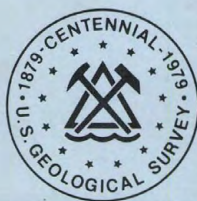
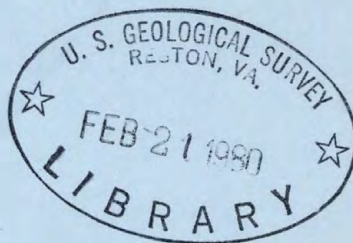


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1978



Water Resources Data for West Virginia



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT WV-78-1

WATER YEAR 1978

Prepared in cooperation with the State of
West Virginia and with other agencies

CALENDAR FOR WATER YEAR 1978

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Water Resources Data for West Virginia

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT WV-78-1

WATER YEAR 1978

Prepared in cooperation with the State of
West Virginia and with other agencies

UNITED STATES DEPARTMENT OF THE INTERIOR
CECIL B. ANDRUS, Secretary

GEOLOGICAL SURVEY
H. William Menard, Director

For information on the water program in West Virginia write to
District Chief, Water Resources Division
U.S. Geological Survey
3017 Federal Building
Charleston, West Virginia 25301

1979

PREFACE

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

This report is one of a series issued State by State. General direction for the series is by J. S. Cragwall, Jr., Chief Hydrologist, U.S. Geological Survey, and G. W. Whetstone, Assistant Chief Hydrologist for Scientific Publications and Data Management.

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WATER RESOURCES DATA FOR WEST VIRGINIA, 1978

INTRODUCTION

Water resources data for the 1978 water year for West Virginia consist of records of stage, discharge, and water quality of streams and springs; stage and contents of lakes and reservoirs; and water levels of ground water. This report contains discharge records for 118 gaging stations; stage only records for 3 gaging stations; stage and contents for 7 lakes and reservoirs; contents for 1 reservoir; change in contents for 1 reservoir; water quality for 47 gaging stations; and water levels for 31 observation wells. Also included are 3 crest-stage partial-record stations and 4 low-flow partial record stations. Additional water data were collected at various sites, not involved in the systematic data collection program, and are published as miscellaneous measurements. These data represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in West Virginia.

Records of discharge or stage of streams, and contents or stage of lakes and reservoirs were first published in a series of U.S. Geological Survey water-supply papers entitled "Surface Water Supply of the United States." Through September 30, 1960, these water-supply papers were in an annual series and then in a 5-year series for 1961-65 and 1966-70. Records of chemical quality, water temperatures, and suspended sediment were published from 1941 to 1970 in an annual series of water-supply papers entitled "Quality of Surface Waters of the United States." Records of ground-water levels were published from 1935 to 1974 in a series of water-supply papers entitled "Ground-water Levels in the United States." Water-supply papers may be consulted in the libraries of the principal cities in the United States or may be purchased from Branch of Distribution, U.S. Geological Survey, 1200 South Eads Street, Arlington, Va. 22202.

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

Beginning with the 1975 water year, water data for streamflow, water quality, and ground water are published as an official Survey report on a State-boundary basis. These official Survey reports carry an identification number consisting of the two letter State abbreviation, the last two digits of the water year, and the volume number. For example, this report is identified as "U.S. Geological Survey Water-Data Report WV-78-1." Water-Data reports are for sale by the National Technical Information Service, U. S. Department of Commerce, Springfield, Virginia, 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 the title page or by telephone (304) 343-6181, ext. 310.

COOPERATION

The U.S. Geological Survey and organizations of the State of West Virginia have had cooperative agreements for the systematic collection of streamflow records since 1895, for ground-water levels since 1941, and for water-quality records since 1969. Organizations that assisted in collecting data through cooperative agreement with the survey are:

West Virginia Department of Natural Resources, D. C. Callaghan, Director, through
Division of Water Resources, D. W. Robinson, Chief.

West Virginia State Department of Highways, C. L. Miller, Commissioner.

West Virginia Geological and Economic Survey, R. B. Erwin, Director.

Clarksburg Water Board, G. S. Pritchard, Secretary and General Manager.

Morgantown Water Commission, T. E. Urquhart, Manager.

Assistance in the form of funds or services was given by the Corps of Engineers, U.S. Army, U.S. Soil Conservation Service, and U.S. Fish and Wildlife Service.

Assistance was also furnished by the National Weather Service of the U.S. Department of Commerce.

The following organizations aided in collecting records:

Appalachian Power Company and Monongahela Power Company.

Organizations that supplied data are acknowledged in station descriptions.

HYDROLOGIC CONDITIONS

Streamflow was above normal throughout the state from October through January and in May, July and August, and below normal in February and April. Streamflow in other months showed both above and below normal trends for similar periods. On an annual basis, streamflow in the northeastern panhandle of the state was approximately 140-150 percent of normal, 120-130 percent in the north, approximately 110 percent in the central, and 130-140 percent in the south. Graphical illustrations of monthly and annual streamflow compared to a 30-year base period are shown for three stations in Figure 4.

Ground-water levels at year end were generally above normal in the northern half of the state, along the southern border, and in the eastern panhandle. Elsewhere levels were below normal. Water levels in many of the central, west central, and south central counties were below normal most of the year.

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 English 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 ± 1.0°C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

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

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

Bed material: See Bottom material.

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/m³), and periphyton and benthic organisms in grams per square meter (g/m²).

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 for ash mass and dry mass.

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

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

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.

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.

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

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

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

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

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

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

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

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

Cubic feet per second per square mile (CFSM) is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area.

Cubic foot per second (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, 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 the amount of substance present in true chemical solution. In practice, however, the term includes all forms of substance that will pass through a 0.45-micrometer membrane filter, and thus may include some very small (colloidal) suspended particles. Analyses are performed on filtered samples.

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 specified 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 (CaCO_3).

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

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

Micrograms per gram ($\mu\text{g/g}$) 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 (UG/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.

Not detected (ND) the substance was analyzed for but not detected.

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

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

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

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

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

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

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

The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay.....	0.00024 - 0.004	Sedimentation.
Silt.....	.004 - .062	Sedimentation.
Gravel.....	2.0 - 64.0	Sieve.

The particle-size distribution 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.

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

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

Milligrams of oxygen per area or volume per unit time [$\text{mg O}_2/(\text{m}^2 \cdot \text{time})$ for periphyton and macrophytes and $\text{mg O}_2/(\text{m}^3 \cdot \text{time})$] for phytoplankton are the units for expressing primary productivity. They define production and respiration rates as estimated from changes in the measured dissolved oxygen concentration. The oxygen light and dark bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period.

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 by 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. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in micromhos). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

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

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

Substrate is the physical surface upon which an organism 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 U.S.G.S. topographic map as the boundary of the lake and measured by a planimeter in acres. In localities not covered by topographic maps, the areas are computed from the best maps available at the time planimetered. All areas shown are those for the stage when the planimetered map was made.

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

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of the total concentration in a water-sediment mixture. The water-sediment mixture is associated with (or sorbed on) that material retained on a 0.45 micrometer filter.

Suspended, recoverable is the amount of a given constituent that is in solution after the material which is retained on an 0.45- μ m membrane filter has been digested by a method (usually with an acid or mixture of acids) that results in dissolution of readily soluble substances. More commonly, the difference of determinations of total recoverable and dissolved concentrations of the constituent.

Suspended, total is that material which is retained by an 0.45- μ m membrane filter. Determinations of "suspended" constituent are made either by analyzing portions of the material collected on the filter disk or, more commonly, by difference, based on determinations of (1) dissolved and (2) total (dissolved-plus-suspended) 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:

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

Total (as used in tables of chemical analyses):

Total (dissolved plus suspended) is the total amount of a given constituent in water-suspended sediment sample, regardless of its physical or chemical form.

Total recoverable is the amount of a given constituent that is in solution after a water-suspended sediment sample has been digested by a method (usually with an acid or mixture of acids) that results in dissolution of readily soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment employed and there is reason to suspect that the determination actually represents something less than the "total" amount (95 percent) of the constituent sought in both phases of the sample.

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 1975.

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

DOWNSTREAM ORDER AND STATION NUMBER

Since October 1, 1950, the order of listing hydrologic-stations 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 indentation in a list of stations in the front of the report. Each indentation represents one rank. This downstream order and system of indentation show which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

As an added means of identification, each hydrologic station and partial-record station has been assigned a station number. These are in the same downstream order used in this report. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete 8-digit number for each station such as 03041000, which appears just to the left of the station name, includes the 2-digit part number "03" plus the 6-digit downstream order number "041000".

NUMBERING SYSTEM FOR WELLS AND MISCELLANEOUS SITES

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

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

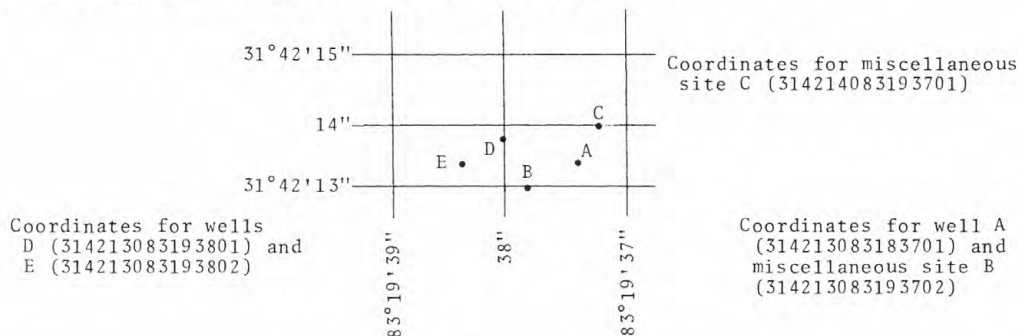


Figure 1. System for numbering wells and miscellaneous sites (latitude and longitude)

SPECIAL NETWORKS AND PROGRAMS

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

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

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

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 STAGE AND WATER-DISCHARGE RECORDS

Collection and computation of data

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

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

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

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

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

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

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

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

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

Previously published streamflow records of some stations have been found to be in error on the basis of data or information later obtained. Revisions of such records are usually published along with the current records in one of the annual or compilation reports. In order to make it easier to find such revised records, a paragraph headed "REVISED RECORDS" has been added to the description of all stations for which revised records have been published. Listed therein are all the reports in which revisions have been published, each followed by the water years for which figures are revised in that report. In listing the water years only one number is given; for instance, 1965 stands for the water year October 1, 1964 to September 30, 1965. If no daily, monthly, or annual figures of discharge are affected by the revision, the fact is brought out by notations after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the revised figure was first published is given. It should be noted that for all stations for which cubic feet per second per square mile and runoff in inches are published, a revision of the drainage area necessitates corresponding revision of all figures based on the drainage area. Revised figures of cubic feet per second per square mile and runoff in inches resulting from a revision of the drainage area only are usually not published in the annual series of reports.

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

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

The average discharge for the number of years indicated is given under "AVERAGE DISCHARGE"; it is not given for stations having fewer than 5 complete years of record or for stations where changes in water development during the period of record cause the figure to have little significance. In addition, the median of yearly mean discharges is given for stream-gaging stations having 10 or more complete years of record if the median differs from the average by more than 10 percent. Under "EXTREMES" are given first, the extremes for the period of record, second, information available outside the period of record, and last, those for the current year. Unless otherwise qualified, the maximum discharge (or contents) is the instantaneous maximum corresponding to the crest stage obtained by use of a water-stage recorder (graphic or digital), a crest-stage gage, or a nonrecording gage read at the time of the crest. If the maximum gage height did not occur on the same day as the maximum discharge (or contents), it is given separately. Similarly, the minimum is the instantaneous minimum unless otherwise qualified. For some stations peak discharges are listed with EXTREMES FOR THE CURRENT YEAR; if they are, all independent peaks, including the maximum for the year, above the selected base with the time of occurrence and corresponding gage heights are published in tabular format. The base discharge, which is given in the table heading, is selected so that an average of about three peaks a year will be presented. Peak discharges are not published for any canals, ditches, drains, or for any stream for which the peaks are subject to substantial control by man. Time of day is expressed in 24-hour local standard time; for example, 12:30 a.m. is 0030, 1:30 p.m. is 1330. The minimums for these stations are published in a separate paragraph following the table of peaks.

The daily table for stream-gaging stations gives the mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month also may be expressed in cubic feet per second per square mile (line headed "CFSM"), or in inches (line headed "IN"), 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, if the drainage area includes large noncontributing areas, or if the average annual rainfall over the drainage basin is usually less than 20 inches. In the yearly summary below the monthly summary, the figures shown are the appropriate daily discharges for the calendar and water years.

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

For most gaging stations on lakes and reservoirs the data presented comprise a description of the station and a monthly summary table of stage and contents. For some reservoirs a table showing daily contents or stage is given. A skeleton table of capacity at given stages is published for all reservoirs for which records are published on a daily basis, but is not published for reservoirs for which only monthly data are given.

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 discharge measurements at low-flow partial-record stations, and the second is a table of annual maximum stage and discharge at crest-stage stations. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. Occasionally, a series of discharge measurements are made within a short time period to investigate the seepage gains or losses along a reach of a stream or to determine the low-flow characteristics of an area. Such measurements are also given in special tables following the tables of partial-record stations.

Accuracy of field data and computed results

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

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

Figures of daily mean discharge in this report are shown to the nearest hundredth of a cubic foot per second for discharges of less than 1 ft³/s; to tenths between 1.0 and 10 ft³/s; to whole numbers between 10 and 1,000 ft³/s; and to 3 significant figures above 1,000 ft³/s. The number of significant figures used is based solely on the magnitude of the figure. The same rounding rules apply to discharge figures listed for partial-record stations.

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

Other data available

Information of a more detailed nature than that published for most of the gaging stations such as 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.

EXPLANATION OF WATER-QUALITY RECORDS

Collection and examination of data

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

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

Water analysis

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

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load.

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

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

Water temperature

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

At stations where recording instruments are used, either mean temperatures or maximum and minimum temperatures for each day are published.

Sediment

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

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

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

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

EXPLANATION OF GROUND-WATER LEVEL RECORDS

Collection of the data

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

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

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

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

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

Thirty-four manuals by the U.S. Geological Survey have been published to date in the series on techniques describing procedures for planning and executing specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) is on surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises. The reports listed below are for sale by the U.S. Geological Survey, Branch of Distribution, 1200 South Eads Street, Arlington, VA 22202 (authorized agent of the Superintendent of Documents, Government Printing Office. Prices are effective October 1978 but are subject to change.

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

- 1-D1. *Water temperature-influential factors, field measurement, and data presentation*, by H. H. Stevens Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages. \$1.60.
- 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. \$0.85.
- 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. \$1.90.
- 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. \$1.75.
- 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. \$1.00.
- 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. \$0.35.
- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages. \$0.40.
- 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. \$1.00.
- 3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages. \$0.35.
- 3-A6. *General procedure for gaging streams*, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages. \$1.00.
- 3-A7. *Stage measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages. \$1.40.
- 3-A8. *Discharge measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages. \$1.25.
- 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. \$1.20.
- 3-A12. *Fluorometric procedures for dye tracing*, by J. F. Wilson Jr.: USGS--TWRI Book 3, Chapter A12. 1968. 31 pages. \$0.35. Not currently available.
- 3-B1. *Aquifer-test design, observation, and data analysis*, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages. \$0.70.
- 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. \$2.50.
- 3-C1. *Fluvial sediment concepts*, by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages. \$2.50.
- 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. \$2.50.
- 3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages. \$2.10.
- 4-A1. *Some statistical tools in hydrology*, by H. C. Riggs: USGS--TWRI Book 4 Chapter A1. 1968. 39 pages. \$1.60.
- 4-A2. *Frequency curves*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages. \$1.20.
- 4-B1. *Low-flow investigations*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages. \$0.65.
- 4-B2. *Storage analyses for water supply*, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages. \$0.75.
- 4-B3. *Regional analyses of streamflow characteristics*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages. \$0.65.
- 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. \$1.10.
- 5-A1. *Methods for collection and analysis of water samples for dissolved minerals and gases*, by Eugene Brown, M. W. Skougstad, and M. J. Fishman: USGS--TWRI Book 5, Chapter A1. 1970. 160 pages. \$2.40.
- 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. \$0.80.
- 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. \$0.90.
- 5-A4.* *Methods for collection and analysis of aquatic biological and microbiological samples*, edited by P.E. Greason, T.A. Ehlike, G.A. Irwin, B.W. Lium, and K.V. Slack: USGS--TWRI Book 5, Chapter A4. 1977. 332 pages. \$20.00.
- 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. \$16.00.
- 5-C1. *Laboratory theory and methods for sediment analysis*, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages. \$2.10.
- 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. \$2.30.
- 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. \$0.70.
- 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. \$1.10.

*These publications are available ONLY from Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. They are in looseleaf format and are subscription items. Additional supplements will be issued to subscribers at no extra cost. Checks should be made payable to Superintendent of Documents. Requester should emphasize to Superintendent of Documents that this is a subscription item.

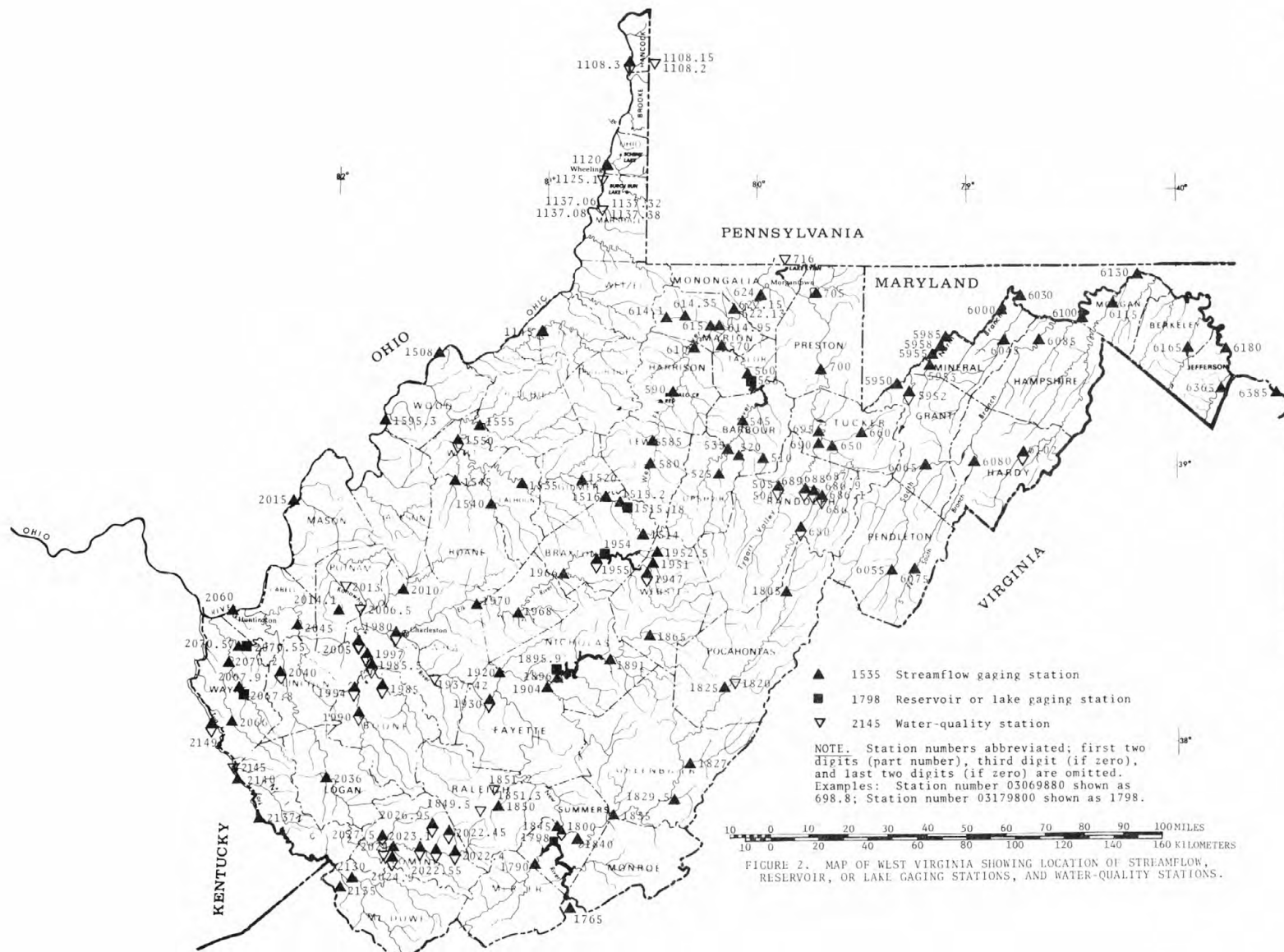
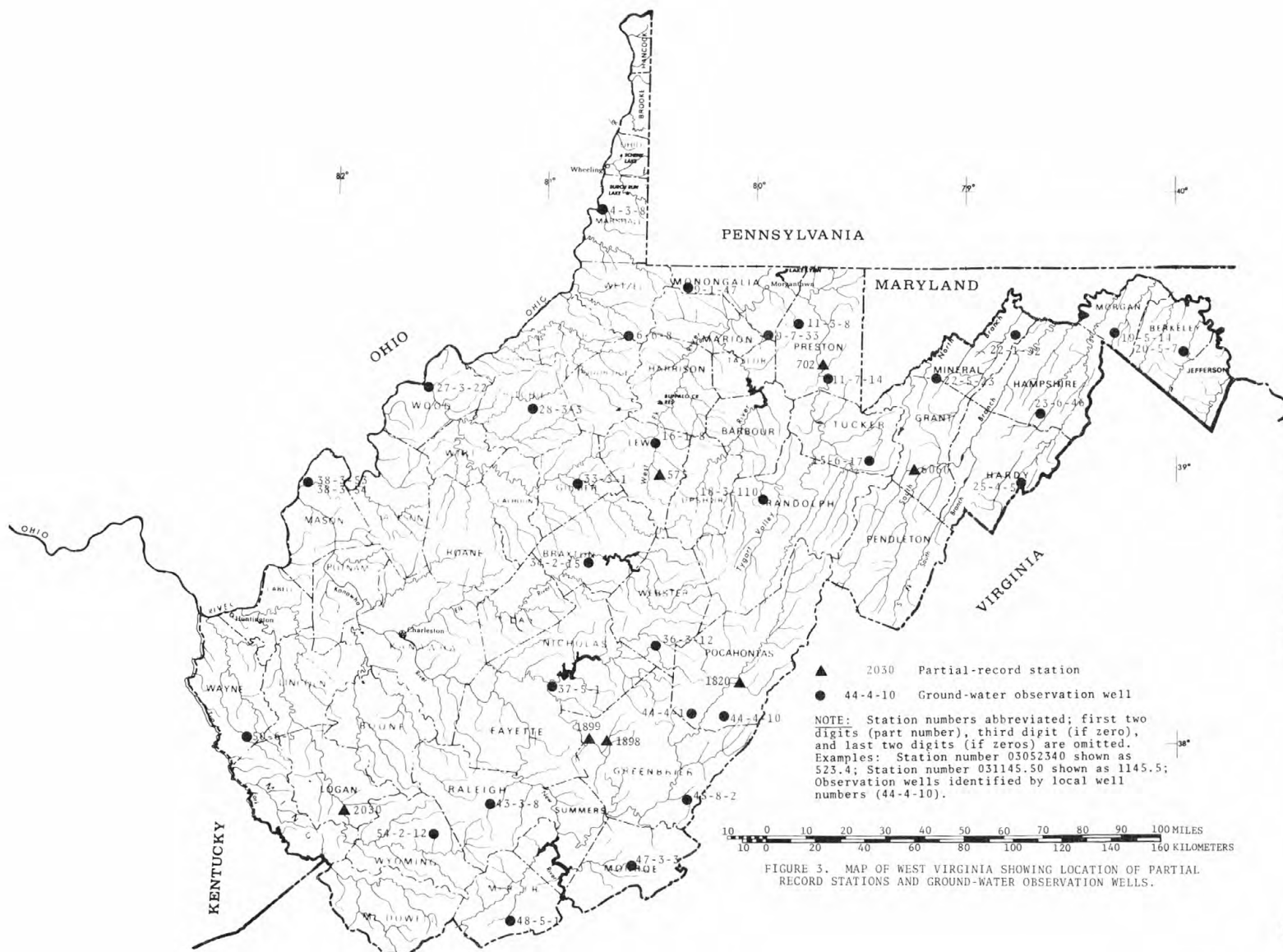


FIGURE 2. MAP OF WEST VIRGINIA SHOWING LOCATION OF STREAMFLOW, RESERVOIR, OR LAKE GAGING STATIONS, AND WATER-QUALITY STATIONS.



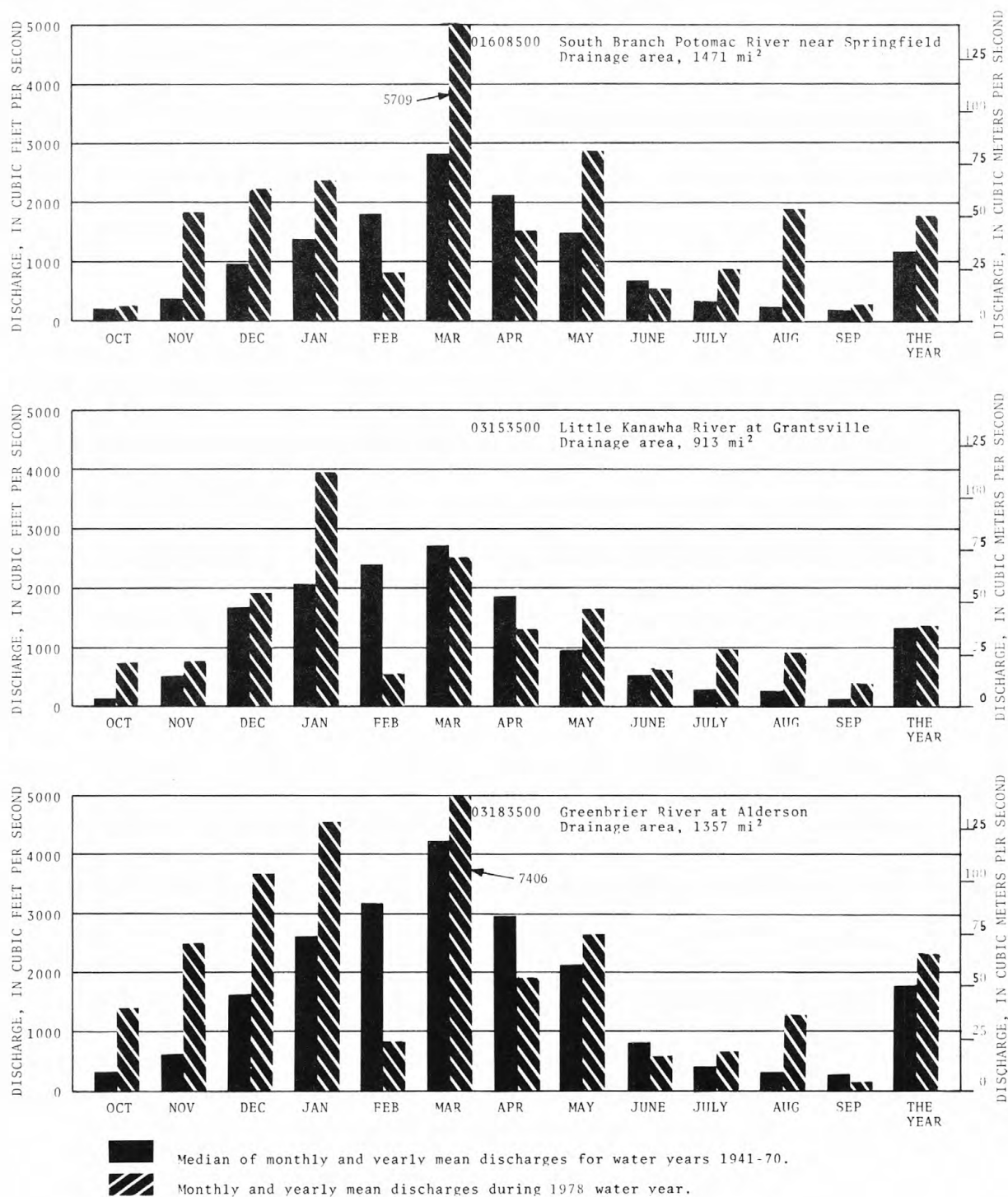


FIGURE 4.--RUNOFF DURING 1978 WATER YEAR COMPARED WITH MEDIAN RUNOFF FOR PERIOD 1941-70 FOR THREE REPRESENTATIVE GAGING STATIONS.

GAGING STATION RECORDS

17

NORTH ATLANTIC SLOPE BASINS

POTOMAC RIVER BASIN

01595000 NORTH BRANCH POTOMAC RIVER AT STEYER, MD

LOCATION.--Lat 39°18'07", long 79°18'26", Garrett County, Hydrologic Unit 02070002, on left bank 0.3 mi (0.5 km) southeast of Steyer, 0.4 mi (0.6 km) downstream from Steyer Run, 2.0 mi (3.2 km) northeast of Gorman, and at mile 81.8 (131.6 km).

DRAINAGE AREA.--73.0 mi² (189.1 km²).

PERIOD OF RECORD.--July 1956 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,276.01 ft (693.728 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those for winter periods, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--22 years, 172 ft³/s (4.871 m³/s), 32.00 in/yr (813 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,900 ft³/s (195 m³/s) July 3, 1978, gage height, 10.30 ft (3.139 m), from rating curve extended above 3,000 ft³/s (85 m³/s) on basis of slope-area measurement of peak flow; minimum, 2.9 ft³/s (0.082 m³/s) Sept. 10, 1965, gage height, 2.03 ft (0.619 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 15, 1954, reached a stage of 13.0 ft (3.96 m), from flood-marks.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,200 ft³/s (62 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)	Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)
Mar. 21	2215	2400	68.0	6.22	1.896	Aug. 6	1845	2270	64.3	6.18	1.884
July 3	1115	*6900	195	10.30	3.139						

Minimum discharge, 15 ft³/s (0.42 m³/s) Sept. 30, gage height, 2.21 ft (0.674 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	52	1160	96	120	54	522	276	100	92	196	101
2	177	53	626	88	115	52	452	255	85	239	137	64
3	93	53	413	80	110	58	345	212	110	3600	135	54
4	90	73	312	86	105	58	289	290	125	1390	181	80
5	59	120	345	105	100	56	379	586	85	569	230	56
6	62	175	362	115	92	56	278	475	78	323	684	46
7	67	472	259	130	84	60	511	409	74	219	529	39
8	68	1040	223	180	78	60	354	444	105	262	335	39
9	323	447	198	370	72	65	282	566	105	251	199	36
10	204	347	154	180	70	80	238	500	85	241	155	35
11	128	307	150	170	66	100	214	400	70	349	131	32
12	100	233	145	165	64	150	207	330	62	190	167	38
13	82	204	165	150	64	306	171	500	58	150	123	72
14	73	176	448	146	66	650	150	700	64	288	103	46
15	66	164	575	145	68	1170	138	1000	58	199	85	47
16	140	164	327	141	66	537	128	700	64	168	70	62
17	153	205	255	132	62	345	121	500	78	236	59	116
18	109	260	305	130	60	252	127	408	42	150	49	56
19	114	196	315	125	58	344	166	323	30	122	50	42
20	127	167	299	120	56	486	386	255	28	107	49	36
21	102	154	279	116	54	1160	443	217	38	101	46	35
22	92	180	218	112	52	1450	364	182	68	86	41	32
23	81	409	188	108	52	1060	302	175	56	80	39	33
24	76	297	173	105	60	1020	270	227	49	97	36	27
25	68	252	275	350	58	815	284	260	48	112	32	27
26	68	307	188	850	58	1070	531	210	60	91	35	25
27	78	236	160	510	56	935	447	190	270	75	36	23
28	76	211	150	349	54	844	343	170	600	81	35	20
29	65	229	135	250	---	857	302	150	200	71	36	18
30	59	362	120	180	---	665	286	135	113	194	36	17
31	53	---	105	140	---	518	---	125	---	419	215	---
TOTAL	3085	7545	9027	5924	2020	15333	9030	11170	3008	10552	4254	1354
MEAN	99.5	252	291	191	72.1	495	301	360	100	340	137	45.1
MAX	323	1040	1160	850	120	1450	531	1000	600	3600	684	116
MIN	32	52	105	80	52	52	121	125	28	71	32	17

*CAL YR 1977 TOTAL 55133 MEAN 151 MAX 1300 MIN 14 CFSM 2.07 IN 28.09
WTR YR 1978 TOTAL 82302 MEAN 225 MAX 3600 MIN 17 CFSM 3.08 IN 41.93

POTOMAC RIVER BASIN

01595200 STONY RIVER NEAR MT. STORM, WV

LOCATION.--Lat 39°16'10", long 79°15'45", Grant County, Hydrologic Unit 02070002, on left bank 100 ft (30 m) downstream from highway bridge on U.S. Highway 50, 1.0 mi (1.6 km) west of Mt. Storm, and at mile 6.4 (10.3 km).

DRAINAGE AREA.--48.8 mi² (126.4 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,554.54 ft (778.624 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good except those for January and February, which are poor. Flow regulated by Stony River Reservoir, 14.0 mi (22.5 km) upstream from station, capacity, 1,948,000,000 gal (7.373 hm³), of which 1,681,000,000 gal (6.363 hm³) is controlled above minimum pool. Since 1963, minor regulation by Virginia Electric and Power Company dam 4.0 mi (6.4 km) upstream from station.

AVERAGE DISCHARGE.--17 years, 97.0 ft³/s (2.747 m³/s), 26.99 in/yr (686 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,340 ft³/s (151 m³/s) July 3, 1978, from rating curve extended above 2,500 ft³/s (71 m³/s); gage height, 10.34 ft (3.152 m); minimum, 1.8 ft³/s (0.051 m³/s) July 13, 1968; minimum daily, 1.9 ft³/s (0.054 m³/s) July 13, 1968; minimum gage height, 1.81 ft (0.552 m), Sept. 30, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,340 ft³/s (151 m³/s) July 3, gage height, 10.34 ft (3.152 m), from rating curve extended above 2,500 ft³/s (71 m³/s); minimum, 3.3 ft³/s (0.093 m³/s) Sept. 30, gage height, 1.81 ft (0.552 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	14	276	32	29	34	197	60	75	89	68	14
2	17	20	113	32	26	35	262	61	49	157	49	8.4
3	13	36	82	33	25	40	276	58	57	2560	39	7.4
4	12	66	67	34	22	40	301	87	47	1540	41	7.2
5	11	103	74	34	20	40	331	164	35	458	36	5.8
6	11	174	101	38	20	41	206	131	34	81	65	5.6
7	11	712	83	43	20	40	139	120	37	85	85	5.0
8	13	2530	76	42	18	44	182	148	44	95	71	4.5
9	39	1620	71	169	17	46	203	233	47	78	50	4.0
10	22	1230	67	150	18	51	180	206	43	74	43	3.9
11	15	938	65	139	17	56	162	177	41	206	39	5.9
12	13	684	66	131	17	81	144	152	40	122	43	5.8
13	12	515	68	180	16	94	127	255	49	39	40	8.1
14	12	395	159	164	17	363	113	367	65	65	39	5.9
15	11	266	216	144	15	535	101	590	62	54	36	8.4
16	18	53	241	129	14	375	91	777	116	49	35	12
17	20	60	245	124	14	287	84	596	87	50	31	20
18	14	71	255	115	15	233	83	383	11	44	23	15
19	15	48	255	107	17	137	95	197	9.9	39	20	10
20	17	39	223	115	18	135	112	150	13	37	16	7.3
21	14	36	191	99	23	304	113	83	25	33	13	6.0
22	13	44	164	92	23	1080	99	76	43	28	13	5.2
23	12	102	141	85	24	221	91	79	55	24	10	5.6
24	12	83	131	80	28	280	84	110	63	24	9.6	5.2
25	12	63	188	152	29	565	83	167	71	25	7.8	4.8
26	14	71	139	422	29	607	172	159	75	20	6.6	4.4
27	19	56	120	734	32	920	131	150	115	17	5.8	4.0
28	21	50	112	966	33	596	87	137	197	21	5.5	3.7
29	17	52	105	56	---	462	71	126	99	15	5.5	3.6
30	15	99	39	38	---	744	57	118	94	55	5.2	3.4
31	14	---	32	33	---	194	---	105	---	162	32	---
TOTAL	469	10230	4165	4752	596	8680	4377	6222	1798.9	6346	983.0	210.1
MEAN	15.1	341	134	153	21.3	280	146	201	60.0	205	31.7	7.00
MAX	39	2530	276	966	33	1080	331	777	197	2560	85	20
MIN	10	14	32	32	14	34	57	58	9.9	15	5.2	3.4
(†)	961	1241	1258	1149	1149	1022	1403	1411	1405	1399	1411	1381

CAL YR 1977 TOTAL 33382.9 MEAN 91.5 MAX 2530 MIN 8.0 CFSM 1.88 IN 25.44
WTR YR 1978 TOTAL 48824.0 MEAN 134 MAX 2560 MIN 3.4 CFSM 2.75 IN 37.21

† Month-end contents, in millions of gallons, in Stony River Reservoir, furnished by West Virginia Pulp and Paper Co.

POTOMAC RIVER BASIN

19

01595200 STONY RIVER NEAR MOUNT STORM, WV--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: December 1961 to March 1974, September 1974 to current year.

INSTRUMENTATION.--Temperature recorder since December 1961.

REMARKS.--Temperature recorder pen did not ink Sept. 19-30.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 27°C July 1, Aug. 22, 23, 1968; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 25.0°C June 27; minimum, 0.0°C on many days during period December to March.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
(CONTINUOUS ETHYL ALCOHOL-ACTUATED THERMOGRAPH)

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

[illegible]

01595300 ABRAM CREEK AT OAKMONT, WV

LOCATION.--Lat 39°22'00", long 79°10'45", Mineral County, Hydrologic Unit 02070002, on downstream side of right wingwall of highway bridge, 0.5 mi (0.8 km) east of Oakmont, 1.2 mi (1.9 km) downstream from Emory Run, 1.8 mi (2.9 km) southwest of Elk Garden, and at mile 1.9 (3.1 km).

DRAINAGE AREA.--42.6 mi² (110.3 km²), revised.

PERIOD OF RECORD.--August 1956 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,840 ft (560.8 m), from topographic map.

REMARKS.--Records good except those for the period of no gage-height record Apr. 25 to June 7, and those for January and February, which are poor.

AVERAGE DISCHARGE.--22 years, 66.8 ft³/s (1.892 m³/s), 19.18 in/yr (487 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,310 ft³/s (65.4 m³/s) July 3, 1978, gage height, 8.17 ft (2.490 m), from rating curve extended above 1,200 ft³/s (34 m³/s) on basis of contracted-opening measurement at gage height 9.82 ft (2.993 m); minimum, 0.2 ft³/s (0.006 m³/s) Sept. 13-19, 1959, Sept. 14-18, 1964; minimum gage height, 1.48 ft (0.451 m) Sept. 16, 1959.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 18, 1955, reached a stage of 9.82 ft (2.993 m), from floodmarks, discharge, 3,830 ft³/s (108 m³/s), from rating curve extended above 1,200 ft³/s (34 m³/s) on basis of contracted-opening measurement.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft³/s (20 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 8	0045	845 23.9	5.73 1.747	Mar. 21	1915	865 24.5	5.80 1.768
Mar. 14	2130	940 26.6	5.96 1.817	July 3	1315	*2310 65.4	8.17 2.490

Minimum discharge, 2.9 ft³/s (0.082 m³/s) Oct. 1, gage height, 2.17 ft (0.661 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.8	7.3	463	45	58	28	240	73	42	34	47	20
2	21	10	227	39	52	27	213	62	47	72	28	11
3	13	21	162	35	48	27	193	52	120	1360	23	10
4	8.1	35	132	32	45	27	167	80	90	588	41	10
5	5.9	69	138	30	42	26	191	200	50	267	25	8.2
6	5.2	112	163	32	39	25	153	150	35	160	29	6.7
7	5.1	282	104	40	37	24	193	120	31	108	71	5.6
8	6.2	459	86	71	36	24	149	100	40	94	68	4.8
9	20	171	72	147	34	25	124	170	39	89	36	4.3
10	17	154	61	70	33	27	108	130	31	77	28	3.8
11	9.8	146	49	57	32	31	99	100	25	94	26	25
12	7.3	95	43	50	31	48	88	80	23	54	32	22
13	5.8	76	70	47	30	69	77	110	21	44	31	33
14	5.0	66	161	45	29	375	68	300	20	81	23	15
15	4.6	60	205	40	29	571	61	250	18	55	20	16
16	9.2	55	131	36	31	292	56	290	17	79	18	13
17	15	63	106	33	38	195	53	220	17	87	15	27
18	10	85	138	31	37	151	59	170	16	53	13	13
19	8.3	59	143	29	34	255	100	140	14	43	12	10
20	8.4	50	122	28	31	333	107	110	16	37	11	9.2
21	7.7	46	109	30	29	531	100	92	30	34	9.6	8.3
22	6.7	51	89	32	28	579	79	80	42	29	8.8	8.0
23	6.0	149	78	33	28	471	69	70	22	26	8.2	8.3
24	5.3	139	80	32	29	431	66	140	17	25	7.5	8.0
25	5.1	102	158	80	30	318	58	500	15	30	7.2	7.7
26	6.2	84	96	317	30	327	210	270	23	31	7.3	6.8
27	12	78	78	203	28	411	190	120	100	23	7.2	6.2
28	15	77	65	132	26	503	130	80	195	25	7.4	5.9
29	11	78	60	101	---	459	110	62	61	19	6.6	5.6
30	9.1	125	54	84	---	333	117	53	43	35	6.3	5.0
31	7.7	---	51	70	---	267	---	45	---	106	34	---
TOTAL	280.5	3004.3	3694	2051	974	7210	3598	4419	1260	3859	707.1	337.4
MEAN	9.05	100	119	66.2	34.8	233	120	143	42.0	124	22.8	11.2
MAX	21	459	463	317	58	579	240	500	195	1360	71	33
MIN	3.8	7.3	43	28	26	24	53	45	14	19	6.3	3.8
CFSM	.19	2.11	2.52	1.40	.74	4.93	2.54	3.02	.89	2.62	.48	.24
IN.	.22	2.36	2.91	1.61	.77	5.67	2.83	3.48	.99	3.03	.56	.27

CAL YR 1977 TOTAL 19803.3 MEAN 54.3 MAX 602 MIN 1.0 CFSM 1.15 IN 15.57
WTR YR 1978 TOTAL 31394.3 MEAN 86.0 MAX 1360 MIN 3.8 CFSM 1.82 IN 24.69

POTOMAC RIVER BASIN

01595500 NORTH BRANCH POTOMAC RIVER AT KITZMILLER, MD

LOCATION.--Lat 39°23'38", long 79°10'55", Garrett County, Hydrologic Unit 02070002, on left bank 0.6 mi (1.0 km) downstream from bridge on State Highway 38 in Kitzmiller, 1.5 mi (2.4 km) downstream from Wolfden Run, and at mile 68.9 (110.9 km).

DRAINAGE AREA.--225 mi² (583 km²).

PERIOD OF RECORD.--October 1949 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,572.26 ft (479.225 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 15, 1954, at site 0.3 mi (0.5 km) upstream at datum 7.58 ft (2.310 m) higher. Oct. 15, 1954, to Nov. 20, 1955, nonrecording gage at bridge 0.5 mi (0.8 km) upstream at datum 21.51 ft (6.556 m) higher.

REMARKS.--Records good except those for winter periods, which are fair. Regulation at low flow by Stony River Reservoir (station 01595200), 30 mi (48 km) upstream from station. Gage-height telemeter at station.

AVERAGE DISCHARGE.--29 years, 446 ft³/s (12.63 m³/s), 26.92 in/yr (684 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,400 ft³/s (946 m³/s) Oct. 15, 1954, gage height, 13.73 ft (4.185 m), from floodmarks, present site and datum; minimum, 4.6 ft³/s (0.13 m³/s) Oct. 3-7, 1953, gage height, 1.45 ft (0.442 m) site and datum then in use.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,400 ft³/s (96 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 8	0530	6000 170	7.61 2.320	Mar. 21	2145	5740 163	7.55 2.301
Jan. 26	1000	3630 103	6.82 2.079	July 3	1615	*17900 507	10.78 3.286
Mar. 14	2345	4420 125	7.13 2.173				

Minimum discharge, 33 ft³/s (0.93 m³/s) Sept. 30, gage height, 2.35 ft (0.716 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	90	2480	287	310	140	1500	382	275	301	351	187
2	244	96	1480	250	295	135	1460	345	227	474	222	99
3	176	127	984	185	280	150	1230	310	302	8310	202	80
4	144	215	781	190	258	150	1080	403	346	5040	292	95
5	108	287	761	220	255	145	1310	1140	226	2270	236	80
6	89	657	946	235	240	145	1000	899	207	1040	742	64
7	111	1090	650	245	220	150	1200	723	194	717	1040	54
8	94	4280	537	361	200	150	989	757	269	707	733	52
9	369	2540	484	979	190	155	881	1110	276	770	439	49
10	361	1980	397	490	180	185	756	911	231	572	339	46
11	211	1720	338	430	170	225	670	755	187	902	276	61
12	162	1310	324	410	165	310	626	651	166	559	298	70
13	130	965	396	405	165	410	530	1010	155	346	256	155
14	114	808	877	395	170	1570	452	1690	168	629	213	90
15	101	641	1440	385	170	3220	397	1900	154	450	184	86
16	120	386	956	352	170	1720	355	2480	169	354	160	88
17	248	393	823	335	167	1190	322	2030	209	438	144	187
18	174	603	949	320	162	925	323	1580	115	294	122	102
19	148	409	1010	309	155	1020	476	1150	80	239	114	76
20	179	342	882	290	150	1440	690	943	75	208	101	62
21	157	311	805	275	145	2740	802	715	100	202	88	60
22	135	328	664	265	140	4220	652	604	190	164	80	54
23	124	766	572	249	140	2560	547	537	161	148	75	52
24	112	698	531	245	174	2450	486	619	133	153	67	52
25	104	560	833	690	172	2260	467	718	130	182	60	48
26	99	649	589	2600	168	2380	898	579	129	155	60	43
27	120	518	488	1450	161	2710	818	516	637	122	56	41
28	139	466	442	900	150	2690	588	455	1210	126	57	39
29	120	444	398	600	---	2550	497	407	522	110	54	36
30	104	669	351	465	---	2290	422	366	358	233	54	34
31	95	---	308	390	---	1610	---	336	---	671	326	---
TOTAL	4636	24348	23476	15202	5322	41995	22424	27021	7601	26886	7441	2242
MEAN	150	812	757	490	190	1355	747	872	253	867	240	74.7
MAX	369	4280	2480	2600	310	4220	1500	2480	1210	8310	1040	187
MIN	44	90	308	185	140	135	322	310	75	110	54	34
CFSM	.67	3.61	3.36	2.18	.84	6.02	3.32	3.88	1.12	3.85	1.07	.33
IN.	.77	4.03	3.88	2.51	.88	6.94	3.71	4.47	1.26	4.45	1.23	.37
CAL YR 1977	TOTAL	144933	MEAN 397	MAX 4280	MIN 26	CFSM 1.76	IN 23.96					
WTR YR 1978	TOTAL	208594	MEAN 571	MAX 8310	MIN 34	CFSM 2.54	IN 34.49					

POTOMAC RIVER BASIN

23

01595800 NORTH BRANCH POTOMAC RIVER AT BARNUM, WV

LOCATION.--Lat 39°26'44", long 79°06'39", Garrett County, Md., Hydrologic Unit 02070002, on left bank at highway bridge at Barnum, 0.4 mi (0.6 km) upstream from Folly Run, and 4.0 mi (6.4 km) southwest of Piedmont.

DRAINAGE AREA.--266 mi² (689 km²).

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1151.82 ft (351.075 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for period of no gage-height record, Jan. 20 to Feb. 21, and those for winter periods, which are fair. Regulation at low flow by Stony River Reservoir (station 01595200), 39 mi (63 km) upstream from station.

