	72	---	86	64	---
TOTAL	1620	18180	11189	7982	25899	14711	8257	2672	5610	6938	2620	2333
MEAN	52.3	606	361	257	925	475	275	86.2	187	224	84.5	77.8
MAX	97	3010	990	1020	3670	1810	699	129	496	681	224	103
MIN	40	41	96	88	135	124	102	66	54	54	47	58
†	-19.5	+207	-18.7	-33.0	+48.5	-10.8	+5.7	+16.0	-2.4	+1.4	-23.4	-33.6
MEAN‡	32.8	813	342	224	974	464	281	102	185	225	61.1	44.2
CFSM‡	.19	4.75	2.00	1.31	5.70	2.71	1.64	.60	1.08	1.32	.36	.26
IN.‡	.22	5.30	2.31	1.51	5.94	3.12	1.83	.69	1.20	1.52	.42	.29

CAL YR 1985 TOTAL 105269 MEAN 288 MAX 3200 MIN 40 ADJ -0.5 MEAN‡ 288 CFSM‡ 1.68 IN.‡ 22.85
WTR YR 1986 TOTAL 108011 MEAN 296 MAX 3670 MIN 40 ADJ +10.8 MEAN‡ 307 CFSM‡ 1.80 IN.‡ 24.35

† Change in contents, equivalent in cubic feet per second, in Two Lick Creek Reservoir and Yellow Creek Lake.
Records of contents in Two Lick Creek Reservoir furnished by Pennsylvania Electric Co.

‡ Adjusted for change in reservoir contents.

KISKIMINETAS RIVER BASIN

65

03044000 CONEMAUGH RIVER AT TUNNELTON, PA

LOCATION.--Lat 40°27'16", long 79°23'28", Indiana County, Hydrologic Unit 05010007, on right bank at downstream side of highway bridge at Tunnelton, 0.9 mi downstream from Boatyard Run, 2.0 mi downstream from Conemaugh River Dam, 3.8 mi southeast of Saltsburg, and 5.5 mi upstream from confluence with Loyalhanna Creek.

DRAINAGE AREA.--1,358 mi².

PERIOD OF RECORD.--October 1939 to current year.

GAGE.--Water-stage recorder. Datum of gage is 844.64 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1952, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, Dec. 20-22, 25, 28-31, Jan. 8, 9, 15-17, 28-31, and Feb. 4, 5, 18-20, which are fair. Flow regulated since 1971 by Yellow Creek Lake (station 03042260) since 1952 by Conemaugh River Lake 2 mi upstream and by reservoirs above station, the nine most effective of which have a combined capacity of 68,090 acre-ft. Evaporation from operation of Homer City and Conemaugh generating stations, which began during 1969 and 1970 respectively, can amount to as much as 45 ft³/s. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--47 years, 2,384 ft³/s, 23.84 in/yr, adjusted for storage 1952-75.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 59,200 ft³/s, Mar. 7, 1945, gage height, 21.0 ft from graph based on gage readings; minimum, 1 ft³/s, Sept. 10, 1954, gage height, 1.20 ft; minimum daily, 1 ft³/s, Sept. 10, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,500 ft³/s, Feb. 24, gage height, 9.16 ft; minimum daily, 122 ft³/s, Aug. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	342	559	10500	846	2740	10100	1150	1440	983	662	460	130
2	297	539	10300	863	2100	6050	1060	1430	960	661	680	130
3	310	532	10000	874	2250	4530	1060	1290	924	660	480	134
4	317	698	9680	885	2400	3080	1090	1010	769	656	490	775
5	322	960	9290	895	4390	1170	1090	843	565	649	372	480
6	322	2990	8820	899	5700	732	1090	853	673	475	316	420
7	324	4680	7310	904	6890	1200	1140	877	722	380	208	388
8	317	3110	5140	894	10700	1400	1330	926	950	318	316	356
9	317	1430	3700	880	10600	1740	1390	945	1180	957	775	356
10	313	1230	2330	844	10400	2110	1440	944	1170	1580	590	284
11	310	1300	2350	842	11700	3420	1460	915	1150	2160	550	356
12	310	1480	2520	842	12900	4630	1490	884	1040	2050	950	364
13	317	1610	3830	841	12000	3340	1490	853	2830	1740	372	356
14	318	3340	5460	824	9760	4480	1520	831	2940	1160	163	356
15	320	5280	5460	650	6300	6100	1540	845	1510	1340	372	348
16	326	4510	5340	520	3730	6480	1820	854	1130	1800	470	221
17	326	3110	5160	530	2160	8150	3070	857	1710	1750	440	234
18	331	4790	4890	535	2350	9110	5530	842	1900	731	510	364
19	337	8190	3170	558	2710	6640	5520	872	1090	550	430	490
20	345	9770	2120	806	3050	11800	4130	1030	693	1220	372	570
21	426	9430	2050	2740	5000	13600	4070	2370	710	1200	332	560
22	520	8990	1690	5350	3940	11300	4030	2690	719	2180	340	510
23	527	8470	1340	5260	3660	7000	3940	1100	720	1780	380	420
24	530	7820	1400	5130	11000	2330	3010	955	720	1640	480	440
25	589	5100	1430	4890	14100	1800	1510	976	715	1120	540	808
26	640	2750	1410	3980	13500	2170	2130	976	658	926	520	1450
27	639	2740	1370	3190	12800	1850	2530	974	592	1050	430	1350
28	626	3330	1350	2440	12000	2160	2230	993	699	388	276	721
29	614	6360	1350	1380	---	2090	1780	1020	686	420	142	352
30	600	10600	1310	1400	---	1570	1450	1030	674	680	122	363
31	584	---	1040	2170	---	1330	---	1010	---	530	126	---
TOTAL	12716	125698	133110	53662	200830	143462	66090	33435	31782	33413	13004	14086
MEAN	410	4190	4294	1731	7172	4628	2203	1079	1059	1078	419	470
MAX	640	10600	10500	5350	14100	13600	5530	2690	2940	2180	950	1450
MIN	297	532	1040	520	2100	732	1060	831	565	318	122	130

CAL YR 1985 TOTAL 878448 MEAN 2407 MAX 15600 MIN 297

WTR YR 1986 TOTAL 861288 MEAN 2360 MAX 14100 MIN 122

03045000 LOYALHANNA CREEK AT KINGSTON, PA

LOCATION.--Lat 40°17'33", long 79°20'27", Westmoreland County, Hydrologic Unit 05010008, on right bank 60 ft downstream from bridge on State Highway 217, at Kingston, 100 ft downstream from Miller Run, 1.9 mi upstream from Ninemile Run, and 3 mi southeast of Latrobe.

DRAINAGE AREA.--172 mi².

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only October to December 1939, published in WSP 1305.

REVISED RECORDS.--WSP 1335: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,013.16 ft above National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to Oct. 1, 1969, at datum 1.00 ft higher.

REMARKS.--Records good except for estimated daily discharges, Dec. 21 to Feb. 2, Feb. 11-17, and Mar. 4-8, which are fair. Flow regulated by Latrobe Reservoir, capacity, 3,870 acre-ft, and diversion works at Kingston. Figures of daily discharge do not include diversion from reservoir and at Kingston intake to borough of Latrobe. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--47 years, 303 ft³/s, 23.92 in/yr, adjusted for storage and diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,700 ft³/s, Oct. 15, 1954, gage height, 15.8 ft, present datum, from floodmarks, from rating curve extended above 8,700 ft³/s on basis of contracted-opening measurement of peak flow; minimum, 0.1 ft³/s, Sept. 4, 1953; minimum daily, 0.2 ft³/s, Oct. 23, 24, 1953.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1918, 15.8 ft, present datum, Oct. 15, 1954. Flood of Mar. 17 or 18, 1936 reached a stage of about 15.5 ft, present datum, from information by local residents, discharge, 21,000 ft³/s, from rating curve extended above 8,700 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 16	2000	3770	7.03	Feb. 19	2000	4230	7.34
Nov. 27	0100	3550	6.87	Mar. 15	0400	3990	7.18
Nov. 28	1500	6140	8.47	July 19	2130	4190	7.31
Feb. 4	2100	6360	8.58	July 20	2130	3900	7.12
Feb. 5	1300	*7960	*9.38				

Minimum daily discharge, 8.6 ft³/s, Oct. 9, 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	22	802	98	80	258	116	195	129	38	64	16
2	18	25	625	94	250	227	113	178	109	56	58	16
3	20	57	445	92	899	212	104	152	91	57	54	16
4	17	135	355	88	3190	190	102	134	80	39	48	16
5	15	283	310	84	6360	170	102	125	129	32	44	16
6	14	330	318	80	3360	160	274	117	136	28	40	17
7	13	232	284	78	1640	140	767	185	114	26	76	16
8	11	192	264	74	997	130	456	130	107	38	54	15
9	8.6	152	249	72	711	211	345	111	98	1160	74	14
10	8.6	176	250	70	557	489	304	101	72	454	47	12
11	11	363	391	66	400	1530	317	94	143	220	64	12
12	15	1050	1220	64	310	898	308	87	503	223	51	12
13	14	790	1030	62	250	950	329	82	335	216	38	13
14	16	592	952	60	200	1380	314	125	196	193	33	14
15	21	647	666	58	150	2960	324	100	136	125	31	11
16	19	2370	536	56	120	1510	734	89	114	100	38	11
17	16	1850	463	72	300	938	970	85	159	101	54	9.8
18	14	843	380	90	2170	673	796	79	99	83	39	12
19	15	518	294	150	2940	615	650	168	78	891	33	36
20	42	377	250	230	2430	481	570	315	77	1640	28	21
21	36	294	210	320	1830	356	580	277	62	1300	27	17
22	39	290	180	540	1330	302	777	229	54	573	28	15
23	32	286	170	470	961	273	675	205	54	347	25	15
24	33	231	150	400	714	239	572	198	50	250	41	100
25	83	201	140	320	565	208	491	159	40	202	33	312
26	50	913	130	260	454	190	416	133	39	168	24	117
27	34	2570	125	220	398	195	347	167	38	148	21	55
28	27	4220	115	170	313	171	294	320	54	109	23	44
29	24	2330	110	140	---	153	251	189	48	97	23	35
30	21	1200	105	120	---	138	213	159	39	91	19	24
31	22	---	100	96	---	128	---	182	---	77	17	---
TOTAL	721.2	23539	11819	4794	33879	16473	12611	4870	3383	9082	1249	1039.8
MEAN	23.3	785	375	155	1210	531	420	157	113	293	40.3	34.7
MAX	83	4220	1220	540	6360	2960	970	320	503	1640	76	312
MIN	8.6	22	100	56	80	126	102	79	38	26	17	9.8
†	+3.0	+22.2	+5.0	+10.2	+24.7	+9.6	+8.1	+5.6	+6.8	+8.0	+4.7	+1.1
MEAN†	26.3	806	380	165	1235	541	428	163	120	301	45.0	35.7
CFSM†	.15	4.69	2.21	.96	7.18	3.15	2.49	.95	.70	1.75	.26	.21
IN.†	.17	5.23	2.55	1.11	7.48	3.63	2.78	1.10	.78	2.02	.30	.23
CAL YR 1985	TOTAL 110464.2	MEAN 303	MAX 4220	MIN 8.6	ADJ +6.9	MEAN† 310	CFSM† 1.80	IN.† 24.43				
WTR YR 1986	TOTAL 123260.0	MEAN 338	MAX 6360	MIN 8.6	ADJ +8.9	MEAN† 347	CFSM† 2.02	IN.† 27.38				

† Diversion from and change in contents in Latrobe Reservoir and diversion from Kingston intake, equivalent in cubic feet per second, furnished by Latrobe Municipal Authority.

‡ Adjusted for diversion and change in reservoir contents.

KISKIMINETAS RIVER BASIN

67

03047000 LOYALHANNA CREEK AT LOYALHANNA DAM, PA

LOCATION.--Lat 40°27'53", long 79°27'05", Westmoreland County, Hydrologic Unit 05010008, on left bank at downstream side of highway bridge, 0.7 mi downstream from Loyalhanna Dam, 1.5 mi south of Saltsburg, and 4.0 mi upstream from confluence with Conemaugh River.

DRAINAGE AREA.--292 mi².

PERIOD OF RECORD.--October 1939 to current year. Prior to October 1970, published as "at Loyalhanna Creek Dam." Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 1435: 1941.

GAGE.--Water-stage recorder. Datum of gage is 861.15 ft above National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

REMARKS.--No estimated daily discharges. Records good. Flow completely regulated since 1942 by Loyalhanna Lake 0.7 mi upstream and Latrobe Reservoir, combined capacity, 99,000 acre-ft. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--47 years, 486 ft³/s, 22.60 in/yr, adjusted for storage since June 1942.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,700 ft³/s, June 5, 1941, gage height, 10.30 ft; from rating curve extended above 5,200 ft³/s; no flow on Aug. 9, 1979; minimum gage height, -0.18 ft, Aug. 23, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,650, ft³/s Feb. 11, gage height, 6.91 ft; minimum daily, 24 ft³/s, Oct. 1-4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	120	2400	235	704	2380	220	167	170	63	229	64
2	24	86	2380	234	700	1100	196	181	128	101	176	64
3	24	62	2340	234	744	428	173	224	128	124	107	65
4	24	156	2300	233	801	327	173	224	120	123	92	65
5	25	225	2230	234	1140	223	174	224	128	123	92	67
6	25	360	2170	234	1220	224	175	223	130	85	93	68
7	25	452	2110	233	1790	227	309	225	130	61	92	69
8	25	447	1530	233	2550	228	731	225	184	62	105	70
9	25	440	719	232	3080	328	700	225	241	388	120	71
10	26	434	438	230	3610	571	433	172	240	951	121	73
11	26	433	440	230	4060	738	433	117	240	1050	123	76
12	26	454	460	230	4460	767	433	118	244	752	123	78
13	27	480	735	230	3700	781	432	118	556	460	123	77
14	27	797	1080	228	2160	804	430	118	755	457	86	75
15	28	1120	1590	228	872	854	430	119	601	345	61	75
16	45	1040	2090	226	715	878	681	120	319	230	61	77
17	65	899	1540	156	707	1690	1140	120	235	179	98	56
18	64	1650	860	113	760	2030	1290	120	234	123	122	33
19	65	2980	419	115	839	1740	1270	175	166	124	104	58
20	65	3260	227	416	879	2040	1100	233	125	134	92	77
21	95	3060	229	735	1070	2190	817	339	124	353	77	77
22	126	1830	230	731	684	2130	700	447	124	874	60	77
23	125	509	231	1150	549	1570	885	443	124	1100	61	78
24	125	222	233	1160	1770	1030	842	330	124	1080	61	81
25	125	223	235	735	2930	1000	707	221	123	1060	60	191
26	124	227	235	731	3410	968	569	228	123	1020	60	361
27	124	248	235	728	3940	520	429	237	123	665	61	362
28	123	280	235	503	3760	218	428	238	93	245	61	192
29	123	1190	235	222	---	219	426	310	62	123	60	150
30	123	2430	235	224	---	220	318	312	63	123	60	150
31	121	---	235	464	---	220	---	238	---	174	61	---
TOTAL	2019	26114	30626	11887	53604	28643	17044	6791	6157	12752	2902	3077
MEAN	65.1	870	988	383	1914	924	568	219	205	411	93.6	103
MAX	126	3260	2400	1160	4460	2380	1290	447	755	1100	229	362
MIN	24	62	227	113	549	218	173	117	62	61	60	33
†	-11.5	+400	-342	-17.2	+90.0	-71.6	-2.0	+16.2	-8.2	-2.3	-4.3	-15.4
MEAN†	53.6	1270	646	366	2004	852	566	235	197	409	89.3	87.6
CFSM†	.18	4.35	2.21	1.25	6.86	2.92	1.94	.80	.67	1.40	.31	.30
IN.†	.21	4.85	2.55	1.44	7.14	3.37	2.16	.92	.75	1.61	.36	.33

CAL YR 1985 TOTAL 185866 MEAN 509 MAX 3590 MIN 19 ADJ -1.6 MEAN† 507 CFSM† 1.74 IN.† 23.61
WTR YR 1986 TOTAL 201616 MEAN 552 MAX 4460 MIN 24 ADJ +0.9 MEAN† 553 CFSM† 1.89 IN.† 25.69

† Change in contents, equivalent in cubic feet per second, in Latrobe Reservoir and Loyalhanna Lake. Records of contents in Latrobe Reservoir furnished by the Latrobe Municipal Authority.

‡ Adjusted for change in reservoir contents.

KISKIMINETAS RIVER BASIN

03048500 KISKIMINETAS RIVER AT VANDERGRIFF, PA

LOCATION.--Lat 40°36'16", long 79°33'08", Westmoreland County, Hydrologic Unit 05010008, on left bank 0.5 mi upstream from bridge on State Highway Alternate 66 at Vandergriff, and 2.2 mi upstream from Pine Run.

DRAINAGE AREA.--1,825 mi².

PERIOD OF RECORD.--August 1937 to current year. Monthly discharge only for some periods, published in WSP 1305. October 1920 to September 1932 (gage heights and discharge measurements only) in reports of Pennsylvania Department of Forest and Waters.

GAGE.--Water-stage recorder. Datum of gage is 769.40 ft above National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Oct. 1, 1920, to Sept. 30, 1930, nonrecording gage, Oct. 1, 1930, to Sept. 30, 1932, water-stage recorder, at site 0.6 mi downstream at different datum.

REMARKS.--Records good except for estimated daily discharges, Feb. 3-6, 17-21, which are fair. Flow regulated since 1971 by Yellow Creek Lake (station 03042260), since 1952 by Conemaugh River Lake, 23 mi upstream, since 1942 by Loyalhanna Lake, 20 mi upstream, and by other reservoirs above station, the 11 most effective of which have a combined capacity of 105,700 acre-ft. Figures of daily discharge do not include diversion from Beaver Run Reservoir to plants and communities downstream, nor into the Monongahela River basin. Evaporation from operation of Homer City and Conemaugh generating stations, which began during 1969 and 1970, respectively, can amount to as much as 45 ft³/s. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--49 years, 3,104 ft³/s, 23.10 in/yr, adjusted for storage and diversion, 1938-75.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 71,900 ft³/s, Mar. 31, 1940, gage height, 25.70 ft; minimum, 56 ft³/s, Oct. 15, 16, 1952; minimum daily, 60 ft³/s, Oct. 15, 1952.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 18, 1936, reached a stage of 41.64 ft, from floodmark at present site, discharge, 185,000 ft³/s, by slope-area measurement.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 19,000 ft³/s, Feb. 11, gage height, 13.26 ft; minimum daily, 189 ft³/s, Sept. 2, 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	413	665	13600	1330	4230	14200	1710	1880	1280	721	1110	191
2	338	644	13400	1330	3380	8900	1450	1770	1140	812	977	189
3	325	649	12900	1360	2900	5710	1400	1800	1090	794	778	189
4	335	1110	12600	1370	3600	4620	1440	1500	986	770	518	745
5	341	1400	12100	1390	5400	2340	1450	1190	842	761	558	661
6	339	2320	11600	1400	7000	1030	1480	1180	910	727	421	480
7	337	5630	10500	1380	8080	1480	1550	1270	1000	438	438	471
8	335	4600	7450	1260	14500	1880	2100	1260	992	438	369	411
9	330	2260	5640	1310	14400	2060	2540	1270	1530	729	639	400
10	333	1900	3120	1320	14900	3030	2160	1270	1510	2680	1020	396
11	342	2120	3310	1300	15800	4540	2190	1120	1560	3100	682	362
12	330	2660	3960	1290	18500	6670	2180	1080	1570	3760	899	408
13	338	2760	4710	1250	17000	5730	2190	1050	2300	2430	1040	405
14	356	3750	7590	1230	13900	5590	2190	1020	4730	2190	468	404
15	354	7590	7670	1140	8750	8910	2270	1020	2910	1810	339	400
16	338	8990	8120	845	5750	8850	2720	1060	1690	2120	490	393
17	358	6110	7560	897	2900	9900	4340	1060	1670	2530	491	239
18	367	6010	6490	799	3300	12900	7070	1050	2390	1860	622	332
19	376	10800	4910	826	4000	9150	8180	1080	2080	514	617	432
20	389	13500	2720	1290	5000	13600	5910	1300	929	1260	477	616
21	393	12900	2550	2720	6200	17000	5630	1940	860	1650	432	619
22	587	11700	2480	6900	7770	15000	5350	4160	861	3030	389	614
23	613	9850	1860	7060	3590	10600	5330	1930	895	4170	433	512
24	639	8780	1900	7250	12200	4770	5060	1490	862	2820	519	511
25	648	6740	1880	6410	18000	2850	2560	1280	849	2840	590	672
26	722	3900	1700	5760	18100	3520	2810	1280	840	2140	591	1780
27	737	4260	1890	4430	17700	2950	3340	1330	749	2150	571	1970
28	726	6310	1800	4090	17100	2690	3150	1360	748	1250	452	1400
29	709	7090	1790	1920	---	2650	2650	1370	757	459	275	479
30	698	13900	1800	1900	---	2320	2100	1480	731	759	201	460
31	690	---	1740	2440	---	1800	---	1340	---	912	192	---
TOTAL	14136	170898	181340	75197	273950	197240	94500	44190	41261	52624	17598	17141
MEAN	456	5697	5850	2426	9784	6363	3150	1425	1375	1698	568	571
MAX	737	13900	13600	7250	18500	17000	8180	4160	4730	4170	1110	1970
MIN	325	644	1700	799	2900	1030	1400	1020	731	438	192	189

CAL YR 1985 TOTAL 1182340 MEAN 3239 MAX 18500 MIN 325
WTR YR 1986 TOTAL 1180070 MEAN 3233 MAX 18500 MIN 189

BUFFALO CREEK BASIN

69

03049000 BUFFALO CREEK NEAR FREEPORT, PA

LOCATION.--Lat 40°42'57", long 79°41'59", Butler County, Hydrologic Unit 05010009, on right bank 0.6 mi upstream from Little Buffalo Creek and 3 mi north of Freeport.

DRAINAGE AREA.--137 mi².

PERIOD OF RECORD.--October 1940 to current year. Monthly discharge only for October 1940, published in WSP 1305.

GAGE.--Water-stage recorder. Elevation of gage is 792 ft, by barometer. Prior to July 19, 1962, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, Dec. 19 to Jan. 20, Jan. 29 to Feb. 19, and Mar. 2-7, which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--46 years, 194 ft³/s, 19.23 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,000 ft³/s, Oct. 15, 1954, gage height, 13.60 ft, from flood-marks, from rating curve extended above 4,300 ft³/s on basis of slope-area measurement of peak flow; minimum observed, 1.3 ft³/s, Oct. 16-18, 1960; minimum gage height, 0.69 ft, Sept. 1, 1962.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 12	1400	2000	4.60	Jan. 20	---	---	ice jam
Nov. 16	2030	*5100	*7.70	Feb. 5	---	---	ice jam
Nov. 28	1330	2450	5.05	July 2	1100	3350	5.95

Minimum discharge, 9.0 ft³/s, Sept. 15, 17, gage height, 0.88 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	18	508	94	105	187	99	105	46	53	47	14
2	18	19	489	92	105	160	94	101	39	1470	61	14
3	19	62	331	88	300	150	88	89	34	569	49	13
4	15	1050	270	86	700	135	83	81	29	272	39	13
5	16	1070	241	82	1500	125	81	76	30	177	34	13
6	18	428	242	80	900	115	91	74	441	129	31	13
7	19	243	229	80	500	110	122	92	193	101	32	12
8	15	200	202	78	350	117	107	76	140	147	33	11
9	13	138	183	76	280	133	102	67	98	1240	86	11
10	12	221	180	74	250	161	98	63	73	867	71	9.6
11	12	772	724	72	210	304	98	58	77	576	139	9.7
12	13	1310	1430	72	190	225	99	55	721	562	61	10
13	15	1090	960	72	170	376	95	53	463	659	42	11
14	17	789	693	70	150	484	89	54	249	532	36	11
15	30	823	439	70	135	636	95	56	176	342	32	9.2
16	31	2660	343	70	125	506	231	63	130	262	34	10
17	24	2430	293	110	115	392	385	65	178	218	45	9.3
18	18	986	250	200	300	316	317	74	106	169	130	10
19	16	604	220	580	900	308	260	81	85	255	61	21
20	17	411	200	1400	1050	283	231	116	107	246	43	21
21	22	300	190	906	970	216	339	105	79	197	35	15
22	21	255	170	606	887	183	304	80	61	134	30	16
23	21	227	150	478	673	178	261	70	81	107	29	38
24	29	185	140	358	500	163	225	70	67	92	35	126
25	55	158	130	301	380	146	201	60	52	83	27	48
26	31	482	120	278	300	136	184	53	45	80	22	52
27	24	935	115	256	272	129	163	64	41	73	22	69
28	22	1770	110	182	228	121	146	132	41	66	21	56
29	20	1230	105	160	---	111	131	77	114	59	18	37
30	18	744	100	140	---	106	113	61	63	56	16	28
31	19	---	98	125	---	105	---	53	---	52	15	---
TOTAL	634	21610	9855	7336	12545	6817	4932	2324	4059	9845	1376	730.8
MEAN	20.5	720	318	237	448	220	164	75.0	135	318	44.4	24.4
MAX	55	2660	1430	1400	1500	636	385	132	721	1470	139	126
MIN	12	18	98	70	105	105	81	53	29	52	15	9.2
CFSM	.15	5.26	2.32	1.73	3.27	1.61	1.20	.55	.99	2.32	.32	.18
IN.	.17	5.87	2.68	1.99	3.41	1.85	1.34	.63	1.10	2.67	.37	.20

CAL YR 1985 TOTAL 87413.7 MEAN 239 MAX 3690 MIN 9.5 CFSM 1.75 IN. 23.73
WTR YR 1986 TOTAL 82063.8 MEAN 225 MAX 2660 MIN 9.2 CFSM 1.64 IN. 22.28

OHIO RIVER MAIN STEM

03049500 ALLEGHENY RIVER AT NATRONA, PA

LOCATION.--Lat 40°36'55", long 79°43'07", Allegheny County, Hydrologic Unit 05010009, on right bank 520 ft upstream from dam at lock 4 at Natrona, 5.8 mi downstream from Kiskiminetas River, and at mile 24.3.

DRAINAGE AREA.--11,410 mi², approximately.

PERIOD OF RECORD.--October 1938 to current year.

REVISED RECORDS.--WSP 1435: 1939.

GAGE.--Water-stage recorder and concrete dam control. Datum of gage is 737.11 ft above National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to Apr. 14, 1940, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, Nov. 5 to Jan. 24, and July 1, 2, which are fair. Flow regulated by Allegheny Reservoir, Chautauqua and Tionesta Lakes, Union City Reservoir, Woodcock Creek, East Branch Clarion River, Mahoning Creek, Crooked Creek, Yellow Creek, Conemaugh River, and Loyalhanna Lakes and by 15 smaller reservoirs, combined capacity, excluding that of Chautauqua Lake, 2,069,000 acre-ft. Slight diversion since 1952 from Beaver Run Reservoir into the Monongahela River basin. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--48 years, 19,640 ft³/s, 23.38 in/yr, adjusted for storage from 1940 to 1975.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 238,000 ft³/s, Dec. 30, 1942, gage height, 27.46 ft; minimum, 895 ft³/s, Oct. 22, 1963; minimum gage height, 8.82 ft, July 25, 26, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 18, 1936, reached a stage of 32.06 ft, discharge, 365,000 ft³/s, determined by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 100,000 ft³/s, Nov. 17; minimum, 2,770 ft³/s, Aug. 31, Sept. 2, gage height, 9.21 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES
STATION NUMBER 03049500 ALLEGHENY RIVER AT NATRONA, PA. STREAM SOURCE AGENCY USGS
DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5550	5990	58000	13000	25800	40600	13300	15500	6990	9600	8780	3420
2	5760	5510	54000	12000	23400	29300	11400	14700	6100	20600	8220	3270
3	5580	5510	54000	13000	27100	22700	10500	12900	6470	17200	7530	4080
4	5800	8740	52000	14000	29700	20300	8830	10000	5910	13200	7210	4610
5	6340	20000	49000	13500	57900	15600	9360	8910	5360	9090	8450	4200
6	6870	46000	49000	13000	80300	12600	7930	9310	13800	8400	8230	3830
7	6880	47000	47000	12000	66600	13000	11300	9360	19900	7140	7760	4050
8	6850	39000	45000	11000	59400	12000	16800	12300	32400	6930	7030	3830
9	7040	32000	41000	10000	55900	10000	15300	12500	33200	13000	7010	3990
10	7130	26000	40000	9400	52300	12300	15700	10900	29400	20600	7910	3670
11	6590	47000	45000	10000	48800	19800	13300	8150	29300	17800	9140	3670
12	6190	58000	62000	11500	47800	33700	14100	7000	55500	16700	11600	4160
13	5570	54000	62000	12000	45300	31000	14600	7450	58100	15600	13900	4390
14	4640	48000	52000	11000	41600	37000	14700	6130	53800	17600	11300	4550
15	4310	52000	47000	9000	36000	47700	16000	6360	50400	18700	8400	4040
16	4470	60000	43000	8600	29500	47000	18800	6850	48000	17100	7520	4460
17	4650	100000	36000	9400	23600	43800	27200	6300	52600	16200	6970	4080
18	4930	80000	30000	13000	22000	47000	35100	5630	50800	15700	6960	4030
19	5010	60000	24000	20000	27200	40400	35900	5680	43300	14600	8850	4030
20	4490	52000	18000	43000	41400	40700	30700	6640	37800	30400	7530	4410
21	3850	48000	16000	94000	51300	45600	28400	9180	33300	40500	6910	4790
22	4160	46000	13500	70000	61000	43000	33900	17100	28000	39200	5860	4650
23	5410	42000	14000	62000	47100	37300	35600	14800	25000	36800	4950	5480
24	5980	40000	17000	56000	49400	29500	37600	12400	20900	32100	5450	8230
25	6230	37000	16500	51300	53200	26100	32400	10700	15600	29400	5140	9850
26	6430	35000	12000	47100	53100	24500	26200	9590	13200	25700	5160	12500
27	6880	50000	9000	42000	50600	23500	21600	8540	11800	21900	5460	12100
28	7090	80000	9600	38200	47000	22300	19200	8240	10600	17900	4470	15200
29	6840	72000	7600	30100	---	20300	18400	9360	9740	13500	4440	15200
30	6580	60000	8600	25900	---	16400	16800	9300	8970	10200	3780	13100
31	6260	---	9400	26200	---	13400	---	7960	---	8750	3030	---
TOTAL	180360	1356750	1041200	811200	1254300	878400	610920	299740	816240	582110	224950	181870
MEAN	5818	45220	33590	26170	44800	28340	20360	9669	27210	18780	7256	6062
MAX	7130	100000	62000	94000	80300	47700	37600	17100	58100	40500	13900	15200
MIN	3850	5510	7600	8600	22000	10000	7930	5630	5360	6930	3030	3270

CAL YR 1985 TOTAL 7570530 MEAN 20740 MAX 100000 MIN 2800
WTR YR 1986 TOTAL 8238040 MEAN 22570 MAX 100000 MIN 3030

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM DIS- SOLVED (MG/L AS CA)
DEC 11...	1000	50400	185	7.1	5.5	5.0	742	10.2	3400	120	18
MAR 19...	0930	41600	185	7.3	8.0	13	730	12.4	130	100	16
AUG 21...	0900	7330	260	7.9	23.0	5.8	746	4.0	750	56	29
SEP 17...	0845	4160	420	8.1	19.0	--	753	4.2	620	29	--

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HC03)	CAR- BONATE (MG/L AS C03)	ALKA- LINITY TOTAL (AS CAC03)	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, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
DEC 11...	4.7	8.1	1.6	29	24	24	29	13	<.10	4.8	105
MAR 19...	4.6	6.6	1.4	17	14	14	37	9.7	.10	4.9	88
AUG 21...	7.2	13	2.2	46	38	38	65	11	.10	2.7	166
SEP 17...	--	--	--	48	39	37	--	--	--	--	--

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 TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	SEDI- MENT, SUS- PENDED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)
DEC 11...	.64	.060	.40	.030	.09	<.010	<.010	12	88	40	<1
MAR 19...	.87	.060	.40	.030	.09	.010	.020	24	83	20	<1
AUG 21...	.43	.050	.35	.430	--	.010	.010	41	70	70	<1
SEP 17...	.44	.010	.40	.030	--	.010	<.010	18	80	80	--

[illegible]

DATE	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
DEC 11...	<10	8	<1	73	<6	<1	26
MAR 19...	<10	7	<1	73	<6	<1	26
AUG 21...	<10	6	<1	120	<6	<1	230
SEP 17...	--	--	--	--	--	--	--

PINE CREEK BASIN

03049800 LITTLE PINE CREEK NEAR ETNA, PA

LOCATION.--Lat 40°31'13", long 79°56'18", Allegheny County, Hydrologic Unit 05010009, on right bank at downstream side of highway bridge on Saxonburg Boulevard, 0.7 mi upstream from mouth, and 1.5 mi northeast of Etna.

DRAINAGE AREA.--5.78 mi².

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 778.26 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, Dec. 18 to Jan. 20, Jan. 28 to Feb. 5, Feb. 11-19, Feb. 28 to Mar. 8, and May 30 to Sept. 30, which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--24 years, 6.24 ft³/s, 14.66 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,190 ft³/s, May 30, 1986, gage height, 10.28 ft in gage well, 10.41 ft from floodmarks, from rating curve extended above 150 ft³/s on basis of slope-area measurement of peak flow at site 0.6 mi downstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 150 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 16	1630	228	2.06	May 30	1745	*7190	a*10.28
Feb. 2	---	---	ice jam				

(a) 10.41 ft, from outside floodmark.

Minimum daily discharge, 0.10 ft³/s, Oct. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.25	.66	15	2.4	5.0	4.0	2.6	3.3	2.3	2.5	.58	.27
2	.46	2.4	16	2.3	6.2	3.4	2.5	2.9	1.8	3.5	.54	.30
3	.33	20	9.5	2.3	14	3.0	2.3	2.6	1.4	3.2	.52	.40
4	.28	46	8.1	2.2	35	2.8	2.3	2.5	1.2	2.4	.49	.50
5	.47	24	7.3	2.2	75	2.5	2.3	2.4	4.0	1.9	.48	1.0
6	.36	6.2	7.4	2.1	36	2.6	2.9	2.3	8.8	1.5	1.7	.64
7	.25	2.8	6.1	2.1	24	2.9	2.5	5.0	2.6	2.4	1.4	.72
8	.16	2.3	5.3	2.0	16	3.6	2.3	2.7	3.8	8.2	1.0	.80
9	.14	4.6	4.4	2.0	12	4.0	2.3	2.4	1.7	4.5	1.5	.88
10	.10	15	5.6	1.9	9.5	5.0	2.2	2.1	9.0	2.5	3.9	.80
11	.48	25	26	1.9	7.4	8.8	2.5	2.0	9.0	1.7	2.3	.44
12	.35	42	35	1.9	6.0	6.5	2.2	1.8	7.0	4.2	1.4	.82
13	.47	27	26	1.8	5.0	16	2.1	1.7	4.1	2.5	1.7	.60
14	1.5	31	20	1.8	4.0	22	2.0	1.7	3.0	1.7	2.1	.34
15	1.7	24	13	1.7	3.5	25	3.3	1.7	2.1	1.4	2.6	.35
16	.51	119	11	1.7	2.7	17	5.9	3.1	3.7	1.2	3.0	.35
17	.44	62	8.4	2.2	6.0	11	11	2.3	6.0	.90	2.0	1.0
18	.46	24	7.8	3.0	17	8.6	7.2	1.6	5.0	.76	1.2	7.0
19	.57	14	6.2	4.5	40	9.5	5.8	1.5	3.6	2.5	.70	2.0
20	1.6	10	5.4	40	37	7.0	5.7	7.5	2.6	6.2	.47	.90
21	1.7	7.2	4.7	22	32	6.2	9.7	3.2	1.7	3.6	.56	.50
22	1.3	6.7	4.2	17	30	5.4	8.0	2.4	2.4	2.0	2.7	.60
23	1.1	5.3	3.7	15	20	4.4	6.9	2.4	3.5	1.7	1.6	1.1
24	4.9	4.1	3.5	12	14	3.5	6.1	2.0	1.4	1.4	.90	8.0
25	1.6	3.5	3.3	9.7	9.5	3.3	5.3	1.7	1.4	1.3	.70	*4.0
26	.66	41	3.1	8.7	8.2	3.2	4.3	1.5	2.0	5.4	.58	2.0
27	.54	48	3.0	8.8	6.6	3.2	3.7	8.8	2.7	1.0	1.2	1.1
28	.51	87	2.8	7.6	5.4	3.0	4.4	5.7	2.8	.90	.90	.76
29	.46	36	2.7	6.8	---	3.1	5.7	3.1	1.5	.80	.60	.56
30	.56	21	2.6	6.2	---	2.9	3.5	525	2.0	.70	.76	1.5
31	.70	---	2.5	5.6	---	2.7	---	20	---	.60	.82	---
TOTAL	24.91	761.76	279.6	201.4	487.0	206.1	129.5	628.9	104.1	75.06	40.90	40.23
MEAN	.80	25.4	9.02	6.50	17.4	6.65	4.32	20.3	3.47	2.42	1.32	1.34
MAX	4.9	119	35	40	75	25	11	525	9.0	8.2	3.9	8.0
MIN	.10	.66	2.5	1.7	2.7	2.5	2.0	1.5	1.2	.60	.47	.27
CFSM	.14	4.39	1.56	1.12	3.01	1.15	.75	3.51	.60	.42	.23	.23
IN.	.16	4.90	1.80	1.30	3.13	1.33	.83	4.05	.67	.48	.26	.26

CAL YR 1985 TOTAL 2466.75 MEAN 6.76 MAX 119 MIN .08 CFSM 1.17 IN. 15.87
WTR YR 1986 TOTAL 2979.42 MEAN 8.16 MAX 525 MIN .10 CFSM 1.41 IN. 19.17

MONONGAHELA RIVER BASIN

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03070420 STONY FORK TRIBUTARY NEAR GIBBON GLADE, PA.

LOCATION.--Lat 39°45'51", long 79°35'16", Fayette County, Hydrologic Unit 05020004, on left bank 1.5 mi upstream from mouth, 1.7 mi north of Gibbon Glade, and 3.2 mi southwest of Farmington.

DRAINAGE AREA.--0.93 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1977 to current year.

GAGE.--Water-stage recorder and V-notch wooden weir. Elevation of gage is 1,750 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good except for low flows of August and September, which are fair.

AVERAGE DISCHARGE.--9 years, 1.71 ft³/s, 24.82 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 126 ft³/s, July 16, 1978, gage height, 3.61 ft; no flow part of Aug. 6, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 40 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 26	2045	56	2.75	Feb. 5	0730	49	2.65
Feb. 4	0730	56	2.75	July 19	1635	*72	*2.98

Minimum daily discharge, 0.02 ft³/s, Oct. 4, Sept 3, 4, 7, 11, 14, 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	.09	3.4	.67	1.1	1.3	.73	.94	.09	.06	.31	.03
2	.12	.22	2.4	.64	4.0	1.2	.71	.80	.09	.55	.11	.05
3	.12	.89	1.8	.78	5.5	1.1	.67	.75	.08	.15	.10	.02
4	.02	10	1.5	.80	29	1.1	.67	.72	.10	.09	.08	.02
5	.08	9.6	1.4	.89	29	1.2	.76	.67	.14	.06	.08	.06
6	.08	4.3	1.6	.82	12	1.2	1.2	.68	.12	.04	.20	.06
7	.07	2.5	1.5	.69	6.7	1.1	1.1	.75	.18	.07	.41	.02
8	.08	1.8	1.5	.76	4.6	1.7	1.1	.59	.16	.05	.10	.03
9	.09	1.4	1.4	.69	3.4	2.2	1.5	.50	.09	.58	.08	.03
10	.07	1.2	1.3	.69	2.7	2.1	2.1	.46	.09	.09	.15	.03
11	.07	1.1	2.4	.68	2.4	6.9	2.6	.40	.07	.06	.11	.02
12	.07	4.4	4.1	.76	1.8	4.8	4.0	.35	.23	.06	.06	.05
13	.08	4.0	4.5	.74	2.0	4.3	3.6	.39	.08	.07	.06	.03
14	.09	11	3.9	.67	1.7	7.1	2.6	.36	.07	.06	.06	.02
15	.09	7.5	2.7	.62	1.4	9.9	2.8	.29	.07	.04	.06	.03
16	.08	15	2.1	.62	1.3	5.1	2.8	.23	.07	.33	.05	.04
17	.07	8.3	1.7	.67	5.9	3.6	3.5	.20	.14	2.2	.06	.06
18	.07	4.5	1.4	1.8	14	2.8	3.1	.18	.06	.98	.05	.07
19	.17	2.8	1.2	4.2	19	2.4	2.5	.40	.06	7.6	.04	.08
20	.22	2.0	1.2	4.5	10	1.7	2.2	.68	.10	4.2	.04	.03
21	.98	1.5	1.0	2.8	7.3	1.3	2.0	.31	.07	1.9	.05	.02
22	.41	3.5	.98	2.8	5.2	1.3	2.1	.20	.06	1.1	.04	.03
23	.14	2.9	1.0	2.7	3.8	1.3	1.8	.17	.09	.76	.18	.03
24	.61	2.1	1.1	2.2	2.9	1.1	1.5	.14	.07	.54	.08	1.8
25	.28	2.2	.99	2.0	2.2	1.1	1.4	.13	.06	.40	.04	.73
26	.13	16	1.1	2.0	1.9	.89	1.3	.12	.05	1.4	.04	.20
27	.12	22	.90	2.0	1.8	.93	1.2	.44	.13	1.1	.04	.72
28	.11	23	.79	2.6	1.5	.91	1.1	.36	.18	.47	.05	.21
29	.10	9.6	.76	1.3	---	.93	1.2	.22	.08	.42	.04	.11
30	.10	5.3	.70	1.1	---	.75	1.0	.11	.07	.33	.03	.10
31	.10	---	.72	1.1	---	.74	---	.10	---	.50	.03	---
TOTAL	4.92	180.70	53.04	45.29	184.1	74.05	54.84	12.64	2.95	26.26	2.83	4.73
MEAN	.16	6.02	1.71	1.46	6.57	2.39	1.83	.41	.098	.85	.091	.16
MAX	.98	23	4.5	4.5	29	9.9	4.0	.94	.23	7.6	.41	1.8
MIN	.02	.09	.70	.62	1.1	.74	.67	.10	.05	.04	.03	.02
CFSM	.17	6.48	1.84	1.57	7.07	2.57	1.97	.44	.11	.91	.10	.17
IN.	.20	7.23	2.12	1.81	7.36	2.96	2.19	.51	.12	1.05	.11	.19

CAL YR 1985 TOTAL 613.68 MEAN 1.68 MAX 23 MIN .01 CFSM 1.81 IN. 24.57
WTR YR 1986 TOTAL 646.34 MEAN 1.77 MAX 29 MIN .02 CFSM 1.90 IN. 25.85

MONONGAHELA RIVER BASIN

03070420 STONY FORK TRIBUTARY NEAR GIBBON GLADE, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1977 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1977 to current year.

pH: October 1977 to current year.

WATER TEMPERATURES: October 1977 to current year.

SUSPENDED SEDIMENT DISCHARGE: October 1977 to current year.

INSTRUMENTATION.--Water-quality monitor and sediment pumping sampler since October 1977.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 991 microsiemens Sept. 3, 1982; minimum, 15 microsiemens Nov. 2, 1983.

pH: Maximum, 7.9 Sept. 29, 1980, July 8, 1982; minimum, 5.5 May 22, 1984.

WATER TEMPERATURES: Maximum, 27.5°C July 20, 1980; minimum, 0.0°C on many days during winter months.

SEDIMENT CONCENTRATIONS: Maximum daily, 1,460 mg/L July 3, 1983; minimum daily, 2 mg/L Oct. 25, 26, 27, 1979.

SEDIMENT DISCHARGES: Maximum daily, 110 tons Apr. 12, 1981; minimum daily, 0.0 ton on many days.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 436 microsiemens July 31; minimum, 46 microsiemens Nov. 30.

pH: Maximum, 7.8 Jan. 3; minimum, 5.8 Nov. 27.

WATER TEMPERATURES: Maximum, 25.5°C May 31; minimum, 0.0°C on many days during winter months.

SEDIMENT CONCENTRATIONS: Maximum daily, 580 mg/L July 19; minimum daily, 6 mg/L Oct. 30.

SEDIMENT DISCHARGES: Maximum daily, 30 tons July 19; minimum daily, 0.0 ton on many days.

SPECIFIC CONDUCTANCE, (MICROSIEMENS PER CENTIMETER AT 25°C) WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	198	141	146	128	119	123	57	50	52	123	84	100
2	208	114	165	186	119	138	58	53	54	132	81	101
3	164	148	157	183	125	152	58	52	55	219	92	134
4	156	140	149	136	72	107	60	57	58	190	116	149
5	150	135	143	84	74	78	96	58	67	166	105	126
6	144	136	140	81	74	78	118	91	105	105	88	95
7	138	135	137	77	70	73	100	88	93	89	82	86
8	163	125	140	77	70	73	98	79	86	89	80	85
9	161	136	151	79	70	74	85	74	79	87	75	82
10	137	133	135	80	68	76	74	68	70	80	71	74
11	142	135	139	84	68	77	117	66	81	99	70	80
12	142	137	139	101	69	79	83	61	72	125	83	94
13	155	140	145	94	65	73	88	59	71	92	82	86
14	199	135	149	74	58	69	67	54	58	85	78	80
15	163	144	155	67	55	60	55	53	54	99	74	82
16	154	147	150	78	58	66	55	53	54	338	79	153
17	153	148	151	---	---	---	59	53	55	222	93	135
18	163	146	152	---	---	---	61	57	59	172	119	149
19	176	137	155	---	---	---	65	58	61	195	99	130
20	223	142	163	---	---	---	64	58	60	99	67	76
21	205	144	157	---	---	---	62	58	60	82	66	72
22	181	148	158	---	---	---	64	61	62	180	70	112
23	152	140	145	---	---	---	126	61	82	198	100	135
24	179	136	149	---	---	---	214	79	120	115	83	97
25	141	129	133	---	---	---	123	84	95	95	76	84
26	131	123	126	---	---	---	102	76	86	163	90	109
27	127	120	124	---	---	---	97	68	75	119	89	100
28	125	120	123	55	49	52	85	72	77	92	83	86
29	126	117	122	52	47	50	87	72	78	84	76	79
30	125	117	120	50	46	48	90	72	78	78	75	76
31	125	118	121	---	---	---	94	71	77	156	74	96
MONTH	223	114	143	186	46	81	214	50	72	338	66	101

MONONGAHELA RIVER BASIN

03070420 STONY FORK TRIBUTARY NEAR GIBBON GLADE, PA--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	7.10	7.00	7.00	7.00	6.80	6.90	6.20	6.10	6.10	6.76	6.67	6.72
2	7.00	6.70	6.90	6.90	6.80	6.80	6.40	6.20	6.30	7.15	6.66	6.75
3	6.90	6.80	6.80	6.90	6.60	6.80	6.40	6.20	6.30	7.78	6.65	6.79
4	6.90	6.80	6.80	6.60	6.30	6.40	6.40	6.30	6.30	6.83	6.66	6.72
5	7.00	6.80	6.90	6.30	6.00	6.20	6.40	6.30	6.40	6.74	6.64	6.69
6	7.00	6.90	7.00	6.30	6.20	6.30	6.60	6.40	6.50	6.68	6.61	6.65
7	7.10	6.90	7.00	6.40	6.30	6.30	6.50	6.50	6.50	6.68	6.59	6.64
8	7.00	6.80	7.00	6.40	6.40	6.40	6.60	6.50	6.50	6.61	6.52	6.57
9	7.00	6.90	6.90	6.50	6.40	6.40	6.50	6.40	6.50	6.61	6.51	6.56
10	7.00	6.90	6.90	6.50	6.40	6.50	6.50	6.40	6.40	6.62	6.56	6.59
11	6.90	6.80	6.90	6.60	6.40	6.50	7.00	6.40	6.50	6.68	6.58	6.63
12	6.90	6.80	6.90	6.50	6.20	6.30	6.40	6.20	6.30	6.82	6.64	6.70
13	6.90	6.80	6.80	6.40	6.10	6.20	6.60	6.20	6.30	6.71	6.64	6.68
14	6.80	6.70	6.80	6.40	6.00	6.20	6.30	6.20	6.20	6.69	6.64	6.65
15	6.80	6.70	6.80	6.30	6.10	6.10	6.40	6.30	6.30	6.80	6.60	6.70
16	6.90	6.50	6.80	6.40	6.10	6.20	6.40	6.30	6.40	7.00	6.60	6.70
17	6.90	6.80	6.90	---	---	---	6.50	6.40	6.40	6.90	6.70	6.80
18	6.90	6.80	6.90	---	---	---	6.50	6.40	6.50	6.80	6.60	6.70
19	6.80	6.70	6.80	---	---	---	6.50	6.40	6.50	6.80	6.50	6.60
20	7.00	6.70	6.80	---	---	---	6.50	6.40	6.50	6.50	6.40	6.40
21	6.90	6.60	6.70	---	---	---	6.60	6.50	6.50	6.50	6.40	6.40
22	6.70	6.60	6.70	---	---	---	6.60	6.50	6.60	6.50	6.50	6.50
23	6.70	6.60	6.70	---	---	---	6.60	6.50	6.60	6.60	6.50	6.50
24	6.80	6.50	6.60	---	---	---	6.70	6.50	6.60	6.70	6.40	6.50
25	6.70	6.50	6.60	---	---	---	6.70	6.60	6.60	6.50	6.50	6.50
26	6.80	6.70	6.70	---	---	---	6.60	6.50	6.50	6.70	6.50	6.50
27	6.80	6.70	6.80	---	---	---	6.60	6.50	6.60	6.60	6.50	6.60
28	6.90	6.70	6.90	6.10	5.90	6.00	6.70	6.60	6.60	6.60	6.50	6.50
29	7.00	6.90	6.90	6.00	5.90	6.00	6.70	6.60	6.60	6.60	6.50	6.60
30	6.90	6.80	6.90	6.10	6.00	6.00	6.70	6.60	6.60	6.60	6.60	6.60
31	6.90	6.80	6.80	---	---	---	6.71	6.60	6.63	6.90	6.60	6.70
MONTH	7.10	6.50	6.84	7.00	5.90	6.34	7.00	6.10	6.46	7.78	6.40	6.62
DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	6.90	6.60	6.70	6.80	6.63	6.70	7.05	6.81	6.90	---	---	---
2	6.70	6.60	6.60	6.80	6.60	6.70	7.00	6.75	6.88	---	---	---
3	6.60	6.50	6.60	6.80	6.70	6.70	6.97	6.82	6.88	---	---	---
4	6.60	6.20	6.30	6.90	6.70	6.80	6.93	6.78	6.85	---	---	---
5	7.00	6.20	6.30	6.90	6.70	6.80	6.92	6.77	6.85	---	---	---
6	6.50	6.20	6.30	6.90	6.80	6.80	7.00	6.81	6.90	7.07	6.75	6.91
7	6.40	6.30	6.40	6.80	6.70	6.70	7.00	6.80	6.88	6.96	6.63	6.81
8	6.40	6.40	6.40	6.80	6.70	6.70	6.96	6.80	6.86	7.02	6.75	6.87
9	6.50	6.40	6.50	7.00	6.70	6.80	7.09	6.77	6.90	7.08	6.75	6.90
10	6.50	6.50	6.50	6.90	6.40	6.60	7.54	6.79	6.96	6.99	6.76	6.87
11	6.60	6.50	6.60	6.76	6.40	6.47	7.53	6.66	6.88	7.04	6.72	6.87
12	6.60	6.60	6.60	7.27	6.46	6.59	6.65	6.44	6.55	7.14	6.74	6.90
13	6.60	6.50	6.60	6.93	6.51	6.62	6.56	6.45	6.49	7.05	6.66	6.82
14	6.60	6.50	6.60	6.94	6.48	6.63	6.63	6.51	6.56	6.97	6.67	6.80
15	6.70	6.60	6.70	6.48	6.39	6.42	7.47	6.58	6.82	6.91	6.65	6.75
16	6.70	6.70	6.70	6.47	6.41	6.45	6.93	6.67	6.75	6.82	6.62	6.71
17	6.80	6.40	6.60	6.52	6.47	6.49	7.00	6.65	6.75	7.09	6.62	6.81
18	6.60	6.30	6.40	6.59	6.50	6.54	6.64	6.50	6.57	6.96	6.54	6.75
19	6.30	6.20	6.20	6.83	6.56	6.65	6.63	6.52	6.57	7.07	6.51	6.66
20	6.30	6.20	6.30	6.71	6.66	6.68	6.70	6.58	6.62	7.10	6.72	6.90
21	7.30	6.30	6.40	6.80	6.64	6.67	6.86	6.66	6.76	7.08	6.84	6.94
22	6.50	6.40	6.40	6.78	6.68	6.73	6.99	6.75	6.86	7.15	6.85	6.97
23	6.70	6.50	6.50	6.80	6.74	6.78	---	---	---	7.10	6.85	6.96
24	6.50	6.50	6.50	6.79	6.66	6.77	---	---	---	7.06	6.83	6.93
25	6.60	6.50	6.60	6.77	6.71	6.74	---	---	---	7.03	6.80	6.90
26	6.60	6.50	6.60	6.83	6.71	6.77	---	---	---	6.99	6.77	6.88
27	6.70	6.60	6.60	6.95	6.74	6.86	---	---	---	7.17	6.76	6.92
28	6.70	6.60	6.60	6.85	6.77	6.83	---	---	---	6.94	6.66	6.78
29	---	---	---	7.00	6.78	6.92	---	---	---	6.96	6.69	6.83
30	---	---	---	7.00	6.81	6.88	---	---	---	6.98	6.77	6.85
31	---	---	---	7.04	6.80	6.89	---	---	---	6.95	6.74	6.83
MONTH	7.30	6.20	6.50	7.27	6.39	6.70	7.54	6.44	6.77	7.17	6.51	6.85

03070420 STONY FORK TRIBUTARY NEAR GIBBON GLADE, PA--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	6.92	6.73	6.82	---	---	---	6.68	6.63	6.65	7.20	7.01	7.10
2	6.90	6.76	6.82	---	---	---	7.03	6.65	6.86	7.07	7.01	7.03
3	6.90	6.73	6.81	---	---	---	6.93	6.80	6.86	7.10	7.02	7.07
4	6.89	6.63	6.78	---	---	---	6.97	6.82	6.88	7.18	7.04	7.10
5	6.75	6.64	6.70	---	---	---	6.98	6.84	6.90	7.25	6.96	7.10
6	6.74	6.67	6.69	---	---	---	7.30	6.83	7.00	7.10	6.96	7.01
7	---	---	---	---	---	---	7.25	7.03	7.07	7.25	7.09	7.17
8	---	---	---	---	---	---	7.16	7.01	7.08	7.25	7.04	7.17
9	---	---	---	---	---	---	7.23	7.06	7.13	7.19	7.05	7.14
10	---	---	---	7.56	7.23	7.38	7.26	6.99	7.11	7.23	7.18	7.21
11	---	---	---	7.45	7.15	7.25	7.17	7.00	7.06	7.20	7.11	7.15
12	---	---	---	7.53	7.09	7.23	7.22	7.09	7.13	7.30	7.12	7.21
13	---	---	---	7.42	7.11	7.23	7.16	7.06	7.11	7.26	7.15	7.22
14	---	---	---	7.57	7.15	7.30	7.19	7.06	7.12	7.22	7.13	7.18
15	---	---	---	7.29	7.03	7.15	7.21	7.04	7.12	7.25	7.18	7.22
16	---	---	---	7.22	6.75	7.08	7.15	7.02	7.07	7.36	7.14	7.25
17	---	---	---	6.88	6.35	6.67	7.10	6.98	7.04	7.35	7.27	7.31
18	---	---	---	6.54	6.38	6.46	7.16	7.00	7.08	7.30	7.20	7.25
19	---	---	---	6.70	6.04	6.41	7.14	7.03	7.09	7.34	7.21	7.28
20	---	---	---	6.45	6.05	6.20	7.09	7.02	7.06	7.29	7.22	7.26
21	---	---	---	6.36	6.28	6.32	7.10	7.00	7.05	7.21	7.15	7.17
22	---	---	---	6.41	6.33	6.37	7.12	7.01	7.05	7.22	7.09	7.17
23	---	---	---	6.47	6.41	6.44	7.23	6.96	7.06	7.21	7.10	7.17
24	---	---	---	6.51	6.44	6.47	7.16	7.05	7.09	7.18	6.74	6.90
25	---	---	---	6.56	6.39	6.49	7.11	6.94	7.09	7.02	6.86	6.90
26	---	---	---	7.05	6.41	6.52	7.09	6.93	7.01	7.13	6.89	7.00
27	---	---	---	6.64	6.51	6.58	7.07	6.94	7.01	7.30	6.95	7.01
28	---	---	---	6.79	6.63	6.70	7.22	7.04	7.10	7.01	6.93	6.98
29	---	---	---	7.34	6.62	6.84	7.14	7.05	7.09	7.09	6.93	7.01
30	---	---	---	6.85	6.62	6.74	7.18	7.09	7.15	7.07	6.98	7.03
31	---	---	---	6.66	6.61	6.64	7.17	7.10	7.15	---	---	---
MONTH	6.92	6.63	6.77	7.57	6.04	6.75	7.30	6.63	7.04	7.36	6.74	7.13
YEAR	7.78	5.90	6.74									

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

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

03070420 STONY FORK TRIBUTARY NEAR GIBBON GLADE, PA--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	3.0	1.5	2.0	4.0	.5	1.5	18.0	7.5	12.0	---	---	---
2	3.5	2.0	3.0	4.0	.5	2.0	18.0	8.5	12.5	---	---	---
3	5.0	3.5	4.0	3.5	1.5	2.0	17.5	5.5	10.5	---	---	---
4	7.0	3.5	4.5	4.0	2.0	2.5	17.0	10.0	13.0	---	---	---
5	7.0	4.5	6.0	4.0	2.0	2.5	18.0	11.0	13.5	---	---	---
6	6.5	3.0	5.5	2.0	.5	1.0	15.5	11.5	13.0	20.5	13.5	17.5
7	4.5	3.5	4.0	1.0	.5	.5	17.5	10.5	13.0	22.0	13.5	17.5
8	4.5	3.5	4.0	1.0	.5	.5	16.5	8.5	12.0	22.5	11.5	16.5
9	4.5	3.5	4.0	2.5	1.0	1.5	9.0	5.0	7.5	18.0	10.5	13.5
10	4.0	2.0	3.0	7.5	2.0	4.5	6.5	4.0	5.0	21.5	8.0	14.0
11	2.5	.5	1.5	6.0	4.0	5.0	7.0	4.5	5.5	22.5	9.5	15.0
12	2.0	.5	1.0	5.0	3.5	4.0	12.0	4.5	7.5	21.5	10.5	15.5
13	1.0	.5	.5	7.0	4.0	5.5	13.0	6.5	8.5	15.0	13.0	14.0
14	1.0	.5	1.0	7.5	6.0	6.5	14.0	6.0	9.5	18.5	12.5	14.5
15	2.0	.5	1.0	8.0	6.0	6.5	11.0	9.0	9.5	20.0	12.0	16.0
16	2.5	.5	1.5	6.5	5.5	6.0	9.0	7.0	7.5	22.0	14.0	17.5
17	3.5	1.5	2.5	6.5	4.0	5.5	8.0	6.0	7.0	22.5	15.0	18.0
18	5.0	3.5	4.5	9.0	2.5	6.0	15.5	6.0	9.5	23.0	15.0	18.5
19	8.0	5.0	5.5	13.0	7.0	9.5	17.5	6.5	11.0	18.0	16.0	17.0
20	---	---	---	7.5	1.0	5.0	12.5	10.0	11.5	17.0	14.5	15.5
21	7.0	4.5	5.5	6.5	.5	2.5	12.5	9.5	11.0	14.5	12.5	13.5
22	5.5	3.5	4.5	7.5	1.0	3.5	---	---	---	15.5	11.0	13.0
23	6.0	2.5	4.0	9.5	2.0	5.0	---	---	---	14.5	10.0	12.0
24	3.5	1.5	2.5	11.0	3.5	6.0	---	---	---	18.0	10.5	14.0
25	4.0	.5	2.0	13.5	2.5	7.5	---	---	---	20.5	10.0	15.0
26	3.5	.0	1.5	14.0	4.5	9.0	---	---	---	22.0	12.0	16.5
27	4.5	1.0	2.5	12.0	5.0	9.0	---	---	---	16.0	14.5	15.5
28	3.0	.5	1.0	13.0	3.0	7.5	---	---	---	21.0	14.5	17.0
29	---	---	---	15.5	5.0	9.5	---	---	---	24.0	15.5	19.0
30	---	---	---	18.0	7.0	11.5	---	---	---	20.5	15.0	17.5
31	---	---	---	18.5	7.5	12.5	---	---	---	25.5	14.5	19.5
MONTH	8.0	.0	3.0	18.5	.5	5.0	18.0	4.0	10.0	25.5	8.0	16.0
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	24.0	15.0	19.5	---	---	---	22.5	18.0	20.0	18.0	15.0	16.5
2	20.0	15.5	17.5	---	---	---	21.0	17.5	19.5	19.5	17.5	18.0
3	20.5	9.5	14.5	---	---	---	21.5	17.5	19.0	19.5	16.5	18.0
4	19.5	11.5	15.5	---	---	---	21.5	15.5	18.5	19.5	17.5	18.5
5	20.5	17.0	18.5	---	---	---	22.0	16.5	19.0	20.5	18.0	19.0
6	20.0	18.0	18.5	---	---	---	23.0	18.0	19.5	19.5	16.5	18.0
7	---	---	---	---	---	---	22.5	19.0	20.5	16.5	14.5	15.5
8	---	---	---	---	---	---	22.5	20.0	21.0	17.0	12.5	14.5
9	---	---	---	---	---	---	23.5	19.0	21.0	17.5	12.0	14.5
10	---	---	---	24.5	20.0	22.5	22.5	18.5	20.5	18.5	12.5	15.5
11	---	---	---	21.5	17.5	19.5	22.0	19.5	21.0	20.0	15.5	17.5
12	---	---	---	23.5	19.5	21.0	21.0	16.0	18.5	18.0	17.0	17.5
13	---	---	---	22.0	20.0	21.0	21.0	16.5	19.0	18.0	14.0	16.0
14	---	---	---	23.5	19.0	21.0	22.0	16.5	19.5	17.0	13.0	15.0
15	---	---	---	23.5	17.0	20.5	22.5	18.0	20.0	18.5	13.5	16.0
16	---	---	---	22.0	17.5	20.0	23.0	19.5	21.0	17.5	13.5	16.0
17	---	---	---	23.0	19.0	20.5	21.5	20.5	21.0	16.0	10.5	13.0
18	---	---	---	23.5	19.5	21.0	23.0	20.0	21.0	15.0	11.5	13.5
19	---	---	---	22.5	18.0	20.5	22.5	18.0	20.0	18.0	14.5	16.0
20	---	---	---	20.5	17.5	19.0	20.0	18.0	19.0	19.0	16.0	17.5
21	---	---	---	21.0	17.5	19.0	20.0	18.5	19.0	19.5	16.5	18.0
22	---	---	---	21.0	16.5	18.5	21.5	18.0	19.5	19.5	16.0	17.5
23	---	---	---	21.0	17.5	19.0	21.0	17.0	19.0	19.5	17.5	18.5
24	---	---	---	22.0	18.0	20.0	20.0	17.0	18.5	19.0	18.0	18.5
25	---	---	---	22.5	18.5	20.5	20.0	15.0	17.0	20.5	18.0	19.0
26	---	---	---	23.5	19.5	21.0	21.0	15.0	18.5	21.5	19.0	20.0
27	---	---	---	23.0	19.0	20.5	19.5	18.0	19.0	19.5	18.0	19.0
28	---	---	---	22.0	18.0	19.5	18.0	15.5	16.5	21.0	18.0	19.0
29	---	---	---	22.5	18.0	20.0	16.5	13.0	15.0	21.5	17.5	19.0
30	---	---	---	20.5	18.0	19.0	17.0	11.5	14.0	21.5	17.5	19.5
31	---	---	---	22.0	17.5	19.5	18.0	12.5	15.5	---	---	---
MONTH	24.0	9.5	17.5	24.5	16.5	20.0	23.5	11.5	19.0	21.5	10.5	17.0
YEAR	25.5	.0	10.5									

03070420 STONY FORK TRIBUTARY NEAR GIBBON GLADE, PA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) OCTOBER	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) NOVEMBER	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) DECEMBER	SEDIMENT DISCHARGE (TONS/DAY)
1	.10	21	.01	.09	8	.00	3.4	34	.31
2	.12	56	.02	.22	9	.01	2.4	33	.21
3	.12	88	.03	.89	100	.48	1.8	34	.17
4	.02	21	.00	10	540	20	1.5	30	.12
5	.08	23	.00	9.6	200	5.2	1.4	20	.08
6	.08	26	.01	4.3	58	.67	1.6	16	.07
7	.07	26	.00	2.5	44	.30	1.5	26	.11
8	.08	46	.01	1.8	36	.17	1.5	47	.19
9	.09	71	.02	1.4	46	.17	1.4	46	.17
10	.07	44	.01	1.2	47	.15	1.3	47	.16
11	.07	49	.01	1.1	45	.13	2.4	45	.29
12	.07	50	.01	4.4	36	.43	4.1	36	.40
13	.08	38	.01	4.0	30	.32	4.5	30	.36
14	.09	22	.01	11	15	.45	3.9	15	.16
15	.09	19	.00	7.5	13	.26	2.3	13	.08
16	.08	10	.00	15	13	.53	1.5	13	.05
17	.07	7	.00	8.3	56	1.3	1.5	15	.06
18	.07	7	.00	4.5	50	.61	1.3	13	.05
19	.17	7	.00	2.8	45	.34	1.1	11	.03
20	.22	68	.04	2.0	38	.21	1.0	11	.03
21	.98	116	.50	1.5	38	.15	1.0	15	.04
22	.41	23	.03	3.5	36	.34	.94	25	.06
23	.14	23	.01	2.9	35	.27	.96	35	.09
24	.61	120	.28	2.1	30	.17	1.1	36	.11
25	.28	47	.04	2.2	30	.18	.99	37	.10
26	.13	21	.01	16	41	1.8	1.1	36	.11
27	.12	15	.00	22	113	7.1	.90	32	.08
28	.11	10	.00	23	103	6.6	.79	30	.06
29	.10	7	.00	9.6	60	1.6	.76	30	.06
30	.10	6	.00	5.3	44	.63	.70	30	.06
31	.10	7	.00	---	---	---	.72	30	.06
TOTAL	4.92	---	1.06	180.70	---	50.57	51.36	---	3.93

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) JANUARY	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) FEBRUARY	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) MARCH	SEDIMENT DISCHARGE (TONS/DAY)
1	.67	30	.05	1.0			1.3	---	---
2	.64	30	.05	2.0			1.2	---	---
3	.78	32	.07	5.5			1.1	---	---
4	.80	35	.08	29			1.1	---	---
5	.89	39	.09	29			1.2	---	---
6	.74	50	.10	12			1.2	---	---
7	.67	58	.10	6.7			1.1	---	---
8	.64	55	.10	4.6			1.7	---	---
9	.64	49	.08	3.4			2.2	---	---
10	.66	36	.06	2.7			2.1	---	---
11	.68	30	.06	2.4			6.9	---	---
12	.76	23	.06	1.8			4.8	---	---
13	.74	27	.05	2.0			4.3	---	---
14	.60	38	.06	1.7			7.1	---	---
15	.58	37	.06	1.4			9.9	---	---
16	.59	36	.06	1.3			5.1	---	---
17	.64	45	.08	5.9			3.6	---	---
18	1.8	44	.21	14			2.8	---	---
19	4.2	61	.69	19			2.4	---	---
20	4.5	49	.60	10			1.7	---	---
21	2.8	45	.34	7.3			1.3	---	---
22	2.8	45	.34	5.2			1.3	10	.04
23	2.7	43	.31	3.8			1.3	10	.04
24	2.2	40	.24	2.9			1.1	10	.03
25	2.0	37	.20	2.2			1.1	11	.03
26	1.7	34	.16	1.9			.89	14	.03
27	1.5	34	.14	1.8			.93	15	.04
28	1.4	---	---	1.5			.91	15	.04
29	1.2	---	---	---			.93	20	.05
30	1.1	---	---	---			.75	25	.05
31	1.0	---	---	---			.74	36	.07
TOTAL	42.62	---	4.44	182.0			74.05	---	0.42

03070420 STONY FORK TRIBUTARY NEAR GIBBON GLADE, PA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) APRIL	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) MAY	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) JUNE	SEDIMENT DISCHARGE (TONS/DAY)
1	.73	36	.07	.94	17	.04	.09	24	.01
2	.71	40	.08	.80	14	.03	.09	19	.00
3	.67	40	.07	.75	15	.03	.08	20	.00
4	.67	38	.07	.72	15	.03	.10	20	.01
5	.76	36	.07	.67	16	.03	.14	24	.01
6	1.2	37	.12	.68	20	.04	.12	28	.01
7	1.1	25	.07	.75	24	.05	.18	21	.01
8	1.1	30	.09	.59	16	.03	.16	26	.01
9	1.5	45	.18	.50	15	.02	.09	26	.01
10	2.1	50	.28	.46	8	.01	.09	25	.01
11	2.6	55	.39	.40	10	.01	.07	25	.00
12	4.0	81	.87	.35	10	.01	.23	26	.02
13	3.6	49	.48	.39	11	.01	.08	28	.01
14	2.6	50	.35	.36	12	.01	.07	26	.00
15	2.8	86	.65	.29	12	.01	.07	26	.00
16	2.8	44	.33	.23	16	.01	.07	23	.00
17	3.5	36	.34	.20	20	.01	.14	21	.01
18	3.1	35	.29	.18	18	.01	.06	20	.00
19	2.5	33	.22	.40	20	.02	.06	20	.00
20	2.2	32	.19	.68	33	.06	.10	25	.01
21	2.0	33	.18	.31	16	.01	.07	26	.00
22	2.1	26	.15	.20	16	.01	.06	28	.00
23	1.8	22	.11	.17	15	.01	.09	23	.01
24	1.5	21	.09	.14	15	.01	.07	21	.00
25	1.4	20	.08	.13	25	.01	.06	22	.00
26	1.3	22	.08	.12	25	.01	.05	20	.00
27	1.2	21	.07	.44	25	.03	.13	22	.01
28	1.1	20	.06	.36	25	.02	.18	20	.01
29	1.2	21	.07	.22	25	.01	.08	20	.00
30	1.0	21	.06	.11	25	.01	.07	20	.00
31	---	---	---	.10	24	.01	---	---	---
TOTAL	54.84	---	6.16	12.64	---	0.61	2.95	---	0.16
DAY	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L) JULY	MEAN SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L) AUGUST	MEAN SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L) SEPTEMBER	MEAN SEDIMENT DISCHARGE (TONS/DAY)
1	.06	30	.00	.31	35	.03	.03	27	.00
2	.55	34	.05	.11	35	.01	.05	18	.00
3	.15	32	.01	.10	35	.01	.02	18	.00
4	.09	41	.01	.08	20	.00	.02	26	.00
5	.06	30	.00	.08	20	.00	.06	60	.01
6	.04	20	.00	.20	33	.02	.06	24	.00
7	.07	27	.01	.41	34	.04	.02	22	.00
8	.05	20	.00	.10	30	.01	.03	21	.00
9	.58	53	.08	.08	20	.00	.03	21	.00
10	.09	48	.01	.15	35	.01	.03	21	.00
11	.06	35	.01	.11	30	.01	.02	16	.00
12	.06	30	.00	.06	20	.00	.05	41	.01
13	.07	27	.01	.06	19	.00	.03	16	.00
14	.06	22	.00	.06	18	.00	.02	13	.00
15	.04	18	.00	.06	18	.00	.03	20	.00
16	.33	196	1.3	.05	18	.00	.04	57	.01
17	2.2	504	4.6	.06	19	.00	.06	36	.01
18	.98	65	.17	.05	21	.00	.07	10	.00
19	7.6	580	30	.04	21	.00	.08	16	.00
20	4.2	110	1.2	.04	22	.00	.03	12	.00
21	1.9	50	.26	.05	23	.00	.02	12	.00
22	1.1	30	.09	.04	24	.00	.03	10	.00
23	.76	30	.06	.18	68	.03	.03	12	.00
24	.54	30	.04	.08	52	.01	1.8	221	4.1
25	.40	30	.03	.04	49	.01	.73	35	.07
26	1.4	60	.23	.04	42	.00	.20	19	.01
27	1.1	40	.12	.04	34	.00	.72	42	.08
28	.47	30	.04	.05	22	.00	.21	30	.02
29	.42	40	.05	.04	16	.00	.11	32	.01
30	.33	35	.03	.03	18	.00	.10	30	.01
31	.50	35	.05	.03	24	.00	---	---	---
TOTAL	26.26	---	38.46	2.83	---	0.19	4.73	---	4.34
YEAR	639.90	---	110.34						

03072000 DUNKARD CREEK AT SHANNOPIN, PA

LOCATION.--Lat 39°45'33", long 79°58'15", Greene County, Hydrologic Unit 05020005, on left bank at Shannopin, 1,300 ft upstream from highway bridge at mine buildings, 1.2 mi north of Dunkard, 3.5 mi upstream from mouth, and 4 mi southwest of Greensboro.