AVERAGE DISCHARGE.--12 years, 525 ft³/s (14.87 m³/s), 26.80 in/yr (668 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,100 ft³/s (767 m³/s) July 3, 1978, gage height, 13.37 ft (4.075 m), from rating curve extended above 8,000 ft³/s (230 m³/s) on basis of slope-area measurement of peak flow; minimum, 10 ft³/s (0.28 m³/s) Oct. 2, 3, 1968, gage height, 1.69 ft (0.515 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,000 ft³/s (110 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 11	Unknown	7090 201	8.16 2.487	Mar. 27	Unknown	6960 197	8.11 2.472
Mar. 15	Unknown	Unknown	Unknown	July 3	1915	*27100 767	13.37 4.075

Minimum discharge, 43 ft³/s (1.22 m³/s) Sept. 29, gage height, 2.07 ft (0.631 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	101	2770	347	360	160	1700	430	271	300	465	269
2	238	105	1740	325	340	160	1730	390	225	378	258	133
3	209	140	1100	265	320	175	1400	370	306	10900	233	95
4	150	244	875	225	300	175	1200	450	342	5600	330	89
5	116	335	807	245	290	165	1460	1300	229	2500	240	95
6	92	803	1060	260	280	165	1140	1100	206	1150	502	75
7	108	1430	700	273	260	170	1300	880	196	780	1260	65
8	102	5060	570	360	240	170	1100	840	256	760	844	58
9	382	2740	515	1100	230	180	987	1250	272	840	448	57
10	402	2010	440	600	210	205	844	1100	231	620	337	55
11	224	1730	395	480	190	260	742	900	187	980	288	60
12	167	1270	330	460	180	350	692	760	163	620	273	65
13	138	989	395	450	180	440	590	1200	146	380	292	163
14	121	799	740	440	190	1800	505	1900	156	473	233	118
15	111	672	1710	420	195	3600	450	2200	158	498	196	91
16	124	435	1060	383	190	2000	409	2800	157	330	175	99
17	278	379	880	375	185	1400	375	2100	199	431	157	157
18	188	670	1050	363	180	1100	368	1710	132	309	138	133
19	156	459	1160	346	175	1200	552	1180	85	247	125	89
20	191	383	994	340	170	1600	740	939	76	212	115	81
21	170	347	923	325	165	3000	918	713	94	203	102	68
22	146	346	754	315	160	4600	743	456	170	178	91	54
23	134	835	644	300	160	2900	623	506	171	157	87	52
24	122	802	596	285	190	2700	553	540	135	143	79	60
25	112	627	922	1300	183	2500	515	704	127	181	72	58
26	109	711	702	2800	178	2700	943	578	128	175	68	54
27	133	579	535	1700	173	3100	929	507	683	138	66	48
28	152	522	495	1050	165	3050	670	446	1390	125	65	48
29	138	474	470	700	---	2900	550	398	572	125	63	45
30	117	694	410	540	---	2710	480	345	365	172	61	44
31	106	---	374	450	---	1920	---	320	---	639	262	---
TOTAL	4987	26691	26116	17822	6039	47555	25208	29312	7828	30544	7925	2578
MEAN	161	890	842	575	216	1534	840	946	261	985	256	85.9
MAX	402	5060	2770	2800	360	4600	1730	2800	1390	10900	1260	269
MIN	51	101	330	225	160	160	368	320	76	125	61	44
CFSM	.61	3.35	3.17	2.16	.81	5.77	3.16	3.56	.98	3.70	.96	.32
IN.	.70	3.73	3.65	2.49	.84	6.65	3.53	4.10	1.09	4.27	1.11	.36

CAL YR 1977	TOTAL	160974	MEAN 441	MAX 5060	MIN 30	CFSM 1.66	IN 22.51
WTR YR 1978	TOTAL	232605	MEAN 637	MAX 10900	MIN 44	CFSM 2.40	IN 32.53

POTOMAC RIVER BASIN

01598500 NORTH BRANCH POTOMAC RIVER AT LUKE, MD

LOCATION.--Lat 39°28'45", long 79°03'55", Mineral County, W. Va., Hydrologic Unit 02070002, on right bank 0.2 mi (0.3 km) downstream from Savage River, 0.5 mi (0.8 km) northwest of Luke, and at mile 53.3 (85.8 km).

DRAINAGE AREA.--404 mi² (1,046 km²).

PERIOD OF RECORD.--June 1899 to July 1906 (published as "at Piedmont, W. Va."), October 1949 to current year.

REVISED RECORDS.--WSP 192: 1899-1904. WSP 1432: 1905-6, drainage area at former site.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 944.22 ft (287.798 m) National Geodetic Vertical Datum of 1929. June 27, 1899, to July 15, 1906, nonrecording gage at bridge 1.1 mi (1.8 km) downstream at datum about 35 ft (11 m) lower.

REMARKS.--Records good except those for winter periods, which are fair to poor. Flow regulated since 1913 by Stony River Reservoir (station 01595200), 45 mi (72 km) upstream from station, and since December 1950, by Savage River Reservoir (station 01597500), 5 mi (8 km) upstream from station. Some regulation at low flow by West Virginia Pulp and Paper Company at site used 1899-1906.

AVERAGE DISCHARGE.--35 years (water years 1900-05, 1950-78), 704 ft³/s (19.94 m³/s), 23.66 in/yr (601 mm/yr), adjusted for storage since October 1949.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 39,400 ft³/s (1,120 m³/s) Oct. 15, 1954, gage height, 17.15 ft (5.227 m); minimum daily, 6 ft³/s (0.17 m³/s) Sept. 4, 1904.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 28,200 ft³/s (799 m³/s) July 3, gage height, 14.87 ft (4.532 m); minimum, 93 ft³/s (2.63 m³/s) Aug. 25, gage height, 1.22 ft (0.372 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	119	195	3120	480	630	240	2790	561	494	404	721	438
2	277	204	2990	449	532	235	2840	498	406	446	390	280
3	297	239	2410	614	492	240	2220	457	440	10600	350	227
4	218	341	2110	501	455	250	1690	478	592	7890	488	222
5	190	411	1730	368	425	240	2080	1600	421	3640	407	230
6	161	970	1700	385	400	235	1930	1590	353	1620	577	204
7	174	1600	978	391	380	235	1990	1310	335	935	1680	189
8	178	5630	1050	456	350	235	1610	1220	405	861	1480	180
9	430	3640	1060	1240	320	240	1470	1850	440	1120	892	177
10	517	2880	585	810	300	250	1240	1670	380	1080	653	174
11	304	2540	505	957	285	290	992	1370	308	1550	565	150
12	234	1840	450	810	265	400	924	1150	269	1030	479	138
13	210	1180	575	651	265	570	805	1420	251	623	664	264
14	188	1220	1110	636	295	1760	670	3290	231	692	527	262
15	176	1050	2480	574	300	4740	570	3280	233	770	406	201
16	184	603	1760	540	280	3950	521	4530	212	515	325	182
17	347	521	1580	580	265	3040	475	4250	276	687	278	230
18	259	825	1720	520	260	1710	456	3310	220	513	236	234
19	223	608	2010	470	250	1520	666	2410	141	393	198	169
20	255	521	1680	400	245	2120	836	1870	126	329	176	149
21	237	477	1600	390	235	3510	1060	1440	147	310	149	137
22	212	479	1170	380	230	6460	873	1010	299	276	130	126
23	199	1170	1060	370	230	5480	737	937	305	239	120	120
24	186	1210	1080	350	255	4620	660	965	216	220	117	127
25	175	786	1370	900	290	4040	609	1120	190	272	184	125
26	176	864	1200	3300	270	4080	995	935	183	260	579	118
27	211	731	850	2600	260	4190	1120	826	776	211	484	110
28	253	664	880	1700	250	4060	843	729	1500	193	109	135
29	237	614	869	1140	---	3840	722	651	792	185	113	157
30	216	813	562	952	---	3710	631	601	498	200	113	156
31	202	---	516	794	---	3320	---	572	---	648	357	---
TOTAL	7245	34826	42760	24710	9014	69810	35025	47900	11439	38712	13947	5611
MEAN	234	1161	1379	797	322	2252	1168	1545	381	1249	450	187
MAX	517	5630	3120	3300	630	6460	2840	4530	1500	10600	1680	438
MIN	119	195	450	350	230	235	456	457	126	185	109	110
CFSM	.58	2.87	3.41	1.97	.80	5.57	2.89	3.82	.94	3.09	1.11	.46
IN.	.67	3.21	3.94	2.28	.83	6.43	3.23	4.41	1.05	3.56	1.28	.52

CAL YR 1977 TOTAL 230995 MEAN 633 MAX 5630 MIN 92 CFSM 1.57 IN 21.27
WTR YR 1978 TOTAL 340999 MEAN 934 MAX 10600 MIN 109 CFSM 2.31 IN 31.40

POTOMAC RIVER BASIN

25

01600000 NORTH BRANCH POTOMAC RIVER AT PINTO, MD

LOCATION.--Lat 39°33'59", long 78°50'25", Mineral County, W. Va., Hydrologic Unit 02070002, on right bank at downstream side of Western Maryland Railway bridge at Pinto, 2.8 mi (4.5 km) downstream from Mill Run, and at mile 32.6 (52.5 km).

DRAINAGE AREA.--596 mi² (1,544 km²).

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

REVISED RECORDS.--WSP 1332: 1943

GAGE.--Water-stage recorder. Datum of gage is 648.23 ft (197.581 m) National Geodetic Vertical Datum of 1929. Prior to Dec. 10, 1938, nonrecording gage at highway bridge 250 ft (76 m) downstream at same datum.

REMARKS.--Records good except those for winter periods, which are fair. Some regulation at low flow by Stony River Reservoir (station 01595200), 66 mi (106 km) upstream from station, and since December 1950, by Savage River Reservoir (station 01597500) 25 mi (40 km) upstream from station.

AVERAGE DISCHARGE.--40 years, 880 ft³/s (24.92 m³/s), 20.05 in/yr (509 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,000 ft³/s (1,050 m³/s) Oct. 16, 1954, gage height, 23.23 ft (7.081 m); minimum, 31 ft³/s (0.88 m³/s) Dec. 18, 19, 1943, gage height, 1.37 ft (0.418 m), result of freezeup.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 29, 1924, reached a stage of about 24 ft (7.3 m), discharge, about 55,000 ft³/s (1,560 m³/s). Flood of Mar. 17, 1936, reached a stage of about 23.5 ft (7.16 m), from floodmarks, discharge, about 50,000 ft³/s (1,420 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 24,700 ft³/s (700 m³/s) July 4, gage height, 19.36 ft (5.901 m); minimum, 124 ft³/s (3.51 m³/s) Sept. 29, gage height, 1.87 ft (0.570 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	134	205	3360	620	930	280	3300	715	631	438	960	600
2	152	213	3800	582	790	283	3440	613	525	393	457	378
3	376	236	2820	571	660	300	2880	565	538	8270	375	282
4	232	319	2410	716	550	308	2210	557	718	10700	492	265
5	210	419	2100	421	500	284	2540	1710	558	3810	765	261
6	179	1100	2160	460	460	282	2470	2090	452	1840	718	241
7	165	1560	1330	453	440	280	2520	1740	414	1190	2160	224
8	196	6110	1150	484	410	280	2160	1560	478	964	1770	210
9	298	3960	1370	1350	380	285	1920	2290	521	1170	1110	202
10	650	2910	786	960	360	296	1710	2260	459	1380	844	197
11	357	2710	620	860	335	356	1380	1850	379	1730	734	193
12	266	2070	535	960	316	525	1260	1550	329	1260	601	162
13	220	1350	645	760	318	930	1100	1750	300	846	819	229
14	204	1240	884	740	344	2410	952	5000	282	658	661	322
15	188	1270	2690	680	354	7620	790	4420	277	971	499	279
16	193	756	2070	640	336	5610	712	6620	256	640	402	220
17	289	574	1830	680	329	4230	651	6360	281	741	334	208
18	298	845	1950	600	326	2560	609	4540	296	648	283	292
19	240	706	2410	540	302	2250	944	3420	209	468	247	217
20	235	574	2070	470	278	3380	1060	2600	174	383	222	179
21	253	511	1980	450	275	4100	1310	2030	171	337	198	167
22	224	492	1630	430	270	8270	1150	1550	250	315	171	160
23	209	1050	1220	420	267	7230	982	1280	368	272	162	145
24	198	1480	1420	400	295	5830	891	1320	262	256	151	147
25	188	946	1480	800	302	4910	802	1430	222	270	178	151
26	193	964	1690	4000	322	5320	541	1210	210	312	459	145
27	218	873	1110	3200	306	5690	1440	1040	589	262	576	136
28	259	770	990	2200	286	5840	1060	931	1450	225	261	131
29	255	714	1180	1700	---	5260	895	833	1080	215	150	163
30	231	899	767	1400	---	4640	791	748	580	196	145	169
31	213	---	666	1100	---	4290	---	719	---	540	415	---
TOTAL	7523	37826	51123	29647	11041	94129	44870	65301	13259	41700	17319	6675
MEAN	243	1261	1649	956	394	3036	1496	2106	442	1345	559	223
MAX	650	6110	3800	4000	930	8270	3440	6620	1450	10700	2160	600
MIN	134	205	535	400	267	280	609	557	171	196	145	131
CFSM	.41	2.12	2.77	1.60	.66	5.09	2.51	3.53	.74	2.26	.94	.37
IN.	.47	2.36	3.19	1.85	.69	5.88	2.80	4.08	.83	2.60	1.08	.42

CAL YR 1977 TOTAL 279930 MEAN 767 MAX 6280 MIN 97 CFSM 1.29 IN 17.47
WTR YR 1978 TOTAL 420413 MEAN 1152 MAX 10700 MIN 131 CFSM 1.93 IN 26.24

01603000 NORTH BRANCH POTOMAC RIVER NEAR CUMBERLAND, MD

LOCATION.--Lat 39°37'16", long 78°46'24", Allegany County, Hydrologic Unit 02070002, on left bank at downstream side of Wiley Ford Bridge, 2.0 mi (3.2 km) south of Cumberland, 2.1 mi (3.4 km) downstream from Wills Creek, and at mile 19.6 (31.5 km).

DRAINAGE AREA.-- 875 mi² (2,266 km²).

PERIOD OF RECORD.--May 1929 to current year. Gage-height records collected at various sites about 2.0 mi (3.2 km) upstream from September 1901 to December 1932 and thereafter at present site, are contained in reports of National Weather Service.

REVISED RECORDS.--WSP 726: Drainage area. WSP 781: 1932(M).

GAGE.--Water-stage recorder. Datum of gage is 585.22 ft (178.375 m) National Geodetic Vertical Datum of 1929. Prior to June 18, 1929, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter periods, which are fair. Regulation by Stony River Reservoir (station 01595200), 79 mi (127 km) upstream from station, and since December 1950, by Savage River Reservoir (station 01597500) 39 mi (63 km) upstream from station. Prior to July 1957, small amount of inflow from industrial wastes and sewage from city of Cumberland from water diverted from Evitts Creek, mouth of which is downstream from station. Diversion to Chesapeake and Ohio Canal prior to 1935. Gage-height telemeter at station.

AVERAGE DISCHARGE.--49 years, 1,246 ft³/s (35.29 m³/s), 19.34 in/yr (491 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 88,200 ft³/s (2,500 m³/s) Mar. 17, 1936, gage height, 29.1 ft (8.87 m), from rating curve extended above 33,000 ft³/s (930 m³/s) on basis of slope-area measurement of peak flow; minimum (river only), 12 ft³/s (0.34 m³/s) Sept. 22, 1932, gage height, 2.38 ft (0.725 m); minimum daily (including flow in canal), 38 ft³/s (1.08 m³/s) Sept. 24, 1932.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1, 1899, reached a stage of 29.2 ft (8.90 m), discharge, about 89,000 ft³/s (2,520 m³/s). Flood of Mar. 29, 1924, reached a stage of 28.4 ft (8.66 m), discharge, about 82,000 ft³/s (2,320 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 10,000 ft³/s (280 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)
Mar. 15	1000	12600	357	11.65	3.551	May 16	2030	14000	396	12.50	3.810
Mar. 22	1000	13600	385	12.28	3.743	July 4	0515	*23500	666	17.85	5.441
May 14	1000	11100	314	10.68	3.255						

Minimum discharge, 147 ft³/s (4.16 m³/s) Sept. 28, 39; minimum daily, 154 ft³/s (4.36 m³/s) Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	191	291	4660	967	1290	420	4590	1040	1010	594	1220	970
2	208	303	6250	897	1140	420	5210	925	871	564	670	642
3	408	347	4370	760	1080	470	4480	856	856	5110	512	472
4	316	488	3500	989	900	470	3590	837	1020	15100	700	416
5	260	689	3000	660	790	438	4120	2000	878	5240	1260	387
6	230	1440	2950	719	700	425	4110	2900	722	2590	1080	357
7	208	2320	1980	688	660	443	4150	2480	664	1710	2560	325
8	254	7280	1480	739	630	436	3710	2200	726	1230	2250	297
9	442	5740	1780	2280	600	426	3180	3030	771	1410	1450	277
10	917	4050	1130	1550	550	447	2760	3330	693	1910	1070	264
11	575	3900	880	1400	530	548	2250	2810	590	2850	975	256
12	413	3060	830	1650	500	813	1980	2350	515	1970	814	287
13	322	2020	907	1300	480	1410	1700	2610	472	1310	1020	318
14	291	1620	1060	1200	490	3340	1470	9240	444	1000	933	433
15	254	1740	3420	1130	500	11100	1230	7780	422	1250	713	430
16	278	1110	3190	971	500	9010	1110	11500	398	942	583	351
17	400	868	2740	1010	480	6600	1030	11300	400	963	491	304
18	472	1060	3100	901	480	4550	1010	7950	453	920	416	358
19	373	1020	3930	800	450	3450	1580	5900	362	685	364	319
20	334	839	3510	696	428	5450	1670	4360	303	576	325	270
21	360	758	3120	680	420	6310	1930	3380	299	505	288	234
22	316	719	2610	660	405	11800	1800	2610	324	475	247	215
23	284	1050	1820	620	400	11000	1560	2020	507	418	228	195
24	260	1870	2010	600	446	8750	1420	2150	400	428	206	182
25	242	1220	2170	863	460	7210	1290	2320	329	429	243	187
26	266	1160	2610	4760	480	7560	1280	2040	315	465	282	179
27	373	1140	1730	6180	440	8550	1890	1730	536	406	730	166
28	393	998	1540	4930	420	9110	1500	1520	1580	349	616	154
29	393	937	1700	2990	---	8760	1270	1350	1510	317	242	170
30	354	1070	1250	1900	---	7490	1140	1210	783	299	209	203
31	316	---	1060	1540	---	6470	---	1130	---	586	991	---
TOTAL	10703	51107	76287	47030	16649	143676	70410	106858	19153	52601	23688	9618
MEAN	345	1704	2461	1517	595	4635	2347	3447	638	1697	764	321
MAX	917	7280	6250	6180	1290	11800	5210	11500	1580	15100	2560	970
MIN	191	291	830	600	400	420	1010	837	299	299	206	154
CFSM	.39	1.95	2.81	1.73	.68	5.30	2.68	3.94	.73	1.94	.87	.37
IN.	.46	2.17	3.24	2.00	.71	6.11	2.99	4.54	.81	2.24	1.01	.41

CAL YR 1977 TOTAL 423397 MEAN 1160 MAX 9030 MIN 129 CFSM 1.33 IN 18.00
WTR YR 1978 TOTAL 627780 MEAN 1720 MAX 15100 MIN 154 CFSM 1.97 IN 26.69

POTOMAC RIVER BASIN

27

01604500 PATTERSON CREEK NEAR HEADSVILLE, WV

LOCATION.--Lat 39°26'35", long 78°49'20", Mineral County, Hydrologic Unit 02070002, on right bank 100 ft (30 m) downstream from Hazel Run, 1.0 mi (1.6 km) downstream from Cabin Run, 4.0 mi (6.4 km) northeast of Headsville, 8.0 mi (12.9 km) east of Keyser, and at mile 12.5 (20.1 km).

DRAINAGE AREA.--219 mi² (567 km²).

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

REVISED RECORDS.--WSP 951: 1939-40.

GAGE.--Water-stage recorder. Datum of gage is 624.90 ft (190.470 m) Corps of Engineers datum. Prior to Oct. 11, 1946, nonrecording gage on bridge 1.0 mi (1.6 km) upstream at datum 6.14 ft (1.871 m) higher. Oct. 11-23, 1946, nonrecording gage at present site and datum.

REMARKS.--Records good except those for January and February, which are poor. The flow from 111 mi² (287 km²) upstream from station is partially controlled, but not diverted, by several floodwater detention reservoirs with a total combined detention capacity of 19,080 acre-ft (23.5 hm³).

AVERAGE DISCHARGE.--40 years, 165 ft³/s (4.673 m³/s), 10.23 in/yr (260 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,000 ft³/s (453 m³/s) Aug. 18, 1955, gage height, 12.20 ft (3.719 m), from rating curve extended above 4,900 ft³/s (140 m³/s) on basis of contracted-opening measurement at gage height 11.53 ft (3.514 m); minimum, 1.2 ft³/s (0.034 m³/s) Sept. 10-12, 1965; minimum gage height, 2.02 ft (0.616 m) Oct. 2, 1953.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,010 ft³/s (114 m³/s) Mar. 15, gage height, 9.89 ft (3.014 m); minimum, 6.8 ft³/s (0.193 m³/s) Oct. 1, gage height 2.50 ft (0.762 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.4	15	1100	89	210	185	582	94	88	27	171	63
2	11	15	616	83	190	159	503	89	79	28	129	51
3	13	16	452	73	170	140	463	84	78	748	92	41
4	9.2	18	360	64	150	120	412	88	79	1440	185	35
5	8.2	21	378	60	140	115	378	312	73	829	128	32
6	7.6	59	491	61	135	110	326	356	65	533	470	29
7	7.1	106	359	61	130	110	321	291	64	439	630	28
8	8.3	616	265	64	125	110	282	282	68	383	653	26
9	17	361	219	166	120	108	242	389	60	338	424	24
10	16	265	182	190	115	109	210	345	50	286	314	23
11	14	222	150	242	110	124	187	283	44	244	242	22
12	12	176	120	203	105	420	164	238	40	193	551	24
13	10	140	96	153	100	755	143	519	37	158	428	33
14	9.3	112	89	141	95	1990	125	1640	32	135	318	31
15	8.7	90	101	134	91	3530	111	972	30	120	258	30
16	10	76	106	101	90	2130	102	1720	29	95	220	29
17	12	66	101	95	117	1190	95	1690	29	101	176	28
18	11	58	128	85	120	918	94	1200	28	91	144	32
19	10	54	263	78	110	1240	112	887	27	70	122	29
20	9.7	51	295	69	97	1430	118	710	26	55	101	26
21	9.3	48	341	74	86	1070	113	599	27	45	84	25
22	8.9	47	323	87	79	927	107	499	34	39	69	24
23	8.5	113	255	83	74	742	100	427	29	35	58	23
24	9.6	200	216	79	78	617	95	391	27	31	48	23
25	11	172	219	86	100	570	93	322	25	32	41	22
26	14	159	190	1460	162	1820	98	256	25	91	35	20
27	25	132	160	1340	176	2000	105	207	28	56	33	19
28	25	116	140	800	178	1530	107	170	33	48	36	18
29	22	114	120	420	---	980	104	140	31	41	36	17
30	19	236	105	300	---	749	100	117	29	36	32	16
31	17	---	96	240	---	651	---	101	---	140	52	---
TOTAL	380.8	3874	8036	7181	3453	26649	5992	15418	1314	6907	6280	843
MEAN	12.3	129	259	232	123	860	200	497	43.8	223	203	28.1
MAX	25	616	1100	1460	210	3530	582	1720	88	1440	653	63
MIN	7.1	15	89	60	74	108	93	84	25	27	32	16
CFSM	.06	.59	1.18	1.06	.56	3.93	.91	2.27	.20	1.02	.93	.13
IN.	.06	.66	1.37	1.22	.59	4.53	1.02	2.62	.22	1.17	1.07	.14

CAL YR 1977 TOTAL 42690.2 MEAN 117 MAX 2020 MIN 4.8 CFSM .53 IN 7.25
WTR YR 1978 TOTAL 86327.8 MEAN 237 MAX 3530 MIN 7.1 CFSM 1.08 IN 14.66

POTOMAC RIVER BASIN

01605500 SOUTH BRANCH POTOMAC RIVER AT FRANKLIN, WV

LOCATION.--Lat 38°38'14", long 79°20'14", Pendleton County, Hydrologic Unit 02070001, on left bank 0.5 mi (0.8 km) southwest of Franklin, 2 mi (3.2 km) upstream from Friends Run, 2.5 mi (4.0 km) downstream from Thorn Creek, and at mile 109.5 (176.2 km).

DRAINAGE AREA.--182 mi² (471 km²).

PERIOD OF RECORD.--April 1940 to September 1969, October 1976 to current year.

GAGE.--Water-stage recorder and improved natural control. Datum of gage is 1,692.5 ft (515.874 m) National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

REMARKS.--Records good except those for January and February and those for period of no gage-height record, July 6 to Sept. 30, which are poor.

AVERAGE DISCHARGE.--31 years, 162 ft³/s (4.588 m³/s), 12.09 in/yr (307 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,000 ft³/s (425 m³/s) June 17, 1949, gage height, 11.40 ft (3.475 m), from floodmarks, from rating curve extended above 6,400 ft³/s (180 m³/s) on basis of slope-area measurement of peak flow; minimum, 13 ft³/s (0.37) Jan. 17, 1966; minimum gage height, 1.31 ft (0.399 m) Sept. 25-29, 1959.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 1936, reached a stage of about 13 ft (4.0 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,700 ft³/s (48 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 1	0400	1790 50.7	4.42 1.347	Mar. 14	1730	6430 182	7.28 2.219
Jan. 9	0315	1930 54.7	4.53 1.381	Mar. 26	1130	5380 152	6.71 2.045
Jan. 26	0700	*10100 286	9.15 2.789				

Minimum daily discharge, 27 ft³/s (0.765 m³/s) Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	53	1170	122	210	87	455	208	284	60	150	99
2	59	51	567	115	180	79	387	185	214	64	110	80
3	42	55	370	90	160	81	335	167	185	132	94	61
4	36	64	282	74	140	76	299	154	176	128	260	52
5	34	94	235	80	130	70	285	172	152	104	350	48
6	32	199	338	88	120	71	260	156	136	89	300	45
7	32	392	265	96	110	70	240	138	125	85	950	43
8	33	325	207	123	100	72	207	131	124	81	500	40
9	59	211	170	1050	100	71	191	158	137	155	330	38
10	76	169	147	407	98	118	180	155	121	140	250	39
11	55	167	129	297	94	135	175	149	103	130	210	40
12	47	139	118	235	92	272	169	142	95	120	200	37
13	41	122	115	204	91	458	156	138	94	100	300	36
14	40	107	132	183	89	2900	145	411	88	97	590	35
15	38	97	226	159	84	2300	135	648	81	120	410	35
16	39	90	184	135	82	1230	129	527	78	150	290	37
17	43	81	171	120	81	723	123	623	77	130	210	41
18	39	75	307	110	83	502	120	619	72	110	160	39
19	37	68	349	93	81	551	126	500	69	91	130	37
20	36	63	308	79	78	631	130	416	65	82	110	34
21	34	58	272	85	77	672	120	341	76	75	98	33
22	33	64	222	103	72	748	113	293	91	68	86	32
23	32	176	184	100	67	577	102	259	76	64	78	31
24	32	193	168	93	68	502	99	235	65	62	70	31
25	32	174	256	100	72	571	97	236	63	90	65	31
26	85	171	221	5090	96	3250	121	194	59	110	62	30
27	153	143	177	2500	85	2500	324	166	71	81	60	29
28	103	130	157	1000	87	1900	279	147	109	110	66	29
29	80	140	142	435	---	1100	246	139	86	95	61	28
30	67	272	133	324	---	750	226	188	70	85	58	27
31	58	---	126	257	---	549	---	433	---	190	71	---
TOTAL	1561	4143	7848	13947	2827	23616	5974	8428	3244	3198	6679	1217
MEAN	50.4	138	253	450	101	762	199	272	108	103	215	40.6
MAX	153	392	1170	5090	210	3250	455	648	284	190	950	99
MIN	32	51	115	74	67	70	97	131	59	60	58	27
CFSM	.28	.76	1.39	2.47	.56	4.19	1.09	1.50	.59	.57	1.18	.22
IN.	.32	.85	1.60	2.85	.58	4.83	1.22	1.72	.66	.65	1.37	.25
CAL YR 1977	TOTAL	47694	MEAN 131	MAX 3760	MIN 22	CFSM .72	IN 9.75					
WTR YR 1978	TOTAL	82682	MEAN 227	MAX 5090	MIN 27	CFSM 1.25	IN 16.90					

01606500 SOUTH BRANCH POTOMAC RIVER NEAR PETERSBURG, WV

LOCATION.--Lat 38°59'34", long 79°10'26", Grant County, Hydrologic Unit 02070001, on right bank 1.2 mi (1.9 km) downstream from North Fork South Branch Potomac River, 2.5 mi (4.0 km) west of Petersburg, and at mile 72.6 (116.8 km).

DRAINAGE AREA.--642 mi² (1,663 km²).

PERIOD OF RECORD.--June 1928 to current year.

REVISED RECORDS.--WSP 951: 1939-41. WSP 1141: 1932, 1933(M), 1936-38.

GAGE.--Water-stage recorder. Datum of gage is 962.00 ft (293.218 m) National Geodetic Vertical Datum, adjustment of 1912. Prior to Dec. 4, 1928, nonrecording gage at same site and datum.

REMARKS.--Records good except those for January and February, which are poor. National Weather Service gage-height telemeter at station.

AVERAGE DISCHARGE.--50 years, 703 ft³/s (19.91 m³/s), 14.87 in/yr (378 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 62,000 ft³/s (1,760 m³/s) June 17, 1949, gage height, 22.83 ft (6.959 m), from rating curve extended above 17,000 ft³/s (480 m³/s) on basis of slope-area measurement of peak flow; minimum, 42 ft³/s (1.19 m³/s) Sept. 28, 29, 1959, Sept. 11-12, 1966; minimum gage height, 0.94 ft (0.287 m) Sept. 28, 29, 1959.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1877 reached a stage of 21.2 ft (6.46 m), from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,000 ft³/s (170 m³/s) and maximum (*).

Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)
Nov. 7	2300	6570	186	7.46	2.273	Mar. 14	2330	17000	481	12.00	3.658
Dec. 1	1045	6930	196	7.66	2.335	Mar. 26	1800	12100	343	10.03	3.057
Jan. 26	1300	*23600	668	13.93	4.246						

Minimum discharge, 88 ft³/s (2.49 m³/s) Sept. 30, gage height, 1.25 ft (0.381 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	103	201	5340	510	960	368	1950	988	722	201	527	265
2	110	189	3330	483	890	336	1790	841	578	189	372	237
3	168	198	1970	386	771	327	1480	715	516	1830	301	192
4	135	309	1400	336	650	309	1270	668	516	2250	650	171
5	118	428	1190	310	614	281	1240	771	433	1110	1050	157
6	110	1040	1580	359	540	277	1090	722	386	736	960	146
7	106	2510	1330	354	460	281	1090	644	363	527	2920	138
8	106	3530	1060	377	430	277	1020	668	350	411	1720	130
9	126	1620	932	2610	440	273	918	848	381	680	1120	121
10	247	1110	736	1690	450	318	841	862	390	620	827	123
11	230	967	590	1260	430	450	785	813	318	510	650	126
12	183	778	543	1040	410	939	736	750	285	433	626	116
13	160	644	554	932	390	1710	650	932	265	354	674	116
14	143	543	578	820	370	6960	584	3360	254	345	2440	116
15	130	477	1270	687	345	10500	521	3030	233	488	1400	116
16	130	444	1200	566	336	5780	488	3190	224	477	953	118
17	138	422	1010	510	327	3390	455	3520	217	450	701	128
18	148	422	1060	420	341	2270	439	2720	208	372	543	126
19	135	377	1410	370	332	1940	466	2100	195	305	444	116
20	146	341	1340	320	309	2850	477	1620	198	261	372	108
21	157	309	1240	350	300	3320	494	1340	240	237	318	105
22	146	309	1060	410	290	4370	461	1110	244	217	281	103
23	138	1000	890	400	270	3200	428	988	217	204	251	101
24	130	1360	785	370	280	2890	411	1190	186	195	230	103
25	126	1090	855	400	301	2480	411	1160	174	240	214	103
26	135	1010	840	13300	400	7320	736	918	168	336	201	99
27	341	855	740	6210	406	8200	1410	771	261	254	195	97
28	372	729	680	3240	372	6530	1400	674	381	323	211	95
29	301	694	650	2170	---	4280	1310	608	297	327	192	91
30	254	1370	610	1570	---	3150	1140	560	230	258	174	89
31	220	---	566	1160	7--	2370	---	771	---	549	208	---
TOTAL	5192	25276	37339	44120	12414	87946	26491	39852	9430	15689	21725	3852
MEAN	167	843	1204	1423	443	2837	883	1286	314	506	701	128
MAX	372	3530	5340	13300	960	10500	1950	3520	722	2250	2920	265
MIN	103	189	543	310	270	273	411	560	168	189	174	89
CFSM	.26	1.31	1.88	2.22	.69	4.42	1.38	2.00	.49	.79	1.09	.20
IN.	.30	1.46	2.16	2.56	.72	5.10	1.53	2.31	.55	.91	1.26	.22

CAL YR 1977 TOTAL 207290 MEAN 568 MAX 11500 MIN 64 CFSM .89 IN 12.01
WTR YR 1978 TOTAL 329326 MEAN 902 MAX 13300 MIN 89 CFSM 1.41 IN 19.08

POTOMAC RIVER BASIN

01607500 SOUTH FORK SOUTH BRANCH POTOMAC RIVER AT BRANDYWINE, WV

LOCATION.--Lat 38°37'53", long 79°14'38", Pendleton County, Hydrologic Unit 02070001, on left bank 50 ft (15 m) upstream from bridge on U.S. Highway 33, 0.1 mi (0.2 km) upstream from Hawes Run, 0.4 mi (0.6 km) north of Brandywine, 0.9 mi (1.4 km) downstream from Broad Run, and at mile 42.9 (69.0 km).

DRAINAGE AREA.--102 mi² (264 km²).

PERIOD OF RECORD.--August 1943 to current year.

REVISED RECORDS.--WSP 1141: 1945(M), 1947(M).

GAGE.--Water-stage recorder. Datum of gage is 1,558.35 ft (474.985 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 24, 1956, nonrecording gage at highway bridge 50 ft (15 m) downstream at same datum.

REMARKS.--Records good except those for January and February, which are poor. The flow from 41.3 mi² (107.0 km²) upstream from station is partially controlled, but not diverted, by several floodwater detention reservoirs with a total combined detention capacity of 8,882 acre-ft (11.0 hm³).

AVERAGE DISCHARGE.--35 years, 99.0 ft³/s (2.804 m³/s), 13.18 in/yr (335 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,200 ft³/s (1,170 m³/s) June 17, 1949, gage height, 14.6 ft (4.45 m), from floodmarks, from rating curve extended above 5,300 ft³/s (150 m³/s) on basis of slope-area measurement of peak flow; minimum, 0.3 ft³/s (0.008 m³/s) Dec. 1, 10, 1958, result of freezeup; minimum gage height observed, 0.95 ft (0.290 m) Aug. 10, 14, 15, 1950.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,150 ft³/s (174 m³/s) Jan. 26, gage height, 8.54 ft (2.603 m); minimum, 5.6 ft³/s (0.159 m³/s) Sept. 29, 30, gage height, 1.86 ft (0.567 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	41	655	60	98	66	182	128	112	17	55	58
2	15	35	433	54	86	52	147	104	88	19	58	33
3	13	96	247	36	67	53	121	86	75	39	41	23
4	12	381	165	31	56	48	106	81	70	41	75	20
5	11	650	138	39	54	39	98	86	59	30	114	16
6	10	914	142	38	51	38	86	78	52	23	104	15
7	10	1210	118	38	46	41	81	75	48	21	237	14
8	11	962	98	45	52	38	72	80	46	45	157	12
9	13	557	92	472	50	39	66	80	50	162	114	11
10	18	218	74	361	43	64	61	77	42	92	96	10
11	15	147	50	203	36	90	59	73	35	67	194	9.4
12	13	110	49	148	39	244	58	68	31	48	521	8.9
13	12	90	56	125	41	425	53	204	33	36	293	8.9
14	12	75	56	106	43	1580	48	890	30	36	630	8.9
15	12	64	69	86	38	1610	44	505	27	33	206	8.5
16	14	56	62	69	42	867	41	449	25	46	125	8.1
17	15	50	62	58	41	437	39	497	22	74	92	8.5
18	13	45	218	56	43	278	37	345	21	50	72	7.7
19	13	39	381	41	43	227	38	247	19	36	58	6.4
20	12	35	269	41	30	311	40	191	17	29	46	6.0
21	12	31	203	50	38	343	37	155	21	23	36	6.0
22	11	33	155	42	36	405	34	127	38	20	30	6.4
23	11	102	120	41	31	272	31	114	28	17	25	6.4
24	10	147	106	39	42	213	30	114	22	27	21	6.4
25	10	130	112	135	49	224	29	100	20	48	20	6.4
26	58	114	106	3220	86	2320	259	88	20	49	21	6.0
27	188	94	84	1150	72	1480	657	78	39	31	22	5.8
28	120	84	74	616	67	923	331	70	30	25	22	5.8
29	82	90	74	305	---	553	213	64	23	21	17	5.8
30	61	165	72	176	---	334	163	86	21	19	15	5.6
31	50	---	64	130	---	237	---	212	---	22	35	---
TOTAL	869	6765	4604	8411	1420	13851	3261	5552	1164	1246	3552	353.9
MEAN	28.0	226	149	271	50.7	447	109	179	38.8	40.2	115	11.8
MAX	188	1210	655	3220	98	2320	657	890	112	162	630	58
MIN	10	31	49	31	30	38	29	64	17	17	15	5.6
CFSM	.28	2.22	1.46	2.66	.50	4.38	1.07	1.76	.38	.39	1.13	.12
IN.	.32	2.47	1.68	3.07	.52	5.05	1.19	2.02	.42	.45	1.30	.13

CAL YR 1977	TOTAL	27544.7	MEAN	75.5	MAX	3020	MIN	4.2	CFSM	.74	IN	10.05
WTR YR 1978	TOTAL	51048.9	MEAN	140	MAX	3220	MIN	5.6	CFSM	1.37	IN	18.62

01608000 SOUTH FORK SOUTH BRANCH POTOMAC RIVER NEAR MOOREFIELD, WV

LOCATION.--Lat 39°00'44", long 78°57'23", Hardy County, Hydrologic Unit 02070001, on right bank 0.2 mi (0.3 km) downstream from Stony Creek, 3.5 mi (5.6 km) south of Moorefield, and at mile 6.0 (9.7 km).

DRAINAGE AREA.--283 mi² (733 km²).

PERIOD OF RECORD.--June 1928 to September 1935, August 1938 to current year.

REVISED RECORDS.--WSP 1141: 1933(M), 1940, 1942-43, 1945, 1948(M). WSP 1302: 1931(M), 1935(M).

GAGE.--Water-stage recorder. Datum of gage is 861.51 ft (262.588 m) National Geodetic Vertical Datum of 1929 (Corps of Engineers datum). Prior to Mar. 11, 1940, nonrecording gage at Harness Ford Bridge 2.0 mi (3.2 km) upstream at datum about 31 ft (9.45 m) higher.

REMARKS.--Records good except those for December, January, and February, which are poor. The flow from 92.7 mi² (240.1 km²) upstream from station is partially controlled, but not diverted, by several floodwater detention reservoirs with a total combined detention capacity of 19,870 acre-ft (24.5 hm³).

AVERAGE DISCHARGE.--47 years, 216 ft³/s (6.117 m³/s), 10.36 in/yr (263 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 39,000 ft³/s (1,100 m³/s) June 18, 1949, gage height, 16.1 ft (4.91 m), from rating curve extended above 7,000 ft³/s (200 m³/s) on basis of slope-area measurement of peak flow; minimum, 4.4 ft³/s (0.12 m³/s) Sept. 10, 11, 1965, Sept. 9-11, 1966, gage height, 0.92 ft (0.280 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,930 ft³/s (196 m³/s) Jan. 26, gage height, 7.87 ft (2.399 m), from floodmark; minimum 25 ft³/s (0.708 m³/s) Oct. 7, 8, minimum gage height, 1.10 ft (0.335 m) Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	102	1560	150	300	196	548	335	280	56	169	263
2	31	91	1210	130	250	175	447	279	203	50	142	172
3	29	86	731	110	200	162	378	236	170	68	149	126
4	28	182	525	93	170	156	328	213	152	203	341	104
5	27	433	422	100	150	156	301	217	131	185	336	87
6	27	1150	478	111	140	120	271	209	115	139	470	76
7	26	1710	390	107	130	120	252	192	106	109	3470	67
8	28	3710	310	105	140	123	232	191	99	90	1430	61
9	35	1540	250	554	130	120	203	209	94	129	733	55
10	34	751	200	824	120	120	185	212	90	222	431	52
11	31	472	160	877	100	159	175	204	80	166	332	48
12	35	348	150	391	123	381	165	192	70	123	1130	44
13	32	277	150	310	118	906	153	330	71	101	1220	44
14	31	225	160	260	123	2340	143	1790	64	95	1250	41
15	29	192	171	220	112	4130	130	1450	59	101	870	41
16	36	168	167	170	126	2300	118	1470	57	93	706	46
17	42	150	159	150	126	1250	112	1360	53	162	455	46
18	37	136	156	140	123	819	107	1010	50	182	318	43
19	37	119	156	110	123	632	109	740	46	129	240	39
20	37	107	548	100	93	705	111	565	46	101	192	36
21	35	95	542	130	100	741	109	455	92	84	159	34
22	33	91	452	120	97	830	104	370	84	71	133	33
23	32	159	374	110	87	711	95	312	71	61	115	33
24	31	345	321	100	92	559	89	294	63	53	104	31
25	32	387	292	450	120	506	86	268	56	104	93	31
26	46	368	250	5000	179	2840	134	225	53	318	90	30
27	145	323	220	2500	222	3910	983	195	63	192	95	30
28	250	278	200	1400	203	2670	720	174	79	133	87	29
29	199	260	180	800	---	1490	510	157	68	104	82	27
30	154	435	175	520	---	938	403	144	62	87	76	27
31	121	---	170	370	---	696	---	232	---	133	156	---
TOTAL	1719	14690	11229	16212	3997	30961	7701	14230	2727	3844	15574	1796
MEAN	55.5	490	362	523	143	999	257	459	90.9	124	502	59.9
MAX	250	3710	1560	5000	300	4130	983	1790	280	318	3470	263
MIN	26	86	150	93	87	120	86	144	46	50	76	27
CFSM	.20	1.73	1.28	1.85	.51	3.53	.91	1.62	.32	.44	1.77	.21
IN.	.23	1.93	1.48	2.13	.53	4.07	1.01	1.87	.36	.51	2.05	.24
CAL YR 1977	TOTAL	64514.7	MEAN 177	MAX 4300	MIN 7.8	CFSM .63	IN 8.48					
WTR YR 1978	TOTAL	124680.0	MEAN 342	MAX 5000	MIN 26	CFSM 1.21	IN 16.39					

01608500 SOUTH BRANCH POTOMAC RIVER NEAR SPRINGFIELD, WV

LOCATION.--Lat 39°26'49", long 78°39'16", Hampshire County, Hydrologic Unit 02070001, on left bank at highway bridge, 2.0 mi (3.2 km) east of Springfield, and at mile 13.4 (21.6 km).

DRAINAGE AREA.--1,471 mi² (3,810 km²).

PERIOD OF RECORD.--June 1894 to February 1896, (fragmentary), June 1899 to February 1902, August 1903 to July 1906, August 1928 to current year.

REVISED RECORDS.--WSP 1552: 1903-06, 1929-30(M), 1932-33(M), 1935(M), 1937-40(M), 1942-43(M), 1945(M).

GAGE.--Water-stage recorder. Datum of gage is 562.02 ft (171.304 m) National Geodetic Vertical Datum of 1929. June 1894 to February 1896, nonrecording gage at Baltimore & Ohio Railroad bridge 11.2 mi (18.0 km) upstream at different datum. June 26, 1899, to Feb. 2, 1902, nonrecording gage at bridge 10.0 mi (16.1 km) upstream at different datum. Aug. 28, 1903, to July 14, 1906, nonrecording gage at present site at different datum. Aug. 8 to Sept. 24, 1928, nonrecording gage at present site and datum.

REMARKS.--Records good except those for January and February, which are poor. National Weather service gage-height telemeter at station.

AVERAGE DISCHARGE.--54 years (water years 1900-01, 1904-05, 1929-78), 1,282 ft³/s (36.31 m³/s), 11.84 in/yr (301 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 143,000 ft³/s (4,050 m³/s) Mar. 18, 1936, gage height, 34.2 ft (10.42 m), from rating curve extended above 28,000 ft³/s (790 m³/s) on basis of measurement made about 10 mi (16 km) upstream from station, adjusted for storage and inflow and slope-area measurement at gage height 29.84 ft (9.095 m); minimum, 29 ft³/s (0.82 m³/s) Jan. 28, 1956, result of freezeup, July 30, 1966, result of temporary dam; minimum gage height, 0.39 ft (0.119 m) July 30, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in November 1877 reached a stage of about 34 ft (10.4 m), from flood-marks, discharge, 140,000 ft³/s (3,960 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 10,000 ft³/s (280 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 8	1300	18400 521	13.82 4.212	Mar. 27	0800	23000 651	15.69 4.782
Dec. 1	2330	11600 329	10.44 3.182	May 14	0815	10300 292	9.69 2.954
Jan. 27	0600	27500 779	17.21 5.246	May 16	1700	10700 303	9.95 3.033
Mar. 15	1400	*30700 869	18.10 5.517	Aug. 7	1700	11300 320	10.29 3.136

Minimum discharge, 161 ft³/s (4.560 m³/s) Sept. 30; minimum gage height, 1.61 ft (0.491 m) Oct. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	184	375	7690	904	2040	898	3840	1700	1190	373	1310	763
2	178	336	8770	825	1610	817	3210	1440	1100	351	995	739
3	178	317	4890	748	1540	751	2820	1230	916	1350	703	551
4	176	313	3250	580	1330	703	2390	1100	852	5050	1580	435
5	200	471	2400	490	1100	639	2140	1350	801	2740	1820	375
6	186	1500	2000	617	950	580	2010	1560	692	1660	3710	336
7	176	3070	1800	570	740	571	1820	1370	635	1140	6580	308
8	171	12800	1600	565	730	586	1790	1230	621	873	6230	292
9	178	6800	1500	1010	740	578	1590	1400	587	864	3450	275
10	189	3600	1300	4220	740	571	1450	1580	593	1040	2100	260
11	212	2270	1100	2540	680	646	1340	1480	586	946	1500	249
12	292	1710	976	1860	680	1310	1250	1350	506	758	2800	263
13	253	1320	902	1600	680	3410	1150	1580	453	640	3240	279
14	225	1090	901	1470	675	9650	1040	8920	418	547	2900	263
15	206	929	1070	1250	600	25100	935	8100	394	577	4030	256
16	203	807	1750	1010	630	15000	851	9130	374	653	2550	253
17	212	732	1540	840	638	8690	791	9290	356	765	1850	249
18	212	678	1600	675	615	5760	753	7360	345	753	1330	256
19	209	659	2870	630	645	4590	777	5350	330	633	1030	231
20	209	597	3290	520	600	5390	814	4010	311	505	840	215
21	200	540	3150	570	590	5390	798	3050	348	430	691	203
22	203	501	2690	675	590	6270	793	2410	474	387	593	195
23	209	648	2090	645	565	5820	737	1970	428	352	523	189
24	200	2330	1700	586	530	4680	694	1830	380	329	471	184
25	195	2210	1510	653	586	4140	670	2070	332	316	424	181
26	197	1920	1400	8150	787	9380	683	1730	307	469	396	178
27	231	1710	1200	19800	1010	19900	1560	1390	313	778	375	176
28	471	1410	1100	8190	950	14600	2820	1190	402	675	380	173
29	660	1250	1080	4930	---	9350	2320	1070	555	545	385	168
30	530	1860	1080	3350	---	6400	1980	964	447	529	364	163
31	435	---	977	2600	---	4810	---	894	---	594	430	---
TOTAL	7580	54753	69176	73073	23571	176980	45816	89098	16046	27622	55580	8658
MEAN	245	1825	2231	2357	842	5709	1527	2874	535	891	1793	289
MAX	660	12800	8770	19800	2040	25100	3840	9290	1190	5050	6580	763
MIN	171	313	901	490	530	571	670	894	307	316	364	163
CFSM	.17	1.24	1.52	1.60	.57	3.88	1.04	1.95	.36	.61	1.22	.20
IN.	.19	1.38	1.75	1.85	.60	4.48	1.16	2.25	.41	.70	1.41	.22

CAL YR 1977 TOTAL 360434 MEAN 987 MAX 17800 MIN 111 CFSM .67 IN 9.11
WTR YR 1978 TOTAL 647953 MEAN 1775 MAX 25100 MIN 163 CFSM 1.21 IN 16.39

01610000 POTOMAC RIVER AT PAW PAW, WV

LOCATION.--Lat 39°32'13", long 78°27'28", Allegany County, Md., Hydrologic Unit 02070003, on left bank 250 ft (76 m) upstream from bridge on Maryland State Highway 51 at Paw Paw, 3.3 mi (5.3 km) downstream from Little Cacapon River, and at mile 277 (446 km).

DRAINAGE AREA.--3,109 mi² (8,052 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 487.88 ft (148.706 m) National Geodetic Vertical Datum of 1929. Prior to Mar. 25, 1939, nonrecording gage at bridge 250 ft (76 m) downstream at same datum.

REMARKS.--Records good except those for January and February, which are fair. Low flow affected by Stony River Reservoir (station 01595200), and since December 1950, by Savage River Reservoir (station 01597500). Several observations of water temperature were made during the year. Gage height telemeter at station.

AVERAGE DISCHARGE.--40 years, 3,217 ft³/s (91.11 m³/s), 14.05 in/yr (357 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 111,000 ft³/s (3,140 m³/s) Oct. 16, 1942, gage height, 38.36 ft (11.692 m); minimum, 164 ft³/s (4.64 m³/s) Sept. 10, 11, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 18, 1936, reached a stage of 54.0 ft (16.46 m), discharge, 240,000 ft³/s (6,800 m³/s), from rating curve extended above 85,000 ft³/s (2,400 m³/s) on basis of slope-area measurement of peak flow at site 5.0 mi (8.0 km) upstream at Okonoko.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 20,000 ft³/s (560 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 18	1900	29000 821	18.69 5.697	Mar. 27	1015	42300 1200	22.88 6.974
Dec. 2	0300	20600 583	15.75 4.801	May 14	1230	30200 855	19.06 5.809
Jan. 27	1045	39000 1100	21.90 6.675	May 16	2345	34300 971	20.42 6.224
Mar. 15	2000	*54900 1550	26.43 8.056	July 4	1530	29600 838	18.89 5.758
Mar. 22	1715	23100 654	16.69 5.087				

Minimum discharge, 441 ft³/s (12.5 m³/s) Sept. 29, 30, gage height, 3.49 ft (1.064 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	506	940	11900	2680	4940	1800	10500	3550	2770	1360	2700	3130
2	479	865	18600	2490	4190	1700	9790	3160	2760	1200	2640	2350
3	484	837	11700	2140	3770	1650	8890	2800	2400	2970	1810	1650
4	719	893	8420	2010	3350	1600	7660	2560	2380	23200	2200	1310
5	583	1120	6730	1880	2810	1500	7470	3520	2370	11500	4520	1120
6	573	2120	6710	1870	2650	1500	7540	5780	2020	6290	5500	990
7	513	5000	6610	1840	2320	1450	7310	5210	1800	4240	8160	888
8	479	17700	4880	1790	2150	1450	7070	4580	1830	3180	11700	808
9	658	16500	4110	2910	2060	1450	6140	5180	1850	2980	6610	742
10	1060	9190	3500	6440	1950	1450	5510	6140	1770	3880	4410	685
11	1210	7400	2940	5070	1860	1680	4910	5560	1650	4930	3430	648
12	933	5990	2560	4300	1750	2720	4410	4880	1470	3870	4270	677
13	831	4610	2450	3910	1660	5630	3970	5080	1320	2870	4900	953
14	692	3630	2520	3490	1570	17200	3530	25600	1210	2250	4360	843
15	625	3350	4000	3110	1560	47000	3100	20900	1120	2180	5400	931
16	606	2830	5870	2730	1590	37500	2780	27400	1070	2180	3910	873
17	696	2240	5300	2470	1670	21700	2570	30800	1010	1980	3120	761
18	867	2060	5550	2120	1580	14300	2430	22700	1030	2290	2390	746
19	817	2260	8450	1950	1540	11300	3440	16000	1030	1900	1920	839
20	723	1930	8940	1750	1480	15900	3770	11600	883	1550	1610	732
21	671	1730	8030	1700	1460	15400	3810	9050	858	1320	1390	657
22	667	1610	7270	1610	1430	20100	3740	7080	944	1170	1200	620
23	628	1780	5660	1530	1410	20400	3340	5880	1150	1090	1070	581
24	592	4060	4970	1470	1440	16000	3050	5420	1150	1010	956	542
25	561	4490	4840	2160	1460	13300	2850	5800	945	1120	885	525
26	569	3850	5360	11630	1700	20300	2710	5260	836	1160	866	516
27	773	3710	4550	33300	2000	39800	3410	4390	878	1590	1210	498
28	982	3220	3830	17200	1900	32000	5050	3850	1530	1520	1820	479
29	1350	2930	3570	11000	---	23500	4400	3430	2700	1340	1030	453
30	1270	3310	3410	7240	---	17200	3910	3080	1810	1180	860	464
31	1080	---	3020	5860	---	13700	---	2810	---	1290	2790	---
TOTAL	23197	122155	186250	151620	59250	422180	149460	269050	46544	100590	99637	27011
MEAN	748	4072	6008	4891	2116	13620	4982	8679	1551	3245	3214	900
MAX	1350	17700	18600	33300	4940	47000	10500	30800	2770	23200	11700	3130
MIN	479	837	2450	1470	1410	1450	2430	2560	836	1010	860	453
CFSM	.24	1.31	1.93	1.57	.68	4.38	1.60	2.79	.50	1.04	1.03	.29
IN.	.28	1.46	2.23	1.81	.71	5.05	1.79	3.22	.56	1.20	1.19	.32

CAL YR 1977 TOTAL 994974 MEAN 2726 MAX 33400 MIN 279 CFSM .88 IN 11.91
WTR YR 1978 TOTAL 1656944 MEAN 4540 MAX 47000 MIN 453 CFSM 1.46 IN 19.83

POTOMAC RIVER BASIN

01610200 LOST RIVER AT MCCAULEY NEAR BAKER, WV

LOCATION.--Lat 39°03'18", long 78°43'31", Hardy County, Hydrologic Unit 02070003, on left bank at McCauley, 1.4 mi (2.3 km) upstream from Three Springs Run, and 1.7 mi (2.7 km) east of Baker.

DRAINAGE AREA.--155 mi² (401 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 1,259.34 ft (383.847 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 4, 1974, at site 350 ft. (107 m) downstream at same datum.

REMARKS.--Water-discharge records good except those for January and February, which are poor.

AVERAGE DISCHARGE.--7 years, 187 ft³/s (5.296 m³/s), 16.38 in/yr (416 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,600 ft³/s (413 m³/s) June 23, 1972, gage height, 11.58 ft (3.530 m), site then in use, from floodmarks, from rating curve extended above 1,000 ft³/s (28 m³/s) on basis of slope-area measurement of peak flow; minimum, 1.8 ft³/s (0.051 m³/s), July 23, 24, 1977, gage height, 0.63 ft (0.192 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,900 ft³/s (54 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 7	2400	*11400 323	10.53 3.210	Mar. 27	1730	5210 148	7.73 2.356
Dec. 1	0515	2710 76.7	6.07 1.850	May 13	2400	6400 181	8.35 2.545
Jan. 26	0700	9470 268	*all.52 3.511	May 16	1130	3340 94.6	6.57 2.003
Mar. 14	1830	7440 211	8.87 2.704	Aug. 3	2215	7100 201	8.70 2.652
Mar. 26	1315	4770 135	7.48 2.280	Aug. 7	0130	10700 303	10.26 3.127

a Ice jam.

Minimum discharge, 8.4 ft³/s (0.238 m³/s) Oct. 6, 7, 8; minimum gage height, 0.82 ft (0.250 m) Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	44	1880	84	170	81	313	76	64	38	178	295
2	24	42	792	71	160	59	242	69	55	38	87	105
3	20	51	471	43	112	66	195	64	57	493	542	67
4	15	92	319	42	92	64	170	65	61	493	1770	50
5	12	280	316	54	80	43	160	104	47	242	415	40
6	12	625	431	55	64	47	132	99	43	134	1200	33
7	12	2250	328	52	60	54	123	92	48	87	4100	29
8	12	3850	235	56	78	52	106	105	44	70	762	26
9	20	798	195	450	71	53	95	166	44	67	377	23
10	34	471	125	225	65	58	91	178	37	48	235	20
11	26	370	104	195	59	79	88	156	31	39	319	18
12	20	253	87	148	61	289	83	132	31	31	678	24
13	16	182	104	142	55	828	75	912	64	26	708	29
14	14	140	97	106	58	3710	66	2930	39	43	367	21
15	13	112	111	85	50	3330	61	1210	30	51	215	19
16	30	97	87	72	51	1460	57	2690	28	37	370	18
17	125	84	77	85	57	726	53	1410	26	51	178	63
18	64	70	220	90	60	502	53	804	24	32	109	31
19	43	59	447	75	56	610	66	690	20	26	83	23
20	32	51	391	72	50	768	71	497	21	21	64	19
21	26	46	349	70	55	696	64	374	184	18	51	17
22	21	48	289	69	49	625	60	271	247	15	44	15
23	18	381	222	58	46	435	51	215	90	22	39	15
24	16	451	192	58	55	332	49	210	56	15	34	14
25	15	360	202	158	65	295	48	174	41	19	31	14
26	27	381	158	4470	116	2350	90	132	34	47	29	14
27	197	289	116	1200	94	3490	126	108	53	31	27	12
28	162	225	92	574	83	1910	97	98	92	37	35	11
29	106	257	98	322	---	822	85	90	63	25	29	10
30	75	511	99	225	---	520	79	83	44	22	48	9.9
31	55	---	95	186	---	395	---	74	---	142	138	---
TOTAL	1280	12870	8729	9592	2072	24749	3049	14278	1718	2460	13262	1084.9
MEAN	41.3	429	282	309	74.0	798	102	461	57.3	79.4	428	36.2
MAX	197	3850	1880	4470	170	3710	313	2930	247	493	4100	295
MIN	12	42	77	42	46	43	48	64	20	15	27	9.9
CFSM	.27	2.77	1.82	1.99	.48	5.15	.66	2.97	.37	.51	2.76	.23
IN.	.31	3.09	2.09	2.30	.50	5.94	.73	3.43	.41	.59	3.18	.26

CAL YR 1977 TOTAL 44486.9 MEAN 122 MAX 3850 MIN 1.8 CFSM .79 IN 10.68
WTR YR 1978 TOTAL 95143.9 MEAN 261 MAX 4470 MIN 9.9 CFSM 1.68 IN 22.83

POTOMAC RIVER BASIN

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01610200 LOST RIVER AT MCCAULEY NEAR BAKER, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1974 to October 1976.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum 29.0°C Aug. 26, 1976; minimum, 0.0°C on many days during winter periods.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTANTANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)
OCT							
05...	0915	9.9	145	8.2	11.0	5.0	7.5
NOV							
04...	1015	3100	40	--	--	--	--
16...	1445	95	117	8.3	7.0	--	12.9
DEC							
01...	1040	2200	70	--	--	--	--
28...	1400	92	25	8.6	5.0	--	16.0
JAN							
26...	0805	9610	50	--	--	--	--
26...	1115	7500	51	--	--	--	--
26...	1300	5900	53	--	--	--	--
26...	1445	5340	52	--	--	--	--
26...	1645	4240	52	--	--	--	--
26...	1838	3540	77	--	--	--	--
FEB							
09...	1100	60	--	8.0	1.0	--	14.5
MAR							
14...	0830	1530	55	--	--	--	--
14...	1045	2200	53	--	--	--	--
14...	1320	2540	77	--	--	--	--
14...	1405	3380	78	--	--	--	--
14...	1450	4290	75	--	--	--	--
14...	1600	5250	74	--	--	--	--
14...	1705	6300	71	--	--	--	--
14...	1830	7400	57	--	--	--	--
14...	2010	7400	72	--	--	--	--
15...	0800	3400	58	--	--	--	--
15...	1215	2690	59	--	--	--	--
21...	1050	660	55	7.4	6.0	--	13.0
27...	1035	2810	57	--	5.0	--	--
27...	1305	3210	54	--	6.0	--	--
27...	1540	4360	50	--	7.0	--	--
27...	1545	4770	58	--	7.0	--	--
27...	1920	5000	56	--	7.0	--	--
MAY							
02...	1345	65	70	8.1	12.0	--	9.9
14...	1125	2510	53	--	12.0	--	--
14...	1700	1790	--	--	12.0	--	--
16...	0610	2620	52	--	12.0	--	--
16...	0800	2540	53	--	12.0	--	--
16...	1005	3300	52	--	12.0	--	--
16...	1105	3320	52	--	12.0	--	--
16...	1305	3340	106	--	12.0	--	--
JUN							
08...	1450	43	127	7.1	21.0	--	7.9
JUL							
03...	1745	800	90	--	18.0	--	--
03...	2045	770	87	--	18.0	--	--
26...	1430	50	130	8.4	25.0	--	7.5
AUG							
07...	0910	3500	68	--	18.0	--	--
SEPT							
12...	1400	16	155	8.5	25.0	--	9.8

POTOMAC RIVER BASIN

01610200 LOST RIVER AT MCCAULEY NEAR BAKER, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT		
05...	9	.24
NOV		
08...	275	2300
16...	3	.77
DEC		
01...	206	1220
28...	3	.75
JAN		
26...	2050	53200
26...	2640	53500
26...	1180	18800
26...	1570	22600
26...	653	7480
26...	715	6830
FEB		
09...	3	.49
MAR		
14...	202	834
14...	189	1120
14...	853	6770
14...	826	7540
14...	1190	13800
14...	1140	16200
14...	1920	32700
14...	2000	40000
14...	1800	36000
15...	285	2620
15...	435	3160
21...	10	18
27...	147	1120
27...	198	1720
27...	605	7120
27...	618	7960
27...	627	8460
MAY		
02...	0	.00
14...	135	915
14...	121	525
16...	160	1130
16...	156	1240
16...	118	1050
16...	130	1170
16...	1040	9380
JUN		
08...	5	.59
JUL		
03...	72	150
03...	77	160
AUG		
07...	446	4340
SEP		
12...	143	6.3

01611500 CACAPON RIVER NEAR GREAT CACAPON, WV

LOCATION.--Lat 39°34'43", long 78°18'34", Morgan County, Hydrologic Unit 02070003, on left bank at Rock Ford, 3.0 mi (4.8 km) southwest of Great Cacapon, and at mile 6.5 (10.5 km).

DRAINAGE AREA.--677 mi² (1,753 km²).

PERIOD OF RECORD.--December 1922 to current year.

REVISED RECORDS.--WSP 800: 1924(M). WSP 921: Drainage area. WSP 951: 1936-37, WSP 1552: 1925-26(M), 1928, 1929(M), 1932.

GAGE.--Water-stage recorder. Datum of gage is 456.78 ft (139.227 m) Corps of Engineers datum. Prior to Nov. 10, 1933, nonrecording gage at same site and datum.

REMARKS.--Records good except those for January and February, which are poor.

AVERAGE DISCHARGE.--55 years (water years 1924-78), 582 ft³/s (16.48 m³/s), 11.67 in/yr (296 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 87,600 ft³/s (2,480 m³/s) Mar. 18, 1936, gage height, 30.1 ft (9.17 m), from rating curve extended above 52,000 ft³/s (1500 m³/s); minimum, 26 ft³/s (0.74 m³/s) Sept. 11-13, 1966; minimum gage height, 0.35 ft (0.107 m) Sept. 21, 22, 1932, Sept. 11-13, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1889 reached a stage of 24.7 ft (7.53 m), from floodmarks, discharge, 57,500 ft³/s (1,630 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,900 ft³/s (110 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)
Nov. 8	2000	13500	382	12.41	3.783	May 14	1900	12000	340	11.71	3.569
Dec. 1	2400	6970	197	8.97	2.734	May 17	0200	12600	357	12.00	3.658
Jan. 26	Unknown	*20200	572	a15.03	4.581	Aug. 4	2000	8920	253	10.17	3.100
Mar. 15	1100	16000	453	13.45	4.100	Aug. 7	2000	12500	354	11.93	3.636
Mar. 27	0700	10600	300	11.07	3.374						

a From floodmark.

Minimum discharge, 74 ft³/s (2.10 m³/s) Oct. 8, gage height, 0.78 ft (0.238 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	112	205	3500	433	910	379	1600	340	433	239	1400	219
2	102	177	4540	383	777	426	1330	321	396	209	1140	187
3	93	170	2100	350	700	353	1110	306	360	334	670	162
4	87	187	1390	330	630	344	984	294	340	2220	3360	148
5	78	293	1030	310	570	385	930	334	340	1510	3430	139
6	81	446	959	290	530	360	870	454	321	882	2010	130
7	79	1520	1070	290	500	312	790	504	294	576	6810	126
8	75	6490	797	400	470	274	740	464	285	433	5010	130
9	84	5030	642	3300	440	280	655	497	274	413	2120	128
10	87	1900	539	1500	420	260	596	670	277	541	1330	125
11	87	1360	419	1200	410	288	560	675	257	369	948	122
12	81	930	389	1000	400	382	541	612	234	277	1040	120
13	89	720	407	820	390	1090	504	576	211	231	1660	137
14	89	680	407	720	356	4920	454	6170	224	202	1510	144
15	83	490	412	670	379	13400	413	6270	244	192	1000	204
16	90	440	436	610	344	8340	376	6990	209	219	720	187
17	131	383	402	570	312	4470	353	10300	185	315	685	164
18	153	338	438	530	303	2750	337	5850	173	413	537	154
19	239	294	1030	500	356	2170	379	3510	164	300	340	178
20	193	261	1570	460	372	3280	430	2890	155	229	207	190
21	149	236	1390	430	350	2930	461	2150	150	190	204	153
22	124	221	1330	400	340	2650	433	1670	155	164	237	140
23	107	248	1080	380	330	2180	392	1310	533	148	195	129
24	97	827	855	370	320	1680	363	1110	372	144	252	121
25	96	986	785	800	285	1360	334	1070	282	146	195	117
26	101	897	600	18000	300	2290	321	930	239	141	183	114
27	163	1020	450	7800	385	8880	340	745	234	242	231	111
28	238	790	360	3500	464	8540	454	628	234	331	413	109
29	369	655	400	2500	---	4520	416	556	266	715	576	105
30	310	725	441	1500	---	2620	369	508	282	399	372	101
31	247	---	497	1100	---	1930	---	468	---	334	268	---
TOTAL	4114	28919	30665	50646	12343	84043	17835	59172	8123	13058	39053	4294
MEAN	133	964	989	1634	441	2711	595	1909	271	421	1260	143
MAX	369	6490	4540	18000	910	13400	1600	10300	533	2220	6810	219
MIN	75	170	360	290	285	260	321	294	150	141	183	101
CFSM	.20	1.42	1.46	2.41	.65	4.00	.88	2.82	.40	.62	1.86	.21
IN.	.23	1.59	1.68	2.78	.68	4.62	.98	3.25	.45	.72	2.15	.24

CAL YR 1977 TOTAL 163090 MEAN 447 MAX 7600 MIN 52 CFSM .66 IN 8.96
WTR YR 1978 TOTAL 352265 MEAN 965 MAX 18000 MIN 75 CFSM 1.43 IN 19.36

01613000 POTOMAC RIVER AT HANCOCK, MD

LOCATION.--Lat 39°41'49", long 78°10'39", Washington County, Hydrologic Unit 02070004, on left bank 0.2 mi (0.3 km) downstream from Little Tonoloway Creek, 0.5 mi (0.8 km) downstream from bridge on U. S. Highway 522 at Hancock, 1.1 mi (1.8 km) upstream from Tonoloway Creek (formerly called Great or Big Tonoloway Creek), and at mile 239 (385 km).

DRAINAGE AREA.--4,073 mi² (10,549 km²).

PERIOD OF RECORD.--October 1932 to current year. Gage-height records collected at same site since June 1925 are contained in reports of National Weather Service.

REVISED RECORDS.--WSP 781: 1933(M). WSP 801: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 383.68 ft (116.946 m) National Geodetic Vertical Datum of 1929. Oct. 1, 1932, to Jan. 5, 1935, Mar. 18, 1936, to Jan. 20, 1937, nonrecording gage, on former highway bridge just upstream at same datum.

REMARKS.--Records good except those for January and February, which are fair. Slight regulation at low flow from power plants upstream. Low flow affected slightly by Stony River Reservoir (station 01595200) and since December 1950, by Savage River Reservoir (station 01597500). Gage-height telemeter at station.

AVERAGE DISCHARGE.--46 years, 4,090 ft³/s (115.8 m³/s), 13.64 in/yr (346 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 340,000 ft³/s (9,630 m³/s) Mar. 18, 1936, gage height, 47.6 ft (14.508 m), from rating curve extended above 120,000 ft³/s (3,400 m³/s) on basis of slope-area measurement of peak flow; minimum observed, 180 ft³/s (5.10 m³/s) Oct. 4, 1932, gage height, 2.01 ft (0.613 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known prior to 1932, about 40 ft (12.2 m) in May 1889, discharge, about 220,000 ft³/s (6,230 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 23,000 ft³/s (650 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 9	0215	38000 1080	17.28 5.267	Mar. 27	1500	53900 1530	20.85 6.355
Dec. 2	0830	26200 742	14.11 4.301	May 14	2100	42900 1210	18.45 5.624
Jan. 27	---	Unknown	*a29.13 8.879	May 17	0600	50400 1430	20.13 6.136
Mar. 15	2315	*68800 1950	23.73 7.233	July 4	2230	30600 867	15.36 4.682
Mar. 23	0145	26400 748	14.15 4.313				

a Ice jam.

Minimum discharge, 543 ft³/s (15.4 m³/s) Sept. 30, gage height, 2.72 ft (0.829 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	759	1410	11200	3440	6000	2200	14200	4160	3270	2190	2170	4070
2	665	1240	24500	3150	5000	2100	11800	3750	3320	1780	4350	3480
3	589	1150	16900	2830	4500	2000	10900	3370	3080	1950	3330	2670
4	574	1160	11300	2490	3900	1900	9580	3080	2780	15800	3270	1940
5	792	1340	8790	2490	3600	1800	8560	3190	2810	19500	7390	1550
6	694	1790	7820	2230	3300	1750	8940	5630	2680	9720	7190	1330
7	678	4980	8350	2270	2900	1700	8580	6240	2340	6360	10400	1180
8	626	13900	6650	2180	2600	1700	8430	5530	2190	4600	19300	1060
9	699	27800	5350	2510	2400	1650	7600	5430	2200	3600	11100	954
10	998	13600	4700	5740	2300	1750	6760	6920	2170	3690	7030	879
11	1340	9890	3970	7320	2200	2000	6090	6930	2070	5140	5080	820
12	1310	8350	3240	5700	2100	2670	5410	6150	1910	5110	4410	804
13	1050	6480	3050	5100	2000	5480	4890	5600	1710	3870	6580	915
14	959	4880	3000	4600	1900	19600	4360	24600	1530	2990	6610	1120
15	830	4060	3300	4100	1800	57900	3870	33400	1470	2470	6010	1080
16	836	3800	6210	3500	1800	56200	3440	36300	1380	2490	5630	1130
17	1130	3040	6360	3200	1900	30700	3160	46600	1330	2420	4320	1040
18	1190	2560	6380	2800	2100	20300	2560	33600	1230	2530	3480	914
19	1270	2510	9790	2500	1800	15400	3400	23200	1250	2630	2740	917
20	1180	2460	12000	2200	1700	20500	4630	17500	1220	2170	2250	1050
21	997	2160	10600	2050	1700	21000	4620	13100	1080	1790	1900	900
22	896	1990	9860	1950	1700	22300	4600	10200	1060	1540	1630	829
23	858	2010	8120	1850	1700	24800	4250	8260	1400	1360	1430	769
24	798	3050	6480	1750	1700	19800	3830	7030	1670	1260	1280	716
25	752	5960	6190	2700	1800	16400	3540	7030	1500	1190	1180	673
26	742	5090	6510	15000	2100	19000	3320	6910	1250	1270	1180	642
27	950	4920	6180	44000	2250	49300	3270	5800	1150	1330	1150	630
28	1280	4480	4880	24000	2400	45100	4940	4940	1210	2000	1790	610
29	1530	3900	4330	15000	---	32000	5330	4380	2050	2160	1860	586
30	1890	3840	4240	9000	---	22700	4650	3920	2990	2020	1210	557
31	1660	---	3950	7000	---	17500	---	3560	---	1680	1520	---
TOTAL	30522	153800	234200	194650	71150	539200	179910	356310	57300	118610	138770	35815
MEAN	985	5127	7555	6279	2541	17390	5597	11490	1910	3826	4476	1194
MAX	1890	27800	24500	44000	6000	57900	14200	46600	3320	19500	19300	4070
MIN	574	1150	3000	1750	1700	1650	2960	3080	1060	1190	1150	557

CAL YR 1977 TOTAL 1227261 MEAN 3362 MAX 44700 MIN 342 CFSM 0.83 IN 11.21
WTR YR 1978 TOTAL 2110237 MEAN 5781 MAX 57900 MIN 557 CFSM 1.42 IN 19.27

01616500 OPEQUON CREEK NEAR MARTINSBURG, WV

LOCATION.--Lat 39°25'25", long 77°56'20", Berkeley County, Hydrologic Unit 02070004, on right bank 300 ft (91 m) upstream from Evans Run, 2.3 mi (3.7 km) upstream from Tuscarora Creek, 3.0 mi (4.8 km) southeast of Martinsburg, and at mile 11.1 (17.9 km).

DRAINAGE AREA.--272 mi² (704 km²).

PERIOD OF RECORD.--May 1905 to July 1906, July 1947 to current year.

REVISED RECORDS.--WSP 1702: 1959.

GAGE.--Water-stage recorder. Datum of gage is 354.89 ft (108.170 m) National Geodetic Vertical Datum of 1929. Prior to July 1906, nonrecording gage at approximately the same site at different datum. July 23, 1947, to July 22, 1948, nonrecording gage at present site and datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--31 years (water years 1947-78), 224 ft³/s (6.344 m³/s), 11.18 in/yr (284 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,000 ft³/s (538 m³/s) June 22, 1972, gage height, 17.45 ft (5.319 m), from rating curve extended above 7,100 ft³/s (200 m³/s); minimum observed, 25 ft³/s (0.71 m³/s) Oct. 25, 1947; minimum gage height, 1.24 ft (0.378 m) Jan. 8, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1936 reached a stage of about 17.5 ft (5.33 m), from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,900 ft³/s (54 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 9	1800	2320 65.7	9.30 2.835	May 17	0100	2900 82.1	10.27 3.130
Jan. 26	2100	3060 86.7	10.44 3.182	July 4	0500	2250 63.7	9.13 2.783
Mar. 15	0900	5450 154	12.16 3.706	Aug. 7	0800	*8060 228	13.50 4.115
Mar. 27	0700	3550 101	10.89 3.319				

Minimum discharge, 42 ft³/s (1.19 m³/s) Oct. 5, 25, gage height, 1.67 ft (0.509 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	54	1340	197	301	219	526	178	233	139	836	369
2	48	56	682	191	290	198	463	175	210	153	357	232
3	50	61	388	170	266	198	421	171	202	796	230	200
4	44	183	292	160	250	187	399	171	204	1390	397	186
5	43	214	257	164	240	175	404	202	193	454	303	175
6	46	169	297	164	230	173	362	197	187	298	476	166
7	50	385	237	162	220	169	349	182	182	243	5920	164
8	46	1070	195	178	210	166	323	178	180	232	1880	157
9	51	460	190	1730	210	166	301	206	184	632	662	152
10	58	275	180	682	208	167	288	197	173	308	496	148
11	50	550	160	375	202	191	283	184	164	247	399	147
12	46	311	157	277	197	430	275	175	162	212	419	145
13	43	210	151	270	195	951	260	233	268	195	358	230
14	45	171	155	257	197	2260	247	1320	210	187	314	176
15	51	153	185	235	187	4450	237	1250	173	191	291	158
16	56	139	176	208	185	2130	229	2000	162	188	273	150
17	102	129	166	212	182	1160	223	2150	162	198	253	150
18	83	124	877	210	187	987	219	1090	157	174	236	141
19	61	114	1310	195	180	1050	272	760	158	160	225	139
20	56	104	748	195	170	1120	268	592	151	152	216	140
21	50	100	796	195	180	838	251	481	155	148	205	135
22	49	100	865	190	173	712	231	391	268	145	199	132
23	46	311	517	167	164	577	217	352	176	140	193	127
24	45	385	393	170	167	504	212	339	151	135	188	125
25	43	249	357	424	178	450	208	320	148	142	183	126
26	51	342	295	2330	219	1360	206	286	143	139	190	124
27	102	288	239	1740	235	2800	204	262	151	137	219	120
28	126	210	230	796	229	1340	195	247	187	215	282	121
29	87	198	208	568	---	841	189	239	162	160	201	116
30	67	463	204	412	---	661	184	227	146	137	192	114
31	58	---	200	344	---	574	---	245	---	184	237	---
TOTAL	1798	7578	12447	13568	5852	27204	8446	15000	5402	8231	16830	4765
MEAN	58.0	253	402	438	209	878	282	484	180	266	543	159
MAX	126	1070	1340	2330	301	4450	526	2150	268	1390	5920	369
MIN	43	54	151	160	164	166	184	171	143	135	183	114
CFSM	.21	.93	1.48	1.61	.77	3.23	1.04	1.78	.66	.98	2.00	.59
IN.	.25	1.04	1.70	1.86	.80	3.72	1.16	2.05	.74	1.13	2.30	.65

CAL YR 1977 TOTAL 64004 MEAN 175 MAX 3270 MIN 43 CFSM .64 IN 8.75
WTR YR 1978 TOTAL 127121 MEAN 348 MAX 5920 MIN 43 CFSM 1.28 IN 17.39

POTOMAC RIVER BASIN

01618000 POTOMAC RIVER AT SHEPHERDSTOWN, WV

LOCATION.--Lat 39°26'04", long 77°48'07", Jefferson County, Hydrologic Unit 02070004, on right bank 0.1 mi (0.2 km) downstream from Rumsey Bridge at Shepherdstown, 3.3 mi (5.3 km) upstream from Antietam Creek, and at mile 184 (296 km).

DRAINAGE AREA.--5,936 mi² (15,374 km²).

PERIOD OF RECORD.--August 1928 to September 1953. Annual maximums, water years 1954-64. July 1964 to current year. Gage-height record and estimated discharges October 1953 to June 1964 available in files of Maryland district office.

REVISED RECORDS.--WSP 756: Drainage area. WSP 781: 1929(M).

GAGE.--Water-stage recorder. Datum of gage is 281.00 ft (85.649 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter periods, which are fair. Some regulation at low flow by power plants upstream from station, Stony River Reservoir (station 01595200), and since December 1950 by Savage River Reservoir (station 01597500). Several observations of water temperature were made during the year. Gage height telemeter at station.

AVERAGE DISCHARGE.--39 years (water years 1929-53, 1965-78), 6,045 ft³/s (171.2 m³/s), 13.83 in/yr (351 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 335,000 ft³/s (9,490 m³/s) Mar. 19, 1936, gage height, 42.1 ft (12.83 m), from floodmarks, from rating curve extended above 200,000 ft³/s (5,700 m³/s) on basis of slope-area measurement of peak flow; minimum, 170 ft³/s (4.81 m³/s) Aug. 1, 1966; minimum daily, 185 ft³/s (5.24 m³/s) July 31, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods in June 1889 and May 1924 reached stages of 39.2 ft (11.95 m) and 29.8 ft (9.08 m) respectively, from floodmarks, discharges, about 290,000 ft³/s (8,210 m³/s) and 168,000 ft³/s (4,760 m³/s) respectively, from rating curve extended as explained above.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 23,000 ft³/s (650 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 9	1300	41200 1170	12.73 3.880	Mar. 23	1130	35500 1010	11.57 3.527
Dec. 2	1930	34000 963	11.26 3.432	Mar. 27	2200	71800 2030	18.12 5.523
Jan. 28	---	Unknown	Unknown	May 17	1530	71800 2030	18.12 5.523
Mar. 16	0830	*89400 2530	20.81 6.343	July 5	0930	33900 960	11.24 3.426
Mar. 21	0130	34700 983	11.41 3.478	Aug. 8	1500	29700 841	10.35 3.155

Minimum discharge, 780 ft³/s (22.1 m³/s) Sept. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1220	2120	10800	6050	10000	3700	21600	5840	5050	3450	3550	3570
2	1140	1860	30400	5280	8000	3500	17700	5190	4660	2780	5000	5460
3	998	1690	28300	4630	7000	3300	15700	4770	4660	3090	5560	4310
4	910	1720	18500	3810	6000	3100	14400	4420	4290	12500	6520	3370
5	800	2530	13600	3450	5200	2900	13000	4330	4010	29400	9250	2670
6	954	3260	11600	3680	4600	2700	12300	5020	3960	15900	9180	2220
7	1050	4090	11100	3590	4400	2600	12200	7670	3700	9690	12900	1990
8	955	12600	10400	3780	4200	2600	11900	7400	3460	6870	26800	1820
9	967	33900	8100	6520	4000	2500	11300	7000	3400	5900	19000	1680
10	1050	23100	6950	9390	3600	2700	10100	7790	3290	5250	11300	1460
11	1430	15800	5750	8830	3400	3060	9130	9050	3170	5540	7820	1300
12	1720	14100	4920	9270	3200	3540	8350	8330	2990	6780	6380	1250
13	1740	10700	4450	7590	3100	5520	7710	7590	2880	5810	6880	1500
14	1320	8160	4520	7050	3000	17000	7040	17800	2780	4520	8020	1450
15	1370	6450	4720	6400	2900	61400	6230	52000	2530	3980	7320	1500
16	1280	5570	6000	6110	2900	85300	5570	53700	2370	3740	7300	1450
17	1540	5040	8700	5130	2900	54000	5090	68300	2290	4100	6020	1450
18	2830	4180	9220	4300	3100	34800	4640	54900	2310	3840	4940	1350
19	2780	3660	17300	3900	3300	25700	4720	38400	2270	4020	4120	1400
20	2270	3530	20200	3550	3100	30000	5970	27900	2270	3480	3410	1460
21	1960	3310	18700	3300	2900	33900	7050	20800	2410	2830	2880	1300
22	1660	3000	18400	3150	2800	32300	7010	16100	2760	2480	2540	1200
23	1450	3060	15300	3000	2800	34300	6810	12800	2600	2250	2260	1100
24	1350	3950	11900	2900	2800	30500	6370	11000	2520	2060	2050	1000
25	1240	5740	10200	3930	2800	24700	5980	10400	2600	1940	1900	940
26	1160	7630	10200	11100	3000	23100	5390	10100	2440	1830	1770	950
27	1210	7370	9940	46000	3300	56600	4750	8990	2240	1910	1890	910
28	1680	6870	8330	60000	3500	65900	4900	7610	2070	2120	2270	850
29	2240	6000	6910	30000	---	49800	6530	6710	2240	2800	2450	780
30	2220	5610	6320	20000	---	35200	6440	6020	3110	2840	2580	870
31	2380	---	6240	12000	---	26600	---	5490	---	2990	2180	---
TOTAL	46874	216600	357970	307690	111800	762820	265880	513420	91330	166690	196040	52560
MEAN	1512	7220	11550	9925	3993	24610	8663	16560	3044	5377	6324	1752
MAX	2830	33900	30400	60000	10000	85300	21600	68300	5050	29400	26800	5460
MIN	800	1690	4450	2500	2800	2500	4640	4330	2070	1830	1770	780
CAL YR 1977	TOTAL	1817527	MEAN	4580	MAX	57800	MIN	600	CFSM	0.84	IN	11.39
WTR YR 1978	TOTAL	3089674	MEAN	8465	MAX	85300	MIN	780	CFSM	1.43	IN	19.36

01636500 SHENANDOAH RIVER AT MILLVILLE, WV

LOCATION.--Lat 39°16'55", long 77°47'22", Jefferson County, Hydrologic Unit 02070007, on left bank 0.4 mi (0.6 km) downstream from Cattail Run, 1.0 mi (1.6 km) upstream from Millville, 5.0 mi (8.0 km) upstream from Harpers Ferry, and at mile 5.0 (8.0 km).

DRAINAGE AREA.--3,040 mi² (7,874 km²).

PERIOD OF RECORD.--April 1895 to March 1909, August 1928 to current year.

REVISED RECORDS.--WSP 951: 1936(M). WSP 1432: Drainage area at former site, 1895-99, 1901-02, 1905, 1907-08, 1932(M), 1935(M).

GAGE.--Water-stage recorder. Datum of gage is 293.00 ft (89.306 m) National Geodetic Vertical Datum, adjustment of 1912. Apr. 15, 1895, to Mar. 31, 1909, nonrecording gage at site 0.8 mi (1.3 km) downstream at datum 0.32 ft (0.098 m) higher.

REMARKS.--Records good except those for period of no gage-height record, Oct. 9 to Nov. 15, and those for January and February, which are poor. Regulation by hydroelectric plants, particularly that of Potomac Light and Power Co., 0.5 mi (0.8 km) upstream from station. National Weather Service gage-height telemeter at station.

AVERAGE DISCHARGE.--63 years (water years 1896-1908, 1929-78, 2,667 ft³/s (75.53 m³/s), 11.91 in/yr (303 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 230,000 ft³/s (6,510 m³/s) Oct. 16, 1942, gage height, 32.4 ft (9.88 m), from floodmarks; minimum, about 59 ft³/s (1.67 m³/s) Oct. 4, 1930, gage height, 0.39 ft (0.119 m); minimum daily, 194 ft³/s (5.49 m³/s) July 24, 1930.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1870 reached practically same stage as flood of Mar. 18, 1936, 26.36 ft (8.035 m), discharge, 151,000 ft³/s (4,280 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 15,000 ft³/s (420 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 8	Unknown	33300 943	a12.50 3.810	Mar. 28	0200	29400 833	11.78 3.591
Jan. 27	1945	*48000 1360	15.08 4.596	May 15	1045	24500 694	10.78 3.286
Mar. 16	0300	42300 1200	14.13 4.307	Aug. 7	1615	17800 504	9.18 2.798

a From floodmark.

Minimum recorded discharge, 387 ft³/s (10.96 m³/s) Oct. 5, 9, gage height, 1.20 ft (0.366 m), but may have been less during period of no gage-height record Oct. 9 to Nov. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	645	840	4010	2360	6600	2790	8420	4360	2380	1670	2620	2340
2	600	830	6370	2210	5320	2600	7150	3750	2280	1550	2270	2170
3	531	840	7670	2100	4500	2470	6170	3370	2210	1670	1910	1640
4	544	1300	6080	1900	4100	2350	5470	3100	2110	2890	1880	1450
5	460	1700	4900	1800	3700	2170	5000	3120	2020	3180	2500	1210
6	482	4500	4210	1630	3400	2110	4640	3240	1900	2640	1730	1170
7	500	12000	3760	1690	3100	1960	4310	3770	1880	2260	9210	1050
8	497	30000	3680	1770	2840	1920	3990	3460	1790	1950	9950	1060
9	500	18500	3280	3530	2900	1920	3710	3250	1740	2160	5540	978
10	510	9500	2930	5660	2800	1930	3460	3340	1680	1900	4110	960
11	500	7230	2610	7000	2700	1960	3290	3400	1650	1630	3730	909
12	520	6210	2390	5800	2600	3550	3150	3330	1530	2050	5520	900
13	540	4740	2230	4900	2470	7560	3000	3370	1610	1740	7000	1110
14	510	3750	2010	4280	2350	15700	2840	8760	1650	1570	6170	1030
15	500	3140	2060	3860	2260	30900	2710	21700	1480	1450	6040	972
16	540	2820	1920	3400	2140	36700	2580	19900	1430	1510	5790	907
17	600	2420	2010	2920	2110	21400	2450	20800	1310	1650	4650	907
18	640	2150	2530	2680	2080	13800	2420	15200	1270	1930	3760	881
19	730	1960	4000	2400	2060	10200	2420	11800	1350	1690	2860	863
20	690	1800	5380	2120	2010	8560	2470	8940	1210	1390	2390	919
21	590	1580	5920	2060	1900	7830	2530	7120	1270	1210	1920	860
22	530	1700	5720	2200	2000	7690	2520	5930	2040	1180	1790	786
23	520	1520	5070	2100	1900	7590	2370	5880	2230	1150	1590	805
24	510	2150	4390	2000	1900	7120	2230	4480	2100	1030	1560	789
25	520	2320	3810	2410	1970	6290	2160	4080	1960	1030	1350	886
26	620	2980	3440	9940	2050	6730	2140	3690	1550	1160	1310	846
27	850	2990	3130	41600	2280	19500	2210	3350	1420	1170	1280	890
28	990	2720	2850	30000	2710	28200	5110	3030	2560	2720	1300	836
29	1200	2580	2650	17000	---	20900	6520	2810	2730	2500	1270	750
30	1100	2600	2530	12000	---	14100	5170	2540	2160	1480	1170	754
31	940	---	2420	8600	---	10400	---	2450	---	1500	1750	---
TOTAL	19409	139370	115960	193920	78750	308900	112610	195720	54500	54610	105920	31628
MEAN	626	4646	3741	6255	2813	9965	3754	6314	1817	1762	3417	1054
MAX	1200	30000	7670	41600	6600	36700	8420	21700	2730	3180	9950	2340
MIN	460	830	1920	1630	1900	1920	2140	2450	1210	1030	1170	750
CFSM	.21	1.53	1.23	2.06	.93	3.28	1.24	2.08	.60	.58	1.12	.35
IN.	.24	1.71	1.42	2.37	.96	3.78	1.38	2.39	.67	.67	1.30	.39

CAL YR 1977	TOTAL	646884	MEAN	1772	MAX	30000	MIN	354	CFSM	.58	IN	7.92
WTR YR 1978	TOTAL	1411297	MEAN	3867	MAX	41600	MIN	460	CFSM	1.27	IN	17.27

POTOMAC RIVER BASIN

01638500 POTOMAC RIVER AT POINT OF ROCKS, MD

LOCATION.--Lat 39°16'25", long 77°32'35", Frederick County, Hydrologic Unit 02070008, on left bank at downstream side of bridge on U.S. Highway 15 at Point of Rocks, 0.3 mi (0.5 km) downstream from Catoctin Creek (Virginia), 6.0 mi (9.7 km) upstream from Monocacy River, and at mile 159.5 (256.6 km).

DRAINAGE AREA.--9,651 mi² (24,996 km²).

PERIOD OF RECORD.--February 1895 to current year.

REVISED RECORDS.--WSP 192: 1895-1905. WSP 1432: 1899, 1901-2, 1904-5, 1912, 1914(M), 1915, 1917(M), 1918, 1919(M), 1920, 1921-23(M), 1924, 1925-28(M), 1930(M).

GAGE.--Water-stage recorder. Datum of gage is 200.63 ft (61.152 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 28, 1929, nonrecording gage at same site. Prior to Sept. 2, 1902, at datum about 0.45 ft (0.137 m) higher.

REMARKS.--Records good. Low flow affected slightly since 1913 by Stony River Reservoir (station 01595200) and since December 1950 by Savage River Reservoir (station 01597500). Low flow affected extensively at times by run-of-the-river hydroelectric plants. Gage-height telemeter at station.

AVERAGE DISCHARGE.--83 years, 9,321 ft³/s (264.0 m³/s), 13.11 in/yr (333 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 480,000 ft³/s (13,600 m³/s) Mar. 19, 1936, gage height, 41.03 ft (12.506 m), from rating curve extended above 300,000 ft³/s (8,500 m³/s) on the basis of adjustment of figure of peak flow at station near Washington for inflow and storage, and slope-area measurement of peak flow; minimum, 530 ft³/s (15.0 m³/s) Sept. 11, 12, 1966, gage height, 0.27 ft (0.082 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 2, 1889, reached a stage of 40.2 ft (12.25 m), from floodmarks, discharge, about 460,000 ft³/s (13,000 m³/s), from rating curve extended as explained above.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 35,000 ft³/s (990 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 9	1700	64300 1820	13.17 4.014	Mar. 28	0530	107000 3030	18.43 5.617
Dec. 2	2400	39300 1110	9.43 2.874	May 17	1700	100000 2830	17.67 5.386
Jan. 28	0600	132000 3740	21.22 6.468	July 5	1530	35600 1010	8.80 2.682
Mar. 16	1030	*139000 3940	22.01 6.709	Aug. 8	1800	37200 1050	9.07 2.765

Minimum discharge, 1,290 ft³/s (36.5 m³/s) Oct. 6, gage height, 0.81 ft (0.247 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1690	3300	13200	9130	22000	7360	32100	10800	8390	5730	5960	5670
2	1820	2910	32600	8290	18100	7120	26800	9640	7800	5140	6290	7800
3	1650	2650	36900	7500	15600	6920	23000	8820	7610	6170	8040	6870
4	1520	3200	26800	6640	13700	6570	20800	8220	7300	12100	7640	5710
5	1440	3610	19900	5860	11700	6090	18900	8060	6790	30600	11200	4600
6	1330	5160	16600	5760	10300	5970	17500	8350	6540	22600	12100	3950
7	1410	8980	15100	5680	8630	5770	17200	11200	6340	14200	17400	3510
8	1510	23200	14700	6000	8590	5470	16400	11800	5970	10200	34300	3260
9	1530	54200	12300	11000	8680	5400	15600	11200	5820	8900	28600	2970
10	1480	40800	10500	17700	8180	5410	14300	11500	5630	8130	17700	2780
11	1630	26200	9130	16200	8010	6150	13200	13000	5400	7410	12900	2490
12	1840	21800	7790	16100	7910	7700	12300	12700	5140	9070	11700	2560
13	2290	17300	7080	13500	7540	14000	11400	12100	5240	8460	14300	2740
14	2010	13300	6900	12500	7390	29900	10500	22300	5050	7010	14400	2780
15	1970	10500	7160	11500	6940	83200	9590	75100	4610	6010	14200	2800
16	2040	8850	7750	10400	6640	133000	8850	81000	4370	5660	13900	2830
17	2450	7990	10500	9300	6580	90600	8200	96300	4170	5510	11700	2770
18	2660	6930	14700	8510	6540	53900	7800	81900	4160	5930	9770	2740
19	3790	6050	21000	7780	6460	39200	7830	56500	4110	5650	7820	2640
20	3220	5470	26700	7100	6030	38000	8540	41400	3900	5280	6490	2500
21	2850	5210	27200	6270	5820	43000	9890	32100	3820	4730	5410	2610
22	2500	4940	25900	6810	5690	41000	9840	25300	4620	4170	4800	2480
23	2200	5220	22500	6370	5720	42300	9450	20500	5310	3880	4350	2410
24	1970	5890	18200	6060	5500	39600	8810	17200	5080	3500	3940	2270
25	1810	7250	15300	9310	5610	32800	8220	15500	5020	3330	3760	2280
26	1890	10900	14500	25500	5950	30600	7840	14900	4530	3300	3390	2170
27	2100	10800	13900	78300	6300	68300	7530	13700	4280	3290	3350	2170
28	2250	10100	12500	110000	6660	102000	9110	11900	4540	4020	3680	2060
29	3170	9240	10500	53200	---	78300	13400	10700	5650	5890	3810	1880
30	3320	8620	9500	36400	---	53500	12500	9650	5140	4750	4170	1780
31	3450	---	9230	27600	---	39600	---	8950	---	4830	3960	---
TOTAL	66790	350570	496540	562270	242770	1128730	397400	772290	162330	235450	311030	96080
MEAN	2155	11690	16020	18140	8670	36410	13250	24910	5411	7595	10030	3203
MAX	3790	54200	36900	110000	22000	133000	32100	96300	8390	30600	34300	7800
MIN	1330	2650	6900	5680	5500	5400	7530	8060	3820	3290	3350	1780
CAL YR 1977	TOTAL	2600720	MEAN	7125	MAX	73700	MIN	1100	CFSM	0.74	IN	10.02
WTR YR 1978	TOTAL	4822250	MEAN	13210	MAX	133000	MIN	1330	CFSM	1.37	IN	18.58

MONONGAHELA RIVER BASIN

43

03050400 TYGART VALLEY RIVER AT ELKINS, WV

LOCATION.--Lat 38°55'00", long 79°50'43", Randolph County, Hydrologic Unit 05020001, at city water plant, at Elkins, 2.5 mi (4.0 km) upstream from gaging station.

DRAINAGE AREA.--268 mi² (694 km²) upstream from water plant; 272 mi² (704 km²) upstream from gaging station.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: January 1947 to current year.

REMARKS.--No appreciable inflow between water plant and gaging station except during periods of heavy local rains. During flood periods part of the flow is diverted around the water plant in a flood by-pass channel.

COOPERATIONS.--Temperature records were furnished by City of Elkins pump station.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum daily, 33.0°C July 22, 1952; minimum daily, 0.0°C on many days during winter months most years.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum daily, 25.0°C July 26; minimum daily, 1.0°C Dec. 9-12, 27, 28, Jan. 2, 3, 12-20, 23, 24, Feb. 14, 23, 24, and Mar. 4.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.0	11.0	5.5	3.5	1.5	1.5	10.5	15.0	23.0	20.0	22.0	23.5
2	17.0	11.0	5.5	1.0	1.5	1.5	10.5	14.5	22.0	21.5	22.0	23.0
3	16.0	11.5	5.5	1.0	2.0	1.5	12.0	14.0	21.0	21.0	23.0	22.0
4	15.5	12.0	5.5	1.5	1.5	1.0	13.5	13.5	21.5	19.5	23.0	22.0
5	15.5	14.5	6.0	3.0	2.0	1.5	14.0	10.5	19.5	20.0	23.0	22.0
6	15.0	16.5	5.0	3.0	1.5	1.5	14.0	10.5	19.0	21.0	22.0	22.0
7	13.0	16.5	3.5	3.5	1.5	1.5	12.0	13.0	19.5	20.5	22.0	22.0
8	12.0	15.5	1.5	3.5	1.5	2.0	13.5	14.0	19.5	21.0	21.5	22.0
9	13.0	16.5	1.0	2.0	1.5	3.0	14.0	15.0	19.0	22.0	21.0	22.0
10	12.0	14.5	1.0	1.5	1.5	2.0	14.5	15.0	18.5	22.0	20.5	23.0
11	12.0	12.0	1.0	1.5	1.5	3.0	15.0	15.0	19.5	22.0	20.5	23.0
12	11.5	8.0	1.0	1.0	1.5	3.0	15.0	14.5	19.5	21.5	21.0	22.0
13	11.0	5.5	1.5	1.0	1.5	3.0	15.0	14.0	20.0	21.5	21.0	22.0
14	10.0	6.0	3.0	1.0	1.0	4.0	14.0	13.5	20.0	21.5	21.5	22.0
15	10.0	4.5	4.0	1.0	1.5	4.5	13.0	13.5	18.5	22.0	21.5	22.0
16	9.5	5.0	5.0	1.0	1.5	4.5	13.0	12.0	18.0	21.5	23.0	22.0
17	9.5	5.0	5.0	1.0	1.5	4.0	14.0	13.5	18.0	21.5	23.5	21.5
18	9.0	6.0	4.5	1.0	1.5	2.0	13.5	13.0	19.0	22.0	23.5	21.5
19	9.0	6.0	5.5	1.0	1.5	3.5	13.5	12.0	19.5	22.0	23.5	22.0
20	9.0	5.0	4.5	1.0	1.5	4.5	12.0	15.0	19.5	23.5	23.0	23.0
21	9.5	5.0	4.5	1.5	1.5	5.0	9.5	15.0	19.5	23.5	24.0	22.0
22	9.5	9.5	4.5	1.5	1.5	5.0	9.0	15.5	20.0	24.0	23.5	21.5
23	9.5	6.5	2.0	1.0	1.0	7.0	10.0	16.5	19.5	24.0	23.5	21.5
24	11.0	6.0	3.0	1.0	1.0	9.0	11.5	18.0	19.5	24.5	23.5	21.0
25	10.5	6.0	3.5	2.0	1.5	9.0	12.0	18.5	20.0	24.5	23.5	21.0
26	11.5	4.5	3.0	2.0	1.5	8.5	11.0	18.0	20.0	25.0	23.5	20.0
27	11.5	4.0	1.0	2.0	1.5	8.0	12.0	19.0	20.0	24.5	23.0	20.0
28	14.5	4.5	1.0	2.0	1.5	9.0	12.0	21.0	20.5	24.0	23.0	19.5
29	13.5	5.5	1.5	2.0	---	9.0	12.0	22.0	20.0	24.0	23.5	18.5
30	13.5	5.5	4.0	2.0	---	9.5	15.0	22.0	20.0	24.0	23.0	18.5
31	12.0	---	4.0	1.5	---	9.5	---	22.0	---	22.0	23.0	---
MEAN	12.0	8.5	3.5	1.5	1.5	4.5	12.5	15.5	20.0	22.5	22.5	21.5
WTR YR 1978	MEAN	12.0	MAX	25.0	MIN	1.0						

MONONGAHELA RIVER BASIN

03050500 TYGART VALLEY RIVER NEAR ELKINS, WV

LOCATION.--Lat 38°55'30", long 79°52'45", Randolph County, Hydrologic Unit 05020001, on left bank 1.4 mi (2.3 km) upstream from Leading Creek, 1.5 mi (2.4 km) west of Elkins, and at mile 78.3 (126.0 km).