DRAINAGE AREA.--229 mi².

PERIOD OF RECORD.--October 1940 to current year. Prior to December 1940 monthly discharge only, published in WSP 1305.

REVISED RECORDS.--WSP 1505: 1955.

GAGE.--Water-stage recorder. Datum of gage is 806.25 ft above National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records good except for estimated daily discharges, Dec. 20 to Jan. 21, Jan. 26 to Feb. 1, Feb. 11-17, and Feb. 28 to Mar. 9, which are fair. Some regulation at low flow by mine pumpage above station. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--46 years, 278 ft³/s, 16.49 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,600 ft³/s, Aug. 18, 1980, gage height, 14.27 ft; minimum, 0.4 ft³/s, Aug. 28, 1944, gage height, 0.75 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft³/s and maximum (*).

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 5	0400	7600	10.34	Feb. 5	2000	6820	9.95
Nov. 27	0900	*9170	*11.06				

Minimum discharge, 2.5 ft³/s, Oct. 17, gage height, 1.07 ft; minimum gage height, 1.05 ft, Sept. 16, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.9	14	615	68	150	230	118	134	29	34	65	6.0
2	11	17	450	66	385	210	109	121	22	35	40	6.5
3	12	29	344	64	738	190	104	104	19	38	26	6.7
4	15	632	275	62	1470	180	97	90	21	78	20	10
5	13	4990	232	60	4610	170	90	83	20	45	16	14
6	8.2	1140	233	58	3200	150	95	85	21	27	17	9.8
7	5.8	506	244	56	1700	150	287	84	19	19	47	6.9
8	4.4	320	228	56	1280	140	360	82	15	14	83	5.5
9	3.8	216	210	54	745	200	280	69	12	28	62	4.9
10	9.6	154	188	52	504	326	378	56	11	76	39	4.7
11	14	127	180	52	380	1090	370	49	12	81	31	3.8
12	8.1	205	371	50	300	952	355	46	21	49	26	4.2
13	6.3	475	543	49	260	1150	290	45	29	31	28	4.5
14	5.5	1010	1000	48	230	1890	244	50	35	37	25	4.0
15	4.8	1920	574	47	210	3310	226	48	28	76	23	5.4
16	4.0	2240	391	46	190	1630	276	49	20	55	18	3.9
17	9.5	1880	328	44	300	844	248	43	18	35	13	3.4
18	17	786	266	52	2930	525	250	37	23	21	11	3.6
19	11	494	156	70	1870	443	216	34	19	16	11	6.6
20	8.8	351	140	200	1370	470	196	41	17	14	15	8.5
21	14	254	120	560	978	364	201	46	14	15	15	10
22	19	243	110	450	1010	298	274	44	13	38	13	9.8
23	20	367	100	801	685	263	346	38	12	33	11	9.0
24	29	306	94	625	489	234	300	31	12	25	12	11
25	22	243	90	458	408	209	258	29	12	19	8.3	20
26	18	529	84	370	350	187	227	25	12	15	7.5	17
27	16	6660	80	300	335	176	197	27	9.8	21	9.2	17
28	13	4590	78	240	260	162	173	35	19	25	16	14
29	9.9	2640	74	200	---	143	189	40	40	341	14	12
30	10	1140	72	170	---	130	159	59	55	316	11	15
31	13	---	70	150	---	121	---	54	---	86	7.4	---
TOTAL	362.6	34478	7940	5578	27337	16537	6913	1778	609.8	1743	740.4	257.7
MEAN	11.7	1149	256	180	976	533	230	57.4	20.3	56.2	23.9	8.59
MAX	29	6660	1000	801	4610	3310	378	134	55	341	83	20
MIN	3.8	14	70	44	150	121	90	25	9.8	14	7.4	3.4
CFSM	.05	5.02	1.12	.79	4.26	2.33	1.01	.25	.09	.25	.10	.04
IN.	.06	5.60	1.29	.91	4.44	2.69	1.12	.29	.10	.28	.12	.04

CAL YR 1985 TOTAL 110406.0 MEAN 302 MAX 6660 MIN 3.1 CFSM 1.32 IN. 17.93
WTR YR 1986 TOTAL 104274.4 MEAN 286 MAX 6660 MIN 3.4 CFSM 1.25 IN. 16.94

MONONGAHELA RIVER BASIN

03072500 MONONGAHELA RIVER AT GREENSBORO, PA

LOCATION.--Lat 39°47'15", long 79°55'26", Greene County, Hydrologic Unit 05020005, on left bank on land guide wall, 950 ft upstream from dam at lock 7 at Greensboro, 0.4 mi upstream from Georges Creek, 2.0 mi downstream from Dunkard Creek, 4.3 mi downstream from Cheat River, and at mile 85.2.

DRAINAGE AREA.--4,407 mi².

PERIOD OF RECORD.--October 1938 to current year. Prior to January 1939 monthly discharge only, published in WSP 1305.

REVISED RECORDS.--WSP 1113: 1939 (M), 1941 (M). WSP 1435: 1939. WSP 1907: 1936 (M), 1955 (M).

GAGE.--Water-stage recorder and concrete dam control. Datum of gage is 767.55 ft above National Geodetic Vertical Datum, adjustment of 1912.

REMARKS.--Estimated daily discharges: October 11 to August 12. Records good above 5,000 ft³/s and fair below and for estimated daily discharges. Records below 1,000 ft³/s, are poor. Flow regulated since 1938 by Tygart Lake 66 mi upstream and since 1926 by Lake Lynn 8 mi upstream combined capacity, 357,300 acre-ft. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

COOPERATION.--Gage-height record for the period October 11 to August 12 provided by the Corps of Engineers.

AVERAGE DISCHARGE.--48 years, 8,264 ft³/s, 25.47 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 220,000 ft³/s, Nov. 5, 1985, gage height, 39.39 ft; from outside flood marks; minimum daily, 204 ft³/s, Sept. 1-3, 5, 1946; minimum gage height, 10.23 ft, Apr. 29, 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 1888 reached a stage of about 36 ft, from high-water profile by Corps of Engineers. Flood of Mar. 18, 1936, reached a stage of 28.4 ft, discharge, 130,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 220,000 ft³/s, Nov. 5, gage height, 39.39 ft, from outside floodmarks; minimum daily, 457 ft³/s, Aug. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1080	2680	36900	2920	3540	7700	2620	9440	1380	12600	1850	1190
2	1010	2900	30100	3220	7200	6200	2350	8240	1150	22300	1610	1100
3	634	1710	27400	3220	19900	7200	2100	5700	1150	36900	1150	1870
4	906	25500	16100	2920	40200	8240	2100	3220	1610	29200	1350	1820
5	1160	154000	15400	2920	75300	7200	1610	3220	1850	23900	1610	2540
6	608	100000	11300	3540	52000	7200	1850	2620	1150	13300	928	1040
7	1540	55600	8840	3540	27400	9440	3540	2920	1150	7200	1380	1020
8	499	35900	7200	3220	30100	5230	4780	4330	720	4780	1610	1370
9	893	28300	8840	3540	23900	5230	6200	2920	1380	3540	1150	1690
10	548	23100	8840	2920	19900	10600	6200	2920	1610	8240	928	1640
11	881	18400	8840	2100	16100	26500	5700	1850	2350	10600	1850	1630
12	723	18400	14700	1610	14700	29200	7700	2100	2100	7200	1610	1630
13	718	15400	19100	3220	13300	20700	10600	2350	2100	8240	1970	813
14	671	19900	31900	2350	13300	24800	10000	2920	1150	8240	740	1010
15	837	21500	23100	2100	15400	63400	5700	1380	1610	7700	1630	1250
16	967	21500	16100	2350	8240	39100	7700	2350	2100	5230	663	1260
17	1830	17600	19900	2100	12600	30100	7200	1610	1850	3540	457	1220
18	1400	9440	17600	1610	55600	31000	10000	928	1380	4780	1220	1130
19	640	16800	14700	2920	54400	22300	12600	1610	1610	2620	1310	1530
20	2190	7700	13300	17600	42400	19100	9440	4780	1610	3540	1820	1080
21	13900	8840	10000	18400	32900	16100	8840	9440	1380	3220	811	965
22	17900	10000	6200	16100	30100	14000	13300	9440	1150	4330	1590	1770
23	11900	20700	8840	22300	27400	13300	11900	9440	1610	3540	637	1720
24	6980	13300	5230	23000	23100	9440	12600	5700	1850	3540	493	1240
25	6400	8840	7200	19000	21500	9440	8840	2920	928	1610	2890	1940
26	5890	8240	3540	15400	19900	5230	4330	2100	1610	1380	2790	2180
27	2410	33900	3540	11300	16800	2920	3220	3540	1850	1850	1440	2460
28	2950	65600	2620	10000	12600	2620	5230	2350	2350	2920	2040	8850
29	2510	74400	1850	7700	---	2920	9440	2100	9440	3910	1860	9280
30	1910	47200	3540	6200	---	2620	9440	2620	14000	3540	1140	9350
31	1660	---	2920	3220	---	2920	---	1610	---	2620	1460	---
TOTAL	94145	887350	405640	222540	729780	461950	207130	118668	67178	256110	43987	67588
MEAN	3037	29580	13090	7179	26060	14900	6904	3828	2239	8262	1419	2253
MAX	17900	154000	36900	23000	75300	63400	13300	9440	14000	36900	2890	9350
MIN	499	1710	1850	1610	3540	2620	1610	928	720	1380	457	813
†	-101	+2550	-3050	-109	+340	-234	+1570	-6.5	+363	-400	-29.2	-370
MEAN†	2936	32130	12090	7537	26400	14670	8474	3822	2602	7862	1390	1883
CFSM†	.67	7.29	2.74	1.71	5.99	3.33	1.92	.89	.59	1.78	.32	.43
IN.†	.77	8.13	3.16	1.97	6.24	3.84	2.14	1.00	.66	2.05	.37	.48

CAL YR 1985 TOTAL 3477350 MEAN 9527 MAX 154000 MIN 414 ADJ -13.5 MEAN† 9510 CFSM† 2.16 IN.† 29.82
WTR YR 1986 TOTAL 3562070 MEAN 9759 MAX 154000 MIN 457 ADJ +30.8 MEAN† 9790 CFSM† 2.22 IN.† 30.81

† Change in contents, equivalent in cubic feet per second, in Tygart Lake and Lake Lynn. Records of contents in Lake Lynn furnished by Allegheny Power Service Corp.

‡ Adjusted for change in reservoir contents.

MONONGAHELA RIVER BASIN

83

03073000 SOUTH FORK TENMILE CREEK AT JEFFERSON, PA

LOCATION.--Lat 39°55'23", long 80°04'22", Greene County, Hydrologic Unit 05020005, on right bank at downstream side of bridge on State Highway 188, 1 mi southwest of Jefferson, and 3.1 mi downstream from Ruff Creek.

DRAINAGE AREA.--180 mi².

PERIOD OF RECORD.--October 1931 to current year. Monthly discharge only for October 1931, published in WSP 1305.

REVISED RECORDS.--WSP 1305: 1949. WSP 1435: 1932-34, 1935 (M).

GAGE.--Water-stage recorder and masonry control. Datum of gage is 852.54 ft above National Geodetic Vertical Datum, adjustment of 1907. Prior to Oct. 21, 1938, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, Dec. 20 to Jan. 21, Jan. 26 to Feb. 2, Feb. 11-16, and Mar. 4-9, which are fair. Slight diversion into basin during winter months from Monongahela River for Waynesburg water supply. Some regulation from reservoirs and pumpage above station. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--55 years, 202 ft³/s, 15.24 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,200 ft³/s, Nov. 27, 1985, gage height, 18.63 ft, from rating curve extended above 7,600 ft³/s on basis of slope-area measurement at gage height 18.45 ft, from floodmark in gage house; minimum observed, 0.05 ft³/s, Sept. 3, 1938, gage height, 0.36 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 5	0130	6440	11.32	Nov. 27	0500	*14200	*18.63
Nov. 16	1300	4830	9.60	Feb. 5	1530	4450	9.12

Minimum daily discharge, 1.5 ft³/s, Sept. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	5.6	541	56	100	162	76	76	65	31	7.3	4.3
2	10	6.4	453	54	160	150	71	72	41	34	5.9	3.7
3	7.8	51	299	52	594	138	64	63	27	51	6.4	4.0
4	4.9	2100	224	49	1740	130	63	56	20	31	5.8	3.9
5	3.2	3200	193	47	3110	115	61	52	17	19	4.8	3.4
6	2.9	681	203	45	1450	105	84	30	15	13	4.8	2.9
7	3.1	344	186	43	1030	100	132	40	23	10	28	2.7
8	3.1	225	164	41	734	92	65	51	16	7.7	15	2.7
9	3.0	142	142	39	519	88	58	41	13	82	16	2.2
10	2.8	148	123	37	393	216	72	34	11	214	13	2.0
11	2.8	628	128	36	270	917	130	31	11	66	54	2.0
12	2.8	849	478	33	210	599	135	29	123	57	34	2.0
13	2.6	732	561	32	180	641	89	26	105	68	17	1.5
14	2.9	758	796	31	150	913	67	29	49	83	11	2.0
15	3.5	970	464	30	140	1420	64	28	30	52	8.5	2.4
16	6.1	3550	340	29	130	734	68	25	21	32	6.3	2.0
17	5.5	1750	273	30	382	496	69	25	25	24	6.3	1.7
18	4.5	726	212	40	1740	360	64	28	27	21	6.3	1.7
19	4.0	464	144	60	1040	430	53	24	17	17	6.3	2.2
20	4.5	328	125	100	941	405	71	28	16	33	6.3	2.7
21	24	228	110	200	739	280	79	26	13	68	5.3	2.7
22	20	196	105	324	678	231	357	22	11	35	5.3	3.0
23	17	181	94	592	510	205	289	20	12	19	6.1	3.2
24	13	143	88	433	383	174	186	18	11	13	30	9.2
25	12	127	84	338	313	139	177	17	8.4	11	11	28
26	10	955	80	260	255	124	146	15	5.7	8.7	9.8	18
27	8.8	9030	76	200	253	114	114	18	5.3	7.1	7.2	15
28	8.0	3340	70	160	195	71	70	33	180	7.5	12	31
29	7.4	1630	66	140	---	63	75	27	111	15	7.9	19
30	6.5	815	64	120	---	56	54	153	49	19	6.3	12
31	6.2	---	60	110	---	53	---	231	---	11	5.6	---
TOTAL	215.8	34303.0	6946	3761	18339	9721	3103	1368	1078.4	1160.0	369.5	193.1
MEAN	6.96	1143	224	121	655	314	103	44.1	35.9	37.4	11.9	6.44
MAX	24	9030	796	592	3110	1420	357	231	180	214	54	31
MIN	2.6	5.6	60	29	100	53	53	15	5.3	7.1	4.8	1.5
CFSM	.04	6.35	1.24	.67	3.64	1.74	.57	.25	.20	.21	.07	.04
IN.	.04	7.09	1.44	.78	3.79	2.01	.64	.28	.22	.24	.08	.04

CAL YR 1985 TOTAL 94826.0 MEAN 260 MAX 9030 MIN 2.6 CFSM 1.44 IN. 19.60
WTR YR 1986 TOTAL 80557.5 MEAN 221 MAX 9030 MIN 1.5 CFSM 1.23 IN. 16.65

MONONGAHELA RIVER BASIN

03074500 REDSTONE CREEK AT WALTERSBURG, PA

LOCATION.--Lat 39°58'48", long 79°45'52", Fayette County, Hydrologic Unit 05020005, on right bank, 15 ft upstream from highway bridge at Waltersburg, 400 ft upstream from Bolden Run, and 0.9 mi upstream from Allen Run.

DRAINAGE AREA.--73.7 mi².

PERIOD OF RECORD.--October 1942 to current year. Monthly discharge only for October 1942, published in WSP 1305.

REVISED RECORDS.--WSP 1435: 1943-45 (M), 1946, 1947 (M), 1948 (P), 1949-50 (M), 1951 (P), 1952 (M).

GAGE.--Water-stage recorder. Datum of gage is 883.28 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 15, 1973, nonrecording gage 15 ft downstream at same datum.

REMARKS.--Records good except for estimated daily discharges, Dec. 23-26, Jan. 15-20, Feb. 1-3, 11-17, and Mar. 9, which are fair. Some regulation at low flow by mine pumpage into stream above station. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--44 years, 100 ft³/s, 18.43 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,660 ft³/s, June 23, 1972, gage height, 14.83 ft; minimum observed, 4.2 ft³/s, Aug. 2, 1962; minimum gage height, 0.16 ft, Sept. 17, 1986.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 5	0100	1760	5.50	Nov. 28	1245	2360	6.55
Nov. 16	0615	1190	4.36	Feb. 4	1545	2490	6.77
Nov. 27	0145	*5460	*11.32	Feb. 5	1200	2220	6.31

Minimum discharge, 14 ft³/s, Sept. 17, gage height, 0.16 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	36	282	55	90	124	68	86	40	30	42	19
2	49	44	228	51	82	115	65	80	39	112	36	19
3	33	98	175	54	250	112	62	72	36	58	33	19
4	30	519	148	52	1570	122	61	67	33	40	31	18
5	30	833	139	52	1610	115	64	65	41	33	29	19
6	28	342	157	47	682	124	94	62	39	28	37	18
7	27	215	127	44	469	117	93	68	33	26	94	17
8	27	162	116	39	362	99	76	62	40	26	41	17
9	26	124	106	40	275	88	84	54	34	296	38	17
10	26	125	99	41	227	127	87	50	29	129	37	17
11	29	158	111	42	180	282	108	48	34	149	89	17
12	27	296	135	42	170	216	99	46	73	119	42	23
13	31	252	185	42	140	231	97	49	40	143	33	18
14	42	409	209	39	130	368	94	49	33	115	30	16
15	64	349	164	37	110	630	169	43	28	79	28	16
16	42	807	145	34	100	358	206	42	29	68	37	16
17	35	419	128	33	180	257	207	43	94	132	36	16
18	31	265	109	30	730	206	185	45	40	79	31	17
19	31	198	93	45	586	195	157	108	33	92	28	19
20	41	163	88	64	461	159	139	97	33	144	25	17
21	92	133	85	111	484	133	137	71	28	149	26	16
22	51	149	75	175	388	122	240	58	25	90	25	17
23	42	129	72	231	304	114	199	55	32	71	25	23
24	46	113	66	188	245	106	173	49	42	61	26	117
25	43	126	62	162	207	97	156	45	27	54	22	107
26	39	1310	58	163	182	91	138	42	23	51	21	41
27	38	3030	66	157	167	93	121	69	26	51	26	43
28	37	1820	61	128	138	83	109	71	77	43	33	32
29	36	766	57	120	---	79	108	50	40	114	23	27
30	36	392	54	108	---	75	91	45	33	58	21	24
31	36	---	54	98	---	71	---	44	---	47	19	---
TOTAL	1175	13782	3654	2524	10519	5109	3687	1835	1154	2687	1064	802
MEAN	37.9	459	118	81.4	376	165	123	59.2	38.5	86.7	34.3	26.7
MAX	92	3030	282	231	1610	630	240	108	94	296	94	117
MIN	26	36	54	30	82	71	61	42	23	26	19	16
CFSM	.51	6.23	1.60	1.10	5.10	2.24	1.67	.80	.52	1.18	.47	.36
IN.	.59	6.96	1.84	1.27	5.31	2.58	1.86	.93	.58	1.36	.54	.40

CAL YR 1985 TOTAL 45367 MEAN 124 MAX 3030 MIN 24 CFSM 1.69 IN. 22.90
WTR YR 1986 TOTAL 47992 MEAN 131 MAX 3030 MIN 16 CFSM 1.78 IN. 24.22

03075070 MONONGAHELA RIVER AT ELIZABETH, PA

LOCATION.--Lat 40°15'44", long 79°54'05", Allegheny County, Hydrologic Unit 05020005, on right bank 30 ft landward from upstream end of guide wall, 1,050 ft upstream from dam at lock 3 at Elizabeth, 0.4 mi downstream from Lobbs Creek, and at mile 24.0.

DRAINAGE AREA.--5,340 mi².

PERIOD OF RECORD.--October 1933 to current year. Published as "at Charleroi" (station 03075000) October 1933 to September 1976. Monthly discharge prior to 1940, adjusted for reservoir contents, published in WSP 1305. Records for March 1886 to March 1905 (high-water periods, only), published in WSP 169, are unreliable and should not be used (peak discharge of July 11, 1888, as published in WSP 783, is still considered reliable).

REVISED RECORDS.--WSP 758: Drainage area. WSP 783: 1888 (M). WSP 1435: 1934, 1936. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder and concrete dam. Datum of gage is 725.50 ft above National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). From Oct. 1, 1967, to Sept. 30, 1976, at site 17.5 mi upstream at datum 8.10 ft higher. Prior to Oct. 1, 1967, water-stage recorder at site 17.9 mi upstream at datum 9.83 ft higher. Oct. 1, 1965, to Sept. 30, 1967, auxiliary staff gage and Apr. 14, 1966, to Sept. 30, 1967, auxiliary water-stage recorder at present site.

REMARKS.--No estimated daily discharges. Records good except those below 1,000 ft³/s, which are fair. Flow regulated by locks above station, since 1938 by Tygart Lake, and since 1926 by Lake Lynn, combined capacity, 357,000 acre-ft. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--53 years, 9,161 ft³/s, 23.30 in/yr, adjusted for storage 1940-75.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 178,000 ft³/s, Nov. 6, 1985, gage height, 23.60 ft; minimum not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 178,000 ft³/s, Nov. 6, gage height, 23.60 ft; minimum daily, 594 ft³/s, Oct. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1370	2150	44300	3500	5480	11300	3200	10200	2200	13200	2680	1970
2	1040	2740	35100	3700	7480	8060	3100	9250	1500	20900	1760	865
3	805	3480	30400	3900	22300	8700	2800	6680	1600	32900	1650	1760
4	1050	15300	23100	3700	34400	9170	3600	5520	1800	31900	1040	2120
5	1010	120000	16800	3500	82600	8660	1800	4000	2200	24500	1860	2670
6	765	149000	16000	4000	73600	9310	3100	3800	1500	15800	1370	1360
7	1280	71200	12800	4300	37100	9760	4000	3300	2100	9120	2050	1320
8	1110	43300	9700	4000	34100	8240	5200	4400	720	5230	1660	1220
9	594	32400	8950	4200	27800	6160	7630	3900	1500	6180	1940	1910
10	825	27900	10300	3900	22500	10700	7860	3400	2100	9790	949	1550
11	635	23300	9970	2700	20600	25800	7250	3000	2600	11400	2530	1970
12	651	23100	14800	2000	17800	35900	8670	1800	3290	8600	2040	1480
13	909	21300	21700	3700	15900	24600	10200	2600	2290	7730	2310	1470
14	648	21200	31500	3300	13500	28000	11500	3700	2180	8750	1790	632
15	997	27300	27400	2600	18000	55300	7090	2100	1460	9800	990	1520
16	965	32900	13700	2800	9480	53300	9810	2800	2280	6330	1960	974
17	1580	32100	20100	2500	13500	33800	10100	2100	2440	4710	754	1630
18	1480	16700	19300	2000	49400	33600	10500	2000	1770	5420	939	1330
19	1220	17600	15400	3000	59900	26300	13300	1100	2400	3240	1430	1110
20	656	15400	15600	16100	52000	21900	10700	6540	1590	4510	2230	1910
21	10400	9640	12200	22200	39200	17800	9740	9760	1560	5510	1460	1010
22	17200	11300	7750	16600	36600	17000	13800	10200	1410	4980	1190	1410
23	12100	16000	8780	21500	32000	14400	13700	10100	2010	4230	1660	1960
24	8000	19700	8590	25500	27900	11800	13200	7070	2550	4110	698	2000
25	5700	12300	6270	21300	24100	10300	11100	5830	1420	2930	1910	2220
26	6080	11000	4300	16800	22400	7610	7150	2400	1370	1740	3200	2360
27	3480	52400	4300	13700	20000	4800	5410	3600	2580	2180	1970	2840
28	2640	65200	3200	11800	16000	3800	6660	3300	3280	3380	2280	6430
29	3000	86100	2300	9680	---	4200	8280	3100	8450	4690	1950	9960
30	1950	62400	3000	8170	---	3600	10100	3100	13300	3810	1870	9360
31	1760	---	4200	5680	---	3700	---	2900	---	3520	1060	---
TOTAL	91900	1044410	461810	252330	835640	527570	240550	143550	77450	281090	53180	70321
MEAN	2965	34810	14900	8140	29840	17020	8018	4631	2582	9067	1715	2344
MAX	17200	149000	44300	25500	82600	55300	13800	10200	13300	32900	3200	9960
MIN	594	2150	2300	2000	5480	3600	1800	1100	720	1740	698	632

CAL YR 1985 TOTAL 3929260 MEAN 10770 MAX 149000 MIN 492
WTR YR 1986 TOTAL 4079800 MEAN 11180 MAX 149000 MIN 594

03076500 YOUGHIOGHENY RIVER AT FRIENDSVILLE, MD

LOCATION.--Lat 39°39'13", long 79°24'31", Garrett County, Hydrologic Unit 05020006, on left bank 0.7 mi upstream from bridge on State Highway 42 at Friendsville, and 1.5 mi upstream from Bear Creek.

DRAINAGE AREA.--295 mi².

PERIOD OF RECORD.--August 1898 to December 1904 and October 1940 to current year. Annual maximum, water years 1905, 1923-31, 1940, published in WSP 1675. October, November 1940 monthly discharge only, published in WSP 1305. September 1922 to September 1926 (gage heights only) in reports of Pennsylvania Department of Forests and Waters.

REVISED RECORDS.--WSP 1385: Drainage area at former site, 1898-1905, 1941(M), 1942, 1944-45, 1948-49, 1951(M).

GAGE.--Water-stage recorder. Datum of gage is 1,487.33 ft above National Geodetic Vertical Datum of 1929. Aug. 17, 1898, to Dec. 31, 1904, and Sept. 1, 1922, to Sept. 30, 1926, nonrecording gages at bridge 0.7 mi downstream at datum 16.24 ft and 16.29 ft lower, respectively.

REMARKS.--Estimated daily discharges: Dec. 28-29. Records good. Low and medium flow regulated since July 1925 by Deep Creek Reservoir (see station 03076000). U.S. Army Corps of Engineers satellite telemeter at station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

AVERAGE DISCHARGE.--52 years (water years 1899-1904, 1941-86), 647 ft³/s, 29.78 in/yr, adjusted for storage since October 1940.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,600 ft³/s, Mar. 29, 1924, gage height, 14.2 ft, from flood-marks, site and datum then in use or 10.2 ft, present site and datum, from rating curve extended above 5,800 ft³/s on basis of slope-area measurement of peak flow; minimum daily discharge, 8.2 ft³/s, Sept. 11, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13,000 ft³/s, Nov. 5, gage height, 8.59 ft, from rating curve extended above 12,500 ft³/s; minimum discharge, 36 ft³/s, Sept. 20, gage height, 1.89 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	90	295	2330	328	334	732	433	366	168	113	457	111
2	107	176	2040	576	507	687	302	345	152	236	335	273
3	112	323	1660	525	1470	670	307	272	145	709	141	340
4	112	1600	1440	252	3960	535	273	248	128	410	339	294
5	70	10000	1330	254	6380	502	238	277	131	233	319	299
6	58	4460	1050	385	4350	487	214	264	186	174	319	244
7	95	2520	966	528	2420	425	394	284	127	145	359	151
8	93	1780	753	533	1640	348	367	312	121	118	339	213
9	93	1150	803	436	1070	312	344	266	111	225	398	212
10	91	854	922	418	959	1040	436	202	103	908	130	206
11	88	746	962	208	898	3270	467	188	103	440	341	202
12	45	940	1700	186	795	2220	601	220	133	741	357	210
13	43	786	2200	288	685	1720	1170	226	184	609	318	205
14	95	1270	2490	349	668	1920	994	292	123	971	305	65
15	107	1550	1350	372	604	4040	811	276	104	562	287	202
16	65	1620	1340	297	426	2380	1140	244	94	560	304	196
17	168	2420	1140	270	1020	1610	1050	181	137	734	105	198
18	110	1590	1030	268	3900	1280	1120	172	144	849	337	197
19	55	1240	887	843	4610	1080	916	176	102	522	241	64
20	63	1040	875	1930	5340	935	774	450	149	1250	229	140
21	1360	924	475	1210	3460	786	763	464	154	1230	231	112
22	1210	2270	379	995	2750	647	754	387	118	886	234	195
23	828	2600	706	1130	1920	436	709	380	94	843	138	206
24	654	1670	774	914	1480	583	617	312	86	725	133	392
25	525	1330	414	668	1230	575	552	267	79	776	176	499
26	366	1360	629	601	1030	508	474	289	73	601	159	507
27	290	2920	712	635	946	409	417	236	117	315	235	565
28	360	6480	361	493	822	412	421	267	148	494	144	679
29	266	6370	240	546	---	363	428	216	240	536	133	292
30	235	3410	530	503	---	282	411	236	153	512	126	93
31	203	---	614	472	---	330	---	181	---	482	72	---
TOTAL	8057	65694	33102	17413	55674	31524	17897	8496	3907	17909	7741	7562
MEAN	260	2190	1068	562	1988	1017	597	274	130	578	250	252
MAX	1360	10000	2490	1930	6380	4040	1170	464	240	1250	457	679
MIN	43	176	240	186	334	282	214	172	73	113	72	64
(†)	-29.3	+135	-97.8	-16.3	+178	0	+55.5	+11.4	+6.7	+42.3	-143	-200
MEAN‡	231	2325	970	546	2166	1017	652	285	137	620	107	52
CFSM‡	0.78	7.88	3.29	1.85	7.34	3.45	2.21	0.97	0.46	2.10	0.36	0.18
IN‡	0.90	8.79	3.79	2.13	7.64	3.98	2.47	1.12	0.51	2.42	0.42	0.20

CAL YR 1985 TOTAL 301803 MEAN 827 MAX 10000 MIN 41 MEAN‡ 827 CFSM‡ 2.80 IN‡ 38.00
WTR YR 1986 TOTAL 274976 MEAN 753 MAX 10000 MIN 43 MEAN‡ 753 CFSM‡ 2.55 IN‡ 34.62

† Change in contents, equivalent in cubic feet per second, in Deep Creek Reservoir, provided by Pennsylvania Electric Co.

‡ Adjusted for change in contents.

MONOGAHELA RIVER BASIN

87

03077500 YOUGHIOGHENY RIVER AT YOUGHIOGHENY RIVER DAM, PA

LOCATION.--Lat 39°48'19", long 79°21'52", Somerset County, Hydrologic Unit 05020006, on right bank 800 ft upstream from bridge on State Highway 281, 0.2 mi downstream from Youghiogheny River Dam, 0.2 mi south of Confluence, 0.7 mi upstream from Casselman River, and at mile 73.2.

DRAINAGE AREA.--436 mi².

PERIOD OF RECORD.--September 1904 to September 1913 (gage heights only), October 1939 to current year. Monthly discharge only for October 1939 to April 1940, published in WSP 1305. Figures of daily discharge prior to January 1911, published in WSP 169, 205, 243, 263, and 283 are unreliable and should not be used. September 1904 to September 1922 (gage heights only) in reports of Water Supply Commission of Pennsylvania or Pennsylvania Department of Forests and Waters. Published as "at Confluence" 1904-22.

REVISED RECORDS.--WSP 893: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,310.17 ft above National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

REMARKS.-- No estimated daily discharges. Records good. Flow regulated since 1925 by Deep Creek Reservoir and since 1943 by Youghiogheny River Lake 0.2 mi upstream. Several observations of water temperature were made during the year. Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--47 years (1939-86), 881 ft³/s, 27.44 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,700 ft³/s, Mar. 5, 1948, gage height, 11.28 ft; maximum gage height, 19.08 ft, Oct. 15, 1954 (backwater from Casselman River); practically no flow at times during May and June 1950 when reservoir gates were closed.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,520 ft³/s, Dec. 2, gage height, 8.30 ft; maximum gage height, 10.03 ft, Nov. 27 (backwater from Casselman River); minimum daily discharge, 116 ft³/s, Apr. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1070	565	6040	520	510	2740	294	614	353	451	638	856
2	1070	561	6470	405	520	2740	221	614	297	462	637	856
3	930	549	6330	520	612	2720	158	614	260	461	636	852
4	837	455	6210	520	647	1800	192	556	305	461	636	1120
5	837	553	6120	520	647	1530	251	452	350	509	722	845
6	811	576	5950	520	647	1510	253	452	435	540	838	845
7	642	603	5840	520	774	1660	210	452	614	492	901	834
8	538	318	5790	520	873	2660	143	453	520	460	900	834
9	539	600	5700	520	868	2670	116	459	344	427	821	834
10	535	610	5550	520	912	1730	156	458	344	229	771	837
11	529	284	5480	519	1010	1720	141	458	326	214	768	838
12	529	310	5490	512	1100	1330	142	425	344	488	772	845
13	529	362	5420	514	1140	933	278	317	435	428	775	845
14	529	375	5410	520	1130	960	517	235	603	131	830	845
15	529	377	4360	518	1140	960	741	268	507	131	890	840
16	529	611	1760	510	1260	1860	1100	435	335	278	889	834
17	529	634	893	510	1100	3180	1340	744	335	384	889	834
18	530	410	950	510	888	2840	1400	666	335	383	889	834
19	529	366	1270	515	680	2560	1490	262	329	383	889	760
20	526	223	1840	520	958	3900	1490	263	419	383	889	713
21	529	280	1890	526	1490	4130	1490	261	581	504	888	713
22	529	415	1830	499	2110	4110	1490	262	514	625	881	713
23	529	626	1630	527	2110	3730	1490	277	407	758	878	714
24	529	623	1610	540	1620	2610	1490	372	407	902	878	718
25	529	581	1600	539	1580	1260	1230	444	407	1040	878	597
26	538	522	1600	531	1590	905	770	443	407	1180	878	479
27	529	435	921	384	1690	900	614	367	470	1180	1330	452
28	529	198	520	520	2600	819	614	263	550	908	1540	452
29	532	1190	516	516	---	700	600	260	514	630	1110	499
30	596	3680	340	510	---	625	614	293	464	625	857	608
31	573	---	336	512	---	543	---	353	---	630	856	---
TOTAL	19039	17892	105666	15837	32206	62335	21035	12792	12511	16677	26954	22846
MEAN	614	596	3409	511	1150	2011	701	413	417	538	869	762
MAX	1070	3680	6470	540	2600	4130	1490	744	614	1180	1540	1120
MIN	526	198	336	384	510	543	116	235	260	131	636	452
†	-307	+2650	-2390	+223	+1650	-290	+218	-11.4	-243	+297	-816	-739
MEAN†	307	3246	1019	734	2801	1721	919	402	174	835	53.0	23.0
CFSM†	.70	7.44	2.34	1.68	6.42	3.95	2.11	.92	.40	1.92	.12	.05
IN.†	.81	8.30	2.70	1.94	6.69	4.55	2.35	1.06	.45	2.21	.14	.06

CAL YR 1985 TOTAL 413131 MEAN 1132 MAX 6470 MIN 188 ADJ -8.6 MEAN† 1123 CFSM† 2.58 IN.† 34.97
WTR YR 1986 TOTAL 365790 MEAN 1002 MAX 6470 MIN 116 ADJ +1.8 MEAN† 1004 CFSM† 2.30 IN.† 31.26

† Change in contents, equivalent in cubic feet per second, in Deep Creek Reservoir and Youghiogheny River Lake. Records for Deep Creek Reservoir furnished by Pennsylvania Electric Co.

‡ Adjusted for change in contents.

MONONGAHELA RIVER BASIN

03078000 CASSELMAN RIVER AT GRANTSVILLE, MD

LOCATION.--Lat 39°42'08", long 79°08'12", Garrett County, Hydrologic Unit 05020006, on left bank at downstream side of highway bridge, 0.3 mi upstream from Slaubaugh Run, 0.7 mi downstream from U.S. Highway 40, and 1.0 mi north-east of Grantsville.

DRAINAGE AREA.--62.5 mi².

PERIOD OF RECORD.--July 1947 to current year.

REVISED RECORDS.--WSP 1143: 1948.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 2,088.97 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 27 to Jan. 17. Records good except those for period with ice effect, Dec. 27 to Jan. 17, which are fair. U.S. Army Corps of Engineers satellite telemeter at station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

AVERAGE DISCHARGE.--39 years, 119 ft³/s, 25.86 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,400 ft³/s, Oct. 15, 1954, gage height, 10.70 ft, from rating curve extended above 1,600 ft³/s on basis of contracted-opening measurement at gage height 8.13 ft; no flow Aug. 31, 1962, result of regulation from unknown source.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 5	0400	*4,030	*7.04	Feb. 18	1815	1,160	3.93
Nov. 28	1545	1,770	4.57	Feb. 19	2000	1,780	4.58
Feb. 4	1815	1,190	3.96	Mar. 15	0315	1,620	4.43

Minimum discharge, 2.4 ft³/s, Oct. 1, gage height, 0.94 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3	18	335	52	86	121	49	63	40	13	34	9.7
2	9.6	30	358	50	216	109	46	59	39	74	27	9.9
3	12	91	248	48	315	101	44	51	38	96	25	11
4	8.7	857	200	46	807	90	43	47	33	36	21	11
5	6.7	2320	177	46	1390	84	42	45	31	22	19	11
6	5.2	661	170	44	873	81	72	44	64	16	17	10
7	5.0	361	149	44	439	68	131	43	116	14	37	8.7
8	4.8	263	135	43	306	77	83	46	47	12	33	8.1
9	4.4	195	128	43	240	111	75	41	40	82	27	7.0
10	4.4	155	141	42	200	359	96	39	32	62	23	6.5
11	4.4	144	182	42	179	492	105	37	29	28	25	6.0
12	4.6	154	264	42	161	274	165	34	31	96	20	5.7
13	5.0	171	281	42	141	283	239	39	31	139	16	6.2
14	7.7	258	274	42	134	464	175	127	28	149	14	5.9
15	12	263	188	44	129	1050	168	79	22	56	13	5.5
16	15	587	155	48	147	436	307	59	17	39	13	4.7
17	10	586	137	52	272	296	297	49	45	139	13	4.3
18	8.2	316	110	162	891	230	316	44	31	85	14	13
19	7.6	234	91	351	1150	207	229	98	21	122	14	15
20	9.2	191	99	353	912	174	186	354	23	206	13	14
21	159	156	92	200	591	137	175	267	25	202	15	9.5
22	159	521	93	200	438	118	162	164	17	97	21	7.9
23	111	482	91	219	308	108	146	124	17	70	20	7.2
24	95	282	84	164	245	100	126	104	16	59	29	31
25	87	229	72	156	205	88	109	85	13	187	14	21
26	48	311	61	124	177	81	99	72	11	82	11	19
27	34	801	60	107	158	81	87	69	11	58	19	23
28	27	1530	58	81	137	74	79	80	23	45	33	21
29	23	846	56	127	---	65	74	61	21	68	18	15
30	19	454	54	105	---	59	67	48	15	48	13	11
31	18	---	52	104	---	53	---	45	---	40	11	---
TOTAL	927.8	13467	4595	3223	11247	6071	3992	2517	927	2442	622	338.8
MEAN	29.9	449	148	104	402	196	133	81.2	30.9	78.8	20.1	11.3
MAX	159	2320	358	353	1390	1050	316	354	116	206	37	31
MIN	3.3	18	52	42	86	53	42	34	11	12	11	4.3
CFSM	.48	7.18	2.37	1.66	6.43	3.14	2.13	1.30	.49	1.26	.32	.18
IN.	.55	8.02	2.73	1.92	6.69	3.61	2.38	1.50	.55	1.45	.37	.20

CAL YR 1985 TOTAL 50456.2 MEAN 138 MAX 2320 MIN 2.8 CFSM 2.21 IN 30.03
WTR YR 1986 TOTAL 50369.6 MEAN 138 MAX 2320 MIN 3.3 CFSM 2.21 IN 29.98

MONONGAHELA RIVER BASIN

89

03079000 CASSELMAN RIVER AT MARKLETON, PA

LOCATION.--Lat 39°51'35", long 79°13'40", Somerset County, Hydrologic Unit 05020006, on right bank at downstream side of highway bridge at Markleton, 2 mi southwest of Casselman, and 7 mi downstream from Coxes Creek.

DRAINAGE AREA.--382 mi².

PERIOD OF RECORD.--August to September 1913 (gage heights and discharge measurement only), October 1920 to current year. Monthly discharge only for some periods, published in WSP 1305. October 1913 to September 1920 (gage heights and discharge measurements only) in reports of Water Supply Commission of Pennsylvania.

REVISED RECORDS.--WSP 743: Drainage area. WSP 1305: 1923-31. WSP 1435: 1932-34, 1935 (M), 1936-38. WSP 1625: 1924 (M).

GAGE.--Water-stage recorder. Datum of gage is 1,655.29 ft above National Geodetic Vertical Datum, adjustment of 1907. Prior to Nov. 19, 1940, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, Dec. 20 to Jan. 20, Jan. 23 to Feb. 4, Feb. 14-17, and July 31 to Aug. 4, which are fair. Slight diversion above station to city of Frostburg, Md., in the Potomac River basin. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--66 years (1920-86), 661 ft³/s, 23.50 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 50,000 ft³/s, estimated, Oct. 15, 1954, gage height, 14.06 ft, on basis of summation of peak flows at nearby stations; minimum, 10 ft³/s, Sept. 9, 1957; minimum gage height, 0.81 ft, Sept. 30, Oct. 1, 1985.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 8,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 5	1000	*17900	*9.58	Feb. 5	1500	9510	7.46
Nov. 27	0100	14300	8.83	Feb. 19	2130	10300	7.71
Nov. 28	1800	10400	7.74	Mar. 15	0530	9030	7.30

Minimum discharge, 25 ft³/s, Oct. 1, gage height, 0.81 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	103	2170	190	310	702	316	327	205	79	210	84
2	53	176	1960	190	700	636	300	313	181	101	170	81
3	68	330	1480	180	1200	621	280	286	171	212	230	82
4	57	2770	1210	170	3500	563	267	260	159	174	190	81
5	48	12700	1040	170	8080	517	264	241	152	110	149	87
6	41	4190	994	160	5440	492	358	228	149	85	144	92
7	36	2170	871	160	2890	433	651	228	346	67	184	85
8	33	1500	795	150	1940	322	495	229	756	56	200	77
9	32	1090	750	150	1480	557	394	211	315	548	195	72
10	32	856	777	150	1220	1680	428	196	207	611	167	68
11	33	842	932	140	1070	3010	502	184	189	278	182	64
12	34	1380	1320	140	905	1740	580	174	176	244	168	67
13	35	1450	1330	135	745	1610	762	164	152	317	140	67
14	44	1700	1560	140	680	2260	660	260	133	384	124	62
15	75	2330	1050	150	600	6830	597	369	121	274	117	59
16	91	4690	930	170	520	3130	1120	293	112	184	126	59
17	68	5060	806	180	760	1980	1450	239	160	213	130	59
18	56	2540	688	320	4680	1480	1660	217	165	301	118	67
19	48	1720	436	720	7040	1310	1240	225	122	1710	110	89
20	51	1330	380	1600	6330	1110	1010	811	101	2610	103	108
21	243	1060	340	1310	3880	846	949	917	96	2090	115	104
22	549	2100	310	1080	2920	738	888	649	93	980	154	94
23	532	2710	290	840	2040	683	787	486	86	731	137	96
24	400	1680	270	620	1590	623	667	413	93	495	180	449
25	528	1340	250	500	1300	545	587	352	105	424	165	759
26	283	3530	240	380	1070	495	531	308	74	456	126	448
27	193	9370	230	300	990	491	470	287	67	398	110	287
28	157	9300	220	240	799	454	427	399	98	343	117	258
29	131	6050	210	300	---	406	392	317	111	278	130	209
30	115	3180	200	410	---	367	351	253	94	318	114	172
31	107	---	200	360	---	339	---	224	---	260	94	---
TOTAL	4200	89247	24239	11705	64679	36970	19383	10060	4989	15331	4599	4386
MEAN	135	2975	782	378	2310	1193	646	325	166	495	148	146
MAX	549	12700	2170	1600	8080	6830	1660	917	756	2610	230	759
MIN	27	103	200	135	310	322	264	164	67	56	94	59
CFSM	.35	7.79	2.05	.99	6.05	3.12	1.69	.85	.44	1.29	.39	.38
IN.	.41	8.69	2.36	1.14	6.30	3.60	1.89	.98	.49	1.49	.45	.43

CAL YR 1985 TOTAL 295244 MEAN 809 MAX 12700 MIN 26 CFSM 2.12 IN. 28.74
WTR YR 1986 TOTAL 289788 MEAN 794 MAX 12700 MIN 27 CFSM 2.08 IN. 28.23

MONONGAHELA RIVER BASIN
03080000 LAUREL HILL CREEK AT URSINA, PA

LOCATION.--Lat 39°49'13", long 79°19'18", Somerset County, Hydrologic Unit 05020006, on right bank 500 ft downstream from bridge on State Highway 281 at Ursina, and 2.7 mi upstream from mouth.

DRAINAGE AREA.--121 mi².

PERIOD OF RECORD.--August to September 1913 (gage heights and discharge measurement only). October 1918 to current year. Monthly discharge only for some periods, published in WSP 1305. October 1913 to September 1918 (gage heights and discharge measurements only) in reports of Water Supply Commission of Pennsylvania.

REVISED RECORDS.--WSP 743: Drainage area. WSP 893: 1919-21, 1932-34. WSP 1305: 1922-31. WSP 1435: 1919-20. WSP 1625: 1932 (M).

GAGE.--Water-stage recorder and masonry control. Datum of gage is 1,335.26 ft above National Geodetic Vertical Datum of 1929, unadjusted. Prior to July 18, 1939, nonrecording gage at bridge 0.5 mi downstream at datum 6.20 ft lower.

REMARKS.--Records good except for estimated daily discharges, Dec. 2 to Feb. 3, Feb. 14-19, and June 7-11, which are fair. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--68 years (1918-86), 266 ft³/s, 29.85 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,900 ft³/s, Oct. 15, 1954, gage height, 10.63 ft, from rating curve extended above 6,100 ft³/s on basis of slope-area measurement of peak flow; minimum, 2.2 ft³/s, Sept. 26, 1932.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 26	2400	*5870	*6.71	Feb. 5	1200	5040	6.07
Nov. 28	1400	3620	4.98	July 19	2000	5410	6.35
Feb. 3	---	---	ice jam				

Minimum discharge, 9.6 ft³/s, Sept. 11, 12, 16, 17, gage height, 0.76 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	51	765	62	160	257	106	135	87	33	63	19
2	19	54	574	60	280	232	100	125	77	42	54	18
3	21	95	412	58	700	184	93	110	64	58	74	18
4	17	549	334	56	1950	170	88	97	59	39	53	16
5	16	1590	294	56	3770	158	91	90	54	29	46	17
6	15	1200	286	54	2560	153	129	82	53	20	39	17
7	13	828	249	54	1330	141	183	85	50	19	48	14
8	11	576	226	52	827	172	162	84	310	18	45	13
9	11	410	213	50	565	197	141	71	100	549	43	12
10	11	334	210	49	430	519	158	64	50	421	36	11
11	11	369	327	48	370	1370	183	59	38	220	59	11
12	12	758	680	47	321	864	220	54	40	198	60	12
13	12	999	695	46	276	698	318	53	48	191	37	13
14	17	996	734	45	240	914	280	68	39	221	33	12
15	34	1200	545	44	220	1850	265	72	34	154	30	11
16	54	2090	401	43	210	1170	318	57	32	118	31	9.9
17	34	2210	336	62	260	727	385	59	66	146	33	10
18	23	1180	281	100	600	502	401	60	45	119	29	11
19	17	733	203	230	1750	426	349	59	33	1150	25	14
20	22	508	170	500	2020	358	313	117	30	1550	21	28
21	126	384	150	400	1600	280	310	131	28	946	21	21
22	155	503	120	320	1250	244	322	102	26	494	25	16
23	170	599	110	260	831	222	301	86	23	335	22	17
24	154	429	100	210	586	196	270	80	26	259	83	192
25	237	381	92	160	442	166	248	71	38	209	58	412
26	146	1430	86	130	367	155	231	64	30	162	34	280
27	102	3550	82	100	319	167	207	71	27	151	27	174
28	81	3040	76	82	281	153	185	233	47	114	39	125
29	67	2110	72	270	---	133	165	157	45	115	36	95
30	60	1170	68	230	---	124	145	118	36	89	28	75
31	56	---	64	200	---	116	---	101	---	78	21	---
TOTAL	1736	30326	8955	4078	24515	13018	6667	2815	1635	8247	1253	1693.9
MEAN	56.0	1011	289	132	876	420	222	90.8	54.5	266	40.4	56.5
MAX	237	3550	765	500	3770	1850	401	233	310	1550	83	412
MIN	11	51	64	43	160	116	88	53	23	18	21	9.9
CFSM	.46	8.35	2.39	1.09	7.24	3.47	1.84	.75	.45	2.20	.33	.47
IN.	.53	9.32	2.75	1.25	7.54	4.00	2.05	.87	.50	2.54	.39	.52

CAL YR 1985 TOTAL 108660.0 MEAN 298 MAX 3550 MIN 11 CFSM 2.46 IN. 33.41
WTR YR 1986 TOTAL 104938.9 MEAN 288 MAX 3770 MIN 9.9 CFSM 2.38 IN. 32.26

MONONGAHELA RIVER BASIN

91

03081000 YOUGHIOGHENY RIVER BELOW CONFLUENCE, PA

LOCATION.--Lat 39°49'39", long 79°22'22", Fayette County, Hydrologic Unit 05020006, on left bank 1.0 mi downstream from Casselman River, 1.5 mi northwest of Confluence, and at mile 72.0.

DRAINAGE AREA.--1,029 mi².

PERIOD OF RECORD.--June 1940 to current year. Monthly discharge only for June 1940, published in WSP 1305.

GAGE.--Water-stage recorder. Datum of gage is 1,302.77 ft above National Geodetic Vertical Datum of 1929, unadjusted.

REMARKS.--Records good except for estimated daily discharges, Jan. 12-20, 23-29, and Feb. 11-18, which are fair. Flow regulated since 1925 by Deep Creek Reservoir and since 1943 by Youghiogheny River Lake 1.7 mi upstream. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--46 years, 2,007 ft³/s, 26.49 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 69,500 ft³/s, Oct. 15, 1954, gage height, 19.92 ft, from rating curve extended above 25,000 ft³/s on basis of slope-area measurement of peak flow; minimum, 40 ft³/s, Oct. 14, 1943, gage height, 0.31 ft; minimum daily, 121 ft³/s, Sept. 27, 1943.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 17, or 18, 1936, reached a stage of 21.6, ft from floodmarks, discharge, 85,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 22,900 ft³/s, Nov. 27, gage height, 11.80 ft; minimum daily, 500 ft³/s, Oct. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1130	640	9830	1060	1260	4000	834	1230	689	626	984	1100
2	1150	679	9260	883	1710	3890	724	1200	596	685	948	1090
3	1000	826	8540	1020	3310	3830	643	1150	518	778	970	1090
4	850	3030	8060	1040	8810	2800	643	1040	536	782	923	1080
5	832	14800	7770	1040	15300	2450	704	871	581	732	996	1090
6	819	6930	7620	973	12200	2400	808	846	653	729	1130	1090
7	652	3940	7380	911	6190	2480	1110	845	958	656	1260	1080
8	511	2600	7160	850	4280	3330	982	856	1350	602	1280	1070
9	508	2250	7010	815	3410	3590	796	822	794	1560	1180	1060
10	504	1920	6920	853	2950	3860	854	796	654	1570	1080	1050
11	504	1570	7110	898	2500	6470	938	771	572	822	1090	1030
12	500	2400	7810	860	2300	4420	1070	710	601	1060	1110	1030
13	501	3010	7830	820	2100	3550	1520	571	695	1050	1060	1030
14	508	3070	8160	800	2000	4240	1680	545	852	790	1110	1020
15	543	4410	6470	760	1900	11200	1820	759	730	661	1190	1010
16	586	7710	3620	740	1800	7030	2640	820	503	639	1180	1010
17	577	9650	2400	760	1700	6450	3470	1130	590	821	1200	1010
18	539	4780	2270	800	6800	5380	3910	1050	586	879	1190	999
19	520	3190	2200	1600	11100	4670	3540	625	527	2860	1170	929
20	522	2360	2890	3300	11700	5790	3240	1150	585	4620	1160	880
21	739	1930	2970	2750	7990	5660	3150	1490	770	3520	1160	881
22	1170	2920	2710	2310	7170	5450	3120	1180	704	2170	1190	869
23	1250	4310	2670	1800	5620	5000	2980	986	565	1950	1180	867
24	1020	3010	2650	1400	4290	3750	2790	986	559	1850	1240	1190
25	1290	2470	2520	1150	3770	2220	2390	994	590	1840	1240	1800
26	965	5220	2200	920	3390	1760	1780	926	553	2010	1180	1310
27	787	16600	1410	1000	3360	1760	1490	809	606	1890	1640	913
28	710	15100	1150	1100	4030	1620	1410	922	772	1500	1940	806
29	662	11500	1070	1200	---	1400	1330	807	742	1180	1480	776
30	692	9130	827	1380	---	1260	1280	715	665	1070	1130	839
31	659	---	811	1290	---	1130	---	726	---	1040	1110	---
TOTAL	23200	151955	151298	37083	142940	122840	53646	28328	20096	42942	36701	30999
MEAN	748	5065	4881	1196	5105	3963	1788	914	670	1385	1184	1033
MAX	1290	16600	9830	3300	15300	11200	3910	1490	1350	4620	1940	1800
MIN	500	640	811	740	1260	1130	643	545	503	602	923	776
†	-307	+2650	-2390	+223	+1650	-290	+218	-11.4	-243	+297	-816	-739
MEAN†	442	7715	2491	1419	6756	3673	2006	903	427	1682	367	294
CFSM†	.43	7.50	2.42	1.38	6.57	3.57	1.95	.88	.41	1.63	.36	.29
IN.†	.50	8.37	2.79	1.59	6.84	4.12	2.18	1.01	.46	1.88	.42	.32

CAL YR 1985 TOTAL 891199 MEAN 2442 MAX 16600 MIN 500 ADJ -8.6 MEAN† 2433 CFSM† 2.36 IN.† 32.09
WTR YR 1986 TOTAL 842028 MEAN 2307 MAX 16600 MIN 500 ADJ +1.8 MEAN† 2309 CFSM† 2.24 IN.† 30.48

† Change in contents, equivalent in cubic feet per second, in Deep Creek Reservoir and Youghiogheny River Lake. Records of contents in Deep Creek Reservoir furnished by Pennsylvania Electric Co.

‡ Adjusted for change in reservoir contents.

MONONGAHELA RIVER BASIN

03082020 INDIAN CREEK AT JONES MILLS, PA

LOCATION.--Lat 40°05'21", long 79°20'04", Westmoreland County, Hydrologic Unit 05020006, on right bank 200 ft downstream from State Highway 381 bridge, 400 ft upstream from State Highway 31 bridge, 0.2 mi northeast of Jones Mills, and 0.8 mi downstream from Camp Run.

DRAINAGE AREA.--17.4 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1985 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,530 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, Dec. 13-21, Jan. 6-10, 14-17, Jan. 26 to Feb. 2, and July 21 to Aug. 5, which are fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 972 ft³/s, Feb. 5, 1986, gage height, 4.62 ft; minimum, 2.3 ft³/s, Oct. 1, 1985, Sept. 18, 1986; minimum gage height, 1.04 ft, Sept. 18, 1986.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft³/s and maximum (*).

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 26	2230	804	4.34	Feb. 4	1700	650	4.04
Nov. 28	1145	690	4.12	Feb. 5	1730	*972	*4.62

Minimum discharge, 2.3 ft³/s, Oct. 1, Sept. 18; minimum gage height, 1.04 ft, Sept. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	3.5	94	15	27	31	15	23	11	4.3	8.8	3.5
2	4.2	4.1	71	13	33	28	14	20	11	8.3	8.1	3.6
3	2.9	6.5	53	15	71	25	14	18	9.6	5.1	7.5	3.4
4	2.8	18	42	15	344	24	13	17	9.0	4.2	6.6	3.3
5	2.8	62	37	15	653	23	14	16	9.2	3.8	6.1	4.2
6	2.8	55	36	16	371	22	22	15	9.2	3.6	6.3	3.4
7	2.8	41	30	14	183	21	28	17	8.9	3.6	7.7	3.2
8	2.7	32	29	13	109	32	21	14	9.6	6.0	6.2	3.0
9	2.6	24	27	12	76	31	20	12	7.9	91	5.8	2.8
10	2.9	23	29	12	60	65	22	11	6.8	26	6.9	2.7
11	3.5	38	44	12	51	143	26	11	7.4	19	13	2.7
12	3.2	66	86	12	41	94	27	10	12	18	6.1	3.5
13	3.9	72	90	12	42	96	27	9.8	8.1	20	5.4	3.1
14	4.5	89	83	9.5	66	149	26	15	6.7	20	5.0	2.7
15	4.7	100	56	8.4	29	281	31	10	6.0	15	4.8	2.6
16	4.1	269	45	9.2	32	159	53	10	6.4	14	8.1	2.5
17	3.4	216	37	12	79	101	69	11	11	13	5.8	2.5
18	3.3	118	33	22	230	73	61	9.3	6.1	11	5.2	3.5
19	3.6	77	29	33	327	63	57	13	5.6	127	4.8	5.5
20	5.0	57	27	62	259	49	55	19	5.3	120	4.5	3.4
21	9.3	42	25	54	212	38	57	17	5.0	77	4.6	3.1
22	6.0	47	24	58	145	33	71	15	4.7	48	4.5	2.9
23	5.3	39	24	60	103	29	58	15	5.9	33	5.8	4.5
24	6.7	32	22	52	77	26	51	14	4.7	27	9.2	26
25	9.0	30	24	43	61	24	47	13	4.4	22	4.6	31
26	4.7	194	42	41	51	22	42	12	4.2	18	4.2	12
27	4.2	379	29	36	43	23	36	17	4.2	15	5.5	9.4
28	4.0	483	17	32	35	20	31	19	6.1	13	4.9	7.6
29	3.7	263	16	27	---	18	28	14	4.7	12	4.2	6.4
30	3.5	145	15	25	---	17	24	13	4.3	11	3.8	5.8
31	3.7	---	15	24	---	16	---	13	---	9.7	3.6	---
TOTAL	128.4	3025.1	1231	784.1	3810	1776	1060	443.1	215.0	818.6	187.6	173.8
MEAN	4.14	101	39.7	25.3	136	57.3	35.3	14.3	7.17	26.4	6.05	5.79
MAX	9.3	483	94	62	653	281	71	23	12	127	13	31
MIN	2.6	3.5	15	8.4	27	16	13	9.3	4.2	3.6	3.6	2.5
CFSM	.24	5.80	2.28	1.46	7.83	3.30	2.03	.82	.41	1.52	.35	.33
IN.	.27	6.47	2.63	1.68	8.15	3.80	2.27	.95	.46	1.75	.40	.37

WTR YR 1986 TOTAL 13652.6 MEAN 37.4 MAX 653 MIN 2.5 CFSM 2.15 IN. 29.20

MONONGAHELA RIVER BASIN

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03082020 INDIAN CREEK AT JONES MILLS, PA.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1985 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1985 to current year.

pH: October 1985 to current year.

WATER TEMPERATURE: October 1985 to current year.

SUSPENDED-SEDIMENT DISCHARGE: October 1985 to current year.

INSTRUMENTATION.--Water-quality monitor and sediment pumping sampler since October 1985.

REMARKS.--Interruptions in the record were due to malfunctions of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,520 microsiemens Jan. 6, 1986; minimum, 130 microsiemens Nov. 15, 1985.

pH: Maximum, 8.4 Sept. 2, 1986; minimum, 6.4 Nov. 27, 1985.

WATER TEMPERATURES: Maximum, 23.0°C July 7, 8, 1986; minimum, 0.5°C on many days.

SEDIMENT CONCENTRATIONS: Maximum daily, 311 mg/L July 9, 1986; minimum daily, 1 mg/L on several days.

SEDIMENT DISCHARGES: Maximum daily, 459 tons Feb. 5, 1986; minimum daily, 0.01 ton on several days.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 1,520 microsiemens Jan. 6; minimum, 130 microsiemens Nov. 15.

pH: Maximum, 8.4 Sept. 2; minimum, 6.4 Nov. 27.

WATER TEMPERATURES: Maximum, 23.0°C July 7, 8; minimum, 0.5°C on many days.

SEDIMENT CONCENTRATIONS: Maximum daily, 311 mg/L July 9; minimum daily, 1 mg/L on several days.

SEDIMENT DISCHARGES: Maximum daily, 459 tons Feb. 5; minimum daily, 0.01 ton on several days.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	ACIDITY (MG/L AS H)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	ALKA- LITY WH WAT TOTAL FIELD MG/L AS CACO3	
AUG 12...	1045	5.6	275	7.10	15.5	0	16	2.4	22	0.6	24	
DATE		SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
AUG 12...	<10	50	<0.1	176	<2	1.14	<40	<4	<250	<10	<50	
DATE		COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	SELE- NIUM, TOTAL (UG/L AS SE)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)
AUG 12...	<30	<10	20	<10	<4	17	<25	<10	<10	<6	<2.0	

MONONGAHELA RIVER BASIN

03082020 INDIAN CREEK AT JONES MILLS, PA.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	ACIDITY (MG/L AS H)	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
OCT											
23...	1015	5.3	470	7.40	12.0	0	21	3.5	35	1.3	42
NOV											
25...	0930	27	180	7.80	4.5	0	--	--	--	--	14
DEC											
23...	0910	24	425	7.80	0.5	0.1	--	--	--	--	13
JAN											
15...	1200	8.5	775	7.30	0.0	0.1	--	--	--	--	20
FEB											
19...	1045	204	310	6.30	6.0	0.1	--	--	--	--	80
MAR											
17...	0945	106	200	5.80	5.5	0.2	--	--	--	--	8
APR											
28...	0850	33	230	6.70	11.5	0.1	--	--	--	--	14
JUN											
06...	0845	7.4	295	7.20	16.0	0.2	--	--	--	--	26
JUL											
22...	1140	51	170	7.40	15.5	0	--	--	--	--	14
AUG											
20...	0950	4.6	300	7.50	18.0	0	--	--	--	--	30
SEP											
29...	0952	6.4	305	7.40	17.0	0	--	--	--	--	32

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BORON, DIS- SOLVED (UG/L AS B)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)
OCT											
23...	16	--	368	<2	--	100	<4	<0	<50	<30	<10
NOV											
25...	17	--	124	4	--	<40	--	--	--	--	--
DEC											
23...	22	--	272	4	--	150	--	--	--	--	--
JAN											
15...	26	--	520	2	<500	<500	--	--	--	--	--
FEB											
19...	27	140	178	<2	330	<130	--	--	--	--	--
MAR											
17...	13	--	96	4	360	<130	--	--	--	--	--
APR											
28...	20	42	130	<2	830	<130	--	--	--	--	--
JUN											
06...	14	--	164	<2	<130	700	--	--	--	--	--
JUL											
22...	26	--	148	<2	380	380	--	--	--	--	--
AUG											
20...	18	--	166	8	<130	<130	--	--	--	--	--
SEP											
29...	27	--	178	<2	<130	<130	--	--	--	--	--

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, DIS- SOLVED (UG/L AS NI)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	MERCURY DIS- SOLVED (UG/L AS HG)
OCT											
23...	--	54	<45	--	<10	<25	79	--	<10	<6	<1.0
NOV											
25...	--	<10	--	--	52	--	--	--	<10	--	--
DEC											
23...	--	65	--	--	65	--	--	--	32	--	--
JAN											
15...	<300	<300	--	90	90	--	--	<10	<10	--	--
FEB											
19...	230	38	--	92	78	--	--	30	<10	--	--
MAR											
17...	230	<10	--	70	61	--	--	<10	<10	--	--
APR											
28...	1100	100	--	320	69	--	--	60	39	--	--
JUN											
06...	130	780	--	23	260	--	--	<10	40	--	--
JUL											
22...	350	66	--	27	<10	--	--	20	22	--	--
AUG											
20...	70	64	--	21	23	--	--	60	23	--	--
SEP											
29...	140	90	--	11	11	--	--	30	16	--	--

03082020 INDIAN CREEK AT JONES MILLS, PA.--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS PER CENTIMETER AT 25°C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	---	---	---	422	398	409	---	---	---	507	441	472
2	---	---	---	415	380	398	---	---	---	507	439	478
3	---	---	---	451	393	426	390	225	298	535	432	452
4	---	---	---	467	390	426	283	178	199	970	542	814
5	---	---	---	391	251	300	277	172	180	1170	626	762
6	---	---	---	267	203	226	587	309	456	1520	960	1270
7	---	---	---	222	194	199	---	---	---	967	732	831
8	---	---	---	322	205	212	---	---	---	763	551	645
9	---	---	---	216	206	211	---	---	---	625	510	565
10	323	313	316	243	212	221	---	---	---	509	436	467
11	321	293	304	264	239	247	---	---	---	502	424	447
12	323	294	306	240	181	209	---	---	---	483	395	418
13	359	297	312	185	164	173	---	---	---	489	408	454
14	366	307	329	165	134	151	---	---	---	859	461	720
15	377	326	345	144	130	137	---	---	---	973	622	735
16	376	337	352	---	---	---	---	---	---	963	716	772
17	362	335	345	---	---	---	328	232	279	760	686	705
18	336	320	326	---	---	---	835	273	434	918	667	827
19	326	315	321	152	145	147	275	231	250	1040	568	728
20	347	307	321	163	151	156	234	209	223	---	---	---
21	437	309	397	171	161	166	1030	208	703	---	---	---
22	429	388	400	582	167	253	943	415	687	---	---	---
23	450	415	433	218	183	194	965	332	505	---	---	---
24	453	370	414	185	180	181	997	313	606	---	---	---
25	495	412	450	223	176	185	1490	553	1080	---	---	---
26	440	412	428	283	153	232	996	673	775	---	---	---
27	426	392	412	---	---	---	1010	646	799	---	---	---
28	404	388	397	---	---	---	1100	841	939	---	---	---
29	398	375	388	---	---	---	907	652	756	---	---	---
30	387	376	381	---	---	---	729	534	616	---	---	---
31	424	372	394	---	---	---	556	447	493	1050	670	870
MONTH	495	293	367	582	130	237	1490	172	541	1520	395	672
DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	860	570	720	---	---	---	---	---	---	236	224	229
2	1180	570	870	---	---	---	274	252	257	292	237	258
3	780	500	600	---	---	---	273	253	262	253	248	250
4	640	360	510	564	380	514	274	254	262	257	241	251
5	---	---	---	891	512	688	277	246	261	256	236	246
6	192	180	188	---	---	---	447	264	347	258	236	243
7	654	177	392	---	---	---	448	333	398	356	227	285
8	857	667	748	---	---	---	333	290	307	323	258	277
9	---	---	---	---	---	---	292	275	283	263	254	259
10	---	---	---	---	---	---	398	281	331	300	255	272
11	---	---	---	---	---	---	1280	382	916	307	283	296
12	---	---	---	---	---	---	1090	482	667	310	286	299
13	---	---	---	---	---	---	539	389	429	293	285	290
14	---	---	---	---	---	---	413	307	349	475	273	387
15	---	---	---	---	---	---	343	282	299	396	347	359
16	---	---	---	---	---	---	828	341	493	368	313	336
17	---	---	---	---	---	---	620	435	531	388	328	358
18	---	---	---	---	---	---	432	281	332	401	324	344
19	---	---	---	---	---	---	281	237	257	447	320	400
20	213	207	210	---	---	---	238	222	230	519	392	441
21	414	190	254	---	---	---	298	231	264	393	349	367
22	562	207	241	---	---	---	470	253	339	349	302	323
23	705	264	469	---	---	---	414	279	335	303	278	290
24	---	---	---	---	---	---	307	238	260	291	271	281
25	---	---	---	---	---	---	242	222	232	275	260	267
26	---	---	---	---	---	---	228	213	221	272	255	262
27	---	---	---	---	---	---	224	212	218	397	238	260
28	---	---	---	---	---	---	234	215	222	411	329	364
29	---	---	---	---	---	---	253	216	227	330	291	303
30	---	---	---	---	---	---	234	222	227	295	247	272
31	---	---	---	---	---	---	---	---	---	287	248	269
MONTH	1180	177	473	891	380	601	1280	212	336	519	224	301

MONONGAHELA RIVER BASIN

03082020 INDIAN CREEK AT JONES MILLS, PA.--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS PER CENTIMETER AT 25 °C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	273	248	261	372	338	350	249	227	237	329	314	321
2	264	245	253	420	308	368	250	222	240	330	316	323
3	254	246	249	419	383	396	273	235	246	334	319	325
4	248	244	246	384	364	371	257	239	246	335	319	327
5	296	261	287	376	311	346	258	240	248	357	300	329
6	300	286	294	346	335	339	263	245	254	344	331	337
7	365	302	330	343	317	332	291	236	272	334	301	326
8	341	308	321	428	312	386	280	264	272	---	---	---
9	349	321	335	501	250	328	278	266	274	---	---	---
10	332	303	320	334	315	322	288	216	265	---	---	---
11	342	313	329	316	273	302	354	258	300	---	---	---
12	416	295	352	342	279	311	300	283	289	---	---	---
13	400	358	362	343	255	304	286	279	281	---	---	---
14	361	344	352	289	251	281	284	276	280	---	---	---
15	348	327	338	279	255	267	285	276	280	---	---	---
16	364	315	336	264	248	254	367	281	327	---	---	---
17	---	---	---	277	257	267	348	323	332	---	---	---
18	---	---	---	275	256	268	323	318	320	---	---	---
19	---	---	---	273	155	227	320	311	314	---	---	---
20	---	---	---	---	---	---	316	306	309	---	---	---
21	---	---	---	---	---	---	310	299	304	---	---	---
22	---	---	---	---	---	---	319	306	311	---	---	---
23	---	---	---	---	---	---	319	223	301	---	---	---
24	---	---	---	199	182	187	355	264	324	---	---	---
25	339	323	333	210	176	192	328	315	322	367	329	337
26	334	319	328	213	190	201	323	311	317	345	336	343
27	330	308	323	227	198	214	336	291	314	344	300	326
28	391	298	363	229	208	218	363	330	342	337	308	324
29	388	374	380	230	211	222	333	325	329	330	303	317
30	379	341	358	234	221	227	327	313	320	329	298	320
31	---	---	---	243	225	232	334	312	322	---	---	---
MONTH	416	244	320	501	155	286	367	216	293	367	298	327
YEAR	1520	130	363									

PH (STANDARD UNITS), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	---	---	---	7.60	7.50	7.60	---	---	---	7.20	7.10	7.10
2	---	---	---	7.60	7.50	7.50	---	---	---	7.20	7.10	7.20
3	---	---	---	7.70	7.50	7.60	6.80	6.70	6.80	7.20	7.20	7.20
4	---	---	---	7.60	7.50	7.60	7.10	6.80	7.00	7.30	7.20	7.30
5	---	---	---	7.50	7.20	7.40	7.10	7.10	7.10	7.30	7.30	7.30
6	---	---	---	7.30	7.20	7.20	7.10	7.10	7.10	7.30	7.20	7.30
7	---	---	---	7.30	7.20	7.20	---	---	---	7.20	7.20	7.20
8	---	---	---	7.30	7.10	7.20	---	---	---	7.20	7.10	7.20
9	---	---	---	7.30	7.20	7.30	---	---	---	7.30	7.20	7.20
10	7.70	7.20	7.50	7.30	7.20	7.30	---	---	---	7.30	7.20	7.20
11	7.60	7.30	7.40	7.30	7.20	7.30	---	---	---	7.30	6.60	7.20
12	7.50	7.30	7.40	7.20	7.10	7.20	---	---	---	7.30	6.60	7.20
13	7.50	7.30	7.40	7.20	7.20	7.20	---	---	---	7.30	7.30	7.30
14	7.50	7.30	7.40	7.20	7.00	7.20	---	---	---	7.30	7.20	7.30
15	7.50	7.30	7.40	7.10	6.90	7.00	---	---	---	7.30	7.20	7.20
16	7.40	7.20	7.30	7.10	6.90	7.00	---	---	---	7.63	7.19	7.30
17	7.40	7.20	7.30	---	---	---	7.00	6.60	6.90	7.28	7.17	7.23
18	7.50	7.30	7.40	---	---	---	7.00	6.90	7.00	7.30	7.24	7.27
19	7.50	7.30	7.40	7.10	6.60	6.90	7.00	6.90	6.90	---	---	---
20	7.30	7.20	7.30	7.00	6.90	7.00	7.00	6.80	6.90	---	---	---
21	7.40	7.20	7.30	7.00	6.80	6.90	7.00	6.90	7.00	---	---	---
22	7.50	7.40	7.40	7.10	7.00	7.10	7.00	7.00	7.00	---	---	---
23	7.50	7.40	7.40	7.10	7.00	7.10	7.10	7.00	7.10	---	---	---
24	7.50	7.40	7.40	7.10	7.00	7.10	7.10	7.10	7.10	---	---	---
25	7.50	7.20	7.40	7.10	7.00	7.10	7.10	7.10	7.10	---	---	---
26	7.50	7.20	7.30	7.20	6.60	7.00	7.10	7.00	7.00	---	---	---
27	7.50	7.30	7.40	7.00	6.40	6.70	7.10	7.00	7.00	---	---	---
28	7.50	7.30	7.40	---	---	---	7.10	7.10	7.10	---	---	---
29	7.60	7.10	7.50	---	---	---	7.10	7.10	7.10	---	---	---
30	7.60	7.60	7.90	---	---	---	7.10	7.10	7.10	---	---	---
31	7.60	7.50	7.60	---	---	---	7.20	7.10	7.10	7.10	7.00	7.00
MONTH	7.70	7.10	7.40	7.70	6.40	7.19	7.20	6.60	7.02	7.63	6.60	7.22

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PH (STANDARD UNITS), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	7.20	7.00	7.10	---	---	---	---	---	---	7.40	7.10	7.20
2	7.10	7.10	7.10	---	---	---	7.39	7.21	7.30	7.40	7.10	7.20
3	7.10	7.00	7.10	---	---	---	7.50	7.23	7.37	7.40	7.10	7.20
4	7.10	6.80	6.90	7.60	7.30	7.30	7.56	7.29	7.39	7.50	7.10	7.30
5	---	---	---	7.50	7.30	7.40	7.54	7.20	7.35	7.60	7.10	7.30
6	7.30	6.50	6.70	---	---	---	7.68	7.25	7.38	7.70	7.10	7.40
7	6.80	6.60	6.70	---	---	---	7.48	7.32	7.38	7.80	7.10	7.40
8	6.90	6.80	6.90	---	---	---	7.50	7.25	7.39	7.70	7.10	7.40
9	---	---	---	---	---	---	7.35	7.22	7.27	7.70	7.10	7.40
10	---	---	---	---	---	---	7.33	7.22	7.25	7.70	7.10	7.40
11	---	---	---	---	---	---	7.40	7.30	7.30	7.70	7.10	7.40
12	---	---	---	---	---	---	7.40	7.30	7.30	7.80	7.20	7.40
13	---	---	---	---	---	---	7.40	7.30	7.30	7.60	7.20	7.40
14	---	---	---	---	---	---	7.50	7.20	7.30	7.60	7.20	7.40
15	---	---	---	---	---	---	7.40	7.20	7.30	7.60	7.30	7.40
16	---	---	---	---	---	---	7.30	7.20	7.30	7.70	7.10	7.40
17	---	---	---	---	---	---	7.20	7.20	7.20	7.70	7.10	7.40
18	---	---	---	---	---	---	7.30	7.10	7.20	7.70	7.20	7.40
19	---	---	---	---	---	---	7.30	7.00	7.20	7.60	7.20	7.40
20	7.33	6.53	6.68	---	---	---	7.30	7.00	7.20	7.44	7.30	7.36
21	6.86	6.54	6.62	---	---	---	7.30	7.10	7.20	7.43	7.26	7.32
22	6.77	6.61	6.70	---	---	---	7.20	7.00	7.10	7.47	7.28	7.37
23	6.87	6.76	6.79	---	---	---	7.20	7.00	7.10	7.46	7.24	7.33
24	---	---	---	---	---	---	7.30	7.00	7.10	7.50	7.23	7.35
25	---	---	---	---	---	---	7.30	7.00	7.10	7.54	7.20	7.36
26	---	---	---	---	---	---	7.30	7.00	7.10	7.57	7.16	7.35
27	---	---	---	---	---	---	7.40	6.90	7.20	7.38	7.19	7.30
28	---	---	---	---	---	---	7.50	7.00	7.20	7.52	7.19	7.36
29	---	---	---	---	---	---	7.40	7.00	7.20	7.57	7.24	7.38
30	---	---	---	---	---	---	7.50	7.00	7.20	7.54	7.19	7.32
31	---	---	---	---	---	---	---	---	---	7.54	7.18	7.33
MONTH	7.33	6.50	6.84	7.60	7.30	7.35	7.68	6.90	7.25	7.80	7.10	7.35
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	7.55	7.13	7.34	7.73	7.42	7.55	7.85	7.23	7.47	8.24	7.55	7.79
2	7.46	7.21	7.30	7.58	7.40	7.49	7.86	7.25	7.49	8.43	7.55	7.87
3	7.52	7.16	7.32	7.65	7.45	7.54	7.74	7.23	7.45	8.40	7.54	7.86
4	7.31	7.24	7.27	7.70	7.41	7.53	7.74	7.22	7.44	8.29	7.53	7.83
5	7.60	7.20	7.40	7.73	7.39	7.54	7.84	7.25	7.50	8.09	7.41	7.68
6	7.60	7.20	7.30	7.74	7.37	7.53	7.91	7.30	7.51	8.01	7.41	7.66
7	7.70	7.20	7.40	7.59	7.20	7.41	7.76	7.25	7.45	7.84	7.45	7.66
8	7.50	7.30	7.40	7.53	7.23	7.35	7.78	7.24	7.46	---	---	---
9	7.60	7.30	7.40	7.36	6.99	7.14	7.87	7.38	7.56	---	---	---
10	7.60	7.30	7.50	7.44	7.17	7.34	7.87	7.30	7.50	---	---	---
11	7.70	7.30	7.50	7.39	7.24	7.33	7.72	7.25	7.45	---	---	---
12	7.60	7.30	7.40	7.51	7.26	7.38	7.88	7.23	7.52	---	---	---
13	7.57	7.18	7.48	7.47	7.28	7.36	8.15	7.38	7.68	---	---	---
14	7.72	7.34	7.50	7.48	7.30	7.39	8.13	7.38	7.66	---	---	---
15	7.75	7.40	7.54	7.50	7.28	7.38	8.19	7.32	7.64	---	---	---
16	7.74	7.39	7.52	7.47	7.20	7.33	7.74	7.31	7.45	---	---	---
17	---	---	---	7.57	7.14	7.34	7.74	7.30	7.46	---	---	---
18	---	---	---	7.65	7.23	7.41	8.01	7.34	7.58	---	---	---
19	---	---	---	7.50	6.70	7.04	8.09	7.31	7.62	---	---	---
20	---	---	---	---	---	---	8.02	7.34	7.61	---	---	---
21	---	---	---	---	---	---	7.96	7.41	7.61	---	---	---
22	---	---	---	---	---	---	8.22	7.36	7.70	---	---	---
23	---	---	---	---	---	---	8.25	7.24	7.65	---	---	---
24	---	---	---	---	---	---	7.78	7.27	7.46	---	---	---
25	7.70	7.49	7.59	7.17	6.90	7.04	7.78	7.27	7.46	---	---	---
				7.38	6.99	7.16	8.05	7.30	7.57	7.41	7.10	7.32
26	7.74	7.42	7.55	7.55	7.06	7.29	8.41	7.44	7.81	7.57	7.32	7.44
27	7.76	7.43	7.56	7.70	7.19	7.42	7.91	7.47	7.61	7.47	7.06	7.34
28	7.56	7.39	7.48	7.80	7.22	7.44	8.14	7.42	7.67	7.42	7.05	7.25
29	7.70	7.34	7.51	7.75	7.25	7.42	8.09	7.42	7.70	7.51	7.03	7.25
30	7.65	7.41	7.51	7.70	7.27	7.39	8.09	7.49	7.73	7.55	7.01	7.28
31	---	---	---	7.76	7.23	7.44	8.22	7.54	7.79	---	---	---
MONTH	7.76	7.13	7.44	7.80	6.70	7.37	8.41	7.22	7.57	8.43	7.01	7.56
YEAR	8.43	6.40	7.32									

MONONGAHELA RIVER BASIN

03082020 INDIAN CREEK AT JONES MILLS, PA.--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

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

03082020 INDIAN CREEK AT JONES MILLS, PA.--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

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

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L) OCTOBER	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L) NOVEMBER	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L) DECEMBER	SEDIMENT DISCHARGE (TONS/DAY)
1	2.6	7	.05	3.5	1	.01	94	29	7.4
2	4.2	7	.08	4.1	1	.01	71	25	4.8
3	2.9	6	.05	6.5	4	.07	53	22	3.1
4	2.8	5	.04	18	10	.64	42	20	2.3
5	2.8	4	.03	62	60	12	37	18	1.8
6	2.8	5	.04	55	12	1.8	36	16	1.6
7	2.8	5	.04	41	5	.55	30	14	1.1
8	2.7	5	.04	32	5	.43	29	14	1.1
9	2.6	5	.04	24	2	.13	27	14	1.0
10	2.9	6	.05	23	5	.31	29	18	1.4
11	3.5	7	.07	38	23	2.4	44	17	2.0
12	3.2	6	.05	66	53	13	86	26	6.0
13	3.9	5	.05	72	23	4.7	90	26	6.3
14	4.5	5	.06	89	36	10	83	26	5.8
15	4.7	6	.08	100	28	8.6	56	20	3.0
16	4.1	5	.06	269	144	119	45	26	3.2
17	3.4	4	.04	216	49	32	37	23	2.3
18	3.3	4	.04	118	13	4.1	33	20	1.8
19	3.6	1	.01	77	9	1.9	29	35	2.7
20	5.0	5	.07	57	9	1.4	27	32	2.3
21	9.3	10	.25	42	9	1.0	25	9	.61
22	6.0	8	.13	47	9	1.1	24	6	.39
23	5.3	6	.09	39	9	.95	24	5	.32
24	6.7	8	.14	32	9	.78	22	5	.30
25	9.0	10	.24	30	9	.73	24	5	.32
26	4.7	2	.03	194	121	109	42	5	.57
27	4.2	1	.01	379	109	112	29	5	.39
28	4.0	1	.01	483	110	152	17	5	.23
29	3.7	1	.01	263	59	42	16	5	.22
30	3.5	3	.03	145	33	13	15	4	.16
31	3.7	2	.02	---	---	---	15	4	.16
TOTAL	128.4	---	1.95	3025.1	---	645.61	1231	---	64.67

03082020 INDIAN CREEK AT JONES MILLS, PA.--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) JANUARY	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) FEBRUARY	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) MARCH	SEDIMENT DISCHARGE (TONS/DAY)
1	15	5	.20	27	17	1.2	31	7	.59
2	13	4	.14	33	80	7.1	28	5	.38
3	15	4	.16	71	30	5.8	25	4	.27
4	15	4	.16	344	62	58	24	4	.26
5	15	4	.16	653	236	459	23	5	.31
6	16	8	.35	371	111	119	22	6	.36
7	14	10	.38	183	70	35	21	6	.34
8	13	9	.32	109	50	15	32	12	1.0
9	12	8	.26	76	39	8.0	31	16	1.3
10	12	7	.23	60	35	5.7	65	37	6.5
11	12	7	.23	51	26	3.6	143	65	25
12	12	7	.23	41	17	1.9	94	26	6.6
13	12	7	.23	42	15	1.7	96	26	6.7
14	9.5	6	.15	66	35	6.2	149	94	63
15	8.4	6	.14	29	30	2.3	281	125	102
16	9.2	6	.15	32	25	2.2	159	75	32
17	12	7	.23	79	44	9.4	101	36	9.8
18	22	9	.53	230	87	54	73	22	4.3
19	33	12	1.1	327	126	149	63	15	2.6
20	62	20	3.3	259	55	38	49	14	1.9
21	54	17	2.5	212	145	83	38	14	1.4
22	58	15	2.3	145	160	63	33	13	1.2
23	60	14	2.3	103	69	19	29	9	.70
24	52	10	1.4	77	20	4.2	26	5	.35
25	43	9	1.0	61	12	2.0	24	3	.19
26	41	8	.89	51	10	1.4	22	2	.12
27	36	7	.68	43	9	1.0	23	2	.12
28	32	11	.95	35	9	.85	20	2	.11
29	27	27	2.0	---	---	---	18	1	.05
30	25	24	1.6	---	---	---	17	1	.05
31	24	21	1.4	---	---	---	16	2	.09
TOTAL	784.1	---	25.67	3810	---	1156.55	1776	---	269.59
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) APRIL	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) MAY	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) JUNE	SEDIMENT DISCHARGE (TONS/DAY)
1	15	2	.08	23	6	.37	11	2	.06
2	14	4	.15	20	6	.32	11	2	.06
3	14	3	.11	18	5	.24	9.6	2	.05
4	13	3	.11	17	5	.23	9.0	2	.05
5	14	2	.08	16	5	.22	9.2	2	.05
6	22	7	.42	15	5	.20	9.2	3	.07
7	28	5	.38	17	6	.28	8.9	4	.10
8	21	1	.06	14	5	.19	9.6	5	.13
9	20	1	.05	12	5	.16	7.9	5	.11
10	22	1	.06	11	5	.15	6.8	5	.09
11	26	2	.14	11	5	.15	7.4	5	.10
12	27	2	.15	10	5	.14	12	5	.16
13	27	3	.22	9.8	6	.16	8.1	6	.13
14	26	3	.21	15	7	.28	6.7	7	.13
15	31	7	.59	10	6	.16	6.0	6	.10
16	53	10	1.4	10	6	.16	6.4	6	.10
17	69	14	2.6	11	4	.12	11	18	.53
18	61	12	2.0	9.3	4	.10	6.1	7	.12
19	57	10	1.5	13	8	.28	5.6	4	.06
20	55	7	1.0	19	6	.31	5.3	4	.06
21	57	7	1.1	17	5	.23	5.0	3	.04
22	71	13	2.5	15	4	.16	4.7	3	.04
23	58	10	1.6	15	3	.12	5.9	3	.05
24	51	9	1.2	14	3	.11	4.7	3	.04
25	47	9	1.1	13	3	.11	4.4	3	.04
26	42	9	1.0	12	2	.06	4.2	3	.03
27	36	8	.78	17	14	.64	4.2	4	.05
28	31	8	.67	19	8	.41	6.1	7	.12
29	28	7	.53	14	4	.15	4.7	6	.08
30	24	7	.45	13	3	.11	4.3	6	.07
31	---	---	---	13	3	.11	---	---	---
TOTAL	1060	---	22.24	443.1	---	6.43	215.0	---	2.82

MONONGAHELA RIVER BASIN

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03082020 INDIAN CREEK AT JONES MILLS, PA.--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) JULY	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) AUGUST	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) SEPTEMBER	SEDIMENT DISCHARGE (TONS/DAY)
1	4.3	6	.07	8.8	7	.17	3.5	5	.05
2	8.3	13	.29	8.1	7	.15	3.6	5	.05
3	5.1	4	.06	7.5	6	.12	3.4	5	.05
4	4.2	3	.03	6.6	5	.09	3.3	5	.04
5	3.8	3	.03	6.1	4	.07	4.2	5	.06
6	3.6	2	.02	6.3	4	.07	3.4	5	.05
7	3.6	3	.03	7.7	4	.08	3.2	5	.04
8	6.0	10	.16	6.2	4	.07	3.0	4	.03
9	91	311	139	5.8	3	.05	2.8	4	.03
10	26	23	1.6	6.9	11	.20	2.7	4	.03
11	19	16	.82	13	55	1.9	2.7	4	.03
12	18	12	.58	6.1	32	.53	3.5	5	.05
13	20	18	.97	5.4	15	.22	3.1	5	.04
14	20	12	.65	5.0	12	.16	2.7	4	.03
15	15	10	.41	4.8	11	.14	2.6	6	.04
16	14	11	.42	8.1	26	.57	2.5	5	.03
17	13	12	.42	5.8	7	.11	2.5	5	.03
18	11	10	.30	5.2	6	.08	3.5	8	.08
19	127	265	258	4.8	5	.06	5.5	8	.12
20	120	80	26	4.5	5	.06	3.4	6	.06
21	77	26	5.4	4.6	4	.05	3.1	5	.04
22	48	18	2.3	4.5	4	.05	2.9	5	.04
23	33	14	1.2	5.8	14	.22	4.5	9	.11
24	27	7	.51	9.2	21	.52	26	77	16
25	22	7	.42	4.6	7	.09	31	53	9.7
26	18	6	.29	4.2	6	.07	12	4	.13
27	15	6	.24	5.5	5	.07	9.4	4	.10
28	13	6	.21	4.9	5	.07	7.6	4	.08
29	12	6	.19	4.2	5	.06	6.4	3	.05
30	11	6	.18	3.8	5	.05	5.8	2	.03
31	9.7	7	.18	3.6	5	.05	---	---	---
TOTAL	818.6	---	440.98	187.6	---	6.20	173.8	---	27.22
YEAR	13652.7		2669.93						

MONONGAHELA RIVER BASIN

03082120 CHAMPION CREEK AT MELCROFT, PA

LOCATION.--Lat 40°03'55", long 79°23'55", Fayette County, Hydrologic Unit 05020006, on left bank 0.2 mi downstream from Little Champion Creek, 1.0 mi northwest of Melcroft, 1.1 mi upstream from mouth, and 3.2 mi southwest of Donegal.

DRAINAGE AREA.--13.8 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1985 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,490 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, Dec. 16 to Jan. 1, Jan. 5-18, and Jan. 21 to Feb. 2, which are fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,020 ft³/s, Nov. 26, 1985, gage height, 4.91 ft; minimum, 0.73 ft³/s, Oct. 1, 1985, gage height, 0.65 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 470 ft³/s and maximum (*).

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 26	2015	*1020	*4.91	Feb. 4	1645	770	4.48
Nov. 28	0730	558	4.02	Feb. 5	0900	695	4.33
Feb. 2	0530	715	4.37	July 9	0900	842	4.62

Minimum discharge, 0.73 ft³/s, Oct. 1, gage height, 0.65 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.82	1.2	94	8.2	21	24	9.3	11	8.9	1.6	4.9	2.4
2	1.7	1.5	87	9.8	37	21	9.1	10	8.1	6.3	4.1	2.5
3	1.2	3.7	73	13	88	18	8.2	9.7	7.0	2.7	3.6	2.5
4	1.1	20	61	16	423	20	7.4	9.1	4.9	1.7	3.1	2.2
5	1.0	69	53	17	469	22	8.2	8.7	4.3	1.4	3.3	2.5
6	.99	35	62	11	181	25	19	7.5	4.2	1.2	2.7	2.2
7	.94	20	54	9.0	91	26	28	8.2	3.2	1.2	6.0	1.9
8	.92	16	50	8.0	59	32	24	6.4	3.4	6.1	3.3	2.0
9	.89	11	49	7.0	43	43	18	5.5	2.7	225	2.9	1.8
10	.86	16	37	6.5	34	81	16	4.9	2.1	44	3.8	1.5
11	.90	61	52	6.2	29	145	20	4.6	2.4	24	16	1.5
12	.99	112	109	6.0	25	85	23	4.4	5.8	20	4.6	1.9
13	1.1	97	94	5.7	26	95	20	4.2	3.5	25	3.3	1.8
14	1.6	119	75	5.5	49	138	17	6.6	2.4	22	2.6	1.5
15	1.9	131	49	5.5	43	195	25	4.6	2.0	14	2.6	1.3
16	1.8	253	39	6.0	35	107	52	4.4	2.9	11	5.2	1.1
17	1.2	138	25	8.0	108	66	74	4.3	6.2	13	5.6	1.0
18	1.1	76	22	36	243	37	50	3.9	2.3	9.6	3.5	1.7
19	1.1	47	19	48	249	35	37	8.6	1.9	95	2.5	4.7
20	1.7	33	16	59	148	26	31	17	1.9	125	2.2	2.1
21	4.8	21	15	42	132	20	34	11	1.9	80	2.2	1.7
22	2.2	26	14	30	88	18	66	9.0	1.7	37	2.2	1.5
23	1.7	25	13	25	60	16	47	9.3	2.3	29	30	2.3
24	3.4	19	12	22	45	14	37	9.5	1.6	33	27	31
25	3.5	13	11	20	36	12	30	9.2	1.3	18	7.3	64
26	2.0	233	11	19	32	11	24	8.3	1.2	14	4.7	18
27	1.6	297	10	18	28	14	19	19	1.6	10	9.0	11
28	1.4	363	10	17	24	11	16	24	3.7	8.6	6.3	8.0
29	1.3	167	9.4	17	---	10	14	14	2.1	7.8	4.0	6.2
30	1.2	108	8.8	18	---	9.3	12	11	1.6	6.8	3.2	5.1
31	1.2	---	8.4	19	---	9.2	---	11	---	5.8	2.7	---
TOTAL	48.11	2532.4	1242.6	538.4	2846	1385.5	795.2	278.9	99.1	899.8	184.4	188.9
MEAN	1.55	84.4	40.1	17.4	102	44.7	26.5	9.00	3.30	29.0	5.95	6.30
MAX	4.8	363	109	59	469	195	74	24	8.9	225	30	64
MIN	.82	1.2	8.4	5.5	21	9.2	7.4	3.9	1.2	1.2	2.2	1.0
CFSM	.11	6.13	2.91	1.26	7.38	3.25	1.92	.65	.24	2.11	.43	.46
IN.	.13	6.84	3.36	1.45	7.69	3.74	2.15	.75	.27	2.43	.50	.51

WTR YR 1986 TOTAL 11039.21 MEAN 30.2 MAX 469 MIN .82 CFSM 2.20 IN. 29.82

MONONGAHELA RIVER BASIN
03082120 CHAMPION CREEK AT MELCROFT, PA.--Continued

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WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1985 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: October 1985 to current year.

REMARKS.--Suspended-sediment samples were collected by a local observer periodically during low flow and more frequently during periods of higher flow and storm events.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily, 470 mg/L Feb. 4, 1986; minimum daily, 1 mg/L on several days.

SEDIMENT DISCHARGES: Maximum daily, 537 tons Feb. 4, 1986; minimum daily, 0.0 ton on several days.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily, 470 mg/L Feb. 4; minimum daily, 1 mg/L on several days.

SEDIMENT DISCHARGES: Maximum daily, 537 tons Feb. 4; minimum daily, 0.0 ton on several days.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	ACIDITY (MG/L AS H)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	ALKA- LITY TOTAL WH WAT FIELD MG/L AS CACO3	
AUG 12...	1200	2.3	350	7.80	19.0	0.1	39	12	7.6	1.3	56	
DATE		SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
AUG 12...	87	17	<0.1	282	<2	0.520	<40	<4	<250	<10	<50	
DATE		COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)
AUG 12...	<30	<10	<10	<10	<10	<4	11	<25	<10	<10	<6	<2.0

MONONGAHELA RIVER BASIN

03082120 CHAMPION CREEK AT MELCROFT, PA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	ACIDITY (MG/L AS H)	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 CAO3
OCT 23...	1030	1.7	395	7.80	13.0	0	33	10	12	2.2	54
NOV 25...	1330	17	200	7.20	5.0	0	--	--	--	--	24
DEC 23...	1245	13	240	7.40	0.5	0	--	--	--	--	22
JAN 15...	1200	5.7	210	7.60	0.0	0	--	--	--	--	48
FEB 19...	1015	138	140	6.70	5.0	0	--	--	--	--	8
MAR 17...	1320	51	150	6.40	6.0	0.1	--	--	--	--	13
APR 28...	1420	16	190	7.60	19.0	0	--	--	--	--	22
JUN 06...	1150	3.2	320	7.60	18.0	0.1	--	--	--	--	42
JUL 22...	1200	38	145	7.30	18.0	0	--	--	--	--	19
AUG 20...	1405	2.3	340	8.00	20.0	0	--	--	--	--	54
SEP 29...	1330	6.4	230	7.40	20.5	0	--	--	--	--	36

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BORON, DIS- SOLVED (UG/L AS B)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)
OCT 23...	83	--	336	<2	--	300	<4	<0	<50	<30	<10
NOV 25...	52	--	168	6	--	<40	--	--	--	--	--
DEC 23...	51	--	174	2	--	200	--	--	--	--	--
JAN 15...	56	--	256	<2	<500	<500	--	--	--	--	--
FEB 19...	28	16	102	<2	390	<130	--	--	--	--	--
MAR 17...	26	--	86	4	300	<130	--	--	--	--	--
APR 28...	38	11	132	8	<130	<130	--	--	--	--	--
JUN 06...	61	--	204	<2	<130	<130	--	--	--	--	--
JUL 22...	36	--	124	<2	390	<130	--	--	--	--	--
AUG 20...	72	--	220	<2	<130	<130	--	--	--	--	--
SEP 29...	52	--	150	<2	<130	<130	--	--	--	--	--

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, DIS- SOLVED (UG/L AS NI)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	MERCURY DIS- SOLVED (UG/L AS HG)
OCT 23...	--	120	<45	--	<10	<25	77	--	<10	<6	<1.0
NOV 25...	--	14	--	--	43	--	--	--	<10	--	--
DEC 23...	--	52	--	--	62	--	--	--	28	--	--
JAN 15...	<300	<300	--	50	50	--	--	<10	<10	--	--
FEB 19...	550	53	--	92	84	--	--	<10	<10	--	--
MAR 17...	160	<10	--	64	58	--	--	<10	<10	--	--
APR 28...	170	54	--	28	27	--	--	20	18	--	--
JUN 06...	170	69	--	<10	<10	--	--	<10	<10	--	--
JUL 22...	430	28	--	<10	<10	--	--	20	25	--	--
AUG 20...	120	59	--	30	24	--	--	10	13	--	--
SEP 29...	160	47	--	<10	<10	--	--	20	22	--	--

03082120 CHAMPION CREEK AT MELCROFT, PA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) OCTOBER	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) NOVEMBER	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) DECEMBER	SEDIMENT DISCHARGE (TONS/DAY)
1	.82	6	.01	1.2	1	.00	94	5	1.3
2	1.7	9	.04	1.5	2	.01	87	5	1.2
3	1.2	5	.02	3.7	5	.05	73	5	.99
4	1.1	5	.01	20	26	1.4	61	6	.99
5	1.0	6	.02	69	36	6.7	53	6	.86
6	.99	4	.01	35	14	1.3	62	5	.84
7	.94	5	.01	20	2	.11	54	4	.58
8	.92	4	.01	16	1	.04	50	6	.81
9	.89	4	.01	11	1	.03	49	6	.79
10	.86	4	.01	16	3	.13	37	10	1.0
11	.90	3	.01	61	20	3.3	52	30	4.2
12	.99	3	.01	112	265	80	109	55	16
13	1.1	4	.01	97	80	21	94	15	3.8
14	1.6	4	.02	119	190	61	75	8	1.6
15	1.9	4	.02	131	55	19	49	7	.93
16	1.8	10	.05	253	150	102	39	8	.84
17	1.2	8	.03	138	25	9.3	25	10	.68
18	1.1	5	.01	76	15	3.1	22	13	.77
19	1.1	5	.01	47	14	1.8	19	40	2.1
20	1.7	7	.03	33	9	.80	16	40	1.7
21	4.8	8	.10	21	5	.28	15	15	.61
22	2.2	3	.02	26	15	1.1	14	55	2.1
23	1.7	4	.02	25	7	.47	13	10	.35
24	3.4	11	.10	19	7	.36	12	10	.32
25	3.5	3	.03	13	2	.07	11	10	.30
26	2.0	3	.02	233	200	126	11	10	.30
27	1.6	3	.01	297	165	132	10	10	.27
28	1.4	3	.01	363	120	118	10	7	.19
29	1.3	3	.01	167	30	14	9.4	7	.18
30	1.2	2	.01	108	10	2.9	8.8	6	.14
31	1.2	1	.00	---	---	---	8.4	8	.18
TOTAL	48.11	---	0.68	2532.4	---	706.25	1242.6	---	46.92

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) JANUARY	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) FEBRUARY	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) MARCH	SEDIMENT DISCHARGE (TONS/DAY)
1	8.2	6	.13	21	25	1.4	24	9	.58
2	9.8	8	.21	37	115	11	21	8	.45
3	13	10	.35	88	20	4.8	18	8	.39
4	16	8	.35	423	470	537	20	9	.49
5	17	5	.23	469	325	412	22	10	.59
6	11	7	.21	181	67	33	25	9	.61
7	9.0	8	.19	91	30	7.4	26	9	.63
8	8.0	8	.17	59	20	3.2	32	5	.43
9	7.0	9	.17	43	20	2.3	43	68	7.9
10	6.5	10	.18	34	13	1.2	81	60	13
11	6.2	6	.10	29	12	.94	145	49	19
12	6.0	5	.08	25	12	.81	85	15	3.4
13	5.7	9	.14	26	12	.84	95	50	13
14	5.5	35	.52	49	13	1.7	138	105	39
15	5.5	25	.37	43	9	1.0	195	68	36
16	6.0	5	.08	35	40	3.8	107	17	4.9
17	8.0	5	.11	108	210	61	66	5	.89
18	36	22	2.1	243	170	112	37	7	.70
19	48	26	3.4	249	180	121	35	6	.57
20	59	6	.96	148	50	20	26	7	.49
21	42	19	2.2	132	115	41	20	4	.22
22	30	45	3.6	88	10	2.4	18	5	.24
23	25	11	.74	60	9	1.5	16	3	.13
24	22	9	.53	45	7	.85	14	4	.15
25	20	5	.27	36	10	.97	12	4	.13
26	19	9	.46	32	10	.86	11	3	.09
27	18	8	.39	28	9	.68	14	4	.15
28	17	26	1.2	24	9	.58	11	3	.09
29	17	35	1.6	---	---	---	10	3	.08
30	18	22	1.1	---	---	---	9.3	3	.08
31	19	37	1.9	---	---	---	9.2	2	.05
TOTAL	538.4	---	24.04	2846	---	1385.23	1385.5	---	144.43

03082120 CHAMPION CREEK AT MELCROFT, PA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) APRIL	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) MAY	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) JUNE	SEDIMENT DISCHARGE (TONS/DAY)
1	9.3	3	.08	11	9	.27	8.9	10	.24
2	9.1	3	.07	10	6	.16	8.1	5	.11
3	8.2	3	.07	9.7	4	.10	7.0	5	.09
4	7.4	4	.08	9.1	5	.12	4.9	5	.07
5	8.2	7	.15	8.7	15	.35	4.3	6	.07
6	19	15	.77	7.5	15	.30	4.2	8	.09
7	28	14	1.1	8.2	8	.18	3.2	8	.07
8	24	9	.58	6.4	6	.10	3.4	11	.10
9	18	8	.39	5.5	10	.15	2.7	6	.04
10	16	10	.43	4.9	10	.13	2.1	6	.03
11	20	15	.81	4.6	12	.15	2.4	25	.16
12	23	13	.81	4.4	10	.12	5.8	45	.70
13	20	13	.70	4.2	12	.14	3.5	22	.21
14	17	10	.46	6.6	6	.11	2.4	15	.10
15	25	35	2.4	4.6	7	.09	2.0	14	.08
16	52	49	6.9	4.4	8	.10	2.9	12	.09
17	74	20	4.0	4.3	6	.07	6.2	80	1.3
18	50	9	1.2	3.9	9	.09	2.3	19	.12
19	37	7	.70	8.6	11	.26	1.9	4	.02
20	31	8	.67	17	30	1.4	1.9	4	.02
21	34	20	1.8	11	5	.15	1.9	4	.02
22	66	70	12	9.0	6	.15	1.7	6	.03
23	47	20	2.5	9.3	6	.15	2.3	8	.05
24	37	15	1.5	9.5	10	.26	1.6	14	.06
25	30	10	.81	9.2	7	.17	1.3	9	.03
26	24	8	.52	8.3	13	.29	1.2	10	.03
27	19	7	.36	19	50	2.6	1.6	16	.07
28	16	7	.30	24	55	3.6	3.7	15	.15
29	14	6	.23	14	25	.95	2.1	12	.07
30	12	6	.19	11	20	.59	1.6	13	.06
31	---	---	---	11	10	.30	---	---	---
TOTAL	795.2	---	42.58	278.9	---	13.60	99.1	---	4.28
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) JULY	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) AUGUST	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) SEPTEMBER	SEDIMENT DISCHARGE (TONS/DAY)
1	1.6	10	.04	4.9	3	.04	2.4	3	.02
2	6.3	60	1.0	4.1	3	.03	2.5	2	.01
3	2.7	18	.13	3.6	3	.03	2.5	2	.01
4	1.7	6	.03	3.1	3	.03	2.2	2	.01
5	1.4	5	.02	3.3	3	.03	2.5	3	.02
6	1.2	2	.01	2.7	3	.02	2.2	3	.02
7	1.2	3	.01	6.0	10	.16	1.9	4	.02
8	6.1	25	.41	3.3	6	.05	2.0	5	.03
9	225	315	191	2.9	6	.05	1.8	5	.02
10	44	40	4.8	3.8	23	.24	1.5	5	.02
11	24	40	2.6	16	98	4.2	1.5	5	.02
12	20	15	.81	4.6	7	.09	1.9	12	.06
13	25	50	3.4	3.3	8	.07	1.8	8	.04
14	22	10	.59	2.6	10	.07	1.5	2	.01
15	14	10	.38	2.6	10	.07	1.3	2	.01
16	11	8	.24	5.2	28	.39	1.1	2	.01
17	13	6	.21	5.6	15	.23	1.0	1	.00
18	9.6	6	.16	3.5	6	.06	1.7	15	.07
19	95	460	118	2.5	5	.03	4.7	26	.33
20	125	360	121	2.2	4	.02	2.1	8	.05
21	80	55	12	2.2	2	.01	1.7	5	.02
22	37	25	2.5	2.2	2	.01	1.5	3	.01
23	29	30	2.3	30	115	9.3	2.3	10	.06
24	33	14	1.2	27	55	4.0	31	200	17
25	18	5	.24	7.3	15	.30	64	135	23
26	14	5	.19	4.7	10	.13	18	10	.49
27	10	5	.14	9.0	65	1.6	11	7	.21
28	8.6	5	.12	6.3	6	.10	8.0	6	.13
29	7.8	5	.11	4.0	5	.05	6.2	5	.08
30	6.8	4	.07	3.2	5	.04	5.1	3	.04
31	5.8	3	.05	2.7	3	.02	---	---	---
TOTAL	899.8	---	463.76	184.4	---	21.47	188.9	---	41.82
YEAR	11039.31	---	2895.06						

MONONGAHELA RIVER BASIN

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03082190 POPLAR RUN NEAR NORMALVILLE, PA

LOCATION.--Lat 40°01'09", long 79°25'39", Fayette County, Hydrologic Unit 05020006, on right bank about 0.2 mi upstream from bridge on State Highway 711 and 381, 0.9 mi upstream from mouth, 2.0 mi northeast of Normalville, and 6.9 mi southwest of Donegal.

DRAINAGE AREA.--8.83 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1985 to current year. Records for September 1961 to September 1978 at site 0.2 mi downstream published under station number 03082200 are not equivalent because of difference in drainage areas.

GAGE.--Water-stage recorder. Elevation of gage is 1,420 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, Dec. 20 to Jan. 20, Jan. 25 to Feb. 2, and Feb. 14-16, which are fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 785 ft³/s, Nov. 26, 1985, gage height, 6.35 ft; minimum, 0.10 ft³/s, June 27, 1986, gage height, 2.63 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft³/s and maximum (*).

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 26	1930	*785	*6.35	Feb. 5	0830	494	5.38
Nov. 28	0700	378	4.93	Feb. 19	1430	328	4.73
Feb. 2	---	---	ice jam	July 9	0830	584	5.68
Feb. 4	1500	448	5.21	July 20	1845	653	5.91

Minimum discharge, 0.10 ft³/s, June 27, gage height, 2.63 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.44	5.3	37	5.4	8.6	12	5.8	8.2	4.1	.51	3.6	1.5
2	1.8	7.6	28	5.2	20	10	5.7	7.2	3.4	9.0	3.3	1.6
3	.73	16	20	5.0	54	9.9	5.1	6.1	2.5	3.5	2.7	1.6
4	.50	39	18	4.8	259	9.5	5.0	5.3	2.1	1.0	2.3	1.4
5	.79	63	17	4.7	338	8.8	5.6	5.0	2.8	.54	2.0	1.6
6	.52	37	17	4.5	130	8.9	12	4.4	2.8	.30	2.1	1.5
7	.53	24	14	4.3	64	7.8	15	5.1	2.0	.29	3.3	1.3
8	.48	18	14	4.2	40	7.0	11	4.3	2.3	2.4	2.4	1.3
9	.40	12	14	4.1	29	13	11	3.5	1.6	158	2.2	1.2
10	.57	15	18	4.0	23	48	11	3.1	.95	42	3.3	1.2
11	.85	44	31	3.9	20	91	13	2.5	.98	23	15	1.2
12	1.2	77	67	3.8	16	38	17	2.4	4.7	19	3.9	1.6
13	2.2	55	58	3.7	13	43	17	2.3	1.7	37	2.5	1.8
14	4.9	76	47	3.6	11	69	14	3.4	1.1	34	2.0	1.4
15	6.5	78	32	3.5	10	103	18	2.4	.65	17	1.9	1.3
16	5.4	192	26	3.7	9.2	48	33	5.8	1.8	12	2.1	1.5
17	3.8	95	21	4.0	55	32	51	7.7	7.7	12	2.0	1.5
18	2.7	48	16	6.0	146	24	38	4.0	1.5	7.8	1.9	1.8
19	5.1	32	14	10	164	22	27	9.0	.89	45	1.7	5.6
20	8.2	24	11	18	96	18	21	22	.74	161	1.6	2.5
21	15	18	9.0	27	85	14	22	14	.46	100	1.5	1.7
22	7.9	24	8.0	43	57	12	38	9.5	.28	39	1.7	1.5
23	6.4	21	10	41	39	11	32	7.4	.49	22	15	3.5
24	15	17	9.2	30	29	9.9	27	5.9	.40	14	14	52
25	13	16	8.4	20	23	8.7	22	4.6	.24	11	3.4	59
26	8.4	193	7.4	17	19	7.9	18	3.7	.20	8.5	2.6	19
27	7.0	205	7.0	15	17	10	15	11	.78	6.4	5.0	11
28	6.7	246	6.6	13	14	8.1	13	18	4.6	5.3	4.2	7.9
29	5.8	101	6.2	12	---	7.4	11	9.3	1.2	6.8	2.7	5.8
30	5.0	55	5.8	10	---	6.6	9.0	6.6	.54	5.1	2.0	4.9
31	5.4	---	5.6	9.2	---	5.9	---	5.5	---	4.1	1.5	---
TOTAL	143.21	1853.9	603.2	343.6	1788.8	724.4	543.2	209.2	55.50	807.54	115.4	200.7
MEAN	4.62	61.8	19.5	11.1	63.9	23.4	18.1	6.75	1.85	26.0	3.72	6.69
MAX	15	246	67	43	338	103	51	22	7.7	161	15	59
MIN	.40	5.3	5.6	3.5	8.6	5.9	5.0	2.3	.20	.29	1.5	1.2
CFSM	.52	7.00	2.20	1.26	7.24	2.65	2.05	.76	.21	2.95	.42	.76
IN.	.60	7.81	2.54	1.45	7.54	3.05	2.29	.88	.23	3.40	.49	.85

WTR YR 1986 TOTAL 7388.59 MEAN 20.2 MAX 338 MIN .20 CFSM 2.29 IN. 31.13

MONONGAHELA RIVER BASIN
03082190 POPLAR RUN NEAR NORMALVILLE, PA.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1985 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1985 to current year.

pH: October 1985 to current year.

WATER TEMPERATURE: October 1985 to current year.

SUSPENDED-SEDIMENT DISCHARGE: October 1985 to current year.

INSTRUMENTATION.--Water-quality monitor and sediment pumping sampler since October 1985.

REMARKS.--Interruptions in the record were due to malfunctions of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,360 microsiemens Sept. 18, 1986; minimum, 61 microsiemens Nov. 26, 1985.

pH: Maximum, 7.5 Apr. 29, 1986 and May 3, 1986; minimum, 4.5 on several days.

WATER TEMPERATURES: Maximum, 24.0°C June 28, 1986; minimum, 0.0°C on many days during winter months.

SEDIMENT CONCENTRATIONS: Maximum daily, 366 mg/L July 9, 1986; minimum daily, 1 mg/L on several days.

SEDIMENT DISCHARGES: Maximum daily, 440 tons Nov. 26, 1986; minimum daily, 0.0 ton on several days.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 1,360 microsiemens Sept. 18; minimum, 61 microsiemens Nov. 26.

pH: Maximum, 7.5 Apr. 29, and May 3; minimum, 4.5 on several days.

WATER TEMPERATURES: Maximum, 24.0°C June 28; minimum, 0.0°C on many days during winter months.

SEDIMENT CONCENTRATIONS: Maximum daily, 366 mg/L July 9; minimum daily, 1 mg/L on several days.

SEDIMENT DISCHARGES: Maximum daily, 440 tons Nov. 26; minimum daily, 0.0 ton on several days.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	ACIDITY (MG/L AS H)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	ALKA- LITY WH WAT TOTAL FIELD MG/L AS CACO3	
AUG 13...	0910	2.4	1000	4.70	17.5	0.4	100	57	30	1.0	0	
DATE		SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, TOTAL (MG/L AS N)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
AUG 13...	540	4.0	0.4	898	<2	0.960	1600	<4	<250	<10	<50	
DATE		COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	SELE- NIUM, TOTAL (UG/L AS SE)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)
AUG 13...	110	<10	250	250	<4	12000	<25	<10	520	<6	<2.0	

03082190 POPLAR RUN NEAR NORMALVILLE, PA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	ACIDITY (MG/L AS H)	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
OCT											
23...	1340	2.7	580	5.30	14.0	0.3	55	24	4.4	1.8	0
NOV											
25...	1600	15	300	5.70	5.0	0.1	--	--	--	--	4
DEC											
23...	1400	11	590	5.00	0.0	1.0	--	--	--	--	1
JAN											
15...	1530	5.8	435	4.90	0.0	1.0	--	--	--	--	4
FEB											
19...	1700	290	130	5.70	5.5	0	--	--	--	--	1
MAR											
17...	1615	32	220	5.60	6.0	0.1	--	--	--	--	2
APR											
29...	1255	10	480	6.10	16.0	0.2	--	--	--	--	2
JUN											
05...	1700	2.7	630	6.20	19.0	0.2	--	--	--	--	4
JUL											
23...	1200	22	305	6.50	17.0	0.1	--	--	--	--	4
AUG											
20...	1630	1.3	920	4.60	19.5	1.0	--	--	--	--	0
SEP											
30...	1257	4.6	560	5.00	19.5	0.3	--	--	--	--	0

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BORON, DIS- SOLVED (UG/L AS B)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)
OCT											
23...	280	--	604	<2	--	260	<4	<0	<50	40	<10
NOV											
25...	130	--	258	12	--	<40	--	--	--	--	--
DEC											
23...	330	--	532	8	--	5900	--	--	--	--	--
JAN											
15...	310	--	656	6	4300	3800	--	--	--	--	--
FEB											
19...	35	3.0	88	46	2800	<130	--	--	--	--	--
MAR											
17...	81	--	130	12	840	<130	--	--	--	--	--
APR											
29...	220	3.0	396	8	1700	<130	--	--	--	--	--
JUN											
05...	300	--	532	8	2300	<130	--	--	--	--	--
JUL											
23...	120	--	248	10	760	<130	--	--	--	--	--
AUG											
20...	580	--	814	6	7700	7400	--	--	--	--	--
SEP											
30...	280	--	396	<2	1700	1300	--	--	--	--	--

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, DIS- SOLVED (UG/L AS NI)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	MERCURY DIS- SOLVED (UG/L AS HG)
OCT											
23...	--	88	<45	--	4700	<25	83	--	190	<6	<1.0
NOV											
25...	--	270	--	--	1700	--	--	--	98	--	--
DEC											
23...	--	950	--	--	7800	--	--	--	410	--	--
JAN											
15...	1200	520	--	8400	7000	--	--	410	420	--	--
FEB											
19...	2500	110	--	600	550	--	--	40	41	--	--
MAR											
17...	450	210	--	1200	1200	--	--	50	44	--	--
APR											
29...	1300	410	--	5600	5600	--	--	210	200	--	--
JUN											
05...	1900	330	--	6700	6400	--	--	260	200	--	--
JUL											
23...	390	190	--	1400	1400	--	--	100	85	--	--
AUG											
20...	370	94	--	11000	11000	--	--	610	590	--	--
SEP											
30...	690	500	--	5000	5000	--	--	280	280	--	--

03082190 POPLAR RUN NEAR NORMALVILLE, PA--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS PER CENTIMETER AT 25 °C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	---	---	---	680	652	656	242	205	226	667	364	544
2	---	---	---	706	630	660	345	165	223	649	368	492
3	---	---	---	993	628	680	543	186	265	672	310	486
4	---	---	---	521	216	276	799	280	419	664	393	527
5	---	---	---	---	---	---	654	289	415	450	408	420
6	---	---	---	299	179	199	822	279	410	580	314	441
7	---	---	---	351	189	221	787	400	480	577	313	444
8	---	---	---	417	240	268	545	400	437	597	344	461
9	---	---	---	430	221	268	629	280	386	557	370	449
10	778	745	761	264	221	246	616	256	395	742	356	528
11	751	710	727	259	179	210	544	224	312	643	351	474
12	732	661	694	313	129	187	390	158	207	479	449	468
13	792	675	728	---	---	---	299	156	198	579	350	445
14	700	577	622	---	---	---	258	177	198	864	341	536
15	690	519	580	---	---	---	295	188	213	781	332	515
16	706	572	643	---	---	---	470	198	250	696	330	480
17	1050	717	882	---	---	---	612	233	305	715	300	471
18	1090	876	1040	---	---	---	468	256	336	505	201	298
19	872	748	798	---	---	---	585	267	395	220	188	206
20	926	733	828	---	---	---	489	268	379	---	---	---
21	732	448	552	---	---	---	596	390	452	---	---	---
22	509	461	474	352	159	221	427	397	410	374	140	189
23	612	511	538	388	172	215	562	289	390	261	159	186
24	752	377	548	375	176	222	634	287	449	290	163	192
25	---	---	---	370	166	252	677	397	447	315	204	232
26	516	367	399	320	61	174	636	334	476	343	220	235
27	704	308	610	113	65	92	660	319	449	228	193	210
28	932	683	788	103	73	89	636	372	510	251	214	226
29	1000	904	933	154	104	133	492	456	468	241	170	212
30	904	765	870	216	154	185	689	369	488	400	212	253
31	754	682	735	---	---	---	723	362	530	429	190	262
MONTH	1090	308	702	993	61	273	822	156	372	864	140	375
DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	417	253	298	605	360	427	1130	530	726	823	290	399
2	262	127	161	522	374	398	889	452	655	613	382	442
3	217	135	156	731	287	411	644	406	499	1020	360	586
4	161	64	135	739	277	413	1260	435	692	507	358	427
5	124	74	98	585	286	439	778	374	552	711	485	540
6	265	113	155	646	257	405	736	274	472	708	488	566
7	346	168	206	725	279	418	456	247	319	760	534	594
8	356	242	288	702	292	512	606	245	381	630	503	561
9	388	294	327	580	235	421	488	247	332	724	477	573
10	621	236	336	331	127	218	350	329	364	818	509	670
11	652	238	342	260	109	141	491	319	354	598	468	573
12	679	254	379	291	150	182	468	241	316	1010	474	666
13	756	268	394	305	156	218	281	225	249	700	623	641
14	760	253	445	271	133	185	447	237	289	921	484	664
15	620	365	420	165	122	144	456	211	294	817	483	666
16	523	363	384	266	160	192	240	177	212	848	445	709
17	521	126	301	307	181	210	267	183	199	584	375	438
18	180	88	119	356	211	254	292	200	223	526	470	506
19	156	80	119	536	246	312	357	234	261	754	403	592
20	266	116	156	541	226	311	272	240	255	317	262	286
21	235	124	174	482	235	309	386	253	288	471	259	328
22	237	178	202	544	253	371	333	222	243	421	286	344
23	311	209	244	467	304	398	373	199	234	558	347	404
24	515	193	265	556	302	400	330	224	244	599	392	461
25	554	219	293	613	311	457	378	243	267	489	429	456
26	611	229	319	788	327	491	442	270	302	683	441	513
27	635	248	358	649	287	399	322	289	306	635	266	481
28	614	246	105	843	300	458	515	321	358	384	240	283
29	---	---	---	752	308	548	690	293	429	552	299	385
30	---	---	---	548	449	493	588	304	415	569	381	422
31	---	---	---	747	355	501	---	---	---	618	396	451
MONTH	760	64	256	843	109	356	1260	177	358	1020	240	504

03082190 POPLAR RUN NEAR NORMALVILLE, PA--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS PER CENTIMETER AT 25°C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	500	425	464	943	698	834	980	460	714	870	630	730
2	742	471	552	896	352	562	950	530	774	1010	670	842
3	708	487	590	591	417	479	830	770	782	1300	700	992
4	935	491	706	532	412	468	970	780	862	1150	780	964
5	679	537	586	---	---	---	910	650	784	1130	780	966
6	733	568	604	---	---	---	860	650	719	1150	790	957
7	818	593	654	740	690	720	980	670	856	1150	840	999
8	676	604	630	830	620	716	1060	620	841	1150	840	985
9	743	570	626	---	---	---	1170	690	946	1040	840	948
10	822	564	670	---	---	---	1150	790	977	1100	940	1030
11	840	720	757	450	260	300	810	310	432	1210	950	1090
12	770	427	613	430	260	318	1020	380	741	1080	930	1010
13	691	472	596	---	---	---	840	610	758	1020	860	949
14	835	575	682	---	---	---	850	630	718	1090	930	1020
15	790	679	702	---	---	---	860	650	771	1070	930	1020
16	893	643	773	---	---	---	980	680	838	1160	970	1080
17	652	405	504	440	270	315	970	870	905	1290	1070	1190
18	752	436	597	490	330	364	960	890	909	1360	1050	1230
19	912	650	774	550	370	399	1130	770	962	1090	610	796
20	843	625	755	---	---	---	1100	820	973	1180	610	869
21	896	727	767	---	---	---	1090	840	952	1110	810	913
22	936	815	852	---	---	---	960	810	896	960	820	882
23	1140	804	868	280	260	268	980	810	846	1120	810	965
24	1130	828	902	490	280	352	---	---	---	750	180	376
25	904	757	816	600	320	408	680	450	550	330	150	233
26	984	898	932	980	340	521	1130	500	828	390	310	331
27	1000	874	957	520	500	508	870	410	641	500	350	391
28	---	---	---	670	420	541	1100	450	668	530	350	416
29	710	541	614	900	380	561	1090	490	773	450	350	392
30	970	711	813	950	390	633	1040	590	786	620	370	473
31	---	---	---	900	440	647	850	600	720	---	---	---
MONTH	1140	405	702	980	260	496	1170	310	797	1360	150	835
YEAR	1360	61	504									

PH (STANDARD UNITS), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	---	---	---	5.30	5.20	5.20	5.30	5.10	5.20	5.20	4.90	5.00
2	---	---	---	5.40	5.10	5.30	6.00	5.00	5.40	5.20	4.90	5.00
3	---	---	---	5.30	4.90	5.00	6.20	4.90	5.40	5.30	4.80	5.30
4	---	---	---	6.10	5.00	5.30	5.60	4.60	5.10	5.10	4.80	4.90
5	---	---	---	6.10	5.10	5.70	5.50	4.70	5.10	5.00	5.00	5.00
6	---	---	---	5.80	5.00	5.40	5.50	4.50	5.10	5.30	4.90	5.10
7	---	---	---	5.90	5.10	5.60	5.10	4.50	4.90	5.30	4.90	5.10
8	---	---	---	5.40	4.90	5.20	5.00	4.90	5.00	5.30	4.90	5.10
9	---	---	---	5.90	5.00	5.50	5.60	4.70	5.10	5.20	5.00	5.10
10	6.50	6.40	6.40	6.30	5.30	5.80	5.50	4.70	5.00	5.30	4.80	4.90
11	6.50	6.30	6.40	5.80	5.10	5.30	5.70	4.70	5.10	5.20	5.00	5.10
12	6.40	6.30	6.30	6.10	5.10	5.50	5.60	4.80	5.20	5.30	5.20	5.20
13	6.30	5.70	6.10	---	---	---	5.90	5.00	5.40	5.30	5.00	5.20
14	6.30	6.00	6.20	---	---	---	5.30	5.10	5.20	5.30	4.90	5.10
15	6.20	5.80	6.00	---	---	---	5.30	5.10	5.30	5.20	4.90	5.00
16	6.20	4.90	5.40	---	---	---	5.80	4.90	5.30	5.30	4.90	5.00
17	4.90	4.70	4.80	---	---	---	5.90	4.80	5.30	5.30	4.80	5.00
18	5.00	4.70	4.80	---	---	---	5.90	4.90	5.30	5.20	4.90	5.10
19	5.10	5.00	5.10	---	---	---	5.50	4.90	5.20	5.30	5.20	5.20
20	5.20	4.90	5.00	---	---	---	5.60	5.10	5.20	---	---	---
21	5.70	5.10	5.50	---	---	---	5.20	4.90	5.10	---	---	---
22	5.50	5.40	5.40	6.30	5.00	5.50	5.20	5.10	5.10	6.10	5.00	5.60
23	5.50	5.20	5.30	6.20	5.00	5.50	5.50	5.00	5.20	6.00	5.30	5.60
24	5.50	5.10	5.30	6.20	5.00	5.50	5.50	4.90	5.10	6.20	5.30	5.70
25	5.40	5.20	5.40	6.20	5.00	5.30	5.20	4.90	5.10	5.50	5.20	5.40
26	5.60	5.40	5.50	6.30	5.00	5.50	5.30	5.00	5.10	5.50	5.20	5.40
27	5.60	4.80	5.10	6.00	5.50	5.70	5.50	4.90	5.10	5.50	5.30	5.40
28	4.80	4.80	4.80	6.10	5.70	5.90	5.20	4.90	5.00	5.50	5.30	5.40
29	4.80	4.80	4.80	6.00	5.60	5.90	5.10	5.00	5.10	5.70	5.30	5.40
30	5.00	4.80	4.90	5.90	5.30	5.50	5.30	4.90	5.10	5.70	5.10	5.60
31	5.20	5.00	5.10	---	---	---	5.30	4.90	5.00	5.80	5.10	5.40
MONTH	6.50	4.70	5.44	6.30	4.90	5.48	6.20	4.50	5.15	6.20	4.80	5.22

03082190 POPLAR RUN NEAR NORMALVILLE, PA--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	5.30	5.10	5.20	5.10	4.80	5.00	5.20	5.00	5.10	6.60	5.40	6.30
2	5.50	5.20	5.40	5.10	5.00	5.10	5.40	5.00	5.20	6.60	5.30	6.20
3	6.10	5.30	5.60	5.40	4.80	5.10	5.40	5.10	5.20	7.50	5.40	6.60
4	5.90	5.50	5.70	5.20	4.70	5.10	5.20	4.90	5.10	6.40	6.00	6.30
5	6.10	5.50	5.60	5.40	4.90	5.10	5.30	4.90	5.00	6.30	4.90	5.50
6	6.10	5.20	5.70	5.50	4.90	5.20	5.60	4.80	5.10	6.40	5.30	6.10
7	6.20	5.10	5.70	5.50	4.90	5.20	5.80	5.10	5.50	6.50	5.10	6.10
8	5.30	5.10	5.20	5.40	4.90	5.00	5.90	5.10	5.60	6.20	5.90	6.10
9	5.20	5.10	5.10	5.40	5.00	5.10	5.90	5.20	5.70	6.50	5.90	6.30
10	5.80	4.90	5.30	5.60	5.00	5.20	5.90	5.70	5.80	6.40	5.10	6.00
11	5.80	4.80	5.30	6.10	5.10	5.50	6.40	5.30	6.10	6.20	5.70	6.10
12	5.60	4.70	5.20	5.90	5.10	5.50	6.40	5.20	6.00	6.20	5.30	6.00
13	5.50	4.80	5.20	6.10	5.00	5.40	6.20	5.70	6.00	6.10	5.60	5.90
14	5.40	4.70	5.10	6.10	5.10	5.50	6.30	5.20	5.90	6.90	5.80	6.50
15	5.10	4.70	5.00	5.60	5.30	5.40	6.40	5.30	6.00	6.70	6.20	6.50
16	5.10	5.00	5.00	5.50	5.20	5.40	6.40	5.90	6.30	6.30	6.10	6.20
17	5.50	4.90	5.10	6.00	5.10	5.60	6.50	5.70	6.20	6.40	6.10	6.30
18	5.70	5.20	5.50	6.00	5.00	5.50	6.20	5.50	6.00	6.20	6.10	6.20
19	5.90	5.20	5.50	5.80	4.80	5.30	6.30	5.30	6.10	6.60	6.20	6.40
20	6.00	5.00	5.50	5.80	4.80	5.30	6.40	6.30	6.40	6.30	5.90	6.20
21	6.20	5.20	5.50	5.70	5.00	5.30	6.50	5.40	6.20	6.60	5.30	6.30
22	5.40	5.20	5.30	5.60	5.00	5.20	6.60	5.70	6.40	6.70	5.60	6.40
23	5.30	5.10	5.20	5.40	4.90	5.00	6.40	6.10	6.30	6.70	6.00	6.50
24	5.90	4.90	5.40	5.40	4.90	5.10	6.40	5.50	6.20	6.60	5.40	6.30
25	5.90	4.90	5.40	5.50	4.80	5.00	6.50	5.40	6.30	6.60	6.40	6.50
26	5.70	4.80	5.30	5.20	4.60	4.90	6.60	5.30	6.20	6.60	5.60	6.30
27	5.60	4.80	5.20	5.30	4.80	5.00	6.70	6.30	6.60	6.50	5.90	6.30
28	5.50	4.80	5.20	5.30	4.80	5.00	7.00	6.60	6.80	6.50	5.30	6.30
29	---	---	---	5.30	4.70	5.00	7.50	6.60	7.00	6.70	5.30	6.30
30	---	---	---	5.10	5.00	5.00	6.70	5.30	6.40	6.70	5.90	6.40
31	---	---	---	5.10	4.80	5.00	---	---	---	6.70	6.00	6.40
MONTH	6.20	4.70	5.34	6.10	4.60	5.19	7.50	4.80	5.96	7.50	4.90	6.25
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	6.70	6.40	6.60	6.00	4.90	5.50	5.70	4.60	5.00	5.08	4.82	4.97
2	6.70	5.20	6.30	6.30	5.70	6.00	5.40	4.60	4.80	5.01	4.69	4.83
3	6.40	5.60	6.20	6.30	6.00	6.20	4.80	4.70	4.70	4.92	4.56	4.73
4	7.20	6.30	6.90	6.40	6.20	6.30	4.80	4.60	4.70	4.81	4.59	4.69
5	7.00	6.00	6.60	---	---	---	5.10	4.70	4.80	4.77	4.56	4.66
6	6.60	5.70	6.40	---	---	---	5.10	4.70	4.80	4.80	4.58	4.69
7	6.60	5.50	6.30	5.30	5.10	5.20	5.10	4.60	4.70	4.80	4.61	4.71
8	6.60	5.80	6.40	5.20	4.70	4.90	5.00	4.50	4.70	4.82	4.66	4.75
9	6.90	6.50	6.70	---	---	---	4.90	4.50	4.60	4.83	4.74	4.79
10	6.60	6.20	6.50	---	---	---	4.60	4.50	4.60	4.76	4.66	4.73
11	6.50	6.20	6.40	6.80	6.40	6.70	5.10	4.60	4.80	4.66	4.61	4.63
12	6.50	6.20	6.30	6.70	5.80	6.40	5.30	4.50	4.80	4.70	4.61	4.65
13	6.90	6.20	6.50	---	---	---	5.10	4.70	4.80	4.75	4.68	4.71
14	6.70	5.30	6.50	---	---	---	5.30	4.70	4.90	4.75	4.67	4.70
15	5.50	5.10	5.40	---	---	---	5.00	4.70	4.80	4.75	4.65	4.72
16	5.30	4.80	5.00	---	---	---	5.00	4.60	4.70	4.71	4.65	4.68
17	6.60	5.00	5.90	6.50	5.30	6.10	4.70	4.60	4.60	4.71	4.68	4.70
18	6.60	6.00	6.30	6.20	5.10	5.80	4.70	4.60	4.60	4.72	4.64	4.67
19	7.00	6.10	6.70	6.00	5.00	5.80	4.80	4.50	4.60	4.79	4.62	4.72
20	6.80	6.30	6.50	---	---	---	4.80	4.50	4.60	4.85	4.50	4.68
21	6.70	6.50	6.60	---	---	---	4.70	4.60	4.70	4.67	4.52	4.62
22	6.60	6.20	6.40	---	---	---	4.80	4.60	4.70	4.71	4.61	4.67
23	6.90	6.50	6.70	---	---	---	4.80	4.60	4.70	4.69	4.54	4.63
24	7.00	6.80	6.90	6.80	5.00	6.10	---	---	---	5.56	4.63	5.08
25	6.90	6.80	6.80	6.70	4.80	5.80	---	---	---	6.51	5.06	5.72
26	6.80	6.60	6.70	6.70	4.60	5.60	5.59	4.64	4.92	6.72	5.19	6.10
27	6.90	6.70	6.80	5.00	4.90	5.00	5.31	4.74	4.98	6.73	5.29	6.20
28	6.90	5.60	6.50	6.00	4.80	5.10	5.26	4.63	4.88	6.63	5.13	5.85
29	6.50	5.10	6.00	6.20	4.60	5.30	5.36	4.73	4.97	6.35	5.80	6.03
30	5.10	4.70	5.00	6.00	4.60	5.00	5.25	4.75	4.96	6.24	4.98	5.50
31	---	---	---	6.10	4.60	5.10	5.15	4.83	4.99	---	---	---
MONTH YEAR	7.20 7.50	4.70 4.50	6.36 5.48	6.80	4.60	5.68	5.70	4.50	4.77	6.73	4.50	4.96