DRAINAGE AREA.--272 mi² (704 km²).

PERIOD OF RECORD.--October 1944 to current year. Prior to October 1960, published as Tygart River near Elkins.

GAGE.--Water-stage recorder. Datum of gage is 1,893.95 ft (577.276 m) National Geodetic Vertical Datum, adjustment of 1912. Prior to Nov. 16, 1944, nonrecording gage and Nov. 16, 1944, to Sept. 30, 1951, water-stage recorder at site 200 ft (61 m) upstream at same datum.

REMARKS.--Records good except those for December, January, and February, which are poor. Slight regulation at times by flood-diversion dam upstream from station.

AVERAGE DISCHARGE.--34 years, 533 ft³/s (15.09 m³/s), 26.61 in/yr (676 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,100 ft³/s (371 m³/s) Dec. 31, 1969, gage height, 15.65 ft (4.770 m); maximum gage height, 15.84 ft (4.828 m) Jan. 27, 1978; minimum daily, 0.1 ft³/s (0.003 m³/s) Sept. 20-29, 1959; minimum gage height, 1.01 ft (0.308 m) Sept. 26-28, 1959.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,000 ft³/s (140 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 27	0030	*10700 303	15.84 4.828	July 4	0245	6110 173	12.31 3.752
Mar. 15	1330	5870 166	12.07 3.679				

Minimum discharge, 7.2 ft³/s (0.20 m³/s) Sept. 14, gage height, 1.22 ft (0.372).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52	137	2780	240	350	98	401	252	215	268	944	274
2	272	127	1760	220	300	100	346	212	158	199	308	155
3	305	99	956	210	250	97	305	179	769	2450	214	109
4	169	118	701	200	220	110	268	231	1250	4780	583	87
5	141	100	677	210	200	100	324	554	557	1520	305	50
6	129	88	1190	240	180	100	360	511	343	700	583	50
7	120	78	904	298	160	99	565	371	251	362	1680	42
8	117	84	601	451	150	106	572	371	338	238	1700	19
9	628	117	450	1360	135	162	426	613	1200	240	966	29
10	1190	118	350	1140	125	822	343	804	994	220	451	26
11	458	150	283	600	120	1060	302	648	567	234	286	24
12	278	177	255	500	125	1750	297	461	356	203	1430	21
13	195	165	342	450	130	2030	252	621	258	146	744	24
14	155	150	668	410	140	3940	220	3060	202	346	854	18
15	134	137	2420	330	139	5570	189	1900	156	656	776	43
16	250	134	1400	269	128	2240	169	1220	123	249	310	30
17	1010	144	848	223	115	1170	153	1420	104	210	205	30
18	504	173	612	334	114	752	150	1040	95	199	159	37
19	426	189	565	451	110	692	163	957	82	148	132	39
20	676	175	561	370	105	1240	236	767	94	114	114	30
21	572	163	583	330	95	1380	602	568	301	84	93	27
22	395	203	510	300	94	1720	962	407	495	81	67	27
23	286	1140	403	270	92	1140	813	352	237	75	54	41
24	223	1320	358	250	95	890	636	430	141	72	35	44
25	185	836	531	1230	106	998	481	431	100	90	41	34
26	169	784	711	7000	107	2280	410	332	89	115	53	26
27	243	672	470	7150	100	3040	625	262	2160	122	48	25
28	245	561	370	2500	86	1440	504	215	1970	238	53	25
29	203	688	320	1000	---	899	371	181	1120	111	54	23
30	175	2140	290	600	---	652	297	165	456	103	45	22
31	151	---	260	435	---	487	---	188	---	1640	169	---
TOTAL	10056	11167	23129	29571	4071	37164	11742	19723	15181	16213	13456	1431
MEAN	324	372	746	954	145	1199	391	636	506	523	434	47.7
MAX	1190	2140	2780	7150	350	5570	962	3060	2160	4780	1700	274
MIN	52	78	255	200	86	97	150	165	82	72	35	18
CFSM	1.19	1.37	2.74	3.51	.53	4.41	1.44	2.34	1.86	1.92	1.60	.18
IN.	1.38	1.53	3.16	4.04	.56	5.08	1.61	2.70	2.08	2.22	1.84	.20
CAL YR 1977	TOTAL	151668	MEAN 416	MAX 6720	MIN 14	CFSM 1.53	IN 20.74					
WTR YR 1978	TOTAL	192904	MEAN 529	MAX 7150	MIN 18	CFSM 1.95	IN 26.38					

03051000 TYGART VALLEY RIVER AT BELINGTON, WV

LOCATION.--Lat 39°01'45", long 79°56'10", Barbour County, Hydrologic Unit 05020001, on left bank opposite mouth of Mill Creek, 0.2 mi (0.3 km) downstream from highway bridge at Belington, and mile 61.5 (99.0 km).

DRAINAGE AREA.--408 mi² (1,057 km²), excluding that of Mill Creek.

PERIOD OF RECORD.--June 1907 to current year. Prior to October 1960, published as Tygart River at Belington.

REVISED RECORDS.--WSP 823: Drainage area. WSP 953: 1933(M), 1941(M). WSP 1335: 1912, 1914-15, 1916(M), 1921-22(M), 1925(M), 1928, 1933. WSP 1385: 1909(M), 1913-15(M), 1917-18, 1924(M), 1928(M), 1932, 1934, 1936, 1938-39, 1948-49.

GAGE.--Water-stage recorder. Datum of gage is 1,679.49 ft (511.909 m) National Geodetic Vertical Datum, adjustment of 1912. Prior to Apr. 25, 1939, nonrecording gage at site 0.2 mi (0.3 km) upstream at same datum.

REMARKS.--Records good except those for December, January, and February, which are poor. National Weather Service gage-height telemeter at station.

AVERAGE DISCHARGE.--71 years, 803 ft³/s (22.74 m³/s), 26.73 in/yr (679 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,400 ft³/s (521 m³/s) July 25, 1912, gage height, 20.3 ft (6.19 m) from floodmarks, site then in use; minimum, 0.1 ft³/s (0.003 m³/s) Sept. 13, 1930, gage height, 1.56 ft (0.475 m), site then in use.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 1888, reached a stage of 21.7 ft (6.61 m), former site, from floodmarks, discharge, 21,200 ft³/s (600 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,200 ft³/s (180 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 27	0400	*13800 391	16.35 4.983	July 4	0800	8590 243	12.74 3.883
Mar. 15	0300	9850 279	13.60 4.145				

Minimum discharge, 24 ft³/s (0.68 m³/s) Sept. 29, gage height, 2.27 ft (0.692 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	118	243	5030	471	540	150	790	510	386	505	2130	986
2	380	227	3210	420	450	200	664	445	294	325	741	425
3	592	213	1660	360	400	210	598	385	701	3050	415	221
4	425	170	1190	330	350	200	537	470	1970	7680	834	181
5	233	233	1140	380	320	200	603	1420	980	2830	565	115
6	245	155	2050	448	300	190	675	1410	598	1260	818	87
7	292	170	1590	591	280	180	980	980	425	708	2240	78
8	270	168	1000	867	250	187	1240	878	543	450	2620	61
9	998	224	840	1710	240	250	950	1300	1660	420	1600	38
10	2340	276	670	1900	230	1170	763	1510	1600	380	840	48
11	1020	420	510	1120	220	1970	669	1230	944	340	515	45
12	617	461	420	840	230	2550	686	911	587	335	1350	44
13	431	414	530	760	250	3270	603	974	425	229	1120	51
14	331	362	851	741	270	7100	526	4810	320	636	1120	47
15	276	326	3720	592	300	9060	455	3370	245	1390	1360	48
16	536	302	2370	457	280	4430	405	2060	204	603	686	67
17	1990	344	1430	418	211	2160	370	2290	160	505	420	103
18	1170	483	1040	621	209	1410	355	1860	148	410	345	110
19	826	489	905	780	190	1230	420	1630	127	278	229	78
20	1160	441	920	653	185	2040	702	1380	112	204	184	61
21	1060	400	1080	600	180	2440	1720	1030	330	139	145	51
22	779	445	946	500	175	2790	2240	756	708	122	117	48
23	584	1810	730	450	170	1990	1720	616	470	105	84	49
24	458	2240	630	400	170	1470	1270	899	229	110	72	65
25	374	1580	913	1960	176	1440	992	1430	166	127	51	60
26	333	1320	1270	9790	189	3240	840	893	133	157	58	49
27	355	1200	980	10800	190	4940	933	623	3080	204	67	43
28	425	1090	730	2900	190	2590	889	473	3600	587	60	40
29	356	1300	550	1560	---	1710	708	377	2080	261	72	32
30	306	3560	500	933	---	1240	592	415	873	261	67	39
31	269	---	518	730	---	956	---	364	---	2780	515	---
TOTAL	19549	21066	39923	45082	7145	62963	24895	37699	24098	27391	21440	3370
MEAN	631	702	1288	1454	255	2031	830	1216	803	884	692	112
MAX	2340	3560	5030	10800	540	9060	2240	4810	3600	7680	2620	986
MIN	118	155	420	330	170	150	355	364	112	105	51	32
CFSM	1.55	1.72	3.16	3.56	.63	4.98	2.03	2.98	1.97	2.17	1.70	.28
IN.	1.78	1.92	3.64	4.11	.65	5.74	2.27	3.44	2.20	2.50	1.95	.31

CAL YR 1977	TOTAL	253963	MEAN 696	MAX 9580	MIN 41	CFSM 1.71	IN 23.16
WTR YR 1978	TOTAL	334621	MEAN 917	MAX 10800	MIN 32	CFSM 2.25	IN 30.51

MONONGAHELA RIVER BASIN

03052000 MIDDLE FORK RIVER AT AUDRA, WV

LOCATION.--Lat 39°02'25", long 80°04'10", Barbour County, Hydrologic Unit 05020001, on right bank at Audra, 600 ft (183 m) upstream from highway bridge, and at mile 2.7 (4.3 km).

DRAINAGE AREA.--149 mi² (386 km²).

PERIOD OF RECORD.--February 1942 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,670 ft (509 m), from topographic map.

REMARKS.--Records good except those for Dec. 23 to Mar. 9, which are poor.

AVERAGE DISCHARGE.--36 years, 345 ft³/s (9.770 m³/s), 31.44 in/yr (799 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,500 ft³/s (326 m³/s) June 23, 1972, gage height, 13.67 ft (4.167 m), from rating curve extended above 6,800 ft³/s (190 m³/s) on basis of slope-area measurement of peak flow; minimum, 0.2 ft³/s (0.006 m³/s) Oct. 11-27, 1953; minimum gage height, 1.07 ft (0.326 m) Sept. 9, 1957.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s (85 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 26	0945	*6880 195	10.14 3.091	July 3	2115	5040 143	8.72 2.658
Mar. 14	2045	5760 163	9.28 2.829				

Minimum discharge, 8.6 ft³/s (0.24 m³/s) Sept. 30, gage height, 1.62 ft (0.494 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	101	2050	140	240	110	389	219	155	264	530	303
2	264	95	1120	130	210	110	317	185	115	182	289	136
3	257	92	710	125	190	115	268	160	185	1850	182	115
4	205	88	540	120	170	115	244	299	417	2660	240	112
5	155	83	535	150	150	110	297	525	275	1060	198	65
6	143	79	790	200	140	110	296	500	205	560	198	40
7	182	79	640	230	130	110	409	443	166	334	870	29
8	155	93	470	270	120	130	465	465	244	222	872	24
9	470	110	381	800	110	200	425	615	555	208	490	20
10	730	117	320	640	100	465	365	605	461	138	324	18
11	456	296	275	450	96	745	331	500	328	212	229	16
12	320	296	258	340	100	1010	357	413	233	185	243	15
13	236	264	300	280	110	1350	306	413	202	121	172	17
14	185	226	370	240	120	3790	268	1530	146	117	275	25
15	155	205	1540	210	130	3310	236	1050	112	373	188	25
16	341	188	856	200	140	1450	205	750	90	222	129	24
17	976	202	590	190	130	862	185	635	72	222	108	34
18	610	254	456	540	125	615	182	515	63	163	76	43
19	465	236	397	450	125	525	215	490	59	115	65	27
20	565	219	345	380	120	725	434	405	48	104	64	20
21	500	202	345	330	140	964	946	345	48	81	51	16
22	397	247	314	240	135	755	1150	286	289	64	37	16
23	317	535	272	200	130	710	844	240	195	55	28	17
24	257	665	247	180	120	615	645	381	110	66	22	27
25	208	630	381	1070	120	570	525	405	75	84	20	20
26	182	600	300	5050	130	868	447	357	63	124	18	17
27	179	485	212	1620	120	1140	381	289	1130	127	19	14
28	157	485	192	832	115	940	320	240	1830	230	19	12
29	138	575	175	525	---	750	278	208	790	119	19	11
30	124	1420	163	350	---	585	243	208	413	249	29	9.6
31	112	---	216	280	---	466	---	185	---	930	222	---
TOTAL	9506	9167	15760	16762	3766	24320	11973	13861	9074	11441	6226	1267.6
MEAN	307	306	508	541	135	785	399	447	302	369	201	42.3
MAX	976	1420	2050	5050	240	3790	1150	1530	1830	2660	872	303
MIN	65	79	163	120	96	110	182	160	48	55	18	9.6
CFSM	2.06	2.05	3.41	3.63	.91	5.27	2.68	3.00	2.03	2.48	1.35	.28
IN.	2.37	2.29	3.93	4.18	.94	6.07	2.99	3.46	2.27	2.86	1.55	.32

CAL YR 1977 TOTAL 100377.9 MEAN 275 MAX 3210 MIN 9.9 CFSM 1.85 IN 25.06
WTR YR 1978 TOTAL 133123.6 MEAN 365 MAX 5050 MIN 9.6 CFSM 2.45 IN 33.24

47

LOCATION.--Lat 38°57'50", long 80°09'10", Upshur County, Hydrologic Unit 05020001, on right bank 300 ft (91 m) downstream from Left Fork, 4.5 mi (7.2 km) southeast of Buckhannon, and at mile 6.0 (9.7 km).

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

REVISID RECORDS.--WSP 1725: 1955(M).

GAGE.--Water-stage recorder. Altitude of gage is 1,530 ft (466 m), from topographic map.

REMARKS.--Records good except those for Dec. 26 to Apr. 14, which are poor.

AVERAGE DISCHARGE.--32 years, 26.4 ft³/s (0.748 m³/s), 24.72 in/yr (628 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,000 ft³/s (56.6 m³/s) June 25, 1950, from rating curve extended above 600 ft³/s (17 m³/s); maximum gage height, 6.29 ft (1.917 m) Mar. 19, 1963; no flow for several days in 1951-56, 1964-66.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 713 ft³/s (20.2 m³/s) Jan. 26, gage height, 4.71 ft (1.436 m), no other peak above base of 400 ft³/s (11 m³/s); minimum, 1.6 ft³/s (0.045 m³/s) Sept. 30, gage height, 0.34 ft (0.104 m).

	OCT	NOV	DEC	JAN	FEH	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	6.7	153	14	20	9.3	28	16	6.1	13	58	47
2	38	6.5	73	13	18	9.0	23	14	4.8	9.2	21	15
3	24	6.3	45	12	16	9.5	19	12	11	252	13	8.9
4	14	6.3	36	12	14	8.9	16	55	7.6	156	17	6.3
5	9.5	6.1	51	14	14	8.6	17	70	5.2	54	10	5.0
6	15	5.9	65	19	13	8.2	19	51	4.8	26	11	4.2
7	15	6.5	44	23	12	8.2	24	37	6.3	14	43	3.7
8	14	11	33	25	11	8.6	30	38	28	10	42	3.4
9	88	11	28	69	10	11	26	55	32	12	21	3.0
10	55	24	24	52	9.3	39	21	48	18	8.6	13	2.8
11	27	43	20	40	8.5	94	19	36	11	17	9.5	2.5
12	19	32	17	33	8.8	123	23	26	7.9	8.2	8.9	2.3
13	13	24	19	27	9.1	190	20	38	9.2	6.3	47	2.7
14	11	18	35	23	9.8	279	16	131	5.9	13	60	2.6
15	9.2	16	65	21	11	148	14	77	4.6	7.9	29	2.8
16	90	14	47	19	12	73	13	52	4.0	6.9	15	14
17	92	22	36	18	11	47	12	41	3.8	9.2	10	8.6
18	43	25	32	100	9.7	36	13	34	3.4	5.9	6.7	4.0
19	36	22	26	66	10	37	16	33	2.9	4.4	5.2	3.1
20	42	19	26	47	9.2	42	60	26	2.8	4.3	4.3	2.8
21	33	17	26	34	10	38	96	21	5.6	3.4	3.7	2.5
22	24	26	23	24	9.8	31	100	16	21	3.0	3.1	2.7
23	18	69	20	19	9.3	25	63	14	6.3	2.9	2.8	3.4
24	15	60	19	17	9.1	21	41	26	4.3	4.0	2.6	2.7
25	12	46	40	120	8.9	24	32	21	3.4	8.2	2.4	2.4
26	12	41	35	338	9.0	40	32	17	26	5.0	2.4	2.0
27	11	35	25	150	9.2	68	29	13	96	16	2.5	2.0
28	9.8	52	21	80	9.2	71	25	9.8	179	32	2.7	1.9
29	8.9	88	18	47	---	54	21	8.2	44	9.5	2.4	1.8
30	7.9	117	16	30	---	45	19	9.8	20	99	5.0	1.6
31	7.3	---	15	23	---	36	---	7.6	---	213	106	---
TOTAL	839.6	876.3	1133	1529	310.9	1642.3	887	1053.4	584.9	1035.9	580.2	167.7
MEAN	27.1	29.2	36.5	45.3	11.1	53.0	29.6	34.0	19.5	33.4	18.7	5.59
MAX	92	117	153	338	20	279	100	131	179	252	106	47
MIN	7.3	5.9	15	12	8.5	8.2	12	7.6	2.8	2.9	2.4	1.6
CFSM	1.47	2.01	2.52	3.40	.77	3.66	2.04	2.35	1.35	2.30	1.29	.39
IN.	2.15	2.25	2.91	3.92	.80	4.21	2.28	2.70	1.50	2.66	1.49	.43
CAL YR 1977	TOTAL	10118.50	MEAN 27.7	MAX 442	MIN .51	CFSM 1.91	IN 25.96					
WTR YR 1978	TOTAL	10640.20	MEAN 29.2	MAX 338	MIN 1.6	CFSM 2.01						

03053500 BUCKHANNON RIVER AT HALL, WV

LOCATION.--Lat 39°03'05", Long 80°06'50", Barbour County, Hydrologic Unit 05020001, on right bank 0.2 mi (0.3 km) upstream from highway bridge at Hall, 1.0 mi (1.6 km) upstream from Pecks Run, and at mile 7.5 (12.1 km).

DRAINAGE AREA.--277 mi² (717 km²).

PERIOD OF RECORD.--June 1907 to May 1909 (gage heights only), April 1915 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 783: 1918(M).

GAGE.--Water-stage recorder. Datum of gage is 1,369.15 ft (417.317 m) Baltimore & Ohio RR datum. June 1907 to May 25, 1909, nonrecording gage at site 0.2 mi (0.3 km) downstream at datum 4.12 ft (1.256 m) lower. Apr. 15, 1915, to June 8, 1939, nonrecording gage at site 500 ft (152 m) downstream at present datum.

REMARKS.--Records good except those for December, January, and February, which are poor.

AVERAGE DISCHARGE.--63 years, 591 ft³/s (16.74 m³/s), 28.97 in/yr (736 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,000 ft³/s (368 m³/s) Mar. 7, 1967, gage height, 15.07 ft (4.593 m), from rating curve extended above 9,100 ft³/s (260 m³/s); minimum, 0.2 ft³/s (0.006 m³/s) Oct. 23, 27, 1930, gage height, 1.30 ft (0.396 m), site then in use.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,500 ft³/s (130 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 26	1000	*10200 289	13.09 3.990	July 4	0445	4820 137	9.26 2.822
Mar. 15	0600	6450 183	10.42 3.176				

Minimum discharge, 27 ft³/s (0.76 m³/s) Sept. 30, gage height, 3.93 ft (1.198 m).

DISCHARGE* IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	139	143	3770	330	390	180	646	326	222	435	1490	972
2	621	133	2440	310	350	180	526	277	165	281	700	474
3	677	125	1300	280	310	180	436	235	192	1470	425	237
4	495	121	926	250	280	170	395	358	506	4210	497	191
5	350	116	863	280	260	165	420	1090	378	1910	415	139
6	290	113	1370	385	240	160	460	906	261	922	369	106
7	355	110	1000	454	220	160	556	669	200	560	551	84
8	330	127	750	508	200	170	658	610	229	366	1320	70
9	952	172	640	1160	190	269	574	895	930	384	961	60
10	2050	183	530	1220	180	793	508	967	796	338	611	53
11	1080	481	400	902	170	1560	460	775	531	631	419	47
12	658	522	320	660	170	1970	508	614	357	806	374	42
13	455	403	350	560	180	2520	484	549	285	432	362	43
14	335	331	450	470	190	4390	420	1800	243	321	751	42
15	267	287	1430	420	210	5680	365	1980	172	599	597	48
16	552	262	1420	380	230	2630	325	1300	135	416	394	54
17	1890	287	998	370	210	1500	285	1050	114	293	296	108
18	1200	415	772	1060	200	1050	269	839	98	225	200	97
19	802	394	658	1310	200	849	312	815	84	166	146	77
20	906	339	568	918	180	926	544	715	74	227	116	56
21	860	308	510	737	210	1050	1470	574	70	291	96	45
22	673	338	450	500	190	1350	2140	454	243	170	80	45
23	520	782	420	370	180	1110	1700	364	204	127	67	51
24	403	1120	410	320	180	863	1140	466	115	132	57	60
25	322	1040	568	2280	175	772	840	516	80	166	51	60
26	272	1000	863	9000	200	950	731	388	72	292	47	48
27	256	875	670	4000	200	1530	672	306	1310	266	45	41
28	234	998	540	1500	190	1540	552	246	2870	367	56	36
29	206	1230	450	900	---	1300	447	198	1620	247	56	32
30	181	2140	410	580	---	998	377	184	670	225	50	28
31	159	---	370	450	---	779	---	171	---	1550	654	---
TOTAL	18730	14895	26616	33064	6085	37744	19220	20637	13226	18825	12253	3446
MEAN	604	497	859	1067	217	1218	641	666	441	607	395	115
MAX	2050	2140	3770	9000	390	5680	2140	1980	2870	4210	1490	972
MIN	139	110	320	250	170	160	269	171	70	127	45	28
CFSM	2.18	1.75	3.10	3.85	.78	4.40	2.31	2.40	1.59	2.19	1.43	.42
IN.	2.52	2.00	3.57	4.44	.82	5.07	2.58	2.77	1.78	2.53	1.65	.46

CAL YR 1977 TOTAL 169909 MEAN 466 MAX 4850 MIN 12 CFSM 1.68 IN 22.82
WTR YR 1978 TOTAL 224741 MEAN 616 MAX 9000 MIN 28 CFSM 2.22 IN 30.18

03054500 TYGART VALLEY RIVER AT PHILIPPI, WV

LOCATION.--Lat 39°09'00", long 80°02'25", Barbour County, Hydrologic Unit 05020001, on right bank at Philippi, 0.2 mi (0.3 km) downstream from Anglins Run, 5.0 mi (8.0 km) downstream from Buckhannon River, and at mile 44.9 (72.2 km).

DRAINAGE AREA.--916 mi² (2,372 km²).

PERIOD OF RECORD.--April 1940 to current year. Prior to October 1960, published as Tygart River at Philippi.

GAGE.--Water-stage recorder. Datum of gage is 1,280.55 ft (390.312 m) National Geodetic Vertical Datum of 1929. Prior to May 23, 1940, nonrecording gage at same site and datum.

REMARKS.--Records good except those for December, January and February, which are poor.

AVERAGE DISCHARGE.--38 years, 1,838 ft³/s (52.05 m³/s), 27.25 in/yr (692 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 43,000 ft³/s (1,220 m³/s) Mar. 7, 1967, gage height, 25.93 ft (7.903 m); minimum, 4.9 ft³/s (0.14 m³/s) Oct. 10-12, 21, 1953; minimum gage height, 0.92 ft (0.280 m) Sept. 9, 10, 1957.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 25, 1912, reached a stage of 27.3 ft (8.32 m), read on National Weather Service gage 0.2 mi (0.3 km) downstream, or about 26 ft (8 m), present site and datum, discharge, about 37,000 ft³/s (1,100 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 13,000 ft³/s (370 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 26	1200	*27100 767	20.15 6.142	July 4	0500	16000 453	14.89 4.538
Mar. 15	0100	20500 581	17.31 5.276				

Minimum discharge, 74 ft³/s (2.10 m³/s) Sept. 30, gage height, 1.71 ft (0.521 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	319	524	11700	1160	1100	467	1920	1140	779	1480	5340	2700
2	1190	479	8020	1000	1000	442	1570	974	658	965	2290	1440
3	1850	452	4320	900	870	440	1330	828	688	4400	1340	700
4	1430	407	3040	820	800	430	1160	954	2880	14600	1840	543
5	938	415	2720	900	720	420	1210	2960	1940	7110	1600	400
6	795	398	4340	1170	640	430	1410	3230	1240	3290	1410	270
7	958	357	3500	1430	600	440	1770	2390	909	1960	3320	220
8	924	373	2500	1810	560	490	2430	2080	936	1350	5120	189
9	2130	478	2100	3400	520	597	2050	2850	2880	1210	3600	155
10	5710	544	1700	4160	500	1580	1700	3320	3230	1080	2140	123
11	3230	1100	1300	2790	480	3960	1480	2790	2120	1110	1430	126
12	1940	1450	1100	2100	500	5990	1540	2170	1420	1630	1680	115
13	1350	1240	1300	1800	522	7390	1430	1890	1060	990	2020	135
14	999	1040	1680	1500	589	14500	1220	7170	852	1360	2080	130
15	799	911	6120	1300	626	18000	1050	7480	639	3320	2330	138
16	1220	831	5390	1250	593	9680	917	4690	498	1770	1530	158
17	5070	864	3480	1210	566	5080	816	4350	413	1250	1040	242
18	3770	1230	2610	2520	543	3350	751	3710	353	1020	776	292
19	2490	1290	2210	2980	500	2690	865	3230	310	732	553	231
20	2840	1150	2040	2340	450	3510	1390	2900	271	547	429	186
21	2780	1020	2180	2000	521	4310	3870	2270	333	641	349	150
22	2180	1040	2020	1500	475	5110	5810	1800	1120	428	289	132
23	1690	2520	1690	1200	442	4170	4770	1410	1170	349	244	145
24	1320	4420	1490	1100	470	3030	3400	1820	575	408	199	148
25	1050	3660	1850	5760	460	2700	2590	2630	384	394	177	177
26	884	3220	2780	23200	487	4500	2240	1980	298	597	151	150
27	835	2950	2200	15000	460	7630	2100	1460	4590	846	158	123
28	891	2860	1800	6000	430	5560	1960	1120	8350	2350	167	108
29	783	3340	1500	3300	---	4070	1590	882	5550	1060	171	95
30	674	7100	1400	2000	---	3030	1320	806	2480	1070	186	81
31	590	---	1300	1500	---	2340	---	797	---	5790	1200	---
TOTAL	53629	47663	91380	99100	16424	126336	57659	78081	48926	65107	45159	9802
MEAN	1730	1589	2948	3197	587	4075	1922	2519	1631	2100	1457	327
MAX	5710	7100	11700	23200	1100	18000	5810	7480	8350	14600	5340	2700
MIN	319	357	1100	820	430	420	751	797	271	349	151	81
CFSM	1.89	1.74	3.22	3.49	.64	4.45	2.10	2.75	1.78	2.29	1.59	.36
IN.	2.18	1.94	3.71	4.02	.67	5.13	2.34	3.17	1.99	2.64	1.83	.40
CAL YR 1977	TOTAL	573511	MEAN	1571	MAX	17100	MIN 79	CFSM 1.72	IN 23.29			
WTR YR 1978	TOTAL	739266	MEAN	2025	MAX	23200	MIN 81	CFSM 2.21	IN 30.02			

MONONGAHELA RIVER BASIN

03055500 TYGART LAKE NEAR GRAFTON, WV

LOCATION.--Lat 39°18'50", long 80°02'00", Taylor County, Hydrologic Unit 05020001, at dam on Tygart Valley River, 2.2 mi (3.5 km) upstream from Threefork Creek, and 2.4 mi (3.9 km) upstream from Grafton.

DRAINAGE AREA.--1,184 mi² (3,067 km²).

PERIOD OF RECORD.--April 1938 to current year (monthend contents only). Prior to October 1960, published as "Tygart Reservoir".

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

REMARKS.--Reservoir is formed by concrete gravity dam completed and accepted February 1938; storage began May 15, 1938. Capacity, 285,000 acre-ft (351 hm³) from sedimentation resurvey made in 1959, between elevations 991.5 ft (302.21 m), sill of valves, and 1,167.0 ft (355.70 m), crest of spillway, National Geodetic Vertical Datum of 1929. Dead storage, 2,700 acre-ft (3.33 hm³). Figures given herein represent total contents. Conservation pool elevation is 1,010.0 ft (307.85 m) and water below elevation 991.5 ft (302.21 m), cannot be withdrawn. Reservoir is used for flood control, for supplementary supply for navigation of Monongahela River during period of low flow, and for recreation.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 251,100 acre-ft (310 hm³) June 25, 1972, elevation, 1,155.22 ft (352.111 m); minimum since October 1939, 8,330 acre-ft (10.3 hm³) Jan. 25, 1940, elevation, 1,005.15 ft (306.370 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 156,300 acre-ft (193 hm³) July 5, elevation 1,117.50 ft (340.614 m); minimum, 14,610 acre-ft (18.0 hm³) Jan. 24, elevation, 1,014.95 ft (309.357 m).

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)	Change in contents (equivalent in cfs)
Sept. 30.....	1087.08	99630	-	-
Oct. 31.....	1056.82	55900	-43730	-711
Nov. 30.....	1037.20	33850	-22060	-371
Dec. 31.....	1023.93	21690	-12160	-198
CAL YR 1977	-	-	-560	-1
Jan. 31.....	1073.10	77910	+56210	+914
Feb. 28.....	1030.95	27860	-50040	-901
Mar. 31.....	1055.05	53710	+25850	+420
Apr. 30.....	1089.38	103400	+49710	+835
May 31.....	1097.19	116900	+13480	+219
June 30.....	1097.67	117800	+869	+15
July 31.....	1100.00	122000	+4280	+70
Aug. 31.....	1090.05	104500	-17520	-285
Sept. 30.....	1072.94	77670	-26860	-451
WTR YR 1978	-	-	-21960	-30

MONONGAHELA RIVER BASIN

03056000 TYGART VALLEY RIVER AT TYGART DAM NEAR GRAFTON, WV

LOCATION.--Lat 39°18'50", long 80°02'00", Taylor County, Hydrologic Unit 05020001, at Tygart Dam, 2.2 mi (3.5 km) upstream from Threefork Creek, and 2.4 mi (3.9 km) upstream from Grafton.

DRAINAGE AREA.--1,184 mi² (3,067 km²).

PERIOD OF RECORD.--June 1938 to current year. Prior to October 1960, published as Tygart River at Tygart Dam near Grafton.

GAGE.--Water-stage recorder.

REMARKS.--Discharge computed from records of flow through gates and valves in dam. Flow regulated by Tygart Lake (station 03055500).

COOPERATION.--Records furnished by Corps of Engineers.

AVERAGE DISCHARGE.--40 years, 2,324 ft³/s (65.82 m³/s), 26.66 in/yr (677 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,000 ft³/s (566 m³/s) Feb. 2, 1939; no flow Aug. 2, 1938.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,000 ft³/s (340 m³/s) July 5; minimum daily, 330 ft³/s (9.35 m³/s) June 23-26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	820	2190	2800	1900	9790	700	5520	1180	900	4650	4750	2360
2	1160	2170	5010	1500	6650	700	3180	880	900	3820	6200	2900
3	1500	2140	9290	1490	3870	590	2090	735	900	3070	3230	1990
4	1500	2100	8950	1460	3140	480	1550	590	1820	4750	1400	1440
5	1510	2050	4860	1420	3020	480	1030	1060	3110	9820	2050	1430
6	1500	1990	4300	1400	2910	480	1040	2330	3020	11700	3080	1430
7	1500	1940	7310	1420	2760	480	1050	3120	3050	9670	3080	889
8	1500	1920	7390	1840	1670	480	1090	3120	1770	6260	4530	570
9	1510	1900	6740	2380	1140	480	1140	3130	900	3070	6070	570
10	3590	1860	5120	4020	1260	1150	1150	3920	900	1520	4520	570
11	5960	1830	3420	5230	839	3510	1170	4680	1230	1520	2080	570
12	5840	1820	2450	4380	765	5770	1190	4630	1560	1520	1510	570
13	5680	1810	2430	3680	700	5920	1080	4580	1560	1520	1510	565
14	5500	2230	2390	3130	700	3630	960	4590	1560	1530	1510	565
15	3990	2600	2540	2100	700	2910	960	5540	1560	3120	1520	565
16	2570	2470	3880	1370	700	5980	960	6380	1550	3880	2230	565
17	1960	1960	4900	1380	565	10400	960	6380	1220	2310	2220	565
18	1910	1560	4710	1900	565	10600	960	6370	890	1540	1110	565
19	2800	1590	4460	3210	700	10400	960	6320	745	1220	880	565
20	2800	1600	3230	3790	700	9990	970	5460	600	890	880	560
21	3500	1600	2620	3240	700	6640	990	3300	600	890	783	560
22	4150	1590	2650	2740	700	4270	1840	1560	431	890	516	555
23	4090	1600	2620	2230	700	6750	2740	1560	330	890	516	555
24	4010	2530	2580	1830	700	9600	2100	1560	330	890	590	550
25	3910	4120	2520	2100	700	6340	1420	3380	330	890	590	706
26	3330	5260	2540	3600	700	4010	1440	4750	330	890	590	799
27	1700	5800	2590	7770	700	4820	1450	3900	2860	890	585	794
28	1640	4500	2600	11200	700	7810	1460	2090	6780	1220	580	790
29	2350	3120	2550	10900	---	9410	1470	750	8000	1540	580	789
30	2290	2610	2460	10700	---	8900	1470	788	6300	1540	580	784
31	2230	---	2370	10800	---	7650	---	900	---	2340	1020	---
TOTAL	88300	72460	124320	116110	48744	151330	45390	99533	56036	90250	61290	26686
MEAN	2848	2415	4010	3745	1741	4882	1513	3211	1868	2911	1977	890
MAX	5960	5800	9290	11200	9790	10600	5520	6380	8000	11700	6200	2900
MIN	820	1560	2370	1370	565	480	960	590	330	890	516	550

CAL YR 1977 TOTAL 729950 MEAN 2000 MAX 10900 MIN 170 MEAN‡ 1999 CFSM‡ 1.69 IN‡ 22.94
WTR YR 1978 TOTAL 980449 MEAN 2686 MAX 11700 MIN 330 MEAN‡ 2656 CFSM‡ 2.24 IN‡ 30.41

‡ Adjusted for change in contents in Tygart Lake.

MONONGAHELA RIVER BASIN

03057000 TYGART VALLEY RIVER AT COLFAX, WV

LOCATION.--Lat 39°26'15", long 80°07'55", Marion County, Hydrologic Unit 05020001, on right bank at highway bridge at Colfax, 300 ft (91 m) upstream from Guyses Run, and at mile 6.0 (9.7 km). Records include flow of Guyses Run.

DRAINAGE AREA.--1,366 mi² (3,538 km²), including that of Guyses Run.

PERIOD OF RECORD.--May 1939 to current year. Prior to October 1960, published as Tygart River at Colfax.

REVISED RECORDS.--WSP 1083: 1942(M), WSP 1335: 1941.

GAGE.--Water-stage recorder. Datum of gage is 856.27 ft (260.991 m) National Geodetic Vertical Datum of 1929, supplementary adjustment of 1944. Formerly published as 855.49 ft (260.753 m) Baltimore & Ohio RR datum. Since Jan. 19, 1945, auxiliary water-stage recorder at Fairmont waterworks, 5.7 mi (9.2 km) downstream from base gage, at datum 856.99 ft (261.211 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow regulated by Tygart Lake (station 03055500). Corps of Engineers gage-height tele-meter at station.

AVERAGE DISCHARGE.--39 years, 2,613 ft³/s (74.00 m³/s), 25.98 in/yr (660 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,500 ft³/s (637 m³/s) Feb. 14, 1948, gage height, 16.86 ft (5.139 m); maximum gage height, 19.77 ft (6.026 m) Mar. 5, 1963, backwater from West Fork River; minimum discharge, 94 ft³/s (2.66 m³/s) July 3, 1946; minimum daily, 129 ft³/s (3.65 m³/s) May 5-7, 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1888 reached a stage of 39.6 ft (12.07 m) at site 1,100 ft (335 m) downstream, present datum, from information by local resident. The stage on that day was probably affected by backwater from West Fork River.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,200 ft³/s (459 m³/s) Jan. 26, gage height, 15.40 ft (4.694 m), backwater from West Fork River; minimum, 372 ft³/s (10.5 m³/s) Aug. 23, gage height, 3.76 ft (1.146 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	926	2330	5310	2230	11000	769	6170	1560	1050	4830	4590	2150
2	1740	2280	4650	1670	7390	768	3890	1070	1040	4360	6400	2990
3	1910	2230	8980	1620	4330	746	2290	1010	1120	7050	4530	2490
4	1690	2170	9740	1600	3380	596	2070	807	1450	7990	1840	1610
5	1600	2120	6220	1590	3210	644	1350	1290	3160	9480	1930	1540
6	1620	2070	3890	1570	3070	627	1370	2400	3090	11800	3190	1510
7	1680	2030	7470	1650	3020	605	1710	3360	3150	10200	3320	1240
8	1640	3440	7710	2040	2000	594	1780	3380	2550	6840	4120	618
9	2430	2540	7250	4200	1140	607	1630	4110	1180	3880	6170	610
10	3420	2280	5900	4140	1500	947	1540	4240	1120	1750	5350	606
11	6230	2310	4040	5620	1090	3220	1500	4980	1190	1930	2670	603
12	6010	2180	2670	5020	950	6330	1480	4820	1660	1740	1690	600
13	5790	2070	2650	3960	860	7360	1390	4790	1750	1670	1640	600
14	5590	2190	2690	3500	804	7940	1160	5560	1700	2030	1670	598
15	4640	2730	3120	2610	847	6320	1150	5920	1650	2890	1640	614
16	2920	2600	3860	1530	836	5950	1130	6860	1630	4380	1980	633
17	2840	2440	5170	1590	758	10800	1120	7290	1500	3000	2690	653
18	1890	2220	5000	2130	537	11000	1130	7800	990	1740	1390	613
19	3000	2010	4760	3100	800	10500	1230	7130	937	1550	959	601
20	3000	1860	3990	4780	826	10300	1790	6180	688	1020	949	594
21	3330	1790	3100	3980	877	8240	2040	4300	711	995	933	590
22	4260	1750	2970	3060	882	5050	2250	1900	660	986	631	591
23	4170	1780	2860	2500	906	5940	3280	1820	443	978	547	594
24	4040	2260	2770	2100	778	9520	2890	1950	398	1040	597	586
25	3930	3990	2760	5280	769	7460	1880	3010	390	1110	623	645
26	3640	5050	2710	11500	770	4580	2000	4820	463	1040	623	837
27	2140	6020	2700	10300	791	5080	1910	4290	4050	1060	625	832
28	1470	5150	2690	12000	798	7250	1820	2790	6980	1370	620	824
29	2480	3860	2640	11600	---	9470	1760	908	8120	1710	616	822
30	2440	3210	2550	11400	---	8920	1720	996	7010	1800	625	815
31	2380	---	2480	11800	---	8030	---	1020	---	2810	981	---
TOTAL	94846	80960	135300	141670	54919	166163	58430	112361	61830	105029	66139	28609
MEAN	3060	2699	4365	4570	1961	5360	1948	3625	2061	3388	2134	954
MAX	6230	6020	9740	12000	11000	11000	6170	7800	8120	11800	6400	2990
MIN	926	1750	2480	1530	537	594	1120	807	390	978	547	586

CAL YR 1977 TOTAL 843937 MEAN 2312 MAX 10900 MIN 197 MEAN‡ 2311 CFSM‡ 1.69 IN‡ 22.94
WTR YR 1978 TOTAL 1106256 MEAN 3031 MAX 12000 MIN 390 MEAN‡ 3001 CFSM‡ 2.20 IN‡ 29.86

‡ Adjusted for change in contents in Tygart Lake.

MONONGAHELA RIVER BASIN

53

03058000 WEST FORK RIVER AT BROWNSVILLE, WV

LOCATION.--Lat 39°00'10", long 80°28'35", Lewis County, Hydrologic Unit 05020002, on right bank at downstream side of highway bridge at Brownsville, 0.4 mi (0.6 km) downstream from Skin Creek, 2.5 mi (4.0 km) south of Weston, and at mile 71.0 (114.2 km).

DRAINAGE AREA.--102 mi² (264 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 1,010.85 ft (308.107 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Aug. 15, 1949, nonrecording gage at same site and datum.

REMARKS.--Records good except those for January and February, which are poor.

AVERAGE DISCHARGE.--32 years, 162 ft³/s (4.588 m³/s), 21.57 in/yr (548 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,420 ft³/s (182 m³/s) June 25, 1950, gage height, 17.20 ft (5.243 m), from rating curve extended above 3,400 ft³/s (96 m³/s) on basis of slope-area measurement of peak flow; no flow for several days during 1952-54, Sept. 16, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,200 ft³/s (62 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)
Jan. 26	0800	*6170	175	16.88	5.145	July 3	2200	2240	63.4	10.35	3.155

Minimum discharge, 3.6 ft³/s (0.10 m³/s) Sept. 12, gage height, 5.04 ft (1.536 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	28	1620	60	100	59	105	91	30	66	313	260
2	138	28	690	88	89	48	83	73	24	45	99	105
3	79	30	241	84	78	45	68	60	283	952	55	49
4	46	32	165	63	72	43	63	284	196	1520	80	30
5	30	34	221	68	66	41	95	868	88	340	66	20
6	30	35	507	88	60	40	100	393	55	121	46	14
7	50	50	292	132	55	45	138	211	46	67	50	9.9
8	55	297	171	166	51	61	137	196	53	50	159	7.8
9	612	247	215	826	48	106	108	482	82	158	105	6.4
10	454	232	282	450	46	494	90	374	74	103	56	5.3
11	144	405	281	240	45	895	81	215	53	479	48	4.5
12	86	217	160	170	46	997	87	143	37	328	37	9.4
13	62	121	112	140	48	1010	77	127	39	96	29	16
14	48	85	115	120	50	1260	65	529	32	295	158	7.5
15	38	67	320	110	53	791	56	458	28	485	193	5.8
16	224	57	238	100	54	342	49	261	24	152	70	9.6
17	707	65	158	110	47	286	45	248	20	86	57	35
18	287	101	128	1020	46	223	46	196	15	57	34	16
19	133	95	105	610	46	180	65	243	13	40	23	12
20	104	76	94	318	45	145	178	216	11	29	18	7.5
21	92	66	97	213	45	123	588	138	13	23	14	5.6
22	75	67	89	162	45	108	565	99	48	31	11	9.3
23	62	159	75	133	44	91	371	75	48	20	9.2	15
24	52	247	69	146	44	81	203	90	24	26	6.8	10
25	44	183	151	2060	45	77	146	87	13	73	7.4	8.0
26	41	166	215	5000	49	143	271	64	110	87	8.1	7.4
27	40	154	139	1480	53	581	426	50	1410	47	18	6.0
28	39	247	97	398	52	408	228	41	983	31	22	5.6
29	37	426	80	250	---	293	148	34	316	26	12	5.4
30	33	696	67	180	---	182	113	32	101	32	16	4.5
31	30	---	61	130	---	131	---	33	---	527	901	---
TOTAL	3904	4717	7255	15115	1522	9329	4795	6411	4269	6392	2721.5	707.5
MEAN	126	157	234	488	54.4	301	160	207	142	206	87.8	23.6
MAX	707	696	1620	5000	100	1260	588	868	1410	1520	901	260
MIN	30	28	61	60	44	40	45	32	11	20	6.8	4.5
CFSM	1.24	1.54	2.29	4.78	.53	2.95	1.57	2.03	1.39	2.02	.86	.23
IN.	1.42	1.72	2.65	5.51	.56	3.40	1.75	2.34	1.56	2.33	.99	.26

CAL YR 1977 TOTAL 45500.18 MEAN 125 MAX 2480 MIN .83 CFSM 1.23 IN 16.59
WTR YR 1978 TOTAL 67138.00 MEAN 184 MAX 5000 MIN 4.5 CFSM 1.80 IN 24.49

MONONGAHELA RIVER BASIN

03058500 WEST FORK RIVER AT BUTCHERVILLE, WV

LOCATION.--Lat 39°05'25", long 80°28'05", Lewis County, Hydrologic Unit 05020002, on right bank at Butcherville, 0.5 mi (0.8 km) upstream from Freemans Creek, 3,500 ft (1,067 m) downstream from abandoned bridge on Weston-Clarksburg interurban electric railway, 3.0 mi (4.8 km) north of Weston, and at mile 62.0 (99.8 km).

DRAINAGE AREA.--181 mi² (469 km²).

PERIOD OF RECORD.--April 1915 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 1053: 1935. WSP 1335: 1918, 1923.

GAGE.--Water-stage recorder. Datum of gage is 993.0 ft (302.67 m) Department of Highways datum. Prior to Feb. 17, 1937, nonrecording gage at interurban bridge 3,500 ft (1,067 m) upstream. Feb. 17, 1937, to Apr. 7, 1939, nonrecording gage at site 2,500 ft (762 m) upstream. Prior to Oct. 1, 1942, at datum 10.0 ft (3.05 m) lower.

REMARKS.--Records good, except those for period of no gage-height record, Aug. 10 to Sept. 20, and those for January and February, which are poor. The flow from 30.4 mi² (78.7 km²) is partially controlled, but not diverted, by eight floodwater detention reservoirs and one multi-purpose reservoir. Some additional regulation of low flow from one water-supply reservoir, approximate capacity 96 acre-ft (118,000 m³).

AVERAGE DISCHARGE.--63 years, 299 ft³/s (8.468 m³/s), 22.43 in/yr (570 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,000 ft³/s (510 m³/s) June 25, 1950, gage height, 16.81 ft (5.124 m), from rating curve extended above 7,500 ft³/s (220 m³/s) on basis of slope-area measurement of peak flow; no flow at times during October 1919, September, October, December 1922, caused by either diversion or pondage at small dam upstream.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1888 reached a stage of 17 ft (5.2 m) at site 3,500 ft (1,067 m) upstream, present datum, from information by local residents. The stage on that day may have been affected by backwater from a dam which has since been washed out.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,100 ft³/s (314 m³/s) Jan. 26, gage height, 13.41 ft (4.087 m); minimum daily, 14 ft³/s (0.40 m³/s) Aug. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	152	34	2590	120	240	145	194	144	61	207	516	610
2	398	31	1050	158	223	123	158	117	50	138	174	250
3	246	30	405	150	204	110	136	101	368	1350	103	150
4	127	31	276	115	170	105	127	421	337	2280	120	90
5	101	32	370	124	160	114	152	1320	141	706	113	60
6	120	33	747	150	150	100	164	633	96	301	82	32
7	142	47	464	220	130	110	219	338	83	179	134	25
8	148	357	283	305	120	136	217	379	101	141	226	20
9	1200	356	390	1440	110	207	175	970	153	260	179	19
10	783	336	438	864	100	732	146	663	126	204	105	20
11	274	574	303	465	100	1470	129	386	87	500	91	24
12	148	319	206	307	105	1680	136	264	63	504	80	25
13	101	176	193	250	115	1760	119	247	93	163	61	35
14	75	120	212	210	120	2240	103	838	61	298	150	30
15	59	98	464	190	130	1370	89	765	49	642	320	25
16	387	87	396	180	149	629	80	485	41	240	170	30
17	1060	114	282	170	143	524	73	435	36	130	100	57
18	478	166	235	1550	143	403	81	353	32	89	60	48
19	237	144	195	1000	141	323	107	412	30	64	45	45
20	188	116	180	596	120	261	236	381	28	51	35	43
21	153	103	176	430	143	224	776	256	30	43	29	39
22	121	107	161	300	143	199	776	183	62	46	22	46
23	99	219	139	260	138	169	546	145	100	42	17	47
24	80	337	129	287	134	147	313	197	47	48	16	34
25	66	255	281	3660	134	151	230	185	34	87	15	29
26	60	243	353	9800	147	243	486	133	132	130	14	27
27	57	219	248	2800	149	885	702	105	2120	84	17	29
28	52	412	178	790	136	659	381	85	1840	68	45	52
29	46	689	149	500	---	477	243	70	642	47	30	53
30	42	1130	128	330	---	317	181	74	291	70	33	53
31	37	---	118	240	---	237	---	86	---	747	1200	---
TOTAL	7237	6915	11739	27961	3997	16250	7475	11171	7334	9859	4302	2047
MEAN	233	231	379	902	143	524	249	360	244	318	139	68.2
MAX	1200	1130	2590	9800	240	2240	776	1320	2120	2280	1200	610
MIN	37	30	118	115	100	100	73	70	28	42	14	19
CFSM	1.29	1.28	2.09	4.98	.79	2.90	1.38	1.99	1.35	1.76	.77	.38
IN.	1.49	1.42	2.41	5.75	.82	3.34	1.54	2.30	1.51	2.03	.88	.42
CAL YR 1977	TOTAL	82644.7	MEAN	226	MAX	3420	MIN	5.6	CFSM	1.25	IN	16.99
WTR YR 1978	TOTAL	116287.0	MEAN	319	MAX	9800	MIN	14	CFSM	1.76	IN	23.90

03059000 WEST FORK RIVER AT CLARKSBURG, WV

LOCATION.--Lat 39°16'15", long 80°21'20", Harrison County, Hydrologic Unit 05020002, on downstream side of left abutment of Hartland Bridge on Camden Street at Clarksburg, 700 ft (213 m) upstream at datum 10 ft (3.0 m) waterworks, 1.2 mi (1.9 km) upstream from Elk Creek, and at mile 32.4 (52.1 km).