MONONGAHELA RIVER BASIN

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03082190 POPLAR RUN NEAR NORMALVILLE, PA--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

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

MONONGAHELA RIVER BASIN

03082190 POPLAR RUN NEAR NORMALVILLE, PA--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

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

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) OCTOBER	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) NOVEMBER	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) DECEMBER	SEDIMENT DISCHARGE (TONS/DAY)
1	.82	6	.01	1.2	1	.00	94	5	1.3
2	1.7	9	.04	1.5	2	.01	87	5	1.2
3	1.2	5	.02	3.7	5	.05	73	5	.99
4	1.1	5	.01	20	26	1.4	61	6	.99
5	1.0	6	.02	69	36	6.7	53	6	.86
6	.99	4	.01	35	14	1.3	62	5	.84
7	.94	5	.01	20	2	.11	54	4	.58
8	.92	4	.01	16	1	.04	50	6	.81
9	.89	4	.01	11	1	.03	49	6	.79
10	.86	4	.01	16	3	.13	37	10	1.0
11	.90	3	.01	61	20	3.3	52	30	4.2
12	.99	3	.01	112	265	80	109	55	16
13	1.1	4	.01	97	80	21	94	15	3.8
14	1.6	4	.02	119	190	61	75	8	1.6
15	1.9	4	.02	131	55	19	49	7	.93
16	1.8	10	.05	253	150	102	39	8	.84
17	1.2	8	.03	138	25	9.3	25	10	.68
18	1.1	5	.01	76	15	3.1	22	13	.77
19	1.1	5	.01	47	14	1.8	19	40	2.1
20	1.7	7	.03	33	9	.80	16	40	1.7
21	4.8	8	.10	21	5	.28	15	15	.61
22	2.2	3	.02	26	15	1.1	14	55	2.1
23	1.7	4	.02	25	7	.47	13	10	.35
24	3.4	11	.10	19	7	.36	12	10	.32
25	3.5	3	.03	13	2	.07	11	10	.30
26	2.0	3	.02	233	200	126	11	10	.30
27	1.6	3	.01	297	165	132	10	10	.27
28	1.4	3	.01	363	120	118	10	7	.19
29	1.3	3	.01	167	30	14	9.4	7	.18
30	1.2	2	.01	108	10	2.9	8.8	6	.14
31	1.2	1	.00	---	---	---	8.4	8	.18
TOTAL	48.11	---	0.68	2532.4	---	706.25	1242.6	---	46.92

03082190 POPLAR RUN NEAR NORMALVILLE, PA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) JANUARY	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) FEBRUARY	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) MARCH	SEDIMENT DISCHARGE (TONS/DAY)
1	5.4	8	.12	8.6	7	.16	12	2	.06
2	5.2	7	.10	20	17	.92	10	2	.05
3	5.0	7	.09	54	24	3.5	9.9	2	.05
4	4.8	7	.09	259	210	204	9.5	2	.05
5	4.7	6	.08	338	193	199	8.8	3	.07
6	4.5	6	.07	130	40	14	8.9	3	.07
7	4.3	6	.07	64	25	4.3	7.8	3	.06
8	4.2	5	.06	40	18	1.9	7.0	2	.04
9	4.1	5	.06	29	14	1.1	13	30	1.1
10	4.0	5	.05	23	11	.68	48	41	5.3
11	3.9	5	.05	20	10	.54	91	114	28
12	3.8	4	.04	16	10	.43	38	40	4.1
13	3.7	4	.04	13	10	.35	43	49	5.7
14	3.6	4	.04	11	10	.30	69	75	14
15	3.5	4	.04	10	9	.24	103	84	23
16	3.7	4	.04	9.2	9	.22	48	18	2.3
17	4.0	3	.03	55	118	18	32	9	.78
18	6.0	3	.05	146	113	45	24	5	.32
19	10	3	.08	164	111	71	22	5	.30
20	18	3	.15	96	41	11	18	5	.24
21	27	3	.22	85	38	11	14	5	.19
22	43	18	2.5	57	13	2.0	12	5	.16
23	41	8	.89	39	12	1.3	11	5	.15
24	30	6	.49	29	9	.70	9.9	5	.13
25	20	6	.32	23	5	.31	8.7	5	.12
26	17	6	.28	19	4	.21	7.9	5	.11
27	15	6	.24	17	3	.14	10	8	.22
28	13	6	.21	14	2	.08	8.1	8	.17
29	12	6	.19	---	---	---	7.4	8	.16
30	10	6	.16	---	---	---	6.6	9	.16
31	9.2	6	.15	---	---	---	5.9	9	.14
TOTAL	343.6	---	7.00	1788.8	---	592.38	724.4	---	87.30
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) APRIL	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) MAY	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) JUNE	SEDIMENT DISCHARGE (TONS/DAY)
1	5.8	9	.14	8.2	22	.49	4.1	10	.11
2	5.7	9	.14	7.2	22	.43	3.4	6	.06
3	5.1	9	.12	6.1	21	.35	2.5	5	.03
4	5.0	8	.11	5.3	21	.30	2.1	5	.03
5	5.6	9	.14	5.0	22	.30	2.8	16	.12
6	12	10	.32	4.4	20	.24	2.8	16	.12
7	15	9	.36	5.1	17	.23	2.0	15	.08
8	11	8	.24	4.3	15	.17	2.3	16	.10
9	11	7	.21	3.5	12	.11	1.6	14	.06
10	11	7	.21	3.1	10	.08	.95	13	.03
11	13	7	.25	2.5	9	.06	.98	12	.03
12	17	8	.37	2.4	9	.06	4.7	21	.27
13	17	9	.41	2.3	9	.06	1.7	18	.08
14	14	8	.30	3.4	10	.09	1.1	17	.05
15	18	33	1.6	2.4	9	.06	.65	15	.03
16	33	42	3.7	5.8	49	.77	1.8	12	.06
17	51	31	4.3	7.7	61	1.3	7.7	73	2.6
18	38	28	2.9	4.0	20	.22	1.5	20	.08
19	27	23	1.7	9.0	36	.87	.89	13	.03
20	21	20	1.1	22	45	2.7	.74	8	.02
21	22	20	1.2	14	32	1.2	.46	7	.01
22	38	30	3.1	9.5	23	.59	.28	7	.01
23	32	21	1.8	7.4	19	.38	.49	9	.01
24	27	20	1.5	5.9	17	.27	.40	13	.01
25	22	20	1.2	4.6	14	.17	.24	13	.01
26	18	20	.97	3.7	11	.11	.20	13	.01
27	15	20	.81	11	47	1.4	.78	15	.03
28	13	20	.70	18	27	1.3	4.6	39	.48
29	11	21	.62	9.3	16	.40	1.2	20	.06
30	9.0	21	.51	6.6	16	.29	.54	18	.03
31	---	---	---	5.5	15	.22	---	---	---
TOTAL	543.2	---	31.03	209.2	---	15.22	55.50	---	4.65

MONONGAHELA RIVER BASIN

03082190 POPLAR RUN NEAR NORMALVILLE, PA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) JULY	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) AUGUST	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) SEPTEMBER	SEDIMENT DISCHARGE (TONS/DAY)
1	.51	12	.02	3.6	8	.08	1.5	5	.02
2	9.0	100	2.4	3.3	8	.07	1.6	5	.02
3	3.5	23	.22	2.7	7	.05	1.6	4	.02
4	1.0	14	.04	2.3	7	.04	1.4	4	.02
5	.54	13	.02	2.0	6	.03	1.6	3	.01
6	.30	12	.01	2.1	6	.03	1.5	2	.01
7	.29	12	.01	3.3	6	.05	1.3	2	.01
8	2.4	24	.16	2.4	6	.04	1.3	1	.00
9	158	366	368	2.2	6	.04	1.2	1	.00
10	42	90	8.3	3.3	8	.07	1.2	1	.00
11	23	25	1.6	15	110	9.7	1.2	1	.00
12	19	20	1.0	3.9	20	.21	1.6	2	.01
13	37	21	2.1	2.5	20	.14	1.8	2	.01
14	34	30	2.8	2.0	18	.10	1.4	1	.00
15	17	25	1.1	1.9	16	.08	1.3	1	.00
16	12	25	.81	2.1	15	.09	1.5	1	.00
17	12	25	.81	2.0	13	.07	1.5	1	.00
18	7.8	20	.42	1.9	11	.06	1.8	5	.02
19	45	22	2.7	1.7	10	.05	5.6	27	.41
20	161	35	15	1.6	9	.04	2.5	3	.02
21	100	30	8.1	1.5	7	.03	1.7	2	.01
22	39	20	2.1	1.7	5	.02	1.5	2	.01
23	22	10	.59	15	217	58	3.5	15	.14
24	14	10	.38	14	110	4.2	52	247	50
25	11	10	.30	3.4	10	.09	59	86	30
26	8.5	9	.21	2.6	6	.04	19	10	.51
27	6.4	9	.16	5.0	17	.23	11	10	.30
28	5.3	9	.13	4.2	4	.05	7.9	8	.17
29	6.8	9	.17	2.7	4	.03	5.8	5	.08
30	5.1	8	.11	2.0	4	.02	4.9	5	.07
31	4.1	8	.09	1.5	4	.02	---	---	---
TOTAL	807.54	---	419.86	115.4	---	73.77	200.7	---	81.87
YEAR	7388.65		2072.66						

MONONGAHELA RIVER BASIN

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03082237 INDIAN CREEK AT WHITE BRIDGE, PA

LOCATION.--Lat 39°59'40", long 79°25'59", Fayette County, Hydrologic Unit 05020006, on left bank 200 ft downstream from State Highway 653 bridge at White Bridge, 0.2 mi upstream from Stony Run, 1.0 mi southeast of Normalville, and 4.6 mi upstream from Mill Run Reservoir.

DRAINAGE AREA.--91.2 mi².

WATER DISCHARGE RECORDS

PERIOD OF RECORD.--October 1985 to current year. Occasional discharge measurements, water years 1979-1981, published under incorrect station number 03082837.

GAGE.--Water-stage recorder. Elevation of gage is 1,320 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, Dec. 18 to Jan. 18, and Jan. 25 to Feb. 2, which are fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,910 ft³/s, Nov. 26, 1985, gage height, 9.07 ft; minimum, 14 ft³/s, Oct. 8, 9, 10, 11, 1985, gage height, 2.16 ft, minimum gage height, 2.13 ft, Sept. 18, 1986.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,100 ft³/s and maximum (*).

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 26	2300	*4910	*9.07	Feb. 4	1730	3560	7.95
Nov. 28	1115	3290	7.69	Feb. 5	1015	3900	8.23

Minimum discharge, 14 ft³/s, Oct. 8, 9, 10, 11, gage height, 2.16 ft; minimum gage height, 2.13 ft, Sept. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	21	613	88	108	160	87	119	65	27	67	25
2	23	22	580	84	119	144	83	110	60	59	61	25
3	20	30	560	82	441	137	79	98	54	46	56	24
4	17	114	428	78	2060	133	78	90	51	29	51	23
5	17	360	213	75	3250	126	79	86	53	25	47	24
6	16	294	202	72	1780	126	104	81	55	23	46	24
7	16	219	190	68	871	113	142	89	52	21	55	21
8	15	179	177	66	547	114	115	80	52	32	47	21
9	15	141	193	64	386	149	108	72	48	879	43	19
10	14	133	168	62	299	296	111	67	40	280	41	18
11	15	228	224	60	257	679	127	63	40	180	97	18
12	16	399	470	58	214	425	138	61	64	166	49	20
13	17	399	465	56	186	448	140	58	50	185	40	21
14	24	478	450	54	198	629	132	69	40	197	36	18
15	30	631	334	52	163	1280	140	60	35	135	33	17
16	24	1430	275	52	153	702	236	57	41	114	36	16
17	19	1100	233	58	413	461	347	60	69	120	43	15
18	17	590	198	90	1310	339	305	52	40	92	36	17
19	16	386	175	212	1590	293	263	63	33	713	31	42
20	19	281	162	275	1260	235	240	126	32	1280	29	26
21	40	218	153	234	977	187	245	103	29	913	28	20
22	32	241	145	282	719	164	328	87	27	441	29	18
23	27	222	141	317	520	151	286	83	30	275	61	24
24	31	188	130	259	386	138	254	79	37	222	152	204
25	40	177	125	200	303	125	229	72	27	163	48	310
26	29	1100	120	170	253	118	204	66	23	134	37	132
27	25	2470	123	150	225	125	178	84	25	116	47	93
28	24	2590	110	135	184	111	158	126	53	98	48	75
29	22	1470	102	122	---	102	142	84	36	93	34	62
30	21	780	96	116	---	96	126	73	28	83	29	54
31	21	---	92	110	---	91	---	73	---	75	26	---
TOTAL	678	16891	7647	3801	19172	8397	5204	2491	1289	7216	1483	1426
MEAN	21.9	563	247	123	685	271	173	80.4	43.0	233	47.8	47.5
MAX	40	2590	613	317	3250	1280	347	126	69	1280	152	310
MIN	14	21	92	52	108	91	78	52	23	21	26	15
CFSM	.24	6.18	2.71	1.34	7.51	2.97	1.90	.88	.47	2.55	.52	.52
IN.	.28	6.89	3.12	1.55	7.82	3.43	2.12	1.02	.53	2.94	.61	.58

WTR YR 1986 TOTAL 75695 MEAN 207 MAX 3250 MIN 14 CFSM 2.27 IN. 30.89

MONONGAHELA RIVER BASIN

03082237 INDIAN CREEK AT WHITE BRIDGE, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1985 to current year. Water years 1979-1981 published under incorrect station number 03082837.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1985 to current year.
 pH: October 1985 to current year.
 WATER TEMPERATURE: October 1985 to current year.
 SUSPENDED-SEDIMENT DISCHARGE: October 1985 to current year.

INSTRUMENTATION.--Water-quality monitor and sediment pumping sampler since October 1985.

REMARKS.--Interruptions in the record were due to malfunctions of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 485 microsiemens Jan. 7, 1986; minimum, 79 microsiemens Nov. 26, 27, 1985.
 pH: Maximum, 8.9 May 5, 1986; minimum, 5.1 Sept. 18, 1986.
 WATER TEMPERATURES: Maximum, 28.0°C July 7, 1986; minimum, 0.0°C Feb. 12-16, 1986.
 SEDIMENT CONCENTRATIONS: Maximum daily, 1,280 mg/L July 9, 1986; minimum daily, 1 mg/L on several days.
 SEDIMENT DISCHARGES: Maximum daily, 6,170 tons July 9, 1986; minimum daily, 0.05 ton on Sept. 22, 1986.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 485 microsiemens Jan. 7; minimum, 79 microsiemens Nov. 26, 27.
 pH: Maximum, 8.9 May 5; minimum, 5.1 Sept. 18.
 WATER TEMPERATURES: Maximum, 28.0°C July 7; minimum, 0.0°C Feb. 12-16.
 SEDIMENT CONCENTRATIONS: Maximum daily, 1,280 mg/L July 9; minimum daily, 1 mg/L on several days.
 SEDIMENT DISCHARGES: Maximum daily, 6,170 tons July 9; minimum daily, 0.05 ton on Sept. 22.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	ACIDITY (MG/L AS H)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	ALKA- LITY WH WAT TOTAL FIELD MG/L AS CACO3
AUG 13...	1030	36	318	6.60	19.5	0.2	17	5.8	4.7	1.0	6
DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 105 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)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
AUG 13...	110	12	<0.1	272	<2	1.08	120	<4	<250	12	<50
DATE	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)
AUG 13...	40	28	<10	<10	<4	660	70	<10	60	<6	<2.0

03082237 INDIAN CREEK AT WHITE BRIDGE, PA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAN- DARD UNITS)	TEMPER- ATURE WATER (DEG C)	ACIDITY (MG/L AS H)	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
OCT 24...	0830	24	320	8.00	13.0	0	26	7.6	8.9	1.5	20
NOV 25...	0945	173	180	6.60	5.0	0	--	--	--	--	6
DEC 23...	1015	141	310	6.10	0.5	0.1	--	--	--	--	4
JAN 16...	1010	54	350	6.80	0.0	0.1	--	--	--	--	6
FEB 19...	1215	1150	200	6.20	5.5	0.1	--	--	--	--	6
MAR 17...	1420	435	122	6.40	6.0	0.1	--	--	--	--	4
APR 29...	1045	146	185	7.10	14.5	0.1	--	--	--	--	18
JUN 05...	1335	54	270	6.80	20.0	0	--	--	--	--	6
JUL 22...	1135	456	138	7.10	16.5	0	--	--	--	--	8
AUG 20...	1130	28	325	6.70	21.0	0	--	--	--	--	4
SEP 29...	1630	51	220	7.20	21.5	0	--	--	--	--	12

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BORON, DIS- SOLVED (UG/L AS B)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)
OCT 24...	90	--	322	<2	--	<40	<4	<0	<50	<30	<10
NOV 25...	58	--	124	10	--	<40	--	--	--	--	--
DEC 23...	66	--	178	14	--	220	--	--	--	--	--
JAN 16...	83	--	344	8	<500	<500	--	--	--	--	--
FEB 19...	32	20	100	6	340	<130	--	--	--	--	--
MAR 17...	27	--	86	8	540	<130	--	--	--	--	--
APR 29...	58	12	88	24	1300	<130	--	--	--	--	--
JUN 05...	82	--	178	<2	<130	<130	--	--	--	--	--
JUL 22...	41	--	122	<2	290	--	--	--	--	--	--
AUG 20...	110	--	222	<2	<130	<130	--	--	--	--	--
SEP 29...	66	--	170	<2	<130	<130	--	--	--	--	--

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, DIS- SOLVED (UG/L AS NI)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	MERCURY DIS- SOLVED (UG/L AS HG)
OCT 24...	--	33	<45	--	590	<25	61	--	<10	<6	<1.0
NOV 25...	--	120	--	--	490	--	--	--	30	--	--
DEC 23...	--	300	--	--	570	--	--	--	100	--	--
JAN 16...	1100	380	--	670	650	--	--	50	40	--	--
FEB 19...	640	36	--	250	230	--	--	<10	<10	--	--
MAR 17...	780	180	--	270	270	--	--	<10	<10	--	--
APR 29...	1200	13	--	1100	850	--	--	70	32	--	--
JUN 05...	120	300	--	510	510	--	--	30	41	--	--
JUL 22...	280	--	--	290	--	--	--	40	--	--	--
AUG 20...	40	28	--	900	900	--	--	80	71	--	--
SEP 29...	280	<10	--	600	550	--	--	30	20	--	--

MONONGAHELA RIVER BASIN

03082237 INDIAN CREEK AT WHITE BRIDGE, PA--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS PER CENTIMETER AT 25°C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	386	365	374	---	---	---	139	127	134	291	260	269
2	405	354	376	---	---	---	151	139	142	277	255	266
3	405	356	371	---	---	---	204	144	169	276	251	262
4	381	363	370	---	---	---	207	178	186	310	242	267
5	389	366	380	---	---	---	225	175	189	343	307	325
6	397	374	383	176	152	162	346	174	223	329	293	308
7	389	379	384	---	---	---	391	275	337	485	296	404
8	393	374	380	---	---	---	273	231	244	463	353	399
9	400	375	385	---	---	---	235	217	223	404	312	347
10	387	374	382	---	---	---	243	205	219	315	276	295
11	---	---	---	---	---	---	252	195	217	284	256	264
12	---	---	---	---	---	---	212	157	173	277	257	263
13	---	---	---	---	---	---	201	143	154	264	247	254
14	---	---	---	152	129	140	---	---	---	308	252	272
15	---	---	---	134	122	126	---	---	---	361	271	298
16	---	---	---	---	---	---	---	---	---	345	307	331
17	---	---	---	---	---	---	---	---	---	370	319	340
18	---	---	---	---	---	---	293	195	239	332	242	284
19	---	---	---	---	---	---	241	204	223	272	102	252
20	---	---	---	---	---	---	217	189	202	---	---	---
21	---	---	---	158	146	150	227	189	203	---	---	---
22	---	---	---	170	147	156	346	229	303	269	206	231
23	---	---	---	225	157	176	330	236	282	287	192	248
24	---	---	---	174	156	163	485	236	367	198	156	171
25	---	---	---	181	157	167	326	272	286	185	159	171
26	---	---	---	187	79	154	462	282	379	---	---	---
27	---	---	---	98	79	92	393	304	342	---	---	---
28	---	---	---	98	84	91	380	293	322	---	---	---
29	---	---	---	112	94	104	382	344	358	---	---	---
30	---	---	---	127	112	120	342	309	327	---	---	---
31	---	---	---	---	---	---	333	281	302	327	295	310
MONTH	405	354	379	225	79	139	485	127	250	485	102	285
DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	302	252	280	---	---	---	---	---	---	219	180	188
2	263	203	245	---	---	---	223	197	210	208	184	194
3	---	---	---	---	---	---	271	175	225	257	200	214
4	---	---	---	---	---	---	329	243	275	219	200	210
5	---	---	---	233	209	224	292	246	265	247	202	209
6	120	112	114	260	189	226	286	242	264	219	200	210
7	184	109	139	309	182	225	299	242	264	213	202	207
8	274	165	217	365	313	344	284	224	260	252	206	232
9	225	192	202	---	---	---	225	200	213	252	215	230
10	227	177	203	---	---	---	202	189	195	259	212	235
11	237	185	216	---	---	---	270	189	212	254	241	245
12	264	214	242	---	---	---	414	272	339	253	217	239
13	252	222	238	---	---	---	287	216	241	259	240	253
14	282	233	256	---	---	---	259	201	222	259	240	251
15	367	236	283	---	---	---	219	197	207	293	240	262
16	374	315	343	---	---	---	200	172	183	300	284	293
17	342	179	263	---	---	---	236	178	202	---	---	---
18	---	---	---	---	---	---	197	165	178	---	---	---
19	---	---	---	---	---	---	176	145	157	---	---	---
20	---	---	---	---	---	---	157	149	151	---	---	---
21	---	---	---	---	---	---	158	142	149	---	---	---
22	---	---	---	---	---	---	181	139	155	---	---	---
23	---	---	---	---	---	---	207	145	169	---	---	---
24	---	---	---	---	---	---	190	140	162	---	---	---
25	---	---	---	---	---	---	159	140	151	---	---	---
26	---	---	---	---	---	---	159	140	145	---	---	---
27	---	---	---	---	---	---	146	142	144	---	---	---
28	---	---	---	---	---	---	188	146	155	---	---	---
29	---	---	---	---	---	---	209	152	175	---	---	---
30	---	---	---	---	---	---	200	156	188	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	374	109	232	365	182	255	414	139	202	300	180	230

03082237 INDIAN CREEK AT WHITE BRIDGE, PA--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS PER CENTIMETER AT 25°C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	---	---	---	345	325	334	260	228	239	---	---	---
2	---	---	---	367	277	324	262	240	249	---	---	---
3	---	---	---	303	277	287	263	257	260	---	---	---
4	---	---	---	322	302	313	276	257	263	---	---	---
5	---	---	---	356	321	335	276	265	270	---	---	---
6	269	260	265	351	330	340	278	264	271	---	---	---
7	271	257	263	350	334	341	293	264	280	---	---	---
8	281	256	270	369	333	348	293	275	282	---	---	---
9	282	263	273	349	116	206	301	275	291	---	---	---
10	287	276	280	184	159	174	310	290	301	---	---	---
11	298	285	291	208	185	190	363	227	276	---	---	---
12	299	200	268	209	185	195	332	228	272	---	---	---
13	295	256	267	216	171	196	323	291	303	---	---	---
14	308	294	300	203	170	182	309	304	307	---	---	---
15	313	300	307	203	182	189	313	298	306	369	362	365
16	318	287	303	206	188	195	328	302	311	386	370	378
17	346	253	290	209	188	198	331	281	310	397	377	385
18	306	274	287	222	198	208	336	323	328	408	360	389
19	315	303	308	217	182	211	336	321	328	418	354	390
20	326	313	319	---	---	---	339	323	332	354	325	333
21	325	317	320	---	---	---	341	319	329	388	325	353
22	329	319	323	---	---	---	337	326	331	386	367	376
23	335	326	329	142	139	140	364	272	323	387	324	361
24	333	270	309	161	142	151	227	142	188	439	190	277
25	324	293	309	180	153	166	250	226	239	219	155	191
26	335	317	326	217	164	180	---	---	---	227	204	218
27	340	312	330	192	182	188	---	---	---	245	219	230
28	410	295	345	212	192	202	---	---	---	249	224	235
29	316	294	306	254	200	219	---	---	---	240	229	234
30	329	308	320	250	208	224	---	---	---	260	235	242
31	---	---	---	249	218	231	---	---	---	---	---	---
MONTH	410	200	300	369	116	231	364	142	288	439	155	310
YEAR	485	79	256									

PH (STANDARD UNITS), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	6.30	6.10	6.30	---	---	---	6.00	6.00	6.00	6.20	5.90	6.10
2	6.60	6.20	6.40	---	---	---	6.20	6.00	6.10	6.40	6.00	6.10
3	6.80	6.50	6.70	---	---	---	6.20	5.90	6.10	6.30	5.70	6.20
4	6.70	6.50	6.60	---	---	---	6.10	5.70	6.00	6.40	6.00	6.20
5	6.70	6.60	6.60	6.70	6.60	6.70	6.10	5.30	5.90	6.40	6.10	6.30
6	6.70	6.50	6.60	6.70	6.60	6.60	6.20	5.60	6.00	6.40	5.80	6.20
7	6.60	6.50	6.50	---	---	---	6.20	5.30	5.90	6.50	5.60	6.30
8	6.60	6.50	6.50	---	---	---	6.00	5.80	5.90	6.30	5.60	6.10
9	6.50	6.40	6.50	---	---	---	6.20	5.90	6.00	6.10	5.60	5.90
10	6.40	6.30	6.30	---	---	---	6.20	5.60	6.00	6.10	5.80	6.00
11	---	---	---	---	---	---	6.30	5.60	6.10	6.30	6.00	6.20
12	---	---	---	---	---	---	6.40	5.90	6.30	6.40	6.20	6.30
13	---	---	---	---	---	---	6.40	6.00	6.20	6.40	6.30	6.40
14	---	---	---	6.70	6.30	6.60	---	---	---	6.40	5.80	6.20
15	---	---	---	6.60	6.50	6.50	---	---	---	6.20	5.80	6.10
16	---	---	---	---	---	---	---	---	---	6.10	5.70	5.90
17	---	---	---	---	---	---	---	---	---	6.20	5.90	6.10
18	---	---	---	---	---	---	6.20	5.90	6.00	6.30	6.00	6.20
19	---	---	---	---	---	---	6.20	5.60	5.90	6.60	6.30	6.50
20	---	---	---	---	---	---	6.10	5.60	5.90	---	---	---
21	---	---	---	6.40	6.30	6.40	6.20	5.80	5.90	---	---	---
22	---	---	---	6.40	6.20	6.30	5.90	5.70	5.80	6.59	6.30	6.50
23	---	---	---	6.40	6.30	6.40	6.20	5.90	6.10	6.56	6.37	6.52
24	---	---	---	6.40	6.30	6.40	6.30	6.00	6.10	6.53	6.42	6.49
25	---	---	---	6.40	6.20	6.30	6.40	6.00	6.30	6.53	6.42	6.48
26	---	---	---	6.40	6.00	6.30	6.30	5.70	6.10	---	---	---
27	---	---	---	6.10	6.00	6.00	6.10	5.70	6.00	---	---	---
28	---	---	---	6.10	6.00	6.00	6.30	6.00	6.10	---	---	---
29	---	---	---	6.00	5.90	6.00	6.10	5.80	6.00	---	---	---
30	---	---	---	6.00	5.90	6.00	6.10	5.90	6.00	---	---	---
31	---	---	---	---	---	---	6.10	5.80	6.00	6.34	6.12	6.24
MONTH	6.80	6.10	6.50	6.70	5.90	6.32	6.40	5.30	6.03	6.60	5.60	6.23

03082237 INDIAN CREEK AT WHITE BRIDGE. PA--Continued

PH (STANDARD UNITS). WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	6.37	6.22	6.29	---	---	---	---	---	---	6.90	6.50	6.70
2	6.49	6.27	6.35	---	---	---	6.70	6.50	6.60	6.90	6.60	6.80
3	---	---	---	---	---	---	7.10	6.50	6.60	7.10	6.80	6.90
4	---	---	---	---	---	---	6.60	6.50	6.60	8.50	6.60	7.50
5	---	---	---	6.20	5.90	6.00	6.70	6.50	6.60	8.90	7.00	8.20
6	5.98	5.86	5.94	6.30	5.80	6.10	6.80	6.50	6.60	7.00	6.80	6.90
7	6.09	5.87	6.01	6.30	5.40	5.80	6.90	6.60	6.90	7.00	6.60	6.80
8	6.08	5.94	6.03	5.50	5.30	5.40	6.90	6.80	6.90	7.00	6.90	6.90
9	6.09	5.96	6.06	---	---	---	6.90	6.80	6.80	6.90	6.90	6.90
10	6.25	6.01	6.13	---	---	---	6.90	6.69	6.82	6.90	6.80	6.90
11	6.20	5.59	6.02	---	---	---	6.86	6.78	6.83	6.90	6.80	6.80
12	6.24	5.53	5.98	---	---	---	6.90	6.77	6.84	6.90	6.80	6.80
13	6.21	5.57	5.91	---	---	---	6.85	6.77	6.81	6.90	6.80	6.80
14	6.21	5.43	5.83	---	---	---	6.85	6.77	6.82	7.10	6.80	6.90
15	6.15	5.48	5.73	---	---	---	6.86	6.75	6.82	7.00	6.90	6.80
16	5.91	5.62	5.77	---	---	---	6.89	6.72	6.84	6.90	6.80	6.80
17	6.34	5.61	5.86	---	---	---	6.85	6.77	6.81	---	---	---
18	---	---	---	---	---	---	6.78	6.68	6.75	---	---	---
19	---	---	---	---	---	---	6.76	6.71	6.74	---	---	---
20	---	---	---	---	---	---	6.79	6.71	6.75	---	---	---
21	---	---	---	---	---	---	6.88	6.77	6.83	---	---	---
22	---	---	---	---	---	---	6.86	6.50	6.70	---	---	---
23	---	---	---	---	---	---	6.80	6.50	6.60	---	---	---
24	---	---	---	---	---	---	6.60	6.50	6.50	---	---	---
25	---	---	---	---	---	---	6.50	6.50	6.50	---	---	---
26	---	---	---	---	---	---	6.50	6.50	6.50	---	---	---
27	---	---	---	---	---	---	6.60	6.50	6.50	---	---	---
28	---	---	---	---	---	---	6.80	6.50	6.60	---	---	---
29	---	---	---	---	---	---	7.20	6.50	6.80	---	---	---
30	---	---	---	---	---	---	6.90	6.50	6.70	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	6.49	5.43	5.99	6.30	5.30	5.83	7.20	6.50	6.71	8.90	6.50	6.96
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	---	---	---	6.80	6.60	6.70	6.81	6.56	6.69	---	---	---
2	---	---	---	6.90	6.60	6.70	6.80	6.52	6.64	---	---	---
3	---	---	---	7.00	6.90	7.00	6.66	6.49	6.55	---	---	---
4	---	---	---	7.00	6.80	6.90	6.59	6.51	6.55	---	---	---
5	---	---	---	6.80	6.80	6.80	6.56	6.38	6.45	---	---	---
6	7.09	6.75	6.96	6.70	6.60	6.70	6.54	6.36	6.45	---	---	---
7	6.99	6.00	6.51	6.70	6.50	6.60	6.64	6.34	6.49	---	---	---
8	6.99	6.01	6.62	6.70	6.30	6.50	6.89	6.62	6.73	---	---	---
9	6.99	6.00	6.49	6.70	6.10	6.50	6.72	6.55	6.63	---	---	---
10	6.99	6.00	6.50	6.90	6.70	6.80	6.61	6.23	6.50	---	---	---
11	6.99	6.00	6.60	6.90	6.80	6.90	7.08	5.13	6.46	---	---	---
12	6.99	6.00	6.50	6.90	6.80	6.90	7.11	6.65	6.95	---	---	---
13	6.99	6.00	6.60	6.90	6.60	6.90	6.95	6.61	6.77	---	---	---
14	7.32	6.86	7.08	6.90	6.80	6.90	6.80	6.60	6.70	---	---	---
15	7.12	6.69	6.94	6.90	6.90	6.90	6.81	6.53	6.66	5.31	5.29	5.30
16	7.03	6.63	6.84	6.90	6.80	6.90	6.71	6.40	6.54	5.29	5.14	5.22
17	7.09	6.55	6.90	6.90	6.60	6.80	7.18	6.37	6.77	5.32	5.17	5.25
18	7.10	6.91	7.05	6.90	6.80	6.80	7.11	6.76	6.94	5.25	5.11	5.20
19	6.97	6.77	6.91	6.90	6.80	6.80	7.03	6.66	6.83	5.46	5.12	5.19
20	6.85	6.70	6.79	---	---	---	6.84	6.59	6.70	6.61	5.48	6.34
21	6.78	6.67	6.74	---	---	---	6.71	6.48	6.59	6.55	6.02	6.38
22	6.74	6.61	6.67	---	---	---	6.68	6.41	6.55	6.02	5.72	5.84
23	6.61	6.51	6.57	6.68	6.54	6.65	6.74	5.93	6.53	6.12	5.56	5.78
24	6.80	6.45	6.61	6.79	6.62	6.71	7.04	5.67	6.79	6.83	5.55	6.27
25	6.84	6.78	6.82	6.81	6.62	6.73	7.04	6.97	7.00	6.86	6.43	6.78
26	6.70	6.60	6.70	6.86	6.63	6.73	---	---	---	7.03	6.80	6.90
27	6.60	6.30	6.60	6.85	6.64	6.75	---	---	---	7.08	6.95	7.00
28	7.10	6.30	6.60	6.84	6.72	6.78	---	---	---	7.11	6.96	7.02
29	6.90	6.70	6.80	6.80	6.40	6.70	---	---	---	7.11	6.96	7.02
30	6.90	6.80	6.80	6.81	6.44	6.69	---	---	---	7.14	6.89	6.99
31	---	---	---	6.82	6.64	6.72	---	---	---	---	---	---
MONTH	7.32	6.00	6.73	7.00	6.10	6.77	7.18	5.13	6.66	7.14	5.11	6.16
YEAR	8.90	5.11	6.47									

MONONGAHELA RIVER BASIN

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03082237 INDIAN CREEK AT WHITE BRIDGE, PA--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

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

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	.5	.5	.5	---	---	---	---	---	---	15.0	12.0	14.0
2	1.5	.5	.5	---	---	---	25.5	11.5	13.5	13.0	9.0	10.5
3	---	---	---	---	---	---	15.0	8.5	11.5	12.0	5.5	8.5
4	---	---	---	---	---	---	16.0	11.5	13.5	14.5	5.5	10.0
5	---	---	---	4.0	3.0	3.5	15.5	13.0	14.0	17.5	9.0	12.5
6	6.0	4.0	5.5	3.0	1.0	2.0	15.0	12.5	13.5	18.0	12.0	14.5
7	4.0	3.0	3.5	1.0	.5	.5	15.0	12.0	13.0	20.0	14.5	16.5
8	4.0	3.5	4.0	.5	.5	.5	15.0	11.5	13.0	20.5	12.5	16.5
9	4.0	3.5	3.5	---	---	---	11.0	7.5	9.0	18.0	12.0	15.0
10	3.5	2.5	3.0	---	---	---	7.0	4.5	5.5	19.5	10.0	14.5
11	2.0	.5	1.5	---	---	---	5.5	3.5	4.5	20.5	11.0	15.5
12	1.0	.0	.5	---	---	---	10.5	4.5	7.5	---	---	---
13	.5	.0	.0	---	---	---	10.5	6.5	8.5	---	---	---
14	.5	.0	.0	---	---	---	13.0	6.5	10.0	---	---	---
15	.5	.0	.0	---	---	---	11.0	9.5	10.5	---	---	---
16	1.0	.0	.5	---	---	---	9.5	6.5	8.0	---	---	---
17	3.0	1.0	2.0	---	---	---	7.5	6.0	6.5	---	---	---
18	---	---	---	---	---	---	12.5	6.0	9.0	---	---	---
19	---	---	---	---	---	---	14.0	8.0	11.0	---	---	---
20	---	---	---	---	---	---	12.5	11.0	11.5	---	---	---
21	---	---	---	---	---	---	11.5	10.5	11.0	---	---	---
22	---	---	---	---	---	---	10.0	5.0	7.5	---	---	---
23	---	---	---	---	---	---	8.0	5.0	6.0	---	---	---
24	---	---	---	---	---	---	11.0	5.0	8.0	---	---	---
25	---	---	---	---	---	---	11.0	7.0	9.0	---	---	---
26	---	---	---	---	---	---	15.5	7.5	12.0	---	---	---
27	---	---	---	---	---	---	17.5	10.0	14.0	---	---	---
28	---	---	---	---	---	---	19.5	12.0	15.5	---	---	---
29	---	---	---	---	---	---	18.0	14.5	16.0	---	---	---
30	---	---	---	---	---	---	16.0	10.5	13.5	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	6.0	.0	2.0	4.0	.5	1.5	25.5	3.5	10.5	20.5	5.5	13.5

03082237 INDIAN CREEK AT WHITE BRIDGE, PA--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

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

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) OCTOBER	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) NOVEMBER	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) DECEMBER	SEDIMENT DISCHARGE (TONS/DAY)
1	16	12	.52	21	1	.06	613	30	50
2	23	8	.50	22	3	.18	580	20	31
3	20	4	.22	30	4	.32	560	15	23
4	17	7	.32	114	92	28	428	10	12
5	17	9	.41	360	358	346	213	9	5.2
6	16	9	.39	294	145	115	202	8	4.4
7	16	9	.39	219	85	50	190	8	4.1
8	15	9	.36	179	29	14	177	8	3.8
9	15	10	.41	141	10	3.8	204	8	4.4
10	14	3	.11	133	7	2.5	168	20	9.1
11	15	4	.16	228	31	19	224	55	33
12	16	4	.17	399	53	57	470	114	151
13	17	4	.18	399	64	77	465	140	184
14	24	7	.45	478	353	629	450	77	94
15	30	9	.73	631	341	648	334	16	14
16	24	7	.45	1430	1060	4330	275	14	10
17	19	6	.31	1100	400	1190	233	13	8.2
18	17	6	.28	590	136	217	198	12	6.4
19	16	6	.26	386	23	24	175	14	6.6
20	19	6	.31	281	13	9.9	162	14	6.1
21	40	15	1.6	218	13	7.7	153	16	6.6
22	32	20	1.7	241	31	20	145	18	7.0
23	27	9	.66	222	8	4.8	141	18	6.9
24	31	9	.75	188	8	4.1	130	18	6.3
25	40	10	1.1	177	8	3.8	125	17	5.7
26	29	9	.70	1100	473	3820	120	17	5.5
27	25	6	.41	2470	145	1160	123	18	6.0
28	24	2	.13	2590	127	948	110	17	5.0
29	22	1	.06	1470	60	238	102	16	4.4
30	21	1	.06	780	40	84	96	16	4.1
31	21	1	.06	---	---	---	92	18	4.5
TOTAL	678	---	14.16	16891	---	14051.16	7658	---	722.3

03082237 INDIAN CREEK AT WHITE BRIDGE, PA--Continued

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) JANUARY	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) FEBRUARY	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) MARCH	SEDIMENT DISCHARGE (TONS/DAY)
1	88	20	4.8	108	15	4.4	160	76	33
2	84	25	5.7	119	253	420	144	48	19
3	82	36	8.0	441	195	232	137	30	11
4	78	51	11	2060	765	4690	133	25	9.0
5	75	55	11	3250	212	1970	126	15	5.1
6	72	54	10	1780	75	360	126	11	3.7
7	68	40	7.3	871	37	87	113	10	3.1
8	66	25	4.5	547	33	49	114	13	4.0
9	64	15	2.6	386	26	27	149	20	8.0
10	62	14	2.3	299	18	15	296	63	50
11	60	12	1.9	257	15	10	679	185	339
12	58	10	1.6	214	14	8.1	425	138	158
13	56	10	1.5	186	13	6.5	448	59	71
14	54	9	1.3	198	15	8.0	629	151	351
15	52	10	1.4	163	13	5.7	1280	297	1100
16	52	10	1.4	153	10	4.1	702	132	250
17	58	7	1.1	413	55	61	461	20	25
18	90	15	3.6	1310	162	573	339	14	13
19	212	28	16	1590	234	1310	293	14	11
20	275	38	28	1260	59	201	235	13	8.2
21	234	32	20	977	224	639	187	13	6.6
22	282	25	19	719	200	388	164	13	5.8
23	317	10	8.6	520	181	254	151	13	5.3
24	259	10	7.0	386	170	177	138	12	4.5
25	200	9	4.9	303	158	129	125	13	4.4
26	170	8	3.7	253	140	96	118	12	3.8
27	150	8	3.2	225	122	74	125	10	3.4
28	135	11	4.0	184	100	50	111	12	3.6
29	122	20	6.6	---	---	---	102	14	3.9
30	116	13	4.1	---	---	---	96	14	3.6
31	110	11	3.3	---	---	---	91	14	3.4
TOTAL	3801	---	209.4	19172	---	11848.8	8397	---	2520.4

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) APRIL	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) MAY	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) JUNE	SEDIMENT DISCHARGE (TONS/DAY)
1	87	14	3.3	119	8	2.6	65	3	.53
2	83	14	3.1	110	8	2.4	60	2	.32
3	79	10	2.1	98	8	2.1	54	2	.29
4	78	9	1.9	90	8	1.9	51	5	.69
5	79	9	1.9	86	8	1.9	53	7	1.0
6	104	9	2.5	81	8	1.7	55	5	.74
7	142	13	5.0	89	8	1.9	52	3	.42
8	115	7	2.2	80	8	1.7	52	1	.14
9	108	7	2.0	72	7	1.4	48	1	.13
10	111	8	2.4	67	7	1.3	40	1	.11
11	127	10	3.4	63	7	1.2	40	3	.32
12	138	10	3.7	61	7	1.2	64	6	1.0
13	140	10	3.8	58	7	1.1	50	3	.41
14	132	10	3.6	69	14	2.6	40	3	.32
15	140	19	7.2	60	7	1.1	35	3	.28
16	236	23	15	57	10	1.5	41	3	.33
17	347	35	33	60	7	1.1	69	17	3.2
18	305	39	32	52	7	.98	40	8	.86
19	263	22	16	63	6	1.0	33	6	.53
20	240	21	14	126	10	3.4	32	2	.17
21	245	23	15	103	5	1.4	29	1	.08
22	328	24	21	87	4	.94	27	1	.07
23	286	20	15	83	4	.90	30	4	.32
24	254	19	13	79	4	.85	37	8	.80
25	229	18	11	72	4	.78	27	4	.29
26	204	14	7.7	66	4	.71	23	1	.06
27	178	13	6.2	84	13	2.9	25	1	.07
28	158	11	4.7	126	17	5.8	53	9	1.3
29	142	10	3.8	84	3	.68	36	1	.10
30	126	9	3.1	73	3	.59	28	1	.08
31	---	---	---	73	2	.39	---	---	---
TOTAL	5204	---	258.6	2491	---	50.02	1289	---	14.96

MONONGAHELA RIVER BASIN
03082237 INDIAN CREEK AT WHITE BRIDGE, PA--Continued

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) JULY	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) AUGUST	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) SEPTEMBER	SEDIMENT DISCHARGE (TONS/DAY)
1	27	1	.07	67	5	.90	25	6	.41
2	59	24	3.8	61	5	.82	25	6	.41
3	46	8	.99	56	4	.60	24	5	.32
4	29	3	.23	51	4	.55	23	5	.31
5	25	3	.20	47	6	.76	24	5	.32
6	23	3	.19	46	11	1.4	24	6	.39
7	21	2	.11	55	14	2.1	21	6	.34
8	32	3	.26	47	13	1.6	21	5	.28
9	879	1280	6170	43	10	1.2	19	4	.21
10	280	78	59	41	6	.66	18	3	.15
11	180	12	5.8	97	31	8.1	18	3	.15
12	166	10	4.5	49	11	1.5	20	2	.11
13	185	54	27	40	11	1.2	21	3	.17
14	197	35	19	36	11	1.1	18	3	.15
15	135	15	5.5	33	11	.98	17	3	.14
16	114	12	3.7	36	10	.97	16	4	.17
17	120	14	4.5	43	10	1.2	15	3	.12
18	92	15	3.7	36	10	.97	17	2	.09
19	713	690	3500	31	9	.75	42	8	.91
20	1280	1090	3770	29	9	.70	26	3	.21
21	913	250	616	28	9	.68	20	2	.11
22	441	90	107	29	10	.78	18	1	.05
23	275	80	59	61	20	3.3	24	6	.39
24	222	112	67	152	143	288	204	215	171
25	163	95	42	48	12	1.6	310	187	235
26	134	60	22	37	7	.70	132	25	8.9
27	116	31	9.7	47	18	2.3	93	12	3.0
28	98	16	4.2	48	16	2.1	75	12	2.4
29	93	11	2.8	34	11	1.0	62	12	2.0
30	83	6	1.3	29	7	.55	54	12	1.7
31	75	6	1.2	26	7	.49	---	---	---
TOTAL YEAR	7216 75706	---	14510.75 44960.02	1483	---	329.56	1426	---	429.91

MONONGAHELA RIVER BASIN

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03082258 FLUME DISCHARGE TO CHARLES RUN AT NORMALVILLE, PA

LOCATION.--Lat 39°59'20", long 79°27'12", Fayette County, Hydrologic Unit 05020006, on right bank 100 ft downstream from flume portal, 200 ft upstream from mouth, 0.2 mi upstream from Indian Creek, 0.5 mi north from Mill Run Reservoir, and 0.7 mi southwest of Normalville.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1985 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,290 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, Oct. 6-11, July 21-30, and Sept. 24-30, which are fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2.1 ft³/s, Feb. 5, 1986, gage height, 1.20 ft; minimum, 0.32 ft³/s, Oct. 1, 1985, gage height, 1.07 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1.6 ft³/s and maximum (*).

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 27	1030	1.7	*1.20	Feb. 5	2015	*2.1	*1.20

Minimum daily discharge, 0.42 ft³/s, Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.42	.51	.72	.54	.48	.81	.67	.60	.60	.47	.47	.47
2	.43	.54	.78	.54	.48	.81	.65	.60	.60	.47	.47	.47
3	.43	.54	.70	.54	.50	.81	.64	.61	.60	.47	.47	.47
4	.43	.54	.70	.54	.74	.81	.61	.60	.55	.47	.47	.47
5	.44	.54	.69	.54	1.4	.81	.61	.60	.47	.47	.47	.47
6	.44	.54	.66	.53	1.7	.73	.60	.60	.47	.47	.47	.47
7	.44	.54	.60	.52	1.1	.68	.64	.60	.47	.47	.47	.47
8	.44	.54	.60	.48	.94	.68	.68	.60	.47	.47	.47	.47
9	.46	.51	.56	.49	.86	.68	.68	.60	.47	.60	.47	.47
10	.48	.48	.48	.54	.81	.68	.64	.60	.47	.52	.47	.47
11	.50	.48	.48	.54	.81	.74	.60	.60	.47	.48	.47	.47
12	.56	.52	.48	.54	.80	.74	.60	.60	.47	.58	.47	.47
13	.58	.53	.51	.54	.75	.74	.60	.60	.47	.47	.47	.47
14	.60	.55	.54	.54	.74	.78	.60	.60	.47	.47	.47	.47
15	.66	.55	.54	.52	.74	.90	.60	.60	.47	.47	.47	.47
16	.70	.61	.54	.48	.74	.90	.68	.60	.47	.53	.47	.44
17	.81	.63	.54	.48	.76	.83	.68	.60	.47	.54	.47	.44
18	.91	.58	.54	.48	.88	.77	.68	.60	.47	.47	.47	.44
19	1.0	.54	.49	.48	1.0	.76	.68	.60	.47	.56	.47	.44
20	1.0	.57	.51	.48	1.1	.76	.68	.60	.47	.63	.47	.44
21	.63	.57	.54	.48	1.1	.74	.68	.60	.47	.63	.47	.44
22	.43	.55	.54	.48	1.0	.74	.68	.60	.47	.62	.47	.44
23	.46	.54	.54	.48	.97	.74	.68	.60	.47	.58	.47	.44
24	.54	.54	.54	.49	.90	.72	.68	.60	.48	.55	.47	.60
25	.54	.54	.54	.52	.90	.71	.68	.60	.47	.53	.46	.59
26	.48	.68	.54	.54	.85	.73	.68	.60	.47	.50	.44	.58
27	.48	1.5	.54	.54	.81	.74	.68	.60	.47	.47	.44	.56
28	.48	1.3	.54	.54	.81	.74	.68	.60	.47	.47	.44	.55
29	.48	1.2	.54	.54	---	.74	.64	.60	.47	.47	.47	.54
30	.48	.87	.54	.53	---	.74	.60	.60	.47	.47	.47	.53
31	.48	---	.54	.50	---	.74	---	.60	---	.47	.47	---
TOTAL	17.21	19.13	17.60	15.98	24.67	23.50	19.50	18.61	14.58	15.84	14.47	14.52
MEAN	.56	.64	.57	.52	.88	.76	.65	.60	.49	.51	.47	.48
MAX	1.0	1.5	.78	.54	1.7	.90	.68	.61	.60	.63	.47	.60
MIN	.42	.48	.48	.48	.48	.68	.60	.60	.47	.47	.44	.44

WTR YR 1986 TOTAL 215.61 MEAN .59 MAX 1.7 MIN .42

MONONGAHELA RIVER BASIN

03082258 FLUME DISCHARGE TO CHARLES RUN AT NORMALVILLE, PA.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1985 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1985 to current year.

pH: November 1985 to current year.

WATER TEMPERATURE: November 1985 to current year.

INSTRUMENTATION.--Water-quality monitor since November 1985.

REMARKS.--Interruptions in the record were due to malfunctions of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 2,150 microsiemens Jan. 15, 1986; minimum, 1,290 microsiemens Nov. 26, 1985.

pH: Maximum, 3.4 Feb. 7, 8, 1986; minimum, 2.5 Mar. 6, 1986.

WATER TEMPERATURES: Maximum, 15.5°C July 19, 1986; minimum, 8.5°C Feb. 4, 1986.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 2,150 microsiemens Jan. 15; minimum, 1,290 microsiemens Nov. 26.

pH: Maximum, 3.4 Feb. 7, 8; minimum, 2.5 Mar. 6.

WATER TEMPERATURES: Maximum, 15.5°C July 19; minimum, 8.5°C Feb. 4.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	ACIDITY (MG/L AS H)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	SULFATE DIS- SOLVED (MG/L AS SO4)	
AUG 12...	1600	0.68	1800	2.60	12.0	8.8	130	47	2.2	1.5	930	
DATE		CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)
AUG 12...	4.0	0.3	1690	<2	0.320	22000	12	<250	950	<50	200	
DATE		COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	SELE- NIUM, TOTAL (UG/L AS SE)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	
AUG 12...		35	71000	71000	<4	3500	250	70	880	<6	<2.0	

03082258 FLUME DISCHARGE TO CHARLES RUN AT NORMALVILLE, PA.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	ACIDITY (MG/L AS H)	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
OCT											
23...	1600	0.58	2000	2.40	13.0	21	80	40	2.2	1.8	0
NOV											
25...	1415	0.57	1990	2.80	11.0	8.4	--	--	--	--	--
DEC											
23...	1020	0.57	1990	3.10	11.0	8.8	--	--	--	--	0
JAN											
15...	1410	0.52	1820	3.20	11.0	7.8	--	--	--	--	0
FEB											
19...	1435	1.1	1600	2.80	10.5	6.2	--	--	--	--	0
MAR											
17...	1100	0.82	1740	2.80	11.0	7.4	--	--	--	--	0
APR											
29...	1130	0.59	1780	2.90	12.0	6.8	--	--	--	--	0
JUN											
04...	1400	0.45	1810	2.90	12.0	7.8	--	--	--	--	0
JUL											
22...	1340	0.61	1900	3.00	13.0	18	--	--	--	--	0
AUG											
20...	1300	0.48	1900	2.80	12.0	7.1	--	--	--	--	0
SEP											
30...	1100	0.46	1880	2.78	12.0	7.7	--	--	--	--	0

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BORON, DIS- SOLVED (UG/L AS B)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)
OCT											
23...	860	--	1770	<2	--	21000	33	<0	<50	230	27
NOV											
25...	860	--	1620	6	--	24000	--	--	--	--	--
DEC											
23...	770	--	1380	2	--	24000	--	--	--	--	--
JAN											
15...	690	--	1780	8	28000	27000	--	--	--	--	--
FEB											
19...	680	4.0	1060	<2	18000	18000	--	--	--	--	--
MAR											
17...	730	--	1220	2	22000	22000	--	--	--	--	--
APR											
29...	600	3.0	1240	16	29000	28000	--	--	--	--	--
JUN											
04...	770	--	1690	<2	22000	22000	--	--	--	--	--
JUL											
22...	790	--	1540	16	22000	22000	--	--	--	--	--
AUG											
20...	860	--	1370	2	26000	24000	--	--	--	--	--
SEP											
30...	420	--	1390	<2	23000	23000	--	--	--	--	--

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, DIS- SOLVED (UG/L AS NI)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	MERCURY DIS- SOLVED (UG/L AS HG)
OCT											
23...	--	54000	<45	--	3300	310	720	--	930	<6	<1.0
NOV											
25...	--	47000	--	--	2700	--	--	--	790	--	--
DEC											
23...	--	52000	--	--	2700	--	--	--	780	--	--
JAN											
15...	54000	52000	--	2800	2700	--	--	800	800	--	--
FEB											
19...	39000	38000	--	2400	2300	--	--	570	570	--	--
MAR											
17...	46000	45000	--	2600	2600	--	--	650	650	--	--
APR											
29...	37000	37000	--	2800	2700	--	--	700	680	--	--
JUN											
04...	38000	38000	--	2900	2900	--	--	700	700	--	--
JUL											
22...	43000	41000	--	2900	2900	--	--	730	720	--	--
AUG											
20...	47000	43000	--	3200	3000	--	--	830	790	--	--
SEP											
30...	42000	42000	--	3100	3100	--	--	840	840	--	--

MONONGAHELA RIVER BASIN

03082258 FLUME DISCHARGE TO CHARLES RUN AT NORMALVILLE, PA.--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS PER CENTIMETER AT 25°C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1				---	---	---	1640	1570	1600	2040	2010	2030
2				---	---	---	1680	1640	1660	2030	2010	2020
3				---	---	---	1730	1680	1700	2040	2020	2030
4				---	---	---	1770	1730	1750	2040	2030	2030
5				---	---	---	1830	1750	1790	2050	2030	2040
6				---	---	---	1890	1830	1860	2050	2020	2030
7				---	---	---	1910	1890	1900	2040	2020	2030
8				---	---	---	1950	1910	1930	2040	2030	2030
9				---	---	---	1950	1940	1940	2040	2030	2040
10				---	---	---	1980	1950	1970	2060	2040	2050
11				---	---	---	1990	1980	1980	2060	2040	2050
12				---	---	---	1970	1960	1970	2060	2040	2050
13				---	---	---	1980	1940	1960	2060	2030	2050
14				---	---	---	1980	1950	1960	2040	2030	2030
15				---	---	---	1970	1870	1940	2150	2040	2060
16				---	---	---	1890	1850	1870	2060	2050	2050
17				---	---	---	1880	1860	1870	2070	2050	2060
18				---	---	---	1880	1870	1880	2090	2070	2080
19				---	---	---	---	---	---	2090	2060	2070
20				---	---	---	2000	1990	2000	2070	2050	2060
21				---	---	---	2010	2000	2000	2060	2040	2050
22				---	---	---	2000	1980	1990	2050	2030	2040
23				---	---	---	2000	1980	1990	2050	2030	2040
24				---	---	---	2000	1980	1990	2050	2010	2020
25				---	---	---	2000	1980	1990	2030	2020	2030
26				2020	1290	1700	1980	1960	1970	2030	1990	2010
27				2000	1820	1890	2000	1980	1990	2000	1980	1990
28				1870	1620	1690	2020	2000	2010	1990	1970	1980
29				1650	1600	1620	2030	2010	2020	1980	1960	1970
30				1640	1570	1600	2030	2020	2030	1980	1970	1980
31				---	---	---	2030	2010	2020	2030	1970	2000
MONTH				2020	1290	1700	2030	1570	1920	2150	1960	2030
DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	2040	2020	2030	1710	1690	1700	1800	1790	1800	1760	1750	1750
2	2040	1960	2000	1730	1690	1710	1810	1790	1800	1760	1750	1760
3	1980	1950	1960	1770	1730	1750	1810	1790	1800	1760	1750	1760
4	1950	1540	1770	1780	1760	1770	1810	1790	1800	1780	1760	1770
5	1900	1710	1800	1790	1770	1780	1810	1800	1800	1790	1770	1780
6	1790	1520	1680	1810	1780	1790	1820	1800	1810	1790	1780	1790
7	1510	1410	1440	1810	1800	1810	1810	1800	1810	1790	1780	1780
8	1480	1400	1430	1820	1800	1810	1820	1800	1810	1790	1780	1790
9	1620	1480	1550	1820	1810	1820	1810	1800	1800	1790	1780	1790
10	1700	1620	1660	1830	1790	1810	1810	1790	1800	1800	1780	1790
11	1750	1700	1730	1810	1770	1790	1800	1780	1790	1810	1790	1800
12	1790	1760	1770	1810	1790	1800	1790	1780	1790	1820	1800	1810
13	1830	1790	1810	1800	1760	1780	1800	1780	1790	1810	1800	1810
14	1850	1820	1840	1770	1620	1730	1820	1800	1810	1820	1800	1810
15	1880	1860	1870	1780	1640	1740	1810	1800	1800	1820	1800	1810
16	1900	1880	1890	1770	1740	1760	1810	1780	1800	1820	1790	1810
17	1910	1820	1870	1750	1720	1740	1790	1770	1780	1820	1810	1820
18	1830	1770	1810	1730	1700	1710	1800	1780	1790	1820	1810	1820
19	1870	1600	1760	1710	1690	1700	1790	1780	1780	1820	1800	1810
20	1740	1670	1720	1700	1680	1690	1790	1780	1780	1810	1770	1790
21	1670	1610	1630	1690	1680	1690	1790	1770	1780	1800	1780	1790
22	1610	1540	1570	1690	1670	1680	1770	1740	1760	1810	1800	1800
23	1570	1540	1550	1740	1690	1720	1750	1740	1740	1810	1800	1800
24	1620	1540	1590	1760	1740	1750	1760	1740	1750	1810	1800	1800
25	1630	1610	1620	1770	1750	1760	1760	1740	1750	1810	1800	1810
26	1660	1630	1640	1790	1760	1780	1770	1750	1760	1810	1800	1800
27	1680	1650	1670	1780	1770	1780	1770	1750	1760	1810	1790	1800
28	1700	1680	1690	1790	1780	1780	1760	1750	1750	1810	1800	1800
29	---	---	---	1800	1780	1790	1760	1740	1750	1820	1800	1810
30	---	---	---	1790	1780	1790	1760	1740	1750	1810	1800	1800
31	---	---	---	1800	1780	1790	---	---	---	1820	1800	1810
MONTH	2040	1400	1730	1830	1620	1760	1820	1740	1780	1820	1750	1800

03082258 FLUME DISCHARGE TO CHARLES RUN AT NORMALVILLE, PA.--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS PER CENTIMETER AT 25°C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	1820	1800	1810	1880	1870	1880	1800	1780	1790	1920	1910	1920
2	1810	1800	1810	1880	1840	1870	1800	1790	1800	1920	1910	1920
3	1820	1800	1810	1890	1870	1880	1820	1800	1810	1920	1920	1920
4	1820	1810	1810	1890	1880	1880	1820	1810	1810	1920	1910	1920
5	1830	1820	1820	1890	1880	1880	1830	1820	1820	1920	1910	1910
6	1830	1820	1830	1900	1880	1890	1840	1830	1830	1920	1910	1920
7	1830	1820	1820	1900	1890	1890	1850	1810	1840	1920	1910	1920
8	1830	1800	1820	1900	1880	1900	1850	1840	1850	1920	1910	1920
9	1830	1820	1830	1900	1350	1730	1860	1850	1860	1930	1920	1920
10	1830	1820	1830	1880	1770	1840	1870	1850	1860	1930	1920	1930
11	1850	1830	1840	1880	1800	1850	1870	1830	1860	1940	1930	1930
12	1850	1830	1840	1860	1800	1830	1880	1860	1870	1940	1920	1930
13	1850	1840	1840	1870	1830	1860	1890	1870	1880	1940	1920	1930
14	1850	1840	1840	1840	1830	1840	1890	1880	1890	1930	1920	1920
15	1860	1840	1850	1850	1840	1840	1890	1880	1890	1930	1920	1930
16	1860	1800	1850	1870	1790	1860	1890	1880	1880	1940	1920	1930
17	1860	1830	1850	1860	1840	1850	1890	1870	1880	1880	1880	1880
18	1860	1850	1860	1880	1860	1870	1890	1880	1880	1890	1860	1880
19	1860	1850	1860	1870	1180	1740	1890	1880	1880	1890	1880	1890
20	1870	1860	1860	1830	1650	1760	1890	1880	1890	1890	1880	1890
21	1870	1860	1860	1830	1750	1800	1900	1890	1890	1890	1880	1880
22	1870	1860	1860	---	---	---	1910	1890	1900	1890	1880	1880
23	1870	1860	1870	---	---	---	1910	1900	1910	1890	1860	1880
24	1870	1840	1870	---	---	---	1910	1900	1910	1890	1700	1860
25	1870	1860	1870	---	---	---	1910	1900	1910	1880	1800	1870
26	1870	1860	1870	---	---	---	1910	1890	1900	1890	1870	1880
27	1880	1860	1870	---	---	---	1910	1890	1900	1880	1870	1880
28	1880	1860	1870	---	---	---	1910	1900	1900	1880	1870	1880
29	1890	1870	1880	---	---	---	1910	1900	1900	1890	1870	1880
30	1880	1870	1880	1770	1770	1770	1920	1900	1910	1890	1850	1880
31	---	---	---	1790	1770	1780	1920	1910	1910	---	---	---
MONTH	1890	1800	1850	1900	1180	1840	1920	1780	1870	1940	1700	1900
YEAR	2150	1180	1850									

PH (STANDARD UNITS), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1				---	---	---	3.00	3.00	3.00	3.20	3.20	3.20
2				---	---	---	3.00	3.00	3.00	3.20	3.20	3.20
3				---	---	---	3.00	3.00	3.00	3.20	3.20	3.20
4				---	---	---	3.00	3.00	3.00	3.20	3.20	3.20
5				---	---	---	3.00	3.00	3.00	3.20	3.20	3.20
6				---	---	---	3.00	3.00	3.00	3.20	3.20	3.20
7				---	---	---	3.00	3.00	3.00	3.20	3.20	3.20
8				---	---	---	3.00	3.00	3.00	3.20	3.20	3.20
9				---	---	---	3.00	3.00	3.00	3.20	3.20	3.20
10				---	---	---	3.00	3.00	3.00	3.20	3.20	3.20
11				---	---	---	3.00	3.00	3.00	3.20	3.20	3.20
12				---	---	---	3.00	3.00	3.00	3.20	3.20	3.20
13				---	---	---	3.10	3.00	3.00	3.20	3.20	3.20
14				---	---	---	3.10	3.10	3.10	3.20	3.20	3.20
15				---	---	---	3.10	3.10	3.10	3.30	2.90	3.20
16				---	---	---	3.10	3.10	3.10	3.20	3.20	3.20
17				---	---	---	3.10	3.10	3.10	3.20	3.20	3.20
18				---	---	---	3.10	3.10	3.10	3.20	3.20	3.20
19				---	---	---	---	---	---	3.20	3.20	3.20
20				---	---	---	3.10	3.10	3.10	3.30	3.20	3.20
21				---	---	---	3.10	3.10	3.10	3.30	3.20	3.30
22				---	---	---	3.10	3.10	3.10	3.30	3.20	3.30
23				---	---	---	3.10	3.10	3.10	3.30	3.30	3.30
24				---	---	---	3.20	3.10	3.10	3.30	3.30	3.30
25				---	---	---	3.20	3.10	3.20	3.30	3.30	3.30
26				3.10	2.90	3.00	3.20	3.20	3.20	3.30	3.30	3.30
27				3.00	2.90	2.90	3.20	3.20	3.20	3.30	3.30	3.30
28				3.00	3.00	3.00	3.20	3.20	3.20	3.30	3.30	3.30
29				3.00	3.00	3.00	3.20	3.20	3.20	3.30	3.30	3.30
30				3.00	3.00	3.00	3.20	3.20	3.20	3.30	3.30	3.30
31				---	---	---	3.20	3.20	3.20	3.30	3.30	3.30
MONTH				3.10	2.90	2.98	3.20	3.00	3.08	3.30	2.90	3.24

PH (STANDARD UNITS), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

[illegible]

MONONGAHELA RIVER BASIN

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03082258 FLUME DISCHARGE TO CHARLES RUN AT NORMALVILLE, PA.--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1				---	---	---	11.5	11.5	11.5	11.5	11.0	11.0
2				---	---	---	11.5	11.0	11.5	11.5	11.0	11.5
3				---	---	---	11.5	11.0	11.0	11.5	11.5	11.5
4				---	---	---	11.5	11.0	11.5	11.5	11.5	11.5
5				---	---	---	11.5	11.0	11.5	11.5	11.0	11.0
6				---	---	---	11.5	11.5	11.5	11.5	11.0	11.0
7				---	---	---	11.5	11.5	11.5	11.0	11.0	11.0
8				---	---	---	11.5	11.5	11.5	11.0	11.0	11.0
9				---	---	---	11.5	11.5	11.5	11.5	11.0	11.0
10				---	---	---	11.5	11.5	11.5	11.5	11.0	11.0
11				---	---	---	11.5	11.5	11.5	11.5	11.0	11.0
12				---	---	---	11.5	11.5	11.5	11.5	11.0	11.5
13				---	---	---	11.5	11.0	11.5	11.5	11.0	11.0
14				---	---	---	11.5	11.0	11.0	11.0	11.0	11.0
15				---	---	---	11.5	11.0	11.0	11.5	11.0	11.0
16				---	---	---	11.5	11.5	11.5	11.5	11.0	11.0
17				---	---	---	11.5	11.0	11.5	11.5	11.0	11.5
18				---	---	---	11.5	11.0	11.0	11.5	11.5	11.5
19				---	---	---	---	---	---	11.5	11.5	11.5
20				---	---	---	11.5	11.0	11.5	11.5	10.5	11.0
21				---	---	---	11.5	11.0	11.0	11.5	11.0	11.0
22				---	---	---	11.5	11.0	11.0	11.5	11.0	11.0
23				---	---	---	11.5	11.5	11.5	11.5	11.0	11.0
24				---	---	---	11.5	11.0	11.5	11.5	11.0	11.0
25				---	---	---	11.0	11.0	11.0	11.5	11.0	11.0
26				12.0	11.0	11.5	11.0	11.0	11.0	11.5	11.0	11.0
27				11.5	11.5	11.5	11.5	11.0	11.0	11.0	10.5	11.0
28				11.5	11.5	11.5	11.5	11.0	11.0	11.0	10.5	11.0
29				11.5	11.5	11.5	11.5	11.0	11.0	11.0	11.0	11.0
30				11.5	11.5	11.5	11.5	11.0	11.0	11.0	11.0	11.0
31				---	---	---	11.5	11.0	11.5	11.5	11.0	11.0
MONTH				12.0	11.0	11.5	11.5	11.0	11.5	11.5	10.5	11.0
DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	11.5	11.0	11.0	11.0	10.5	11.0	12.0	11.0	11.5	12.0	11.5	11.5
2	11.5	11.0	11.0	11.0	10.5	11.0	12.0	11.0	11.5	11.5	11.0	11.5
3	11.0	11.0	11.0	11.0	11.0	11.0	12.0	11.0	11.5	12.0	11.0	11.5
4	11.0	8.5	10.0	11.0	11.0	11.0	12.0	11.5	11.5	12.0	11.0	11.5
5	11.5	10.0	11.0	11.0	11.0	11.0	12.0	11.5	11.5	12.5	11.5	11.5
6	11.5	10.5	11.0	11.0	10.5	11.0	12.0	11.5	11.5	12.5	11.5	11.5
7	10.5	10.5	10.5	11.0	10.5	11.0	12.0	11.5	11.5	12.5	11.5	12.0
8	10.5	10.5	10.5	11.5	10.5	11.0	12.0	11.0	11.5	12.5	11.5	11.5
9	10.5	10.5	10.5	11.5	11.0	11.0	11.5	11.0	11.5	12.0	11.5	11.5
10	10.5	10.5	10.5	11.5	11.0	11.5	11.5	11.0	11.0	12.0	11.5	11.5
11	11.0	10.5	10.5	11.0	11.0	11.0	11.5	11.0	11.0	12.5	11.5	11.5
12	10.5	10.5	10.5	11.0	11.0	11.0	12.0	11.0	11.5	12.0	11.5	11.5
13	11.0	10.5	10.5	11.0	11.0	11.0	12.0	11.0	11.5	11.5	11.5	11.5
14	11.0	10.5	10.5	11.0	10.5	11.0	12.0	11.0	11.5	12.0	11.5	11.5
15	11.0	10.5	11.0	11.0	10.5	11.0	11.5	11.5	11.5	12.0	11.5	11.5
16	11.0	10.5	11.0	11.0	11.0	11.0	11.5	11.0	11.0	12.0	11.5	11.5
17	11.0	10.5	11.0	11.5	11.0	11.0	11.5	11.0	11.0	12.0	11.5	12.0
18	10.5	10.5	10.5	11.5	11.0	11.0	12.0	11.0	11.5	12.0	11.5	12.0
19	11.0	10.0	10.5	11.5	11.0	11.5	12.0	11.0	11.5	12.0	11.5	11.5
20	11.5	11.0	11.0	11.0	10.5	11.0	11.5	11.5	11.5	12.0	11.5	11.5
21	11.0	11.0	11.0	11.5	10.5	11.0	12.0	11.5	11.5	11.5	11.5	11.5
22	11.0	11.0	11.0	11.5	10.5	11.0	11.5	11.0	11.0	12.0	11.5	11.5
23	11.0	10.5	11.0	11.5	11.0	11.0	12.0	11.0	11.0	12.0	11.5	11.5
24	11.0	10.5	10.5	11.5	11.0	11.0	12.0	11.0	11.5	12.0	11.5	11.5
25	11.0	10.5	10.5	12.0	11.0	11.0	12.0	11.0	11.5	12.0	11.5	11.5
26	11.0	10.5	11.0	11.5	11.0	11.5	12.0	11.5	11.5	12.0	11.5	11.5
27	11.0	10.5	11.0	11.5	11.0	11.0	12.5	11.5	11.5	12.0	11.5	11.5
28	11.0	10.5	11.0	12.0	11.0	11.0	12.5	11.5	11.5	12.0	11.5	12.0
29	---	---	---	12.0	11.0	11.5	12.0	11.5	11.5	12.0	11.5	12.0
30	---	---	---	12.0	11.0	11.5	12.0	11.5	11.5	12.0	11.5	12.0
31	---	---	---	12.0	11.0	11.5	---	---	---	12.0	11.5	12.0
MONTH	11.5	8.5	11.0	12.0	10.5	11.0	12.5	11.0	11.5	12.5	11.0	11.5

03082500 YOUGHIOGHENY RIVER AT CONNELLSVILLE, PA

LOCATION.--Lat 40°01'03", long 79°35'38", Fayette County, Hydrologic Unit 05020006, on left bank at downstream side of Crawford Avenue bridge at Conneltsville, 1.2 mi upstream from Mounts Creek, and at mile 44.0.

DRAINAGE AREA.--1,326 mi².

PERIOD OF RECORD.--July 1908 to current year. Monthly discharge only for periods, published in WSP 1305.

REVISED RECORDS.--WSP 743: Drainage area. WSP 1305: 1912 (M), 1914 (M), 1916-17 (M), 1918, 1922-25, WSP 1435: 1919-20. WSP 1725: 1916, 1932 (monthly, yearly summaries).

GAGE.--Water-stage recorder. Datum of gage is 860.13 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 15, 1928, nonrecording gage, and Aug. 15, 1928, to July 7, 1958, water-stage recorder at same site and datum. July 8, 1958, to Sept. 8, 1959, nonrecording gage at site 0.4 mi downstream at different datum.

REMARKS.--Records good except for estimated daily discharges, Dec. 29 to Jan. 2, Jan. 12-20, Jan. 23 to Feb. 3, and Feb. 11-17, which are fair. Flow regulated since 1925 by Deep Creek Reservoir, since 1943 by Youghiogheny River Lake 29.4 mi upstream, and by several smaller reservoirs above station. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--78 years, 2,580 ft³/s, 26.42 in/yr, adjusted for storage since August 1925.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 103,000 ft³/s, Oct. 16, 1954, gage height, 21.96 ft, from rating curve extended above 55,000 ft³/s; minimum, 11 ft³/s, Sept. 23, 26, 27, 1908, Oct. 18, 1910, gage height, 0.11 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 40,400 ft³/s, Nov. 27, gage height, 14.66 ft; minimum daily, 532 ft³/s, June 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1160	719	12500	960	1500	5000	1020	1690	822	674	1220	1100
2	1200	758	11300	920	2400	4790	875	1610	758	815	1130	1090
3	1160	904	10200	1100	5200	4650	795	1510	606	987	1100	1080
4	918	2550	9390	1220	14100	3910	610	1410	549	902	1060	1080
5	888	17100	8910	1240	26500	3010	701	999	646	774	1020	1080
6	864	10500	8730	1130	19400	2940	982	1070	650	769	1160	1080
7	833	5840	8400	1090	10200	2860	1400	1030	886	727	1440	1070
8	547	4040	8100	993	6830	3620	1530	1010	1520	623	1440	1060
9	536	3140	7900	990	5280	4200	970	1010	1060	2720	1380	1040
10	537	2630	7800	1120	4380	4800	1010	961	748	4200	1180	1030
11	545	2410	7980	1120	3800	8820	1430	914	646	1840	1330	1030
12	541	3260	9300	1050	3300	7010	1660	860	674	1690	1250	1020
13	550	5140	9200	1000	3000	5340	1920	744	685	1890	1150	1020
14	584	4780	10200	980	2800	6020	2380	667	873	1590	1090	1010
15	636	7210	8500	920	2600	15600	2490	775	877	1210	1240	995
16	668	10600	5670	880	2500	10600	3440	836	622	870	1240	997
17	656	15200	3390	960	2800	8740	5120	1300	842	1680	1260	984
18	607	7880	3120	1000	10000	7600	5480	1360	707	1440	1250	996
19	582	5210	2470	1900	16700	5690	5260	925	602	1510	1220	1010
20	596	3910	3530	4380	18300	7060	4410	1080	543	9780	1200	894
21	830	2900	3630	4230	12200	6850	4160	2000	730	6850	1180	881
22	1250	2890	3410	3520	10900	6220	4360	1620	778	4230	1210	860
23	1380	5910	3220	3200	8010	6150	4320	1270	627	2900	1220	884
24	1220	4350	3310	2800	6130	5190	4240	1140	603	2710	1390	1420
25	1400	3480	3270	2400	5290	3160	3540	1210	575	2340	1350	2640
26	1210	6780	2700	2100	4640	2280	2810	1100	575	2530	1230	2000
27	947	28800	2340	1800	4360	2310	2290	1080	532	2460	1440	1200
28	836	23800	1300	1600	4890	2130	1810	1190	855	2220	2150	996
29	774	18000	1150	1400	---	1760	1730	1150	861	1840	1920	848
30	748	15200	1050	1700	---	1600	1790	901	736	1550	1150	851
31	800	---	1000	1600	---	1520	---	878	---	1360	1120	---
TOTAL	26003	225891	182970	51303	218010	161430	74533	35300	22188	67681	39720	33246
MEAN	839	7530	5902	1655	7786	5207	2484	1139	740	2183	1281	1108
MAX	1400	28800	12500	4380	26500	15600	5480	2000	1520	9780	2150	2640
MIN	536	719	1000	880	1500	1520	610	667	532	623	1020	848
†	-307	+2650	-2390	+223	+1650	-290	+218	-11.4	-243	+297	-816	-739
MEAN†	531	10180	3514	1878	9433	4918	2702	1128	496	2480	465	369
CFSM†	.40	7.68	2.65	1.42	7.11	3.71	2.04	.85	.37	1.87	.35	.28
IN.†	.46	8.57	3.06	1.64	7.40	4.28	2.28	.98	.41	2.16	.40	.31

CAL YR 1985 TOTAL 1190740 MEAN 3262 MAX 28800 MIN 536 ADJ -8.6 MEAN† 3253 CFSM† 2.45 IN.† 33.32
WTR YR 1986 TOTAL 1138270 MEAN 3119 MAX 28800 MIN 532 ADJ +1.8 MEAN† 3120 CFSM† 2.35 IN.† 31.95

† Change in contents, equivalent in cubic feet per second, in Deep Creek Reservoir and Youghiogheny River Lake. Records of contents in Deep Creek Reservoir furnished by Pennsylvania Electric Co.

‡ Adjusted for change in reservoir contents.

MONONGAHELA RIVER BASIN

03083500 YOUGHIOGHENY RIVER AT SUTERSVILLE, PA

LOCATION.--Lat 40°14'24", long 79°48'24", Allegheny County, Hydrologic Unit 05020006, on left bank 500 ft upstream from highway bridge at Sutersville, 2.1 mi downstream from Sewickley Creek, and at mile 15.2.

DRAINAGE AREA.--1,715 mi².

PERIOD OF RECORD.--October 1920 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORD.--WSP 743: Drainage area. WSP 1305: 1924, 1926 (M), 1931 (M). WSP 1435: 1935-36.

GAGE.--Water-stage recorder. Datum of gage is 733.36 ft above National Geodetic Vertical Datum of 1929. Prior to June 1, 1939, nonrecording gage at site 500 ft downstream at same datum.

REMARKS.--Records good except for estimated daily discharges, Dec. 29 to Jan. 3, Jan. 11-20, Jan. 29 to Feb. 4, Feb. 11-18, and Sept. 15-17, 20-26, which are fair. Flow regulated since 1925 by Deep Creek Reservoir, since 1943 by Youghiogheny River Lake 58 mi upstream, and by several smaller reservoirs above station. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--66 years, 3,040 ft³/s, 24.08 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 108,000 ft³/s, Oct. 16, 1954, gage height, 32.5 ft, from floodmark; minimum observed, 57 ft³/s, Sept. 29, 30, 1922.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 50,000 ft³/s, Nov. 27, gage height, 20.62 ft; minimum daily, 500 ft³/s, June 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1370	871	13000	1300	1800	5360	1720	2160	1100	659	1520	1300
2	1480	849	11400	1400	2300	5150	1420	2270	990	722	1380	1280
3	1460	1220	10200	1500	5600	5020	1270	2200	844	990	1300	1270
4	1270	3860	9330	1720	14000	4910	1040	2090	655	873	1290	1270
5	1060	15500	8870	1750	36900	3810	937	1730	619	797	1190	1260
6	1020	18700	8780	1650	30600	3680	1040	1600	808	692	1240	1260
7	993	7200	8480	1500	13300	3660	1700	1680	808	696	1480	1250
8	859	5190	8150	1230	8670	3650	2200	1460	1170	745	1660	1240
9	611	3920	7920	1200	6620	4470	2150	1360	1480	5370	1580	1230
10	605	3740	7750	1730	5560	5310	1740	1260	844	5520	1470	1210
11	608	4240	7980	1600	4700	8800	1690	1190	736	2580	1720	1210
12	615	5780	9820	1450	4200	8250	1730	1140	930	2360	1520	1180
13	616	7440	10100	1350	3800	6270	2090	1100	960	2260	1370	1180
14	660	6300	10700	1250	3600	6960	2470	1000	808	2190	1280	1150
15	764	8630	9430	1200	3400	15900	2890	888	910	1580	1330	1080
16	780	12300	6950	1150	3200	12700	3410	1100	799	1170	1440	1080
17	758	20700	4570	1200	3100	9120	4420	1260	835	1740	1530	1060
18	801	10300	4060	1300	7000	8090	5770	1620	817	1690	1480	1160
19	889	6640	3460	1600	17800	6380	5950	1630	646	1550	1390	1260
20	950	5140	3820	4350	22800	6930	5250	1310	556	9410	1350	979
21	972	4070	4190	4970	14000	6940	4710	2200	523	8320	1330	961
22	1320	3620	4010	4210	11900	6190	4610	2150	730	5070	1340	945
23	1670	5790	3800	4800	9080	6310	5190	1730	720	3450	1430	999
24	1680	5200	3840	4530	7390	5350	4950	1560	535	3170	1830	2000
25	1620	4250	3800	3870	6180	4240	4520	1480	544	2810	1680	3180
26	1810	5430	3340	3640	5480	2870	4370	1420	510	2760	1520	2200
27	1310	38200	3160	3600	5110	2820	3620	1410	500	2750	1430	1700
28	1070	32700	2090	2810	4990	2790	2970	1680	703	2550	2120	1310
29	947	28100	1700	2500	---	2310	2730	1620	866	2170	2330	1110
30	876	14100	1500	2200	---	2150	2420	1290	771	2050	1670	1000
31	898	---	1400	2000	---	1900	---	1170	---	1670	1340	---
TOTAL	32342	289980	197600	70560	263080	178290	90977	47758	23717	80364	46540	39314
MEAN	1043	9666	6374	2276	9396	5751	3033	1541	791	2592	1501	1310
MAX	1810	38200	13000	4970	36900	15900	5950	2270	1480	9410	2330	3180
MIN	605	849	1400	1150	1800	1900	937	888	500	659	1190	945
†	-307	+2650	-2390	+223	+1650	-290	+218	-11.4	-243	+297	-816	-739
MEAN†	736	12320	3983	2499	11050	5460	3250	1530	548	2889	686	572
CFSM†	.43	7.18	2.32	1.46	6.44	3.18	1.90	.89	.32	1.68	.40	.33
IN.†	.50	8.01	2.67	1.68	6.71	3.67	2.12	1.03	.36	1.94	.46	.37

CAL YR 1985 TOTAL 1411650 MEAN 3868 MAX 38200 MIN 605 ADJ -8.6 MEAN† 3858 CFSM† 2.25 IN.† 30.55
WTR YR 1986 TOTAL 1360520 MEAN 3727 MAX 38200 MIN 500 ADJ +1.8 MEAN† 3730 CFSM† 2.17 IN.† 29.52

† Change in contents, equivalent in cubic feet per second, in Deep Creek Reservoir and Youghiogheny River Lake. Records of contents in Deep Creek Reservoir furnished by Pennsylvania Electric Co.

‡ Adjusted for change in contents.

03084000 ABERS CREEK NEAR MURRYSVILLE, PA

LOCATION.--Lat 40°27'01", long 79°42'50", Allegheny County, Hydrologic Unit 05020005, on right bank at downstream side of highway bridge, 30 ft upstream from small tributary, 2 mi northwest of Murrysville, and 5 mi northwest of Export.

DRAINAGE AREA.--4.39 mi².

PERIOD OF RECORD.--October 1948 to current year.

GAGE.--Water-stage recorder and log control. Datum of gage is 936.73 ft above National Geodetic Vertical Datum of 1929 (Pennsylvania Department of Transportation bench mark). Prior to Oct. 1, 1950, water-stage recorder at site 800 ft upstream at different datum. Oct. 1, 1950 to Apr. 26, 1984, water-stage recorder at present site and datum. Apr. 27, 1984 to Sept. 30, 1985, nonrecording gage at site 800 ft upstream at same datum.

REMARKS.--Estimated daily discharges: Dec. 18 to Jan. 20, Jan. 22 to Feb. 4, Feb. 9-19, Feb. 26 to Mar. 9, and July 3-8. Records fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--38 years, 5.37 ft³/s, 16.61 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,600 ft³/s, July 5, 1950, gage height, 7.72 ft, from flood-marks, from rating curve extended above 910 ft³/s on basis of contracted-opening measurement of peak flow; maximum gage height, 11.65 ft, Mar. 29, 1985; no flow at times during some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft³/s and maximum (*).

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 14	1230	*396	*4.58	July 19	1400	278	3.98
Nov. 16	1530	268	3.94				

Minimum daily discharge, 0.20 ft³/s Sept. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	.62	8.3	1.0	2.3	3.7	2.5	2.6	2.4	.76	.73	.20
2	.70	3.8	7.7	.96	2.1	3.5	2.5	2.0	1.8	7.1	.70	.31
3	.47	28	5.5	.92	4.0	3.2	2.3	1.9	1.3	.38	.77	.33
4	.41	37	4.5	.88	28	3.0	2.6	1.7	1.1	.86	.66	.39
5	.64	15	4.5	.86	37	2.9	3.3	1.8	1.8	.80	.65	.88
6	.48	6.4	5.1	.84	14	2.0	4.9	1.7	9.5	.72	1.6	.55
7	.37	4.8	4.3	.80	11	3.7	2.6	5.7	2.7	.72	1.4	.67
8	.31	3.0	3.7	.80	8.4	5.0	2.4	2.2	3.7	3.0	1.3	.68
9	.28	7.4	3.0	.78	5.6	6.8	3.2	1.9	1.6	15	.71	.74
10	.41	14	5.4	.78	4.6	9.0	2.8	1.9	1.3	3.1	6.4	.66
11	1.5	19	19	.76	3.6	12	3.7	1.9	10	3.1	2.6	.43
12	.38	27	15	1.2	3.1	7.7	2.5	1.8	10	3.8	.93	.79
13	.68	17	14	1.8	2.8	12	2.9	1.7	4.2	7.1	1.5	.34
14	2.4	51	9.7	2.5	2.4	18	2.3	1.8	2.5	2.2	1.4	.30
15	1.1	18	6.5	3.7	2.2	17	13	2.1	1.9	1.4	2.2	.32
16	.56	103	5.4	1.9	1.9	10	14	2.4	2.0	1.3	2.3	.31
17	.50	25	4.4	1.1	3.0	7.9	13	4.2	1.8	1.1	1.1	.41
18	.49	12	3.7	1.8	7.0	6.8	8.4	3.2	1.4	.78	.58	5.9
19	1.2	8.2	3.0	3.5	13	8.8	6.6	3.9	1.3	10	.49	1.3
20	1.4	6.2	2.7	10	19	6.3	6.5	5.4	1.1	12	.52	.51
21	.81	5.0	2.4	7.5	21	7.4	9.8	2.2	1.1	4.8	.66	.49
22	1.1	5.5	2.1	5.6	15	6.7	7.9	1.9	.83	2.2	.59	.57
23	.75	4.3	1.9	4.7	11	4.4	6.5	4.0	1.7	1.5	2.4	.70
24	4.8	3.7	1.7	3.8	8.1	3.9	4.7	2.0	.76	1.4	.73	12
25	.98	3.2	1.5	3.4	6.4	3.6	4.0	1.7	.70	1.2	.55	6.5
26	.64	34	1.4	3.1	5.0	3.4	3.5	1.4	.70	3.9	.54	1.2
27	.59	27	1.3	2.9	4.3	3.8	3.2	12	1.3	1.3	1.0	.91
28	.54	54	1.2	2.8	4.0	3.3	2.7	4.6	1.4	1.1	.62	.62
29	.49	16	1.2	2.6	---	2.8	2.8	2.7	.73	.94	.57	.57
30	.86	10	1.1	2.5	---	2.9	2.2	6.5	.96	.88	.61	2.8
31	.62	---	1.1	2.4	---	2.7	---	4.0	---	.78	.62	---
TOTAL	27.86	569.12	152.3	78.18	249.8	194.2	149.3	94.8	73.58	95.22	37.43	42.38
MEAN	.90	19.0	4.91	2.52	8.92	6.26	4.98	3.06	2.45	3.07	1.21	1.41
MAX	4.8	103	19	10	37	18	14	12	10	15	6.4	12
MIN	.28	.62	1.1	.76	1.9	2.0	2.2	1.4	.70	.38	.49	.20
CFSM	.20	4.32	1.12	.57	2.03	1.43	1.13	.70	.56	.70	.28	.32
IN.	.24	4.82	1.29	.66	2.12	1.65	1.27	.80	.62	.81	.32	.36

CAL YR 1985 TOTAL 2350.26 MEAN 6.44 MAX 130 MIN .11 CFSM 1.47 IN. 19.92
WTR YR 1986 TOTAL 1764.14 MEAN 4.83 MAX 103 MIN .20 CFSM 1.10 IN. 14.96

MONONGAHELA RIVER BASIN

03085000 MONONGAHELA RIVER AT BRADDOCK, PA
(National stream quality accounting network)

LOCATION.--Lat 40°23'28", long 79°51'30", Allegheny County, Hydrologic Unit 05020005, near right bank on river guide wall 300 ft upstream from dam at lock 2 at Braddock, 1,700 ft downstream from Turtle Creek, and 11.2 mi upstream from confluence with Allegheny River. Water-quality sampling site at Rankin bridge, 1.7 mi downstream.

DRAINAGE AREA.--7,337 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1938 to current year. Monthly discharge only for some periods, published in WSP 1305.

GAGE.--Water-stage recorder and fixed-crest concrete dam control with streamward lock chamber usable as floodway during high flow since 1951. Datum of gage is 707.16 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 13, 1951, at site 700 ft upstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by locks and hydroelectric plants, since 1938 by Tygart Lake, since 1926 by Lake Lynn, since 1925 by Deep Creek Reservoir, and since 1943 by Youghiogheny River Lake, combined capacity, 704,300 acre-ft. Figures of daily discharge include slight diversion from Beaver Run Reservoir in the Kiskiminetas River basin to the borough of Jeannette in the Monongahela River basin.

AVERAGE DISCHARGE.--48 years, 12,530 ft³/s, 23.19 in/yr, adjusted for storage and diversion 1938-75.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 201,000 ft³/s, June 5, 1941, gage height, 31.20 ft; maximum gage height, 31.39 ft, June 24, 1972 (backwater from Allegheny River); minimum discharge, 559 ft³/s, Sept. 20, 22, 23, 1946; minimum daily, 703 ft³/s, Sept. 3, 4, 22, 1946; minimum gage height, 12.01 ft, Oct. 7-13, 1943.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 18, 1936, reached a stage of 38.8 ft from floodmarks, discharge, 210,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 190,000 ft³/s, Nov. 6, gage height, 29.07 ft; minimum, 1,390 ft³/s, Oct. 9, 10, gage height, 12.09 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2580	2990	56300	5570	7050	17300	5480	12600	3590	13900	4200	3230
2	2600	3840	46000	5640	10000	13800	4850	11600	2740	20000	3450	2260
3	2410	5430	39500	5550	27800	13600	4190	8360	2880	30800	2990	2930
4	2350	17600	32800	5950	41500	14200	4740	6410	2560	31600	2340	3360
5	2370	117000	25700	5390	108000	12800	3570	5900	3130	24600	3070	3510
6	2190	163000	24600	5720	101000	12900	4350	5390	2810	17500	2770	3080
7	2260	80400	21700	4710	53200	13100	5920	5250	3470	10900	3420	2600
8	2570	47700	18600	5320	42600	12600	7290	5610	2250	6990	3160	2360
9	1680	34700	17100	6010	34300	10200	8910	5920	3080	14200	3850	3020
10	1750	30000	18200	4890	27800	14900	9540	4850	3490	17600	2590	2870
11	1710	28200	18400	4600	25200	31300	9180	4860	3900	15000	4040	2960
12	1640	31000	24200	3650	22400	44100	10500	2990	5110	12500	3840	2890
13	1960	30900	31100	4580	19900	30900	12200	3650	4040	11100	3640	2820
14	1770	28200	40400	4620	17100	33300	14000	4570	3450	11600	3290	2050
15	1950	35900	38000	3980	21200	64600	9840	3860	2820	11700	2320	2510
16	2170	45400	21300	4370	13700	70600	13600	3580	3390	8560	3510	2240
17	2320	52700	24400	4610	16000	42900	15300	3770	3690	6830	2460	2860
18	2500	30300	22700	3440	54000	40400	16600	3620	3180	7660	2390	2580
19	2480	23600	18600	4650	77600	32900	18700	2910	3050	5250	2900	2640
20	1970	21400	18000	17900	73700	28400	16200	6760	2700	11700	3210	3150
21	9140	13900	16700	27300	54100	24400	14600	10200	2580	14500	3250	2210
22	17300	14500	12100	20700	48400	23400	18600	12100	2410	11000	2400	2360
23	14000	19100	12300	24600	41500	21000	18900	11800	2640	8210	3170	3030
24	10300	24600	13000	29000	34900	17900	17800	8880	3510	7280	2500	3330
25	7820	16900	10000	24900	29800	14700	15800	6210	2630	6030	3090	5060
26	7890	15300	8000	20000	27200	11500	11600	4240	1860	4440	4690	5470
27	5580	73500	7870	17500	24800	8200	7390	5050	3690	4670	3780	4810
28	3840	90600	5970	14300	21100	6560	8190	5600	4010	5530	3720	7140
29	4060	106000	4940	12100	---	7020	10800	4550	8340	6170	4010	10900
30	3450	78200	4870	10600	---	6070	11900	5100	13500	6340	3820	10300
31	2790	---	5650	7730	---	5930	---	5380	---	5540	2450	---
TOTAL	129400	1282860	659000	319880	1075850	701480	330540	191570	110500	369700	100320	110530
MEAN	4174	42760	21260	10320	38420	22630	11020	6180	3683	11930	3236	3684
MAX	17300	163000	56300	29000	108000	70600	18900	12600	13500	31600	4690	10900
MIN	1640	2990	4870	3440	7050	5930	3570	2910	1860	4440	2320	2050

CAL YR 1985 TOTAL 5298770 MEAN 14520 MAX 163000 MIN 1640
WTR YR 1986 TOTAL 5381630 MEAN 14740 MAX 163000 MIN 1640

03085000 MONONGAHELA RIVER AT BRADDOCK, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1958 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM DIS- SOLVED (MG/L AS CA)
DEC 12...	1000	23600	275	7.1	8.5	11	741	9.8	3500	K2000	26
MAR 18...	0900	40400	220	7.0	6.0	55	746	13.8	1300	800	22
AUG 20...	0915	3360	380	8.0	25.0	5.3	747	3.9	830	76	35
SEP 18...	0830	2120	480	7.8	18.0	--	747	4.3	290	K52	--
DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY TOTAL (AS CACO3)	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)
DEC 12...	7.0	12	1.8	25	21	21	81	11	.10	5.8	154
MAR 18...	5.7	8.0	1.4	25	21	21	58	7.4	.10	5.3	144
AUG 20...	9.1	26	2.6	46	38	38	120	15	.20	2.3	249
SEP 18...	--	--	--	40	38	34	--	--	--	--	--
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 TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	SEDI- MENT, SUS- PENDE (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)
DEC 12...	1.9	.120	.50	.050	.15	<.010	<.010	71	54	30	<1
MAR 18...	2.4	.110	.60	.040	.12	.020	.010	112	94	40	<1
AUG 20...	.68	.110	.27	.083	--	.030	.030	19	80	40	1.0
SEP 18...	.66	.110	.28	.060	--	.030	.021	19	71	--	--
DATE	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)	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)
DEC 12...	40	<.5	<1	<1	6	3	38	<1	11	250	<.1
MAR 18...	36	<.5	<1	<1	<3	<1	38	<1	7	160	<.1
AUG 20...	40	0.5	1	6	3	3	14	5	12	2.0	0.1
SEP 18...	--	--	--	--	--	--	--	--	--	--	--
DATE	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)				
DEC 12...	<10	12	<1	150	<6	<1	32				
MAR 18...	<10	7	<1	130	<6	<1	12				
AUG 20...	10	4	1	240	6	1	30				
SEP 18...	--	--	--	--	--	--	--				

03085000 MONONGAHELA RIVER AT BRADDOCK, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1958 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM DIS- SOLVED (MG/L AS CA)
DEC 12...	1000	23600	275	7.1	8.5	11	741	9.8	3500	K2000	26
MAR 18...	0900	40400	220	7.0	6.0	55	746	13.8	1300	800	22
AUG 20...	0915	3360	380	8.0	25.0	5.3	747	3.9	830	76	35
SEP 18...	0830	2120	480	7.8	18.0	--	747	4.3	290	K52	--
DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY TOTAL (AS CACO3)	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)
DEC 12...	7.0	12	1.8	25	21	21	81	11	.10	5.8	154
MAR 18...	5.7	8.0	1.4	25	21	21	58	7.4	.10	5.3	144
AUG 20...	9.1	26	2.6	46	38	38	120	15	.20	2.3	249
SEP 18...	--	--	--	40	38	34	--	--	--	--	--
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 TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	SEDI- MENT, SUS- PENDE (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)
DEC 12...	1.9	.120	.50	.050	.15	<.010	<.010	71	54	30	<1
MAR 18...	2.4	.110	.60	.040	.12	.020	.010	112	94	40	<1
AUG 20...	.68	.110	.27	.083	--	.030	.030	19	80	40	1.0
SEP 18...	.66	.110	.28	.060	--	.030	.021	19	71	--	--
DATE	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)	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)
DEC 12...	40	<.5	<1	<1	6	3	38	<1	11	250	<.1
MAR 18...	36	<.5	<1	<1	<3	<1	38	<1	7	160	<.1
AUG 20...	40	0.5	1	6	3	3	14	5	12	2	0.1
SEP 18...	--	--	--	--	--	--	--	--	--	--	--
DATE	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)				
DEC 12...	<10	12	<1	150	<6	<1	32				
MAR 18...	<10	7	<1	130	<6	<1	12				
AUG 20...	10	4	1	240	6	1	30				
SEP 18...	--	--	--	--	--	--	--				

03085500 CHARTIERS CREEK AT CARNEGIE, PA

LOCATION.--Lat 40°24'02", long 80°05'48", Allegheny County, Hydrologic Unit 05030101, on left bank 100 ft downstream from Hammond Street bridge, 0.3 mi downstream from Robinson Run, 0.8 mi upstream from Campbells Run, and 8.9 mi upstream from mouth.

DRAINAGE AREA.--257 mi².

PERIOD OF RECORD.--October 1919 to September 1933, October 1940 to current year. Published as "at Crafton" October 1971 to September 1975. Monthly discharge only for some periods, published in WSP 1305. June 1915 to September 1919 (gage heights and discharge measurements only) in reports of Water Supply Commission of Pennsylvania.

GAGE.--Water-stage recorder and concrete weir control. Datum of gage is 755.45 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 15, 1931, nonrecording gage at site 0.5 mi downstream at different datum. Jan. 8, 1932, to Sept. 30, 1933, nonrecording gage at site 1.0 mi downstream at different datum. Nov. 20, 1940, to Aug. 18, 1967, water-stage recorder at site 400 ft upstream at datum 1.00 ft higher. Oct. 1, 1971, to Sept. 30, 1975, nonrecording gage at site 4.6 mi downstream, at datum 725.99 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, Dec. 16 to Jan. 19, Jan. 23 to Feb. 3, and Feb. 11-18, which are fair. Some regulations at low flow by mine drainage, reservoirs, and industrial usage above station. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--60 years, 292 ft³/s, 15.43 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,500 ft³/s, Aug. 6, 1956, gage height, 16.37 ft, site and datum then in use; minimum observed, 16 ft³/s, Aug. 9, 1926, and at times in September 1932.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 2, 1912 reached a discharge of 20,000 ft³/s, from Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 5	0100	4080	6.08	Nov. 28	1130	5010	6.99
Nov. 12	2100	4670	6.67	Feb. 4	2130	2800	4.80
Nov. 16	1900	*11100	*11.47	Feb. 19	2200	2600	4.60
Nov. 27	0400	3740	5.74	July 9	1730	3100	5.10

Minimum discharge, 58 ft³/s, Oct. 7, 8, 9, 10, gage height, 1.08 ft, minimum gage height, 1.03 ft, Sept. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	63	869	150	260	402	223	184	153	103	107	80
2	78	87	847	150	250	376	215	174	121	193	100	81
3	66	590	628	145	500	356	206	163	109	159	97	79
4	62	2150	542	140	1460	355	202	156	104	107	95	78
5	67	2380	494	140	2400	329	199	151	109	93	89	84
6	64	643	495	140	1650	334	223	148	188	87	127	81
7	60	363	438	135	1260	324	280	188	137	87	176	78
8	61	265	401	130	1040	253	210	158	147	121	134	75
9	60	254	367	130	800	310	199	142	134	2210	128	75
10	61	611	360	130	675	380	196	134	107	590	137	76
11	70	1480	640	160	560	723	212	132	165	322	228	74
12	66	2570	1310	145	490	505	195	128	254	1140	116	78
13	67	2060	912	140	430	709	185	127	192	808	96	76
14	86	1320	904	130	400	870	177	140	132	411	91	70
15	100	1050	636	125	370	1130	203	133	115	260	90	69
16	71	6440	460	130	340	786	200	127	110	219	114	69
17	62	4180	400	140	480	619	216	144	191	217	116	69
18	63	1220	340	140	1470	535	191	132	117	181	93	111
19	68	840	300	200	1760	585	175	121	105	164	91	147
20	87	651	260	1720	1630	488	172	145	99	173	88	86
21	128	520	240	795	1360	410	274	126	93	156	94	80
22	82	463	230	671	1120	383	315	118	89	139	90	79
23	72	407	210	560	866	363	278	117	93	127	107	87
24	133	351	200	470	727	335	231	117	91	121	160	194
25	196	317	190	430	627	310	214	110	84	119	91	671
26	87	1030	190	390	555	294	202	104	83	166	84	187
27	72	2740	180	350	524	294	190	176	143	126	84	122
28	66	4040	170	320	445	267	185	169	172	111	80	107
29	62	1840	160	300	---	255	275	122	163	349	74	97
30	62	1090	160	280	---	242	195	145	116	140	80	94
31	63	---	150	270	---	230	---	318	---	119	80	---
TOTAL	2406	42015	13683	9256	24449	13752	6438	4549	3916	9318	3337	3354
MFAN	77.6	1400	441	299	873	444	215	147	131	301	108	112
MAX	196	6440	1310	1720	2400	1130	315	318	254	2210	228	671
MIN	60	63	150	125	250	230	172	104	83	87	74	69
CFSM	.30	5.45	1.72	1.16	3.40	1.73	.84	.57	.51	1.17	.42	.44
IN.	.35	6.08	1.98	1.34	3.54	1.99	.93	.66	.57	1.35	.48	.49

CAL YR 1985 TOTAL 129192 MEAN 354 MAX 6440 MIN 60 CFSM 1.38 IN. 18.70
WTR YR 1986 TOTAL 136473 MEAN 374 MAX 6440 MIN 60 CFSM 1.45 IN. 19.76

03086000 OHIO RIVER AT SEWICKLEY, PA

LOCATION.--Lat 40°32'57", long 80°12'21", Allegheny County, Hydrologic Unit 05030101, near left bank 50 ft upstream from Dashiels Dam, 1.0 mi downstream from Narrows Run, 1.0 mi northwest of Sewickley, and 13.3 mi downstream from confluence of Allegheny and Monongahela Rivers.

DRAINAGE AREA.--19,500 mi², approximately.

PERIOD OF RECORD.--October 1933 to current year.

REVISED RECORDS.--WSP 1305: 1938-40 (adjusted monthly runoff). WSP 1435: 1934.

GAGE.--Water-stage recorder and fixed-crest concrete dam control. Datum of gage is 690.41 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 22, 1933 nonrecording gage, Nov. 22, 1933 to May 1981 water-stage recorder at site 1.5 mi upstream, at same datum.

REMARKS.--Records good except for estimated daily discharges, Jan. 12 to Feb. 13, which are fair. Some regulation by locks, and by many reservoirs above station. Combined capacity of reservoirs and lakes excluding that of Chautauqua Lake but including Lake Lynn and Deep Creek Reservoir and 15 smaller reservoirs, 2,773,000 acre-ft. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--53 years, 33,020 ft³/s, 23.00 in/yr, adjusted for storage May 1938 to September 1975.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 574,000 ft³/s, Mar. 18, 1936, gage height, 34.75 ft, from flood-mark in gage house; minimum, 1,800 ft³/s, Sept. 4, 1957, gage height, 2.60 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 239,000 ft³/s, Nov. 6, gage height, 14.56 ft; minimum daily, 4,870 ft³/s, Sept. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7380	7980	59100	18800	33600	62400	20200	30300	10200	25000	12100	5160
2	9710	8030	56200	21300	34200	47000	17800	28800	8750	36500	11600	5290
3	7320	12900	61000	19500	56400	39000	15400	23300	7990	50900	9380	5590
4	6640	35300	87300	22400	75600	37400	13500	17200	8580	47900	8020	7580
5	8190	125000	92100	19500	173000	31900	13100	15000	8180	36800	11000	7570
6	9080	205000	102000	21600	186000	28000	12700	14200	18600	28000	10300	7040
7	8050	132000	90200	20900	124000	27600	17100	17200	38500	19400	11600	5240
8	8790	93600	65200	17600	105000	28300	25800	16800	42000	13900	9950	4870
9	7620	71500	59300	17300	92600	21100	25700	20000	38700	32500	10400	6330
10	8250	61000	56200	15400	82100	28600	27100	16200	36100	41000	9870	5850
11	7790	70800	59300	16000	75700	51500	24200	13100	35300	35100	14100	5550
12	6580	88700	86100	15600	71700	81200	26000	8690	59800	32700	15000	6140
13	6250	90500	91600	17000	66500	67300	28800	11400	65500	29300	17500	6250
14	6080	78900	101000	16000	59100	72500	29900	10400	61100	30900	14600	5790
15	5340	92400	91300	13400	57600	108000	28500	10200	55900	32000	10000	5270
16	5640	114000	68800	13400	42400	125000	34300	8640	53800	27300	10700	6320
17	5820	150000	68700	14400	39200	93000	43400	11000	57300	23900	8830	6320
18	7630	114000	59500	16900	77900	92400	54000	8840	58600	24800	8170	5370
19	6380	89700	50100	25200	114000	80100	58800	7580	49500	20400	10500	7700
20	6250	85200	39800	66100	122000	71100	50300	13800	42500	41900	10700	5860
21	11600	71600	36100	124000	113000	73600	45700	17700	38500	56300	9980	6080
22	23500	69000	29700	92700	116000	70500	54900	30100	33100	54900	6480	6490
23	22800	67300	27000	88300	97900	62200	57200	29100	28600	46800	8280	6990
24	17300	71200	32300	86400	87900	50900	58200	22300	26400	42300	6560	11600
25	15200	59900	28600	77500	88600	44000	51800	18200	19000	37800	6750	16100
26	15100	56300	22800	68300	85000	39100	41100	13200	13500	32700	9880	19400
27	13000	123000	19400	60600	80000	35700	31000	14300	16200	28400	9030	16900
28	10000	120000	17900	53500	72800	30500	29300	15200	14400	24000	6820	21200
29	9800	75300	15000	43100	---	29900	32000	12800	17700	21500	7430	28500
30	9470	64500	12500	37300	---	25100	30200	17600	23300	17800	7520	25200
31	7690	---	17000	32700	---	20200	---	18900	---	14600	4940	---
TOTAL	300250	2504610	1703100	1172700	2429800	1675100	998000	512050	987600	1007300	307990	279550
MEAN	9685	83490	54940	37830	86780	54040	33270	16520	32920	32490	9935	9318
MAX	23500	205000	102000	124000	186000	125000	58800	30300	65500	56300	17500	28500
MIN	5340	7980	12500	13400	33600	20200	12700	7580	7990	13900	4940	4870
CAL YR 1985	TOTAL 13068800		MEAN 35800	MAX 205000		MIN 5340						
WTR YR 1986	TOTAL 13878000		MEAN 38020	MAX 205000		MIN 4870						

BEAVER RIVER BASIN

03101500 SHENANGO RIVER AT PYMATUNING DAM, PA

LOCATION.--Lat 41°29'53", long 80°27'37", Crawford County, Hydrologic Unit 05030102, on left bank 500 ft downstream from Sugar Run, 900 ft downstream from Pymatuning Dam, 1.5 mi northwest of Jamestown, and at mile 84.9.

DRAINAGE AREA.--167 mi².

PERIOD OF RECORD.--June 1934 to current year.

REVISED RECORDS.--WSP 823: 1934-36. WSP 1083: 1936 (M), 1937, 1940 (M), 1941-45. WSP 1335: 1940.

GAGE.--Water-stage recorder and concrete dam control. Datum of gage is 970.00 ft above National Geodetic Vertical Datum, adjustment of 1907.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since 1933 by Pymatuning Reservoir (station 03100500). Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--52 years, 207 ft³/s, 16.83 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,540 ft³/s, Sept. 4, 1937, gage height, 9.2 ft; minimum, 0.1 ft³/s, June 30 to July 3, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 892 ft³/s, Nov. 26, gage height, 6.84 ft; minimum daily, 17 ft³/s, May 12-14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	33	722	683	153	380	148	20	119	688	33	77
2	34	33	753	681	178	376	148	19	121	703	33	79
3	33	39	726	688	165	380	148	18	202	688	31	76
4	33	256	722	686	232	380	148	18	360	450	32	92
5	33	483	721	682	550	234	149	18	130	280	30	102
6	33	80	723	679	649	151	156	18	247	280	29	101
7	33	445	723	679	639	149	161	33	361	142	58	100
8	33	673	718	675	633	148	72	23	537	107	79	100
9	33	650	716	673	633	150	25	20	672	139	79	100
10	33	703	717	673	706	198	26	19	670	125	80	100
11	33	717	784	671	757	225	32	18	625	116	81	99
12	34	663	769	670	752	162	30	17	496	118	79	98
13	34	693	729	670	750	242	27	17	588	114	79	98
14	34	738	719	428	748	183	23	17	612	109	79	98
15	36	735	714	295	748	172	32	18	712	107	79	98
16	36	697	712	201	748	160	39	19	729	107	79	98
17	35	560	709	154	750	157	48	18	728	108	79	98
18	34	694	706	252	820	155	31	18	709	107	79	100
19	38	723	703	249	821	159	26	21	707	107	79	100
20	41	720	702	276	787	156	26	40	708	107	77	100
21	36	716	702	176	617	152	46	33	703	107	77	100
22	36	715	702	166	422	151	42	24	701	107	78	101
23	33	715	701	160	411	151	29	22	714	107	79	104
24	38	716	702	157	399	151	25	19	702	107	78	102
25	43	715	699	156	389	151	24	18	700	78	77	124
26	34	612	697	157	385	150	23	18	697	34	78	108
27	34	482	694	155	384	151	22	51	694	33	78	102
28	33	733	693	154	381	151	20	124	694	32	77	101
29	33	738	692	154	---	149	21	121	691	32	77	100
30	33	722	690	154	---	148	20	120	688	33	77	108
31	33	---	687	152	---	148	---	119	---	32	77	---
TOTAL	1072	17199	22147	12406	15607	5970	1767	1078	17017	5404	2127	2964
MEAN	34.6	573	714	400	557	193	58.9	34.8	567	174	68.6	98.8
MAX	43	738	784	688	821	380	161	124	729	703	81	124
MIN	33	33	687	152	153	148	20	17	119	32	29	76

CAL YR 1985 TOTAL 93986 MEAN 257 MAX 784 MIN 12
WTR YR 1986 TOTAL 104758 MEAN 287 MAX 821 MIN 17

BEAVER RIVER BASIN

03102500 LITTLE SHENANGO RIVER AT GREENVILLE, PA

LOCATION.--Lat 41°25'19", long 80°22'35", Mercer County, Hydrologic Unit 05030102, on left bank 1,700 ft downstream from Williamson Crossing bridge, 1 mi northeast of Greenville, and 2.0 mi upstream from mouth.

DRAINAGE AREA.--104 mi².

PERIOD OF RECORD.--October 1913 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 743: Drainage area. WSP 1305: 1914, 1922-23, 1926-29. WSP 1335: 1923 (m).

GAGE.--Water-stage recorder. Datum of gage is 953.46 ft above National Geodetic Vertical Datum, adjustment of 1912. Prior to Nov. 4, 1915, nonrecording gage; Nov. 4, 1915, to Sept. 30, 1918, water-stage recorder; Nov. 7, 1919, to Aug. 31, 1923, and Nov. 19, 1925, to June 20, 1934, nonrecording gage at site 1 mi downstream at datum 8.96 ft lower.

REMARKS.--Records good except for estimated daily discharges, Dec. 19 to Jan. 20, Jan. 25 to Feb. 5, Feb. 14-20, and Mar. 8-10, which are fair. Several observations of water temperature were made during the year. Corps of Engineers telemeter at station.

AVERAGE DISCHARGE.--73 years, 143 ft³/s, 18.67 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,540 ft³/s, Jan. 22, 1959, gage height, 14.30 ft, from rating curve extended above 3,200 ft³/s on basis of slope-area measurement at gage height 12.26 ft; minimum, 2.9 ft³/s, July 31, 1934, gage height, 0.58 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 5	1015	*3640	*9.63	June 12	1615	1760	6.51
Feb. 5	1645	1520	6.04				

Minimum discharge, 10 ft³/s, Sept. 11, gage height, 0.97 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	32	265	64	70	94	59	63	37	40	21	13
2	20	33	309	62	68	89	55	61	44	127	22	13
3	20	90	265	66	90	87	52	55	40	133	21	12
4	19	650	216	72	200	92	51	52	33	70	20	12
5	18	3070	197	80	1000	96	56	47	119	46	18	15
6	19	1940	204	78	903	99	80	46	268	39	17	16
7	19	952	223	74	363	86	172	176	529	32	27	13
8	19	695	202	68	251	80	122	170	456	28	40	11
9	18	454	184	66	197	72	94	114	244	223	27	11
10	17	538	172	62	162	130	88	80	130	768	20	11
11	17	1020	372	58	131	530	112	65	251	316	43	11
12	17	796	778	56	115	305	129	55	1410	184	57	14
13	19	635	489	54	102	480	121	48	1160	172	28	16
14	21	537	303	54	92	600	97	44	393	117	21	13
15	29	514	217	52	76	384	92	42	258	83	18	12
16	32	575	208	50	82	270	133	50	289	70	20	12
17	25	1180	163	50	80	206	263	55	422	69	30	11
18	21	649	132	200	180	168	204	41	276	65	24	13
19	24	327	120	500	440	175	135	89	158	54	20	18
20	66	249	105	1050	720	162	113	238	145	45	18	18
21	48	192	94	709	603	120	187	188	110	39	16	15
22	38	159	88	349	566	101	228	133	84	36	16	17
23	32	159	84	253	344	100	164	105	138	30	15	50
24	62	132	80	174	246	94	122	82	101	27	18	87
25	162	114	78	130	187	85	99	66	73	25	17	163
26	90	299	76	110	141	78	90	51	59	25	15	226
27	61	1150	74	94	130	88	81	55	50	32	17	186
28	47	964	72	86	103	88	73	107	47	32	18	117
29	39	713	70	80	---	77	71	80	45	25	16	62
30	36	361	68	76	---	70	66	55	41	23	14	87
31	35	---	66	72	---	63	---	43	---	22	13	---
TOTAL	1109	19179	5974	4949	7642	5169	3409	2556	7410	2997	687	1275
MEAN	35.8	639	193	160	273	167	114	82.5	247	96.7	22.2	42.5
MAX	162	3070	778	1050	1000	600	263	238	1410	768	57	226
MIN	17	32	66	50	68	63	51	41	33	22	13	11
CFSM	.34	6.15	1.85	1.54	2.62	1.60	1.09	.79	2.37	.93	.21	.41
IN.	.40	6.86	2.14	1.77	2.73	1.85	1.22	.91	2.65	1.07	.25	.46

CAL YR 1985 TOTAL 63636 MEAN 174 MAX 3070 MIN 14 CFSM 1.68 IN. 22.76
WTR YR 1986 TOTAL 62356 MEAN 171 MAX 3070 MIN 11 CFSM 1.64 IN. 22.31

BEAVER RIVER BASIN

145

03102850 SHENANGO RIVER NEAR TRANSFER, PA

LOCATION.--Lat 41°21'13", long 80°23'53", Mercer County, Hydrologic Unit 05030102, on left bank at downstream side of covered wooden bridge, 200 ft downstream from highway bridge, 0.6 mi downstream from Big Run, 2.5 mi northeast of Transfer, and at mile 71.8.

DRAINAGE AREA.--337 mi².

PERIOD OF RECORD.--October 1965 to current year.

REVISED RECORDS.--WDR PA-71-1: 1966, 1967.

GAGE.--Water-stage recorder. Datum of gage is 913.94 ft above National Geodetic Vertical Datum of 1929 (Pennsylvania Department of Transportation bench mark).

REMARKS.--Records good except for estimated daily discharges, Dec. 19-31, Jan. 8, 9, 15-18, Jan. 26 to Feb. 3, and Mar. 7, 8, which are fair. Flow regulated since 1933 by Pymatuning Reservoir (station 03100500) 13 mi upstream and by mills above station. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--21 years, 481 ft³/s, 19.38 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,390 ft³/s, Nov. 5, 1985, gage height, 10.47 ft; minimum, 33 ft³/s, July 20, 21, 22, 1968, gage height, 1.71 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,390 ft³/s, Nov. 5, gage height, 10.47 ft; minimum daily, 43 ft³/s, Aug. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58	72	1150	819	220	472	236	126	256	714	47	67
2	58	75	1380	814	210	477	230	119	307	965	55	66
3	56	189	1160	830	210	477	225	110	268	849	50	66
4	55	1770	1060	867	944	490	229	105	542	637	45	76
5	54	5120	1030	872	2770	437	236	99	508	310	44	126
6	56	3060	1070	847	1900	322	287	105	868	290	43	116
7	55	1500	1100	819	1110	280	411	343	1420	233	135	110
8	55	1700	1050	780	931	250	297	293	1120	112	142	109
9	53	1270	1010	780	853	298	173	200	991	816	111	108
10	54	1720	1000	795	835	562	172	156	846	1090	112	107
11	55	2540	1760	792	881	1110	217	137	1670	545	183	109
12	57	1940	2180	792	854	638	230	123	3840	389	147	136
13	63	1710	1530	795	824	1100	207	112	2200	355	102	126
14	66	1650	1200	656	816	1040	175	108	1090	249	88	122
15	84	1580	1040	400	828	759	193	107	1010	190	89	116
16	83	2140	1000	300	807	559	273	128	1230	175	100	119
17	71	2450	965	260	844	447	464	143	1310	185	94	116
18	67	1630	922	600	1510	388	326	123	1020	172	83	137
19	79	1240	880	1570	2180	422	229	241	881	150	76	139
20	136	1100	860	2190	1930	387	205	546	876	138	73	136
21	101	1000	860	1080	1830	328	345	419	820	146	70	130
22	85	966	840	659	1210	304	403	296	784	158	68	163
23	76	962	820	516	890	302	271	238	906	147	71	273
24	163	931	820	394	741	290	213	194	813	144	76	294
25	335	900	800	360	645	276	182	162	767	138	72	587
26	154	1640	780	310	576	267	167	141	743	71	72	527
27	108	2430	780	290	558	290	151	178	732	64	81	397
28	90	2370	760	270	507	283	138	394	731	56	73	297
29	81	1840	760	250	---	267	143	339	720	85	71	202
30	77	1310	760	240	---	254	129	293	710	57	69	232
31	75	---	800	230	---	243	---	270	---	51	66	---
TOTAL	2660	48805	32127	21177	28414	14019	7157	6348	29979	9681	2608	5309
MEAN	85.8	1627	1036	683	1015	452	239	205	999	312	84.1	177
MAX	335	5120	2180	2190	2770	1110	464	546	3840	1090	183	587
MIN	53	72	760	230	210	243	129	99	256	51	43	66

CAL YR 1985 TOTAL 203301 MEAN 557 MAX 5120 MIN 46
WTR YR 1986 TOTAL 208284 MEAN 571 MAX 5120 MIN 43

BEAVER RIVER BASIN

03103500 SHENANGO RIVER AT SHARPSVILLE, PA

LOCATION.--Lat 41°15'58", long 80°28'22", Mercer County, Hydrologic Unit 05030102, on left bank 800 ft upstream from double highway bridge at Sharpsville, 0.7 mi downstream from Shenango River Dam, 1.8 mi upstream from McCullough Run, and at mile 55.1.

DRAINAGE AREA.--584 mi².

PERIOD OF RECORD.--March 1938 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 2107: 1970 Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 861.57 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Pymatuning Reservoir (station 03100500) since 1933 and by Shenango River Lake 0.7 mi upstream, since 1967. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

COOPERATION.--Three discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--48 years, 759 ft³/s, 17.69 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,700 ft³/s, Jan. 22, 1959, gage height, 15.97 ft; minimum daily, 43 ft³/s, Sept. 3, 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 26, 1913, reached a stage of 19.3 ft, from Pymatuning survey profile map (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,500 ft³/s, Dec. 5, gage height, 6.23 ft; minimum daily, 134 ft³/s, Mar. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	212	676	1920	1450	820	2060	138	215	305	2430	208	255
2	211	421	2210	1260	813	1550	139	215	305	1780	207	253
3	211	375	2660	1130	822	1110	154	215	295	1910	208	240
4	211	614	3030	1120	838	866	171	215	275	2040	207	217
5	211	972	3310	1130	1360	859	171	215	348	2040	205	217
6	211	1070	3460	1130	1810	855	171	215	470	2040	205	219
7	211	1710	3410	1130	1840	756	172	212	530	1760	188	219
8	211	2230	3360	1120	2270	652	174	212	705	1220	173	219
9	211	2450	3320	957	2490	647	175	212	1200	593	184	219
10	211	2670	3260	796	2450	645	175	215	1400	693	206	217
11	211	2690	2720	799	2070	667	176	215	749	1140	223	218
12	211	2530	2180	804	1460	686	176	212	518	1370	223	217
13	211	2240	2400	810	1450	707	176	191	863	1490	223	215
14	211	2250	2660	810	1440	735	176	174	1410	1580	223	215
15	213	2270	2940	808	1430	880	177	174	1730	1590	221	215
16	215	2140	3230	687	1420	1020	177	174	1830	1570	221	215
17	219	1900	3190	473	1400	1490	177	174	1850	1570	219	187
18	218	1920	3150	432	1410	1700	178	174	2140	1420	223	174
19	218	2190	3100	453	1460	1560	180	174	2960	913	231	212
20	219	2380	3270	606	1530	1770	180	174	3290	266	230	212
21	222	2370	3340	1150	1830	1880	180	174	3400	235	229	212
22	220	2360	3240	2010	2130	1650	183	324	3390	235	187	212
23	219	2560	3150	2260	2140	1190	236	920	3380	235	202	214
24	252	2770	3050	2270	2430	648	350	1530	3300	233	209	239
25	367	2740	2960	2230	2580	413	416	1530	3280	231	217	278
26	672	2720	2850	2170	2530	316	350	1050	3260	231	239	494
27	912	1450	2420	2110	2470	258	285	572	3220	231	253	864
28	896	529	1930	1700	2400	184	290	572	3160	215	251	940
29	883	1290	1880	1150	---	134	300	551	3100	187	243	858
30	869	1910	1730	910	---	135	312	530	3080	208	255	660
31	853	---	1520	831	---	135	---	418	---	208	255	---
TOTAL	10622	56397	86850	36696	49093	28158	6315	12148	55743	31864	6768	9326
MEAN	343	1880	2802	1184	1753	908	210	392	1858	1028	218	311
MAX	912	2770	3460	2270	2580	2060	416	1530	3400	2430	255	940
MIN	211	375	1520	432	813	134	138	174	275	187	173	174

CAL YR 1985 TOTAL 359482 MEAN 985 MAX 3460 MIN 179

WTR YR 1986 TOTAL 389980 MEAN 1068 MAX 3460 MIN 134

03105500 BEAVER RIVER AT WAMPUM, PA

LOCATION.--Lat 40°53'19", long 80°20'14", Lawrence County, Hydrologic Unit 05030104, on right bank at downstream side of bridge on State Highway 288 at Wampum, 2.9 mi upstream from Connoquenessing Creek, and at mile 15.4.

DRAINAGE AREA.--2,235 mi².

PERIOD OF RECORD.--July 1914 to September 1918, August 1932 to current year. Monthly discharge only for some periods, published in WSP 1305. Published as "at Newport" 1914-18.

REVISED RECORDS.--WSP 728: Drainage area. WSP 1385: 1933-40, 1946, 1951-52. WSP 1725: 1960 (adjusted runoff). WDR PA-85-3: 1984 (M).

GAGE.--Water-stage recorder. Datum of gage is 736.24 ft above National Geodetic Vertical Datum of 1929 (Penn Central Railroad bench mark). Prior to Sept. 20, 1914, nonrecording gage at site 500 ft downstream at datum 0.76 ft lower. Oct. 1, 1914, to Sept. 30, 1918, nonrecording gage at site 1 mi upstream at datum 0.84 ft higher. Aug. 26, 1932, to Nov. 16, 1938, nonrecording gage at present site and datum. Since 1932, auxiliary gage 10 mi downstream at Beaver Falls (station 03107500) which is used during periods of backwater from Connoquenessing Creek.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since 1942 by Berlin Lake, since 1916 by Milton Reservoir, since 1966 by Michael J. Kirwan Reservoir, since 1943 by Mosquito Creek Lake, since 1929 by Meander Creek Reservoir, since 1933 by Pymatuning Reservoir, and since 1967 by Shenango River Lake 40 mi upstream. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--58 years (1914-18, 1932-86), 2,491 ft³/s, 15.14 in/yr, adjusted for storage from 1932-75.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 50,100 ft³/s, May 28, 1946, from slope-rating curve extended above 28,000 ft³/s on basis of contracted-opening measurement at gage height 21.44 ft; maximum gage height, 24.86 ft, Jan. 22, 1959 (backwater from Connoquenessing Creek); minimum discharge observed, 74 ft³/s, July 30, 1933, gage height, 1.70 ft; minimum daily, 97 ft³/s, July 22, Aug. 23, 1933.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1912, 29.9 ft, Mar. 26, 1913, from floodmark, discharge, about 87,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 21,000 ft³/s, June 12, gage height, 13.83 ft; minimum daily, 677 ft³/s, Oct. 9, 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	857	1560	6020	2960	1970	4580	1330	1180	1190	3840	1000	793
2	866	1320	6740	2870	3230	3880	1240	1110	1060	10500	1020	792
3	844	1620	6770	2680	4080	3280	1180	1060	1040	10100	965	794
4	837	4090	6600	2810	5310	2770	1160	1020	1010	5290	876	854
5	753	12800	6600	2890	13000	2650	1180	995	5000	3660	847	869
6	695	11200	6820	2820	11000	2670	1290	974	4500	3000	827	836
7	679	8300	7180	2660	7180	2620	1440	3160	6680	2740	1370	797
8	681	6770	7180	2500	5360	2180	1440	2910	4590	2390	1060	791
9	677	5740	6980	2360	5000	2160	1360	1860	3200	6650	876	786
10	677	6760	6890	2000	4730	2890	1280	1260	2910	8140	844	895
11	707	11600	11000	1890	4340	5100	1370	1020	2420	4790	1300	984
12	698	11600	16300	1890	3570	4640	1460	914	15400	4130	1030	1090
13	713	10500	12400	1950	3220	5570	1430	872	16100	3370	917	999
14	768	9240	8820	1870	3150	7300	1330	838	7070	3000	874	929
15	841	11100	7160	1840	3140	6560	1310	797	4460	2570	879	905
16	840	13100	6890	1790	3070	6250	1500	835	4720	2460	926	912
17	865	18500	6800	1660	3220	5010	1760	918	5030	2430	928	889
18	851	11400	6520	2290	5090	4790	1850	911	4310	2380	894	1010
19	844	7320	6190	4520	7690	4540	1630	1120	4350	2300	870	1320
20	873	6350	6050	9190	8660	4560	1430	2860	4970	1450	855	1060
21	836	5840	6350	7190	8400	4460	1590	4260	4870	1140	844	996
22	845	5560	6130	5740	9100	4000	2020	2930	4670	1070	831	1110
23	849	5410	6060	5300	7840	3310	2150	1920	5870	1040	803	1740
24	915	5590	5840	5010	6360	2780	1760	2320	6060	1020	857	2440
25	1040	5600	5630	4690	5860	2240	1590	2400	4900	971	813	2350
26	1110	6170	5230	4450	5440	1940	1500	2260	4200	1020	795	3540
27	1510	9580	5030	3950	5210	1950	1350	1620	3960	991	871	3250
28	1610	9260	3920	3480	4920	1850	1270	2260	4160	941	888	3090
29	1580	7610	3390	2870	---	1660	1330	1890	4030	1810	834	2480
30	1570	6590	3290	2470	---	1490	1260	1600	3920	1630	803	2000
31	1590	---	3120	2070	---	1400	---	1430	---	1140	802	---
TOTAL	29021	238080	209900	102660	159140	111080	43790	51504	146650	97963	28299	41301
MEAN	936	7936	6771	3312	5684	3583	1460	1661	4888	3160	913	1377
MAX	1610	18500	16300	9190	13000	7300	2150	4260	16100	10500	1370	3540
MIN	677	1320	3120	1660	1970	1400	1160	797	1010	941	795	786

CAL YR 1985 TOTAL 1211150 MEAN 3318 MAX 21000 MIN 677
WTR YR 1986 TOTAL 1259390 MEAN 3450 MAX 18500 MIN 677

BEAVER RIVER BASIN
03106000 CONNOQUENESSING CREEK NEAR ZELIENOPLE, PA

LOCATION.--Lat 40°49'01", long 80°14'33", Beaver County, Hydrologic Unit 05030105, on right bank at downstream side of highway bridge at Hazen, 0.3 mi upstream from Brush Creek, 4 mi southeast of Ellwood City, and 6.0 mi west of Zelienople.

DRAINAGE AREA.--356 mi².

PERIOD OF RECORD.--October 1919 to current year. Monthly discharge only for some periods, published in WSP 1305. June 1915 to September 1919 (gage heights and discharge measurements only) in reports of Water Supply Commission of Pennsylvania. Published as "at Hazen" 1915-16, 1929-63, and as "near Hazen" 1917-28.

REVISED RECORDS.--WSP 743: Drainage area. WSP 893: 1937-38, 1939 (M). WSP 1305: 1922-26, 1928. WSP 1335: 1920-21, 1924 (M). WSP 1385: 1952.

GAGE.--Water-stage recorder. Datum of gage is 852.31 ft above National Geodetic Vertical Datum, adjustment of 1912. Prior to June 23, 1941, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, Dec. 18 to Jan. 20, Jan. 26 to Feb. 3, and Feb. 14-18, which are fair. Some regulation by mills above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--67 years, 466 ft³/s, 17.78 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,000 ft³/s, June 29, 1924, gage height, 16.66 ft; minimum observed, 6.0 ft³/s, July 21-23, 1936; minimum gage height, 0.76 ft, Aug. 8, Sept. 16, 17, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 17	0230	*9110	*11.66	Jan. 20	---	---	ice jam

Minimum discharge, 18 ft³/s, Sept. 17, gage height, 1.06 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	44	1200	170	200	424	201	242	117	87	83	34
2	36	48	1110	165	400	383	190	228	100	1420	78	33
3	39	150	823	160	700	360	177	198	87	1090	79	33
4	42	1320	672	155	1430	347	174	178	78	452	69	33
5	40	2600	596	150	4350	343	179	168	79	268	62	33
6	40	1080	598	145	2610	324	224	163	628	194	58	31
7	49	659	592	140	1620	315	296	252	481	150	60	30
8	44	551	527	135	1170	223	268	244	297	169	63	28
9	37	392	474	135	885	276	242	179	201	1810	84	24
10	34	548	461	130	747	387	229	160	147	1770	117	23
11	34	1960	1490	140	653	751	260	148	146	1100	255	23
12	33	2680	3840	155	562	622	274	139	672	1160	146	26
13	36	2690	2280	165	488	678	241	130	646	1350	88	28
14	41	1810	1640	180	420	844	218	126	326	1110	71	30
15	58	1980	1080	190	380	924	218	127	292	793	64	28
16	82	4070	861	210	360	842	350	123	218	537	81	25
17	67	7250	756	220	340	740	623	181	209	428	113	22
18	50	2610	620	240	900	649	616	378	175	314	92	22
19	45	1460	500	700	2110	650	502	241	132	249	91	28
20	43	1030	420	3750	2200	597	447	194	167	327	64	45
21	52	794	380	2480	1910	448	586	236	201	671	54	45
22	58	665	340	1530	1920	381	605	167	124	293	50	39
23	56	616	300	1230	1420	366	497	149	111	200	49	90
24	65	513	270	941	1070	338	424	141	107	159	75	185
25	115	430	240	797	852	300	367	126	91	141	69	123
26	88	747	230	600	700	281	338	113	78	133	52	109
27	58	2440	220	440	639	285	304	134	71	134	47	93
28	50	3520	200	350	527	265	276	354	74	117	43	86
29	45	3060	195	290	---	244	329	198	79	106	41	72
30	43	1720	190	230	---	230	268	145	108	100	38	59
31	43	---	180	210	---	215	---	128	---	91	36	---
TOTAL	1558	49437	23285	16533	31563	14032	9923	5690	6242	16923	2372	1480
MEAN	50.3	1648	751	533	1127	453	331	184	208	546	76.5	49.3
MAX	115	7250	3840	3750	4350	924	623	378	672	1810	255	185
MIN	33	44	180	130	200	215	174	113	71	87	36	22
CFSM	.14	4.63	2.11	1.50	3.17	1.27	.93	.52	.58	1.53	.21	.14
IN.	.16	5.17	2.43	1.73	3.30	1.47	1.04	.59	.65	1.77	.25	.15

CAL YR 1985 TOTAL 209096 MEAN 573 MAX 7250 MIN 30 CFSM 1.61 IN. 21.85
WTR YR 1986 TOTAL 179038 MEAN 491 MAX 7250 MIN 22 CFSM 1.38 IN. 18.71

BEAVER RIVER BASIN

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03106300 MUDDY CREEK NEAR PORTERSVILLE, PA

LOCATION.--Lat 40°57'47", long 80°07'31", Butler County, Hydrologic Unit 05030105, on left bank 1,000 ft downstream from Lake Arthur Dam, 0.2 mi north of U. S. Highway 422, and 3 mi north of Portersville.

DRAINAGE AREA.--51.2 mi².

PERIOD OF RECORD.--March 1963 to current year.