DRAINAGE AREA.--384 mi² (995 km²).

PERIOD OF RECORD.--March 1923 to current year.

REVISED RECORDS.--WSP 1113: 1924, 1927, 1929(M), 1930, 1933-35(M), 1936-39, 1940(P), 1944(M), 1945.

GAGE.--Water-stage recorder. Datum of gage is 921.82 ft (280.971 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1961, water-stage recorder at several sites 700 ft (213 m) upstream at datum 10 ft (3.0 m) higher. June 11, 1954, to Sept. 30, 1961, present base gage used as the supplementary gage. Since Oct 1, 1961, former base gage used as the supplementary gage.

REMARKS.--Records good except those for January and February, which are poor. Some water diverted for supply of City of Clarksburg. The flow from 36.1 mi² (93.5 km) is partially controlled, but not diverted, by nine floodwater detention reservoirs and one multi-purpose reservoir. Some additional regulation of low flow by five other reservoirs, combined capacity of 1950 acre-ft (2.40 hm³).

AVERAGE DISCHARGE.--55 years, 586 ft³/s (16.60 m³/s), 20.72 in/yr (526 mm/yr), adjusted for diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,800 ft³/s (504 m³/s) Mar. 7, 1967, gage height, 23.40 ft (7.132 m); no flow over dam during parts of several years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,200 ft³/s (459 m³/s) Jan. 26, gage height, 21.41 ft (6.526 m), from floodmark, no other peak above base of 6,700 ft³/s (190 m³/s); minimum, 28 ft³/s (0.793 m³/s) Aug. 27, gage height, 3.03 ft (0.924 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	198	62	4370	274	430	257	419	304	125	317	1150	1180
2	684	55	2760	334	390	200	347	284	101	246	496	428
3	572	53	1100	335	350	190	300	242	123	625	280	221
4	299	52	669	268	330	180	292	300	496	3000	365	143
5	186	51	667	270	310	180	325	1800	265	1260	292	101
6	174	56	1550	300	290	214	338	1340	177	536	334	78
7	242	57	1180	449	260	228	438	723	157	334	1170	55
8	237	137	682	660	240	253	487	610	180	356	620	43
9	1230	431	741	2980	220	284	410	2070	210	464	442	44
10	2250	303	1040	2150	210	747	347	1470	207	392	325	46
11	715	580	705	1000	210	2640	309	851	157	300	228	53
12	335	500	489	700	210	3180	304	580	119	645	197	53
13	221	279	466	560	220	3140	280	491	168	356	148	54
14	161	188	474	460	230	4750	239	1080	162	410	239	80
15	124	144	804	410	230	3730	203	984	108	590	438	72
16	303	123	866	370	220	1500	180	655	85	518	321	60
17	1850	156	635	360	220	1190	165	600	73	257	171	90
18	1110	294	518	2480	215	900	160	536	66	168	123	108
19	479	265	451	2400	210	694	214	518	53	119	99	75
20	405	208	413	1430	200	570	374	505	46	92	85	57
21	327	172	430	1180	210	496	1050	383	51	72	67	50
22	256	159	395	740	200	460	1270	276	101	64	53	45
23	205	216	348	600	190	397	1040	221	119	59	38	44
24	167	389	320	649	180	347	661	288	116	119	38	47
25	138	364	479	4010	190	356	496	401	73	210	36	46
26	120	321	705	15000	246	478	555	265	64	224	33	40
27	110	311	546	7000	253	1170	1260	200	1570	232	30	35
28	102	500	420	2200	250	1210	823	160	2200	284	59	33
29	90	1000	342	1100	---	879	536	135	984	207	112	32
30	80	1950	305	700	---	630	419	121	464	184	78	41
31	75	---	278	480	---	491	---	135	---	984	1760	---
TOTAL	13445	9376	25148	51849	6914	31941	14241	18528	8820	13624	9427	3454
MEAN	434	313	811	1673	247	1030	475	598	294	439	317	115
MAX	2250	1950	4370	15000	430	4750	1270	2070	2200	3000	1760	1180
MIN	75	51	278	268	180	180	160	121	46	59	30	32
MEAN‡	444	322	820	1683	257	1040	484	607	302	448	326	124
CFSM‡	1.16	0.84	2.14	4.38	0.67	2.71	1.26	1.58	0.79	1.17	0.85	0.32
IN.‡	1.34	0.94	2.47	5.05	0.70	3.12	1.41	1.82	0.88	1.35	0.98	0.36
CL YR 1977 TOTAL	153966		MEAN 422	MAX 4370	MIN 10	MEAN‡ 431	CFSM‡ 1.12	IN‡ 15.20				
WTR YR 1978 TOTAL	207167		MEAN 568	MAX 15000	MIN 30	MEAN‡ 577	CFSM‡ 1.50	IN‡ 20.36				

‡ Adjusted for diversion by city of Clarksburg; records furnished by Clarksburg Water Board.

MONONGAHELA RIVER BASIN

03061000 WEST FORK RIVER AT ENTERPRISE, WV

LOCATION.--Lat 39°25'20", long 80°16'40", Harrison County, Hydrologic Unit 05020002, on left bank 150 ft (46 m) downstream from highway bridge at Enterprise, 0.8 mi (1.3 km) upstream from Bingamon Creek, and at mile 12.1 (19.5 km).

DRAINAGE AREA.--759 mi² (1,966 km²).

PERIOD OF RECORD.--June 1907 to September 1916, October 1916 to September 1918 (gage heights only), October 1932 to current year.

REVISED RECORDS.--WSP 803: 1936. WSP 823: Drainage area. WSP 1113: 1936-38(M), 1939, WSP 1335: 1911-15, 1937. WSP 1625: 1915(M), 1935(M).

GAGE.--Water-stage recorder. Datum of gage is 869.45 ft (265.008 m) National Geodetic Vertical Datum, adjustment of 1912. June 1907 to Sept. 30, 1918, nonrecording gage at site 150 ft (46 m) upstream at same datum.

REMARKS.--Records good. The flow from about 40 mi² (104 km²) is partially controlled, but not diverted, by sixteen floodwater detention reservoirs, one municipal water-supply reservoir, and one multi-purpose reservoir. Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--54 years (water years 1908-1916, 1934-78), 1,138 ft³/s (32.23 m³/s), 20.36 in/yr (517 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,500 ft³/s (1,030 m³/s) Mar. 7, 1967, gage height, 28.05 ft (8.550 m), from rating curve extended above 21,000 ft³/s (590 m³/s) on basis of slope-area measurement at gage height 27.84 ft (8.486 m); minimum, 3.4 ft³/s (0.10 m³/s) July 27, 1934; minimum gage height, 0.6 ft (0.18 m) Sept. 10, 14, 25, 1908.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1888 reached a stage of about 33 ft (10 m), present site and datum.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 12,000 ft³/s (340 m) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 26	1400	*30900 875	25.14 7.663	Mar. 14	2300	14700 416	15.52 4.730

Minimum discharge, 63 ft³/s (1.78 m) Sept. 30, gage height, 1.57 ft (0.479 m).

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	200	154	5470	427	993	418	541	732	372	429	2000	2330
2	1000	141	4420	305	910	360	775	567	313	387	1000	648
3	910	133	1430	476	702	350	653	495	337	2620	700	363
4	544	131	1200	334	600	387	602	469	624	5590	600	244
5	341	161	1100	422	603	340	742	2110	832	3200	930	192
6	307	171	2420	474	572	357	713	2610	502	1270	620	152
7	300	151	1970	705	491	363	1150	1600	405	631	2510	133
8	400	182	1200	1370	450	385	1330	1280	494	438	1520	109
9	1200	485	1200	3240	420	415	1030	3570	530	1330	796	99
10	3300	526	1670	3200	400	822	627	3540	495	824	604	97
11	1370	706	1210	1550	402	3150	722	2280	395	774	658	97
12	670	850	624	1330	413	5210	691	1580	307	653	473	101
13	437	535	796	1000	429	5640	616	1190	656	636	351	105
14	310	563	540	270	454	10400	514	1910	563	1340	304	111
15	245	275	1450	703	402	9480	441	2950	365	1830	408	133
16	430	245	1450	713	433	4000	391	2300	267	1410	473	138
17	2700	435	1130	672	419	3030	360	2160	226	670	316	215
18	1800	1030	607	2070	415	2310	353	2090	201	408	228	206
19	500	736	748	3550	353	1840	470	2200	183	286	188	164
20	702	511	717	2240	375	1550	1170	1520	167	222	180	128
21	603	403	815	1770	401	1330	2090	1450	167	169	177	105
22	504	362	731	1340	383	1230	2520	1070	186	164	138	105
23	379	402	610	1410	352	1010	2220	807	303	148	111	113
24	305	645	546	1310	340	860	1560	837	241	234	103	101
25	270	713	721	3250	359	1270	1140	1750	199	482	99	97
26	253	633	1120	25900	307	1930	1160	1230	173	379	96	88
27	215	627	863	17300	395	2580	1500	826	1730	308	103	83
28	209	845	671	4750	383	2700	1870	613	3380	560	96	72
29	197	1851	535	2250	---	2030	1270	487	2170	450	145	71
30	101	2710	481	1000	---	1520	525	412	840	400	166	65
31	104	---	445	1480	---	1150	---	385	---	1500	2280	---
TOTAL	21495	17115	40384	53448	13449	60860	31249	48463	17823	29962	10373	6671
MEAN	693	571	1303	3014	480	2221	1042	1563	594	967	593	222
MAX	3300	2710	5470	25900	993	10800	2580	3680	3380	5590	2510	2330
MIN	104	131	445	334	340	346	353	388	167	148	96	65
CFSM	.51	.75	1.72	3.97	.63	2.93	1.37	2.06	.78	1.27	.78	.29
IN.	1.05	.84	1.58	4.58	.06	3.38	1.53	2.38	.87	1.47	.90	.33
CAL YR 1977 TOTAL	291425				6820							
WTR YR 1978 TOTAL	407270				25900							
MEAN												
MAX												
MIN												
CFSM												
IN												

CAL YR 1977 TOTAL 291425 MEAN 800 MAX 6820 MIN 77 CFSM 1.05 IN 14.30
WTR YR 1978 TOTAL 407270 MEAN 1110 MAX 25900 MIN 65 CFSM 1.47 IN 19.96

MONONGAHELA RIVER BASIN

57

03061410 LAUREL RUN AT CURTISVILLE, WV

LOCATION.--Lat 39°31'14", long 80°26'20", Marion County, Hydrologic Unit 05020003, on right upstream wingwall of bridge on Secondary State Route 7, 250 ft (76.2 m) upstream from mouth, and 1.4 mi (2.3 km) west of Logansport.

DRAINAGE AREA.--1.11 mi² (2.88 km²).

PERIOD OF RECORD.--October 1977 to September 1978.

GAGE.--Water-stage recorder. Altitude of gage is 1,000 ft (305 m), from topographic map.

REMARKS.--Records good except those for periods of doubtful-or-no gage-height record Oct. 1 to Dec. 22, and those for January and February, which are poor. Quality-of-water data on page 315.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 6.56 ft (1.999 m) Jan. 26, 1978 from floodmark, backwater from Owen Davy Fork, discharge not determined; minimum discharge, 0.02 ft³/s (<0.001 m³/s) June 25, 26, 1978; minimum observed gage height, 3.99 ft (1.216 m) Mar. 7, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 6.56 ft (1.999 m) Jan. 26 from floodmark, backwater from Owen Davy Fork, discharge not determined; minimum discharge, 0.02 ft³/s (<0.001 m³/s) June 25, 26; minimum observed gage height 3.99 ft (1.216 m) Mar. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.94	.22	6.8	.86	.90	.32	1.1	1.6	.19	.56	3.3	.69
2	4.0	.21	3.0	.94	.78	.34	1.0	1.4	.16	.95	1.3	.28
3	1.5	.21	1.8	.87	.70	.35	.94	1.3	.25	36	4.6	.16
4	.71	.19	1.4	.79	.63	.34	.84	1.9	.18	9.0	6.1	.11
5	.52	.20	4.0	.79	.57	.32	.84	4.3	.13	3.0	2.0	.07
6	.47	.23	4.6	1.1	.52	.33	1.5	3.1	.12	1.2	1.3	.05
7	.56	.60	2.0	2.8	.48	.40	6.5	2.5	.24	.67	30	.05
8	.50	3.0	1.5	8.7	.46	.42	3.0	2.9	.28	.86	3.9	.03
9	3.1	.70	3.3	8.1	.45	.41	1.9	5.3	.22	.94	1.8	.03
10	1.3	1.2	2.5	3.0	.46	.50	1.4	4.0	.15	10	1.5	.03
11	.86	1.7	1.5	2.5	.47	1.6	1.4	3.0	.11	7.0	.99	.03
12	.66	1.1	1.2	2.1	.48	5.4	1.3	2.4	.63	1.9	.70	.35
13	.47	.82	1.3	1.5	.46	11	1.1	2.7	2.7	1.3	.50	.25
14	.42	.67	1.6	1.1	.44	28	.89	6.1	.61	.93	.43	.10
15	.52	.59	3.4	.86	.41	9.6	.79	4.3	.35	.73	.38	.07
16	.86	.58	1.9	.65	.37	5.2	.71	3.3	.24	2.2	.29	.11
17	1.5	4.7	1.5	.83	.35	3.8	.64	6.2	.19	2.5	.24	.14
18	1.0	2.9	1.2	1.2	.35	2.7	.80	4.7	.14	1.1	.20	.12
19	.87	1.6	1.1	.79	.35	3.3	2.4	3.1	.18	.72	.17	.12
20	.80	1.1	2.0	1.1	.35	3.3	7.1	1.9	.11	.58	.21	.08
21	.73	.89	1.8	.98	.36	3.1	7.0	1.2	.08	.50	.15	.08
22	.63	.73	1.6	.87	.35	2.6	4.8	.82	.07	.45	.11	2.6
23	.53	.76	1.4	1.0	.35	2.1	3.6	.67	.04	.44	.08	.53
24	.47	.83	1.3	2.3	.34	1.6	2.9	.89	.03	.49	.08	.26
25	.42	.78	1.6	14	.34	8.3	3.4	.69	.03	.50	.08	.18
26	.37	.72	1.4	41	.32	6.0	3.9	.53	8.2	.44	.08	.14
27	.32	.68	1.1	4.3	.31	5.1	3.3	.43	10	.38	.08	.11
28	.28	1.1	.93	2.7	.31	2.9	2.7	.34	9.6	.52	.11	.08
29	.26	2.0	.84	1.8	---	1.9	2.2	.28	1.9	.38	.94	.08
30	.24	3.5	.76	1.4	---	1.3	1.9	.50	.85	.43	.33	.08
31	.23	---	.70	1.1	---	1.1	---	.30	---	23	3.6	---
TOTAL	26.04	34.51	61.03	112.03	12.66	113.63	71.85	72.65	37.98	109.67	65.55	7.01
MEAN	.84	1.15	1.97	3.61	.45	3.67	2.40	2.34	1.27	3.54	2.11	.23
MAX	4.0	4.7	6.8	41	.90	28	7.1	6.2	10	36	30	2.6
MIN	.23	.19	.70	.65	.31	.32	.64	.28	.03	.38	.08	.03
CFSM	.76	1.04	1.78	3.25	.41	3.31	2.16	2.11	1.14	3.19	1.90	.21
IN.	.87	1.16	2.04	3.75	.42	3.80	2.41	2.43	1.27	3.67	2.19	.23

WTR YR 1978 TOTAL 724.61 MEAN 1.99 MAX 41 MIN .03 CFSM 1.79 IN 24.26

MONONGAHELA RIVER BASIN

03061435 HIBBS RUN NEAR MANNINGTON, WV

LOCATION.--Lat 39°32'35", long 80°23'25", Marion County, Hydrologic Unit 05020003, on right upstream wingwall of bridge on Secondary State Route 5, 275 ft (83.8 m) upstream from mouth, and 2.3 mi (3.7 km) northwest of Mannington.

DRAINAGE AREA.--1.42 mi² (3.68 km²).

PERIOD OF RECORD.--October 1977 to September 1978.

GAGE.--Water-stage recorder. Altitude of gage is 990 ft (302 m), from topographic map.

REMARKS.--Records good except those for periods of doubtful-or-no gage-height record, Oct. 1 to Dec. 23, and those for January and February, which are poor. Quality-of-water data on page 315.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 7.63 ft (2.326 m) Jan. 26, 1978 from floodmark, backwater from Dents Run, discharge not determined; minimum discharge, 0.03 ft³/s (<0.001 m³/s) Sept. 11, 1978; minimum gage height, 3.99 ft (1.216 m) June 6, 7, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 7.63 ft (2.326 m) Jan. 26, from floodmark, backwater from Dents Run, discharge not determined; minimum discharge, 0.03 ft (<0.001 m³/s) Sept. 11; minimum gage height, 3.99 ft (1.216 m) June 6, 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	.26	8.6	.93	1.2	.40	1.7	1.0	.29	.70	4.3	.72
2	5.1	.27	4.0	.87	1.0	.43	1.4	.82	.24	5.9	1.7	.35
3	2.0	.24	2.4	.80	.90	.46	1.3	.77	.30	43	5.9	.22
4	.91	.24	1.8	.76	.80	.44	1.3	1.1	.32	15	7.9	.15
5	.67	.27	5.2	.79	.68	.43	1.4	2.9	.22	4.4	2.6	.14
6	.61	.31	6.0	.98	.60	.42	2.1	2.1	.15	1.8	1.7	.08
7	.73	.63	2.6	2.5	.55	.42	10	1.6	.20	1.1	1.5	.06
8	.64	3.8	2.0	12	.44	.42	4.2	1.8	.46	.94	1.2	.06
9	4.0	.85	4.2	13	.46	.44	2.6	5.2	.30	.94	.87	.06
10	1.7	1.4	3.5	4.7	.47	.90	2.1	3.3	.20	13	.83	.04
11	1.1	2.2	2.0	2.4	.50	2.8	1.4	2.2	.11	9.6	.75	.03
12	.88	1.6	1.6	2.4	.52	7.4	1.6	1.6	.62	2.4	.63	.24
13	.60	1.1	1.7	1.7	.55	17	1.4	1.7	3.2	1.4	.51	.32
14	.54	.90	2.1	1.3	.54	34	1.2	5.5	.75	1.2	.45	.15
15	.66	.78	4.4	.95	.52	14	1.1	3.6	.42	.94	.39	.10
16	1.1	1.7	2.7	.81	.46	6.9	.97	2.6	.30	2.7	.30	.10
17	1.9	6.0	1.9	1.0	.46	5.2	.89	12	.24	3.2	.30	.15
18	1.3	3.3	1.6	1.5	.41	3.6	.93	10	.18	1.5	.25	.15
19	1.1	2.0	1.4	1.4	.46	4.1	4.4	5.6	.23	.97	.20	.15
20	1.0	1.4	2.5	1.5	.46	4.0	10	2.4	.14	.74	.19	.14
21	.91	1.1	2.1	1.3	.45	3.2	5.6	1.9	.10	.65	.15	.11
22	.80	.93	1.8	1.2	.45	2.8	3.3	1.3	.07	.58	.15	.61
23	.69	.96	1.7	1.3	.44	2.4	2.3	1.1	.05	.56	.08	.32
24	.60	1.0	1.4	1.7	.44	2.0	1.4	1.3	.04	.63	.06	.18
25	.50	1.1	1.9	19	.43	14	2.4	1.0	.04	.64	.06	.13
26	.46	1.0	1.7	39	.42	9.4	3.0	.82	1.1	.56	.06	.09
27	.43	.87	1.3	7.4	.40	7.3	2.2	.65	13	.49	.06	.06
28	.37	1.4	1.1	3.3	.40	4.1	1.7	.53	6.5	.66	.12	.05
29	.35	2.0	1.0	2.2	---	2.9	1.4	.44	2.4	.49	.69	.06
30	.33	4.4	.91	1.7	---	2.3	1.2	.38	1.0	.55	.37	.06
31	.29	---	.81	1.5	---	2.0	---	.36	---	30	2.1	---
TOTAL	33.52	44.01	77.92	132.89	15.46	156.16	77.49	78.07	33.17	147.24	36.37	5.08
MEAN	1.08	1.47	2.51	4.29	.55	5.04	2.58	2.52	1.11	4.75	1.17	.17
MAX	5.1	6.0	8.6	39	1.2	34	10	12	13	43	7.9	.72
MIN	.29	.24	.81	.76	.40	.40	.89	.36	.04	.49	.06	.03
CFSM	.76	1.04	1.77	3.02	.39	3.55	1.82	1.78	.78	3.35	.82	.12
IN.	.88	1.15	2.04	3.48	.40	4.09	2.03	2.04	.87	3.85	.95	.13

WTR YR 1978 TOTAL 837.38 MEAN 2.29 MAX 43 MIN .03 CFSM 1.61 IN 21.92

MONONGAHELA RIVER BASIN

59

03061495 DAVY RUN AT KATY, WV

LOCATION.--Lat 39°30'38", long 80°12'51", Marion County, Hydrologic Unit 05020003, on left downstream wingwall of bridge on Secondary State Route 250/32, 300 ft (91.4 m) upstream from mouth, and 2.5 mi (4.0 km) west of Barrackville.

DRAINAGE AREA.--1.76 mi² (4.56 km²).

PERIOD OF RECORD.--October 1977 to September 1978.

GAGE.--Water-stage recorder. Altitude of gage is 920 ft (280 m), from topographic map.

REMARKS.--Records good except those for period of no gage-height record, Oct. 1 to Dec. 21, and for July 3 during period of backwater, which are poor. Quality-of-water data on page 316.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 11.23 ft (3.423 m) July 3, 1978, from floodmark, backwater from Buffalo Creek, discharge not determined; minimum discharge, 0.23 ft³/s (0.007 m³/s) Sept. 26, 27, 28, 29, 30, 1978; minimum gage height, 4.13 ft (1.259 m) Jan. 4, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum gage height 11.23 ft (3.423 m) July 3, from floodmark, backwater from Buffalo Creek, discharge not determined; minimum discharge, 0.23 ft³/s (0.007 m³/s) Sept. 26, 27, 28, 29, 30, minimum gage height, 4.13 ft (1.259 m) Jan. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	.47	12	1.7	2.9	.80	3.5	2.3	.95	.52	4.6	.90
2	6.0	.48	7.0	1.6	2.4	.80	3.2	2.2	.92	.63	2.6	.68
3	3.0	.43	4.5	1.4	2.1	.73	3.0	1.9	.97	50	2.3	.58
4	1.8	.44	3.6	1.2	1.9	.66	2.8	2.0	.87	20	1.9	.54
5	1.2	.46	9.5	1.2	1.8	.62	2.6	2.2	.80	5.5	1.5	.45
6	1.0	.50	8.9	1.4	1.6	.60	2.9	1.9	.74	3.1	1.5	.38
7	1.2	.60	4.3	1.9	1.5	.60	4.1	1.8	.90	2.2	3.2	.35
8	1.0	2.3	3.2	5.6	1.4	.60	3.8	2.3	.89	2.0	2.0	.32
9	6.1	1.5	5.4	9.3	1.3	.66	3.2	4.7	.78	1.8	1.6	.30
10	4.6	1.5	4.5	5.3	1.2	1.0	2.9	3.8	.66	8.4	1.6	.27
11	2.5	3.0	3.0	4.2	1.1	2.2	2.8	3.1	.59	12	1.4	.25
12	1.6	2.2	2.4	3.3	1.1	3.6	2.5	2.7	.63	5.5	1.2	.37
13	1.2	1.7	2.7	3.0	1.0	8.8	2.2	3.0	1.0	3.7	1.1	.58
14	.94	1.4	3.5	2.7	1.0	50	2.0	4.1	.64	3.8	.97	.38
15	1.1	1.2	4.8	2.3	1.0	18	1.9	3.9	.57	2.5	.84	.36
16	2.1	1.2	3.3	2.1	.95	9.4	1.8	4.7	.54	7.2	.81	.40
17	2.8	8.0	2.9	2.6	.95	7.4	1.6	13	.51	8.2	.75	.45
18	2.1	6.0	2.5	2.8	.90	6.0	1.8	15	.48	4.4	.69	.36
19	1.8	3.6	2.3	2.5	.87	5.7	2.0	11	.52	3.1	.66	.33
20	1.7	2.3	2.4	2.6	.84	5.4	3.3	6.2	.47	2.4	.69	.32
21	1.5	1.8	3.0	2.4	.82	5.1	3.4	4.4	.46	1.9	.64	.30
22	1.3	1.4	2.4	2.2	.80	4.7	3.2	3.3	.43	1.6	.60	.55
23	1.1	1.5	2.1	2.2	.78	4.0	2.9	2.6	.42	1.4	.55	.34
24	1.0	1.6	2.2	2.3	.78	3.6	2.7	2.5	.40	1.6	.45	.31
25	.90	1.5	2.6	9.8	.80	12	3.4	2.0	.38	1.3	.36	.31
26	.82	1.6	2.4	69	.80	9.6	3.7	1.7	1.4	1.1	.39	.27
27	.76	1.4	2.1	10	.73	8.1	3.4	1.5	1.4	1.1	.37	.25
28	.70	2.0	1.9	6.4	.73	6.4	3.1	1.3	.99	1.0	.54	.23
29	.63	3.0	1.7	5.3	---	5.3	2.7	1.2	.64	.85	.78	.23
30	.57	6.5	1.6	4.2	---	4.6	2.5	1.1	.55	1.3	.54	.23
31	.52	---	1.5	3.6	---	4.1	---	1.0	---	17	2.4	---
TOTAL	55.64	61.58	116.2	176.1	34.05	191.07	84.9	114.4	21.50	177.10	39.53	11.59
MEAN	1.79	2.05	3.75	5.68	1.22	6.16	2.83	3.69	.72	5.71	1.28	.39
MAX	6.1	8.0	12	69	2.9	50	4.1	15	1.4	50	4.6	.90
MIN	.52	.43	1.5	1.2	.73	.60	1.6	1.0	.38	.52	.36	.23
CFSM	1.02	1.17	2.13	3.23	.69	3.50	1.61	2.10	.41	3.24	.73	.22
IN.	1.18	1.30	2.45	3.72	.72	4.04	1.79	2.42	.45	3.74	.84	.24

WTR YR 1978 TOTAL 1093.66 MEAN 2.97 MAX 69 MIN .23 CFSM 1.69 IN 22.89

MONONGAHELA RIVER BASIN

03061500 BUFFALO CREEK AT BARRACKVILLE, WV

LOCATION.--Lat 39°30'15", long 80°10'20", Marion County, Hydrologic Unit 05020003, near center of span on downstream side of highway bridge at Barrackville, 1,700 ft (518 m) upstream from Finchs Run, and at mile 4.0 (6.4 km).

DRAINAGE AREA.--115 mi² (298 km²).

PERIOD OF RECORD.--June 1907 to December 1908, May 1915 to June 1924, August 1932 to current year.

REVISED RECORDS.--WSP 783: 1917(M). WSP 1335: 1916(M), 1918-20(M), 1921, 1922(M), 1924(M), 1933(M), 1940.

GAGE.--Water-stage recorder. Datum of gage is 882.42 ft (268.962 m) National Geodetic Vertical Datum, adjustment of 1912. Prior to Dec. 6, 1940, nonrecording gage at same site. Prior to June 4, 1943, at datum 1.98 ft (0.604 m) higher.

REMARKS.--Records good except those for January and February, which are poor. Quality-of-water data on page 316.

AVERAGE DISCHARGE.--55 years (water years 1908, 1916-23, 1933-78), 167 ft³/s (4.729 m³/s), 19.72 in/yr (501 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 9,490 ft³/s (269 m³/s) Jan. 22, 1917, gage height, 16.2 ft (4.94 m), present datum; no flow during greater part of period September to November 1908.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in July 1912 reached a stage of about 18 ft (5.5 m), present site and datum, discharge, 11,600 ft³/s (330 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,500 ft³/s (99 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 26	0900	6810 193	13.51 4.118	July 3	1830	*7550 214	14.23 4.337
Mar. 14	2015	4220 120	10.73 3.271				

Minimum discharge, 9.9 ft³/s (0.28 m³/s) June 25, 26, gage height 2.08 ft (0.634 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	140	30	1010	75	160	37	156	113	54	107	307	85
2	552	30	499	88	140	38	126	94	44	68	146	43
3	223	27	315	85	130	38	108	80	46	4380	112	58
4	114	28	246	79	120	38	104	79	46	1720	504	52
5	72	30	471	83	110	39	123	190	35	440	170	30
6	65	33	802	88	98	40	133	188	31	218	121	25
7	81	40	371	152	91	38	584	144	36	135	748	21
8	73	140	227	601	84	34	419	146	55	92	280	19
9	488	99	355	1450	76	36	250	535	60	96	141	18
10	381	99	353	557	73	61	190	462	46	514	108	15
11	174	189	237	340	70	275	158	267	33	1040	92	14
12	114	136	175	250	72	648	141	198	28	255	68	15
13	82	104	177	190	75	1040	112	182	214	141	56	47
14	65	85	278	170	79	2960	92	434	118	121	48	34
15	56	77	454	133	80	1830	76	431	58	89	40	21
16	95	75	318	108	75	792	68	318	38	166	34	20
17	209	413	227	114	71	572	61	844	30	221	32	21
18	146	612	183	254	67	399	61	1210	25	121	28	19
19	120	275	145	214	63	390	144	892	30	82	27	17
20	114	173	160	196	61	458	640	465	25	62	26	16
21	102	131	225	170	58	410	560	309	21	53	23	16
22	89	109	187	155	56	379	422	218	18	46	23	70
23	78	100	147	135	45	260	290	172	14	37	20	72
24	66	104	133	184	44	200	218	172	13	42	19	34
25	58	102	169	1080	43	952	218	154	11	44	19	23
26	54	106	143	4380	41	948	320	113	23	38	18	18
27	48	88	126	1360	36	748	262	91	852	33	17	15
28	45	117	107	572	34	462	204	75	744	40	19	13
29	40	214	95	340	---	320	164	65	210	33	24	12
30	36	425	84	250	---	225	137	56	102	35	39	12
31	31	---	79	190	---	188	---	68	---	1350	135	---
TOTAL	4011	4191	8498	14043	2152	14855	6541	8765	3060	11819	3444	875
MEAN	129	140	274	453	76.9	479	218	283	102	381	111	29.2
MAX	552	612	1010	4380	160	2960	640	1210	852	4380	748	85
MIN	31	27	79	75	34	34	61	56	11	33	17	12
CFSM	1.12	1.22	2.38	3.94	.67	4.17	1.90	2.46	.89	3.31	.97	.25
IN.	1.30	1.36	2.75	4.54	.70	4.81	2.12	2.84	.99	3.82	1.11	.28

CAL YR 1977 TOTAL 65722 MEAN 180 MAX 1740 MIN 12 CFSM 1.57 IN 21.26
WTR YR 1978 TOTAL 82254 MEAN 225 MAX 4380 MIN 11 CFSM 1.96 IN 26.61

MONONGAHELA RIVER BASIN

61

03062213 STEWART RUN AT CROWN, WV

LOCATION.--Lat 39°34'55", long 80°06'17", Monongalia County, Hydrologic Unit 05020003, on right bank at site 200 ft (61.0 m) upstream from mouth, at Crown.

DRAINAGE AREA.--2.43 mi² (6.29 km²).

PERIOD OF RECORD.--October 1977 to September 1978.

GAGE.--Water-stage recorder. Altitude of gage is 960 ft (293 m), from topographic map.

REMARKS.--Records good except those for period of no gage-height record, Oct. 1 to Dec. 16, and those for January and February, which are poor. Quality-of-water data on page 317.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 283 ft³/s (8.01 m³/s) Jan. 26, 1978, gage height, 5.13 ft (1.564 m); minimum, 0.20 ft³/s (0.006 m³/s) Sept. 11, 1978, gage height, 0.39 ft (0.119 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 283 ft³/s (8.01 m³/s) Jan. 26, gage height 5.13 ft (1.564 m); minimum, 0.20 ft³/s (0.006 m³/s) Sept. 11, gage height, 0.39 ft (0.119 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	.53	16	1.8	3.6	.97	3.6	1.9	1.5	.61	1.3	1.7
2	9.5	.50	8.0	1.7	3.2	.93	3.0	1.8	1.4	.69	3.2	1.1
3	3.6	.48	4.3	1.6	2.9	.91	2.9	1.7	2.0	10	3.8	.86
4	1.6	.46	3.3	1.5	2.8	.90	2.8	1.9	1.5	4.4	3.6	.80
5	1.2	.47	8.5	1.4	2.6	.92	2.7	2.6	1.3	2.2	2.2	.67
6	1.1	.52	11	1.7	2.4	1.0	2.9	2.0	1.1	1.5	2.9	.57
7	1.3	1.8	4.5	2.2	2.2	1.0	6.5	1.8	1.3	1.1	13	.53
8	1.2	7.0	3.7	9.6	2.1	.98	4.7	2.2	1.6	1.0	5.4	.49
9	7.4	1.5	7.8	28	2.0	1.2	3.7	4.5	1.3	.95	3.0	.46
10	3.4	2.3	6.0	15	1.9	2.1	3.1	3.8	1.0	2.8	2.4	.45
11	2.0	4.1	3.4	6.7	1.9	5.1	2.9	2.8	.91	2.0	2.0	.36
12	1.4	2.6	2.8	4.2	1.8	8.0	2.5	2.4	.91	1.3	1.7	.69
13	1.1	1.9	3.0	3.2	1.8	21	2.2	3.0	1.7	1.0	1.5	.93
14	1.0	1.6	4.0	2.5	1.7	53	2.0	5.2	1.0	4.9	1.3	.57
15	1.2	1.4	8.0	2.0	1.6	24	1.9	5.5	.85	2.3	1.2	.49
16	2.1	1.3	4.0	1.6	1.5	14	1.7	8.2	.81	2.1	1.1	.51
17	3.6	11	3.5	2.0	1.5	11	1.7	28	.77	2.0	.96	.61
18	2.6	6.5	3.1	2.8	1.5	8.6	1.8	26	.72	1.5	.89	.41
19	2.0	3.7	2.8	2.4	1.7	8.3	2.4	12	.78	1.1	.84	.34
20	1.7	1.5	4.4	2.7	1.7	8.9	3.2	8.0	.71	.96	.84	.34
21	1.5	2.1	4.4	2.4	1.4	6.3	3.1	5.7	.81	.84	.73	.34
22	1.3	1.8	3.4	2.2	1.3	5.3	2.8	4.2	.73	.75	.67	.73
23	1.2	1.7	2.9	2.4	1.3	4.3	2.5	3.6	.59	.71	.63	.53
24	1.1	1.8	2.8	4.0	1.4	3.7	2.4	3.7	.58	.89	.65	.42
25	.97	2.0	3.4	27	1.3	19	3.1	2.8	.55	.76	.69	.40
26	.88	1.7	4.0	96	1.2	15	3.4	2.4	1.7	.67	.69	.34
27	.82	1.6	3.0	16	1.1	11	2.8	2.2	2.7	3.9	.68	.32
28	.74	3.0	2.3	9.4	1.0	8.1	2.5	1.9	1.5	5.0	1.1	.31
29	.66	5.2	1.8	6.8	---	6.1	2.3	1.8	.84	1.7	1.5	.31
30	.62	8.8	1.7	5.4	---	4.7	2.1	1.7	.71	2.5	.99	.31
31	.58	---	1.6	4.3	---	4.1	---	1.6	---	54	5.0	---
TOTAL	61.59	80.86	143.4	270.5	52.4	258.41	85.2	156.9	33.87	116.13	72.46	16.89
MEAN	1.99	2.70	4.63	8.73	1.87	8.34	2.84	5.06	1.13	3.75	2.34	.56
MAX	9.5	11	16	96	3.6	53	6.5	28	2.7	54	13	1.7
MIN	.58	.46	1.6	1.4	1.0	.90	1.7	1.6	.55	.61	.63	.31
CFSM	.82	1.11	1.91	3.59	.77	3.43	1.17	2.08	.47	1.54	.96	.23
IN.	.94	1.24	2.19	4.14	.80	3.95	1.30	2.40	.52	1.78	1.11	.26

WTR YR 1978 TOTAL 1348.61 MEAN 3.65 MAX 96 MIN .31 CFSM 1.52 IN 20.64

03062215 INDIAN CREEK AT CROWN, WV

LOCATION.--Lat 39°34'36", long 80°05'50", Monongalia County, Hydrologic Unit 05020003, on right upstream wingwall of U. S. Route 19 bridge, 3.7 mi (6.0 km) north of Rivesville, and at mile 2.5 (4.0 km).

DRAINAGE AREA.--11.8 mi² (30.6 km²).

PERIOD OF RECORD.--October 1977 to September 1978.

GAGE.--Water-stage recorder. Altitude of gage is 955 ft (291 m), from topographic map.

REMARKS.--Records good except those for January and February, which are fair. Quality-of-water data on page 317.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 886 ft³/s (25.1 m³/s) Jan. 26, 1978, gage height, 9.18 ft (2.798 m); minimum, 1.4 ft³/s (0.040 m³/s) Sept. 11, 30, 1978; minimum gage height, 1.79 ft (0.546 m) June 25, 26, 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 200 ft³/s (5.7 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 9	0030	383 10.8	6.09 1.856	May 18	0300	229 6.49	5.08 1.548
Jan. 26	0345	*886 25.1	9.18 2.798	July 27	2345	265 7.50	5.38 1.640
Mar. 13	1900	261 7.39	5.45 1.661	July 31	0545	752 21.3	8.51 2.594
Mar. 14	1615	458 13.0	6.75 2.057	Aug. 7	0200	285 8.07	5.55 1.692

Minimum discharge, 1.4 ft³/s (0.040 m³/s) Sept. 11, 30; minimum gage height, 1.79 ft (0.546 m) June 25, 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	2.8	91	5.9	18	4.8	15	6.2	5.1	3.0	30	6.0
2	40	2.7	31	5.0	15	4.2	15	5.5	4.8	3.0	17	4.0
3	20	2.6	23	7.7	13	3.6	15	5.1	7.0	66	18	3.4
4	13	2.6	19	6.9	11	3.4	14	5.8	5.3	27	19	3.2
5	7.0	2.8	64	7.4	9.7	3.3	15	11	4.3	12	15	2.6
6	5.0	3.1	66	10	8.6	3.2	17	7.6	3.6	8.3	15	2.2
7	7.3	23	27	15	7.5	3.0	46	6.6	4.5	6.5	91	2.0
8	6.9	59	20	77	7.1	3.0	36	8.6	5.7	5.7	23	1.9
9	30	18	32	195	6.5	3.7	24	39	4.7	5.2	11	1.7
10	16	22	23	70	6.2	9.0	21	30	3.6	11	8.6	1.7
11	11	23	18	33	5.7	33	19	17	3.1	8.7	6.8	1.5
12	9.3	16	15	27	5.5	58	12	11	3.1	5.8	6.2	2.2
13	6.2	12	16	17	5.8	112	10	15	6.5	4.7	5.7	3.4
14	6.1	9.6	22	15	6.6	273	8.2	31	3.8	22	5.2	2.2
15	6.9	8.4	34	13	6.2	133	8.3	31	3.2	10	4.4	2.1
16	14	8.4	22	11	5.7	70	7.0	38	2.9	12	4.2	2.4
17	14	65	19	12	5.5	54	6.2	131	2.6	14	4.0	2.8
18	11	43	17	20	5.6	42	6.7	142	2.4	8.1	3.7	2.2
19	9.0	20	15	18	5.6	41	10	57	3.0	5.8	3.5	2.0
20	7.1	15	24	16	5.5	41	21	30	2.6	4.7	3.5	1.8
21	6.2	12	25	15	5.4	39	20	17	2.7	4.0	3.3	1.7
22	5.4	9.5	20	13	5.3	33	16	13	2.5	3.5	3.1	3.6
23	4.9	10	17	13	5.2	25	12	11	2.0	3.3	2.9	2.7
24	4.8	11	16	18	5.3	20	10	12	1.7	4.2	2.5	2.2
25	4.5	11	20	17.5	5.3	102	15	10	1.7	3.7	2.1	2.0
26	4.2	11	16	396	5.0	81	20	8.8	4.8	3.1	2.3	1.7
27	4.0	9.6	13	86	4.9	54	15	7.7	12	22	2.2	1.6
28	3.7	15	11	53	5.2	37	10	6.9	7.4	40	3.2	1.5
29	3.2	21	10	35	---	27	8.1	6.3	4.3	8.8	4.6	1.4
30	3.0	47	9.5	27	---	20	7.0	5.9	3.6	13	3.2	1.4
31	2.9	---	9.9	21	---	16	---	5.6	---	248	18	---
TOTAL	299.6	516.5	765.4	1445.9	201.9	1352.2	459.5	732.6	124.5	597.1	342.2	71.1
MEAN	9.66	17.2	24.7	46.6	7.21	43.6	15.3	23.6	4.15	19.3	11.0	2.37
MAX	40	65	91	396	18	273	46	142	12	248	91	6.0
MIN	2.9	2.6	9.5	6.9	4.9	3.0	6.2	5.1	1.7	3.0	2.1	1.4
CFSM	0.82	1.46	2.09	3.95	0.61	3.70	1.30	2.00	0.35	1.64	0.93	0.20
IN.	0.94	1.63	2.41	4.56	0.64	4.26	1.45	2.31	0.39	1.88	1.08	0.22
WTR YR 1978	TOTAL	6908.5	MEAN	18.9	MAX	396	MIN	1.4	CFSM	1.60	IN	21.78

MONONGAHELA RIVER BASIN

63

03062400 COBUN CREEK AT MORGANTOWN, WV

LOCATION.--Lat 39°36'30", long 79°57'20", Monongalia County, Hydrologic Unit 05020003, on left bank at Morgantown, 30 ft (9 m) upstream from concrete box culvert on Greenbag Road, and at mile 1.4 (2.3 km).

DRAINAGE AREA.--10.9 mi² (28.2 km²).

PERIOD OF RECORD.--April 1965 to current year.

GAGE.--Water-stage recorder and concrete and metal control. Altitude of gage is 890 ft (271.3 m), from topographic map.

REMARKS.--Records good except those for period of no gage-height record, Aug. 8 to Sept. 28, and those for January and February, which are poor.

AVERAGE DISCHARGE.--13 years, 16.0 ft³/s (0.453 m³/s), 19.93 in/yr (506 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,770 ft³/s (50.1 m³/s) June 23, 1972, gage height, 12.80 ft (3.901 m), from floodmark, from rating curve extended above 800 ft³/s (23 m³/s) on basis of culvert rating computation; no flow for many days.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 250 ft³/s (7.1 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 26	0445	*968 27.4	9.34 2.847	July 31	0445	778 22.0	8.32 2.536
Mar. 14	1700	296 8.38	4.79 1.460				

Minimum discharge, 0.46 ft³/s (0.013 m³/s) Sept. 30, gage height, 0.49 ft (0.149 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	2.4	59	11	14	4.0	18	10	6.8	13	58	6.1
2	15	2.4	34	11	12	3.5	15	9.4	5.8	8.9	33	4.0
3	8.9	2.3	26	7.9	9.5	3.5	14	8.5	10	99	24	5.5
4	5.6	2.3	20	6.5	9.0	4.0	14	9.8	7.9	80	20	4.5
5	3.7	2.3	25	7.0	9.5	3.5	17	17	5.8	37	15	3.0
6	4.6	2.4	30	10	8.5	3.3	18	14	4.9	19	20	2.5
7	4.4	8.7	22	13	7.4	3.5	32	13	6.8	11	116	2.1
8	3.8	41	19	30	6.8	3.5	28	15	11	9.4	51	1.9
9	17	22	26	84	6.4	4.5	22	37	9.4	7.9	12	1.7
10	15	21	18	35	6.0	9.5	19	31	6.8	29	8.6	1.6
11	5.2	21	16	21	5.8	20	17	22	5.3	38	6.8	1.5
12	7.0	16	13	18	5.5	29	15	18	4.5	17	5.8	1.4
13	5.4	12	16	15	6.0	77	13	22	23	10	4.9	3.5
14	4.4	10	28	14	7.0	210	10	37	8.9	68	6.1	2.5
15	3.8	8.8	36	12	7.0	140	9.4	40	6.2	40	4.5	2.0
16	14	8.8	26	10	6.0	73	8.9	39	4.9	27	4.0	2.5
17	15	31	21	11	5.5	49	7.9	81	4.1	22	3.6	2.6
18	11	32	18	17	5.5	33	8.5	143	3.5	15	3.4	2.2
19	8.7	20	16	16	5.0	34	17	79	3.1	9.4	3.1	2.0
20	7.7	15	22	15	5.2	44	52	50	2.9	6.8	3.3	1.7
21	6.7	13	22	14	6.0	77	45	35	3.2	4.9	3.0	3.5
22	5.9	11	18	13	5.5	72	44	25	3.3	4.1	2.7	4.5
23	5.2	10	16	12	4.5	44	33	21	2.1	3.3	2.4	2.5
24	4.5	12	12	15	4.2	32	25	27	1.6	6.2	2.3	1.6
25	4.0	12	24	139	5.0	53	23	22	1.3	6.8	2.1	1.2
26	3.9	12	15	426	4.0	59	22	17	6.8	4.1	2.4	1.0
27	4.0	9.9	12	86	4.0	47	18	14	58	8.9	2.2	8.0
28	3.7	14	11	42	4.5	39	16	11	52	21	2.8	6.4
29	3.3	15	10	26	---	30	14	9.4	21	11	4.5	5.1
30	3.0	23	8.9	18	---	24	13	8.5	17	20	4.0	5.1
31	2.7	---	10	18	---	21	---	7.3	---	194	15	---
TOTAL	214.1	413.3	649.9	1173.4	185.3	1249.8	608.7	892.9	307.9	851.7	446.5	71.56
MEAN	6.91	13.8	21.0	37.9	6.62	40.3	20.3	28.8	10.3	27.5	14.4	2.39
MAX	17	41	59	426	14	210	52	143	58	194	116	6.1
MIN	2.7	2.3	8.9	6.5	4.0	3.3	7.9	7.3	1.3	3.3	2.1	5.1
CFSM	.63	1.27	1.93	3.48	.61	3.70	1.86	2.64	.95	2.52	1.32	.22
IN.	.73	1.41	2.22	4.00	.63	4.26	2.08	3.05	1.05	2.91	1.52	.24
CAL YR 1977	TOTAL	5035.60	MEAN 13.8	MAX 170	MIN .19	CFSM 1.27	IN 17.18					
WTR YR 1978	TOTAL	7065.06	MEAN 19.4	MAX 426	MIN .51	CFSM 1.78	IN 24.11					

MONONGAHELA RIVER BASIN

03065000 DRY FORK AT HENDRICKS, WV

LOCATION.--Lat 39°04'20", long 79°37'20", Tucker County, Hydrologic Unit 05020004, on right bank at Hendricks, 0.4 mi (0.6 km) upstream from confluence with Blackwater River.

DRAINAGE AREA.--345 mi² (894 km²).

PERIOD OF RECORD.--October 1940 to current year. Published as "Dry Fork River," 1949-52.

GAGE.--Water-stage recorder. Datum of gage is 1,698.76 ft (517.782 m) National Geodetic Vertical Datum, adjustment of 1912. Prior to Dec. 21, 1941, nonrecording gage at same site and datum.

REMARKS.--Records good except those for January and February, which are poor.