REVISED RECORDS.--WDR PA-79-3: 1978.

GAGE.--Water-stage recorder. Datum of gage is 1,160.91 ft above National Geodetic Vertical Datum of 1929 (Pennsylvania Department of Environmental Resources bench mark). Prior to Apr. 8, 1963 nonrecording gage at site 2,000 ft downstream at different datum. Apr. 8 to May 1, 1963, nonrecording gage and May 2, 1963 to Sept. 30, 1980, water stage recorder at site 1,000 ft downstream at datum 5.71 ft lower.

REMARKS.--No estimated daily discharges. Records good. Some regulation from October 1966 to May 1969 and completely regulated thereafter by Lake Arthur (station 03106280) 1,000 ft upstream. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--23 years, 75.0 ft³/s, 19.89 in/yr, adjusted for storage since May 1969.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,640 ft³/s, Mar. 10, 1964, gage height, 8.18 ft, from rating curve extended above 820 ft³/s on basis of slope-area measurement of peak flow; minimum, 0.4 ft³/s, Sept. 17, 1966; minimum gage height, 1.09 ft, Sept. 26, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 475 ft³/s, Nov. 17, gage height, 5.45 ft; minimum daily, 1.3 ft³/s, Mar. 28, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	22	274	208	218	220	1.7	4.5	2.5	2.5	30	2.7
2	21	23	240	230	218	219	2.6	4.7	2.6	24	30	2.4
3	20	24	232	230	218	152	2.1	4.5	2.6	31	28	2.9
4	19	27	218	230	221	72	2.5	4.2	2.6	37	25	3.1
5	20	25	200	230	222	72	2.8	3.8	2.8	36	23	3.7
6	21	14	178	230	221	72	4.8	4.7	2.8	34	20	3.7
7	21	9.9	164	230	221	72	3.8	3.9	2.5	31	18	3.8
8	20	15	156	230	221	72	3.9	2.3	2.5	34	17	3.9
9	21	18	146	230	220	72	3.8	2.3	1.9	78	21	4.0
10	21	32	172	172	219	72	2.9	2.6	1.9	108	22	4.2
11	23	77	190	65	219	73	1.9	2.5	3.4	131	22	4.6
12	23	122	240	65	158	71	1.6	2.5	8.0	143	21	4.6
13	24	166	257	41	75	72	1.6	2.6	3.9	157	18	4.5
14	24	203	252	23	75	101	1.6	2.5	3.7	176	16	4.2
15	26	249	246	22	75	151	2.2	2.4	3.7	174	15	3.9
16	28	372	230	21	74	150	2.6	2.5	3.8	165	23	4.0
17	29	454	215	21	75	150	3.1	2.3	4.0	151	24	4.2
18	28	461	191	22	76	150	2.6	2.5	3.9	135	22	4.5
19	29	412	178	68	116	148	2.2	2.7	3.9	124	20	4.5
20	30	352	170	198	142	145	2.4	2.9	4.0	114	19	4.0
21	29	301	160	223	142	99	3.1	3.1	3.8	99	16	3.4
22	29	265	182	223	142	21	2.6	2.9	3.7	84	13	4.6
23	29	231	176	222	142	22	2.5	2.9	2.7	73	11	5.0
24	29	200	170	221	193	22	2.3	2.5	1.6	65	8.7	5.0
25	29	205	166	221	221	22	2.3	2.6	1.7	58	7.2	5.6
26	29	224	166	220	221	22	2.3	2.5	2.0	54	6.2	6.3
27	26	242	208	220	220	11	2.8	3.3	2.1	48	4.7	11
28	23	287	208	220	220	1.3	3.9	2.6	2.3	45	4.1	12
29	21	294	208	219	---	1.5	4.4	2.2	2.2	40	3.6	12
30	21	286	208	219	---	1.3	4.4	2.3	2.1	35	3.5	14
31	21	---	208	218	---	1.5	---	2.3	---	31	3.3	---
TOTAL	755	5612.9	6209	5192	4785	2530.6	83.3	92.1	91.2	2517.5	515.3	156.3
MEAN	24.4	187	200	167	171	81.6	2.78	2.97	3.04	81.2	16.6	5.21
MAX	30	461	274	230	222	220	4.8	4.7	8.0	176	30	14
MIN	19	9.9	146	21	74	1.3	1.6	2.2	1.6	2.5	3.3	2.4

CAL YR 1985 TOTAL 35143.8 MEAN 96.3 MAX 531 MIN 5.7
WTR YR 1986 TOTAL 28540.0 MEAN 78.2 MAX 461 MIN 1.3

BEAVER RIVER BASIN
03106500 SLIPPERY ROCK CREEK AT WURTEMBERG, PA

LOCATION.--Lat 40°53'02", long 80°14'02", Lawrence County, Hydrologic Unit 05030105, on left bank at downstream side of highway bridge at Camp Allegheny, 2 mi north of Wurtemberg, and 2.8 mi upstream from mouth.

DRAINAGE AREA.--398 mi².

PERIOD OF RECORD.--October 1911 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 743: Drainage area. WSP 1305: 1914-18, 1920-22, 1923-24 (M), 1925-28, 1930. WSP 1385: 1932, 1935, 1936 (M), 1937-39. WSP 1625: 1955.

GAGE.--Water-stage recorder. Datum of gage is 832.06 ft above National Geodetic Vertical Datum of 1929. Jan. 1, 1912, to Sept. 30, 1922, nonrecording gage at site 1.5 mi downstream at datum 13.77 ft lower and Oct. 1, 1922, to Sept. 30, 1940, nonrecording gage at site 2 mi downstream at datum 18.92 ft lower.

REMARKS.--Records good except for estimated daily discharges, Dec. 20 to Jan. 20, Jan. 26 to Feb. 5, and Feb. 14-19, which are fair. Some regulation since May 1969 by Lake Arthur (station 03106280) 13 mi upstream. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--75 years, 571 ft³/s, 19.48 in/yr, adjusted for storage since May 1969.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,000 ft³/s, Jan. 25, 1937, gage height, 12.05 ft, from flood-mark, site and datum then in use, from rating curve extended above 14,000 ft³/s; minimum observed, 16 ft³/s, Sept. 13, 1932.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 16	2230	6020	6.54	Feb. 5	1930	4630	5.80
Dec. 12	0200	4100	5.48	June 13	0300	*6590	*6.84
Jan. 20	2200	3640	5.18				

Minimum discharge, 49 ft³/s, Sept. 18, gage height, 0.43 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	94	103	1300	270	290	696	289	350	148	198	177	73
2	94	107	1270	260	520	678	275	348	134	2210	217	71
3	92	172	1100	250	1000	637	260	330	128	2650	180	67
4	94	1060	914	240	1600	524	258	315	123	928	164	70
5	94	3240	814	230	3400	532	266	304	194	628	151	70
6	96	2380	795	230	3390	527	403	300	905	379	139	77
7	96	1120	820	220	1900	484	659	731	704	291	138	75
8	95	806	773	210	1400	399	550	807	724	281	142	69
9	91	559	725	210	1140	474	444	485	379	1690	153	64
10	88	921	769	200	992	678	408	390	245	2220	142	62
11	90	3190	2250	190	873	1560	454	350	228	1340	189	59
12	90	3060	3720	200	773	1160	479	323	3870	1050	182	62
13	92	2800	2520	220	570	1020	421	303	4670	871	144	65
14	97	2410	1740	230	520	1300	369	292	1380	839	122	62
15	106	2710	1250	260	470	1200	365	289	777	641	120	59
16	115	3880	1070	270	430	1040	732	294	539	552	138	56
17	113	5570	913	290	470	864	1100	308	488	552	142	54
18	105	3400	755	310	900	768	946	282	427	476	184	55
19	101	1960	638	800	1900	754	693	277	315	431	156	76
20	101	1440	560	2400	2300	712	595	264	319	389	127	86
21	100	1130	490	2980	2080	592	727	255	292	454	109	87
22	102	951	440	1780	2130	428	801	234	231	416	100	100
23	101	873	410	1380	1570	421	762	215	775	334	97	170
24	112	756	380	1080	1250	408	555	202	756	291	113	516
25	155	675	360	923	1090	382	420	187	383	268	138	417
26	157	870	340	720	931	365	394	172	344	267	112	747
27	128	2050	320	600	883	405	375	182	290	280	98	440
28	111	2580	310	490	789	415	359	309	224	245	95	256
29	102	2240	290	430	---	360	391	266	216	217	88	188
30	100	1660	280	360	---	332	362	190	209	198	82	159
31	102	---	270	320	---	309	---	164	---	187	76	---
TOTAL	3214	54673	28586	18553	35561	20424	15112	9718	20397	21773	4215	4412
MEAN	104	1822	922	598	1270	659	504	313	680	702	136	147
MAX	157	5570	3720	2980	3400	1560	1100	807	4670	2650	217	747
MIN	88	103	270	190	290	309	258	164	123	187	76	54
MEAN†	84.5	1906	840	533	1288	648	558	328	700	723	122	153
CFSM†	.21	4.79	2.11	1.34	3.24	1.63	1.40	.82	1.76	1.82	.31	.38
IN.†	.24	5.34	2.43	1.54	3.37	1.88	1.56	.94	1.96	2.10	.36	.42

CAL YR 1985 TOTAL 249499 MEAN 684 MAX 6670 MIN 77 MEAN† 679 CFSM† 1.71 IN.† 23.27
WTR YR 1986 TOTAL 236638 MEAN 648 MAX 5570 MIN 54 MEAN† 650 CFSM† 1.63 IN.† 22.14

† Adjusted for change in reservoir contents.

BEAVER RIVER BASIN

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03107500 BEAVER RIVER AT BEAVER FALLS, PA
(National stream quality accounting network)

LOCATION.--Lat 40°45'48", long 80°18'55", Beaver County, Hydrologic Unit 05030104, on left bank at Beaver Falls, 200 ft upstream from pumping plant of Beaver Falls Municipal Authority, 7.0 mi downstream from Connoquenessing Creek, and at mile 5.5. Water-quality sampling site 0.25 mi upstream.

DRAINAGE AREA.--3,106 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1935 to current year (fragmentary records only prior to October 1956). Gage-height records collected at same site since 1908 are contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 1725: 1960 (adjusted runoff).

GAGE.--Water-stage recorder and concrete dam control. Datum of gage is 727.48 ft above National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to Dec. 3, 1941, nonrecording gage at site 200 ft downstream at same datum.

REMARKS.--No estimated daily discharges. Records good above 2,000 ft³/s and fair below except those below 1,200 ft³/s which are poor. Pumpage from gage pool, averaging 3.4 ft³/s in 1935 and 6.0 ft³/s at present, for local water supply returns to river 2 mi downstream; information furnished by Beaver Falls Municipal Authority. Flow regulated since 1942 by Berlin Lake, since 1916 by Milton Reservoir, since 1966 by Michael J. Kirwan Reservoir, since 1943 by Mosquito Creek Lake, since 1929 by Meander Creek Reservoir, since 1933 by Pymatuning Reservoir, since 1967 by Shenango River Lake, all over 50 mi upstream, and since 1969 by Lake Arthur 29 mi upstream. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--30 years, (1956-86), 3,754 ft³/s, 16.41 in/yr, adjusted for storage 1957-75.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 69,900 ft³/s, Jan. 22, 1959, gage height, 14.42 ft; minimum not determined.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 27, 1913, reached a stage of 17.4 ft, discharge, 103,000 ft³/s, from rating curve extended above 60,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 31,300 ft³/s, Nov. 17, gage height, 10.15 ft; minimum daily, 802 ft³/s, Sept. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1000	1950	9030	3970	3170	5770	1900	1710	1420	4330	1460	875
2	1000	1700	9410	3770	5030	5040	1790	1610	1220	11300	1490	868
3	1000	1900	8940	3560	6620	4430	1700	1520	1160	15300	1410	857
4	1050	5500	8270	3750	8320	3820	1660	1430	1130	7390	1280	906
5	960	17700	8070	3890	20600	3700	1690	1370	4620	4990	1200	948
6	940	15300	8230	3770	17400	3700	1920	1340	5900	4100	1150	920
7	930	10900	8620	3510	11500	3590	2430	3730	7570	3620	1650	871
8	900	8460	8540	3260	8330	2940	2310	4050	5720	3190	1460	833
9	890	7000	8220	3110	7330	3070	2070	2620	3900	8300	1210	802
10	880	7980	8140	2820	6700	4010	1930	1880	3260	13300	1190	875
11	900	16600	13900	2570	6070	7350	2080	1580	2780	7630	1820	1020
12	910	17200	22700	2560	5090	6670	2230	1410	16100	6560	1550	1110
13	930	16700	17700	2650	4460	7320	2130	1330	20700	5740	1260	1090
14	980	14000	13200	2480	4300	9770	1930	1290	9730	5270	1150	978
15	1080	16100	10100	2390	4380	8850	1900	1240	5840	4370	1130	933
16	1080	19300	9160	2320	4150	8310	2420	1260	5570	3840	1190	923
17	1080	28700	8730	2240	4400	6810	3380	1360	5820	3720	1260	883
18	1080	18000	8100	3080	7490	6350	3460	1610	5120	3520	1250	893
19	1100	11600	7410	6650	12600	6050	2830	1610	4870	3310	1180	1410
20	1120	9250	7170	16400	14000	5990	2470	3070	5380	2600	1100	1130
21	1100	8020	7500	13900	13000	5620	2840	4700	5400	2440	1030	1070
22	1080	7380	7160	9730	13900	4950	3460	3440	5070	2090	1000	1060
23	1100	7090	7170	8260	11500	4250	3400	2290	6390	1820	972	1730
24	1120	7020	6990	7310	8980	3680	2760	2540	7030	1690	1070	2980
25	1240	6880	6660	6620	7980	3040	2380	2640	5530	1640	1060	2420
26	1320	7730	6040	6230	7240	2700	2230	2480	4770	1670	980	4340
27	1980	14500	5980	5650	6850	2750	2020	1880	4530	1670	1000	3620
28	2000	15900	5010	4710	6330	2640	1890	2800	4570	1570	1040	3470
29	1980	14300	4420	4060	---	2340	2020	2370	4490	2170	967	2770
30	1980	10900	4280	3690	---	2120	1870	1910	4390	2320	920	2190
31	1980	---	4100	3230	---	2020	---	1670	---	1960	900	---
TOTAL	36690	345560	268950	152140	237720	149650	69100	65740	169980	143120	37329	44775
MEAN	1184	11520	8676	4908	8490	4827	2303	2121	5666	4617	1204	1492
MAX	2000	28700	22700	16400	20600	9770	3460	4700	20700	15300	1820	4340
MIN	880	1700	4100	2240	3170	2020	1660	1240	1130	1570	900	802

CAL YR 1985 TOTAL 1751060 MEAN 4797 MAX 28700 MIN 880
WTR YR 1986 TOTAL 1720750 MEAN 4714 MAX 28700 MIN 802

WATER-QUALITY RECORDS

PERIODS OF RECORD.--Water years 1966, 1973, November 1975 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM DIS- SOLVED (MG/L AS CA)
DEC 10...	0900	7980	300	7.7	5.0	10	751	10.8	K2000	K2000	32
MAR 20..	0800	6060	360	7.8	7.0	5.8	730	10.2	K6000	2600	34
AUG 22...	0845	986	495	8.1	25.0	7.3	750	3.2	240	40	49
SEP 16...	0830	922	390	7.9	18.0	--	752	3.7	120	24	--

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY TOTAL (AS CACO3)	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 AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
DEC 10...	7.9	13	3.4	62	51	51	53	24	.20	6.2	173
MAR 20..	8.6	18	3.1	65	53	53	65	32	.20	5.3	203
AUG 22...	11	28	5.5	103	84	82	85	45	.40	2.6	300
SEP 16...	--	--	--	97	80	79	--	--	--	--	--

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 TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	SEDI- MENT, SUS- PENDE (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)
DEC 10...	.99	.210	1.0	.140	.43	.040	.030	19	76	30	<1
MAR 20...	1.4	.190	.90	.190	.58	.090	.090	17	84	20	<1
AUG 22...	2.0	.041	1.1	.290	.29	.190	.160	130	77	30	2
SEP 16...	1.7	.090	.71	.310	--	.140	.110	24	92	--	--

[illegible]

DATE	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
DEC 10...	<10	4	<1	100	<6	<1	27
MAR 20...	<10	3	<1	120	<6	1	26
AUG 22...	20	5	<1	170	<6	<1	440
SEP 16...	--	--	--	--	--	--	--

LAKES AND RESERVOIRS IN BEAVER RIVER BASIN

03100500 PYMATUNING RESERVOIR.--Lat 41°29'54", long 80°27'47", Crawford County, Hydrologic Unit 05030102, in gatehouse at Pymatuning Dam on Shenango River, 1.8 mi northwest of Jamestown, Pa., and at mile 85.1. DRAINAGE AREA, 158 mi². PERIOD OF RECORD, October 1932 to current year. Contents prior to October 1938 published in WSP 1305. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum, adjustment of 1907. Prior to Nov. 20, 1934, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed in two parts. The main dam is earthfill with stone facing, provided with regulating gates (outlet gate sill elevation at 975.3 ft), and a spillway with crest elevation at 1,008.0 ft. An auxiliary dam 15 mi upstream from the main dam with spillway elevation at 1,010 ft has a fixed crest weir section in the earthfill causeway. Storage began Jan. 23, 1934, when all regulating gates were closed. Capacity, 188,040 acre-ft between elevations, 975.3 ft and 1,008.0 ft was reached in March 1936. Dead storage 10,150 acre-ft (93 acre-ft behind main dam below elevation 975.3 ft and 10,060 acre-ft behind upstream dam below elevation 1,010 ft). Upstream pool was filled (all dead storage accumulated) on March 5, 1934. Figures given herein represent usable contents. Reservoir is used for flood control, and for recreation. Dam built by Pennsylvania Department of Forests and Waters and now maintained by Pennsylvania Department of Environmental Resources.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 210,680 acre-ft, June 26, 1972, elevation, 1,009.53 ft; minimum (after first filling), 110,570 acre-ft, Dec. 4, 1953, elevation, 1,002.17 ft.

EXTREMES FOR CURRENT YEAR: Maximum contents, 196,500 acre-ft, Dec. 2, elevation, 1,008.58 ft; minimum, 157,300 acre-ft, Jan. 17, elevation, 1005.81 ft.

03106280 LAKE ARTHUR.--Lat 40°57'45", long 80°07'17", Butler County, Hydrologic Unit 05030105, in gatehouse at left end of spillway of Lake Arthur Dam on Muddy Creek, at Moraine State Park, 3 mi northeast of Portersville, Pa. DRAINAGE AREA, 50.8 mi². PERIOD OF RECORD, May 1969 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Pennsylvania Department of Environmental Resources bench mark). Prior to Aug. 23, 1969, nonrecording gage at same site and datum.

REMARKS.--Lake is formed by an earthfill dam with concrete spillway. Storage began May 15, 1969. Usable capacity, 37,000 acre-ft between elevations 1,160 ft, sill of 6 ft outlet gate and 1,189.8 ft (spillway crest). No dead storage. Figures given herein represent usable contents. Lake is used for recreation. Dam built by Pennsylvania Department of Forests and Waters and now maintained by Pennsylvania Department of Environmental Resources.

EXTREMES FOR PERIOD OF RECORD: Maximum contents 44,060 acre-ft, June 26, 1972, elevation, 1,191.96 ft; minimum (after first filling), 21,320 acre-ft, Nov. 30, 1975, elevation, 1,183.88 ft.

EXTREMES FOR CURRENT YEAR: Maximum contents, 42,740 acre-ft, Nov. 17, elevation, 1,191.57 ft; minimum, 30,860 acre-ft, Feb. 3, elevation, 1,187.65 ft.

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

Date	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in cfs)	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in cfs)
<u>03100500 Pymatuning Reservoir</u>				<u>03106280 Lake Arthur</u>		
Sept. 30	1006.27	163600	-	1189.69	36670	-
Oct. 31	1006.24	163200	- 6.5	1189.29	35470	- 19.5
Nov. 30	1008.41	194000	+ 518	1190.89	40450	+ 83.7
Dec. 31	1006.91	172500	- 350	1189.27	35410	- 82.0
CAL YR 1985	-	-	+ 15.2	-	-	- 5.2
Jan. 31	1006.59	168000	- 73.2	1187.86	31420	- 64.9
Feb. 28	1006.45	166100	- 34.2	1188.21	32390	+ 17.5
Mar. 31	1007.08	174900	+ 143	1187.97	31720	- 10.9
Apr. 30	1007.55	181600	+ 113	1189.12	34596	+ 54.4
May 31	1008.22	191200	+ 156	1189.42	35860	+ 14.6
June 30	1008.18	190700	- 8.4	1189.82	37060	+ 20.2
July 31	1007.58	182000	- 141	1190.21	38270	+ 19.7
Aug. 31	1007.31	178100	- 63.4	1189.94	37420	- 13.8
Sept. 30	1007.15	175900	- 37.0	1190.05	37760	+ 5.7
WTR YR 1986	-	-	+ 17.0	-	-	+ 1.5

RACCOON CREEK BASIN

03108000 RACCOON CREEK AT MOFFATTS MILL, PA

LOCATION.--Lat 40°37'40", long 80°20'16", Beaver County, Hydrologic Unit 05030101, on left bank at downstream side of highway bridge at Moffatts Mill, 1.4 mi downstream from Gums Run, 4 mi south of Vanport, and 4.2 mi upstream from mouth.

DRAINAGE AREA.--178 mi².

PERIOD OF RECORD.--September 1941 to current year. May 1915 to July 1932 (gage heights and discharge measurements only) in reports of Water Supply Commission of Pennsylvania or Pennsylvania Department of Forests and Waters.

REVISED RECORDS.--WSP 1385: 1941-43.

GAGE.--Water-stage recorder. Datum of gage is 719.16 ft above National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). May 27, 1915 to July 31, 1932, and Sept. 2 to Dec. 3, 1941, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, Dec. 17 to Jan. 19, Jan. 29 to Feb. 3, and Feb. 11-19, which are fair. Normally no regulation from Raccoon Creek Lake. Diversion out of the basin from Cherry Valley and Service Creek Reservoirs upstream increased from an average of 4.0 ft³/s at the close of 1957 to 6.8 ft³/s for the present year; diversion began with 2.0 ft³/s for September 1957. Published records do not include diversion. Records of diversion furnished by Western Pennsylvania Water Company and Ambridge Water Authority. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--45 years, 193 ft³/s, 14.72 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,590 ft³/s, Jan. 27, 1952, gage height, 9.71 ft; minimum, 4.5 ft³/s, Aug. 24, 25, 1965; minimum gage height, 1.28 ft, Aug. 26, 1962.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 15, 1922, reached a stage of 9.80 ft, discharge, 10,000 ft³/s. Flood of Mar. 5, 1920, also reached a stage of 9.80 ft, backwater from ice.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,800 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 5	0230	1800	4.48	Nov. 28	1830	2440	5.14
Nov. 17	0730	*4910	*7.33	Jan. 20	1300	1840	4.52

Minimum discharge, 12 ft³/s, Oct. 1, gage height, 1.41 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	23	584	98	180	284	107	95	45	33	48	21
2	12	23	564	96	220	267	107	93	37	129	43	20
3	18	78	435	94	280	254	98	82	31	82	38	20
4	16	699	378	92	625	255	98	78	29	47	33	19
5	16	1200	350	90	1520	249	96	77	30	36	30	20
6	17	379	357	88	1030	243	108	74	152	29	29	23
7	20	230	335	86	780	230	111	107	172	27	91	21
8	16	186	313	84	679	130	102	95	84	66	64	18
9	14	151	291	82	530	173	92	78	64	759	49	16
10	14	330	286	130	446	226	94	71	50	453	97	15
11	15	703	444	120	370	349	103	69	71	205	274	15
12	17	826	1090	110	320	304	96	64	80	241	106	16
13	20	967	703	98	290	337	87	59	75	370	66	17
14	22	844	558	100	270	392	82	63	58	271	51	18
15	38	922	410	105	250	398	84	66	51	154	45	16
16	32	1950	359	110	230	351	91	68	42	113	40	15
17	22	3710	280	115	250	306	110	63	51	102	38	15
18	18	1100	240	120	400	317	110	63	52	86	60	16
19	16	649	200	238	690	391	102	55	37	74	49	25
20	23	480	180	1480	1090	336	106	53	33	79	36	32
21	31	387	170	853	936	243	149	53	30	109	31	25
22	36	345	150	596	869	224	176	50	26	71	29	22
23	26	315	140	516	661	220	173	49	28	56	29	21
24	29	278	130	410	522	208	150	49	29	55	46	36
25	48	250	125	364	434	189	140	45	26	47	38	169
26	42	428	120	345	381	157	134	41	24	43	28	118
27	28	1390	115	328	368	152	124	47	24	44	28	55
28	23	1860	110	249	313	138	115	81	60	40	27	40
29	20	1420	105	230	---	130	120	55	58	163	26	34
30	19	808	105	210	---	123	98	45	42	101	23	30
31	20	---	100	190	---	114	---	45	---	62	21	---
TOTAL	700	22931	9727	7827	14934	7690	3363	2033	1591	4147	1613	928
MEAN	22.6	764	314	252	533	248	112	65.6	53.0	134	52.0	30.9
MAX	48	3710	1090	1480	1520	398	176	107	172	759	274	169
MIN	12	23	100	82	180	114	82	41	24	27	21	15
CFSM	.13	4.29	1.76	1.42	3.00	1.39	.63	.37	.30	.75	.29	.17
IN.	.15	4.79	2.03	1.64	3.12	1.61	.70	.42	.33	.87	.34	.19

CAL YR 1985 TOTAL 84699 MEAN 232 MAX 3710 MIN 11 CFSM 1.30 IN. 17.70
WTR YR 1986 TOTAL 77484 MEAN 212 MAX 3710 MIN 12 CFSM 1.19 IN. 16.18

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 mi².

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

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

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

REMARKS.--Estimated daily discharges: Dec. 16 to Jan. 16, Jan. 26 to Feb. 1, Feb. 12-16, Mar. 2, 3, Sept. 3, 4, 7-21. Records good except for estimated daily discharges which are poor. Water-quality data collected at this site 1965 to 1977. Sediment data collected 1970 to 1974.

AVERAGE DISCHARGE.--49 years, 271 ft³/s, 21.04 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,000 ft³/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 ft³/s July 31, Aug. 1, 1933, Aug. 1, 2, 1934.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,900 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 6	0400	*13,600	*10.85	June 6	1800	3,440	6.58
Nov. 27	2000	3,710	6.78	June 9	0200	3,630	6.72
Jan. 19	1200	8,300	9.31	June 11	0700	5,270	7.79
Feb. 6	0700	3,710	6.78	June 12	1200	9,820	9.95

Minimum daily discharge, 6.5 ft³/s Sept. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	32	379	48	50	85	67	66	62	53	18	12
2	15	31	497	48	353	75	63	64	55	53	17	11
3	14	36	558	70	759	70	58	61	52	338	14	9.8
4	13	390	333	80	696	126	57	55	52	146	13	9.0
5	14	6290	290	82	2530	150	59	51	271	74	12	12
6	18	10000	299	82	2550	179	84	57	1680	56	12	12
7	16	2530	342	80	577	162	128	328	2210	48	20	10
8	18	855	330	76	341	106	153	652	2350	41	16	9.0
9	22	597	306	70	278	164	120	541	2480	46	21	8.0
10	19	973	314	62	235	313	111	163	387	41	39	7.0
11	19	1960	505	56	188	1540	176	113	2240	47	30	6.5
12	17	1030	1270	50	130	1240	268	81	7890	43	32	10
13	20	867	942	45	110	1020	485	65	5630	50	37	9.0
14	19	1110	472	42	100	1800	403	58	930	52	25	8.2
15	39	1110	296	40	88	1120	237	53	341	65	20	7.6
16	261	950	190	39	82	755	313	55	950	48	21	9.0
17	155	2130	100	196	126	391	696	58	625	41	16	8.6
18	79	1110	88	1620	633	281	660	62	343	40	28	8.0
19	68	421	80	5930	1530	258	314	411	199	38	24	7.8
20	226	311	75	4800	1260	273	214	1550	235	33	18	7.8
21	212	268	70	2440	1070	200	262	1780	284	29	14	9.6
22	111	300	65	798	1070	148	400	789	161	26	13	25
23	69	349	60	614	483	137	336	306	130	23	12	47
24	64	297	58	377	318	133	248	204	333	21	12	55
25	224	214	56	263	241	119	180	143	143	20	11	62
26	195	679	54	150	188	105	126	104	91	20	15	42
27	108	2940	52	80	150	99	100	88	73	19	26	72
28	69	1910	52	62	129	100	85	117	64	18	17	134
29	51	943	50	58	---	95	77	255	59	19	20	79
30	41	564	50	54	---	83	70	137	56	19	19	57
31	35	---	49	52	---	74	---	83	---	17	14	---
TOTAL	2249	41197	8282	18464	16265	11401	6550	8550	30376	1584	606	764.9
MEAN	72.5	1373	267	596	581	368	218	276	1013	51.1	19.5	25.5
MAX	261	10000	1270	5930	2550	1800	696	1780	7890	338	39	134
MIN	13	31	49	39	50	70	57	51	52	17	11	6.5
CFSM	.41	7.85	1.53	3.41	3.32	2.10	1.25	1.58	5.79	.29	.11	.15
IN.	.48	8.76	1.76	3.92	3.46	2.42	1.39	1.82	6.46	.34	.13	.16

CAL YR 1985	TOTAL	129151	MEAN	354	MAX	10000	MIN	13	CFSM	2.02	IN.	27.45
WTR YR 1986	TOTAL	146288.9	MEAN	401	MAX	10000	MIN	6.5	CFSM	2.29	IN.	31.10

STREAMS TRIBUTARY TO LAKE ERIE

04213040 RACCOON CREEK NEAR WEST SPRINGFIELD, PA

LOCATION.--Lat 41°56'42", long 80°26'51", Erie County, Hydrologic Unit 04120101, on right bank on upstream side of highway bridge on Sanford Road, 1.4 mi east of West Springfield, 4.4 mi upstream from mouth, and 7 mi southwest of Girard.

DRAINAGE AREA.--2.53 mi².

PERIOD OF RECORD.--Annual maximum, water years 1962-68. October 1968 to current year.

REVISED RECORD.--WDR PA-74-1: 1973.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control installed Aug. 2, 1973. Elevation of gage is 715 ft above National Geodetic Vertical Datum of 1929, from topographic map. May 9, 1961, to Oct. 2, 1968, crest-stage gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, Oct. 15 to Nov. 14, Dec. 18 to Jan. 3, Jan. 9-20, Jan. 26 to Feb. 5, Feb. 10-18, Mar. 4-9, and July 20 to Sept. 22, which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--18 years, 3.65 ft³/s, 19.59 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 408 ft³/s, Dec. 28, 1968, gage height, 6.06 ft, from rating curve extended above 76 ft³/s on basis of computation of flow through culvert at gage height 5.39 ft; no flow on many days.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 5	Unknown	*169	*4.33	June 12	0600	145	4.02
June 11	2130	133	3.88				

Minimum daily discharge, 0.0 ft³/s, many days in Aug. and Sept.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.16	.14	5.0	1.8	1.6	2.2	1.1	.59	.72	.25	.01	.00
2	.10	.30	6.0	1.8	1.5	2.4	1.1	.59	1.2	.24	.01	.00
3	.10	1.5	4.5	2.5	3.0	3.1	1.0	.52	.80	.20	.02	.00
4	.10	8.0	3.8	4.1	6.0	2.6	1.1	.45	.63	.15	.00	.00
5	.14	62	3.5	4.1	45	2.2	1.3	.41	13	.13	.00	.00
6	.60	40	3.9	3.7	11	1.8	3.0	.67	35	.10	.00	.01
7	.25	20	4.4	3.2	5.2	1.6	3.5	14	12	.09	.01	.00
8	.11	10	4.0	2.6	4.3	1.4	2.6	4.5	9.8	.11	.02	.00
9	.10	5.6	3.7	2.3	3.6	1.3	2.0	2.2	3.6	.39	.01	.00
10	.12	14	3.4	2.1	2.9	17	2.3	1.2	2.0	.33	.03	.00
11	.38	23	9.5	1.9	2.5	26	3.7	.81	59	.23	.05	.00
12	.19	13	16	1.8	2.2	9.0	4.3	.61	75	.19	.02	.02
13	.54	8.4	7.9	1.7	1.9	41	4.1	.50	15	.47	.01	.01
14	.36	9.0	5.6	1.7	1.6	22	3.2	.54	3.6	.40	.01	.00
15	2.4	9.3	4.3	1.6	1.5	12	3.0	.61	3.2	.25	.01	.00
16	.20	24	3.6	1.6	1.3	7.3	5.2	1.7	22	.18	.05	.00
17	.17	14	3.4	2.6	2.0	5.0	14	1.3	2.8	.19	.03	.00
18	.15	5.9	3.0	9.0	24	4.2	6.0	1.1	1.4	.15	.02	.01
19	.24	4.3	2.8	22	26	5.4	3.4	36	2.3	.12	.01	.01
20	.42	3.8	2.6	52	13	4.6	3.8	25	2.5	.10	.01	.02
21	.30	3.4	2.5	16	30	3.2	10	8.6	1.2	.10	.00	.02
22	.20	14	2.3	11	10	2.8	5.5	4.3	.70	.07	.00	.05
23	.15	9.2	2.3	8.3	6.0	2.9	3.8	3.0	.55	.06	.01	.24
24	.62	4.8	2.2	4.4	4.5	2.8	2.5	2.2	.45	.05	.01	.17
25	.35	3.5	2.1	3.5	3.8	2.4	1.7	1.6	.38	.04	.01	.13
26	.22	25	2.0	2.9	3.3	2.2	1.2	1.2	.33	.03	.01	.16
27	.18	24	2.0	2.5	2.8	2.2	.97	1.9	.30	.03	.02	.18
28	.17	9.3	1.9	2.2	2.6	2.0	.82	2.8	.31	.02	.02	.13
29	.16	8.9	1.9	2.0	---	1.7	.71	1.6	.30	.02	.01	.10
30	.15	7.0	1.9	1.9	---	1.5	.62	1.0	.28	.02	.00	.13
31	.14	---	1.8	1.7	---	1.3	---	.81	---	.01	.00	---
TOTAL	9.47	385.34	123.8	180.5	223.1	197.1	97.52	122.31	270.35	4.72	.42	1.39
MEAN	.31	12.8	3.99	5.82	7.97	6.36	3.25	3.95	9.01	.15	.014	.046
MAX	2.4	62	16	52	45	41	14	36	75	.47	.05	.24
MIN	.10	.14	1.8	1.6	1.3	1.3	.62	.41	.28	.01	.00	.00
CFSM	.12	5.08	1.58	2.30	3.15	2.51	1.28	1.56	3.56	.06	.01	.02
IN.	.14	5.67	1.82	2.65	3.28	2.90	1.43	1.80	3.98	.07	.01	.02

CAL YR 1985 TOTAL 1498.42 MEAN 4.11 MAX 64 MIN .04 CFSM 1.62 IN. 22.04
WTR YR 1986 TOTAL 1615.99 MEAN 4.43 MAX 75 MIN .00 CFSM 1.75 IN. 23.77

STREAMS TRIBUTARY TO LAKE ERIE

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04213075 BRANDY RUN NEAR GIRARD, PA

LOCATION.--Lat 41°59'31", long 80°17'29", Erie County, Hydrologic Unit 04120101, on left bank 100 ft upstream from highway bridge on Tannery Road, 0.5 mi upstream from mouth, and 1.8 mi southeast of Girard.

DRAINAGE AREA.--4.4 mi².

PERIOD OF RECORD.--May 14, 1986 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 800 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, June 7, 8, and June 11 to July 24, which are fair. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 336 ft³/s, May 19, 1986, but may have been higher during period of no gage-height record June 11 to July 24, gage height, 1.93 ft; minimum daily discharge 0.19 ft³/s, July 11, 1986.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period May to September greater than base discharge of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 19	1630	*336	a*1.93	June 12	Unknown	Unknown	Unknown
May 20	1715	150	1.69				

(a) May have been higher during period of no gage-height record June 11 to July 24.

Minimum daily discharge, 0.19 ft³/s, July 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	2.3	.22	1.3	1.1
2	---	---	---	---	---	---	---	---	2.3	.21	1.3	1.1
3	---	---	---	---	---	---	---	---	2.1	1.1	1.3	1.1
4	---	---	---	---	---	---	---	---	2.5	.60	1.3	1.1
5	---	---	---	---	---	---	---	---	11	.35	1.2	1.2
6	---	---	---	---	---	---	---	---	13	.27	1.3	1.1
7	---	---	---	---	---	---	---	---	10	.23	1.8	1.1
8	---	---	---	---	---	---	---	---	4.0	.22	1.8	1.1
9	---	---	---	---	---	---	---	---	1.1	.21	2.1	1.1
10	---	---	---	---	---	---	---	---	.42	.20	1.6	1.0
11	---	---	---	---	---	---	---	---	4.0	.19	1.9	.93
12	---	---	---	---	---	---	---	---	35	.50	1.5	1.6
13	---	---	---	---	---	---	---	---	5.0	1.1	1.3	1.3
14	---	---	---	---	---	---	---	2.7	2.0	2.0	1.3	1.3
15	---	---	---	---	---	---	---	2.3	1.1	4.5	1.3	1.1
16	---	---	---	---	---	---	---	2.9	3.2	4.0	1.3	1.4
17	---	---	---	---	---	---	---	2.3	1.4	3.0	1.3	1.3
18	---	---	---	---	---	---	---	2.5	.90	2.6	1.3	1.3
19	---	---	---	---	---	---	---	71	.66	2.5	1.2	1.5
20	---	---	---	---	---	---	---	54	.80	2.3	1.2	1.7
21	---	---	---	---	---	---	---	13	.92	2.2	1.2	1.6
22	---	---	---	---	---	---	---	6.4	.60	1.9	1.1	3.3
23	---	---	---	---	---	---	---	4.6	.48	1.7	1.3	3.5
24	---	---	---	---	---	---	---	3.8	1.1	1.5	1.3	2.0
25	---	---	---	---	---	---	---	3.2	.70	1.5	1.1	1.5
26	---	---	---	---	---	---	---	2.7	.40	1.5	1.6	11
27	---	---	---	---	---	---	---	4.2	.27	1.5	2.0	5.8
28	---	---	---	---	---	---	---	5.0	.24	1.5	1.3	2.2
29	---	---	---	---	---	---	---	3.2	.23	1.5	1.3	1.7
30	---	---	---	---	---	---	---	2.5	.22	1.5	1.3	3.2
31	---	---	---	---	---	---	---	2.3	---	1.3	1.1	---
TOTAL	---	---	---	---	---	---	---	---	107.94	43.90	43.2	60.23
MEAN	---	---	---	---	---	---	---	---	3.60	1.42	1.39	2.01
MAX	---	---	---	---	---	---	---	---	35	4.5	2.1	11
MIN	---	---	---	---	---	---	---	---	.22	.19	1.1	.93
CFSM	---	---	---	---	---	---	---	---	.82	.32	.32	.46
IN.	---	---	---	---	---	---	---	---	.91	.37	.37	.51

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations, and the second is a table of annual maximum stage and discharge at crest-stage stations. Discharge measurements made at miscellaneous sites for both low flow and high flow are given in a third table.

Low-flow partial-record stations

Measurements of streamflow in the area covered by this report made at low-flow partial-record stations are given in the following table. These measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements when correlated with the simultaneous discharge of a nearby stream when continuous records are available, will give a picture of the low-flow potentiality of the stream. The column headed "Period of record" shows the water years in which measurements were made at the same, or practically the same, site.

Discharge measurements made at low-flow partial-record stations during water year 1986

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Date	Measurements Discharge (ft ³ /s)
Clarion River basin						
03029170	Little Toby Creek at Portland Mills, Pa.	Lat 41°21'53", long 78°49'22", Elk County, at railroad bridge 0.1 mi above State Highway 949 and 0.8 mi south of Portland Mills.	126	1972-86	5-19-86 9-24-86	96 116
03030600	Piney Creek at Piney, Pa.	Lat 41°10'12", long 79°28'20", Clarion County, at bridge on State Highway 854 at Piney, 0.1 mile above mouth, and 4 miles northwest of Reidsburg.	72.2	1933 1970-86	5-19-86 9-24-86	46 64
Kiskiminetas River basin						
03045300	McCune Run at Keystone State Park, Pa.	Lat 40°22'26", long 79°22'25", Westmoreland County, at culvert in Keystone State Park, 200 ft above head of Keystone Lake, and 3 miles southeast of New Alexandria.	1.73	1970-86	4-29-86 8-26-86	1.5 .01
Pine Creek basin						
03049810	Pine Creek at Etna, Pa.	Lat 40°29'42", long 79°56'26", Allegheny County, at highway bridge on ramp leading to 62nd Street Bridge at Etna and 0.8 mile above mouth.	66.8	1950-52 1970-86	4-29-86 9-29-86	84 16
Monongahela River basin						
03083100	Jacobs Creek at Jacobs Creek, Pa.	Lat 40°07'23", long 79°44'14", Westmoreland County, 0.3 mile above highway bridge at Jacobs Creek, and 0.4 mile above mouth.	94.9	1950 1965-67 1970-86	4-29-86 9-29-86	117 23

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage 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 but is 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

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Date	Gage height (feet)	Discharge (ft ³ /s)
Brokenstraw Creek basin							
03015390	Hare Creek near Corry, Pa.	Lat 41°56'29", long 79°38'41", Erie County, at concrete dam of Corry Water Co., 1.1 miles above Bear Creek, and 1.5 miles north of Corry.	12.3	1964-86	--	<5.52	<700
Monongahela River basin							
03072880	Browns Creek near Nineveh, Pa.	Lat 39°56'27", long 80°17'21", Greene County, at highway bridge just below Patterson Run 1.8 miles southeast of Nineveh. Datum of gage is 975.60 ft National Geodetic Vertical Datum of 1929.	17.5	1963-86	11-27-85	8.03	539
03078500	Big Piney Run near Salisbury, Pa.	Lat 39°43'34", long 79°02'55", Somerset County, 660 ft upstream from Little Piney Run, and 2.5 mi southeast of Salisbury.	24.5	1932-70†, 1974-86	11-05-85	6.22	2,720
Streams tributary to Lake Erie							
04213200	Mill Creek at Erie, Pa.	Lat 42°05'54", long 80°04'35", Erie County, at bridge on West 38th Street, 100 ft west of State Highway 505, at Erie.	9.16	1964-86	11-05-85	11.77	968

† Operated as a continuous-record station.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at miscellaneous sites during water year 1986

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
Clarion River Basin						
Clarion River	Allegheny River	Lat 41°25'15", long 78°44'10", Elk County, at bridge on State Highway 948 in Ridgway, 50 ft downstream from Elk Creek.	303	1940-53† 1954-86	11-18-85	2,220
					1-13-86	220
					3-10-86	316
					5-21-86	203
					6-23-86	599
					8-04-86	286
Clarion River	Allegheny River	Lat 41°07'47", long 79°33'18", Clarion County, at bridge on State Highway 58 at Callensburg and 0.3 mi above Licking Creek.	1,163	1970-72† 1979-86	11-25-85	4,500
					1-16-86	117
					3-13-86	6,160
					5-01-86	445
					6-19-86	487
					8-01-86	222
Kiskiminetas River Basin						
Yellow Creek	Two Lick Creek	Lat 40°35'27", long 79°03'11", Indiana County, at right downstream end of dam on Yellow Creek, at Yellow Creek State Park.	52.5	---	6-05-86	7.9
					7-30-86	7.6
					9-23-86	7.3
Pine Creek Basin						
Pine Creek	Allegheny River	Lat 40°30'44", long 79° 57'09", Allegheny County, 0.4 mi above confluence with Little Pine Creek and 0.7 mi north of Etna.	34.0	---	5-30-86	*4,170

† Operated as a continuous record station.

* Indirect measurement of Peak Discharge.

ANALYSIS OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

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OLD FORTY MINE STUDY, CLARION COUNTY

410945079252801 OLD FORTY MINE OUTFLOW NEAR CLARION, PA.

LOCATION.--Lat 41°09'45", Long 79°25'28", Clarion County, Hydrologic Unit 05010005, 1.3 mi northwest of Reidsburg, and 4 mi southwest of Clarion.

DATUM.--Elevation of outflow is 1,313 feet, from topographic map.

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

REMARKS.--Samples analyzed by the Pennsylvania Department of Environmental Resources Harrisburg Laboratory. Discharge, ph, and temperature are field values.

WATER QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	DIS- CHARGE INSTAN- TANEOUS (GPM)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT 08...	1000	9813	DRY	---	---	---	---	---	---
NOV 13...	1010	9813	15	6300	2.6	14.0	3940	160	180
DEC 11...	1015	9813	28	4680	2.3	12.0	2810	150	190
JAN 07...	1000	9813	20	5000	2.3	12.0	3120	170	220
FEB 04...	1020	9813	24	4800	2.1	11.0	2580	140	140
MAR 10...	1430	9813	30	4500	2.5	12.0	2340	130	120
APR 01...	1500	9813	18	4840	2.4	12.0	2540	120	130
MAY 06...	1030	9813	13	5060	2.5	12.5	2660	150	140
JUN 04...	0920	9813	6.0	4680	2.5	12.5	3060	140	140
JUL 08...	0845	9813	7.2	5150	2.5	14.0	3060	---	---
AUG 05...	1055	9813	6.9	5220	2.5	13.5	3240	140	140
SEP 03...	1340	9813	2.9	5350	2.6	15.0	---	150	180

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	ALUM- INUM, DIS- SOLVED (MG/L AS AL)	IRON, DIS- SOLVED (MG/L AS FE)	MANGA- NESE, DIS- SOLVED (MG/L AS MN)
OCT 08...	---	---	---	---
NOV 13...	4880	240	950	89
DEC 11...	2980	190	430	62
JAN 07...	3260	220	560	77
FEB 04...	2820	180	590	75
MAR 10...	3180	160	400	57
APR 01...	3160	150	670	85
MAY 06...	3240	190	610	79
JUN 04...	3190	180	630	---
JUL 08...	3370	200	---	---
AUG 05...	3340	200	740	68
SEP 03...	3740	210	820	90

ANALYSIS OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

INDIAN CREEK BASIN STUDY

WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	ACIDITY (MG/L AS H)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	ALKA- LINITY WH WAT TOTAL FIELD MG/L AS CACO3
MONONGAHELA RIVER BASIN											
03082003 ABANDONED DEEP MINE DISCHARGE AT KREGAR, PA SITE 1 (LAT 40 07 06N LONG 079 17 52W)											
AUG 1985 12...	0900	0.03	825	2.90	10.0	3.6	11	12	0.9	0.9	--
03082005 INDIAN CR AT KREGAR, PA SITE 2 (LAT 40 06 52N LONG 079 18 10W)											
AUG 1985 12...	0945	3.2	408	6.70	14.0	0.2	20	2.9	47	0.7	20
03082040 PIKE RN 50FT ABOVE ROARING RN AT HOPEWELL, PA SITE 4 (LAT 40 04 08N LONG 079 20 37W)											
AUG 1985 12...	1245	4.2	79	6.80	15.0	0.1	7.4	1.1	2.6	0.5	8
03082045 ROARING RN 50FT ABOVE PIKE RN AT HOPEWELL, PA SITE 5 (LAT 40 04 07N LONG 079 20 40W)											
AUG 1985 12...	1300	2.4	62	6.70	15.5	0.1	8.4	1.2	0.4	0.5	14
03082100 INDIAN CREEK AT NEBO, PA SITE 12 (LAT 40 03 37N LONG 079 21 53W)											
AUG 1985 12...	1550	13	164	--	21.5	0	11	1.8	10	0.6	16
03082105 INDIAN CREEK AT COFFMAN, PA SITE 13 (LAT 40 03 07N LONG 079 22 55W)											
AUG 1985 12...	1715	15	164	7.80	21.5	0	12	1.9	9.9	0.6	20
03082110 CHAMPION C ABOVE L CHAMPION C NR MELCROFT, PA SITE 7 (LAT 40 04 05N LONG 079 23 57W)											
AUG 1985 12...	0955	0.82	318	7.80	17.5	0	33	18	18	1.6	53
03082112 DEEP MINE DISCHARGE NR WHITE, PA SITE 9 (LAT 40 04 30N LONG 079 25 03W)											
AUG 1985 12...	0850	<0.01	580	4.20	11.0	1.2	66	19	0.7	0.7	--
03082115 L CHAMPION C ABOVE CHAMPION C NR MELCROFT, PA SITE 8 (LAT 40 04 03N LONG 079 23 59W)											
AUG 1985 12...	1040	1.4	355	7.40	17.0	0.1	44	13	13	1.2	56
03082122 NUMBER 3 MINE POOL AT MELCROFT, PA SITE 10 (LAT 40 03 24N LONG 079 23 33W)											
AUG 1985 12...	1300	--	1680	2.60	28.0	10	74	32	11	2.5	--
03082125 CHAMPION C(RT 381/711BRIDGE)AT MELCROFT, PA SITE 11 (LAT 40 03 06N LONG 079 23 27W)											
AUG 1985 12...	1530	2.8	400	5.80	23.5	0.4	43	13	7.3	1.4	20
03082132 KALP MINE DISCHARGE (LARGE) AT ROMNEY, PA SITE 25 (LAT 40 02 50N LONG 079 24 08W)											
AUG 1985 12...	1615	1.0	1900	2.40	12.5	9.0	170	50	1.9	2.2	--

INDIAN CREEK BASIN STUDY

WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
MONONGAHELA RIVER BASIN											
03082003	ABANDONED DEEP MINE DISCHARGE AT KREGAR, PA SITE 1 (LAT 40 07 06N LONG 079 17 52W)										
AUG 1985 12...	250	2.0	0.2	444	2	1.24	6500	<4	<250	<10	<50
03082005	INDIAN CR AT KREGAR, PA SITE 2 (LAT 40 06 52N LONG 079 18 10W)										
AUG 1985 12...	12	170	<0.1	264	<2	1.04	250	<4	<250	<10	<50
03082040	PIKE RN 50FT ABOVE ROARING RN AT HOPEWELL, PA SITE 4 (LAT 40 04 08N LONG 079 20 37W)										
AUG 1985 12...	<10	8.0	<0.1	70	<2	1.14	100	<4	<250	14	<50
03082045	ROARING RN 50FT ABOVE PIKE RN AT HOPEWELL, PA SITE 5 (LAT 40 04 07N LONG 079 20 40W)										
AUG 1985 12...	<10	3.0	<0.1	94	<2	1.18	40	<4	<250	<10	<50
03082100	INDIAN CREEK AT NEBO, PA SITE 12 (LAT 40 03 37N LONG 079 21 53W)										
AUG 1985 12...	<10	26	<0.1	156	<2	0.960	100	<4	<250	<10	<50
03082105	INDIAN CREEK AT COFFMAN, PA SITE 13 (LAT 40 03 07N LONG 079 22 55W)										
AUG 1985 12...	<10	25	<0.1	132	<2	0.960	40	<4	<250	<10	<50
03082110	CHAMPION C ABOVE L CHAMPION C NR MELCROFT, PA SITE 7 (LAT 40 04 05N LONG 079 23 57W)										
AUG 1985 12...	62	36	<0.1	252	<2	0.900	<40	<4	<250	<10	<50
03082112	DEEP MINE DISCHARGE NR WHITE, PA SITE 9 (LAT 40 04 30N LONG 079 25 03W)										
AUG 1985 12...	280	3.0	0.6	482	8	0.460	5800	<4	<250	<10	<50
03082115	L CHAMPION C ABOVE CHAMPION C NR MELCROFT, PA SITE 8 (LAT 40 04 03N LONG 079 23 59W)										
AUG 1985 12...	110	6.0	<0.1	260	<2	0.320	<40	<4	<250	<10	<50
03082122	NUMBER 3 MINE POOL AT MELCROFT, PA SITE 10 (LAT 40 03 24N LONG 079 23 33W)										
AUG 1985 12...	650	3.0	0.2	1310	<2	0.160	25000	17	<250	<10	<50
03082125	CHAMPION C(RT 381/711BRIDGE)AT MELCROFT, PA SITE 11 (LAT 40 03 06N LONG 079 23 27W)										
AUG 1985 12...	150	16	0.2	384	<2	0.400	970	<4	<250	<10	76
03082132	KALP MINE DISCHARGE (LARGE) AT ROMNEY, PA SITE 25 (LAT 40 02 50N LONG 079 24 08W)										
AUG 1985 12...	970	4.0	0.4	1690	<2	0.620	21000	13	<250	<10	<50

ANALYSIS OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

INDIAN CREEK BASIN STUDY

WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	SELE- NIUM, TOTAL (UG/L AS SE)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)
MONONGAHELA RIVER BASIN											
03082003	ABANDONED DEEP MINE DISCHARGE AT KREGAR, PA SITE 1 (LAT 40 07 06N LONG 079 17 52W)										
AUG 1985 12...	100	35	21000	17000	<4	2900	140	<10	300	<6	<2.0
03082005	INDIAN CR AT KREGAR, PA SITE 2 (LAT 40 06 52N LONG 079 18 10W)										
AUG 1985 12...	<30	<10	130	<10	<4	140	<25	<10	<10	<6	<2.0
03082040	PIKE RN 50FT ABOVE ROARING RN AT HOPEWELL, PA SITE 4 (LAT 40 04 08N LONG 079 20 37W)										
AUG 1985 12...	<30	<10	<10	<10	<4	21	27	<10	<10	<6	<2.0
03082045	ROARING RN 50FT ABOVE PIKE RN AT HOPEWELL, PA SITE 5 (LAT 40 04 07N LONG 079 20 40W)										
AUG 1985 12...	<30	<10	<10	<10	<4	<10	<25	<10	<10	<6	<2.0
03082100	INDIAN CREEK AT NEBO, PA SITE 12 (LAT 40 03 37N LONG 079 21 53W)										
AUG 1985 12...	<30	<10	<10	<10	<4	110	<25	<10	<10	<6	<2.0
03082105	INDIAN CREEK AT COFFMAN, PA SITE 13 (LAT 40 03 07N LONG 079 22 55W)										
AUG 1985 12...	<30	51	150	150	<4	31	<25	<10	30	<6	<2.0
03082110	CHAMPION C ABOVE L CHAMPION C NR MELCROFT, PA SITE 7 (LAT 40 04 05N LONG 079 23 57W)										
AUG 1985 12...	<30	<10	100	<10	<4	26	<25	<10	<10	<6	<2.0
03082112	DEEP MINE DISCHARGE NR WHITE, PA SITE 9 (LAT 40 04 30N LONG 079 25 03W)										
AUG 1985 12...	40	37	1800	1800	<4	380	56	<10	230	<6	<2.0
03082115	L CHAMPION C ABOVE CHAMPION C NR MELCROFT, PA SITE 8 (LAT 40 04 03N LONG 079 23 59W)										
AUG 1985 12...	<30	<10	<10	<10	<4	<10	<25	<10	<10	<6	<2.0
03082122	NUMBER 3 MINE POOL AT MELCROFT, PA SITE 10 (LAT 40 03 24N LONG 079 23 33W)										
AUG 1985 12...	190	28	70000	70000	5	9700	72	30	490	<6	<2.0
03082125	CHAMPION C(RT 381/711BRIDGE)AT MELCROFT, PA SITE 11 (LAT 40 03 06N LONG 079 23 27W)										
AUG 1985 12...	<30	<10	1600	<10	<4	900	<25	<10	40	<6	<2.0
03082132	KALP MINE DISCHARGE (LARGE) AT ROMNEY, PA SITE 25 (LAT 40 02 50N LONG 079 24 08W)										
AUG 1985 12...	290	57	61000	60000	<4	3000	400	120	1200	<6	<2.0

ANALYSIS OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

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INDIAN CREEK BASIN STUDY

WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	ACIDITY (MG/L AS H)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	ALKA- LITY WH WAT TOTAL FIELD MG/L AS CACO3
MONONGAHELA RIVER BASIN											
03082133 KALP MINE DISCHARGE (SMALL) AT ROMNEY, PA SITE 26 (LAT 40 02 49N LONG 079 24 11W)											
AUG 1985 12...	1655	<0.01	790	2.60	14.0	3.2	30	12	0.7	1.1	--
03082142 MATHEWS MINE DISCHARGE AT DAVISTOWN, PA SITE 27 (LAT 40 02 26N LONG 079 24 14W)											
AUG 1985 12...	1745	--	165	4.10	14.5	0.9	29	7.7	0.6	1.5	--
03082155 BACK CREEK AT INDIAN HEAD, PA SITE 15 (LAT 40 01 33N LONG 079 23 47W)											
AUG 1985 12...	0830	5.6	100	6.80	14.5	--	12	1.8	1.8	0.6	22
03082160 INDIAN CREEK AT INDIAN HEAD, PA SITE 14 (LAT 40 01 30N LONG 079 23 49W)											
AUG 1985 12...	1130	28	230	6.60	19.0	0	23	5.2	6.7	0.8	10
03082168 GALENTINE MINE DISCHARGE NR INDIAN HEAD, PA SITE 20 (LAT 40 00 57N LONG 079 24 47W)											
AUG 1985 13...	0900	0.46	1800	2.80	12.5	6.8	140	53	53	1.8	--
03082175 POPLAR RUN ABOVE NEWMYER RN NR CLINTON, PA SITE 18 (LAT 40 02 13N LONG 079 26 31W)											
AUG 1985 12...	1400	1.2	440	5.10	19.0	0.1	51	16	16	1.1	2
03082180 NEWMYER RUN ABOVE POPLAR RN NR CLINTON, PA SITE 17 (LAT 40 02 13N LONG 079 26 29W)											
AUG 1985 12...	1245	1.2	1900	4.50	17.5	2.1	150	57	68	1.4	--
03082210 POPLAR RUN AT MOUTH NEAR NORMALVILLE, PA SITE 19 (LAT 40 00 57N LONG 079 24 58W)											
AUG 1985 13...	0930	2.6	1000	5.30	18.0	0.2	100	57	29	1.1	4
03082215 LAUREL RUN ABOVE BACK RN AT ROGERS MILL, PA SITE 22 (LAT 39 59 50N LONG 079 24 21W)											
AUG 1985 13...	1015	1.9	75	7.00	15.0	0.2	8.8	1.4	0.7	0.7	16
03082220 BUCK RUN ABOVE LAUREL RN AT ROGERS MILL, PA SITE 21 (LAT 39 59 32N LONG 079 24 33W)											
AUG 1985 13...	0930	4.2	86	6.60	15.0	0	8.7	1.7	1.7	0.6	10
03082300 INDIAN CREEK AT MOUTH NEAR MILL RUN, PA SITE 28 (LAT 39 58 12N LONG 079 30 44W)											
AUG 1985 12...	1830	--	274	6.50	25.5	0	26	7.7	6.0	1.0	6

ANALYSIS OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

INDIAN CREEK BASIN STUDY

WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	SULFATE DIS- SOLVED (MG/L AS SO ₄)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO ₂ +NO ₃ (MG/L AS N)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
MONONGAHELA RIVER BASIN											
03082133	KALP MINE DISCHARGE (SMALL) AT ROMNEY, PA SITE 26 (LAT 40 02 49N LONG 079 24 11W)										
AUG 1985 12...	250	8.0	0.1	574	4	0.140	7300	<4	<250	<10	<50
03082142	MATHEWS MINE DISCHARGE AT DAVISTOWN, PA SITE 27 (LAT 40 02 26N LONG 079 24 14W)										
AUG 1985 12...	120	2.0	<0.1	300	<2	0.300	1800	<4	<250	<10	<50
03082155	BACK CREEK AT INDIAN HEAD, PA SITE 15 (LAT 40 01 33N LONG 079 23 47W)										
AUG 1985 12...	<10	6.0	<0.1	92	<2	0.960	60	<4	<250	<10	<50
03082160	INDIAN CREEK AT INDIAN HEAD, PA SITE 14 (LAT 40 01 30N LONG 079 23 49W)										
AUG 1985 12...	66	17	<0.1	216	<2	0.860	270	<4	<250	<10	<50
03082168	GALENTINE MINE DISCHARGE NR INDIAN HEAD, PA SITE 20 (LAT 40 00 57N LONG 079 24 47W)										
AUG 1985 13...	810	6.0	0.4	1560	<2	0.340	21000	13	<250	<10	<50
03082175	POPLAR RUN ABOVE NEWMYER RN NR CLINTON, PA SITE 18 (LAT 40 02 13N LONG 079 26 31W)										
AUG 1985 12...	180	2.0	0.1	386	<2	0.340	430	<4	<250	<10	<50
03082180	NEWMYER RUN ABOVE POPLAR RN NR CLINTON, PA SITE 17 (LAT 40 02 13N LONG 079 26 29W)										
AUG 1985 12...	1200	8.0	0.7	1900	12	1.76	15000	8	<250	<10	<50
03082210	POPLAR RUN AT MOUTH NEAR NORMALVILLE, PA SITE 19 (LAT 40 00 57N LONG 079 24 58W)										
AUG 1985 13...	580	5.0	0.3	898	<2	4.18	720	<4	<250	<10	<50
03082215	LAUREL RUN ABOVE BACK RN AT ROGERS MILL, PA SITE 22 (LAT 39 59 50N LONG 079 24 21W)										
AUG 1985 13...	11	3.0	<0.1	88	<2	1.44	140	<4	<250	16	<50
03082220	BUCK RUN ABOVE LAUREL RN AT ROGERS MILL, PA SITE 21 (LAT 39 59 32N LONG 079 24 33W)										
AUG 1985 13...	39	4.0	<0.1	98	<2	1.04	210	<4	<250	<10	<50
03082300	INDIAN CREEK AT MOUTH NEAR MILL RUN, PA SITE 28 (LAT 39 58 12N LONG 079 30 44W)										
AUG 1985 12...	98	11	<0.1	248	<2	0.780	70	<4	<250	<10	<50

ANALYSIS OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

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INDIAN CREEK BASIN STUDY

WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	SELE- NIUM, TOTAL (UG/L AS SE)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)
MONONGAHELA RIVER BASIN											
03082133	KALP MINE DISCHARGE (SMALL) AT ROMNEY, PA SITE 26 (LAT 40 02 49N LONG 079 24 11W)										
AUG 1985 12...	70	16	19000	19000	<4	1100	140	<10	280	<6	<2.0
03082142	MATHEWS MINE DISCHARGE AT DAVISTOWN, PA SITE 27 (LAT 40 02 26N LONG 079 24 14W)										
AUG 1985 12...	50	<10	1200	430	<4	1500	65	<10	160	<6	<2.0
03082155	BACK CREEK AT INDIAN HEAD, PA SITE 15 (LAT 40 01 33N LONG 079 23 47W)										
AUG 1985 12...	<30	<10	<10	<10	<4	<10	<25	<10	<10	<6	<2.0
03082160	INDIAN CREEK AT INDIAN HEAD, PA SITE 14 (LAT 40 01 30N LONG 079 23 49W)										
AUG 1985 12...	<30	42	730	250	<4	280	26	<10	70	<6	<2.0
03082168	GALENTINE MINE DISCHARGE NR INDIAN HEAD, PA SITE 20 (LAT 40 00 57N LONG 079 24 47W)										
AUG 1985 13...	280	34	48000	47000	<4	3400	370	160	1100	<6	<2.0
03082175	POPLAR RUN ABOVE NEWMYER RN NR CLINTON, PA SITE 18 (LAT 40 02 13N LONG 079 26 31W)										
AUG 1985 12...	<30	<10	240	240	<4	2600	48	<10	180	<6	<2.0
03082180	NEWMYER RUN ABOVE POPLAR RN NR CLINTON, PA SITE 17 (LAT 40 02 13N LONG 079 26 29W)										
AUG 1985 12...	630	<10	7800	6100	<4	40000	410	10	1800	<6	<2.0
03082210	POPLAR RUN AT MOUTH NEAR NORMALVILLE, PA SITE 19 (LAT 40 00 57N LONG 079 24 58W)										
AUG 1985 13...	60	<10	270	110	<4	9700	<25	<10	380	<6	<2.0
03082215	LAUREL RUN ABOVE BACK RN AT ROGERS MILL, PA SITE 22 (LAT 39 59 50N LONG 079 24 21W)										
AUG 1985 13...	<30	14	30	<10	<4	14	55	<10	<10	<6	<2.0
03082220	BUCK RUN ABOVE LAUREL RN AT ROGERS MILL, PA SITE 21 (LAT 39 59 32N LONG 079 24 33W)										
AUG 1985 13...	<30	<10	<10	<10	<4	160	38	<10	20	<6	<2.0
03082300	INDIAN CREEK AT MOUTH NEAR MILL RUN, PA SITE 28 (LAT 39 58 12N LONG 079 30 44W)										
AUG 1985 12...	<30	<10	10	--	<4	420	<25	<10	<10	<6	<2.0

ANALYSIS OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

INDIAN CREEK BASIN STUDY

WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	ACIDITY (MG/L AS H)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	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 WH WAT TOTAL FIELD MG/L AS CACO3
03082003 ABANDONED DEEP MINE DISCHARGE AT KREGAR, PA SITE 1 (LAT 40 07 06N LONG 079 17 52W)												
OCT 1985												
23...	0815	1.1	1160	2.90	9.0	4.8	22	--	23	0.61	1.1	0
JAN 1986												
15...	0915	0.02	745	2.90	9.0	3.5	--	--	--	--	--	0
APR												
28...	0825	0.20	580	3.10	10.0	2.4	--	--	--	--	--	0
JUL												
22...	0845	15	635	2.90	10.5	2.8	--	--	--	--	--	0
03082005 INDIAN CR AT KREGAR, PA SITE 2 (LAT 40 06 52N LONG 079 18 10W)												
OCT 1985												
23...	0845	2.5	609	7.60	11.0	0	22	--	3.0	53	1.2	40
NOV												
25...	0815	13	265	7.40	5.0	0	--	--	--	--	--	12
DEC												
23...	0800	9.5	2800	6.80	3.0	0.1	--	--	--	--	--	14
JAN 1986												
15...	1030	2.0	1460	7.00	0.0	0.1	--	--	--	--	--	14
FEB												
19...	0915	67	615	7.60	6.5	0	--	--	--	--	--	40
MAR												
17...	0845	41	335	6.00	6.0	0.1	--	--	--	--	--	8
APR												
28...	0845	17	320	7.70	10.0	0	--	--	--	--	--	12
JUN												
06...	0900	4.8	390	6.70	15.0	0.3	--	--	--	--	--	24
JUL												
22...	1000	20	270	7.40	13.0	0	--	--	--	--	--	16
AUG												
20...	0840	2.0	440	7.60	17.0	0	--	--	--	--	--	25
SEP												
29...	0850	3.5	520	7.60	16.0	0	--	--	--	--	--	32
03082040 PIKE RN 50FT ABOVE ROARING RN AT HOPEWELL, PA SITE 4 (LAT 40 04 08N LONG 079 20 37W)												
OCT 1985												
24...	0900	1.6	102	7.70	13.5	0	9.4	--	1.4	3.1	1.1	24
NOV												
25...	1100	12	70	7.10	5.5	0	--	--	--	--	--	8
DEC												
23...	1015	10	70	6.80	3.5	0	--	--	--	--	--	10
JAN 1986												
15...	1350	4.2	75	7.40	0.0	0	--	--	--	--	--	14
FEB												
19...	1215	55	80	6.10	6.5	0.1	--	--	--	--	--	40
MAR												
07...	1050	36	65	5.80	7.0	0.1	--	--	--	--	--	4
APR												
28...	1005	13	78	7.30	11.5	0.1	--	--	--	--	--	8
JUN												
06...	1245	4.1	75	6.40	15.0	0.2	--	--	--	--	--	32
JUL												
22...	1330	34	64	7.30	13.5	0	--	1.0	--	--	--	10
AUG												
20...	1100	2.8	80	7.40	17.0	0	--	--	--	--	--	16
SEP												
29...	1130	5.9	90	7.30	15.0	0	--	--	--	--	--	16