AVERAGE DISCHARGE.--38 years, 753 ft³/s (21.32 m³/s), 29.64 in/yr (753 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 47,000 ft³/s (1,330 m³/s) Oct. 15, 1954, gage height, 15.23 ft (4.642 m), from rating curve extended above 15,000 ft³/s (420 m³/s) on basis of slope-area measurement of peak flow; minimum, 5.5 ft³/s (0.17 m³/s) Sept. 10, 11, 1965, gage height, 0.99 ft (0.302 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 7,800 ft³/s (220 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 26	0730	12600 357	8.59 2.618	Mar. 26	1330	8090 229	7.09 2.161
Mar. 14	2230	10300 292	7.88 2.402	July 3	2000	*13200 374	8.77 2.673

Minimum discharge, 34 ft³/s (0.96 m³/s) Sept. 30, gage height, 1.23 ft (0.375 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	124	245	4940	420	430	160	1300	669	372	448	1310	476
2	396	234	2520	350	370	150	1390	534	292	348	688	257
3	426	315	1540	300	330	154	582	446	608	6260	455	174
4	365	545	1160	270	300	154	849	532	672	5540	1480	130
5	250	488	1100	290	280	140	1120	1190	429	2240	1080	106
6	242	954	1310	350	260	145	868	1100	366	1250	1460	86
7	287	2000	991	394	240	154	1460	821	462	784	2970	74
8	267	3110	785	707	220	147	1320	833	768	704	1930	69
9	1330	1160	630	3140	210	138	958	1140	1240	921	1230	63
10	1180	855	500	1900	190	203	795	1020	894	532	816	57
11	652	877	450	1200	180	303	698	832	624	442	696	55
12	455	655	410	800	190	612	732	687	483	330	1080	57
13	342	557	508	600	210	963	562	1280	390	252	680	57
14	282	473	1520	500	220	5360	461	3060	319	672	1060	61
15	240	458	3540	420	230	6350	390	2250	266	808	704	68
16	358	581	1840	320	240	2820	344	2000	219	483	490	228
17	529	696	1240	340	230	1660	310	1760	194	476	366	151
18	410	862	1100	330	210	1120	287	1360	174	336	281	106
19	546	675	1300	300	200	1090	330	1150	155	252	224	79
20	736	568	1110	270	180	2000	585	912	140	206	189	68
21	643	510	999	250	200	3510	832	748	624	215	158	63
22	517	650	814	230	190	4810	794	610	792	181	134	59
23	417	2340	650	220	183	3140	796	523	435	155	117	55
24	348	1880	608	250	189	3100	718	2380	262	155	103	63
25	298	1400	1050	1400	187	2640	643	1960	189	155	92	57
26	298	1100	850	8810	170	5900	1100	1100	162	170	89	55
27	458	940	700	3500	160	4580	1390	808	1460	134	81	50
28	433	846	600	2100	150	2640	1380	632	1650	308	121	42
29	362	934	544	1200	---	2090	1100	518	984	198	117	40
30	311	2630	513	700	---	1620	831	448	624	540	127	35
31	274	---	490	540	---	1210	---	403	---	2940	784	---
TOTAL	13776	29546	36312	32401	6349	59063	25365	33711	16249	28435	21112	2941
MEAN	444	985	1171	1045	227	1905	846	1087	542	917	681	98.0
MAX	1330	3110	4940	8810	430	6350	1460	3060	1650	6260	2970	476
MIN	124	234	410	220	150	138	287	403	140	134	81	35
CFSM	1.29	2.86	3.39	3.03	.66	5.52	2.45	3.15	1.57	2.66	1.97	.28
IN.	1.49	3.19	3.42	3.49	.68	6.37	2.73	3.63	1.75	3.07	2.28	.32

CAL YR 1977	TOTAL	229751	MEAN 629	MAX 6180	MIN 39	CFSM 1.82	IN 24.77
WTR YR 1978	TOTAL	305260	MEAN 836	MAX 8810	MIN 35	CFSM 2.42	IN 32.91

03066000 BLACKWATER RIVER AT DAVIS, WV

LOCATION.--Lat 39°07'35", long 79°28'10", Tucker County, Hydrologic Unit 05020004, on right bank 0.4 mi (0.6 km) southwest of Davis, 0.5 mi (0.8 km) downstream from Beaver Creek, and at mile 10.6 (17.1 km).

DRAINAGE AREA.--86.2 mi² (223.3 km²).

PERIOD OF RECORD.--April 1921 to current year.

REVISED RECORDS.--WSP 583: 1921-23. WSP 803: Drainage area. WSP 1173: 1931-34(M,m). WSP 1305: 1928(M), 1932-37(M), 1939-41(M), 1944-48(M).

GAGE.--Water-stage recorder. Datum of gage is 3,058.87 ft (932.344 m) levels by West Virginia Power and Transmission Co. Prior to Dec. 18, 1952, nonrecording gage at site 60 ft (18 m) downstream at same datum.

REMARKS.--Records good except those for December, January, February, and March, which are poor.

AVERAGE DISCHARGE.--57 years, 196 ft³/s (5.551 m³/s), 30.88 in/yr (784 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,170 ft³/s (203 m³/s) Mar. 29, 1924, gage height, 13.20 ft (4.023 m), from floodmark; minimum, 1.5 ft³/s (0.042 m³/s) Sept. 11, 12, 1959, gage height, 0.90 ft (0.274 m), caused by filling of small water supply pool about 1.0 mi (1.6 km) upstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (42 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 8	0800	2830 80.1	8.18 2.493	Mar. 27	0100	1720 48.7	6.54 1.993
Jan. 26	1500	1580 44.7	6.26 1.908	May 25	1100	1810 51.3	6.69 2.039
Mar. 15	1300	3750 106	9.38 2.859	July 3	2100	*4510 128	10.33 3.149
Mar. 22	0100	1770 50.1	6.82 2.079	Aug. 6	2400	1510 42.8	6.12 1.865

Minimum discharge, 16 ft³/s (0.45 m³/s) Sept. 30, gage height, 1.43 ft (0.436 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	58	1370	100	94	39	379	159	96	109	283	194
2	195	64	418	90	85	38	402	133	103	152	120	92
3	169	95	420	75	79	38	332	116	374	2690	73	63
4	172	191	341	66	73	38	274	176	309	2590	128	73
5	108	167	352	70	67	37	361	494	146	982	158	54
6	90	291	434	90	61	35	273	402	115	368	963	38
7	103	662	249	160	57	34	514	262	134	213	885	27
8	106	2200	200	341	53	34	356	249	222	198	509	22
9	441	977	150	624	50	36	229	362	351	287	255	23
10	362	476	120	367	47	42	182	254	256	295	166	22
11	290	445	110	250	46	60	163	190	144	442	130	20
12	125	292	100	170	48	100	172	159	106	161	186	21
13	57	236	115	140	51	250	133	301	92	113	186	64
14	82	204	525	115	54	680	108	750	80	175	152	41
15	74	203	1030	100	55	3040	93	701	69	196	113	35
16	126	242	532	80	51	2200	93	696	60	121	85	52
17	199	304	300	82	48	1300	78	576	55	119	74	117
18	142	417	292	78	46	808	74	438	52	96	64	79
19	150	245	342	70	44	680	99	366	45	72	56	50
20	174	191	277	64	42	876	197	274	44	63	50	40
21	132	174	220	58	40	1080	315	218	157	119	46	30
22	101	266	180	55	39	1580	249	176	407	70	41	28
23	66	689	170	52	39	1110	179	152	141	58	34	30
24	77	534	157	61	40	988	148	548	78	55	30	28
25	75	348	388	526	41	792	151	1520	61	62	29	26
26	75	310	200	1470	42	1300	465	650	64	56	30	23
27	107	269	170	500	39	1470	562	274	491	44	28	21
28	111	245	150	190	37	873	352	193	572	73	32	19
29	68	289	130	140	---	663	228	154	278	54	32	17
30	72	731	120	120	---	539	185	128	144	66	33	16
31	64	---	115	100	---	409	---	112	---	471	237	---
TOTAL	4167	11821	10077	6404	1468	21169	7336	11183	5246	10570	4808	1365
MEAN	134	394	325	207	52.4	683	245	361	175	341	155	45.5
MAX	441	2200	1370	1470	74	3040	562	1520	572	2690	885	194
MIN	44	58	100	52	37	34	74	112	44	44	28	16
CFSM	4.55	4.57	3.77	2.40	.61	7.92	2.84	4.19	2.03	3.96	1.80	.53
IN.	1.00	5.10	4.35	2.76	.63	9.14	3.17	4.83	2.26	4.56	2.07	.59
CAL YR 1977	TOTAL	67019	MEAN 184	MAX 2200	MIN 12	CFSM 2.14	IN 28.42					
WTR YR 1978	TOTAL	95614	MEAN 262	MAX 3040	MIN 16	CFSM 3.04	IN 41.26					

MONONGAHELA RIVER BASIN

03068000 SHAVERS FORK AT BEMIS, WV

LOCATION.--Lat 38°48'27", long 79°44'16", Randolph County, Hydrologic Unit 05020004, on right bank at downstream side of bridge on State Secondary Route 22, at Bemis, 0.6 mi (1.0 km) upstream from Fishing Hawk Creek, and at mile 39.9 (64.2 km).

DRAINAGE AREA.--115 mi² (298 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1922 to December 1925, October 1973 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,574.06 ft (784.573 m) National Geodetic Vertical Datum of 1929. February 17, 1922 to December 31, 1925, nonrecording gage on downstream side of bridge, at present site, at datum 2.18 ft (0.664 m) lower.

REMARKS.--Water-discharge records good except those for Dec. 6 to Mar. 12, which are poor.

AVERAGE DISCHARGE.--8 years, 333 ft³/s (9.431 m³/s), 39.32 in/yr (999 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,600 ft³/s (413 m³/s) June 2, 1974, gage height, 8.64 ft (2.633 m), from floodmark, from rating curve extended above 6,100 ft³/s (170 m³/s); maximum gage height, 9.69 ft (2.954 m) Jan. 26, 1978; minimum discharge, 9.5 ft³/s (0.27 m³/s) Sept. 9, 10, 1976; minimum gage height, 0.43 ft (0.131 m) Aug. 31, 1925, present datum.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 13, 1918, reached a stage of about 13.1 ft (4.0 m), present datum.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,900 ft³/s (82 m³/s) and maximum (*).

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 1	0515	4000 113	6.19 1.887	Mar. 26	1415	5140 146	6.90 2.103
Jan. 9	0500	3890 110	6.12 1.865	May 13	2200	4530 128	6.52 1.987
Jan. 26	0500	*12600 357	9.69 2.954	July 3	1530	3180 90.1	5.63 1.716
Mar. 14	2300	3320 94.0	5.73 1.746	Aug. 7	0230	3340 94.6	5.74 1.750
Mar. 22	0145	3480 98.6	5.84 1.780				

Minimum discharge, 14 ft³/s (0.40 m³/s) Sept. 30, gage height, 1.41 ft (0.430).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	119	201	2250	160	200	56	882	224	213	206	410	370
2	605	184	826	150	180	56	1170	196	154	178	238	166
3	303	171	544	120	170	60	742	175	676	1720	178	108
4	209	162	435	110	150	60	568	182	405	1380	309	87
5	175	155	445	120	130	58	874	238	257	610	305	70
6	178	154	598	140	120	55	544	241	203	390	297	57
7	109	159	360	170	105	57	544	206	175	293	1680	46
8	102	337	290	238	97	60	455	245	289	241	970	40
9	1000	310	250	1760	90	68	361	465	652	337	465	34
10	741	255	210	440	83	90	317	435	420	234	345	31
11	439	328	190	350	79	160	289	329	289	337	305	26
12	347	260	160	280	74	270	309	277	227	227	756	24
13	281	221	210	250	85	365	249	1030	196	169	532	29
14	233	189	498	210	84	1050	213	1900	169	405	858	29
15	204	150	1250	190	75	1660	189	890	137	375	415	34
16	247	219	526	170	70	700	172	688	122	245	309	34
17	202	243	385	170	67	440	157	664	110	380	245	92
18	220	285	415	160	61	341	145	503	100	265	196	72
19	474	222	604	150	58	341	145	568	87	185	160	40
20	648	192	415	130	56	538	293	445	114	145	135	29
21	508	187	345	120	61	1280	345	365	148	166	118	25
22	480	282	285	110	58	2110	249	309	257	142	104	32
23	403	930	231	100	57	1330	385	285	135	114	90	60
24	357	642	241	93	55	1690	390	380	98	118	81	44
25	204	513	405	658	64	1710	353	305	81	166	76	33
26	400	400	310	5170	61	3420	361	249	74	163	98	26
27	561	350	270	500	59	1880	349	210	1410	110	74	22
28	388	300	210	330	57	970	337	182	962	166	70	19
29	317	382	190	350	---	946	285	163	435	135	67	17
30	208	974	180	290	---	834	245	151	281	245	52	15
31	209	---	170	230	---	622	---	289	---	1110	231	---
TOTAL	11554	9437	13698	14019	2506	23277	11957	12789	8876	10957	10169	1711
MEAN	373	315	442	452	39.5	751	399	413	296	353	328	57.0
MAX	1000	974	2250	5170	209	3420	1170	1900	1410	1720	1680	370
MIN	119	154	160	93	55	55	145	151	74	110	52	15
CFSM	3.74	2.74	3.84	3.43	.78	6.53	3.47	3.59	2.57	3.07	2.85	.50
IN.	3.74	2.05	4.43	4.53	.81	7.53	3.87	4.14	2.87	3.54	3.29	.55

CAL YR 1977 TOTAL 114207 MEAN 313 MAX 5750 MIN 27 CFSM 2.72 IN 36.96
WTR YR 1978 TOTAL 130950 MEAN 359 MAX 5170 MIN 15 CFSM 3.12 IN 42.36

MONONGAHELA RIVER BASIN

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03068000 SHAVERS FORK AT BEMIS, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT									
27...	1305	525	35	--	11.5	9.0	--	9	13
DEC									
08...	1504	284	32	--	.0	1.0	--	6	4.6
JAN									
24...	1215	92	32	--	2.0	1.0	--	2	.50
FEB									
15...	1115	1650	36	--	3.0	9.0	--	23	102
27...	1536	1540	32	--	4.5	6.0	--	13	54
29...	1140	954	31	--	6.0	3.0	--	2	5.2
MAY									
04...	1300	175	30	--	9.5	2.0	--	0	.00
JUNE									
01...	1105	206	28	6.4	--	3.0	8.8	5	2.8
22...	1245	285	26	6.0	18.0	4.0	--	4	3.1
27...	1100	1830	31	6.0	17.0	60	--	151	746
27...	1200	1580	35	6.0	18.0	80	--	173	738
27...	1300	1450	36	6.0	18.0	50	--	92	360
27...	1400	1350	31	6.0	18.5	50	--	87	317
27...	1500	1260	30	6.0	19.0	50	--	87	296
27...	1630	1120	30	6.0	20.0	50	--	75	227
27...	1730	1030	31	6.0	20.0	50	--	73	203
27...	1900	922	30	6.0	20.0	40	--	54	134
28...	0945	978	28	6.0	17.0	15	--	24	63
JUL									
27...	1010	104	29	7.0	20.0	2.0	--	0	.00
AUG									
31...	1015	110	27	7.0	20.0	3.0	--	5	1.5
SEPT									
26...	1120	27	33	7.0	16.5	2.0	--	1	.07

LOCATION.--Lat 38°54'10", long 79°41'41", Randolph County, Hydrologic Unit 05020004, at cableway, 0.5 mi (0.8 km) upstream from Taylor Run, 0.9 mi (1.4 km) southeast of Bowden, and at mile 31.5 (50.7 km).

WATER-DISCHARGE RECORDS

GAGE.--Nonrecording gage. Altitude of gage is 2,240 ft (683 m), from topographic map.

REMARKS.--Records fair. Mean daily discharges computed from once-daily observer readings, records for Taylor Run at Bowden (station 03068610), and records for Shavers Fork below Bowden (station 03068800).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 12,300 ft³/s (348 m³/s) June 2, 1974, from rating curve extended above 4,400 ft³/s (120 m³/s); minimum daily, 18 ft³/s (0.51 m³/s) Sept. 9, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 5,610 ft³/s (159 m³/s) Jan. 26; minimum daily, 25 ft³/s (0.71 m³/s), Sept. 30.

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	90	192	2320	134	207	67	812	240	223	222	505	429
2	310	170	1040	170	247	67	1230	215	154	176	244	202
3	357	160	620	140	222	73	791	171	574	2380	170	122
4	250	153	475	131	173	73	613	175	462	1710	302	93
5	172	146	465	135	103	70	833	248	264	745	308	77
6	107	141	655	167	130	67	621	308	202	+17	320	6
7	174	156	226	217	127	67	622	259	177	264	1670	58
8	151	240	+14	371	117	73	556	264	266	171	1080	53
9	648	274	307	1730	108	75	418	514	702	246	518	47
10	760	222	255	281	78	102	347	532	477	183	351	43
11	432	271	218	417	74	174	308	366	307	262	281	39
12	363	240	189	334	37	311	330	310	238	171	721	36
13	207	212	224	277	70	570	270	747	178	143	407	37
14	230	144	512	254	74	1200	246	2390	173	365	868	37
15	170	173	1477	231	37	2150	215	1040	145	453	427	39
16	230	187	605	203	33	525	187	768	122	234	297	43
17	273	276	416	213	78	577	174	743	107	317	236	70
18	231	250	386	274	71	376	162	577	76	265	195	87
19	404	217	575	185	67	368	160	608	84	180	162	56
20	650	187	424	165	60	593	275	503	74	144	136	43
21	601	174	346	140	71	1220	445	374	173	134	117	36
22	404	217	278	130	67	2390	373	328	268	142	101	37
23	374	854	230	126	67	1430	447	247	164	104	89	53
24	307	671	222	110	70	1800	440	378	105	75	78	53
25	202	523	351	362	70	1870	370	348	82	141	72	43
26	317	438	356	5010	74	3290	387	277	70	168	92	37
27	577	386	314	1200	71	2290	371	233	1350	76	74	32
28	340	321	247	636	60	1150	357	205	1110	72	71	29
29	203	328	222	457	---	1030	213	182	532	135	73	27
30	247	876	202	367	---	713	208	168	307	53	62	25
31	210	---	174	312	---	675	---	233	---	1320	127	---
TOTAL	10707	8815	15274	15740	3074	26018	15127	14238	9226	11750	10154	2055
MEAN	342	274	473	514	110	837	478	457	308	377	328	68.5
MAX	848	676	2520	5010	207	3290	1230	2390	1350	2380	1670	429
MIN	74	141	189	110	66	67	160	168	70	53	62	25
CFSM	2.55	2.13	3.57	3.73	1.00	6.00	3.17	3.33	2.23	2.75	2.38	5.0
100	2.74	2.37	4.12	4.30	1.73	7.01	3.54	3.84	2.47	3.17	2.74	5.5
CAL YR 1977	TOTAL	11547	MEAN	327	MAX	557	MIN	31	CFSM	2.37	IN	32.20
WTR YR 1978	TOTAL	140610	MEAN	380	MAX	261	MIN	25	CFSM	2.75	IN	37.90

MONONGAHELA RIVER BASIN

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03068600 SHAVERS FORK ABOVE BOWDEN, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: September 1975 to current year.

WATER TEMPERATURES: August 1975 to current year.

TURBIDITY: July 1975 to current year.

SUSPENDED SEDIMENT DISCHARGE: July 1975 to current year.

REMARKS.--Sediment samples are taken once daily and more frequently during rises.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 88 micromhos Jan. 19, 1977; minimum daily, 25 micromhos Sept. 25-30, Oct. 2, 3, 6, 1975.

WATER TEMPERATURES: Maximum daily, 25.0°C June 14, 1976; minimum daily, 0.0°C on many days during winter periods.

TURBIDITY: Maximum daily, 100 JTU July 14, 1978; minimum daily, 1 JTU on many days.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 307 mg/L Jan. 26, 1978; minimum daily mean, 0 mg/L on many days.

SEDIMENT LOADS: Maximum daily, 5,220 tons (4,740 tonnes) Oct. 9, 1976; minimum daily, 0 tons (0 tonnes) on many days.

EXTREMES OUTSIDE PERIOD OF DAILY RECORD.--A specific conductance of 72 micromhos was observed Aug. 25, 1975. A water temperature of 24.0°C was observed July 28, 1975.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 44 micromhos Feb. 9; minimum daily, 26 micromhos Dec. 12, May 21, 22, 23, June 8, and Aug. 7.

WATER TEMPERATURES: Maximum daily, 24.0°C Sept. 8; minimum daily, 0.5°C Dec. 7.

TURBIDITY: Maximum daily, 100 JTU July 14; minimum daily, 1 JTU on many days.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 307 mg/L Jan. 26; minimum daily mean, 0 mg/L on many days.

SEDIMENT LOADS: Maximum daily, 4,650 tons (4,220 tonnes) Jan. 26; minimum daily, 0 tons (0 tonnes) on many days.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	35	35	---	34	37	30	34	28	---	31	30
2	32	34	33	---	32	40	29	33	28	---	30	---
3	36	33	32	41	32	37	30	33	28	29	30	31
4	35	34	31	38	32	36	30	33	29	28	36	32
5	36	33	30	36	34	37	29	37	29	29	32	31
6	35	33	31	32	32	36	29	37	27	30	30	32
7	35	34	33	30	35	37	31	37	27	28	26	32
8	34	33	33	31	32	39	30	37	26	28	28	33
9	34	36	---	30	44	38	31	36	28	27	30	34
10	36	35	---	36	42	37	30	36	32	28	30	34
11	34	33	---	37	37	38	32	36	30	28	29	35
12	34	34	26	38	34	41	31	37	29	29	---	36
13	33	33	31	36	34	40	34	36	29	30	---	36
14	32	34	31	36	35	39	38	37	28	38	---	35
15	---	33	32	34	38	36	32	35	32	31	---	36
16	34	34	33	39	35	35	32	35	31	30	---	---
17	33	34	30	36	---	36	32	35	30	29	---	35
18	34	33	30	34	34	36	33	36	30	29	---	32
19	34	34	30	34	31	---	33	27	32	31	---	35
20	35	33	31	42	34	33	32	27	31	30	30	37
21	35	33	31	34	34	34	36	26	29	30	30	37
22	34	---	32	34	36	34	36	26	28	30	31	36
23	34	---	33	34	35	34	34	26	28	---	31	35
24	33	---	30	37	37	33	36	29	29	31	32	32
25	33	---	30	38	34	33	32	28	29	36	31	33
26	33	32	32	32	35	33	33	30	31	30	32	34
27	35	33	34	32	39	33	34	29	28	31	---	36
28	36	32	33	33	34	32	---	---	30	32	34	36
29	33	32	34	33	---	32	33	28	30	---	33	40
30	34	32	32	33	---	31	33	---	29	33	33	38
31	35	---	31	33	---	30	---	32	---	30	34	---
MEAN	34	33	32	35	35	36	32	33	29	30	31	34
WTR YR 1978	MEAN	33	MAX	44	MIN	26						

MONONGAHELA RIVER BASIN

03068600 SHAWERS FORK ABOVE BOWDEN, WV--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.0	7.0	8.0	---	1.0	2.0	8.0	8.0	15.0	---	17.0	19.0
2	15.0	10.0	7.0	---	1.0	2.0	8.0	8.5	17.0	---	16.0	---
3	12.0	12.0	4.0	2.0	1.0	2.0	8.0	8.0	16.0	17.0	18.0	18.0
4	10.0	13.0	6.0	2.0	1.0	2.0	7.0	10.0	14.0	15.5	18.0	18.0
5	9.0	14.0	5.0	3.0	1.0	2.0	9.0	8.0	14.0	17.0	18.0	23.0
6	10.0	15.0	5.0	---	1.0	2.0	8.0	8.0	15.0	15.0	18.0	17.0
7	10.0	14.0	4.5	3.0	1.0	2.0	9.0	9.0	18.0	16.0	18.0	17.0
8	11.0	13.0	1.0	5.0	1.0	2.0	9.0	10.0	17.0	17.0	17.0	24.0
9	10.5	13.0	---	2.0	1.0	2.0	8.0	11.0	15.5	21.0	17.0	21.0
10	9.0	13.0	---	1.0	1.0	2.0	10.0	10.0	12.0	19.0	17.0	19.0
11	9.0	7.0	---	1.0	1.0	2.0	14.0	9.0	16.0	17.0	18.0	19.0
12	10.0	4.0	1.0	1.0	1.0	2.0	9.0	12.0	15.0	15.0	---	19.0
13	7.0	2.0	3.0	2.0	2.0	3.0	9.0	12.5	17.0	16.0	---	20.0
14	9.0	2.0	3.0	2.0	2.0	3.0	8.0	9.0	13.0	18.0	---	18.0
15	---	4.0	5.0	1.0	2.0	3.0	7.0	9.0	12.0	17.0	---	18.0
16	8.0	5.0	4.0	1.0	2.0	3.0	7.0	9.0	14.0	17.0	---	---
17	6.0	8.0	8.0	2.0	---	3.0	8.0	10.0	16.0	17.0	---	19.0
18	5.0	6.0	7.0	2.0	2.0	3.0	9.0	9.0	18.0	16.0	---	18.0
19	8.0	4.0	6.0	2.0	2.0	---	9.0	10.0	18.0	18.0	---	20.0
20	8.0	5.0	5.0	2.0	2.0	3.0	9.0	12.0	18.0	19.0	20.0	21.0
21	7.0	8.0	4.0	3.0	2.0	5.0	6.0	16.0	18.5	19.0	17.0	20.0
22	8.0	---	3.0	1.0	2.0	4.0	4.0	13.0	17.5	21.0	17.0	20.0
23	8.0	---	2.0	1.0	2.0	5.0	7.0	14.0	15.0	---	17.0	16.0
24	9.0	---	3.0	1.0	2.0	6.0	8.0	14.0	15.0	21.0	19.0	16.0
25	9.0	---	4.0	3.0	2.0	5.0	9.0	13.0	18.0	19.0	20.0	17.0
26	11.5	4.0	2.0	1.5	2.0	5.0	8.0	14.0	18.0	19.5	19.0	17.0
27	12.0	1.0	1.0	1.0	2.0	5.0	6.0	14.0	17.5	19.0	---	14.0
28	13.0	3.0	1.0	1.0	2.0	6.0	---	---	17.0	20.0	19.0	15.0
29	10.0	4.0	1.0	1.0	---	7.0	7.0	16.0	17.0	17.0	20.5	13.0
30	9.0	5.0	3.0	1.0	---	5.0	10.0	18.5	17.0	20.0	20.0	13.0
31	7.0	---	2.0	1.0	---	5.0	---	---	---	17.0	19.5	---
MEAN	9.5	7.5	3.5	2.0	1.5	3.5	8.0	11.0	16.0	18.0	18.0	18.0
WTR YR 1978	MEAN	9.5	MAX	24.0	MIN	.5						

TURBIDITY (NTU), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3	1	30	---	1	2	1	1	3	---	7	10
2	50	1	3	---	1	3	4	1	2	---	2	---
3	10	1	2	1	1	1	1	1	50	50	2	2
4	3	1	1	1	1	2	1	1	7	10	3	1
5	2	2	1	1	1	2	3	1	3	4	5	1
6	2	1	2	1	1	1	2	2	2	2	3	1
7	2	1	1	1	1	1	2	2	3	2	25	1
8	2	3	1	1	1	2	2	2	3	2	7	1
9	15	1	---	30	1	1	1	2	8	2	2	1
10	8	3	---	3	1	2	1	2	9	8	2	2
11	2	2	---	1	1	1	2	1	4	3	3	1
12	1	2	1	1	1	3	2	1	3	3	---	1
13	2	3	1	1	1	3	1	10	3	3	---	1
14	2	2	1	1	1	7	1	6	2	100	---	1
15	---	2	20	1	1	15	1	2	2	30	---	1
16	3	2	4	1	1	5	1	1	2	3	---	---
17	2	2	1	1	---	1	1	5	1	2	---	5
18	2	2	1	1	1	1	1	1	1	5	---	2
19	3	7	2	1	1	---	1	1	1	2	---	2
20	5	3	1	1	1	1	1	2	3	1	2	3
21	7	1	1	1	1	1	3	2	6	1	2	2
22	5	---	1	1	1	20	4	1	7	2	2	1
23	2	---	1	1	1	3	3	1	2	---	1	1
24	2	---	1	1	1	5	2	3	3	1	2	1
25	1	---	1	1	1	3	1	2	2	2	1	1
26	2	2	2	60	1	20	1	2	2	2	2	2
27	9	2	1	3	1	6	1	2	40	3	---	1
28	3	2	1	2	1	2	---	---	8	2	2	1
29	2	1	1	1	---	1	1	2	5	1	2	2
30	1	5	1	1	---	1	1	---	3	2	1	2
31	2	---	1	1	---	1	---	2	---	45	4	---
MEAN	5	2	3	4	1	4	2	2	6	10	4	2
WTR YR 1978	MEAN	4	MAX	100	MIN	1						

03068600 SHAVERS FORK ABOVE BOWDEN, WV--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH		
1	38	10	0	.00	119	810	1	.50	1	.72	2	.36
2	25	133	0	.00	7	20	1	.48	2	1.3	2	.37
3	12	12	0	.00	3	5.0	1	.41	4	2.4	2	.39
4	4	2.4	0	.00	2	2.7	2	.71	5	2.6	3	.59
5	1	.52	0	.00	1	1.3	0	.00	3	1.3	3	.57
6	1	.45	0	.00	17	30	0	.00	2	.73	1	.18
7	4	1.9	0	.00	2	2.8	1	.56	1	.34	1	.19
8	19	7.7	5	3.3	2	2.2	1	.81	2	.63	2	.39
9	111	254	2	1.5	2	1.7	58	271	0	.00	2	.41
10	21	46	4	2.4	2	1.4	5	7.8	0	.00	3	.83
11	7	8.2	4	2.9	2	1.2	1	1.1	0	.00	2	.94
12	5	4.4	5	3.3	2	1.0	1	.90	0	.00	3	2.5
13	5	3.6	2	1.1	1	.60	2	1.5	0	.00	7	9.9
14	4	2.5	0	.00	35	48	1	.69	0	.00	144	467
15	4	2.1	0	.00	46	183	2	1.2	0	.00	44	255
16	13	8.1	0	.00	6	9.8	1	.55	0	.00	5	12
17	21	17	0	.00	5	5.6	2	1.2	0	.00	2	3.0
18	5	3.1	0	.00	30	31	2	1.1	0	.00	1	1.1
19	24	26	1	.59	7	11	2	1.0	1	.18	0	.00
20	11	20	1	.50	3	3.4	2	.89	0	.00	2	3.2
21	7	11	0	.00	2	1.9	2	.79	0	.00	127	418
22	6	7.5	6	3.5	1	.75	2	.73	0	.00	63	407
23	4	4.0	122	281	0	.00	2	.68	0	.00	18	69
24	2	1.7	10	18	0	.00	2	.63	0	.00	18	87
25	2	1.4	5	7.1	13	12	3	4.6	0	.00	11	56
26	31	27	1	1.2	7	6.7	307	4650	0	.00	185	1640
27	17	27	1	1.0	1	.85	4	29	0	.00	32	198
28	2	1.9	2	1.7	1	.67	4	6.9	2	.37	4	12
29	1	.77	3	2.7	0	.00	2	2.5	---	---	5	14
30	1	.67	92	223	1	.55	1	.99	---	---	7	17
31	1	.58	---	---	1	.52	1	.84	---	---	2	3.6
TOTAL	---	646.89	---	554.79	---	1195.64	---	4990.16	---	10.57	---	3680.52

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	1	2.2	1	.65	5	3.0	8	4.8	17	23	19	22
2	4	13	0	.00	4	1.7	30	14	3	2.0	5	2.7
3	4	8.5	0	.00	75	116	284	1820	2	.92	1	.33
4	5	8.3	0	.00	16	20	44	227	13	11	1	.25
5	23	55	0	.00	5	3.6	11	22	11	9.1	0	.00
6	8	13	0	.00	4	2.2	3	3.4	15	13	0	.00
7	7	12	0	.00	5	2.4	2	1.4	134	604	0	.00
8	3	4.5	8	5.7	23	17	8	3.7	15	44	0	.00
9	3	3.4	7	9.8	28	53	12	8.0	5	7.0	0	.00
10	7	6.6	1	1.4	11	15	10	4.9	3	2.8	1	.12
11	4	3.3	0	.00	4	3.3	10	7.1	30	23	0	.00
12	5	4.8	1	.84	5	3.2	7	3.6	8	16	0	.00
13	2	1.6	70	141	6	3.2	13	5.0	25	27	1	.11
14	0	.00	92	554	4	1.9	91	90	23	54	1	.11
15	0	.00	5	15	3	1.2	34	42	3	3.5	0	.00
16	0	.00	1	2.1	0	.00	12	7.6	1	.80	2	.23
17	0	.00	2	4.2	0	.00	7	6.0	1	.64	5	.94
18	0	.00	0	.00	0	.00	1	.72	2	1.1	4	.94
19	0	.00	1	1.6	0	.00	0	.00	2	.87	0	.00
20	0	.00	2	2.7	22	4.4	0	.00	2	.73	1	.12
21	1	1.2	1	1.1	7	3.3	4	1.4	1	.32	1	.10
22	0	.00	1	.89	31	22	3	1.2	0	.00	2	.20
23	1	1.2	13	10	5	2.2	0	.00	1	.24	3	.43
24	2	2.4	5	5.4	5	1.4	1	.26	2	.42	2	.29
25	1	1.1	5	4.7	5	1.1	5	1.9	2	.39	1	.12
26	1	1.1	7	5.2	59	11	3	1.4	10	2.5	4	.40
27	0	.00	5	3.1	113	412	3	.78	2	.40	1	.09
28	0	.00	7	3.9	22	66	6	1.5	2	.38	1	.08
29	1	.85	10	4.9	12	17	6	2.2	3	.59	0	.00
30	0	.00	7	3.2	4	6.6	11	1.6	7	1.2	0	.00
31	---	---	12	7.5	---	---	134	478	21	7.2	---	---
TOTAL	---	144.65	---	828.86	---	793.70	---	2761.46	---	858.10	---	29.56

TOTAL LOAD FOR YEAR: 16494.32 TONS.

MONONGAHELA RIVER BASIN

03068610 TAYLOR RUN AT BOWDEN, WV

LOCATION.--Lat 38°54'27", long 79°41'49", Randolph County, Hydrologic Unit 05020001, on upstream side of left abutment of bridge on U.S. Highway 33, 450 ft (137 m) upstream from mouth, and 0.7 mi (1.1 km) east of Bowden.

DRAINAGE AREA.--5.06 mi² (13.11 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1973 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,240 ft (683 m), from topographic map.

REMARKS.--Water-discharge records good except those for Aug. 24 to Sept. 30, which are fair, and those for January, February and July 5 to Aug. 23, which are poor.

AVERAGE DISCHARGE.--5 years, 15.9 ft³/s (0.450 m³/s), 39.99 in/yr (1016 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 382 ft³/s (10.8 m³/s) June 8, 1974, gage height, 6.91 ft (2.106 m), from rating curve extended above 150 ft³/s (4.2 m³/s); minimum, 0.40 ft³/s (0.011 m³/s) Aug. 27, 28, 1974; minimum gage height, 3.72 ft (1.134 m) Aug. 9, 10, 1973.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 150 ft³/s (4.2 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 26	0315	182 5.15	5.79 1.765	July 14	0945	178 5.04	5.76 1.756
Mar. 14	1530	164 4.64	5.67 1.728	July 31	0415	229 6.48	6.08 1.853
July 3	1515	*255 7.22	6.23 1.899				

Minimum discharge, 0.46 ft³/s (0.013 m³/s) Sept. 30, gage height, 4.03 ft (1.228 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.7	4.8	62	10	9.0	2.9	17	8.3	5.3	7.4	36	13
2	8.7	4.8	35	9.2	8.0	2.9	15	7.0	4.5	11	22	6.2
3	8.7	4.5	24	7.9	7.2	2.9	13	6.4	9.2	138	26	4.2
4	8.3	4.0	19	7.4	6.6	2.9	13	15	6.4	85	38	3.3
5	7.0	4.2	22	8.7	6.2	2.7	13	29	5.0	43	34	2.3
6	13	4.0	22	8.3	5.6	2.7	12	25	4.8	39	31	1.7
7	13	4.0	17	12	5.2	2.9	28	21	6.2	35	38	1.5
8	15	4.2	14	15	5.0	2.9	21	30	15	46	35	1.3
9	59	4.2	13	27	4.8	5.0	17	38	19	42	24	1.2
10	34	7.4	4.6	15	4.6	7.0	14	28	14	32	17	1.2
11	18	8.7	8.7	16	4.4	10	18	21	10	26	25	1.1
12	12	6.7	8.3	14	4.3	15	15	17	7.4	21	28	1.2
13	9.2	6.7	10	12	4.7	25	15	36	6.4	16	19	1.3
14	7.4	6.4	50	10	4.6	111	12	46	5.3	55	15	1.2
15	6.4	7.9	53	7.4	4.4	83	10	29	4.8	29	9.2	1.5
16	15	9.6	30	6.7	4.0	37	8.7	25	4.2	20	6.4	3.6
17	14	12	20	6.7	3.9	22	7.4	22	3.8	15	5.0	2.3
18	10	12	17	6.2	3.6	17	7.4	19	3.4	11	3.6	1.3
19	16	11	20	5.9	3.4	22	8.3	17	3.3	7.7	2.9	1.1
20	21	9.2	19	5.9	3.2	30	21	14	5.3	6.2	2.3	1.1
21	15	10	17	5.3	3.4	72	28	12	12	5.4	1.9	.93
22	12	18	15	5.6	3.1	73	26	10	9.6	4.8	1.7	.68
23	10	53	12	5.4	3.0	53	23	10	5.3	4.3	1.3	.73
24	8.7	38	12	5.6	3.1	50	15	25	4.5	3.8	1.2	.63
25	7.4	29	23	42	3.1	56	17	22	3.8	5.0	1.2	.63
26	9.2	24	17	112	3.1	105	18	17	5.3	2.8	1.2	.54
27	7.4	21	14	37	2.9	60	15	14	23	12	4.5	.54
28	6.7	18	13	21	2.9	39	13	11	26	23	9.2	.54
29	6.2	30	11	16	---	28	11	8.7	14	11	2.7	.50
30	5.6	52	11	13	---	22	5.6	7.4	10	37	2.1	.46
31	5.0	---	10	11	---	19	---	6.7	---	91	34	---
TOTAL	397.6	429.3	628.6	489.2	127.3	983.8	469.4	597.5	256.8	885.4	498.4	57.78
MEAN	12.8	14.3	20.3	15.8	4.35	31.7	15.6	19.3	8.56	28.6	16.1	1.93
MAX	59	53	62	112	9.0	111	28	46	26	138	58	13
MIN	5.0	4.0	8.3	5.3	2.9	2.7	7.4	6.4	3.3	2.8	1.2	.46
CFSM	2.33	2.83	4.01	3.12	.70	6.27	3.08	3.81	1.69	5.65	3.18	.38
IN.	2.92	3.16	4.62	3.60	.94	7.23	3.45	4.39	1.89	6.51	3.66	.42

CAL YR 1977 TOTAL 4551.30 MEAN 12.5 MAX 100 MIN 1.2 CFSM 2.47 IN 33.45
WTR YR 1978 TOTAL 5821.08 MEAN 15.5 MAX 138 MIN .46 CFSM 3.14 IN 42.79

MONONGAHELA RIVER BASIN

73

03068610 TAYLOR RUN AT BOWDEN, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1975 to current year.

WATER TEMPERATURES: June 1975 to current year.

TURBIDITY: June 1975 to current year.

SUSPENDED SEDIMENT DISCHARGE: October 1974 to current year.

REMARKS.--In addition to daily record, samples were collected approximately once a month.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 150 micromhos Sept. 9, 1976; minimum daily, 30 micromhos July 29, 1978.

WATER TEMPERATURES: Maximum daily, 22.5°C Aug. 17, 1978; minimum daily, 0.0°C Jan. 1, 8, 9, 11-13, 15, 16, 29, 31, 1977.

TURBIDITY: Maximum daily, 85 JTU June 27, 1975; minimum daily, 1 JTU on many days.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 305 mg/L July 3, 1978; minimum daily mean, 0 mg/L on many days.

SEDIMENT LOADS: Maximum daily, 140 tons (127 tonnes) July 3, 1978; minimum daily, 0 tons (0 tonnes) on many days.

EXTREMES OUTSIDE PERIOD OF DAILY RECORD.--A specific conductance of 175 micromhos was observed Oct. 16, 1974. A water temperature of 20°C was observed Aug. 31, Sept. 4, 1973, and July 30, 1974. A turbidity of 40 JTU was observed Apr. 24, 1975.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 131 micromhos Nov. 20; minimum daily, 30 micromhos July 29.

WATER TEMPERATURES: Maximum daily, 22.5°C Aug. 17; minimum daily, 1.0°C Dec. 11, Jan. 2.

TURBIDITY: Maximum daily, 60 JTU July 3, Aug. 27; minimum daily, 1 JTU on many days.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 305 mg/L July 3; minimum daily mean, 0 mg/L on many days.

SEDIMENT LOADS: Maximum daily, 140 tons (127 tonnes) July 3; minimum daily, 0 tons (0 tonnes) on many days.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C) • WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71	63	47	---	52	70	50	56	58	---	47	60
2	70	64	49	64	53	72	52	56	60	---	46	76
3	66	66	47	63	53	67	54	58	68	49	51	63
4	62	65	58	63	56	68	54	62	69	43	48	67
5	59	65	62	60	55	69	56	65	61	42	49	70
6	63	70	54	85	55	73	56	57	60	45	49	74
7	60	70	52	80	59	73	54	55	64	48	46	76
8	59	69	52	80	58	75	51	61	65	46	50	80
9	54	71	58	60	57	86	50	56	55	45	52	82
10	49	80	54	61	58	87	52	55	51	46	52	85
11	51	63	54	54	59	84	56	54	53	48	47	88
12	53	60	55	53	58	69	54	56	56	49	45	88
13	55	58	62	52	58	69	55	53	56	54	---	85
14	55	60	58	53	58	53	54	55	56	50	51	88
15	---	62	48	55	60	47	56	52	60	46	54	85
16	66	60	47	56	62	48	56	54	60	47	57	---
17	65	62	48	60	---	53	57	54	63	49	62	82
18	60	55	58	60	61	64	59	56	64	51	64	88
19	69	53	54	60	64	72	61	46	67	55	65	92
20	57	131	58	60	72	58	63	49	70	61	68	95
21	58	58	57	61	62	48	57	48	64	63	70	94
22	54	51	56	64	63	45	58	50	60	67	72	95
23	57	51	54	64	68	44	50	53	64	---	73	88
24	58	45	54	64	64	52	50	---	63	71	78	95
25	69	---	66	83	66	49	52	51	63	70	89	96
26	64	50	51	53	68	46	54	46	68	67	82	99
27	62	50	50	48	70	45	53	46	56	76	83	110
28	63	57	50	48	70	47	49	---	54	65	80	102
29	61	75	51	50	---	48	54	50	53	30	73	103
30	63	54	51	51	---	48	54	56	50	68	83	101
31	63	---	58	50	---	50	---	50	---	42	58	---
MEAN	61	64	54	61	61	61	54	54	60	53	61	86
WTR YR 1978	MEAN	61	MAX	131	MIN	30						

MONONGAHELA RIVER BASIN

03068610 TAYLOR RUN AT BOWDEN, WV--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.5	10.0	5.5	---	1.5	2.0	8.5	8.5	16.0	---	15.0	17.5
2	13.5	11.0	5.0	1.0	1.5	2.0	9.0	7.5	14.0	---	15.0	17.0
3	13.5	11.0	6.0	2.0	2.0	3.0	3.5	10.0	15.0	15.0	16.0	18.5
4	11.0	12.0	3.0	2.5	2.0	2.0	8.0	7.0	13.0	14.5	16.0	17.0
5	8.0	11.5	5.0	3.0	1.5	2.0	9.5	9.0	13.0	15.5	16.0	20.0
6	10.0	12.5	4.5	3.5	1.5	2.0	9.0	7.0	16.0	14.0	17.0	16.0
7	11.0	12.5	2.0	3.0	2.0	2.0	8.0	7.5	16.5	15.0	17.0	17.0
8	11.0	12.5	2.0	4.0	1.5	2.0	8.0	10.0	15.0	16.0	16.0	21.5
9	10.0	13.0	3.0	3.0	1.5	3.0	9.0	10.0	14.5	18.0	16.0	19.5
10	10.5	10.0	2.0	2.0	2.0	2.5	11.5	10.0	13.0	16.5	18.0	19.0
11	10.0	7.0	1.0	1.5	2.0	3.0	12.0	8.5	15.5	15.5	18.0	18.0
12	9.0	6.0	2.0	1.5	1.5	2.5	10.0	11.0	14.0	14.0	19.0	18.0
13	7.5	5.5	3.0	3.0	2.0	3.0	8.0	11.0	14.0	16.0	---	18.5
14	10.5	5.5	4.0	3.0	3.0	3.0	7.0	9.0	14.0	15.0	20.0	18.0
15	---	7.0	4.5	2.0	2.0	4.0	7.0	9.0	14.0	15.0	20.0	17.0
16	7.0	9.0	5.0	2.5	2.5	2.5	7.0	9.0	14.5	16.0	21.5	---
17	9.0	7.0	3.5	2.0	---	4.0	7.0	10.0	15.0	16.0	22.5	18.0
18	7.5	7.5	5.0	2.5	4.0	3.0	8.0	9.5	16.0	15.0	20.0	18.0
19	11.0	5.0	5.5	2.0	2.0	4.0	8.0	10.0	16.0	16.0	21.0	19.0
20	8.5	6.5	5.0	2.0	2.0	4.5	8.0	14.0	16.0	18.0	20.0	20.0
21	9.0	8.0	3.5	2.5	3.0	5.5	6.0	14.5	17.0	17.0	18.0	19.5
22	7.0	8.0	3.5	1.5	2.0	5.5	5.0	14.5	15.0	19.0	17.5	18.0
23	9.0	8.0	3.5	1.5	2.0	6.0	7.0	14.5	15.0	---	18.0	15.0
24	9.5	8.0	3.0	1.5	3.0	6.5	8.0	13.0	15.0	19.0	19.0	20.0
25	8.0	---	4.0	3.0	2.0	6.0	8.0	13.0	17.0	18.0	18.0	16.0
26	12.5	5.0	3.0	2.5	2.0	6.0	7.0	13.0	17.5	19.0	17.0	20.0
27	11.5	3.5	3.0	2.0	2.0	6.0	6.0	13.0	17.0	17.0	22.0	15.0
28	12.5	4.0	2.0	1.5	2.5	6.5	---	---	16.0	18.0	20.5	13.0
29	9.0	4.5	3.0	2.0	---	6.5	8.0	19.0	17.0	18.0	18.0	11.0
30	10.5	6.0	4.0	1.5	---	6.5	10.5	18.0	16.0	17.5	19.5	11.0
31	10.0	---	2.5	1.5	---	7.0	---	16.5	---	16.0	19.0	---
MEAN	10.0	8.0	3.5	2.0	2.0	4.0	8.0	11.0	15.5	16.5	18.5	17.5
WTR YR 1978	MEAN	9.5	MAX	22.5	MIN	1.0						

TURBIDITY (NTU), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3	1	6	---	1	1	2	1	2	---	3	4
2	2	1	2	2	1	2	1	1	2	---	3	1
3	1	1	2	2	1	1	2	1	10	60	2	2
4	1	1	1	2	1	2	1	4	3	10	10	2
5	1	1	3	2	1	1	2	2	2	5	3	2
6	2	1	1	1	1	1	2	2	2	4	3	2
7	1	1	1	2	1	1	4	6	8	3	20	2
8	2	1	1	1	1	1	2	3	8	3	4	1
9	15	1	1	2	1	1	2	2	6	4	4	1
10	4	1	1	1	1	4	2	2	7	3	3	1
11	2	1	1	2	1	1	10	2	5	3	30	1
12	2	2	1	2	1	2	2	2	3	2	4	1
13	1	1	2	1	1	15	2	10	3	2	---	2
14	1	1	10	1	1	30	1	3	2	30	3	1
15	---	1	3	1	1	15	2	2	4	4	2	2
16	4	3	2	1	1	2	1	2	2	3	2	---
17	1	5	1	1	---	2	1	2	2	3	2	2
18	1	2	2	1	1	2	1	2	2	2	2	1
19	3	1	1	1	1	2	1	1	2	2	2	1
20	2	1	1	1	1	10	2	1	2	2	3	1
21	2	2	1	1	1	15	3	2	20	2	2	1
22	1	2	2	1	1	8	2	2	6	2	2	1
23	1	5	3	1	1	2	1	2	3	---	2	1
24	15	3	2	15	1	4	2	3	3	2	2	1
25	2	---	5	5	1	10	2	3	3	5	2	1
26	2	2	2	10	1	3	2	2	4	2	2	1
27	1	1	2	3	1	5	1	3	7	2	60	1
28	1	1	2	1	1	4	1	---	10	3	4	1
29	1	5	2	2	---	4	1	4	5	2	4	1
30	1	5	2	1	---	2	2	3	3	25	2	1
31	1	---	2	1	---	---	---	4	---	15	10	---
MEAN	3	2	2	2	1	5	2	3	5	7	7	1
WTR YR 1978	MEAN	3	MAX	60	MIN	1						

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

[illegible]

LOCATION.--Lat 38°54'43", long 79°42'16", Randolph County, Hydrologic Unit 05020001, 100 ft (30 m) landward from right bank of Shavers Fork, 250 ft (76 m) upstream from bridge on State Secondary Route 5/12, and 0.4 mi (0.6 km) east of Bowden.

WATER-DISCHARGE RECORDS

GAGE.--(Base gage) Water-stage recorder, with 16-inch pipe spring box overflow and 16-inch inlet pipe to Bowden National Fish Hatchery as control. Datum of gage is 2201.99 ft (671.167 m) National Geodetic Vertical Datum of 1929. Supplementary water-stage recorder No. 1 and sharp-crested weir in water tower at fish hatchery at datum 2,200.06 ft (670.578 m) National Geodetic Vertical Datum of 1929, nonrecording prior to Nov. 4, 1975. Supplementary water-stage recorder No. 2 and sharp-crested weir in collecting trough in fish hatchery building since Oct. 10, 1975, at datum 2,193.32 ft (668.524 m) National Geodetic Vertical Datum of 1929.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 6.7 ft³/s (0.19 m³/s) Oct. 9, 1976, gage height, 9.00 ft (2.743 m) Oct. 9, 1976, from floodmark, backwater from Shavers Fork over springbox; minimum daily discharge, 1.8 ft³/s (0.051 m³/s) Jan. 7-11, 1977; minimum gage height, 1.23 ft (0.375 m) June 26, 1975, when water tower valve was open.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 5.4 ft³/s (0.15 m³/s) Jan. 26, gage height, not determined, backwater from Shavers Fork over springbox; minimum daily discharge, 2.1 ft³/s (0.059 m³/s) Sept. 28, 29, 30; minimum gage height, 2.40 ft (0.732 m) Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	2.9	4.6	3.0	3.7	2.9	3.6	3.4	3.2	3.3	3.5	2.6
2	3.0	2.9	4.1	2.9	3.6	2.8	3.6	3.3	3.1	3.2	3.2	2.5
3	3.1	2.9	3.9	2.9	3.5	2.8	3.5	3.2	3.2	4.6	3.1	2.5
4	3.1	2.9	3.8	2.9	3.4	2.8	3.5	3.3	3.2	4.4	3.4	2.4
5	3.1	2.9	3.8	2.9	3.4	2.8	3.5	3.5	3.2	4.0	3.4	2.4
6	3.1	2.9	3.8	2.9	3.3	2.8	3.5	3.4	3.1	3.7	3.4	2.4
7	3.1	2.9	3.7	2.9	3.4	2.9	3.6	3.7	3.1	3.5	3.8	2.3
8	3.1	2.9	3.6	3.0	3.3	2.9	3.6	3.9	3.1	3.4	3.5	2.4
9	3.8	3.0	3.5	3.7	3.3	2.8	3.6	4.3	3.5	3.3	3.4	2.4
10	4.0	3.0	3.3	3.7	3.3	3.1	3.5	3.8	3.5	3.3	3.3	2.4
11	3.8	3.1	3.2	3.6	3.2	3.3	3.5	3.7	3.3	3.2	3.2	2.2
12	3.5	3.1	3.1	3.4	3.2	3.7	3.7	3.7	3.3	2.8	3.2	2.2
13	3.4	3.1	3.1	3.3	3.2	4.1	3.6	4.0	3.2	2.9	3.1	2.2
14	3.3	3.0	3.5	3.3	3.1	4.8	3.5	4.8	3.1	3.2	3.1	2.2
15	3.2	2.9	4.5	3.2	3.1	4.8	3.4	4.2	3.0	3.3	3.0	2.2
16	3.2	2.9	3.9	3.2	3.0	4.3	3.3	3.9	3.0	3.2	2.9	2.3
17	3.5	2.9	3.7	3.1	3.0	4.0	3.3	3.9	2.9	3.0	2.7	2.3
18	3.3	3.0	3.7	3.1	3.0	3.8	3.2	3.9	2.8	2.8	2.6	2.3
19	3.3	3.0	3.7	3.0	3.0	3.8	3.3	3.8	2.9	2.7	2.6	2.3
20	3.6	3.0	3.6	3.1	2.9	4.0	3.5	3.7	2.7	2.7	2.5	2.3
21	3.6	3.0	3.6	3.1	2.9	4.1	3.9	3.6	2.8	2.7	2.5	2.3
22	3.5	3.0	3.6	3.0	2.9	4.1	4.0	3.5	3.1	2.6	2.5	2.3
23	3.4	3.9	3.5	3.0	2.9	3.9	3.9	3.4	3.1	2.6	2.4	2.2
24	3.3	3.9	3.4	3.0	2.9	3.8	3.8	3.5	3.0	2.6	2.3	2.3
25	3.3	3.8	3.5	4.0	2.9	3.9	3.7	3.7	2.9	2.7	2.3	2.2
26	3.2	3.8	3.6	5.4	2.9	4.5	3.6	3.8	2.9	2.6	2.3	2.2
27	3.2	3.7	3.5	4.7	2.9	4.5	3.6	3.7	3.4	2.5	2.3	2.2
28	3.1	3.5	3.4	4.3	2.9	4.1	3.6	3.6	3.6	2.7	2.3	2.1
29	3.1	3.6	3.3	4.1	---	3.9	3.6	3.5	3.6	2.6	2.3	2.1
30	3.0	4.3	3.2	3.9	---	3.7	3.5	3.4	3.5	2.6	2.3	2.1
31	2.9	---	3.1	3.8	---	3.7	---	3.2	---	3.5	2.4	---
TOTAL	102.0	95.7	111.8	105.4	88.1	113.4	107.0	114.7	94.3	96.2	88.8	68.8
MEAN	3.29	3.19	3.61	3.40	3.15	3.66	3.57	3.70	3.14	3.10	2.86	2.29
MAX	4.0	4.3	4.6	5.4	3.7	4.8	4.0	4.8	3.6	4.6	3.8	2.6
MIN	2.9	2.9	3.1	2.9	2.9	2.8	3.2	3.2	2.7	2.5	2.3	2.1
CAL YR 1977 TOTAL	1162.1											
WTR YR 1978 TOTAL	1186.2											
			MEAN 3.18	MAX 5.2	MIN 1.8							
			MEAN 3.25	MAX 5.4	MIN 2.1							

MONONGAHELA RIVER BASIN

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03068690 NORTH SPRING AT BOWDEN, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1976 to current year.

TURBIDITY: June 1975 to current year.

INSTRUMENTATION.--Temperature recorder since October 29, 1976. Automatic pumping turbidity sampler.

REMARKS.--Turbidity values listed as 100 JTU represent values of 100 JTU or higher due to instrument limitations. Interruptions in the record were due to malfunctions of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 11.5°C Sept. 2-20, 1977, minimum, 8.0°C Feb. 23-28, 1977, Mar. 13-16, 20-24.

TURBIDITY: Maximum, not determined; minimum, 1 JTU on many days.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 11.0°C Oct. 1 to Nov. 23, and Sept. 14, 16-28; minimum, 8.0°C Mar. 13-16, 20-24.

TURBIDITY: Maximum, 45 JTU Nov. 27; minimum, 1 JTU on many days.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	11.0	11.0	11.0	11.0	10.5	10.5	9.5	9.5	9.0	9.0	9.0	9.0
2	11.0	11.0	11.0	11.0	10.5	10.5	9.5	9.5	9.0	9.0	9.0	9.0
3	11.0	11.0	11.0	11.0	10.5	10.5	9.5	9.5	9.0	9.0	9.0	9.0
4	11.0	11.0	11.0	11.0	10.5	10.5	9.5	9.5	9.0	9.0	9.0	9.0
5	11.0	11.0	11.0	11.0	10.5	10.5	9.5	9.5	9.0	9.0	9.0	9.0
6	11.0	11.0	11.0	11.0	10.5	10.5	9.5	9.5	9.0	9.0	9.0	9.0
7	11.0	11.0	11.0	11.0	10.5	10.0	9.5	9.5	9.0	9.0	9.0	9.0
8	11.0	11.0	11.0	11.0	10.0	10.0	9.5	9.5	9.0	9.0	9.0	9.0
9	11.0	11.0	11.0	11.0	10.0	10.0	9.5	9.5	9.0	9.0	9.0	9.0
10	11.0	11.0	11.0	11.0	10.0	10.0	9.5	9.5	9.0	9.0	8.5	8.5
11	11.0	11.0	11.0	11.0	10.0	10.0	9.5	9.5	9.0	9.0	8.5	8.5
12	11.0	11.0	11.0	11.0	10.0	9.5	9.5	9.5	9.0	9.0	8.5	8.5
13	11.0	11.0	11.0	11.0	9.5	9.5	9.5	9.5	9.0	9.0	8.5	8.0
14	11.0	11.0	11.0	11.0	9.5	9.5	9.5	9.5	9.0	9.0	8.0	8.0
15	11.0	11.0	11.0	11.0	9.5	9.5	9.5	9.5	9.0	9.0	8.0	8.0
16	11.0	11.0	11.0	11.0	9.5	9.5	9.5	9.5	9.0	9.0	8.5	8.0
17	11.0	11.0	11.0	11.0	9.5	9.5	9.5	9.5	9.0	9.0	8.5	8.5
18	11.0	11.0	11.0	11.0	9.5	9.5	9.5	9.5	9.0	9.0	8.5	8.5
19	11.0	11.0	11.0	11.0	9.5	9.5	9.5	9.5	9.0	9.0	8.5	8.5
20	11.0	11.0	11.0	11.0	9.5	9.5	9.5	9.5	9.0	9.0	8.5	8.0
21	11.0	11.0	11.0	11.0	9.5	9.5	9.5	9.5	9.0	9.0	8.5	8.0
22	11.0	11.0	11.0	11.0	9.5	9.5	9.5	9.5	9.0	9.0	8.0	8.0
23	11.0	11.0	11.0	10.5	9.5	9.5	9.5	9.0	9.0	9.0	8.0	8.0
24	11.0	11.0	10.5	10.5	9.5	9.5	9.0	9.0	9.0	9.0	8.5	8.0
25	11.0	11.0	10.5	10.5	9.5	9.5	9.0	9.0	9.0	9.0	8.5	8.5
26	11.0	11.0	10.5	10.5	9.5	9.5	9.0	9.0	9.0	9.0	8.5	8.5
27	11.0	11.0	10.5	10.5	9.5	9.5	9.0	9.0	9.0	9.0	8.5	8.5
28	11.0	11.0	10.5	10.5	9.5	9.5	9.0	9.0	9.0	9.0	8.5	8.5
29	11.0	11.0	10.5	10.5	9.5	9.5	9.0	9.0	---	---	8.5	8.5
30	11.0	11.0	10.5	10.5	9.5	9.5	9.0	9.0	---	---	8.5	8.5
31	11.0	11.0	---	---	9.5	9.5	9.0	9.0	---	---	8.5	8.5
MONTH	11.0	11.0	11.0	10.5	10.5	9.5	9.5	9.0	9.0	9.0	9.0	8.0

MONONGAHELA RIVER BASIN

03068690 NORTH SPRING AT BOWDEN, WV--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.5	8.5	8.5	8.5	10.0	10.0	10.0	10.0	10.5	10.5	10.5	10.5
2	8.5	8.5	8.5	8.5	10.0	10.0	10.0	10.0	10.5	10.5	10.5	10.5
3	8.5	8.5	8.5	8.5	10.0	10.0	10.0	10.0	10.5	10.0	10.5	10.5
4	8.5	8.5	8.5	8.5	10.0	10.0	10.0	10.0	10.5	10.5	10.5	10.5
5	8.5	8.5	8.5	8.5	10.0	10.0	10.0	10.0	10.5	10.5	10.5	10.5
6	8.5	8.5	8.5	8.5	9.5	9.5	10.0	10.0	10.5	10.5	10.5	10.5
7	8.5	8.5	8.5	8.5	9.5	9.5	10.0	10.0	10.5	10.5	10.5	10.5
8	8.5	8.5	8.5	8.5	9.5	9.5	10.0	10.0	10.5	10.5	10.5	10.5
9	8.5	8.5	8.5	8.5	9.5	9.5	10.0	10.0	10.5	10.5	10.5	10.5
10	8.5	8.5	8.5	8.5	9.5	9.5	10.0	10.0	10.5	10.5	10.5	10.5
11	8.5	8.5	8.5	8.5	9.5	9.5	10.0	10.0	10.5	10.5	10.5	10.5
12	8.5	8.5	8.5	8.5	9.5	9.5	10.0	10.0	10.5	10.5	10.5	10.5
13	8.5	8.5	8.5	8.5	9.5	9.5	10.0	10.0	10.5	10.5	10.5	10.5
14	8.5	8.5	8.5	8.5	9.5	9.5	10.0	10.0	10.5	10.5	11.0	11.0
15	8.5	8.5	8.5	8.5	9.5	9.5	10.0	10.0	10.5	10.5	10.5	11.0
16	8.5	8.5	8.5	8.5	9.5	9.5	10.0	10.0	10.5	10.5	11.0	11.0
17	8.5	8.5	8.5	8.5	9.5	9.5	10.0	10.0	10.5	10.5	11.0	11.0
18	8.5	8.5	8.5	8.5	9.5	9.5	10.0	10.0	10.5	10.5	11.0	11.0
19	8.5	8.5	8.5	8.5	9.5	9.5	10.0	10.0	10.5	10.5	11.0	11.0
20	8.5	8.5	8.5	8.5	9.5	9.5	10.0	10.0	10.5	10.5	11.0	11.0
21	8.5	8.5	8.5	8.5	9.5	9.5	10.0	10.0	10.5	10.5	11.0	11.0
22	8.5	8.5	8.5	8.5	9.5	9.5	10.0	10.0	10.5	10.5	11.0	11.0
23	8.5	8.5	8.5	8.5	9.5	9.5	10.0	10.0	10.5	10.5	11.0	11.0
24	8.5	8.5	8.5	8.5	9.5	9.5	10.0	10.0	10.5	10.5	11.0	11.0
25	8.5	8.5	8.5	8.5	9.5	9.5	10.0	10.0	10.5	10.5	11.0	11.0
26	8.5	8.5	8.5	8.5	9.5	9.5	10.0	10.0	10.5	10.5	11.0	11.0
27	8.5	8.5	8.5	8.5	9.5	9.5	10.0	10.0	10.5	10.5	11.0	11.0
28	8.5	8.5	8.5	8.5	10.0	10.0	10.0	10.0	10.5	10.5	11.0	10.5
29	8.5	8.5	8.5	8.5	10.0	10.0	10.0	10.0	10.5	10.5	10.5	10.5
30	8.5	8.5	10.0	8.5	10.0	10.0	10.0	10.0	10.5	10.5	10.5	10.5
31	---	---	10.0	10.0	---	---	10.5	10.0	10.5	10.5	---	---
MONTH	8.5	8.5	10.0	8.5	10.0	9.5	10.5	10.0	10.5	10.0	11.0	10.5
YEAR	11.0	8.0										

TURBIDITY (JTU), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	2	1	1	1	3	1	1	1	3	1	1	1
2	2	1	1	1	7	1	1	1	1	1	1	1
3	3	1	1	1	1	1	4	1	5	1	1	1
4	1	1	1	1	1	1	1	1	1	1	1	1
5	3	1	1	1	3	1	1	1	5	1	1	1
6	2	1	1	1	1	1	1	1	2	1	1	1
7	1	1	1	1	1	1	2	1	2	1	1	1
8	2	1	2	1	2	1	1	1	3	1	1	1
9	7	1	1	1	1	1	6	1	1	1	2	1
10	3	1	3	1	8	1	2	1	6	1	2	1
11	2	1	9	1	6	1	2	1	5	1	2	1
12	1	1	4	1	1	1	5	1	3	1	4	1
13	5	1	3	1	4	1	3	1	1	1	3	1
14	1	1	1	1	8	1	7	1	1	1	3	2
15	1	1	2	1	3	1	3	1	1	1	6	1
16	2	1	4	1	1	1	1	1	1	1	1	1
17	1	1	1	1	1	1	4	1	1	1	1	1
18	1	1	2	1	1	1	1	1	1	1	5	1
19	1	1	8	1	1	1	6	1	1	1	1	1
20	5	1	3	1	1	1	1	1	1	1	1	1
21	1	1	2	1	3	1	1	1	8	1	1	1
22	1	1	4	1	1	1	2	1	1	1	---	---
23	1	1	6	1	7	1	1	1	1	1	1	1
24	1	1	4	1	3	1	1	1	1	1	5	1
25	1	1	5	1	2	1	9	1	1	1	2	1
26	1	1	5	1	1	1	10	2	1	1	2	1
27	1	1	45	1	5	1	6	1	3	1	5	1
28	1	1	7	1	2	1	1	1	1	1	1	1
29	1	1	3	1	1	1	5	1	---	---	1	1
30	7	1	2	1	2	1	3	1	---	---	4	1
31	4	1	---	---	3	1	2	1	---	---	1	1
MONTH	7	1	45	1	8	1	10	1	8	1	6	1

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[illegible]

MONONGAHELA RIVER BASIN

03068710 SOUTH SPRING AT BOWDEN, WV

LOCATION.--Lat 38°54'38", long 79°42'22", Randolph County, Hydrologic Unit 05020001, 75 ft (23 m) upstream from bridge, 400 ft (122 m) landward from left bank of Shavers Fork on State Secondary Route 5/12, and 0.3 mi (0.5 km) east of Bowden.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--1956-58, 1961 (discharge measurements only, published as "Cold Spring, Southbank"), June 1975 to current year.

GAGE.--Water-stage and rainfall recorders, sharp-crested weirs, and concrete control. Datum of gage is 2,204.66 ft (671.980 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. Rainfall records collected at site since July 1975 are contained in files of U.S. Geological Survey with only monthly totals published in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21.3 ft³/s (0.603 m³/s) Oct. 9, 1976, gage height, 3.18 ft (0.969 m); minimum, 0.72 ft³/s (0.020 m³/s) Feb. 10, 1977, Mar. 7, 8, 1978, gage height, 1.77 ft (0.539 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 15.3 ft³/s (0.433 m³/s) Jan. 26, gage height, 3.10 ft (0.945 m); minimum, 0.72 ft³/s (0.020 m³/s) Mar. 7, 8, gage height, 1.77 ft (0.539 m).

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	1.9	5.8	1.2	1.4	.82	2.0	1.4	2.0	2.0	3.6	3.4
2	3.4	1.5	3.6	1.2	1.3	.82	2.1	1.7	1.7	2.0	2.5	2.8
3	3.3	1.5	2.7	1.0	1.2	.77	1.9	1.7	2.1	2.8	2.2	2.5
4	3.0	1.5	2.2	.94	1.2	.77	1.7	1.4	2.1	1.9	2.8	2.2
5	2.8	1.5	2.4	.94	1.2	.82	2.0	2.4	2.1	3.8	3.8	1.9
6	2.8	1.5	2.8	1.0	1.2	.77	1.4	3.2	1.7	2.7	3.6	1.8
7	3.0	2.0	2.2	1.3	1.2	.77	2.4	2.7	1.7	2.1	3.5	1.7
8	2.9	2.3	1.9	1.8	1.0	.77	2.4	3.0	2.2	1.9	3.5	1.5
9	5.7	2.4	1.7	3.5	1.0	.86	2.2	3.7	3.2	2.1	2.8	1.5
10	5.6	2.3	1.5	2.7	.94	1.3	2.0	3.3	2.7	1.4	2.3	1.4
11	3.6	2.7	1.4	1.9	.94	1.5	2.0	2.8	2.2	1.9	2.2	1.4
12	3.0	2.5	1.3	1.7	.94	2.0	2.9	2.3	2.0	1.8	3.0	1.4
13	2.7	2.2	1.3	1.5	.99	3.0	2.4	3.4	2.0	1.7	2.5	1.4
14	2.4	2.0	3.2	1.4	.94	7.7	2.0	7.1	1.4	3.1	2.5	1.4
15	2.2	2.0	6.2	1.3	.94	4.6	1.8	4.0	1.7	3.2	2.2	1.4
16	2.8	2.1	3.4	1.2	.94	4.1	1.7	3.0	1.7	2.3	2.0	1.7
17	3.5	2.2	2.4	1.2	.94	2.8	1.6	2.4	1.6	2.2	1.9	2.2
18	2.9	2.7	2.2	1.1	.94	2.1	1.5	2.7	1.5	2.1	1.9	2.4
19	3.0	2.4	2.4	1.0	.94	2.2	1.5	2.3	1.5	1.9	1.7	1.9
20	3.5	2.2	2.2	1.1	.94	3.2	2.5	2.2	1.4	1.7	1.7	1.5
21	3.3	2.2	2.1	1.2	.94	4.7	3.4	2.1	2.2	1.7	1.5	1.5
22	3.0	2.7	1.4	1.0	.92	6.6	3.4	1.4	2.7	1.7	1.4	1.5
23	2.8	5.2	1.7	1.0	.92	3.9	2.8	1.8	2.1	1.7	1.4	1.7
24	2.6	4.6	1.5	1.0	.92	3.7	2.6	2.4	1.7	1.5	1.4	1.7
25	2.3	3.7	2.3	3.2	.92	3.7	2.3	2.7	1.5	1.8	1.4	1.5
26	2.4	3.4	2.2	1.1	.92	7.3	2.2	2.2	1.5	1.9	1.6	1.4
27	2.8	3.1	1.8	4.6	.92	5.4	2.2	2.1	3.8	1.8	1.7	1.3
28	2.5	2.8	1.6	2.7	.92	3.3	2.1	2.0	4.5	2.2	1.9	1.2
29	2.2	3.2	1.4	1.4	---	2.7	2.0	1.4	3.3	2.1	1.7	1.2
30	2.2	5.7	1.4	1.7	---	2.3	1.9	1.8	2.4	2.0	1.5	1.2
31	2.0	---	1.3	1.5	---	2.1	---	1.9	---	3.4	3.0	---
TOTAL	92.9	40.1	72.0	54.44	27.31	41.39	65.9	81.5	64.7	80.9	13.7	51.7
MEAN	3.00	2.67	2.32	1.75	.87	2.95	2.20	2.53	2.16	2.61	2.38	1.72
MAX	5.7	5.7	6.2	11	1.4	8.6	3.4	7.1	4.5	5.8	5.8	3.4
MIN	2.0	1.5	1.3	.94	.82	.77	1.5	1.7	1.4	1.5	1.4	1.2
IN*	4.88	.88	1.33	2.37	.58	3.06	3.56	5.31	3.82	9.30	5.29	1.52

CAL YR 1977 TOTAL 427.91 MEAN 2.27 MAX 8.4 MIN .77
WTR YR 1978 TOTAL 442.08 MEAN 2.31 MAX 11 MIN .77

* Rainfall.

MONONGAHELA RIVER BASIN

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03068710 SOUTH SPRING AT BOWDEN, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1976 to current year.

TURBIDITY: June 1975 to current year.

INSTRUMENTATION.--Temperature recorder since October 28, 1976. Automatic pumping turbidity sampler.

REMARKS.--Interruptions in the record were due to malfunctions of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 18.0°C July 22-24, 1977; minimum, 5.5°C Feb. 24, 25, 1977.

TURBIDITY: Maximum, not determined; minimum, 2 JTU on many days.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 16.0°C Sept. 18-23; minimum, 6.0°C Jan. 25-28, Mar. 14, 15.

TURBIDITY: Maximum, 190 JTU Dec. 14; minimum, 2 JTU on many days.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	14.0	14.0	10.0	10.0	8.0	7.5	9.0	9.0	7.5	7.5	9.0	8.5
2	14.0	13.5	10.0	10.0	8.0	8.0	9.0	9.0	8.0	7.5	8.5	8.0
3	13.5	12.5	11.0	10.0	8.0	8.0	9.0	8.5	8.0	7.5	8.5	8.0
4	12.5	12.0	11.0	11.0	8.0	8.0	8.5	8.5	8.0	7.5	8.5	8.5
5	12.0	11.5	11.5	11.0	8.0	8.0	8.5	8.5	8.0	8.0	8.5	8.0
6	11.5	11.5	12.0	11.5	8.0	8.0	8.5	8.5	8.0	8.0	8.5	8.0
7	11.5	11.5	12.0	12.0	8.0	7.5	8.5	8.5	8.0	7.5	8.5	8.5
8	11.5	11.5	12.0	12.0	7.5	7.5	8.5	8.0	8.0	7.5	9.0	8.5
9	11.5	11.5	12.0	12.0	7.5	7.5	8.0	6.5	8.0	8.0	9.0	8.5
10	11.5	11.0	12.0	11.5	7.5	7.5	6.5	6.5	8.0	8.0	9.0	9.0
11	11.0	11.0	11.5	10.0	7.5	7.5	7.0	6.5	8.0	7.5	9.0	9.0
12	11.0	11.0	10.0	9.5	8.0	7.5	7.5	7.0	8.5	8.0	9.0	8.0
13	11.0	11.0	9.5	8.0	8.0	8.0	7.5	7.5	8.5	8.0	8.0	7.0
14	11.0	10.5	8.0	7.5	8.0	7.0	7.5	7.5	8.0	8.0	7.0	6.0
15	10.5	10.5	7.5	7.5	7.5	7.5	7.5	7.5	8.0	8.0	6.5	6.0
16	10.5	10.5	8.0	7.5	8.0	7.5	7.5	7.5	8.5	8.0	7.0	6.5
17	10.5	9.5	8.5	8.0	8.0	8.0	8.0	7.5	8.5	8.0	7.0	7.0
18	9.5	9.0	8.5	8.5	8.5	8.0	8.0	8.0	8.5	8.0	7.5	7.0
19	9.0	9.0	8.5	8.0	8.5	8.5	8.0	8.0	8.5	8.5	7.5	7.0
20	9.0	9.0	8.0	8.0	8.5	8.5	8.0	8.0	8.5	8.0	7.0	7.0
21	9.0	9.0	8.0	8.0	8.5	8.5	8.0	8.0	8.5	8.5	7.0	6.5
22	9.0	9.0	8.5	8.0	8.5	8.5	8.0	8.0	8.5	8.0	7.0	6.5
23	9.5	9.0	8.5	8.5	8.5	8.5	8.0	7.5	8.5	8.0	7.0	7.0
24	10.0	9.5	9.0	8.5	8.5	8.5	8.0	8.0	8.5	8.5	7.5	7.0
25	10.0	10.0	9.0	9.0	8.5	8.0	8.0	6.0	9.0	8.5	7.5	7.0
26	10.0	10.0	9.0	8.0	8.0	7.5	6.0	6.0	9.0	9.0	7.0	6.5
27	10.5	10.0	8.0	7.0	7.5	7.5	6.0	6.0	9.0	8.5	7.0	7.0
28	11.0	10.5	7.0	7.0	7.5	7.5	6.5	6.0	9.0	8.5	7.5	7.0
29	11.0	11.0	7.0	7.0	7.5	7.5	7.0	6.5	---	---	8.0	7.5
30	11.0	10.5	7.5	7.0	8.5	8.0	7.0	7.0	---	---	8.0	8.0
31	10.5	10.0	---	---	9.0	8.5	7.0	7.0	---	---	8.0	8.0
MONTH	14.0	9.0	12.0	7.0	9.0	7.0	9.0	6.0	9.0	7.5	9.0	6.0

MONONGAHELA RIVER BASIN

03068710 SOUTH SPRING AT BOWDEN, WV--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.0	8.0	9.0	9.0	12.0	11.5	12.5	12.5	13.5	13.5	15.5	15.0
2	8.5	8.0	9.0	9.0	12.0	12.0	13.0	12.5	13.5	13.5	15.5	15.5
3	8.5	8.5	9.0	9.0	12.0	12.0	13.0	12.0	14.0	13.5	15.5	15.5
4	8.5	8.5	9.0	9.0	12.0	11.5	12.5	12.5	13.5	13.0	15.5	15.5
5	8.5	8.5	9.0	8.0	11.5	11.5	12.5	12.0	14.0	13.5	15.5	15.0
6	8.5	8.5	8.0	8.0	11.5	11.5	12.5	12.5	14.0	14.0	15.0	15.0
7	8.5	8.5	8.0	8.0	11.5	11.5	12.5	12.5	14.0	14.0	15.0	15.0
8	8.5	8.5	8.5	8.0	11.5	11.5	12.5	12.5	14.0	14.0	15.0	15.0
9	8.5	8.5	8.5	8.5	11.5	11.5	13.0	12.5	14.0	13.5	15.0	15.0
10	9.0	8.5	9.0	8.5	11.5	11.5	13.0	13.0	13.5	13.5	15.5	15.0
11	9.0	9.0	9.0	9.0	11.5	11.5	13.5	13.0	13.5	13.5	15.5	15.5
12	9.0	9.0	9.0	9.0	12.0	11.5	13.5	13.5	13.5	13.5	15.5	15.5
13	9.0	9.0	9.5	9.0	12.5	12.0	13.5	13.5	13.5	13.5	15.5	15.5
14	9.0	9.0	9.0	9.0	12.5	12.5	13.5	13.0	14.0	13.5	15.5	15.5
15	9.0	9.0	9.0	9.0	12.5	12.0	13.5	13.0	14.0	14.0	15.5	15.0
16	9.0	9.0	9.0	9.0	12.0	12.0	13.5	13.5	14.0	14.0	15.0	15.0
17	9.0	9.0	9.0	9.0	12.0	12.0	13.5	13.5	14.5	14.0	15.0	15.0
18	9.0	9.0	9.0	9.0	12.0	12.0	13.5	13.5	14.5	14.5	16.0	15.0
19	9.0	9.0	9.0	9.0	12.5	12.0	14.0	14.0	14.5	14.5	16.0	16.0
20	9.0	8.5	9.0	9.0	13.0	12.5	14.5	14.0	15.0	14.5	16.0	16.0
21	8.5	8.0	9.5	9.0	13.5	13.0	15.0	14.5	15.0	15.0	16.0	16.0
22	8.0	8.0	10.0	9.5	13.0	13.0	15.0	14.5	14.5	14.5	16.0	16.0
23	8.0	8.0	10.0	10.0	13.0	13.0	15.0	15.0	14.5	14.5	16.0	15.5
24	8.5	8.0	10.0	10.0	13.0	13.0	15.5	15.0	14.5	14.5	15.5	15.0
25	8.5	8.5	10.0	10.0	13.0	13.0	15.5	15.5	14.5	14.5	15.0	15.0
26	8.5	8.5	10.0	10.0	13.0	13.0	15.5	15.5	15.0	14.5	15.0	14.5
27	8.5	8.5	10.5	10.0	13.0	11.5	15.5	15.5	15.0	15.0	14.5	14.0
28	8.5	8.5	10.5	10.5	12.5	12.5	15.5	15.0	15.0	15.0	14.0	14.0
29	9.0	8.5	11.0	10.5	12.5	12.5	15.0	14.0	15.0	15.0	14.0	13.5
30	9.0	9.0	11.5	11.0	12.5	12.5	15.0	14.0	15.0	15.0	13.5	13.5
31	---	---	11.5	11.5	---	---	14.0	13.5	15.0	14.5	---	---
MONTH	9.0	8.0	11.5	8.0	13.5	11.5	15.5	12.0	15.0	13.0	16.0	13.5
YEAR	16.0	6.0										

TURBIDITY (JTU), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	9	3	4	2	10	2	3	2	3	2	6	2
2	35	2	4	2	10	2	3	2	3	2	6	2
3	20	6	5	2	4	2	5	2	3	2	2	2
4	6	4	4	2	50	2	3	2	4	2	5	2
5	4	3	4	2	10	2	4	2	6	2	6	2
6	5	3	3	2	4	2	3	2	5	2	7	2
7	4	3	15	2	10	2	7	2	5	2	2	2
8	5	3	40	3	7	2	7	2	4	2	2	2
9	80	5	5	2	5	2	15	6	3	2	10	2
10	10	7	6	3	15	2	7	3	6	2	7	2
11	8	3	5	3	5	2	3	2	4	2	6	3
12	4	2	9	4	15	2	4	2	4	2	7	2
13	5	3	6	4	3	2	4	2	4	2	15	2
14	5	3	4	3	190	2	3	2	5	2	60	2
15	3	2	3	2	30	5	3	2	5	2	20	7
16	10	3	4	2	5	2	6	2	4	2	7	3
17	5	3	5	2	5	2	7	2	3	2	4	2
18	4	2	4	4	3	2	3	2	4	2	3	2
19	6	2	30	2	3	2	5	2	5	2	5	2
20	6	4	5	3	3	2	4	2	5	2	6	2
21	6	4	4	3	3	2	8	2	4	2	50	3
22	4	3	7	3	9	2	3	2	5	2	40	4
23	3	2	75	2	6	2	3	2	6	2	4	2
24	3	2	140	2	8	2	3	2	3	2	4	2
25	6	2	50	2	7	2	25	2	4	2	9	2
26	3	2	45	2	3	2	150	15	7	2	30	6
27	8	2	95	2	3	2	20	4	5	2	6	3
28	6	3	95	2	5	2	4	2	4	2	3	2
29	3	2	30	2	6	2	3	2	---	---	2	2
30	3	2	50	2	3	2	3	2	---	---	2	2
31	3	2	---	---	3	2	5	2	---	---	3	2
MONTH	80	2	140	2	190	2	150	2	7	2	60	2

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03068710 SOUTH SPRING AT BOWDEN, WV--Continued

TURBIDITY (JTU), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

[illegible]

03068800 SHAVERS FORK BELOW BOWDEN, WV

LOCATION.--Lat 38°54'47", long 79°46'14", Randolph County, Hydrologic Unit 05020001, on upstream side of right pier, on U.S. Highway 33 bridge, 3.0 mi (4.8 km) west of Bowden, and at mile 26.4 (42.5 km).

DRAINAGE AREA.--151 mi² (391 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1973 to current year. Once daily wire-weight gage readings at same site November 1971 to August 1973 are contained in files of Bowden National Fish Hatchery.

GAGE.--Water-stage recorder. Altitude of gage is 2,120 ft (646 m), from topographic map.

REMARKS.--Water-discharge records good except those for period of no gage-height record, Jan. 26 to Mar. 14, and those for December and January, which are poor.

AVERAGE DISCHARGE.--5 years, 431 ft³/s (12.21 m³/s), 38.76 in/yr (985 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,300 ft³/s (490 m³/s) Dec. 26, 1973, gage height, 11.47 ft (3.496 m), from floodmark, from rating curve extended above 4,100 ft³/s (120 m³/s); minimum, 18 ft³/s (0.51 m³/s) Sept. 9, 1976, gage height, 3.74 ft (1.140 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,600 ft³/s (100 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 1	0900	4460 126	8.56 2.609	Mar. 26	1645	5720 162	9.15 2.789
Jan. 26	Unknown	*11000 310	all.13 3.392	May 13	2400	4840 137	8.75 2.667
Mar. 15	0115	3620 103	8.14 2.481	July 3	1600	5970 169	9.25 2.819

a Ice jam.

Minimum discharge, 25 ft³/s (0.71 m³/s) Sept. 30, gage height, 3.86 ft (1.177 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	120	204	2680	210	290	74	856	261	237	241	598	462
2	600	184	1130	200	270	76	1290	233	166	204	301	218
3	379	172	682	170	240	80	824	207	598	2730	237	133
4	279	163	544	150	210	80	646	237	478	2130	451	101
5	210	157	522	160	180	77	516	363	277	856	395	83
6	200	151	712	190	150	74	652	372	214	517	400	72
7	207	166	570	240	140	76	694	313	193	354	1770	62
8	190	257	450	350	130	80	610	341	305	289	1170	56
9	1000	285	340	1800	120	88	462	616	751	354	580	50
10	907	241	280	620	110	120	385	604	533	265	395	46
11	478	293	240	460	105	200	354	440	333	329	345	42
12	354	265	210	370	100	350	405	354	257	245	793	39
13	293	229	250	330	110	590	329	840	214	184	456	42
14	249	200	640	280	110	1490	277	2510	187	506	907	42
15	214	193	1610	250	100	2360	241	1150	157	528	451	43
16	269	214	682	220	93	1020	211	832	133	285	313	52
17	329	237	467	230	88	616	193	840	117	358	249	76
18	257	281	430	220	80	440	181	646	105	293	204	90
19	445	245	646	200	76	425	181	652	92	200	169	59
20	712	211	473	180	74	670	349	539	88	160	142	46
21	640	200	390	160	80	1410	517	425	204	148	122	38
22	495	265	317	150	76	2580	440	354	293	154	105	39
23	400	990	261	140	75	1570	506	313	178	115	92	55
24	329	779	253	130	74	1930	489	462	117	105	81	55
25	281	598	410	670	84	2030	440	405	92	154	75	45
26	341	500	400	5900	82	3560	435	321	84	175	95	38
27	598	440	350	1300	78	2440	430	269	1410	127	86	33
28	363	367	280	690	76	1250	390	233	1180	151	95	30
29	301	405	250	500	---	1100	341	204	568	163	80	28
30	261	1030	230	400	---	970	293	187	333	148	67	26
31	229	---	220	340	---	724	---	250	---	1550	214	---
TOTAL	11930	9922	16919	17210	3401	28550	14337	15773	9894	14018	11438	2201
MEAN	385	331	546	555	121	921	478	509	330	452	369	73.4
MAX	1000	1030	2680	5900	290	3560	1290	2510	1410	2730	1770	462
MIN	120	151	210	130	74	74	181	187	84	105	67	26
CFSM	2.55	2.19	3.62	3.68	.80	6.10	3.17	3.37	2.19	2.99	2.44	.49
IN.	2.94	2.44	4.17	4.24	.84	7.03	3.53	3.89	2.44	3.45	2.82	.54

CAL YR 1977 TOTAL 131217 MEAN 359 MAX 5790 MIN 35 CFSM 2.38 IN 32.33
WTR YR 1978 TOTAL 155593 MEAN 426 MAX 5900 MIN 26 CFSM 2.82 IN 38.33

MONONGAHELA RIVER BASIN

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03068800 SHAVERS FORK BELOW BOWDEN, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Aug. 1975 to current year.

WATER TEMPERATURES: June 1975 to current year.

TURBIDITY: June 1975 to current year.

SUSPENDED SEDIMENT DISCHARGE: June 1975 to current year.

REMARKS.--Sediment samples taken twice daily and more frequently on rises.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 156 micromhos Mar. 31, 1976; minimum daily, 28 micromhos Aug. 11, 13, 1978.

WATER TEMPERATURES: Maximum daily, 26.0°C June 23, July 31, Aug. 26, 1975; minimum daily, 0.0°C Jan. 1, 8, 9, 11-13, 15, 23, 29, 30, and Feb. 9, 1977.

TURBIDITY: Maximum daily, 140 JTU Aug. 15, 1975; minimum daily, 1 JTU on many days.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 721 mg/L Mar. 13, 1977; minimum daily mean, 0 mg/L on many days.

SEDIMENT LOADS: Maximum daily, 16,300 tons (14,800 tonnes) Mar. 13, 1977; minimum daily, 0 tons (0 tonnes) on many days.

EXTREMES OUTSIDE PERIOD OF DAILY RECORD.--A specific conductance of 418 micromhos was observed Feb. 13, 1974. A water temperature of 25.0°C was observed Aug. 30, 31, 1973, Aug. 1, 1974. A turbidity of 45 JTU was observed Mar. 19, 1975.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 108 micromhos Dec. 12, minimum daily, 28 micromhos Aug. 11, 13.

WATER TEMPERATURES: Maximum daily, 25.5°C Aug. 19; minimum daily 1.0°C on many days.

TURBIDITY: Maximum daily, 80 JTU July 14; minimum daily, 1 JTU on many days.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 323 mg/L Jan. 26; minimum daily mean, 0 mg/L on many days.

SEDIMENT LOADS: Maximum daily, 5,150 tons (4,670 tonnes) Jan. 26; minimum daily, 0 tons (0 tonnes) on many days.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58	41	36	---	38	46	32	38	32	---	35	34
2	40	43	37	38	38	49	31	40	36	---	37	42
3	42	41	36	45	40	46	43	40	33	35	38	41
4	43	42	36	44	39	47	32	45	33	34	51	44
5	43	48	40	44	40	47	32	45	32	34	40	44
6	40	42	36	45	41	46	31	43	33	34	38	48
7	49	46	37	47	45	42	35	42	34	35	30	48
8	46	38	40	45	44	47	34	45	36	36	33	48
9	53	39	37	35	43	50	36	39	33	33	33	57
10	41	45	34	36	42	58	36	39	34	37	37	51
11	40	41	42	43	46	58	37	39	37	36	38	54
12	39	43	108	41	43	53	37	38	41	35	28	54
13	42	40	41	38	42	56	41	44	39	36	---	56
14	40	40	50	37	42	50	40	36	36	56	28	54
15	48	42	37	37	42	40	40	35	62	36	30	60
16	47	41	36	40	42	40	42	36	40	38	32	---
17	47	50	37	39	---	42	43	36	41	36	33	54
18	46	42	37	41	43	40	42	36	42	34	36	63
19	41	42	35	42	46	---	42	33	43	38	38	51
20	43	41	37	40	46	40	47	32	44	39	39	56
21	39	42	43	43	44	38	46	32	43	40	40	54
22	40	41	40	42	44	35	48	33	40	36	40	47
23	40	48	38	41	47	35	40	32	46	---	42	54
24	39	40	36	46	44	32	38	34	42	42	43	50
25	40	---	42	57	45	33	38	37	42	40	46	50
26	39	38	37	37	45	35	38	38	44	40	45	52
27	39	38	39	37	46	34	42	38	47	39	44	53
28	39	38	36	36	46	37	38	---	35	42	46	54
29	38	46	41	42	---	35	42	39	36	36	50	58
30	39	40	38	43	---	34	38	30	40	57	48	58
31	39	---	37	45	---	34	---	34	---	36	68	---
MEAN	43	42	41	42	43	43	39	38	39	38	40	51
WTR YR 1978	MEAN	41	MAX	108	MIN	28						

MONONGAHELA RIVER BASIN

03068800 SHAVERS FORK BELOW BOWDEN, WV--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.0	10.5	7.0	---	1.0	1.5	8.5	9.0	17.5	---	17.0	19.0
2	14.0	11.0	5.5	1.0	1.0	1.5	8.5	9.0	17.0	---	16.0	20.0
3	12.0	12.0	4.0	1.5	1.0	2.0	9.0	10.0	16.0	17.0	18.0	19.0
4	11.0	13.0	5.0	1.5	1.0	1.5	8.5	9.5	16.0	17.0	18.0	18.0
5	9.0	12.5	4.5	2.5	1.0	1.5	9.5	8.0	14.0	15.5	18.0	22.0
6	11.5	13.5	4.0	2.0	1.0	1.5	9.0	8.0	16.0	17.0	18.0	19.0
7	11.0	12.5	1.5	2.5	1.0	1.5	9.5	---	17.5	15.0	18.0	19.5
8	11.5	13.0	1.5	4.0	1.0	1.5	8.5	10.5	17.0	16.0	17.0	23.0
9	11.0	13.5	2.5	2.0	1.0	2.0	10.0	11.5	16.0	17.0	19.0	21.0
10	10.5	10.5	2.0	1.0	1.0	2.0	12.0	10.0	12.0	21.0	19.5	20.0
11	10.0	7.0	1.0	1.0	1.0	2.0	11.0	9.0	17.5	18.5	19.5	18.0
12	9.5	6.0	1.5	1.0	1.0	2.0	10.5	12.0	15.0	17.5	21.0	18.0
13	8.0	5.0	2.5	2.0	1.5	2.5	10.0	12.0	15.5	17.5	---	20.0
14	9.0	5.5	3.0	1.0	1.5	2.5	8.0	9.0	15.0	18.0	22.0	19.0
15	---	6.5	4.0	1.5	1.5	2.5	7.0	9.0	14.5	17.0	23.0	18.0
16	10.0	7.0	5.0	1.0	2.0	2.0	7.0	9.0	14.0	17.0	23.5	---
17	9.0	7.0	6.0	2.0	---	3.0	8.0	10.0	16.0	17.0	25.0	19.0
18	5.0	7.0	5.0	1.5	2.0	3.0	9.0	9.5	18.0	16.0	23.5	18.0
19	9.5	4.0	5.0	1.5	1.5	---	9.0	10.0	18.0	18.0	25.5	21.0
20	9.0	6.5	4.5	2.0	1.5	4.0	9.0	14.5	18.0	20.0	23.5	21.5
21	7.0	8.5	3.5	1.5	1.5	5.5	6.0	15.5	18.5	19.0	21.5	21.0
22	10.0	8.0	2.5	1.0	1.5	5.0	4.0	15.0	18.0	21.0	21.5	20.0
23	9.5	8.0	2.5	1.0	1.5	5.0	7.0	14.5	15.5	---	21.5	16.0
24	10.0	7.0	2.5	1.0	2.0	6.0	8.5	14.0	16.0	19.0	22.5	18.5
25	9.0	---	4.0	2.5	1.5	5.5	8.5	13.0	18.0	19.0	20.0	18.5
26	12.0	4.0	2.0	2.0	1.5	5.5	7.5	13.5	18.5	19.0	19.0	15.0
27	12.0	2.5	1.0	1.0	1.5	5.5	7.0	14.0	17.5	19.0	24.0	21.0
28	13.5	3.5	1.0	1.0	1.5	5.0	10.0	---	17.0	19.0	22.0	16.0
29	10.0	4.5	1.0	1.0	---	7.0	8.5	17.5	18.5	18.0	21.5	13.0
30	11.0	5.0	2.5	1.0	---	5.5	11.0	18.0	17.0	20.0	22.0	---
31	10.0	---	2.0	1.0	---	5.0	---	18.0	---	18.0	21.0	---
MEAN	10.5	8.0	3.0	1.5	1.5	3.5	8.5	12.0	16.5	18.0	20.5	19.0
WTR YR 1978	MEAN	10.0	MAX	25.5	MIN	1.0						

TURBIDITY (NTU), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8	1	35	---	1	1	2	1	2	---	8	8
2	20	1	3	1	1	1	3	1	1	---	3	2
3	15	1	2	1	1	1	2	1	60	60	2	4
4	3	1	1	1	1	1	1	3	7	20	10	2
5	2	2	1	1	1	1	4	1	4	5	6	2
6	2	2	3	1	1	1	3	2	2	2	2	2
7	2	2	2	1	1	1	2	2	4	15	50	2
8	1	3	1	2	1	1	2	2	3	10	8	1
9	25	6	1	30	1	1	2	3	20	2	2	2
10	8	3	1	3	1	1	1	4	10	10	2	1
11	3	3	2	2	1	1	2	2	3	2	10	2
12	2	6	1	6	1	2	2	1	2	2	10	1
13	2	3	1	2	1	3	2	15	2	1	---	2
14	3	2	30	1	1	20	1	10	10	80	7	1
15	---	2	10	1	1	15	1	5	2	6	3	1
16	2	2	3	1	1	3	1	2	2	3	2	---
17	2	3	1	1	---	1	1	3	4	3	2	3
18	2	2	1	1	1	4	1	1	2	20	2	2
19	4	2	2	1	1	---	1	2	4	3	2	2
20	6	2	2	1	1	2	2	3	2	2	2	3
21	6	2	1	1	1	4	4	1	35	2	2	2
22	4	4	1	1	1	15	6	1	15	2	2	1
23	2	20	2	1	1	4	4	1	2	---	2	1
24	2	5	1	1	1	5	2	3	2	1	2	1
25	1	---	3	4	1	4	1	3	2	2	1	1
26	1	2	4	70	1	20	1	2	2	2	1	1
27	10	2	2	4	1	6	2	1	50	2	2	1
28	3	2	1	2	1	3	1	---	20	4	2	1
29	2	3	1	2	---	3	2	1	6	1	2	1
30	2	10	2	1	---	2	1	2	3	6	2	1
31	2	---	2	1	---	2	---	2	---	40	40	---
MEAN	5	3	4	5	1	4	2	3	9	10	6	2
WTR YR 1978	MEAN	5	MAX	80	MIN	1						

MONONGAHELA RIVER BASIN

03068900 SHAVERS FORK NEAR ELKINS, WV

LOCATION.--Lat 38°57'58", long 79°46'02", Randolph County, Hydrologic Unit 05020004, at highway bridge, 0.6 mi (1.0 km) downstream from Johns Run, 5.2 mi (8.4 km) northeast of Elkins, and at mile 19.3 (31.1 km).

DRAINAGE AREA.--161 mi² (417 km²).

PERIOD OF RECORD.--Water years 1973 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT								
26...	0900	320	41	--	10.0	1.0	5	4.3
NOV								
16...	1030	260	42	--	--	2.0	3	2.1
DEC								
02...	1530	1140	--	--	--	5.0	12	37
07...	1630	572	--	--	--	2.0	8	12
JAN								
04...	1645	199	46	--	--	2.0	2	1.1
FEB								
28...	1045	81	50	--	1.0	1.0	1	.22
MAR								
15...	1415	2060	42	--	3.5	20	66	367
27...	1430	2080	37	--	5.0	5.0	47	264
27...	1705	1950	35	--	5.0	6.0	39	205
28...	1310	1340	37	--	6.5	4.0	21	76
MAY								
02...	1400	256	40	--	8.0	1.0	1	.69
31...	1230	251	48	7.0	17.0	1.0	6	4.1
JUN								
22...	1100	427	47	7.0	20.0	8.0	27	31
27...	0900	2500	36	6.4	18.0	80	394	2660
JUL								
27...	1545	134	41	7.0	23.0	2.0	0	.00
AUG								
29...	1135	87	58	7.0	22.0	5.0	11	2.6
SEP								
27...	1200	26	26	7.0	16.0	2.0	2	.14

03069000 SHAVERS FORK AT PARSONS, WV

LOCATION.--Lat 39°05'45", long 79°40'40", Tucker County, Hydrologic Unit 05020004, on right bank at Parsons, 0.7 mi (1.1 km) upstream from confluence with Black Fork.

DRAINAGE AREA.--214 mi² (554 km²).

PERIOD OF RECORD.--October 1910 to September 1926, October 1940 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 583: 1922. WSP 923: Drainage area. WSP 1335: 1911-12, 1915-17, 1918(M), 1921-22(M), 1926(M). WSP 1705: 1955.

GAGE.--Water-stage recorder. Datum of gage is 1,634.87 ft (498.308 m) National Geodetic Vertical Datum of 1929. Prior to Aug. 25, 1923, nonrecording gage on old highway bridge 800 ft (244 m) downstream and Aug. 25, 1923, to Sept. 30, 1926, nonrecording gage on railroad bridge 760 ft (232 m) downstream at datum 3.0 ft (0.9 m) lower. Oct. 4, 1940, to Apr. 4, 1942, nonrecording gage at present site and datum.