ANALYSIS OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

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INDIAN CREEK BASIN STUDY

WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BORON, DIS- SOLVED (UG/L AS B)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)
03082003 ABANDONED DEEP MINE DISCHARGE AT KREGAR, PA SITE 1 (LAT 40 07 06N LONG 079 17 52W)											
OCT 1985											
23...	360	--	832	<2	--	7500	6	<0	<50	150	18
JAN 1986											
15...	190	--	500	<2	9600	9700	--	--	--	--	--
APR											
28...	110	3.0	200	10	9500	9500	--	--	--	--	--
JUL											
22...	150	--	394	<2	6900	6900	--	--	--	--	--
03082005 INDIAN CR AT KREGAR, PA SITE 2 (LAT 40 06 52N LONG 079 18 10W)											
OCT 1985											
23...	22	--	432	<2	--	360	<4	<0	<50	<30	<10
NOV											
25...	20	--	182	<2	--	<40	--	--	--	--	--
DEC											
23...	25	--	1530	6	--	<130	--	--	--	--	--
JAN 1986											
15...	49	--	952	<2	<500	<500	--	--	--	--	--
FEB											
19...	47	150	334	<2	<130	<130	--	--	--	--	--
MAR											
17...	12	--	156	6	260	330	--	--	--	--	--
APR											
28...	25	120	12	12	<130	<130	--	--	--	--	--
JUN											
06...	17	--	226	<2	<130	130	--	--	--	--	--
JUL											
22...	31	--	182	<2	220	220	--	--	--	--	--
AUG											
20...	38	--	256	6	<130	<130	--	--	--	--	--
SEP											
29...	27	--	272	<2	<130	<130	--	--	--	--	--
03082040 PIKE RN 50FT ABOVE ROARING RN AT HOPEWELL, PA SITE 4 (LAT 40 04 08N LONG 079 20 37W)											
OCT 1985											
24...	<10	--	170	<2	--	290	<4	<0	<50	<30	<10
NOV											
25...	14	--	62	6	--	<40	--	--	--	--	--
DEC											
23...	12	--	70	<2	--	170	--	--	--	--	--
JAN 1986											
15...	10	--	80	2	<500	<500	--	--	--	--	--
FEB											
19...	16	14	74	<2	<130	<130	--	--	--	--	--
MAR											
07...	<10	--	16	12	220	<130	--	--	--	--	--
APR											
28...	14	7.0	52	4	180	<130	--	--	--	--	--
JUN											
06...	<10	--	46	<2	<130	<130	--	--	--	--	--
JUL											
22...	8.0	--	76	2	430	--	--	--	--	--	--
AUG											
20...	<10	--	34	6	<130	<130	--	--	--	--	--
SEP											
29...	24	--	60	<2	<130	<130	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

INDIAN CREEK BASIN STUDY

WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, DIS- SOLVED (UG/L AS NI)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	MERCURY DIS- SOLVED (UG/L AS HG)
03082003 ABANDONED DEEP MINE DISCHARGE AT KREGAR, PA SITE 1 (LAT 40 07 06N LONG 079 17 52W)											
OCT 1985											
23...	--	42000	<45	--	5300	160	44	--	510	<6	<1.0
JAN 1986											
15...	26000	26000	--	2600	2600	--	--	340	850	--	--
APR											
28...	5200	9000	--	1900	1900	--	--	220	250	--	--
JUL											
22...	13000	13000	--	2100	2100	--	--	240	240	--	--
03082005 INDIAN CR AT KREGAR, PA SITE 2 (LAT 40 06 52N LONG 079 18 10W)											
OCT 1985											
23...	--	85	<45	--	49	<25	94	--	<10	<6	<1.0
NOV											
25...	--	<10	--	--	53	--	--	--	<10	--	--
DEC											
23...	--	45	--	--	76	--	--	--	31	--	--
JAN 1986											
15...	<300	<300	--	150	150	--	--	20	64	--	--
FEB											
19...	100	<10	--	100	99	--	--	20	<10	--	--
MAR											
17...	100	1000	--	91	160	--	--	<10	<10	--	--
APR											
28...	60	19	--	82	79	--	--	70	22	--	--
JUN											
06...	110	67	--	65	72	--	--	<10	20	--	--
JUL											
22...	150	150	--	22	38	--	--	20	24	--	--
AUG											
20...	100	38	--	81	120	--	--	60	170	--	--
SEP											
29...	130	60	--	43	43	--	--	30	30	--	--
03082040 PIKE RN 50FT ABOVE ROARING RN AT HOPEWELL, PA SITE 4 (LAT 40 04 08N LONG 079 20 37W)											
OCT 1985											
24...	--	260	46	--	16	<25	20	--	<10	<6	<1.0
NOV											
25...	--	<10	--	--	24	--	--	--	<10	--	--
DEC											
23...	--	87	--	--	19	--	--	--	36	--	--
JAN 1986											
15...	<300	<300	--	<50	<50	--	--	<10	<10	--	--
FEB											
19...	140	<10	--	81	76	--	--	<10	<10	--	--
MAR											
07...	70	<10	--	49	42	--	--	<10	<10	--	--
APR											
28...	80	39	--	46	37	--	--	40	35	--	--
JUN											
06...	70	46	--	<10	<10	--	--	20	19	--	--
JUL											
22...	240	--	--	--	--	--	--	30	--	--	--
AUG											
20...	60	120	--	22	21	--	--	10	10	--	--
SEP											
29...	40	28	--	<10	<10	--	--	20	24	--	--

INDIAN CREEK BASIN STUDY

WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	ACIDITY (MG/L AS H)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	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 WH WAT TOTAL FIELD MG/L AS CACO3
03082045 ROARING RN 50FT ABOVE PIKE RN AT HOPEWELL, PA SITE 5 (LAT 40 04 07N LONG 079 20 40W)												
OCT 1985												
24...	0900	1.8	82	8.50	13.0	0	11	--	1.3	0.58	0.90	28
NOV												
25...	1115	11	65	7.90	5.5	0	--	--	--	--	--	12
DEC												
23...	1030	7.2	65	7.60	3.5	0.1	--	--	--	--	--	11
JAN 1986												
15...	1415	5.5	62	7.00	0.0	0	--	--	--	--	--	16
FEB												
19...	1250	62	58	6.30	6.5	0.1	--	--	--	--	--	80
MAR												
17...	1045	31	50	6.30	6.5	0.1	--	--	--	--	--	6
APR												
28...	1045	10	83	6.60	12.0	0.1	--	--	--	--	--	10
JUN												
06...	1325	3.4	70	7.60	14.5	0.1	--	--	--	--	--	12
JUL												
22...	1400	34	57	7.50	13.0	0	--	--	--	--	--	8
AUG												
20...	1140	2.1	70	7.50	16.5	0	--	--	--	--	--	20
SEP												
29...	1130	4.3	70	7.00	16.0	0	--	--	--	--	--	16

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	ACIDITY (MG/L AS H)	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 WH WAT TOTAL FIELD MG/L AS CACO3
03082100 INDIAN CREEK AT NEBO, PA SITE 12 (LAT 40 03 37N LONG 079 21 53W)											
OCT 1985											
23...	1800	9.7	290	7.70	15.5	0	15	2.6	18	1.4	36
JAN 1986											
16...	1030	18	515	6.70	0.0	0.1	--	--	--	--	16
APR											
29...	0840	53	160	7.30	13.5	0.1	--	--	--	--	14
JUL											
22...	1550	120	115	7.10	16.5	0.1	--	--	--	--	18

03082105 INDIAN CREEK AT COFFMAN, PA SITE 13 (LAT 40 03 07N LONG 079 22 55W)											
OCT 1985											
23...	1645	9.7	285	7.50	15.0	0	16	2.8	17	1.4	36
JAN 1986											
16...	0915	17	410	6.80	0.0	0.1	--	--	--	--	20
APR											
29...	0900	61	160	7.30	14.0	0.1	--	--	--	--	14
JUL											
23...	0840	99	110	7.20	14.5	0	--	--	--	--	12

03082110 CHAMPION C ABOVE L CHAMPION C NR MELCROFT, PA SITE 7 (LAT 40 04 05N LONG 079 23 57W)											
OCT 1985											
23...	0910	0.71	480	7.80	12.5	0	30	9.4	25	2.2	60
NOV											
25...	1200	--	--	--	--	--	--	--	--	--	--
JAN 1986											
15...	1000	1.8	280	6.70	0.0	0.1	--	--	--	--	22
APR											
28...	1230	7.5	190	7.60	16.0	0	--	--	--	--	22
JUL											
22...	1035	18	150	7.40	16.5	0	--	--	--	--	18

03082112 DEEP MINE DISCHARGE NR WHITE, PA SITE 9 (LAT 40 04 30N LONG 079 25 03W)											
OCT 1985											
23...	0805	0.40	1300	3.60	12.5	4.6	80	40	0.75	1.2	0
JAN 1986											
15...	0915	0.01	330	6.40	5.5	0.6	--	--	--	--	28
APR											
28...	1115	0.04	315	6.40	11.0	0.9	--	--	--	--	26
JUL											
22...	0845	0.05	300	6.70	10.0	0.4	--	--	--	--	34

ANALYSIS OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

INDIAN CREEK BASIN STUDY

WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BORON, DIS- SOLVED (UG/L AS B)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)
03082045 ROARING RN 50FT ABOVE PIKE RN AT HOPEWELL, PA SITE 5 (LAT 40 04 07N LONG 079 20 40W)											
OCT 1985											
24...	<10	--	186	14	--	140	<4	<0	<50	<30	<10
NOV											
25...	18	--	60	6	--	<40	--	--	--	--	--
DEC											
23...	15	--	66	<2	--	<130	--	--	--	--	--
JAN 1986											
15...	11	--	84	<2	<500	<500	--	--	--	--	--
FEB											
19...	12	3.0	62	<2	730	<130	--	--	--	--	--
MAR											
17...	<10	--	26	2	<130	<130	--	--	--	--	--
APR											
28...	<10	6.0	54	<2	<130	<130	--	--	--	--	--
JUN											
06...	<10	--	46	<2	<130	<130	--	--	--	--	--
JUL											
22...	13	--	80	<2	290	<130	--	--	--	--	--
AUG											
20...	<10	--	42	4	<130	<130	--	--	--	--	--
SEP											
29...	24	--	48	<2	<130	<130	--	--	--	--	--
03082100 INDIAN CREEK AT NEBO, PA SITE 12 (LAT 40 03 37N LONG 079 21 53W)											
OCT 1985											
23...	24	--	252	<2	--	250	<4	<0	<50	<30	<10
JAN 1986											
16...	32	--	360	6	<500	<500	--	--	--	--	--
APR											
29...	24	26	104	<2	<130	<130	--	--	--	--	--
JUL											
22...	25	--	94	2	210	<130	--	--	--	--	--
03082105 INDIAN CREEK AT COFFMAN, PA SITE 13 (LAT 40 03 07N LONG 079 22 55W)											
OCT 1985											
23...	<10	--	420	<2	--	100	<4	<0	<50	<30	<10
JAN 1986											
16...	24	--	280	2	<500	<500	--	--	--	--	--
APR											
29...	18	25	106	2	<130	<130	--	--	--	--	--
JUL											
23...	12	--	76	<2	150	<130	--	--	--	--	--
03082110 CHAMPION C ABOVE L CHAMPION C NR MELCROFT, PA SITE 7 (LAT 40 04 05N LONG 079 23 57W)											
OCT 1985											
23...	59	--	386	2	--	170	<4	<0	<50	<30	<10
NOV											
25...	--	--	--	--	--	--	--	--	--	--	--
JAN 1986											
15...	33	--	292	4	<500	<500	--	--	--	--	--
APR											
28...	25	20	130	8	<130	<130	--	--	--	--	--
JUL											
22...	32	--	118	<2	450	<130	--	--	--	--	--
03082112 DEEP MINE DISCHARGE NR WHITE, PA SITE 9 (LAT 40 04 30N LONG 079 25 03W)											
OCT 1985											
23...	740	--	1480	4	--	2200	<4	<0	<50	80	<10
JAN 1986											
15...	140	--	324	16	800	<500	--	--	--	--	--
APR											
28...	110	2.0	230	12	570	<130	--	--	--	--	--
JUL											
22...	86	--	230	6	960	<130	--	--	--	--	--

INDIAN CREEK BASIN STUDY

WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, DIS- SOLVED (UG/L AS NI)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	MERCURY DIS- SOLVED (UG/L AS HG)	
03082045 ROARING RN 50FT ABOVE PIKE RN AT HOPEWELL, PA SITE 5 (LAT 40 04 07N LONG 079 20 40W)												
OCT 1985												
24...	--		37	<45	--	<10	<25	13	--	<10	<6	<1.0
NOV												
25...	--		<10	--	--	10	--	--	--	<10	--	--
DEC												
23...	--		23	--	--	<10	--	--	--	23	--	--
JAN 1986												
15...	<300	<300	--	<50	<50	--	--	--	<10	<10	--	--
FEB												
19...	670	65	--	51	35	--	--	--	<10	<10	--	--
MAR												
17...	40	<10	--	17	14	--	--	--	<10	<10	--	--
APR												
28...	20	<10	--	11	11	--	--	--	10	19	--	--
JUN												
06...	50	48	--	<10	<10	--	--	--	<10	<10	--	--
JUL												
22...	180	<10	--	<10	<10	--	--	--	30	21	--	--
AUG												
20...	90	120	--	14	21	--	--	--	70	18	--	--
SEP												
29...	60	13	--	<10	<10	--	--	--	20	12	--	--
03082100 INDIAN CREEK AT NEBO, PA SITE 12 (LAT 40 03 37N LONG 079 21 53W)												
OCT 1985												
23...	--	40	<45	--	<10	<25	39	--	<10	<6	<1.0	
JAN 1986												
16...	320	<300	--	70	70	--	--	<10	<10	--	--	
APR												
29...	90	65	--	34	35	--	--	<10	31	--	--	
JUL												
22...	210	58	--	<10	<10	--	--	30	26	--	--	
03082105 INDIAN CREEK AT COFFMAN, PA SITE 13 (LAT 40 03 07N LONG 079 22 55W)												
OCT 1985												
23...	--	250	<45	--	65	<25	38	--	<10	<6	<1.0	
JAN 1986												
16...	<300	<300	--	100	90	--	--	<10	<10	--	--	
APR												
29...	120	26	--	52	48	--	--	10	32	--	--	
JUL												
23...	1200	81	--	10	<10	--	--	20	16	--	--	
03082110 CHAMPION C ABOVE L CHAMPION C NR MELCROFT, PA SITE 7 (LAT 40 04 05N LONG 079 23 57W)												
OCT 1985												
23...	--	290	<45	--	63	<25	82	--	<10	<6	<1.0	
NOV												
25...	--	--	--	--	--	--	--	--	--	--	--	
JAN 1986												
15...	<300	<300	--	100	100	--	--	<10	<10	--	--	
APR												
28...	380	52	--	43	40	--	--	20	<10	--	--	
JUL												
22...	500	24	--	12	<10	--	--	20	11	--	--	
03082112 DEEP MINE DISCHARGE NR WHITE, PA SITE 9 (LAT 40 04 30N LONG 079 25 03W)												
OCT 1985												
23...	--	86000	<45	--	2400	<25	450	--	150	<6	<1.0	
JAN 1986												
15...	4000	2000	--	180	230	--	--	70	77	--	--	
APR												
28...	3600	1400	--	98	96	--	--	80	75	--	--	
JUL												
22...	1800	650	--	25	<10	--	--	50	37	--	--	

ANALYSIS OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

INDIAN CREEK BASIN STUDY

WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	ACIDITY (MG/L AS H)	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 WH WAT TOTAL FIELD MG/L AS CACO3
03082115 L CHAMPION C ABOVE CHAMPION C NR MELCROFT, PA SITE 8 (LAT 40 04 03N LONG 079 23 59W)											
OCT 1985											
23...	0844	0.93	335	7.80	12.5	0	33	10	3.3	2.1	50
NOV											
25...	1130	--	--	--	--	--	--	--	--	--	--
JAN 1986											
15...	1040	2.4	195	7.10	0.0	0.1	--	--	--	--	34
APR											
28...	1305	8.4	190	7.60	17.0	0	--	--	--	--	22
JUL											
22...	0945	18	150	7.30	17.0	0	--	--	--	--	21
03082122 NUMBER 3 MINE POOL AT MELCROFT, PA SITE 10 (LAT 40 03 24N LONG 079 23 33W)											
OCT 1985											
23...	1135	0.0	2000	2.60	15.0	11	80	40	12	3.8	0
JAN 1986											
15...	1405	0.0	1300	2.80	0.0	6.8	--	--	--	--	0
APR											
28...	1430	0.0	1340	2.80	24.0	8.6	--	--	--	--	0
JUL											
22...	1225	0.0	1700	2.80	27.5	3.5	--	--	--	--	0
03082125 CHAMPION C(RT 381/711BRIDGE)AT MELCROFT,PA SITE 11 (LAT 40 03 06N LONG 079 23 27W)											
OCT 1985											
23...	1335	2.0	470	6.70	17.0	0	38	12	12	2.3	24
JAN 1986											
15...	1435	6.7	345	6.30	0.0	0.3	--	--	--	--	12
APR											
28...	1515	18	225	6.90	20.5	0.2	--	--	--	--	8
JUL											
22...	1325	35	180	6.70	19.5	0.2	--	--	--	--	10
03082132 KALP MINE DISCHARGE (LARGE) AT ROMNEY, PA SITE 25 (LAT 40 02 50N LONG 079 24 08W)											
OCT 1985											
23...	1440	0.17	2000	2.70	12.5	10	80	40	2.1	2.3	0
JAN 1986											
16...	0835	0.55	2000	2.90	10.5	9.8	--	--	--	--	0
APR											
28...	1305	1.8	1700	2.90	12.5	9.6	--	--	--	--	0
JUL											
23...	0810	0.86	1850	3.00	12.5	10	--	--	--	--	0
03082133 KALP MINE DISCHARGE (SMALL) AT ROMNEY, PA SITE 26 (LAT 40 02 49N LONG 079 24 11W)											
OCT 1985											
23...	1500	0.0	0	0.0	0.0	0	24	6.0	1.4	3.8	0
JAN 1986											
16...	0910	0.00	675	3.10	0.5	2.2	--	--	--	--	0
APR											
29...	1315	0.01	360	3.20	14.0	1.2	--	--	--	--	0
JUL											
23...	0820	0.03	400	3.30	12.0	1.4	--	--	--	--	0
03082142 MATHEWS MINE DISCHARGE AT DAVISTOWN, PA SITE 27 (LAT 40 02 26N LONG 079 24 14W)											
OCT 1985											
23...	1345	0.0	270	5.20	13.5	0.4	30	9.5	5.7	1.5	2
APR 1986											
29...	1335	0.33	1800	2.90	11.0	10	--	--	--	--	0
JUL											
23...	0845	0.34	1900	2.90	13.0	10	--	--	--	--	0

ANALYSIS OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

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INDIAN CREEK BASIN STUDY

WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BORON, DIS- SOLVED (UG/L AS B)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)
03082115	L CHAMPION C ABOVE CHAMPION C NR MELCROFT, PA SITE 8 (LAT 40 04 03N LONG 079 23 59W)										
OCT 1985											
23...	99	--	348	<2	--	300	<4	<0	<50	<30	<10
NOV											
25...	--	--	--	--	--	--	--	--	--	--	--
JAN 1986											
15...	76	--	260	<2	<500	<500	--	--	--	--	--
APR											
28...	52	4.0	134	6	<130	<130	--	--	--	--	--
JUL											
22...	42	--	128	<2	180	<130	--	--	--	--	--
03082122	NUMBER 3 MINE POOL AT MELCROFT, PA SITE 10 (LAT 40 03 24N LONG 079 23 33W)										
OCT 1985											
23...	810	--	1840	<2	--	19000	19	<0	<50	200	<10
JAN 1986											
15...	320	--	952	6	22000	21000	--	--	--	--	--
APR											
28...	580	2.0	1200	<2	33000	33000	--	--	--	--	--
JUL											
22...	560	--	1420	<2	26000	25000	--	--	--	--	--
03082125	CHAMPION C(RT 381/711BRIDGE)AT MELCROFT, PA SITE 11 (LAT 40 03 06N LONG 079 23 27W)										
OCT 1985											
23...	170	--	484	10	--	430	<4	<0	<50	<30	<10
JAN 1986											
15...	100	--	316	14	800	<500	--	--	--	--	--
APR											
28...	85	11	156	6	<130	1100	--	--	--	--	--
JUL											
22...	59	--	150	16	1000	<130	--	--	--	--	--
03082132	KALP MINE DISCHARGE (LARGE) AT ROMNEY, PA SITE 25 (LAT 40 02 50N LONG 079 24 08W)										
OCT 1985											
23...	1100	--	2150	<2	--	24000	41	<0	<50	310	33
JAN 1986											
16...	860	--	1990	4	30000	30000	--	--	--	--	--
APR											
28...	790	2.0	1400	16	32000	31000	--	--	--	--	--
JUL											
23...	1200	--	1870	4	25000	25000	--	--	--	--	--
03082133	KALP MINE DISCHARGE (SMALL) AT ROMNEY, PA SITE 26 (LAT 40 02 49N LONG 079 24 11W)										
OCT 1985											
23...	130	--	306	12	--	570	<4	<0	<50	30	<10
JAN 1986											
16...	140	--	448	2	6800	6800	--	--	--	--	--
APR											
29...	100	<1.0	170	10	3800	3600	--	--	--	--	--
JUL											
23...	120	--	190	<2	2500	2400	--	--	--	--	--
03082142	MATHEWS MINE DISCHARGE AT DAVISTOWN, PA SITE 27 (LAT 40 02 26N LONG 079 24 14W)										
OCT 1985											
23...	130	--	302	<2	--	40	<4	<0	<50	<30	<10
APR 1986											
29...	790	<1.0	1400	14	31000	31000	--	--	--	--	--
JUL											
23...	1100	--	1910	<2	26000	25000	--	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

INDIAN CREEK BASIN STUDY

WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, DIS- SOLVED (UG/L AS NI)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	MERCURY DIS- SOLVED (UG/L AS HG)
03082115 L CHAMPION C ABOVE CHAMPION C NR MELCROFT, PA SITE 8 (LAT 40 04 03N LONG 079 23 59W)											
OCT 1985											
23...	--	34	<45	--	<10	<25	64	--	<10	<6	<1.0
NOV 25...	--	--	--	--	--	--	--	--	--	--	--
JAN 1986											
15...	<300	<300	--	50	50	--	--	<10	<10	--	--
APR 28...	140	33	--	29	27	--	--	30	19	--	--
JUL 22...	180	36	--	<10	<10	--	--	20	16	--	--
03082122 NUMBER 3 MINE POOL AT MELCROFT, PA SITE 10 (LAT 40 03 24N LONG 079 23 33W)											
OCT 1985											
23...	--	80000	<45	--	11000	30	360	--	450	<6	<1.0
JAN 1986											
15...	50000	48000	--	5000	4800	--	--	350	350	--	--
APR 28...	79000	76000	--	8100	7900	--	--	490	480	--	--
JUL 22...	66000	64000	--	9100	9000	--	--	440	440	--	--
03082125 CHAMPION C(RT 381/711BRIDGE)AT MELCROFT, PA SITE 11 (LAT 40 03 06N LONG 079 23 27W)											
OCT 1985											
23...	--	2200	<45	--	650	<25	100	--	14	<6	<1.0
JAN. 1986											
15...	1700	1200	--	520	520	--	--	40	40	--	--
APR 28...	800	1300	--	300	280	--	--	50	41	--	--
JUL 22...	890	460	--	240	240	--	--	40	25	--	--
03082132 KALP MINE DISCHARGE (LARGE) AT ROMNEY, PA SITE 25 (LAT 40 02 50N LONG 079 24 08W)											
OCT 1985											
23...	--	85000	<45	--	3100	460	990	--	1200	<6	<1.0
JAN 1986											
16...	85000	85000	--	2600	2600	--	--	940	1200	--	--
APR 28...	37000	57000	--	2600	2500	--	--	990	970	--	--
JUL 23...	72000	67000	--	2900	2900	--	--	1100	1100	--	--
03082133 KALP MINE DISCHARGE (SMALL) AT ROMNEY, PA SITE 26 (LAT 40 02 49N LONG 079 24 11W)											
OCT 1985											
23...	--	2100	<45	--	840	<25	120	--	59	<6	<1.0
JAN 1986											
16...	6800	5700	--	680	650	--	--	170	170	--	--
APR 29...	1900	1900	--	450	440	--	--	120	140	--	--
JUL 23...	2800	2500	--	380	320	--	--	90	90	--	--
03082142 MATHEWS MINE DISCHARGE AT DAVISTOWN, PA SITE 27 (LAT 40 02 26N LONG 079 24 14W)											
OCT 1985											
23...	--	<10	46	--	320	<25	70	--	<10	<6	<1.0
APR 1986											
29...	37000	50000	--	2500	2500	--	--	970	990	--	--
JUL 23...	67000	61000	--	3000	2900	--	--	1100	1100	--	--

INDIAN CREEK BASIN STUDY

WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	ACIDITY (MG/L AS H)	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 WH WAT TOTAL FIELD MG/L AS CACO3
03082155 BACK CREEK AT INDIAN HEAD, PA SITE 15 (LAT 40 01 33N LONG 079 23 47W)											
OCT 1985											
23...	0830	4.4	120	7.50	12.0	0.1	13	2.0	2.2	1.1	2
NOV											
25...	1440	21	100	7.30	6.0	0	--	--	--	--	12
DEC											
23...	1350	13	90	7.10	2.5	0	--	--	--	--	16
JAN 1986											
15...	0930	2.6	82	6.80	0.5	0	--	--	--	--	20
FEB											
19...	1115	117	80	7.00	6.0	0.1	--	--	--	--	6
MAR											
17...	1355	57	80	6.40	6.5	0.1	--	--	--	--	9
APR											
29...	1045	17	75	7.30	13.0	0	--	--	--	--	15
JUN											
06...	1045	5.9	110	6.90	16.0	0.6	--	--	--	--	20
JUL											
23...	0945	45	78	7.10	13.5	0	--	--	--	--	12
AUG											
20...	1505	4.0	115	7.70	18.5	0	--	--	--	--	26
SEP											
29...	1412	8.2	105	7.60	18.5	0	--	--	--	--	22
03082160 INDIAN CREEK AT INDIAN HEAD, PA SITE 14 (LAT 40 01 30N LONG 079 23 49W)											
OCT 1985											
23...	1030	19	220	7.00	12.0	0.1	22	4.9	12	1.6	1
JAN 1986											
16...	1150	27	400	7.00	0.0	16	--	--	--	--	8
APR											
29...	0950	103	165	6.90	14.0	0.1	--	--	--	--	11
JUL											
23...	1020	178	105	7.10	15.0	0	--	--	--	--	12
03082168 GALENTINE MINE DISCHARGE NR INDIAN HEAD, PA SITE 20 (LAT 40 00 57N LONG 079 24 47W)											
OCT 1985											
24...	0900	0.35	1900	3.20	13.0	7.9	80	40	2.1	2.2	0
JAN 1986											
16...	1000	0.55	1900	2.40	11.0	180	--	--	--	--	0
APR											
28...	1400	0.74	1850	2.90	9.0	8.0	--	--	--	--	0
JUL											
23...	1140	0.62	1810	3.00	15.5	8.6	--	--	--	--	0
03082175 POPLAR RUN ABOVE NEWMYER RN NR CLINTON, PA SITE 18 (LAT 40 02 13N LONG 079 26 31W)											
OCT 1985											
23...	1300	0.82	380	4.60	13.0	0.2	39	12	2.1	1.9	2
JAN 1986											
15...	1230	1.7	310	5.30	0.0	0.2	--	--	--	--	2
APR											
28...	1020	6.6	210	5.00	13.0	0	--	--	--	--	2
JUL											
22...	1500	14	205	6.70	18.5	0	--	--	--	--	5
03082180 NEWMYER RUN ABOVE POPLAR RN NR CLINTON, PA SITE 17 (LAT 40 02 13N LONG 079 26 29W)											
OCT 1985											
23...	1220	0.77	950	4.60	13.0	2.4	80	40	8.4	2.5	0
JAN 1986											
15...	1235	1.7	560	4.90	0.0	0.8	--	--	--	--	2
APR											
28...	1020	4.7	320	7.10	13.0	0	--	--	--	--	30
JUL											
22...	1600	11	358	7.10	18.5	0	--	--	--	--	14
03082210 POPLAR RUN AT MOUTH NEAR NORMALVILLE, PA SITE 19 (LAT 40 00 57N LONG 079 24 58W)											
OCT 1985											
23...	1700	2.2	650	5.70	14.0	0.1	64	29	5.1	2.2	2
JAN 1986											
16...	1030	4.5	900	4.40	0.0	72	--	--	--	--	0
APR											
28...	1315	15	390	6.20	17.5	0.1	--	--	--	--	8
JUL											
23...	1020	30	420	6.60	18.0	0.1	--	--	--	--	4

INDIAN CREEK BASIN STUDY

WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BORON, DIS- SOLVED (UG/L AS B)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)
03082155 BACK CREEK AT INDIAN HEAD, PA SITE 15 (LAT 40 01 33N LONG 079 23 47W)											
OCT 1985											
23...	17	--	230	<2	--	80	<4	<0	<50	<30	<10
NOV											
25...	22	--	96	6	--	<40	--	--	--	--	--
DEC											
23...	26	--	78	<2	--	480	--	--	--	--	--
JAN 1986											
15...	24	--	198	4	<500	<500	--	--	--	--	--
FEB											
19...	16	2.0	66	<2	<130	<130	--	--	--	--	--
MAR											
17...	<10	--	46	10	<130	<130	--	--	--	--	--
APR											
29...	11	6.0	50	<2	<130	<130	--	--	--	--	--
JUN											
06...	12	--	64	<2	<130	<130	--	--	--	--	--
JUL											
23...	24	--	68	6	250	<130	--	--	--	--	--
AUG											
20...	<10	--	56	6	<130	<130	--	--	--	--	--
SEP											
29...	27	--	70	2	<130	<130	--	--	--	--	--
03082160 INDIAN CREEK AT INDIAN HEAD, PA SITE 14 (LAT 40 01 30N LONG 079 23 49W)											
OCT 1985											
23...	54	--	280	<2	--	140	<4	<0	<50	<30	<10
JAN 1986											
16...	54	--	378	10	<500	<500	--	--	--	--	--
APR											
29...	27	15	114	<2	<130	<130	--	--	--	--	--
JUL											
23...	26	--	88	8	390	180	--	--	--	--	--
03082168 GALENTINE MINE DISCHARGE NR INDIAN HEAD, PA SITE 20 (LAT 40 00 57N LONG 079 24 47W)											
OCT 1985											
24...	790	--	1840	<2	--	22000	31	<0	<50	290	25
JAN 1986											
16...	770	--	1920	6	31000	30000	--	--	--	--	--
APR											
28...	760	2.0	1290	18	32000	30000	--	--	--	--	--
JUL											
23...	820	--	70	<2	21000	21000	--	--	--	--	--
03082175 POPLAR RUN ABOVE NEWMYER RN NR CLINTON, PA SITE 18 (LAT 40 02 13N LONG 079 26 31W)											
OCT 1985											
23...	170	--	354	<2	--	760	<4	<0	<50	30	<10
JAN 1986											
15...	150	--	412	4	<500	<500	--	--	--	--	--
APR											
28...	78	2.0	104	16	<130	<130	--	--	--	--	--
JUL											
22...	62	--	326	<2	340	<130	--	--	--	--	--
03082180 NEWMYER RUN ABOVE POPLAR RN NR CLINTON, PA SITE 17 (LAT 40 02 13N LONG 079 26 29W)											
OCT 1985											
23...	550	--	1100	4	--	4000	<4	<0	<50	240	<10
JAN 1986											
15...	280	--	668	10	4500	3200	--	--	--	--	--
APR											
28...	230	5.0	338	20	910	<130	--	--	--	--	--
JUL											
22...	140	--	122	10	1000	<130	--	--	--	--	--
03082210 POPLAR RUN AT MOUTH NEAR NORMALVILLE, PA SITE 19 (LAT 40 00 57N LONG 079 24 58W)											
OCT 1985											
23...	340	--	600	<2	--	40	<4	<0	<50	40	<10
JAN 1986											
16...	460	--	874	6	8900	8300	--	--	--	--	--
APR											
28...	200	2.0	292	24	910	<130	--	--	--	--	--
JUL											
23...	150	--	1640	6	1100	<130	--	--	--	--	--

INDIAN CREEK BASIN STUDY

WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, DIS- SOLVED (UG/L AS NI)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	MERCURY DIS- SOLVED (UG/L AS HG)
03082155 BACK CREEK AT INDIAN HEAD, PA SITE 15 (LAT 40 01 33N LONG 079 23 47W)											
OCT 1985											
23...	--	23	47	--	<10	<25	19	--	<10	<6	<1.0
NOV											
25...	--	<10	--	--	<10	--	--	--	<10	--	--
DEC											
23...	--	180	--	--	<10	--	--	--	56	--	--
JAN 1986											
15...	<300	<300	--	<50	<50	--	--	60	<10	--	--
FEB											
19...	240	<10	--	31	25	--	--	<10	<10	--	--
MAR											
17...	120	<10	--	16	<10	--	--	<10	<10	--	--
APR											
29...	50	13	--	12	11	--	--	10	24	--	--
JUN											
06...	80	48	--	<10	<10	--	--	<10	<10	--	--
JUL											
23...	180	14	--	<10	<10	--	--	20	11	--	--
AUG											
20...	90	26	--	16	15	--	--	20	14	--	--
SEP											
29...	90	35	--	<10	<10	--	--	20	17	--	--
03082160 INDIAN CREEK AT INDIAN HEAD, PA SITE 14 (LAT 40 01 30N LONG 079 23 49W)											
OCT 1985											
23...	--	120	<45	--	210	<25	64	--	<10	<6	<1.0
JAN 1986											
16...	1700	620	--	190	190	--	--	20	20	--	--
APR											
29...	340	140	--	100	100	--	--	30	45	--	--
JUL											
23...	380	78	--	22	<10	--	--	20	<10	--	--
03082168 GALENTINE MINE DISCHARGE NR INDIAN HEAD, PA SITE 20 (LAT 40 00 57N LONG 079 24 47W)											
OCT 1985											
24...	--	53000	<45	--	3200	410	1000	--	1100	<6	<1.0
JAN 1986											
16...	55000	51000	--	2900	2700	--	--	1100	1000	--	--
APR											
28...	31000	40000	--	2900	2800	--	--	920	880	--	--
JUL											
23...	54000	52000	--	3100	3000	--	--	880	830	--	--
03082175 POPLAR RUN ABOVE NEWMYER RN NR CLINTON, PA SITE 18 (LAT 40 02 13N LONG 079 26 31W)											
OCT 1985											
23...	--	170	<45	--	2400	<25	59	--	160	<6	<1.0
JAN 1986											
15...	<300	<300	--	1700	1700	--	--	140	140	--	--
APR											
28...	90	190	--	1100	1100	--	--	110	120	--	--
JUL											
22...	330	130	--	660	650	--	--	80	65	--	--
03082180 NEWMYER RUN ABOVE POPLAR RN NR CLINTON, PA SITE 17 (LAT 40 02 13N LONG 079 26 29W)											
OCT 1985											
23...	--	1700	<45	--	17000	110	120	--	520	<6	<1.0
JAN 1986											
15...	1200	680	--	8100	7100	--	--	300	290	--	--
APR											
28...	370	170	--	2500	2100	--	--	80	24	--	--
JUL											
22...	560	100	--	1200	1300	--	--	80	84	--	--
03082210 POPLAR RUN AT MOUTH NEAR NORMALVILLE, PA SITE 19 (LAT 40 00 57N LONG 079 24 58W)											
OCT 1985											
23...	--	100	<45	--	4700	<25	93	--	210	<6	<1.0
JAN 1986											
16...	1100	560	--	13000	13000	--	--	520	520	--	--
APR											
28...	670	19	--	3600	3500	--	--	100	67	--	--
JUL											
23...	610	320	--	2500	2500	--	--	140	120	--	--

ANALYSIS OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

INDIAN CREEK BASIN STUDY

WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	ACIDITY (MG/L AS H)	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 WH WAT TOTAL FIELD MG/L AS CACO3
03082215 LAUREL RUN ABOVE BACK RN AT ROGERS MILL, PA SITE 22 (LAT 39 59 50N LONG 079 24 21W)											
OCT 1985											
23...	1500	1.5	94	7.30	14.0	0	8.6	1.4	0.79	0.99	18
NOV											
25...	1330	16	60	7.00	5.0	0	--	--	--	--	8
DEC											
23...	1130	8.9	63	6.80	3.0	0	--	--	--	--	10
JAN 1986											
16...	1500	1.9	70	6.60	0.0	0	--	--	--	--	16
FEB											
19...	1630	174	50	6.30	6.5	0	--	--	--	--	4
MAR											
17...	1415	32	50	6.80	6.5	0	--	--	--	--	6
APR											
28...	1445	14	90	7.80	13.0	0	--	--	--	--	10
JUN											
05...	1500	3.1	80	6.90	15.0	0	--	--	--	--	14
JUL											
23...	0825	23	65	6.90	14.0	0	--	--	--	--	4
AUG											
20...	1410	1.4	105	7.40	18.0	0	--	--	--	--	20
SEP											
29...	1450	4.1	75	7.30	18.0	0	--	--	--	--	16

03082220 BUCK RUN ABOVE LAUREL RN AT ROGERS MILL, PA SITE 21 (LAT 39 59 32N LONG 079 24 33W)											
OCT 1985											
23...	1115	2.0	102	7.40	12.0	0	9.6	1.8	2.6	1.1	24
NOV											
25...	1230	10	85	6.80	5.5	0	--	--	--	--	10
DEC											
23...	1245	7.1	85	6.90	2.5	0.1	--	--	--	--	12
JAN 1986											
16...	1400	3.5	90	6.70	0.0	0	--	--	--	--	14
FEB											
19...	1600	83	65	5.50	6.5	0.1	--	--	--	--	0
MAR											
17...	1620	22	85	5.80	6.5	0.1	--	--	--	--	2
APR											
28...	1515	9.1	85	7.80	13.0	0.1	--	--	--	--	8
JUN											
05...	1600	1.8	90	6.90	15.0	0	--	--	--	--	14
JUL											
23...	0920	17	80	7.30	14.0	0	--	--	--	--	6
AUG											
20...	1445	0.61	95	7.40	18.0	0	--	--	--	--	20
SEP											
29...	1522	4.2	105	7.10	18.0	0	--	--	--	--	12

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	ACIDITY (MG/L AS H)	ALKA- LITY WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)
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03082300 INDIAN CREEK AT MOUTH NEAR MILL RUN, PA SITE 28 (LAT 39 58 12N LONG 079 30 44W)

DEC 1985										
23...	0830	0.0	235	6.80	0.5	0	4	68	--	192
JAN 1986										
16...	1130	0.0	295	7.00	0.0	0	6	100	--	322
FEB										
19...	1400	0.0	145	7.60	6.0	0.1	20	53	16	104
MAR										
17...	0900	0.0	145	6.50	6.0	0	2	34	--	88
APR										
29...	0910	210	150	7.30	11.0	0	4	67	9.0	90
JUN										
05...	1100	59	250	6.80	20.0	0	8	100	--	166
JUL										
22...	0930	0.0	120	7.10	18.0	0	14	36	--	110
AUG										
20...	1000	30	290	6.90	23.0	0	8	130	--	200
SEP										
30...	1010	39	325	6.80	15.0	0	12	100	--	182

INDIAN CREEK BASIN STUDY

WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO-	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BORON, DIS- SOLVED (UG/L AS B)	CHRO-- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)
		RIDE, DIS- SOLVED (MG/L AS CL)									
03082215 LAUREL RUN ABOVE BACK RN AT ROGERS MILL, PA SITE 22 (LAT 39 59 50N LONG 079 24 21W)											
OCT 1985											
23...	18	--	164	<2	--	50	<4	<0	<50	<30	<10
NOV											
25...	20	--	72	4	--	<40	--	--	--	--	--
DEC											
23...	22	--	68	<2	--	350	--	--	--	--	--
JAN 1986											
16...	23	--	194	2	<500	<500	--	--	--	--	--
FEB											
19...	12	2.0	44	<2	<130	<130	--	--	--	--	--
MAR											
17...	<10	--	28	<2	<130	<130	--	--	--	--	--
APR											
28...	23	<1.0	2	12	<130	<130	--	--	--	--	--
JUN											
05...	<10	--	36	<2	<130	<130	--	--	--	--	--
JUL											
23...	13	--	66	<2	<130	<130	--	--	--	--	--
AUG											
20...	<10	--	34	<2	<130	<130	--	--	--	--	--
SEP											
29...	29	--	72	<2	<130	<130	--	--	--	--	--

03082220 BUCK RUN ABOVE LAUREL RN AT ROGERS MILL, PA SITE 21 (LAT 39 59 32N LONG 079 24 33W)											
OCT 1985											
23...	26	--	200	<2	--	250	<4	<0	<50	<30	<10
NOV											
25...	27	--	80	10	--	<40	--	--	--	--	--
DEC											
23...	34	--	80	<2	--	200	--	--	--	--	--
JAN 1986											
16...	33	--	162	<2	<500	<500	--	--	--	--	--
FEB											
19...	20	3.0	64	2	610	<130	--	--	--	--	--
MAR											
17...	20	--	40	4	540	<130	--	--	--	--	--
APR											
28...	31	2.0	20	12	<130	<130	--	--	--	--	--
JUN											
05...	15	--	56	<2	330	610	--	--	--	--	--
JUL											
23...	27	--	58	2	450	150	--	--	--	--	--
AUG											
20...	21	--	46	6	530	<130	--	--	--	--	--
SEP											
29...	34	--	86	<2	500	<130	--	--	--	--	--

DATE	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
	03082300 INDIAN CREEK AT MOUTH NEAR MILL RUN, PA SITE 28 (LAT 39 58 12N LONG 079 30 44W)								

ANALYSIS OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

INDIAN CREEK BASIN STUDY

WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, DIS- SOLVED (UG/L AS NI)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	MERCURY DIS- SOLVED (UG/L AS HG)
03082215 LAUREL RUN ABOVE BACK RN AT ROGERS MILL, PA SITE 22 (LAT 39 59 50N LONG 079 24 21W)											
OCT 1985											
23...	--	22	65	--	<10	<25	15	--	<10	<6	<1.0
NOV											
25...	--	<10	--	--	<10	--	--	--	<10	--	--
DEC											
23...	--	30	--	--	<10	--	--	--	23	--	--
JAN 1986											
16...	<300	<300	--	<50	<50	--	--	<10	<10	--	--
FEB											
19...	270	39	--	50	31	--	--	<10	<10	--	--
MAR											
17...	30	<10	--	12	12	--	--	<10	<10	--	--
APR											
28...	40	38	--	<10	13	--	--	10	26	--	--
JUN											
05...	150	45	--	<10	<10	--	--	20	<10	--	--
JUL											
23...	60	20	--	<10	<10	--	--	20	12	--	--
AUG											
20...	240	36	--	26	22	--	--	20	21	--	--
SEP											
29...	190	45	--	<10	<10	--	--	20	17	--	--
03082220 BUCK RUN ABOVE LAUREL RN AT ROGERS MILL, PA SITE 21 (LAT 39 59 32N LONG 079 24 33W)											
OCT 1985											
23...	--	26	65	--	93	<25	17	--	<10	<6	<1.0
NOV											
25...	--	<10	--	--	210	--	--	--	<10	--	--
DEC											
23...	--	51	--	--	210	--	--	--	43	--	--
JAN 1986											
16...	<300	<300	--	130	120	--	--	<10	<10	--	--
FEB											
19...	390	12	--	230	220	--	--	<10	<10	--	--
MAR											
17...	40	<10	--	390	380	--	--	<10	<10	--	--
APR											
28...	40	49	--	180	160	--	--	30	26	--	--
JUN											
05...	1700	17	--	180	160	--	--	20	21	--	--
JUL											
23...	90	420	--	220	160	--	--	40	40	--	--
AUG											
20...	60	18	--	160	160	--	--	30	29	--	--
SEP											
29...	80	80	--	400	400	--	--	60	60	--	--

GROUND-WATER LEVELS

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ALLEGHENY COUNTY

403734080063001. Local number, AG 700.

LOCATION.--Lat 40°37'34", long 80°06'30", Hydrologic Unit 05030101, at State Game Land Number 203, Bradford Woods.

Owner: U.S. Geological Survey.

AQUIFER.--Sandstone and shale of Glenshaw Formation of Late Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in, depth 100 ft, cased to 24 ft, open hole.

INSTRUMENTATION.--Continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 1,035 ft, from topographic map. Measuring point: Top of casing, 3.45 ft above land-surface datum.

REMARKS.--Missing record Dec. 26 to Jan. 19.

PERIOD OF RECORD.--November 1967 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.86 ft below land-surface datum, May 30, 1983; lowest, 8.94 ft below land-surface datum, Nov. 14, 1968.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.36	7.98	6.30	---	6.61	6.18	6.32	6.45	6.75	6.97	7.06	7.77
2	8.41	8.02	6.21	---	6.48	6.13	6.38	6.66	6.99	6.79	7.09	7.77
3	8.33	8.02	6.31	---	6.47	6.14	6.40	6.72	7.06	6.96	7.23	7.78
4	8.22	7.94	6.55	---	6.26	6.21	6.41	6.71	6.90	7.01	7.36	7.70
5	8.18	7.76	6.53	---	6.19	6.24	6.42	6.66	6.81	7.01	7.36	7.76
6	8.36	7.83	6.36	---	6.24	6.09	6.36	6.46	6.76	7.05	7.33	7.85
7	8.47	7.95	6.39	---	6.13	6.60	6.29	6.50	6.69	7.04	7.28	7.98
8	8.54	8.02	6.43	---	6.17	6.68	6.16	6.58	6.77	7.00	7.27	8.05
9	8.54	8.01	6.34	---	6.20	6.37	6.25	6.66	6.93	6.77	7.39	8.05
10	8.40	7.91	6.50	---	6.19	6.27	6.23	6.68	6.89	6.84	7.41	7.94
11	8.40	7.93	6.49	---	6.19	6.48	6.32	6.54	6.71	6.75	7.46	7.81
12	8.39	7.85	6.34	---	6.27	6.48	6.51	6.50	6.64	6.66	7.58	8.08
13	8.25	7.51	6.22	---	6.38	6.31	6.59	6.56	6.83	6.70	7.53	8.22
14	8.25	7.48	6.32	---	6.21	6.19	6.59	6.66	6.83	6.82	7.47	8.21
15	8.30	7.50	6.25	---	6.32	6.25	6.48	6.70	6.76	6.85	7.40	8.25
16	8.58	7.19	6.24	---	6.32	6.39	6.48	6.62	6.67	6.77	7.36	8.29
17	8.62	7.03	6.26	---	6.14	6.39	6.70	6.63	6.82	6.75	7.38	8.24
18	8.50	6.98	6.53	---	6.10	6.37	6.77	6.55	6.84	6.74	7.47	8.14
19	8.32	6.78	6.58	---	6.13	6.19	6.72	6.61	6.77	6.68	7.51	8.14
20	8.32	6.81	6.45	6.36	6.03	6.48	6.52	6.70	6.81	6.63	7.60	8.12
21	8.29	6.86	6.50	6.63	6.22	6.53	6.42	6.77	6.85	6.77	7.63	8.23
22	8.27	6.69	6.40	6.66	6.20	6.51	6.68	6.77	6.74	6.90	7.67	8.20
23	8.26	6.60	6.18	6.70	6.02	6.33	6.74	6.80	6.71	6.95	7.55	8.03
24	8.17	6.70	6.43	6.69	5.98	6.56	6.78	6.91	6.84	6.91	7.61	8.01
25	8.29	6.78	6.61	6.41	5.99	6.43	6.57	6.94	6.97	6.84	7.64	8.10
26	8.29	6.80	---	6.12	5.92	6.31	6.51	6.95	6.96	6.85	7.58	8.17
27	8.24	6.56	---	6.12	6.01	6.35	6.52	6.94	6.90	6.87	7.59	8.13
28	8.34	6.50	---	6.24	6.15	6.36	6.42	6.96	6.80	6.88	7.81	8.20
29	8.33	6.33	---	6.40	---	6.26	6.57	6.99	6.81	6.88	7.87	8.17
30	8.12	6.45	---	6.61	---	6.27	6.60	6.92	6.96	6.97	7.88	8.11
31	8.08	---	---	6.64	---	6.38	---	6.82	---	7.02	7.83	---
MEAN	8.34	7.29	6.39	6.47	6.20	6.35	6.49	6.71	6.83	6.86	7.49	8.05
MAX	8.62	8.02	6.61	6.70	6.61	6.68	6.78	6.99	7.06	7.05	7.88	8.29
MIN	8.08	6.33	6.18	6.12	5.92	6.09	6.16	6.45	6.64	6.63	7.06	7.70
WTR YR 1986	MEAN	7.00	HIGH	5.92	Apr 26	LOW	8.62	Oct 17				

ARMSTRONG COUNTY

404626079344001. Local number, AR 77.

LOCATION.--Lat 40°46'26", long 79°34'40", Hydrologic Unit 05010006, at State Game Land Number 247.

Owner: U.S. Geological Survey.

AQUIFER.--Allegheny Group of Middle Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in, depth 242 ft cased to 43 ft, open hole.

INSTRUMENTATION.--Continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 1,050 ft, from topographic map. Measuring point: Top of plywood cover, 65 ft above land-surface datum.

REMARKS.--Missing record Dec. 19-22, Mar. 16-20, and Mar. 22 to Apr. 1.

PERIOD OF RECORD.--February 1975 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 26.85 ft below land-surface datum, May 27, 1978; lowest, 52.20 ft below land-surface datum, May 1, 1979.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32.87	33.03	29.25	29.55	30.79	28.64	---	28.99	31.00	29.85	30.72	30.58
2	32.97	33.15	29.07	29.71	30.65	28.82	30.49	29.16	31.10	29.85	30.61	30.94
3	33.08	33.21	28.95	29.87	30.46	29.02	28.90	29.22	31.23	29.79	30.65	31.06
4	33.05	33.23	28.99	30.18	30.46	29.19	29.01	29.33	31.28	29.70	30.72	31.03
5	32.93	33.18	28.86	30.18	30.23	29.30	29.07	29.36	31.28	29.56	30.78	30.90
6	32.97	33.13	28.72	30.16	30.04	29.31	28.96	29.47	31.19	29.63	30.76	30.87
7	33.18	33.07	28.81	30.34	29.85	29.59	28.62	29.56	31.10	29.67	30.73	31.06
8	33.28	32.90	28.88	30.50	29.69	29.82	28.54	29.73	30.92	29.67	30.71	31.53
9	33.28	32.87	29.13	30.51	29.59	29.83	28.60	29.94	30.66	29.67	30.65	31.76
10	33.22	32.70	29.43	30.40	29.62	29.88	28.67	30.13	30.52	29.69	30.65	31.76
11	33.21	32.60	29.50	30.68	29.61	29.85	28.82	30.15	30.39	29.47	30.63	31.72
12	33.25	32.49	29.39	30.70	29.63	29.73	29.03	30.12	30.26	29.06	30.58	31.62
13	33.23	32.17	29.41	30.00	29.71	29.71	29.21	30.07	30.12	29.03	30.48	31.82
14	33.39	31.87	29.19	29.89	29.70	29.57	29.27	30.04	30.05	28.80	30.38	32.12
15	33.39	31.47	29.09	30.15	29.66	29.38	29.33	30.13	29.99	28.53	30.28	32.16
16	33.40	31.22	29.17	30.33	29.74	---	29.40	30.22	29.79	28.40	30.18	32.25
17	33.45	30.89	29.26	30.45	29.74	---	29.43	30.30	29.59	28.38	30.14	32.35
18	33.46	30.77	29.25	30.62	29.74	---	29.43	30.34	29.48	28.25	30.55	32.34
19	33.49	30.61	---	30.64	29.74	---	29.42	30.37	29.31	28.17	30.65	32.25
20	33.48	30.38	---	30.50	29.69	---	29.25	30.44	29.08	28.17	30.72	32.27
21	33.48	30.16	---	30.61	29.56	29.85	29.04	30.51	29.28	28.30	31.18	32.34
22	33.36	30.14	---	30.76	29.25	---	28.83	30.61	29.37	28.63	31.31	32.29
23	33.26	30.13	29.07	30.77	29.20	---	28.79	30.69	29.36	28.52	31.25	32.16
24	33.15	30.28	29.03	30.80	29.28	---	28.85	30.82	29.26	28.58	30.30	32.33
25	33.13	30.30	29.41	30.75	28.85	---	28.88	30.93	29.47	28.66	30.44	32.33
26	33.13	30.24	29.62	30.62	28.83	---	28.73	30.95	29.57	28.94	30.33	32.48
27	33.05	30.13	29.75	30.61	28.73	---	28.71	30.95	29.61	29.67	30.40	32.36
28	33.05	29.70	29.80	30.50	28.76	---	28.76	30.90	29.61	30.41	30.28	32.37
29	32.92	29.43	29.82	30.60	---	---	28.72	30.96	29.64	30.81	30.28	32.28
30	32.91	29.32	29.96	30.73	---	---	28.85	31.00	29.78	30.82	30.49	31.96
31	32.88	---	29.96	30.80	---	---	---	31.00	---	30.81	30.60	---
MEAN	33.19	31.49	29.29	30.42	29.67	29.47	29.02	30.21	30.11	29.27	30.59	31.84
MAX	33.49	33.23	29.96	30.80	30.79	29.88	30.49	31.00	31.28	30.82	31.31	32.48
MIN	32.87	29.32	28.72	29.55	28.73	28.64	28.54	28.99	29.08	28.17	30.14	30.58

WTR YR 1986 MEAN 30.44 HIGH 28.17 July 19, 20 LOW 33.49 Oct 19

BEAVER COUNTY

185

403006080252301. Local number, BV 156.

LOCATION.--Lat 40°30'06", long 80°25'23", Hydrologic Unit 05030101, at Raccoon State Park.

Owner: U.S. Geological Survey.

AQUIFER.--Shale of Glenshaw Formation of Late Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in, depth 101 ft, cased to 25 ft, open hole.

INSTRUMENTATION.--Continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 930 ft, from topographic map. Measuring point: Top of casing, 2.45 ft above land-surface datum.

REMARKS.--Missing record Oct. 24, 25, Jan. 24, 25, and June 22, 23.

PERIOD OF RECORD.--November 1967 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.75 ft below land-surface datum, Aug. 18, 1980 Apr. 24, 1984; lowest 13.72 ft below land-surface datum, June 5, 1968.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.33	9.80	8.35	8.94	8.90	8.61	8.84	8.81	9.15	9.30	9.04	9.50
2	10.32	9.78	8.50	8.98	8.77	8.61	8.91	8.98	9.35	9.19	9.08	9.51
3	10.33	9.77	8.68	8.96	8.75	8.63	8.93	8.98	9.41	9.20	9.19	9.51
4	10.27	9.42	8.69	8.99	8.67	8.68	8.95	8.99	9.35	9.25	9.29	9.48
5	10.17	8.98	8.68	8.90	8.29	8.70	8.94	8.89	9.31	9.27	9.25	9.48
6	10.24	9.06	8.73	9.04	8.32	8.62	8.90	8.89	9.21	9.35	9.26	9.51
7	10.32	9.12	8.75	9.22	8.33	8.93	8.87	8.83	9.00	9.38	9.05	9.62
8	10.38	9.26	8.75	9.27	8.41	8.94	8.81	8.93	9.10	9.32	9.11	9.69
9	10.38	9.26	8.83	9.21	8.45	8.85	8.84	8.99	9.19	9.18	9.18	9.72
10	10.30	9.13	8.83	9.09	8.45	8.73	8.85	9.04	9.22	8.92	9.15	9.64
11	10.29	8.89	8.72	9.06	8.51	8.75	8.86	8.97	8.99	8.91	8.89	9.60
12	10.29	8.87	8.30	8.99	8.57	8.75	8.95	8.94	9.02	8.80	8.95	9.61
13	10.20	8.60	8.28	9.06	8.63	8.64	8.99	8.98	9.14	8.78	8.95	9.74
14	10.19	8.55	8.45	9.13	8.56	8.55	8.99	8.98	9.22	8.79	8.95	9.79
15	10.16	8.48	8.47	9.23	8.64	8.56	8.91	9.04	9.13	8.84	8.91	9.76
16	10.28	8.46	8.50	9.24	8.65	8.66	8.90	9.02	9.12	8.86	8.93	9.86
17	10.32	8.10	8.52	9.19	8.58	8.69	8.99	9.04	9.22	8.85	8.97	9.88
18	10.28	8.21	8.66	9.13	8.49	8.69	9.04	8.99	9.23	8.87	9.00	9.79
19	10.21	8.31	8.67	8.87	8.39	8.55	9.02	9.02	9.25	8.94	9.08	9.71
20	10.16	8.54	8.62	8.57	8.26	8.79	8.93	9.08	9.28	8.81	9.11	9.77
21	10.10	8.61	8.66	8.63	8.31	8.84	8.73	9.15	9.44	8.83	9.18	9.79
22	10.09	8.63	8.50	8.76	8.31	8.83	8.87	9.11	---	8.96	9.22	9.79
23	10.10	8.70	8.53	8.81	8.33	8.78	8.91	9.15	---	8.98	9.18	9.67
24	---	8.84	8.66	---	8.35	8.90	8.94	9.20	9.33	8.98	9.22	9.61
25	---	8.86	8.76	---	8.39	8.87	8.86	9.26	9.44	9.00	9.25	9.56
26	9.90	8.81	8.76	8.56	8.39	8.80	8.81	9.23	9.45	9.00	9.29	9.59
27	9.92	8.44	8.77	8.60	8.44	8.81	8.82	9.22	9.43	9.07	9.24	9.62
28	9.99	8.34	8.84	8.63	8.59	8.87	8.80	9.18	9.25	9.03	9.41	9.65
29	9.98	8.26	8.87	8.69	---	8.80	8.87	9.17	9.21	8.92	9.47	9.64
30	9.88	8.34	8.88	8.86	---	8.79	8.95	9.15	9.28	8.97	9.50	9.59
31	9.89	---	8.83	8.90	---	8.90	---	9.12	---	9.02	9.50	---
MEAN	10.18	8.81	8.65	8.95	8.49	8.75	8.90	9.04	9.24	9.02	9.15	9.66
MAX	10.38	9.80	8.88	9.27	8.90	8.94	9.04	9.26	9.45	9.38	9.50	9.88
MIN	9.88	8.10	8.28	8.56	8.26	8.55	8.73	8.81	8.99	8.78	8.89	9.48

WTR YR 1986 MEAN 9.07 HIGH 8.10 Nov 17 LOW 10.38 Oct 8, 9

BUTLER COUNTY

410501079524401. Local number, BT 311.

LOCATION.--Lat 41°05'01", long 79°52'44", Hydrologic Unit 05030105, at State Game Land Number 95.

Owner: U.S. Geological Survey.

AQUIFER.--Kittanning Formation of Middle Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in, depth 89 ft, cased to 12 ft, open hole.

INSTRUMENTATION.--Continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 1,465 ft, from topographic map. Measuring point: Top of casing, 2.30 ft above land-surface datum.

REMARKS.--Missing record Nov. 4-19, Dec. 14-19, Dec. 21 to Jan. 18, Jan. 30 to Feb. 19, Mar. 1-18, May 10-19, and July 29 to Sept. 19.

PERIOD OF RECORD.--November 1970 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.62 ft below land-surface datum, Feb. 21, 22, 1986; lowest, 31.06 ft below land-surface datum, Oct. 16-18, 1983.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27.77	28.76	4.28	---	---	---	4.70	4.66	8.53	6.46	---	---
2	27.84	28.81	4.34	---	---	---	4.85	4.66	10.47	6.23	---	---
3	27.84	28.83	4.45	---	---	---	4.89	4.72	11.70	5.02	---	---
4	27.80	---	4.44	---	---	---	4.96	4.34	12.59	5.40	---	---
5	27.84	---	4.36	---	---	---	5.01	4.55	13.09	5.84	---	---
6	27.97	---	4.40	---	---	---	4.74	4.65	13.55	6.23	---	---
7	28.07	---	4.40	---	---	---	4.04	4.65	13.88	6.54	---	---
8	28.16	---	4.33	---	---	---	4.14	4.70	14.77	6.67	---	---
9	28.18	---	4.42	---	---	---	4.27	4.68	15.80	5.93	---	---
10	28.16	---	4.41	---	---	---	4.26	---	16.02	4.51	---	---
11	28.20	---	4.01	---	---	---	4.24	---	15.95	4.56	---	---
12	28.19	---	3.85	---	---	---	4.34	---	7.44	4.45	---	---
13	28.20	---	3.93	---	---	---	4.45	---	5.10	4.55	---	---
14	28.21	---	---	---	---	---	4.48	---	5.24	4.75	---	---
15	28.28	---	---	---	---	---	4.38	---	5.26	4.96	---	---
16	28.48	---	---	---	---	---	3.87	---	5.43	4.96	---	---
17	28.51	---	---	---	---	---	3.94	---	5.56	5.10	---	---
18	28.50	---	---	---	---	---	4.07	---	5.55	5.33	---	---
19	28.46	---	---	4.03	---	4.01	4.10	---	5.56	5.48	---	---
20	28.51	5.01	4.32	4.03	3.63	4.26	4.26	5.23	5.76	5.62	25.76	---
21	28.53	4.83	---	4.20	3.62	4.34	4.23	5.36	5.83	5.82	---	25.81
22	28.54	4.81	---	4.27	3.62	4.37	4.26	5.53	5.83	6.12	---	25.81
23	28.55	4.75	---	4.36	3.73	4.29	4.30	5.76	5.16	6.37	---	25.75
24	28.56	4.85	---	4.45	3.74	4.53	4.29	6.03	5.19	6.57	---	21.82
25	28.70	4.85	---	4.33	3.79	4.50	4.33	6.28	5.41	6.81	---	19.73
26	28.72	4.77	---	4.24	3.74	4.43	4.45	6.56	5.61	7.03	---	16.09
27	28.74	4.31	---	4.47	3.88	4.46	4.44	6.64	5.63	7.50	---	16.45
28	28.81	4.23	---	4.47	3.99	4.51	4.55	6.68	5.76	7.75	---	18.66
29	28.82	4.30	---	4.69	---	4.51	4.64	7.02	6.07	---	---	20.28
30	28.76	4.28	---	---	---	4.59	4.67	7.41	6.36	---	---	21.00
31	28.76	---	---	---	---	4.72	---	7.88	---	---	---	---
MEAN	28.34	9.81	4.28	4.32	3.75	4.42	4.41	5.62	8.47	5.81	---	21.56
MAX	28.82	28.83	4.45	4.69	3.99	4.72	5.01	7.88	16.02	7.75	---	25.81
MIN	27.77	4.23	3.85	4.03	3.62	4.01	3.87	4.34	5.10	4.45	---	16.09

WTR YR 1986 MEAN 9.99 HIGH 3.62 Feb 21, 22 LOW 28.83 Nov 3

CAMBRIA COUNTY

187

401935078550601. Local number, CA 1.

LOCATION.--Lat 40°19'35", long 78°55'06", Hydrologic Unit 05010007, at Locust and Park Place, Johnstown.

Owner: Johnstown Tribune Publishing Company.

AQUIFER.--Homewood Sandstone of Middle Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 12 in to 8 in, depth 180 ft, cased to 45 ft, open hole.

INSTRUMENTATION.--Weekly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 1,165 ft, from topographic map. Measuring point: Top of casing, 10 ft below land-surface datum.

REMARKS.--None.

PERIOD OF RECORD.--March 1952 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.10 ft below land-surface datum, Sept. 3, 1975;
lowest measured, 26.78 ft below land-surface datum, July 23, 1953.DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	15.30	---	---	---	---	---	17.30	---	---	17.80
3	---	---	---	---	16.80	16.60	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	17.60	---
5	---	16.40	---	---	---	---	---	17.40	---	---	---	---
6	---	---	---	17.30	---	---	---	---	---	---	---	---
7	18.00	---	---	---	---	---	---	---	---	17.70	---	---
8	---	---	---	---	---	---	17.20	---	---	---	---	17.90
9	---	---	16.50	---	---	---	---	---	17.40	---	---	---
10	---	---	---	---	15.90	---	---	---	---	---	---	---
11	---	17.00	---	---	---	16.00	---	---	---	---	17.60	---
12	---	---	---	---	---	---	---	17.50	---	---	---	---
13	---	---	---	17.50	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	17.30	---	---
15	---	---	---	---	---	---	17.00	---	---	---	---	17.90
16	---	---	16.30	---	---	---	---	---	17.40	---	---	---
17	---	---	---	---	16.70	15.00	---	---	---	---	---	---
18	17.60	15.30	---	---	---	---	---	---	---	---	17.70	---
19	---	---	---	---	---	---	---	17.30	---	---	---	---
20	---	---	---	16.90	---	---	---	---	---	---	---	---
21	17.60	---	---	---	---	---	17.40	---	---	17.00	---	---
22	---	---	---	---	---	---	---	---	---	---	---	17.90
23	---	---	17.90	---	---	---	---	---	17.40	---	---	---
24	---	---	---	---	---	16.50	---	---	---	---	---	---
25	---	16.40	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	16.70	---	---	---	17.20	---	---	---	---
28	17.60	---	---	---	---	---	17.00	---	---	17.40	---	---
29	---	---	---	---	---	---	---	---	---	---	---	17.50
30	---	---	17.30	---	---	---	---	---	17.60	---	---	---
31	---	---	---	---	---	17.00	---	---	---	---	---	---
MEAN	17.70	16.28	16.66	17.10	16.47	16.22	17.15	17.35	17.42	17.35	17.63	17.80
MAX	18.00	17.00	17.90	17.50	16.80	17.00	17.40	17.50	17.60	17.70	17.70	17.90
MIN	17.60	15.30	15.30	16.70	15.90	15.00	17.00	17.20	17.30	17.00	17.60	17.50

WTR YR 1986 MEAN 17.09 HIGH 15.00 Mar 17 LOW 18.00 Oct 7

CRAWFORD COUNTY

413542080245001. Local number, CW 413.

LOCATION.--Lat 41°35'42", long 80°24'50", Hydrologic Unit 05030102, at State Game Land Number 214 near Hartstown.

Owner: U.S. Geological Survey.

AQUIFER.--Sandstone of Cussewago Formation of Early Mississippian age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in, depth 100 ft, cased to 19 ft, open hole.

INSTRUMENTATION.--Continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 1,110 ft, from topographic map. Measuring point: Top of casing, 2.7 ft above land-surface datum.

REMARKS.--Since the June 9, 1981 well pumping and clean out, the monthly mean water levels have generally been from 12 to 24 feet lower. Missing record Jan. 21-23, July 23, and Sept. 22-25.

PERIOD OF RECORD.--July 1967 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 20.02 ft below land-surface datum, Feb. 23, 1975; lowest, 55.99 ft below land-surface datum, Oct. 30, 1983.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54.22	54.42	46.89	47.68	47.54	46.45	47.58	48.83	50.04	47.20	50.14	52.12
2	54.26	54.50	46.81	47.70	47.56	46.58	47.76	48.99	50.16	47.26	50.24	52.25
3	54.22	54.46	46.93	47.90	47.53	46.84	47.83	48.90	50.15	47.52	50.40	52.25
4	54.23	54.44	46.86	47.85	47.35	46.99	47.96	48.89	50.15	47.65	50.50	52.23
5	54.23	54.17	46.67	47.84	47.20	47.05	47.98	49.00	50.17	47.84	50.51	52.26
6	54.34	53.71	46.65	48.15	47.04	47.15	47.96	49.06	50.14	48.05	50.59	52.39
7	54.44	53.30	46.66	48.41	46.63	47.60	48.02	49.13	50.12	48.12	50.66	52.51
8	54.44	53.00	46.54	48.41	46.58	47.68	48.11	49.19	49.83	48.25	50.70	52.57
9	54.43	52.75	46.68	48.18	46.56	47.44	48.12	49.16	49.78	48.26	50.83	52.66
10	54.40	52.28	46.65	48.27	46.53	47.45	48.20	49.13	49.56	48.30	50.82	52.62
11	54.48	51.90	46.56	48.21	46.50	47.59	48.40	49.16	49.18	48.20	50.98	52.67
12	54.49	51.51	46.34	48.21	46.62	47.60	48.52	49.13	48.89	48.15	51.03	52.80
13	54.50	50.91	46.13	48.38	46.73	47.31	48.58	49.28	48.54	48.19	50.97	52.87
14	54.52	50.65	46.06	48.65	46.64	46.93	48.56	49.33	48.12	48.26	50.93	52.94
15	54.49	50.36	45.99	48.65	46.84	46.61	48.54	49.48	47.65	48.38	50.98	52.94
16	54.68	49.87	46.05	48.64	46.69	46.46	48.65	49.55	47.35	48.35	50.99	53.06
17	54.68	49.28	46.16	48.60	46.85	46.41	48.79	49.60	47.19	48.38	51.07	52.97
18	54.56	49.06	46.39	48.57	46.90	46.30	48.81	49.60	46.94	48.43	51.13	52.99
19	54.60	48.69	46.48	48.10	46.71	46.17	48.65	49.64	46.67	48.51	51.18	53.05
20	54.64	48.54	46.37	47.73	46.63	46.47	48.46	49.70	46.58	48.68	51.29	53.00
21	54.55	48.56	46.50	---	46.55	46.51	48.45	49.55	46.61	48.85	51.61	53.14
22	54.59	48.22	46.40	---	46.49	46.44	48.54	49.50	46.54	48.92	51.64	---
23	54.56	48.27	46.41	---	46.14	46.55	48.47	49.74	46.47	---	51.67	---
24	54.54	48.30	46.76	47.54	46.09	46.84	48.27	49.80	46.52	49.13	51.73	---
25	54.61	48.31	46.96	47.17	46.04	46.74	48.32	49.79	46.53	49.23	51.81	---
26	54.51	48.09	46.95	47.04	45.92	46.75	48.50	49.82	46.62	49.40	51.78	52.74
27	54.55	47.87	47.17	46.96	46.13	47.01	48.40	49.88	46.79	49.55	51.89	52.76
28	54.56	47.49	47.21	47.18	46.36	47.04	48.57	49.91	46.79	49.62	51.98	52.79
29	54.53	47.34	47.39	47.56	---	47.12	48.66	49.85	46.99	49.78	52.04	52.71
30	54.41	47.09	47.44	47.73	---	47.30	48.69	49.86	46.20	49.89	52.09	52.63
31	54.46	---	47.63	47.82	---	47.42	---	49.92	---	49.98	52.11	---
MEAN	54.47	50.58	46.67	47.97	46.69	46.93	48.35	49.43	48.11	48.54	51.17	52.69
MAX	54.68	54.50	47.63	48.65	47.56	47.68	48.81	49.92	50.17	49.98	52.11	53.14
MIN	54.22	47.09	45.99	46.96	45.92	46.17	47.58	48.83	46.20	47.20	50.14	52.12

WTR YR 1986 MEAN 49.29 HIGH 45.92 Feb 26 LOW 54.68 Oct. 16, 17

ELK COUNTY

189

412458078324601. Local number, EK 108.

LOCATION.--Lat 41°24'58", long 78°32'46", Hydrologic Unit 05010005, at St. Marys.

Owner: St. Marys Municipal Joint Water Authority.

AQUIFER.--Pottsville Group of Middle Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 12 in, depth 340 ft, cased to 40 ft, open hole.

INSTRUMENTATION.--Continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 1,740 ft, from topographic map. Measuring point: Top of casing, 2.3 ft above land-surface datum.

REMARKS.--Missing record Oct. 23 to Nov. 22, Dec. 15 to Jan. 24, Feb. 14-21, May 25 to June 3, and June 21 to Sept. 24.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.90 ft below land-surface datum, Mar. 30, 1975; lowest, 6.62 ft below land-surface datum, Oct. 7, 8, 1980.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.38	---	4.20	---	5.25	4.26	4.31	3.99	---			---
2	5.45	---	3.91	---	4.92	4.22	4.29	4.21	---			---
3	5.43	---	4.39	---	4.92	4.26	4.37	4.26	---			---
4	5.37	---	4.41	---	4.76	4.26	4.36	4.29	5.02			---
5	5.33	---	4.33	---	4.61	4.27	4.39	4.18	5.02			---
6	5.50	---	4.28	---	4.59	4.13	4.35	4.21	4.98			---
7	5.65	---	4.34	---	4.55	4.52	4.14	4.18	4.90			---
8	5.71	---	4.29	---	4.65	4.61	3.98	4.31	4.69			---
9	5.71	---	4.39	---	4.68	4.37	3.93	4.39	4.64			---
10	5.63	---	4.42	---	4.66	4.30	3.94	4.40	4.64			---
11	5.70	---	4.31	---	4.66	4.37	4.00	4.30	4.64			---
12	5.74	---	4.07	---	4.72	4.37	4.23	4.32	4.64			---
13	5.67	---	4.06	---	4.79	4.34	4.30	4.39	4.63			---
14	5.64	---	3.96	---	---	4.09	4.31	4.47	4.64			---
15	5.71	---	---	---	---	3.91	4.23	4.51	4.60			---
16	5.89	---	---	---	---	4.04	4.13	4.47	4.50			---
17	5.90	---	---	---	---	4.09	4.10	4.46	4.45			---
18	5.87	---	---	---	---	4.10	4.18	4.46	4.44			---
19	5.79	---	---	---	---	3.93	4.18	4.51	4.40			---
20	5.83	---	---	---	---	4.01	4.00	4.53	4.41			---
21	5.84	---	---	---	---	4.24	3.76	4.57	---			---
22	5.82	---	---	---	4.28	4.43	3.99	4.58	---			---
23	---	4.74	---	---	4.17	4.44	4.09	4.66	---			---
24	---	4.72	---	---	4.17	4.42	4.13	4.71	---			---
25	---	4.80	---	4.84	4.11	4.29	4.02	---	---			4.77
26	---	4.72	---	4.57	4.03	4.22	4.01	---	---			4.78
27	---	4.41	---	4.73	4.09	4.23	4.05	---	---			4.71
28	---	4.41	---	4.90	4.23	4.30	4.01	---	---			4.76
29	---	4.30	---	4.91	---	4.22	4.09	---	---			4.74
30	---	4.23	---	5.12	---	4.23	4.15	---	---			4.65
31	---	---	---	5.20	---	4.32	---	---	---			---
MEAN	5.66	4.54	4.24	4.90	4.54	4.25	4.13	4.39	4.66			4.74
MAX	5.90	4.80	4.42	5.20	5.25	4.61	4.39	4.71	5.02			4.78
MIN	5.33	4.23	3.91	4.57	4.03	3.91	3.76	3.99	4.40			4.65
WTR YR 1986	MEAN	4.55	HIGH	3.76	Apr 21	LOW	5.90	Oct 17				

ERIE COUNTY

415607080044601. Local number, ER 82.

LOCATION.--Lat 41°56'07", long 80°04'46", Hydrologic Unit 05010004, near McLane.

Owner: U.S. Geological Survey.

AQUIFER.--Shale of Riceville Formation of Late Devonian age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in, depth 82 ft, cased to 56 ft, open hole.

INSTRUMENTATION.--Continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 1,419 ft, from topographic map. Measuring point: Top of plywood cover, 3.50 ft above land-surface datum.

REMARKS.--Missing record Dec. 20-26.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 10.00 ft below land-surface datum, Mar. 17, 1973; lowest, 23.42 ft below land-surface datum, Sept. 1, 2, 1984.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.40	20.76	18.23	18.53	18.67	18.28	18.12	18.40	18.59	18.10	19.32	20.06
2	21.41	20.73	18.20	18.57	18.66	18.27	18.17	18.41	18.62	18.13	19.37	20.08
3	21.43	20.71	18.18	18.62	18.65	18.26	18.22	18.42	18.64	18.18	19.42	20.12
4	21.45	20.68	18.21	18.65	18.66	18.26	18.26	18.44	18.69	18.21	19.46	20.15
5	21.45	20.62	18.21	18.68	18.65	18.26	18.31	18.47	18.68	18.26	19.49	20.19
6	21.46	20.50	18.22	18.70	18.66	18.26	18.35	18.48	18.70	18.31	19.52	20.24
7	21.44	20.28	18.22	18.72	18.62	18.24	18.38	18.48	18.69	18.39	19.55	20.26
8	21.44	19.99	18.21	18.73	18.55	18.23	18.41	18.48	18.63	18.44	19.57	20.30
9	21.42	19.78	18.22	18.74	18.48	18.23	18.44	18.48	18.55	18.48	19.60	20.34
10	21.42	19.59	18.26	18.75	18.46	18.24	18.44	18.51	18.45	18.52	19.61	20.37
11	21.41	19.43	18.26	18.76	18.42	18.25	18.45	18.52	18.37	18.57	19.63	20.39
12	21.41	19.29	18.27	18.78	18.40	18.25	18.47	18.55	18.28	18.60	19.65	20.39
13	21.40	19.15	18.27	18.80	18.41	18.21	18.49	18.57	18.17	18.60	19.68	20.42
14	21.40	19.04	18.29	18.82	18.43	18.14	18.49	18.61	18.07	18.65	19.69	20.44
15	21.39	18.93	18.26	18.86	18.46	18.06	18.49	18.63	17.98	18.68	19.69	20.45
16	21.36	18.87	18.24	18.91	18.48	17.95	18.45	18.67	17.91	18.71	19.70	20.50
17	21.33	18.80	18.24	18.96	18.48	17.87	18.44	18.69	17.87	18.71	19.70	20.52
18	21.31	18.73	18.22	18.99	18.54	17.82	18.40	18.72	17.86	18.76	19.73	20.53
19	21.31	18.68	18.24	19.01	18.54	17.79	18.32	18.73	17.85	18.79	19.76	20.55
20	21.30	18.63	---	19.00	18.53	17.75	18.31	18.73	17.84	18.81	19.79	20.58
21	21.26	18.62	---	18.99	18.53	17.74	18.26	18.70	17.76	18.86	19.81	20.60
22	21.23	18.59	---	18.98	18.46	17.71	18.24	18.70	17.74	18.91	19.79	20.67
23	21.15	18.57	---	18.91	18.44	17.74	18.24	18.66	17.76	18.96	19.80	20.68
24	21.17	18.50	---	18.85	18.39	17.74	18.24	18.63	17.81	18.98	19.81	20.67
25	21.11	18.45	---	18.79	18.34	17.78	18.24	18.62	17.83	19.01	19.85	20.69
26	21.06	18.44	---	18.72	18.32	17.83	18.27	18.61	17.88	19.04	19.88	20.69
27	20.95	18.41	18.44	18.66	18.29	17.87	18.30	18.61	17.93	19.10	19.89	20.68
28	20.91	18.37	18.45	18.63	18.27	17.91	18.32	18.60	17.97	19.15	19.91	20.67
29	20.88	18.30	18.45	18.61	---	17.97	18.36	18.58	18.00	19.17	19.95	20.63
30	20.82	18.26	18.46	18.63	---	18.03	18.38	18.59	18.07	19.24	19.98	20.58
31	20.79	---	18.49	18.65	---	18.08	---	18.59	---	19.27	20.02	---
MEAN	21.27	19.26	18.28	18.77	18.49	18.03	18.34	18.58	18.17	18.70	19.70	20.45
MAX	21.46	20.76	18.49	19.01	18.67	18.28	18.49	18.73	18.70	19.27	20.02	20.69
MIN	20.79	18.26	18.18	18.53	18.27	17.71	18.12	18.40	17.74	18.10	19.32	20.06

WTR YR 1986 MEAN 19.02 HIGH 17.71 Mar 22 LOW 21.46 Oct 6

FAYETTE COUNTY

191

394843079351401. Local number, FA 17.

LOCATION.--Lat 39°48'43", long 79°35'14", Hydrologic unit 05020006, at Fort Necessity.

Owner: U.S. Geological Survey.

AQUIFER.--Shale and sandstone of Glenshaw Formation of Late Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in, depth 100 ft, cased to 19 ft, open hole.

INSTRUMENTATION.--Continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 1,910 ft, from topographic map. Measuring point: Top of plywood cover 2.05 ft above land-surface datum.

REMARKS.--Missing record Nov. 22, Dec. 27, May 20-24, and Aug. 28, 29.

PERIOD OF RECORD.--November 1967 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 19.71 ft below land-surface datum, Feb. 23, 1971; lowest, 40.00 ft below land-surface datum, Nov. 8, 1967.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.12	22.99	20.12	22.14	22.29	21.43	22.38	22.47	22.88	22.92	22.65	22.81
2	23.16	23.09	20.06	22.22	22.13	21.48	22.49	22.74	23.12	23.05	22.71	22.80
3	23.14	23.08	20.50	22.15	22.14	21.63	22.60	22.84	23.14	23.07	22.78	22.86
4	23.10	23.06	20.47	22.30	21.92	21.76	22.66	22.87	22.99	23.03	22.85	22.86
5	26.30	22.80	20.47	22.20	21.44	21.83	22.73	22.78	22.87	23.01	22.85	22.81
6	25.86	22.83	20.58	22.44	21.24	21.76	22.76	22.80	22.81	22.99	22.79	22.87
7	25.21	22.88	20.66	22.75	21.04	22.27	22.61	22.81	22.75	22.94	22.75	22.97
8	24.12	22.93	20.68	22.92	21.12	22.48	22.55	22.95	22.93	22.88	22.70	23.02
9	23.60	22.92	20.98	22.81	21.17	22.35	22.59	23.16	22.98	22.97	22.77	23.06
10	23.30	22.85	20.99	22.45	21.16	22.31	22.61	23.20	22.97	22.96	22.79	22.99
11	23.13	22.90	20.94	22.45	21.14	22.23	22.63	23.08	22.81	22.94	22.88	22.87
12	23.16	22.89	20.77	22.41	21.25	22.23	22.80	23.00	22.93	23.02	22.93	22.97
13	23.10	22.59	20.72	22.44	21.40	22.16	22.84	23.07	23.02	23.09	22.94	23.06
14	23.07	22.52	20.74	22.44	21.38	21.89	22.84	23.12	23.00	23.09	22.92	23.09
15	23.13	22.53	20.73	22.82	21.50	21.63	22.71	23.16	22.90	23.00	22.88	22.99
16	23.30	22.44	20.66	22.92	21.57	21.54	22.59	23.14	22.96	22.92	22.83	23.05
17	23.31	21.96	20.61	22.90	21.50	21.55	22.74	23.07	23.01	22.82	22.86	23.06
18	23.24	22.00	20.94	22.81	21.44	21.55	22.80	22.97	22.96	22.80	22.92	22.92
19	23.11	21.96	21.05	22.62	21.28	21.26	22.77	22.96	22.92	22.63	22.95	22.97
20	23.05	21.94	21.05	22.49	21.08	21.68	22.54	---	23.07	22.56	23.00	22.97
21	23.05	21.95	21.04	22.63	21.04	21.78	22.22	---	23.05	22.61	23.01	23.00
22	23.04	---	21.05	22.65	21.04	21.83	22.48	---	22.88	22.62	23.05	22.99
23	23.02	21.63	20.93	22.66	20.96	21.76	22.62	---	22.83	22.62	22.94	22.89
24	23.00	21.59	21.16	22.57	20.93	22.05	22.67	---	22.98	22.58	22.93	23.03
25	23.05	21.59	21.35	22.32	20.93	22.10	22.52	23.04	23.01	22.59	22.98	23.12
26	23.05	21.36	21.44	21.88	20.85	22.01	22.41	23.01	22.98	22.56	22.96	23.14
27	22.99	20.97	---	21.63	20.99	22.05	22.43	22.99	22.88	22.55	22.84	23.06
28	23.05	20.62	21.82	21.81	21.31	22.18	22.39	22.94	22.85	22.55	---	23.06
29	23.04	20.33	21.82	21.85	---	22.20	22.52	22.94	22.94	22.56	---	23.07
30	22.93	20.23	21.98	22.22	---	22.21	22.61	22.90	22.97	22.61	23.04	22.99
31	22.99	---	21.95	22.26	---	22.36	---	22.88	---	22.64	22.93	---
MEAN	23.41	22.19	20.94	22.42	21.33	21.92	22.60	22.96	22.95	22.81	22.88	22.98
MAX	26.30	23.09	21.98	22.92	22.29	22.48	22.84	23.20	23.14	23.09	23.05	23.14
MTN	22.93	20.23	20.06	21.63	20.85	21.26	22.22	22.47	22.75	22.55	22.65	22.80

WTR YR 1986 MEAN 22.45 HIGH 20.06 Dec 2 LOW 26.30 Oct 5

FOREST COUNTY

412823079030601. Local number, FO 11.

LOCATION.--Lat 41°28'23", long 79°03'06", Hydrologic Unit 05010005, at U.S. Forest Lands.

Owner: U.S. Geological Survey.

AQUIFER.--Clarion Formation of Middle Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in, depth 110 ft, cased to 23 ft, open hole.

INSTRUMENTATION.--Continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 1,780 ft, from topographic map. Measuring point: Top of casing, 1.4 ft above land-surface datum.

REMARKS.--Missing record Oct. 25 to Nov. 1, Dec. 26, 27, Jan. 24, and Apr. 24.

PERIOD OF RECORD.--August 1973 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.78 ft below land-surface datum, Jan. 27, 28, 1973; lowest, 12.07 ft below land-surface datum, Sept. 18, 19, 1982.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.12	---	8.86	9.31	9.28	8.92	9.01	8.72	9.72	9.63	9.75	10.31
2	11.14	10.28	8.80	9.36	9.15	8.94	9.04	8.86	9.82	9.56	9.80	10.34
3	11.16	10.27	8.91	9.34	9.13	8.99	9.09	8.98	9.93	9.56	9.90	10.39
4	11.13	10.11	8.93	9.34	9.06	9.04	9.10	9.00	9.97	9.61	9.95	10.39
5	11.06	9.87	8.93	9.34	8.89	9.06	9.11	9.02	9.96	9.70	10.00	10.38
6	11.06	9.78	9.05	9.34	8.84	9.06	9.11	9.04	9.80	9.77	10.06	10.40
7	11.12	9.72	8.98	9.43	8.78	9.15	9.04	9.05	9.56	9.83	10.09	10.46
8	11.17	9.69	9.00	9.47	8.76	9.24	8.95	9.05	9.30	9.87	10.09	10.51
9	11.18	9.68	9.06	9.47	8.78	9.24	8.87	9.06	9.17	9.82	10.08	10.57
10	11.17	9.59	9.06	9.47	8.80	9.23	8.84	9.10	9.15	9.81	10.08	10.58
11	11.15	9.49	9.05	9.41	8.82	9.16	8.81	9.11	9.10	9.82	10.09	10.58
12	11.16	9.40	9.05	9.41	8.86	9.16	8.84	9.11	9.04	9.78	10.14	10.62
13	11.12	9.28	9.05	9.41	8.93	9.11	8.87	9.16	8.95	9.75	10.20	10.69
14	11.08	9.21	9.05	9.45	8.93	9.00	8.88	9.24	8.95	9.70	10.21	10.76
15	11.01	9.20	9.05	9.47	8.99	8.86	8.87	9.28	8.91	9.70	10.24	10.80
16	11.05	9.11	9.06	9.47	9.02	8.84	8.82	9.31	8.88	9.70	10.23	10.86
17	11.06	9.02	9.10	9.47	9.01	8.85	8.74	9.36	8.78	9.62	10.32	10.88
18	11.05	9.02	9.12	9.47	9.01	8.86	8.73	9.41	8.78	9.54	10.19	10.88
19	10.99	9.01	9.13	9.42	8.99	8.80	8.73	9.41	8.76	9.45	10.14	10.86
20	10.91	9.02	9.14	9.38	8.95	8.86	8.71	9.40	8.80	9.33	10.16	10.88
21	10.85	9.05	9.14	9.32	8.84	8.93	8.55	9.35	8.88	9.25	10.20	10.87
22	10.77	9.01	9.14	9.32	8.81	8.94	8.52	9.33	8.94	9.29	10.25	10.86
23	10.70	9.01	9.12	9.31	8.75	8.95	8.55	9.33	8.98	9.33	10.24	10.76
24	10.55	8.97	9.12	---	8.74	9.01	---	9.43	9.07	9.32	10.14	10.58
25	---	9.01	9.12	9.11	8.77	9.02	8.58	9.48	9.22	9.37	10.09	10.50
26	---	8.99	---	9.10	8.76	9.02	8.59	9.55	9.30	9.40	10.07	10.43
27	---	8.94	---	8.97	8.77	8.99	8.61	9.58	9.33	9.46	10.02	10.31
28	---	8.89	9.25	9.04	8.86	8.99	8.63	9.59	9.39	9.53	10.07	10.19
29	---	8.87	9.25	9.09	---	8.98	8.69	9.60	9.48	9.56	10.15	10.11
30	---	8.87	9.31	9.19	---	8.99	8.74	9.61	9.57	9.63	10.22	10.01
31	---	---	9.31	9.23	---	9.01	---	9.66	---	9.68	10.26	---
MEAN	11.03	9.32	9.07	9.33	8.90	9.01	8.81	9.26	9.25	9.59	10.11	10.56
MAX	11.18	10.28	9.31	9.47	9.28	9.24	9.11	9.66	9.97	9.87	10.32	10.88
MIN	10.55	8.87	8.80	8.97	8.74	8.80	8.52	8.72	8.76	9.25	9.75	10.01

WTR YR 1986 MEAN 9.50 HIGH 8.52 Apr 22 LOW 11.18 Oct 9

GREENE COUNTY

193

394655080014301. Local number, GR 118.

LOCATION.--Lat 39°46'55", long 80°01'43", Hydrologic Unit 05020005, at State Game Land Number 223.

Owner: U.S. Geological Survey.

AQUIFER.--Shale and sandstone of lower member of Waynesburg Formation of Late Pennsylvanian and Early Permian age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in, depth 104 ft, cased to 22 ft, open hole.

INSTRUMENTATION.--Continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 1,000 ft, from topographic map. Measuring point: Top of plywood cover 2.02 ft above land-surface datum.

REMARKS.--Missing record Nov. 7-12.

PERIOD OF RECORD.--June 1973 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 29.70 ft below land-surface datum, Apr. 12, 1981; lowest, 47.80 ft below land-surface datum, Sept. 21, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34.73	33.50	31.62	32.67	32.70	33.28	33.39	33.35	34.56	36.32	40.53	39.76
2	34.78	33.46	31.82	32.74	32.56	33.38	33.42	33.44	34.63	35.98	41.06	39.97
3	34.84	33.44	31.87	32.83	31.83	33.44	33.48	33.44	34.71	35.67	41.65	40.59
4	34.59	33.39	31.92	32.82	31.78	33.45	33.51	33.45	34.75	35.85	42.08	41.12
5	34.50	33.13	31.93	32.87	30.99	33.36	33.61	33.44	34.70	36.56	42.60	42.17
6	34.53	33.38	32.76	33.03	31.35	33.19	33.56	33.46	34.71	37.43	42.93	42.86
7	34.55	---	32.00	33.15	31.46	33.22	33.46	33.46	34.69	37.54	42.86	43.46
8	34.57	---	31.98	33.17	31.65	33.16	33.46	33.54	34.68	38.44	42.71	43.94
9	34.58	---	32.15	33.21	31.79	33.10	33.47	33.60	34.80	38.76	42.51	44.55
10	34.55	---	32.23	33.22	31.87	33.02	33.47	33.62	34.91	36.91	42.47	44.91
11	34.58	---	32.22	33.24	31.99	32.23	33.44	33.65	34.93	36.83	42.43	44.98
12	34.61	---	32.03	33.26	32.09	32.32	33.37	33.70	34.76	36.79	42.32	45.01
13	34.62	---	31.96	33.32	32.14	32.25	33.37	33.74	34.63	36.79	42.29	45.75
14	34.61	---	31.56	33.38	33.91	32.09	33.38	33.79	34.67	36.84	42.03	46.58
15	34.57	---	31.64	33.42	34.79	31.80	33.43	33.81	34.84	37.03	42.00	47.07
16	34.51	---	31.71	33.51	34.15	32.12	33.04	33.88	34.97	37.33	41.80	47.18
17	34.54	---	31.73	33.48	33.80	32.32	33.03	33.93	34.92	37.10	41.11	47.46
18	34.80	---	31.82	33.45	32.23	32.41	33.06	33.98	35.18	37.30	41.11	47.59
19	34.73	---	31.99	33.36	32.47	32.48	33.12	34.04	35.22	37.55	41.36	47.60
20	34.59	---	32.10	32.86	32.79	32.58	33.12	33.94	35.17	37.27	41.51	47.66
21	34.50	32.59	32.07	32.70	32.79	32.63	33.22	33.99	35.15	37.44	41.56	47.80
22	34.12	32.42	32.07	32.72	32.71	32.68	33.18	34.03	35.72	37.66	41.67	---
23	34.12	32.24	32.11	32.52	32.92	32.75	33.03	34.11	35.57	37.62	41.92	---
24	34.22	32.23	32.13	32.44	33.10	32.84	33.06	34.22	36.02	38.25	41.87	---
25	33.90	32.25	32.21	32.44	33.41	32.90	33.06	34.31	36.60	39.42	41.51	---
26	33.87	32.16	32.25	32.39	33.37	33.00	33.12	34.60	37.10	39.81	41.58	---
27	33.68	30.61	32.33	32.38	33.28	33.07	33.17	34.69	37.49	38.80	40.85	---
28	33.61	30.64	32.39	32.43	33.34	33.12	33.23	34.62	36.17	38.84	41.16	---
29	33.56	31.24	32.47	32.56	---	33.18	33.23	34.69	35.74	39.05	41.01	---
30	33.53	31.51	32.57	32.64	---	33.24	33.28	34.92	35.82	38.77	39.96	---
31	33.51	---	32.63	32.68	---	33.31	---	34.44	---	39.72	39.57	---
MEAN	34.35	32.39	32.07	32.93	32.62	32.84	33.29	33.93	35.26	37.60	41.68	44.67
MAX	34.84	33.50	32.76	33.51	34.79	33.45	33.61	34.92	37.49	39.81	42.93	47.80
MIN	33.51	30.61	31.56	32.38	30.99	31.80	33.03	33.35	34.56	35.67	39.57	39.76

WTR YR 1986 MEAN 35.19 HIGH 30.61 Nov 27 LOW 47.80 Sept 21

INDIANA COUNTY

403702079093301. Local number, IN 1.

LOCATION.--Lat 40°37'02", long 79°09'33", Hydrologic Unit 05010007, at Indiana University of Pennsylvania, Indiana.

Owner: Commonwealth of Pennsylvania.

AQUIFER.--Sandstone of Glenshaw Formation of Late Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in, depth 198 ft, casing information not available.

INSTRUMENTATION.--Continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 1,305 ft, from topographic map. Measuring point: Top of casing, 1.2 ft above land-surface datum.

REMARKS.--Missing record Oct. 1-6, 10-15, 19, 20, Jan. 3-20, and Jan. 22 to Feb. 19.

PERIOD OF RECORD.--October 1944 to June 1947, September 1949 to January 1950, January 1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 72.50 ft below land-surface datum, Apr. 13, 1962; lowest, 87.03 ft below land-surface datum, Oct. 19, 1946.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	74.81	73.64	74.42	---	73.77	74.14	74.02	74.25	74.40	74.03	74.10
2	---	74.88	73.87	74.42	---	73.76	74.29	74.24	74.56	74.20	74.07	74.11
3	---	74.87	74.09	---	---	73.84	74.27	74.30	74.66	74.41	74.19	74.15
4	---	74.80	74.08	---	---	73.88	74.26	74.27	74.55	74.47	74.31	74.10
5	---	74.52	73.93	---	---	73.89	74.28	74.12	74.49	74.49	74.29	74.10
6	---	74.59	74.00	---	---	73.80	74.19	74.19	74.49	74.55	74.25	74.20
7	75.20	74.64	74.03	---	---	74.30	73.94	74.19	74.24	74.50	74.21	74.26
8	75.23	74.74	73.94	---	---	74.39	73.83	74.13	74.22	74.44	74.21	74.40
9	75.20	74.74	74.09	---	---	74.03	73.98	74.33	74.43	74.23	74.27	74.42
10	---	74.60	74.09	---	---	73.95	73.98	74.36	74.43	74.23	74.27	74.34
11	---	74.57	73.91	---	---	73.90	73.96	74.23	74.31	74.13	74.20	74.23
12	---	74.51	73.74	---	---	73.88	74.16	74.24	74.17	74.02	74.27	74.43
13	---	74.20	73.64	---	---	73.68	74.20	74.28	74.29	74.01	74.21	74.54
14	---	74.21	73.82	---	---	73.39	74.22	74.32	74.30	74.07	74.12	74.63
15	---	74.25	73.76	---	---	73.35	74.09	74.37	74.27	74.08	74.06	74.55
16	75.26	74.07	73.75	---	---	73.52	73.98	74.32	74.09	74.02	74.01	74.62
17	75.28	73.95	73.81	---	---	73.60	73.91	74.30	74.18	73.97	74.03	74.64
18	75.21	73.95	74.08	---	---	73.60	73.96	74.28	74.15	73.95	74.06	74.49
19	---	73.85	74.13	---	---	73.56	73.97	74.24	74.08	73.91	74.09	74.44
20	---	73.98	73.91	---	73.38	73.89	73.80	74.08	74.13	73.93	73.94	74.38
21	75.06	74.09	73.90	74.24	73.41	73.96	73.50	74.10	74.17	74.01	73.91	74.44
22	75.04	73.94	73.91	---	73.40	73.94	73.73	74.15	74.11	74.05	74.01	74.44
23	75.03	74.05	73.91	---	73.35	73.82	73.84	74.22	74.05	74.05	73.92	74.27
24	74.96	74.10	73.91	---	73.33	74.06	73.90	74.32	74.23	74.03	73.93	74.23
25	75.00	74.14	74.08	---	73.40	74.01	73.77	74.35	74.34	73.96	73.98	74.31
26	75.01	73.95	74.14	---	73.33	73.91	73.84	74.35	74.35	73.92	73.94	74.34
27	74.92	73.82	74.13	---	73.58	74.03	73.90	74.35	74.31	73.87	73.88	74.28
28	75.02	73.69	74.25	---	73.74	74.06	73.86	74.29	74.23	73.86	74.11	74.36
29	75.02	73.78	74.23	---	---	74.02	74.07	74.28	74.28	73.89	74.21	74.36
30	74.83	73.66	74.30	---	---	74.02	74.15	74.24	74.41	73.95	74.22	74.33
31	74.83	---	74.28	---	---	74.19	---	74.24	---	74.01	74.17	---
MEAN	75.06	74.27	73.98	74.36	73.44	73.87	74.00	74.25	74.29	74.12	74.11	74.35
MAX	75.28	74.88	74.30	74.42	73.74	74.39	74.29	74.37	74.66	74.55	74.31	74.64
MIN	74.83	73.66	73.64	74.24	73.33	73.35	73.50	74.02	74.05	73.86	73.88	74.10

WTR YR 1986 MEAN 74.17 HIGH 73.33 Feb. 24 LOW 75.28 Oct 17

JEFFERSON COUNTY

195

410650078575801. Local number, JE 23.

LOCATION.--Lat 41°06'50", long 78°57'58", Hydrologic Unit 05010006, at State Game Land Number 244.

Owner: U.S. Geological Survey.

AQUIFER.--Sandstone and shale of Kittanning Formation of Middle Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in, depth 101 ft, cased to 37 ft, open hole.

INSTRUMENTATION.--Continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 1,660 ft, from topographic map. Measuring point: Top of plywood cover, 2.05 ft above land-surface datum.

REMARKS.--None.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 14.17 ft below land-surface datum, Apr. 13, 1970; lowest, 32.12 ft below land-surface datum, Aug. 25, 1974.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28.72	29.07	26.65	26.86	27.26	27.26	27.15	27.03	28.51	27.46	27.54	28.49
2	28.77	29.00	26.53	26.86	27.25	27.21	27.33	27.17	28.64	27.43	27.69	28.51
3	28.72	28.99	26.67	26.96	27.34	27.45	27.36	27.30	28.60	27.48	27.82	28.49
4	28.63	28.90	26.62	26.97	27.33	27.56	27.43	27.27	28.46	27.49	27.93	28.50
5	28.64	28.64	26.50	26.84	27.38	27.55	27.52	27.17	28.48	27.48	27.96	28.49
6	28.72	28.65	26.64	27.11	27.47	27.35	27.52	27.20	28.50	27.47	28.06	28.60
7	28.75	28.68	26.72	27.33	27.30	27.54	27.37	27.37	28.49	27.46	28.03	28.55
8	28.71	28.80	26.68	27.36	27.26	27.55	27.28	27.47	28.58	27.40	28.10	28.53
9	28.78	28.74	26.83	27.15	27.21	27.25	27.34	27.58	28.60	27.32	28.19	28.50
10	28.66	28.77	26.82	27.21	27.13	27.25	27.32	27.60	28.49	27.37	28.15	28.51
11	28.84	28.79	26.80	27.19	27.05	27.34	27.33	27.62	28.41	27.31	28.22	28.48
12	28.80	28.75	26.71	27.22	27.16	27.34	27.54	27.67	28.43	27.21	28.22	28.64
13	28.67	28.43	26.62	27.33	27.41	27.11	27.53	27.73	28.47	27.25	28.16	28.65
14	28.68	28.42	26.75	27.59	27.42	26.96	27.63	27.74	28.45	27.23	28.08	28.48
15	28.67	28.51	26.72	27.60	27.58	26.88	27.53	27.81	28.27	27.24	28.11	28.48
16	28.72	28.47	26.71	27.66	27.64	26.93	27.49	28.51	28.07	27.26	28.11	28.58
17	28.76	27.99	26.60	27.57	27.46	26.97	27.55	28.47	27.98	27.20	28.22	28.48
18	28.72	27.94	26.30	27.60	27.49	26.98	27.56	28.52	28.91	27.15	28.38	28.53
19	28.70	27.71	26.30	27.20	27.49	26.69	27.58	28.52	27.77	27.14	28.52	28.75
20	28.69	27.47	26.10	27.24	27.33	26.87	27.37	28.53	27.58	27.12	28.68	28.54
21	28.62	27.39	25.96	27.22	27.40	26.89	27.08	28.49	27.58	27.09	28.45	28.50
22	28.94	27.30	25.74	27.22	27.40	26.83	27.17	28.49	27.45	27.10	28.52	28.49
23	28.92	27.27	25.87	27.16	27.13	26.72	27.14	28.48	27.34	27.10	28.45	28.55
24	28.85	27.28	26.14	27.18	27.05	26.92	27.13	28.51	27.37	27.06	28.56	28.55
25	28.90	27.30	26.26	27.10	27.07	26.92	26.98	28.50	27.44	27.24	28.51	28.57
26	29.08	27.18	26.29	26.88	27.00	26.76	27.04	28.54	27.43	27.31	28.52	28.55
27	29.07	27.24	26.42	26.83	27.22	26.93	27.01	28.49	27.34	27.33	28.49	28.45
28	29.21	27.12	26.53	26.96	27.28	26.93	27.03	28.51	27.27	27.36	28.52	28.45
29	29.24	27.13	26.57	27.01	---	26.93	27.13	28.52	27.30	27.47	28.53	28.38
30	29.16	26.92	26.65	27.25	---	26.97	27.17	28.46	27.45	27.47	28.49	28.27
31	29.09	---	26.80	27.25	---	27.13	---	28.50	---	27.48	28.53	---
MEAN	28.82	28.10	26.50	27.19	27.30	27.10	27.32	27.99	28.06	27.31	28.25	28.52
MAX	29.24	29.07	26.83	27.66	27.64	27.56	27.63	28.54	28.91	27.49	28.68	28.75
MIN	28.62	26.92	25.74	26.83	27.00	26.69	26.98	27.03	27.27	27.06	27.54	28.27

WTR YR 1986 MEAN 27.70 HIGH 25.74 Dec 22 LOW 29.24 Oct 29

LAWRENCE COUNTY

410538080280801. Local number, LA 1201.

LOCATION.--Lat 41°05'38", long 80°28'08", Hydrologic Unit 05030102, at State Game Land 150, near Pulaski.

Owner: U.S. Geological Survey.

AQUIFER.--Shale and sandstone of Connoquenessing Formation of Early Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in, depth 150 ft, cased to 30 ft, open hole.

INSTRUMENTATION.--Continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 1,040 ft, from topographic map. Measuring point: Top of plywood cover, 3.45 ft above land-surface datum.

REMARKS.--Missing record Oct. 1-21, Oct. 23 to Nov. 20, Nov. 22-26, Dec. 22 to Feb. 11, and Apr. 16-18.

PERIOD OF RECORD.--November 1967 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.25 ft below land-surface datum, May 19, 1978; lowest, 22.94 ft below land-surface datum, Apr. 15, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	15.03		---	15.75	19.34	16.35	16.54	15.85	16.28	17.68
2	---	---	15.19		---	15.84	19.77	16.43	16.65	15.79	16.34	17.70
3	---	---	15.30		---	15.90	20.30	16.48	16.70	15.08	16.42	17.72
4	---	---	15.34		---	15.95	20.50	16.49	16.69	14.83	16.49	17.71
5	---	---	15.37		---	15.96	20.65	16.45	16.55	14.81	16.52	17.72
6	---	---	15.46		---	16.05	20.90	16.47	16.34	14.92	16.59	17.78
7	---	---	15.47		---	16.18	21.12	16.45	16.11	15.02	16.60	17.79
8	---	---	15.50		---	16.17	21.42	16.36	15.92	15.11	16.64	17.81
9	---	---	15.58		---	16.18	21.54	16.40	15.94	15.02	16.71	17.83
10	---	---	15.57		---	16.03	21.57	16.42	15.93	14.44	16.72	17.83
11	---	---	15.52		---	15.98	22.09	16.37	15.93	14.18	16.80	17.80
12	---	---	15.16		15.55	15.86	22.10	16.39	15.52	14.02	16.83	17.88
13	---	---	14.90		15.67	15.63	22.10	16.43	14.97	14.03	16.88	17.94
14	---	---	14.83		15.74	15.36	22.83	16.45	14.74	14.22	16.90	17.97
15	---	---	14.93		15.90	15.36	22.94	16.53	14.70	14.39	16.90	17.95
16	---	---	15.02		15.93	15.35	---	16.52	14.80	14.58	16.95	17.99
17	---	---	15.22		15.96	15.41	---	16.52	14.97	14.72	17.01	17.99
18	---	---	15.46		15.87	15.43	---	16.53	15.07	14.86	17.07	17.94
19	---	---	15.60		15.56	15.59	16.22	16.65	15.18	15.00	17.13	17.96
20	---	---	15.66		15.29	15.69	16.17	16.62	15.27	15.18	17.39	17.94
21	---	14.43	15.81		15.10	15.82	16.11	16.57	15.43	15.35	17.41	17.94
22	19.27	---	---		14.92	15.92	16.17	16.60	15.53	15.50	17.45	17.94
23	---	---	---		14.86	16.05	16.21	16.59	15.51	15.62	17.44	17.82
24	---	---	---		14.98	15.52	16.25	16.53	15.56	15.72	17.49	17.84
25	---	---	---		15.08	15.83	16.25	16.55	15.65	15.81	17.53	17.85
26	---	---	---		15.25	16.14	16.25	16.67	15.73	15.88	17.54	17.77
27	---	15.27	---		15.43	16.66	16.28	16.66	15.76	15.96	17.56	17.68
28	---	15.14	---		15.62	17.03	16.27	16.55	15.71	16.02	17.64	17.71
29	---	15.02	---		---	17.64	16.31	16.51	15.75	16.08	17.68	17.74
30	---	15.00	---		---	17.96	16.35	16.51	15.83	16.15	17.69	17.79
31	---	---	---		---	18.51	---	16.52	---	16.23	17.68	---
MEAN	19.27	14.97	15.33		15.45	16.09	19.04	16.50	15.70	15.17	17.04	17.83
MAX	19.27	15.27	15.81		15.96	18.51	22.94	16.67	16.70	16.23	17.69	17.99
MIN	19.27	14.43	14.83		14.86	15.35	16.11	16.35	14.70	14.02	16.28	17.68

WTR YR 1986 MEAN 16.50 HIGH 14.02 July 12 LOW 22.94 Apr 15

MCKEAN COUNTY

197

413852078341401. Local number, MC 110.

LOCATION.--Lat 41°38'52", long 78°34'14", Hydrologic Unit 05010005, at State Forest Land.

Owner: U.S. Geological Survey.

AQUIFER.--Pottsville Formation of Middle Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in , depth 107 ft, cased to 28 ft, open hole.

INSTRUMENTATION.--Continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 2,050 ft, from topographic map. Measuring point: Top of casing, 2.1 ft above land-surface datum.

REMARKS.--Missing record Oct. 1 to Dec. 15, Jan. 19 to Feb. 10, Mar. 6, to Apr. 3, Apr. 19-23, May 4-28, July 2, And Sept. 4-24.

PERIOD OF RECORD.--August 1973 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 27.08 ft below land-surface datum, May 17, 1974; lowest, 30.09 ft below land-surface datum, Aug. 8, 1973.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			---	28.03	---	28.02	---	27.99	28.36	28.08	28.30	28.53
2			---	28.13	---	28.02	---	28.02	28.56	---	28.29	28.47
3			---	28.11	---	28.04	---	28.03	28.60	28.29	28.32	28.46
4			---	28.18	---	28.03	28.20	---	28.54	28.35	28.38	---
5			---	28.02	---	28.04	28.20	---	28.40	28.37	28.39	---
6			---	28.05	---	---	28.19	---	28.36	28.40	28.39	---
7			---	---	---	---	28.10	---	28.33	28.40	28.35	---
8			---	---	---	---	27.99	---	28.23	28.38	28.28	---
9			---	---	---	---	27.96	---	28.30	28.25	28.33	---
10			---	28.19	---	---	27.93	---	28.29	28.30	28.35	---
11			---	28.18	27.98	---	28.02	---	28.05	28.30	28.39	---
12			---	28.14	28.03	---	28.02	---	27.99	28.29	28.47	---
13			---	28.21	28.04	---	28.02	---	28.03	28.27	28.48	---
14			---	28.33	28.03	---	28.02	---	28.04	28.38	28.48	---
15			---	28.44	28.03	---	28.02	---	28.03	28.42	28.44	---
16			27.61	28.45	28.04	---	28.02	---	28.03	28.42	28.36	---
17			27.58	28.44	28.03	---	28.02	---	28.03	28.41	28.39	---
18			27.73	28.33	28.03	---	28.02	---	28.04	28.37	28.41	---
19			27.81	---	28.04	---	---	---	28.04	28.31	28.47	---
20			27.81	---	28.04	---	---	---	28.06	28.27	28.50	---
21			27.71	---	28.05	---	---	---	28.06	28.30	28.50	---
22			27.71	---	28.05	---	---	---	28.06	28.33	28.50	---
23			27.51	---	28.02	---	---	---	28.05	28.33	28.50	---
24			27.62	---	28.02	---	28.02	---	28.07	28.28	28.38	---
25			27.71	---	27.99	---	28.02	---	28.07	28.17	28.44	27.48
26			27.78	---	27.91	---	28.01	---	28.07	28.13	28.44	27.51
27			27.79	---	27.90	---	28.01	---	28.08	28.13	28.38	27.48
28			27.89	---	28.00	---	28.01	---	28.07	28.13	28.45	27.48
29			27.88	---	---	---	28.01	28.42	28.07	28.13	28.55	27.48
30			27.96	---	---	---	28.02	28.39	28.08	28.17	28.56	27.42
31			27.96	---	---	---	---	28.36	---	28.22	28.56	---
MEAN			27.75	28.22	28.01	28.03	28.04	28.20	28.17	28.29	28.42	27.81
MAX			27.96	28.45	28.05	28.04	28.20	28.42	28.60	28.42	28.56	28.53
MIN			27.51	28.02	27.90	28.02	27.93	27.99	27.99	28.08	28.28	27.42

WTR YR 1986 MEAN 28.15 HIGH 27.42 Sept 30 LOW 28.60 June 5

MERCER COUNTY

412350080223701. Local number, MR 1364.

LOCATION.--Lat 41°23'50", long 80°22'37", Hydrologic Unit 05030102, at Greenville.

Owner: Borough of Greenville.

AQUIFER.--Sandstone of Cussewago Formation of Early Mississippian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in, depth 235 ft, cased to 41 ft, open hole.

INSTRUMENTATION.--Continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 965 ft, from topographic map. Measuring point: Top of plywood cover, 2.26 ft above land-surface datum.

REMARKS.--Missing record Oct. 24-27, May 6-22, and June 26-29.

PERIOD OF RECORD.--March 1964 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.43 ft below land-surface datum, Dec. 25, 1968; lowest, 8.31 ft below land-surface datum, Feb. 12, 1967.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.99	4.72	3.38	4.83	4.31	4.14	4.65	4.65	5.26	4.87	4.66	5.29
2	4.98	4.84	3.53	4.83	4.19	4.26	4.72	4.75	5.28	4.85	5.55	5.21
3	5.81	4.82	3.78	4.46	4.18	4.28	4.62	4.75	5.14	4.56	5.78	5.17
4	5.80	4.53	3.60	4.51	4.03	4.25	4.55	4.67	4.79	4.82	4.98	5.10
5	5.01	3.11	3.66	4.23	3.55	4.55	4.82	4.95	4.40	4.70	4.72	5.23
6	5.08	3.40	4.50	4.55	3.45	4.40	4.38	---	4.58	5.12	4.71	5.38
7	5.26	3.60	4.50	4.62	3.47	4.53	4.34	---	4.66	4.72	4.64	5.08
8	5.39	3.60	3.74	4.60	3.85	4.50	4.26	---	4.65	4.67	4.91	5.11
9	5.35	3.52	4.11	4.57	4.05	4.68	4.45	---	4.43	4.43	4.85	4.97
10	5.07	3.69	3.87	4.42	3.99	4.41	4.60	---	3.90	3.82	4.69	4.94
11	5.00	3.51	3.66	4.53	4.01	4.28	4.49	---	3.83	3.85	4.71	4.82
12	5.51	3.32	3.31	4.77	4.28	4.22	4.53	---	4.10	3.76	4.71	5.12
13	5.00	3.41	3.24	4.72	4.34	4.04	4.69	---	4.40	4.02	4.97	4.99
14	4.92	3.40	3.56	4.68	4.37	3.77	4.63	---	4.39	4.47	4.70	4.97
15	4.90	3.40	3.46	4.59	4.44	4.33	4.85	---	4.05	4.42	4.74	4.97
16	5.23	3.20	3.46	4.51	4.34	4.22	4.78	---	4.20	4.22	4.77	5.06
17	5.07	3.42	3.62	4.59	4.11	4.03	4.50	---	4.28	4.42	4.76	5.04
18	5.03	3.37	3.60	4.52	4.18	3.93	4.51	---	4.20	4.65	5.13	4.87
19	5.25	3.30	3.81	4.18	3.97	4.39	4.58	---	4.21	4.60	5.04	5.02
20	5.08	3.53	3.76	4.01	3.69	4.60	4.66	---	4.26	4.58	4.82	4.85
21	5.07	3.60	3.72	4.03	3.75	4.61	4.43	---	4.35	4.71	5.01	4.96
22	4.96	3.62	3.85	4.09	3.56	4.30	4.55	---	4.61	4.90	5.04	4.84
23	5.43	3.81	3.82	4.14	3.99	4.32	4.82	5.20	4.91	5.11	4.95	4.64
24	---	4.04	3.84	4.03	4.13	4.55	4.51	5.12	4.75	4.93	5.13	4.66
25	---	4.31	3.96	4.37	3.93	4.61	4.45	5.11	4.73	5.30	5.03	4.68
26	---	3.86	4.33	3.91	3.78	4.52	4.54	5.06	---	5.18	4.87	4.35
27	---	3.31	4.28	4.12	3.99	4.59	4.72	5.03	---	4.87	4.97	4.16
28	4.96	3.18	4.44	4.55	4.18	4.91	4.65	4.99	---	5.03	5.02	4.30
29	5.02	3.30	4.53	4.25	---	4.97	4.70	5.24	---	4.83	5.02	4.55
30	4.78	3.55	4.54	4.40	---	4.56	4.62	5.22	4.42	5.35	5.19	4.33
31	4.83	---	4.51	4.43	---	5.00	---	5.46	---	5.52	4.95	---
MEAN	5.14	3.68	3.87	4.42	4.00	4.41	4.59	5.01	4.49	4.69	4.94	4.89
MAX	5.81	4.84	4.54	4.83	4.44	5.00	4.85	5.46	5.28	5.52	5.78	5.38
MIN	4.78	3.11	3.24	3.91	3.45	3.77	4.26	4.65	3.83	3.76	4.64	4.16

WTR YR 1986 MEAN 4.48 HIGH 3.11 Nov 5 LOW 5.81 Oct 3

SOMERSET COUNTY

199

400008079142801. Local number, SO 2.

LOCATION.--Lat 40°00'08", long 79°14'28", Hydrologic Unit 05020006, at Laurel Hill State Park.

Owner: Commonwealth of Pennsylvania.

AQUIFER.--Shale and sandstone of Allegheny Group of Middle Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in to 4 in, depth 450 ft, cased to 311 ft, open hole.

INSTRUMENTATION.--Continuous strip-chart recorder

DATUM.--Elevation of land-surface datum is 2,040 ft, from topographic map. Measuring point: Top of casing, 1.43 ft above land-surface datum.

REMARKS.--Missing record June 22.

PERIOD OF RECORD.--April 1937 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 27.42 ft below land-surface datum, Apr. 9, 1980; lowest, 46.63 ft below land-surface datum, Nov. 15, 1985 (affected by pumping of nearby well).

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36.46	43.59	41.65	35.76	34.81	33.92	33.96	33.98	34.39	35.35	34.53	36.67
2	36.38	43.83	41.14	35.72	34.76	33.92	33.96	34.02	34.41	35.31	34.53	36.59
3	36.35	44.06	40.89	35.65	34.73	33.92	33.98	34.05	34.49	35.30	34.53	36.52
4	36.27	44.15	40.59	35.60	34.69	33.92	33.99	34.06	34.49	35.32	34.58	36.41
5	36.21	44.38	40.30	35.54	34.47	33.92	33.99	34.06	34.50	35.34	34.61	36.35
6	36.16	44.65	39.93	35.51	34.45	33.89	33.99	34.07	34.52	35.35	34.61	36.27
7	36.17	44.96	39.63	35.55	34.47	33.92	33.93	34.06	34.52	35.35	34.58	36.21
8	36.18	45.19	39.36	35.55	34.47	33.97	33.92	34.08	34.51	35.34	34.68	36.20
9	36.19	45.54	39.12	35.54	34.47	33.96	33.91	34.12	34.58	35.29	34.89	36.15
10	36.17	45.82	38.92	35.43	34.45	33.96	33.91	34.13	34.60	35.13	35.13	36.10
11	36.19	46.08	38.67	35.40	34.40	33.88	33.87	34.13	34.59	35.12	35.35	36.04
12	36.20	46.21	38.60	35.36	34.36	33.92	33.91	34.13	34.57	35.09	35.66	35.99
13	36.20	46.38	38.35	35.27	34.36	33.91	33.92	34.17	34.63	35.05	35.96	35.99
14	36.21	46.57	37.89	35.27	34.36	33.86	33.99	34.17	34.63	35.04	36.27	35.99
15	36.16	46.63	37.77	35.27	34.27	33.74	33.98	34.22	34.63	35.06	36.58	35.97
16	36.41	46.62	37.59	35.27	34.28	33.81	33.96	34.22	34.63	35.06	36.91	35.93
17	36.91	46.37	37.39	35.28	34.27	33.85	33.97	34.22	34.63	35.05	37.20	35.93
18	37.42	46.37	37.21	35.28	34.22	33.84	34.02	34.23	34.66	35.05	37.54	35.90
19	37.92	46.25	37.11	35.17	34.13	33.80	34.02	34.23	34.77	35.03	37.73	35.83
20	38.50	45.95	36.98	34.99	34.08	33.86	34.01	34.21	34.91	34.76	37.78	35.82
21	39.00	45.65	36.78	34.94	34.00	33.91	33.92	34.24	35.16	34.75	37.76	35.82
22	39.55	45.02	36.63	35.02	34.00	33.91	33.92	4.27	---	34.74	37.74	35.77
23	39.92	44.93	36.42	35.03	34.04	33.91	33.99	34.31	35.26	34.75	37.62	35.76
24	40.45	44.53	36.40	35.04	34.03	33.96	34.02	34.34	35.29	34.70	37.41	35.68
25	40.95	44.17	36.28	35.03	33.99	33.96	34.00	34.38	35.35	34.64	37.37	35.74
26	41.42	43.74	36.20	34.96	33.98	33.92	34.00	34.39	35.39	34.59	37.26	36.09
27	41.85	43.04	36.09	34.85	33.89	33.91	34.00	34.38	35.39	34.54	37.11	36.41
28	42.30	42.67	36.01	34.81	33.92	33.92	33.98	34.34	35.35	34.51	36.98	36.75
29	42.65	42.24	35.94	34.81	---	33.92	34.00	34.37	35.33	34.48	36.87	36.86
30	42.98	41.97	35.88	34.81	---	33.91	34.00	34.37	35.33	34.49	36.84	36.92
31	43.30	---	35.83	34.81	---	33.96	---	34.37	---	34.50	36.76	---
MEAN	38.23	44.92	37.99	35.24	34.30	33.90	33.97	34.20	34.81	34.97	36.24	36.16
MAX	43.30	46.63	41.65	35.76	34.81	33.97	34.02	34.39	35.39	35.35	37.78	36.92
MIN	36.16	41.97	35.83	34.81	33.89	33.74	33.87	33.98	34.39	34.48	34.53	35.68

WTR YR 1986 MEAN 36.25 HIGH 33.74 Mar 15 LOW 46.63 Nov 15

WARREN COUNTY

414159079213601. Local number, WR 50.

LOCATION.--Lat 41°41'59", long 79°21'36", Hydrologic Unit 05010003, at State Game Land Number 86.

Owner: U.S. Geological Survey.

AQUIFER.--Shale of Venango Formation of late Devonian age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in depth 105 ft, cased to 46 ft, open hole.

INSTRUMENTATION.--Continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 1,170 ft, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

REMARKS.--Missing record Nov. 8-22, and Sept. 22, 23. Well also sampled for water quality.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 39.79 ft below land-surface datum, Apr. 6, 1985; lowest, 45.42 ft below land-surface datum, Nov. 2, 1984.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43.36	43.90	41.79	42.01	42.47	41.72	41.90	41.39	42.19	41.56	41.92	43.33
2	43.46	43.87	41.57	42.04	42.32	41.73	41.95	41.45	42.35	41.53	41.99	43.34
3	43.46	43.88	41.69	42.02	42.33	41.76	41.99	41.58	42.45	41.62	42.09	43.36
4	43.43	43.85	41.76	42.08	42.28	41.81	42.03	41.61	42.45	41.73	42.20	43.35
5	43.31	43.66	41.78	41.97	42.06	41.84	42.05	41.57	42.42	41.81	42.25	43.28
6	43.45	43.54	41.62	42.15	42.04	41.82	42.03	41.53	42.27	41.91	42.26	43.34
7	43.61	43.54	41.65	42.39	42.02	41.98	41.92	41.59	42.14	41.96	42.25	43.43
8	43.70	43.61	---	42.52	41.96	42.16	41.79	41.69	41.94	41.99	42.23	43.50
9	43.72	43.61	---	42.50	42.01	42.14	41.68	41.81	41.94	41.94	42.30	42.66
10	43.71	43.57	---	42.32	42.02	42.07	41.63	41.88	41.99	41.96	42.37	42.35
11	43.72	43.46	---	42.32	42.00	42.07	41.61	41.84	41.90	41.98	42.42	42.19
12	43.77	43.43	---	42.25	42.00	42.14	41.74	41.81	41.72	41.97	42.58	42.16
13	43.71	43.25	---	42.29	42.08	42.11	41.83	41.87	41.59	41.92	42.64	42.34
14	43.68	43.06	---	42.40	42.09	41.94	41.86	41.96	41.62	41.95	42.66	42.45
15	43.67	42.91	---	42.56	42.01	41.76	41.80	42.04	41.60	42.04	42.65	42.48
16	43.88	42.91	---	42.60	42.06	41.84	41.71	42.04	41.55	42.05	42.65	42.54
17	43.97	42.64	---	42.59	42.01	41.89	41.69	42.07	41.44	42.03	42.68	42.61
18	43.97	42.57	---	42.56	41.95	41.90	41.77	42.06	41.47	41.98	42.76	42.58
19	43.93	42.51	---	42.44	41.91	41.72	41.76	42.08	41.45	41.95	42.85	42.55
20	43.93	42.36	---	42.21	41.94	41.83	41.66	42.07	41.35	41.78	42.92	42.55
21	43.95	42.39	---	42.30	41.88	41.98	41.40	42.11	41.41	41.71	42.97	42.64
22	43.95	42.37	---	42.33	41.88	42.00	41.36	42.14	41.38	41.78	43.03	---
23	43.96	42.21	41.39	42.48	41.71	41.89	41.47	42.12	41.27	41.83	43.04	---
24	43.95	42.23	41.41	42.51	41.71	42.03	41.52	42.18	41.42	41.83	43.01	42.08
25	43.90	42.26	41.56	42.49	41.65	42.03	41.47	42.23	41.47	41.79	43.02	42.15
26	43.91	42.24	41.60	42.30	41.64	41.96	41.41	42.26	41.47	41.74	43.04	42.19
27	43.90	41.95	41.61	42.06	41.49	41.88	41.39	42.24	41.41	41.75	42.99	42.15
28	44.01	41.92	41.76	42.07	41.64	41.94	41.37	42.22	41.40	41.74	43.09	42.20
29	44.01	41.83	41.77	42.16	---	41.89	41.33	42.22	41.51	41.75	43.22	42.22
30	43.98	41.84	41.86	42.39	---	41.83	41.41	42.21	41.58	41.80	43.29	42.19
31	43.92	---	41.83	42.45	---	41.90	---	42.16	---	41.86	43.31	---
MEAN	43.77	42.91	41.67	42.31	41.97	41.92	41.68	41.94	41.74	41.85	42.67	42.65
MAX	44.01	43.90	41.86	42.60	42.47	42.16	42.05	42.26	42.45	42.05	43.31	43.50
MIN	43.31	41.83	41.39	41.97	41.49	41.72	41.33	41.39	41.27	41.53	41.92	42.08

WTR YR 1986 MEAN 42.28 HIGH 41.27 June 23 LOW 44.01 Oct 28, 29

WASHINGTON COUNTY

201

400233080261301. Local number, WS 155.

LOCATION.--Lat 40°02'33", long 80°26'13", Hydrologic Unit 05030106, near Good Intent.

Owner: U.S. Geological Survey.

AQUIFER.--Washington Formation of Early Permian age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in, depth 160 ft, cased to 19 ft, open hole.

INSTRUMENTATION.--Continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 1,110 ft, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

REMARKS.--None.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 32.25 ft below land-surface datum, Jan. 14, 1974; lowest, 39.01 ft below land-surface datum, July 11, 1971.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36.89	36.15	33.55	35.58	35.49	34.99	35.59	35.84	36.19	36.17	36.73	37.11
2	36.90	36.16	33.92	35.58	35.49	35.04	35.68	35.94	36.29	36.09	36.73	37.17
3	36.78	36.17	34.23	35.67	35.34	35.15	35.69	35.98	36.30	36.05	36.80	37.21
4	36.63	35.96	34.36	35.67	35.02	35.22	35.74	35.99	36.30	36.10	36.87	37.21
5	36.48	35.16	34.40	35.62	34.48	35.24	35.75	35.99	36.30	36.14	36.87	37.34
6	36.49	34.84	34.66	35.71	34.20	35.24	35.76	35.99	36.30	36.18	36.92	37.40
7	36.51	34.98	34.69	35.85	34.01	35.49	35.75	35.99	36.26	36.21	36.98	37.52
8	36.56	35.18	34.79	35.88	34.09	35.52	35.73	36.03	36.22	36.21	36.96	37.58
9	36.57	35.21	34.95	35.88	34.20	35.50	35.73	36.08	36.25	36.21	36.93	37.64
10	36.57	35.20	34.96	35.82	34.29	35.45	35.73	36.11	36.25	35.84	36.93	37.59
11	36.60	34.97	34.96	35.82	34.50	35.27	35.73	36.11	36.25	35.67	36.86	37.58
12	36.59	34.56	34.87	35.82	34.67	35.10	35.80	36.11	36.23	35.67	36.87	37.62
13	36.60	34.11	34.54	35.87	34.78	34.89	35.85	36.11	36.18	35.72	36.87	37.63
14	36.59	33.97	34.29	35.95	34.80	34.69	35.85	36.11	36.18	35.77	36.85	37.65
15	36.40	33.87	34.35	36.01	35.04	34.42	35.85	36.18	36.18	35.82	36.87	37.57
16	36.45	33.71	34.43	36.03	35.06	34.33	35.85	36.18	36.18	35.86	36.76	37.62
17	36.44	33.47	34.59	36.03	35.06	34.57	35.91	36.18	36.23	35.91	36.71	37.57
18	36.41	33.62	34.74	36.03	35.00	34.64	35.94	36.18	36.27	35.91	36.71	37.49
19	36.36	33.80	34.83	35.95	34.58	34.79	35.94	36.15	36.27	35.98	36.74	37.46
20	36.33	34.06	34.91	35.70	34.29	34.96	35.94	36.18	36.30	36.03	36.77	37.41
21	36.29	34.31	34.91	35.50	34.05	35.11	35.82	36.18	36.32	36.13	36.77	37.40
22	36.24	34.49	35.00	35.29	34.04	35.15	35.83	36.18	36.32	36.32	36.81	37.39
23	36.24	34.68	35.08	35.30	34.18	35.19	35.83	36.18	36.38	36.51	36.80	37.39
24	36.15	34.85	35.18	35.23	34.35	35.35	35.83	36.19	36.44	36.69	36.79	37.36
25	36.19	34.89	35.23	35.08	34.45	35.36	35.83	36.19	36.50	36.67	36.88	37.36
26	36.20	34.89	35.23	34.99	34.45	35.36	35.83	36.19	36.50	36.67	36.84	37.22
27	36.20	34.58	35.37	34.98	34.73	35.45	35.83	36.19	36.50	36.67	36.91	36.88
28	36.22	33.90	35.37	35.07	34.92	35.48	35.80	36.19	36.50	36.67	37.03	36.71
29	36.22	33.57	35.41	35.10	---	35.48	35.83	36.19	36.32	36.67	37.07	36.55
30	36.20	33.52	35.52	35.40	---	35.49	35.84	36.19	36.17	36.67	37.06	36.45
31	36.18	---	35.52	35.47	---	35.55	---	36.19	---	36.67	37.06	---
MEAN	36.43	34.63	34.80	35.61	34.63	35.14	35.80	36.11	36.30	36.19	36.86	37.34
MAX	36.90	36.17	35.52	36.03	35.49	35.55	35.94	36.19	36.50	36.69	37.07	37.65
MIN	36.15	33.47	33.55	34.98	34.01	34.33	35.59	35.84	36.17	35.67	36.71	36.45

WTR YR 1986 MEAN 35.83 HIGH 33.47 Nov 17 LOW 37.65 Sept 14

WESTMORELAND COUNTY

402138079031802. Local number, WE 300.

LOCATION.--Lat 40°21'38", long 79°03'18", Hydrologic Unit 05010007, at State Game Land Number 42.

Owner: U.S. Geological Survey.

AQUIFER.--Shale of Clarion Formation of Middle Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in, depth 110 ft, cased to 22 ft, open hole.

INSTRUMENTATION.--Continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 1,270 ft, from topographic map. Measuring point: Top of plywood cover, 3.05 ft above land-surface datum.

REMARKS.--None.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 13.61 ft below land-surface datum, Apr. 24, 1984; lowest, 29.22 ft below land-surface datum, July 3, 1968.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.58	19.49	16.76	16.54	16.41	15.77	15.21	14.75	15.07	16.37	16.89	18.18
2	19.59	19.49	16.73	16.55	16.17	15.74	15.28	15.06	15.47	16.45	16.98	18.21
3	19.57	19.48	17.01	16.53	16.16	15.77	15.37	15.20	15.65	16.62	17.11	18.23
4	19.56	19.45	17.02	16.55	15.95	15.83	15.41	15.26	15.57	16.66	17.16	18.24
5	19.56	19.44	16.82	16.35	15.63	15.87	15.49	15.16	15.59	16.74	17.16	18.26
6	19.62	19.46	16.75	16.63	15.71	15.80	15.48	15.27	15.67	16.79	17.18	18.31
7	19.67	19.44	16.77	16.89	15.55	16.17	15.32	15.35	15.69	16.80	17.18	18.39
8	19.68	19.45	16.63	16.98	15.66	16.35	15.16	15.56	15.86	16.84	17.25	18.43
9	19.69	19.40	16.72	16.72	15.67	16.13	15.05	15.14	16.07	16.78	17.34	18.46
10	19.64	19.35	16.73	16.43	15.61	15.92	15.05	15.79	16.06	16.84	17.35	18.46
11	19.64	19.28	16.60	16.44	15.65	15.92	15.01	15.68	15.92	16.74	17.50	18.43
12	19.64	19.21	16.36	16.27	15.74	15.94	15.22	15.75	15.93	16.65	17.51	18.50
13	19.60	19.00	16.32	16.50	15.87	15.79	15.29	15.90	16.11	16.65	17.53	18.56
14	19.58	18.90	16.37	16.74	15.77	15.48	15.30	16.04	16.09	16.68	17.54	18.61
15	19.60	18.83	16.36	16.82	16.03	15.26	15.12	16.11	15.91	16.69	17.55	18.61
16	19.68	18.57	16.24	16.82	16.06	15.33	14.97	16.06	15.77	16.64	17.59	18.67
17	19.69	18.21	16.23	16.71	15.92	15.34	14.98	16.08	15.92	16.61	17.65	18.68
18	19.66	18.15	16.43	16.65	15.90	15.34	14.99	16.07	15.93	16.60	17.73	18.67
19	19.61	17.96	16.48	16.42	15.78	14.95	14.97	16.06	15.87	16.58	17.79	18.69
20	19.64	17.92	16.43	16.54	15.82	15.29	14.67	15.92	15.96	16.62	17.84	18.69
21	19.61	17.92	16.24	16.66	15.79	15.42	14.40	15.82	16.00	16.69	17.84	18.72
22	19.60	17.75	16.19	16.73	15.80	15.39	14.65	15.72	15.88	16.69	17.88	18.72
23	19.59	17.75	15.99	16.79	15.63	15.24	14.80	15.54	15.79	16.65	17.86	18.70
24	19.56	17.65	16.17	16.77	15.63	15.41	14.83	15.43	16.00	16.58	17.93	18.71
25	19.57	17.66	16.35	16.54	15.56	15.39	14.65	15.40	16.10	16.51	17.97	18.74
26	19.58	17.42	16.41	16.10	15.52	15.21	14.57	15.27	16.12	16.52	17.98	18.75
27	19.56	17.23	16.31	15.92	15.46	15.17	14.60	15.23	16.10	16.56	18.00	18.73
28	19.58	17.14	16.40	16.06	15.71	15.22	14.54	15.20	16.09	16.59	18.11	18.74
29	19.57	17.03	16.35	16.16	---	15.14	14.75	15.19	16.22	16.68	18.15	18.72
30	19.52	16.90	16.44	16.37	---	15.08	14.83	15.11	16.37	16.76	18.18	18.67
31	19.51	---	16.37	16.41	---	15.21	---	15.04	---	16.83	18.19	---
MEAN	19.60	18.50	16.48	16.54	15.79	15.54	15.00	15.52	15.89	16.66	17.61	18.55
MAX	19.69	19.49	17.02	16.98	16.41	16.35	15.49	16.11	16.37	16.84	18.19	18.75
MIN	19.51	16.90	15.99	15.92	15.46	14.95	14.40	14.75	15.07	16.37	16.89	18.18

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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)	2.54×10^1	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^0	kilometers (km)
<i>Area</i>		
acres	4.047×10^3	square meters (m ²)
	4.047×10^1	square hectometers (hm ²)
	4.047×10^{-3}	square kilometers (km ²)
square miles (mi ²)	2.590×10^0	square kilometers (km ²)
<i>Volume</i>		
gallons (gal)	3.785×10^0	liters (L)
	3.785×10^0	cubic decimeters (dm ³)
	3.785×10^{-3}	cubic meters (m ³)
million gallons	3.785×10^3	cubic meters (m ³)
	3.785×10^{-3}	cubic hectometers (hm ³)
cubic feet (ft ³)	2.832×10^1	cubic decimeters (dm ³)
	2.832×10^{-2}	cubic meters (m ³)
cfs-days	2.447×10^3	cubic meters (m ³)
	2.447×10^{-3}	cubic hectometers (hm ³)
acre-feet (acre-ft)	1.233×10^3	cubic meters (m ³)
	1.233×10^{-3}	cubic hectometers (hm ³)
	1.233×10^{-6}	cubic kilometers (km ³)
<i>Flow</i>		
cubic feet per second (ft ³ /s)	2.832×10^1	liters per second (L/s)
	2.832×10^1	cubic decimeters per second (dm ³ /s)
	2.832×10^{-2}	cubic meters per second (m ³ /s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (L/s)
	6.309×10^{-2}	cubic decimeters per second (dm ³ /s)
	6.309×10^{-5}	cubic meters per second (m ³ /s)
million gallons per day	4.381×10^1	cubic decimeters per second (dm ³ /s)
	4.381×10^{-2}	cubic meters per second (m ³ /s)
<i>Mass</i>		
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons

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