REMARKS.--Records good except those for Dec. 7 to Mar. 13, which are poor.

AVERAGE DISCHARGE.--54 years, 549 ft³/s (15.55 m³/s), 34.84 in/yr (885 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,000 ft³/s (453 m³/s) Oct. 16, 1954, gage height, 12.34 ft (3.761 m), from rating curve extended above 11,000 ft³/s (320 m³/s) on basis of slope-conveyance study; minimum daily discharge 3.0 ft³/s (0.085 m³/s) Oct. 7, 1914.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 10, 1888, and July 17, 1907, reached a stage of approximately 12.5 ft (3.8 m) at site and datum of former gage, discharge, 25,000 ft³/s (710 m³/s), from rating curve extended above 8,000 ft³/s (230 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,300 ft³/s (150 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 26	1315	*11200 317	9.83 2.996	July 3	2030	8830 250	8.57 2.612
Mar. 26	2115	6170 175	7.04 2.146				

Minimum discharge, 37 ft³/s (1.05 m³/s) Sept. 30, gage height, 0.49 ft (0.149 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	147	249	3440	284	335	105	832	311	327	331	1030	582
2	507	228	1610	270	320	105	1270	277	228	270	463	357
3	452	216	944	210	290	110	928	253	507	3410	319	232
4	323	204	704	158	250	105	710	288	665	3440	452	177
5	256	198	678	204	230	99	864	639	415	1280	501	142
6	232	192	1030	242	200	96	772	632	319	710	479	115
7	260	210	730	295	180	95	816	479	281	474	1610	98
8	239	288	507	425	170	100	824	441	376	385	1410	89
9	1010	348	450	1910	160	110	606	737	912	435	779	81
10	1460	315	350	976	150	160	490	793	800	366	512	73
11	665	380	300	540	140	280	430	588	474	353	405	71
12	468	380	260	446	130	500	490	457	348	323	840	63
13	366	327	320	415	150	800	430	632	288	249	582	62
14	311	288	665	380	160	2800	353	3240	249	582	912	62
15	274	267	2390	319	140	3490	307	1580	216	856	619	68
16	344	288	1140	263	135	1580	277	1080	183	430	400	86
17	570	331	710	270	130	920	253	1120	163	380	323	108
18	410	405	582	280	120	619	239	880	147	400	263	126
19	452	371	786	250	110	564	246	779	130	277	225	111
20	832	311	723	220	105	968	446	691	119	222	195	81
21	786	284	645	200	115	1700	968	540	228	186	165	66
22	613	323	518	190	110	3070	848	435	344	201	147	62
23	496	1260	410	170	100	1780	697	380	288	168	130	65
24	405	1210	366	170	105	2010	632	737	192	160	117	76
25	344	840	523	440	110	2150	564	808	144	163	106	71
26	319	770	723	6810	105	3770	518	512	128	216	102	60
27	626	660	452	2160	100	3310	518	385	1280	186	133	51
28	435	518	362	888	110	1600	452	319	1400	222	121	46
29	348	600	319	639	---	1240	415	274	840	222	130	42
30	303	1670	303	490	---	1140	348	249	457	284	109	38
31	274	---	291	410	---	856	---	235	---	1850	307	---
TOTAL	14527	13931	23231	20924	4460	36232	17543	20771	12448	19031	13886	3361
MEAN	469	464	749	675	159	1169	585	670	415	614	448	112
MAX	1460	1670	3440	6810	335	3770	1270	3240	1400	3440	1610	582
MIN	147	192	260	158	100	95	239	235	119	160	102	38
CFSM	2.19	2.17	3.50	3.15	.74	5.46	2.73	3.13	1.94	2.87	2.09	.52
IN.	2.53	2.42	4.04	3.64	.78	6.30	3.05	3.61	2.16	3.31	2.41	.58

CAL YR 1977	TOTAL	171169	MEAN 469	MAX 5980	MIN 42	CFSM 2.19	IN 29.75
WTR YR 1978	TOTAL	200345	MEAN 549	MAX 6810	MIN 38	CFSM 2.57	IN 34.83

MONONGAHELA RIVER BASIN

03069500 CHEAT RIVER NEAR PARSONS, WV

LOCATION.--Lat 39°07'20", long 79°40'50", Tucker County, Hydrologic Unit 05020004, on left bank 2.0 mi (3.2 km) north of Parsons, 3.0 mi (4.8 km) downstream from confluence of Black and Shavers Forks, and at mile 74.8 (120.4 km).

DRAINAGE AREA.--718 mi² (1,860 km²).

PERIOD OF RECORD.--January 1913 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 893: Drainage area. WSP 1305: 1917(M), 1924(M), 1932(M), 1936(M), 1938-39(M). WSP 1335: 1916. WSP 1385: 1918-19(M).

GAGE.--Water-stage recorder. Datum of gage is 1,589.66 ft (484.528 m) National Geodetic Vertical Datum, adjustment of 1912. Prior to Aug. 17, 1944, nonrecording gage on Moss Bridge about 1,600 ft (488 m) upstream at datum 1.13 ft (0.344 m) higher.

REMARKS.--Records good except those for January and February, which are poor. Monongahela Power Company gage-height telemeter at station.

AVERAGE DISCHARGE.--65 years, 1,679 ft³/s (47.55 m³/s), 31.76 in/yr (807 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 52,100 ft³/s (1,480 m³/s) Oct. 15, 1954, gage height, 19.08 ft (5.816 m), from rating curve extended above 26,000 ft³/s (740 m³/s) on basis of slope-area measurement of peak flow; minimum observed, 9 ft³/s (0.25 m³/s) Aug. 12, 1930, gage height, 1.28 ft (0.390 m), site and datum then in use.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 10, 1888, reached a stage of 20.5 ft (6.25 m), discharge, 51,300 ft³/s (1,450 m³/s), from floodmarks, at site and datum in use prior to Aug. 17, 1944; it was not exceeded until flood of Oct. 15, 1954, which reached a stage 0.3 ft (0.09 m) higher at that site and datum.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 16,000 ft³/s (450 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 26	1300	26800 759	12.28 3.743	May 24	1600	16900 479	10.00 3.048
Mar. 14	2400	18900 535	10.49 3.197	July 3	2100	*31600 895	13.35 4.069
Mar. 26	2000	17400 493	10.11 3.082				

Minimum discharge, 93 ft³/s (2.63 m³/s) Sept. 30, gage height, 1.97 ft (0.600 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	304	584	11900	884	900	328	2790	1230	797	908	3290	1620
2	1340	542	6100	818	800	324	3410	1000	608	811	1450	797
3	1420	590	3350	626	700	308	2520	853	1360	15300	900	506
4	1140	884	2550	542	640	304	2060	1010	1830	15000	2030	370
5	772	797	2460	644	580	310	2560	2680	1010	5830	1790	304
6	678	1420	3260	720	540	310	2150	2520	790	2850	2270	245
7	848	2220	2310	860	480	315	3100	1830	790	1800	6740	207
8	708	7670	1770	1490	460	308	2860	1680	1310	1560	4750	180
9	3460	2930	1620	6560	430	320	2080	2530	2580	2110	2650	165
10	3850	1920	1200	3600	410	494	1630	2370	2170	1440	1660	156
11	1880	2040	980	2000	400	846	1400	1830	1310	1880	1210	153
12	1240	1550	830	1400	410	1440	1560	1440	932	1160	2250	139
13	932	1270	960	1100	430	2370	1250	2180	762	804	1510	201
14	776	1070	2730	1000	470	9880	1000	8140	644	1800	2200	189
15	664	994	8510	850	464	13500	853	5260	548	2400	1530	174
16	916	1260	4150	670	458	6260	748	4240	458	1360	976	217
17	1610	1480	2620	797	405	3520	671	3930	400	1400	762	566
18	1160	2030	2250	790	390	2350	632	3100	360	1140	596	360
19	1300	1500	2770	706	390	2110	713	2700	320	776	488	262
20	2060	1210	2460	632	360	3890	1360	2210	288	602	400	198
21	1810	1050	2220	500	370	7120	2560	1740	839	578	344	168
22	1400	1330	1760	470	360	11100	2280	1390	1700	542	300	153
23	1140	5020	1370	450	330	7120	2010	1170	949	428	266	159
24	932	4270	1270	500	340	7200	1740	5780	536	405	241	165
25	797	2980	2150	3130	344	6660	1530	5440	385	416	220	156
26	741	2760	2270	19600	336	12800	2130	2670	332	518	207	139
27	1240	2200	1560	8030	316	10900	2770	1620	3640	395	224	123
28	1060	1870	1270	3850	340	5990	2400	1220	4240	638	227	113
29	860	1970	1070	2300	---	4580	1940	976	2460	554	266	104
30	741	5990	1040	1600	---	3720	1490	825	1330	804	224	97
31	644	---	967	1100	---	2770	---	748	---	6260	1310	---
TOTAL	38423	63401	81727	68219	12853	129447	56197	76312	35678	72469	43281	8386
MEAN	1239	2113	2636	2201	459	4176	1873	2462	1189	2338	1396	280
MAX	3850	7670	11900	19600	900	13500	3410	8140	4240	15300	6740	1620
MIN	304	542	830	450	316	304	632	748	288	395	207	97
CFSM	1.73	2.94	3.67	3.07	.64	5.82	2.61	3.43	1.66	3.26	1.94	.39
IN.	1.99	3.28	4.23	3.53	.67	6.71	2.91	3.95	1.85	3.75	2.24	.43
CAL YR 1977	TOTAL	531178	MEAN	1455	MAX	15300	MIN	131	CFSM	2.03	IN	27.52
WTR YR 1978	TOTAL	686393	MEAN	1881	MAX	19600	MIN	97	CFSM	2.62	IN	35.56

03070000 CHEAT RIVER AT ROWLESBURG, WV

LOCATION.--Lat 39°20'50", long 79°40'00", Preston County, Hydrologic Unit 05020004, on left bank 50 ft (15 m) downstream from Baltimore & Ohio Railroad bridge at Rowlesburg, 300 ft (91 m) upstream from Saltlick Creek, and at mile 44.1 (71.0 km). Records include flow of Saltlick Creek.

DRAINAGE AREA.--972 mi² (2,517 km²), including that of Saltlick Creek.

PERIOD OF RECORD.--July 1912 to September 1923 (gage heights only), October 1923 to current year. Gage-height records collected at practically the same site since 1884 are contained in reports of National Weather Service. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 803: Drainage area. WSP 893: 1936-37. WSP 1173: 1924-34(M,m). WSP 1725: 1924(M), 1930(M), 1932(M), 1936(M), 1938-39(M), 1944(M), 1948-49(M).

GAGE.--Water-stage recorder. Datum of gage is 1,369.8 ft (417.52 m) Baltimore & Ohio RR datum. Prior to Nov. 18, 1923, nonrecording gages at several sites within 500 ft (152 m) of present site at various datums.

REMARKS.--Records good except those below 500 ft³/s (14.2 m³/s), which are fair, and those for period of no gage-height record, June 30 to July 7, and those for January and February, which are poor.

AVERAGE DISCHARGE.--55 years, 2,257 ft³/s (63.92 m³/s), 31.53 in/yr (801 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 66,300 ft³/s (1,880 m³/s) Oct. 16, 1954, gage height, 15.67 ft (4.776 m), from rating curve extended above 42,000 ft³/s (1,200 m³/s); minimum, 10 ft³/s (0.28 m³/s) Oct. 15, 1930; minimum gage height observed, 0.50 ft (0.152 m) Oct. 3, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 6, 1844, reached a stage of 16.7 ft (5.09 m), referred to present gage by relation curve, discharge, 89,000 ft³/s (2,520 m³/s), from rating curve extended above 45,000 ft³/s (1,300 m³/s). Flood of July 10, 1888, reached a stage of 16.2 ft (4.94 m), referred to present gage by relation curve, discharge, 84,000 ft³/s (2,380 m³/s), from rating curve extended above 45,000 ft³/s (1,300 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 20,000 ft³/s (570 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 26	1700	35100 994	10.86 3.310	July 4	Unknown	*46700 1320	a12.47 3.801
Mar. 15	0600	24700 700	9.20 2.804				

a From floodmark.

Minimum discharge observed, 133 ft³/s (3.77 m³/s) Sept. 30, gage height, 0.72 ft (0.219 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	529	816	15700	1400	1200	460	3540	2780	1100	1500	5300	2680
2	2490	742	9420	1200	1000	450	3900	2490	963	1200	2470	1650
3	3060	716	5160	900	900	430	3750	2240	1040	15000	1560	932
4	2150	886	3730	760	810	420	3030	2020	2590	20000	2010	696
5	1590	1150	3170	840	770	410	2870	2470	1670	10000	2440	533
6	1210	1380	4510	1080	710	410	3190	4190	1180	3500	2490	414
7	1380	2070	3800	1270	650	420	3580	4150	1040	2360	6080	328
8	1320	11200	2750	2200	610	430	4920	3610	1420	2010	5940	280
9	4670	5310	2200	6550	570	450	4170	3510	3040	2590	3790	235
10	6720	3240	1700	4500	540	600	3140	3500	3150	2260	2470	215
11	3350	3230	1300	3200	520	1330	2540	3000	2100	3100	1840	201
12	2180	2770	1100	2200	540	2380	2320	2700	1490	2110	2240	196
13	1600	2200	1500	1600	580	3940	2260	3300	1190	1380	2510	330
14	1260	1840	2670	1400	610	11000	1560	10000	962	2020	2140	378
15	1060	1610	11100	1200	640	19600	1680	7200	802	4050	2450	322
16	1200	1680	6340	900	640	10100	1480	6100	671	2370	1530	343
17	2690	2110	3960	970	600	5840	1350	5500	577	2130	1160	920
18	2300	3170	3120	890	560	3890	1230	4500	511	1790	890	846
19	1890	2780	3470	820	520	3110	1190	4000	464	1290	709	545
20	2570	2130	3580	740	480	5430	1330	3300	409	957	587	390
21	2630	1780	3570	660	500	9190	3640	2600	525	765	487	302
22	2210	1740	2940	620	480	15800	4660	2200	1840	776	415	258
23	1790	4570	2270	600	440	10400	4310	1800	1690	668	364	240
24	1480	6140	1980	680	450	9490	3690	7700	896	637	314	230
25	1240	4400	2430	6580	470	8680	3160	6900	594	650	290	230
26	1100	3930	3450	24700	490	12200	2920	3490	562	664	255	210
27	1300	3460	2500	10000	430	15200	3260	2770	4340	658	240	183
28	1560	2920	2000	6000	470	9040	3480	2050	6090	631	284	161
29	1260	2630	1750	3100	---	6380	3420	1620	4260	833	278	157
30	1050	6520	1630	2000	---	5440	3150	1320	3000	796	320	137
31	916	---	1540	1500	---	4200	---	1140	---	5280	1600	---
TOTAL	61755	89120	116340	91460	17180	177120	89120	114150	50166	93975	55453	14542
MEAN	1992	2971	3753	2950	614	5714	2971	3682	1672	3031	1789	485
MAX	6720	11200	15700	24700	1200	19600	4920	10000	6090	20000	6080	2680
MIN	529	716	1100	600	430	410	1190	1140	409	631	240	137
CFSM	2.05	3.06	3.86	3.04	.63	5.88	3.06	3.79	1.72	3.12	1.84	.50
IN.	2.36	3.41	4.45	3.50	.66	6.78	3.41	4.37	1.92	3.60	2.12	.56

CAL YR 1977	TOTAL	756281	MEAN	2072	MAX	17500	MIN	183	CFSM	2.13	IN	28.94
WTR YR 1978	TOTAL	970381	MEAN	2659	MAX	24700	MIN	137	CFSM	2.74	IN	37.14

03070500 BIG SANDY CREEK AT ROCKVILLE, WV

LOCATION.--Lat 39°37'15", long 79°42'20", Preston County, Hydrologic Unit 05020004, on right bank just downstream from highway bridge at Rockville, and at mile 5.0 (8.0 km).

DRAINAGE AREA.--200 mi² (518 km²).

PERIOD OF RECORD.--May 1909 to March 1918, April 1921 to current year.

REVISED RECORDS.--WSP 583: 1912(M), 1922-23. WSP 643: Drainage area. WSP 923: 1939. WSP 1173: 1930-34(M,m). WSP 1335: 1910-18, 1921, 1922-24(M), 1928(M), 1930-43(M).

GAGE.--Water-stage recorder. Altitude of gage is 1,310 ft (399 m), from topographic map. Prior to Oct. 4, 1924, nonrecording gages at highway bridge at same datum.

REMARKS.--Records good except those for January and February, which are poor.

AVERAGE DISCHARGE.--65 years (water years 1910-17, 1922-78), 421 ft³/s (11.92 m³/s), 28.59 in/yr (726 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 21,300 ft³/s (603 m³/s) July 24, 1912, gage height, 18.0 ft (5.49 m), from rating curve extended above 10,000 ft³/s (280 m³/s) on basis of velocity-area studies; minimum, 0.1 ft³/s (0.003 m³/s) Oct. 21-27, 1953.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 10, 1888, reached a stage of about 20 ft (6.1 m), discharge, about 30,000 ft³/s (850 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,800 ft³/s (140 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)
Jan. 26	1000	*6730	191	11.54	3.517	May 18	0700	5380	152	10.76	3.280
Mar. 14	2400	5260	149	10.69	3.258	July 14	1200	6240	177	11.27	3.435
Mar. 21	2400	6490	184	11.41	3.478						

Minimum discharge, 29 ft³/s (0.82 m³/s) Sept. 30, gage height, 3.55 ft (1.082 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	123	83	2780	240	400	123	579	232	182	252	808	395
2	324	83	1470	200	350	119	509	202	153	215	468	207
3	305	75	933	170	280	115	460	180	215	2340	350	274
4	250	74	729	150	220	110	530	174	229	1700	433	377
5	196	75	718	160	190	110	849	330	149	769	286	211
6	211	52	968	180	170	110	748	350	120	501	234	144
7	200	103	712	253	160	115	1770	314	124	343	224	111
8	234	256	540	774	150	122	1260	323	271	280	218	91
9	1460	229	440	2080	140	133	753	927	388	244	164	78
10	1110	213	350	1120	130	213	579	849	250	410	149	69
11	626	266	290	700	120	360	484	584	180	381	168	61
12	436	232	240	410	130	520	436	460	142	227	139	56
13	314	211	320	320	140	684	350	526	363	172	176	194
14	244	185	861	280	150	2750	292	1040	255	3110	492	119
15	203	182	1470	250	160	3770	250	1380	184	1230	227	96
16	356	187	912	190	160	1860	218	1390	146	732	151	97
17	489	664	672	200	150	1010	196	2440	126	1370	119	97
18	305	1090	584	190	150	680	192	4280	109	552	96	80
19	321	656	567	170	140	711	266	2010	93	356	84	66
20	282	477	642	160	120	1240	460	1040	85	255	83	58
21	230	393	745	150	130	3000	803	690	83	194	68	53
22	201	359	598	140	125	4400	891	526	266	156	56	82
23	177	332	480	130	120	2510	675	444	149	140	50	86
24	155	397	423	150	120	1760	548	879	97	164	46	63
25	140	435	609	1360	132	1660	492	1210	78	346	45	54
26	131	420	528	5450	127	1990	509	727	158	211	58	47
27	130	400	438	2130	120	1940	417	539	1160	224	48	41
28	121	380	343	1400	110	1380	350	417	1260	575	48	38
29	109	357	310	1000	---	1160	298	326	579	269	87	34
30	98	612	290	700	---	861	266	266	367	198	91	31
31	84	---	272	510	---	665	---	222	---	2110	742	---
TOTAL	9690	9534	21234	21977	4604	36181	16430	25277	7965	20026	6408	3410
MEAN	313	314	685	709	164	1167	548	815	266	646	207	114
MAX	1460	1090	2780	5450	400	4400	1770	4280	1260	3110	808	395
MIN	89	78	240	130	110	110	192	174	78	140	45	31
CFSM	1.57	1.59	3.43	3.55	.82	5.84	2.74	4.08	1.33	3.23	1.04	.57
IN.	1.80	1.77	3.95	4.09	.86	6.73	3.06	4.70	1.48	3.72	1.19	.63

CAL YR 1977 TOTAL 142932 MEAN 392 MAX 4440 MIN 18 CFSM 1.56 IN 26.59
WTR YR 1978 TOTAL 182736 MEAN 501 MAX 5450 MIN 31 CFSM 2.51 IN 33.99

MONONGAHELA RIVER BASIN

93

03071600 CHEAT RIVER AT LAKE LYNN, PA.

LOCATION.--Lat 39°43'15", long 79°51'20", Fayette County, Hydrologic Unit 05020004, at the Lake Lynn hydro-electric plant of the West Penn Power Company at Lake Lynn, 3.0 mi (4.8 km) upstream from mouth.

DRAINAGE AREA.--1,411 mi² (3,654 km²).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1948 to September 1957, October 1958 to current year (partial record).

COOPERATION.--Records were furnished by the West Penn Power Company.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES (Water years 1949-57): Maximum 29.5°C July 30, 1949, July 28, 1952, and Aug. 6, 1955; minimum, 0.5°C several days during 1951, 1952, 1954, 1955, 1957.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	14.0	1.5	---	.0	.0	---	6.5	26.5	---	25.5	25.5
2	---	14.5	1.0	---	.0	.0	---	8.0	25.5	---	28.0	---
3	15.5	14.0	---	.0	---	.0	8.0	8.5	---	---	---	---
4	18.5	14.0	---	.0	---	---	8.0	8.0	---	---	---	---
5	18.0	---	2.0	.0	---	---	8.5	---	24.0	---	---	25.5
6	16.5	---	3.5	.0	.0	.0	8.5	---	24.0	---	---	25.5
7	16.5	13.0	3.0	---	.0	.0	10.0	---	24.0	---	25.5	25.5
8	---	13.0	2.0	---	.0	.0	---	8.0	---	---	26.5	25.5
9	---	13.0	1.5	.0	.0	.0	---	6.5	---	---	26.5	---
10	17.0	13.0	.0	.0	.0	.0	11.0	7.0	---	24.5	26.5	---
11	17.0	13.0	---	.0	---	---	10.0	9.0	---	23.5	26.5	26.0
12	16.5	---	.0	.0	---	---	10.0	10.0	24.0	25.0	---	26.0
13	16.5	---	.0	.0	.0	.0	10.0	---	24.0	25.0	---	25.5
14	15.5	11.5	.5	.0	.0	.0	9.0	---	24.5	25.0	25.5	24.5
15	---	11.0	1.0	---	.0	.0	---	10.0	25.0	---	26.0	24.5
16	---	10.0	1.0	.0	.0	.0	---	11.5	25.0	---	26.5	---
17	14.5	9.0	---	.0	.0	.0	10.0	13.0	---	26.0	26.5	---
18	13.5	9.0	---	.0	---	---	9.0	13.0	---	26.0	28.0	25.5
19	13.0	---	3.0	.0	---	---	---	15.0	25.0	28.5	---	26.5
20	12.0	---	3.5	.0	---	2.0	---	---	25.0	29.0	---	25.5
21	12.0	9.0	3.5	---	.0	2.0	---	---	25.5	29.5	28.0	25.5
22	---	6.5	2.0	---	.0	3.0	---	15.5	26.0	---	28.0	---
23	---	5.5	1.0	.0	.0	4.5	---	16.5	26.5	---	28.5	---
24	13.5	5.5	---	.0	.0	---	9.0	18.0	---	29.0	28.0	---
25	13.5	5.5	---	.0	---	---	8.0	19.0	---	29.0	29.0	23.5
26	13.5	---	---	.0	---	---	8.0	19.0	26.5	29.0	---	24.0
27	13.5	---	1.0	.0	.0	4.5	8.5	---	26.5	28.5	---	23.5
28	13.0	4.5	.5	---	.0	5.5	7.0	---	26.5	28.0	28.0	23.0
29	---	4.0	.5	---	---	5.5	---	---	27.0	---	28.0	23.0
30	---	4.0	.0	.0	---	5.5	---	23.5	25.5	---	27.0	---
31	13.5	---	---	.0	---	6.5	---	24.5	---	25.5	26.5	---
MFAN	15.0	10.0	1.5	.0	.0	2.0	9.0	13.0	25.5	27.0	27.0	25.0
WTR YR 1978	MEAN	12.5		MAX	29.5		MIN	.0				

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

KINGS CREEK BASIN

03110815 KINGS CREEK NEAR PARIS, PA.

LOCATION.--Lat 40°25'36", long 80°30'43", Washington County, Hydrologic Unit 05030101, at Devils Den, 1,000 ft (305 m) upstream from Aunt Clara Fork, 1,000 ft (305 m) downstream from covered bridge, 1.5 mi (2.4 km) north of Paris, and at mile 9.2 (14.8 km).

DRAINAGE AREA.--10.0 mi² (25.9 km²).

PERIOD OF RECORD.--October 1976 to September 1978 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT 19...	1020	2.5	340	8.2	10.0	10.2	72	450	230
NOV 16...	0955	3.1	320	8.2	9.5	10.9	80	230	150
DEC 21...	1100	13	240	7.9	5.0	12.2	170	5800	160
JAN 25...	1030	6.8	320	7.7	3.0	12.8	130	1100	3700
FEB 15...	1100	4.4	440	7.7	3.0	12.4	84	350	420
MAR 22...	0945	24	280	7.5	8.0	11.4	440	1100	200
APR 26...	1020	10	385	8.4	8.5	12.2	220	150	100
MAY 17...	1110	54	295	7.6	11.0	11.1	3300	3500	1900
JUN 14...	1115	28	320	7.1	11.5	10.2	2100	3700	7500
JUL 19...	1030	2.8	495	8.4	17.5	8.8	370	1000	200
AUG 02...	1100	2.1	520	8.7	19.0	8.7	140	1500	470
SEP 18...	1320	1.2	400	8.5	22.0	8.7	160	1600	1500

KINGS CREEK BASIN

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03110820 AUNT CLARA FORK NEAR PARIS, PA.

LOCATION.--LAT 40°25'39", long 80°30'43", Washington County, Hydrologic Unit 05030101, at site 200 ft (61 m) upstream from mouth, 1.7 mi (2.7 km) north of Paris, and 4.1 mi (6.6 km) east northeast of Weirton, WV Post Office.

DRAINAGE AREA.--14.2 mi² (36.8 km²).

PERIOD OF RECORD.--October 1976 to September 1978 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT									
19...	0940	4.6	350	8.2	10.0	10.0	54	470	210
NOV									
16...	0920	4.4	400	8.1	10.0	10.4	82	300	160
DEC									
21...	1010	23	250	7.9	5.0	12.2	220	680	470
JAN									
25...	1000	9.6	340	7.6	4.0	12.4	210	1200	240
FEB									
15...	1030	6.4	500	7.6	4.0	12.3	52	390	47
MAR									
22...	0900	43	310	7.5	8.0	11.4	120	720	470
APR									
26...	0930	12	505	7.7	8.5	12.2	50	130	20
MAY									
17...	1015	38	380	8.2	11.0	10.9	510	800	470
JUN									
14...	0925	28	410	7.5	11.0	10.4	280	1600	660
JUL									
19...	0940	3.6	670	8.5	17.0	8.8	260	240	170
AUG									
02...	1015	2.5	890	8.5	18.5	8.7	1100	580	230
SEP									
18...	1230	2.4	700	8.4	21.5	9.7	800	1600	1200

KINGS CREEK BASIN

03110830 KINGS CREEK AT WEIRTON, WV

LOCATION.--Lat 40°26'08", long 80°35'34", Hancock County, Hydrologic Unit 05030101, at county road bridge 0.2 mi (0.3 km) upstream from W. Va. Route 2, and at mile 1.4 (2.3 km).

DRAINAGE AREA.--49.0 mi² (126.9 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1976 to September 1978 (discontinued).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 698.34 ft (212.854 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for period Dec. 27 to Mar. 12, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,940 ft³/s (54.9 m³/s) June 8, 1978, gage height, 5.05 ft (1.539 m); maximum gage height, 5.09 ft (1.551 m) May 17, 1978, backwater from debris; minimum, 2.0 ft³/s (0.057 m³/s) Sept. 11-13, gage height, 1.12 ft (0.341 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft³/s (14 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 5	1945	862 24.4	3.67 1.119	Mar. 13	1945	802 22.7	3.57 1.088
Dec. 14	1330	784 22.2	3.54 1.079	Mar. 14	1800	1310 37.1	4.30 1.311
Jan. 8	2315	565 16.0	3.15 0.960	May 17	2030	1800 51.0	*a5.09 1.551
Jan. 26	0300	1530 43.3	4.57 1.393	June 8	2000	*1940 54.9	5.05 1.539

a Backwater from debris.

Minimum discharge, 4.3 ft³/s (0.12 m³/s) Sept. 28-30, gage height, 1.20 ft (0.366 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	7.6	50	29	40	15	79	30	34	17	14	21
2	38	7.6	47	24	35	16	66	29	28	52	9.8	13
3	20	7.6	41	20	32	15	82	27	27	201	9.0	11
4	15	7.6	39	18	29	14	112	28	21	96	9.8	13
5	12	7.6	350	21	27	13	173	37	18	59	8.3	11
6	15	8.1	305	23	25	11	169	29	15	43	38	8.4
7	15	17	115	42	23	12	176	27	17	34	154	7.4
8	13	33	85	189	21	14	137	30	279	41	78	6.7
9	27	19	74	298	19	20	109	57	485	40	35	6.2
10	37	21	66	130	18	116	95	43	156	31	42	6.2
11	29	28	54	90	17	250	88	38	92	27	31	6.0
12	21	21	45	64	18	311	73	37	75	21	24	6.3
13	17	18	60	55	19	455	61	54	148	19	20	20
14	14	16	454	50	21	915	51	70	77	34	16	12
15	12	14	316	44	22	535	47	85	58	27	14	13
16	17	14	155	35	20	267	42	108	48	20	13	10
17	14	58	105	40	18	181	40	440	41	17	12	9.9
18	12	63	82	250	16	128	42	646	36	15	10	9.1
19	12	45	66	120	17	110	49	230	39	13	10	9.6
20	12	34	85	80	16	94	62	130	35	12	15	8.0
21	11	29	79	60	15	118	56	85	29	11	9.9	7.1
22	11	25	65	45	14	130	49	63	29	11	8.4	7.7
23	9.9	22	57	38	13	102	45	54	22	11	8.0	7.4
24	8.4	21	53	35	13	92	48	168	19	13	7.0	6.3
25	7.9	19	58	34	14	153	43	112	17	11	7.3	6.1
26	8.5	16	38	810	15	223	42	73	31	11	6.8	5.3
27	8.6	15	35	309	15	208	39	54	50	11	6.2	4.8
28	9.3	14	28	171	13	152	36	44	53	14	6.5	4.7
29	9.8	16	29	100	---	118	34	36	27	9.0	7.8	4.3
30	8.7	23	30	61	---	92	32	63	21	11	14	4.3
31	7.7	---	31	46	---	89	---	52	---	18	52	---
TOTAL	484.8	647.1	3097	3331	565	4969	2177	2979	2027	950.0	696.8	265.8
MEAN	15.6	21.6	99.9	107	20.2	160	72.6	96.1	67.6	30.6	22.5	8.86
MAX	38	63	454	810	40	915	176	646	485	201	154	21
MIN	7.7	7.6	28	18	13	11	32	27	15	9.0	6.2	4.3
CFSM	.32	.44	2.04	2.18	.41	3.27	1.48	1.96	1.38	.62	.46	.18
IN.	.37	.49	2.35	2.53	.43	3.77	1.65	2.26	1.54	.72	.53	.20

CAL YR 1977	TOTAL	16981.7	MEAN	46.5	MAX	653	MIN	2.0	CFSM	.95	IN	12.89
WTR YR 1978	TOTAL	22189.5	MEAN	60.8	MAX	915	MIN	4.3	CFSM	1.24	IN	16.85

KINGS CREEK BASIN

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03110830 KINGS CREEK AT WEIRTON, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to September 1978 (discontinued).

REMARKS.--Suspended sediment samples taken once monthly and more frequently on rises.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW- INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, J.7 UM-MF (COLS./ 100 ML)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	STREP- TOCOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	STREP- TOCOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CaCO3)
OCT												
19...	1205	25	320	9.4	11.0	1.0	11.1	2100	5000	830	--	230
NOV												
16...	1100	14	325	8.4	10.0	1.0	11.4	1300	2900	1100	--	250
DEC												
21...	1310	75	260	7.9	6.0	2.0	11.8	1300	6300	930	--	170
JAN												
13...	1555	55	352	--	--	--	--	--	--	--	--	--
25...	1430	34	360	7.5	4.0	5.0	12.4	12000	8500	2400	--	190
27...	1205	250	282	--	--	--	--	--	--	--	--	--
FEB												
15...	1315	22	430	7.6	3.0	2.0	12.8	1600	2300	811	--	210
MAR												
15...	1000	510	--	--	--	--	--	--	--	--	--	--
18...	0700	92	300	--	--	--	--	--	--	--	--	--
18...	1300	96	290	--	--	--	--	--	--	--	--	--
18...	1515	167	322	--	--	--	--	--	--	--	--	--
18...	1835	120	342	--	--	--	--	--	--	--	--	--
22...	1250	120	300	7.8	10.0	9.0	11.2	--	--	--	--	140
APR												
01...	0630	83	340	--	--	--	--	--	--	--	--	--
01...	1500	77	243	--	--	--	--	--	--	--	--	--
26...	1220	43	380	9.4	11.0	2.0	13.0	--	--	--	--	190
MAY												
17...	1345	379	300	7.5	11.5	75	10.6	12000	57000	--	21000	130
18...	0900	720	220	6.5	11.0	--	11.0	--	--	--	--	--
24...	0730	66	264	--	--	--	--	--	--	--	--	--
24...	0735	127	262	--	--	--	--	--	--	--	--	--
24...	1450	165	250	--	--	--	--	--	--	--	--	--
24...	1830	978	267	--	--	--	--	--	--	--	--	--
25...	0735	620	262	--	--	--	--	--	--	--	--	--
JUN												
08...	0715	110	240	--	--	--	--	--	--	--	--	--
08...	1100	100	233	--	--	--	--	--	--	--	--	--
08...	1500	66	226	--	--	--	--	--	--	--	--	--
08...	2100	1450	231	--	--	--	--	--	--	--	--	--
09...	1041	510	234	--	--	--	--	--	--	--	--	--
12...	2015	98	298	--	--	--	--	--	--	--	--	--
13...	0700	170	312	--	--	--	--	--	--	--	--	--
13...	1530	110	326	--	--	--	--	--	--	--	--	--
14...	1200	79	370	7.6	13.5	4.0	10.3	10000	130000	--	4000	180
26...	0730	34	407	--	--	--	--	--	--	--	--	--
26...	1505	22	407	--	--	--	--	--	--	--	--	--
27...	0800	50	423	--	--	--	--	--	--	--	--	--
JUL												
19...	1230	13	560	8.7	22.0	4.0	10.1	46000	63000	200	--	260
AUG												
02...	1245	8.6	535	8.7	23.5	1.0	10.1	600	20000	200	--	280
30...	0700	11	440	--	--	--	--	--	--	--	--	--
30...	1730	14	420	--	--	--	--	--	--	--	--	--
31...	0800	13	460	--	--	--	--	--	--	--	--	--
31...	1530	11	470	--	--	--	--	--	--	--	--	--
SEP												
18...	1515	8.8	500	8.7	23.0	1.0	10.0	71200	4600	240	--	240

KINGS CREEK BASIN

03110830 KINGS CREEK AT WEIRTON, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, DIS- SOLVED (MG/L AS Na)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CaCO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT												
19...	14.1	64	18	15	12	.4	2.9	120	0	98	.1	130
NOV												
16...	15.1	68	20	15	11	.4	2.4	120	0	98	.8	140
DEC												
21...	12.0	49	12	8.6	10	.3	2.2	65	0	53	1.3	97
JAN												
13...	--	--	--	--	--	--	--	--	--	--	--	--
25...	13.0	52	14	21	19	.7	2.0	76	0	62	3.8	100
27...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
15...	14.0	59	16	12	11	.4	1.8	87	0	71	3.5	130
MAR												
15...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
22...	94	40	10	8.8	12	.3	1.8	57	0	47	1.4	96
APR												
01...	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--
26...	12.0	52	14	9.0	9	.3	1.8	77	1	65	.1	120
MAY												
17...	78	38	9.6	7.0	10	.3	2.2	69	0	57	3.5	85
18...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
08...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	50	13	7.2	8	.2	1.9	--	--	58	--	100
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
19...	--	72	19	12	9	.3	2.3	--	--	92	--	140
AUG												
02...	--	74	22	15	10	.4	2.8	--	--	96	--	160
30...	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
18...	--	66	19	15	12	.4	3.1	--	--	100	--	140

KINGS CREEK BASIN

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03110830 KINGS CREEK AT WEIRTON, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	PHOS- PHORUS, ORTH-O, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTH-O, DIS- SOLVED (MG/L AS P04)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDED RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CU)	CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CU)	CADMIUM DIS- SOLVED (UG/L AS CU)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, HEXA- VALENT, DIS- (UG/L AS CR)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)
OCT												
14...	.01	.03	--	--	40	--	--	--	--	--	--	80
NOV												
14...	.00	.00	--	--	0	--	--	--	--	--	--	10
DEC												
21...	.00	.00	--	--	10	--	--	--	--	--	--	20
JAN												
13...	--	--	--	--	--	--	--	--	--	--	--	--
25...	.06	.18	--	--	30	--	--	--	--	--	--	50
27...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
15...	.03	.05	--	--	20	--	--	--	--	--	--	30
MAR												
15...	--	--	2500	2400	60	0	0	0	10	0	4800	60
15...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--
22...	.00	.00	--	--	60	--	--	--	--	--	--	40
APR												
01...	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--
20...	.00	.00	--	--	50	--	--	--	--	--	--	20
MAY												
17...	.01	.03	--	--	110	--	--	--	--	--	--	140
18...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
04...	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
14...	.01	.03	--	--	50	--	--	--	--	--	--	20
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
14...	.00	.00	--	--	20	--	--	--	--	--	--	30
AUG												
02...	.00	.00	--	--	40	--	--	--	--	--	--	20
30...	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
18...	.02	.06	--	--	40	1	0	1	10	--	60	0

KINGS CREEK BASIN

03110830 KINGS CREEK AT WEIRTON, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	CHLORIDE, DIS- SOLVED (MG/L AS CL)	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO ₂)	SOLIDS, RESIDUE AT 120 DEG. C SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO ₃)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO ₂)	NITRO- GEN, NO ₂ +NO ₃ DIS- SOLVED (MG/L AS N)
OCT												
19...	21	.2	1.3	322	312	.44	24	.01	.04	.01	.03	.02
NOV												
16...	22	.2	2.6	356	330	.48	13	.05	.22	.01	.03	.06
DEC												
21...	14	.1	9.1	250	229	.34	50	1.2	5.3	.01	.03	1.2
JAN												
13...	--	--	--	--	--	--	--	--	--	--	--	--
25...	39	.1	7.6	313	278	.43	28	1.1	4.8	.01	.03	1.1
27...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
15...	20	.1	4.1	305	295	.41	18	1.1	4.8	.01	.03	1.1
MAR												
15...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
22...	13	.1	4.2	226	213	.31	73	1.5	6.6	.01	.03	1.5
APR												
01...	--	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--	--
26...	15	.1	4.2	293	256	.40	34	.26	1.2	.01	.03	.27
MAY												
17...	11	.1	4.2	223	199	.30	228	.85	3.8	.01	.03	.86
18...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
04...	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
14...	10	.1	4.5	286	--	.39	61	--	--	--	--	.63
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
19...	21	.2	4.1	394	--	.54	13.8	.08	.35	.01	.03	.09
AUG												
02...	20	.2	4.9	429	--	.58	10.6	.06	.27	.01	.03	.07
30...	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
18...	23	.1	4.7	387	--	.53	9.2	.06	.27	.00	.00	.06
DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH ₄)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, DIS- SOLVED (UG/L AS P)	ARSENIC DIS- SOLVED (UG/L AS AS)	CHRO- MIUM, SUS- PENDED RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)
JUN												
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
19...	.00	.00	.00	.00	.01	--	--	--	--	--	--	--
AUG												
02...	.01	.01	.20	.21	.01	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
18...	.04	.05	.25	.25	.03	1	10	6	2	1	1	60

KINGS CREEK BASIN

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03110830 KINGS CREEK AT WEIRTON, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	
OCT								
19...	--	--	--	--	--	30	--	
NOV								
16...	--	--	--	--	--	20	--	
DEC								
21...	--	--	--	--	--	40	--	
JAN								
13...	--	--	--	--	--	--	--	
25...	--	--	--	--	--	30	--	
27...	--	--	--	--	--	--	--	
FEB								
15...	--	--	--	--	--	20	--	
MAR								
15...	71	71	0	250	190	60	<.5	
18...	--	--	--	--	--	--	--	
18...	--	--	--	--	--	--	--	
22...	--	--	--	--	--	50	--	
APR								
01...	--	--	--	--	--	--	--	
01...	--	--	--	--	--	--	--	
26...	--	--	--	--	--	20	--	
MAY								
17...	--	--	--	--	--	100	--	
18...	--	--	--	--	--	--	--	
24...	--	--	--	--	--	--	--	
24...	--	--	--	--	--	--	--	
24...	--	--	--	--	--	--	--	
24...	--	--	--	--	--	--	--	
JUN								
08...	--	--	--	--	--	--	--	
08...	--	--	--	--	--	--	--	
08...	--	--	--	--	--	--	--	
08...	--	--	--	--	--	--	--	
09...	--	--	--	--	--	--	--	
12...	--	--	--	--	--	--	--	
13...	--	--	--	--	--	--	--	
13...	--	--	--	--	--	--	--	
14...	--	--	--	--	--	30	--	
26...	--	--	--	--	--	--	--	
26...	--	--	--	--	--	--	--	
27...	--	--	--	--	--	--	--	
DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)
JUL								
19...	--	--	--	--	--	10	--	--
AUG								
02...	--	--	--	--	--	30	--	--
30...	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--
SEP								
18...	10	0	10	20	10	10	<.5	.0

KINGS CREEK BASIN

03110830 KINGS CREEK AT WEIRTON, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	MERCURY SUS- PENDE RECov- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS PG)	ZINC, TOTAL RECov- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECov- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)
OCT							
19...	--	--	--	--	--	4	.30
NOV							
16...	--	--	--	--	--	5	.19
DEC							
21...	--	--	--	--	--	9	1.8
JAN							
13...	--	--	--	--	--	25	3.7
25...	--	--	--	--	--	14	1.3
27...	--	--	--	--	--	28	22
FEB							
15...	--	--	--	--	--	3	.18
MAR							
15...	.0	<.5	40	20	20	--	--
18...	--	--	--	--	--	32	14
18...	--	--	--	--	--	19	6.2
22...	--	--	--	--	--	--	--
APR							
01...	--	--	--	--	--	18	4.0
01...	--	--	--	--	--	262	54
26...	--	--	--	--	--	5	.58
MAY							
17...	--	--	--	--	--	828	847
18...	--	--	--	--	--	311	605
24...	--	--	--	--	--	268	48
24...	--	--	--	--	--	3040	1040
24...	--	--	--	--	--	557	248
24...	--	--	--	--	--	698	1840
JUN							
08...	--	--	--	--	--	430	128
08...	--	--	--	--	--	341	92
08...	--	--	--	--	--	523	93
08...	--	--	--	--	--	1710	6700
09...	--	--	--	--	--	323	445
12...	--	--	--	--	--	146	39
13...	--	--	--	--	--	336	154
13...	--	--	--	--	--	37	11
14...	--	--	--	--	--	14	3.0
26...	--	--	--	--	--	86	7.9
26...	--	--	--	--	--	129	7.7
27...	--	--	--	--	--	68	9.2

DATE	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	ZINC, TOTAL RECov- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECov- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)
JUL							
19...	--	--	--	--	--	8	.28
AUG							
02...	--	--	--	--	--	5	.12
30...	--	--	--	--	--	12	.36
30...	--	--	--	--	--	16	.60
31...	--	--	--	--	--	428	15
31...	--	--	--	--	--	40	1.2
SEP							
18...	<.5	0	10	0	10	6	.14

WHEELING CREEK BASIN

103

03112000 WHEELING CREEK AT ELM GROVE, WV

LOCATION.--Lat 40°02'40", long 80°39'40", Ohio County, Hydrologic Unit 05030106, on right bank at highway bridge at Elm Grove, 500 ft (152 m) downstream from Little Wheeling Creek, and at mile 7.7 (12.4 km).

DRAINAGE AREA.--282 mi² (730 km²).

PERIOD OF RECORD.--October 1940 to current year. Monthly discharge only for October 1940, published in WSP 1907.

REVISED RECORDS.--WSP 1305: 1941(M).

GAGE.--Water-stage recorder. Datum of gage is 667.59 ft (203.481 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for period Dec. 26 to Mar. 9, which are poor. Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--38 years, 328 ft³/s (9.289 m³/s), 15.80 in/yr (401 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,100 ft³/s (626 m³/s) Dec. 30, 1942, gage height, 13.67 ft (4.167 m), from rating curve extended above 15,000 ft³/s (430 m³/s) on basis of slope-area measurements at gage heights 13.2 ft (4.02 m) and 13.67 ft (4.167 m); minimum, 0.1 ft³/s (0.003 m³/s) Oct. 7, 1963, Sept. 26, 27, 1964; minimum gage height, 0.63 ft (0.192 m) Aug. 31, 1953.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 6,000 ft³/s (170 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 26	1215	*10200 289	8.36 2.548	Mar. 14	2215	6740 191	6.60 2.012
Mar. 12	1800	7310 207	6.90 2.103				

Minimum discharge, 5.3 ft³/s (0.15 m³/s) Sept. 29, 30, gage height, 1.05 ft (0.320 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	105	47	1010	167	210	76	386	244	146	76	37	76
2	265	44	675	140	170	80	290	222	127	68	35	54
3	215	43	451	90	150	76	296	201	146	112	33	73
4	166	42	381	80	130	72	332	200	146	280	29	105
5	158	42	1400	90	115	68	473	271	109	150	31	92
6	154	42	2690	122	110	64	576	243	92	99	65	49
7	178	45	1090	125	100	70	1680	203	89	68	158	31
8	195	66	562	464	97	80	1240	205	200	54	280	22
9	235	133	500	2560	85	100	820	319	302	46	139	19
10	238	135	420	1000	79	246	624	353	162	42	170	15
11	270	181	320	500	70	1130	512	296	109	150	178	12
12	240	187	246	360	72	3280	410	269	99	92	127	46
13	195	144	379	320	75	2700	314	313	127	51	302	54
14	166	113	906	280	80	5040	245	530	112	380	162	46
15	135	94	1190	250	86	4100	205	627	82	314	95	33
16	112	90	775	200	79	2170	178	496	68	158	68	24
17	112	276	540	230	77	1350	162	1670	59	270	51	29
18	116	757	401	1700	79	852	158	3980	57	162	40	40
19	112	517	354	1300	84	725	205	2160	112	99	42	27
20	112	332	384	810	77	791	560	1200	79	68	44	22
21	103	271	490	530	72	920	756	840	59	51	35	19
22	97	240	379	400	68	997	624	616	54	42	29	21
23	90	202	274	350	65	660	459	496	44	40	21	16
24	82	186	237	310	60	538	493	528	35	46	18	15
25	76	170	347	1700	63	2040	459	480	31	51	15	13
26	69	150	250	7600	66	2430	436	356	51	62	13	11
27	65	130	200	2400	68	2080	372	280	150	44	12	8.6
28	61	120	155	1200	72	1250	324	235	438	33	16	6.9
29	58	120	180	700	---	792	288	200	210	27	27	5.3
30	54	185	186	350	---	480	267	182	112	22	57	5.3
31	49	---	169	250	---	452	---	170	---	25	68	---
TOTAL	4283	5104	17541	26578	2559	35709	14144	18385	3607	3182	2397	990.1
MEAN	138	170	566	857	91.4	1152	471	593	120	103	77.3	33.0
MAX	270	757	2690	7600	210	5040	1680	3980	438	380	302	105
MIN	49	42	155	80	60	64	158	170	31	22	12	5.3
CFSM	.49	.60	2.01	3.04	.32	4.09	1.67	2.10	.43	.37	.27	.12
IN.	.56	.67	2.31	3.51	.34	4.71	1.87	2.43	.48	.42	.32	.13
CAL YR 1977	TOTAL	112234.0	MEAN 307	MAX 4770	MIN 16	CFSM 1.09	IN 14.81					
WTR YR 1978	TOTAL	134479.1	MEAN 368	MAX 7600	MIN 5.3	CFSM 1.31	IN 17.74					

OHIO RIVER MAIN STEM

03112510 OHIO RIVER AT BENWOOD NEAR WHEELING, WV
(National Stream-quality accounting network station)

LOCATION.--Lat 40°00'54", long 80°44'20", Marshall County, Hydrologic Unit 05030106, at Bellaire Toll Bridge, at Benwood, and at mile 94.3 (151.7 km).

DRAINAGE AREA.--Approximately 25,070 mi² (64,931 km²).

PERIOD OF RECORD.--February to September 1978.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-KF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)
FEH 07...	0930	--	235	7.7	1.0	6.0	15.0	560	--	97	72	27
MAR 29...	1335	--	280	7.8	7.0	30	13.8	1900	1100	81	62	23
APR 19...	1110	42900	210	7.7	11.0	6.0	--	--	--	90	67	25
MAY 24...	1400	84600	100	6.8	17.0	--	10.1	680	200	--	--	--
JUN 28...	1400	43700	355	7.6	28.0	25	7.4	800	570	160	130	43
JUL 13...	1600	14600	295	7.4	23.0	10	8.1	720	92	120	88	33
AUG 30...	1500	7320	450	8.7	27.0	3.0	6.4	4000	8200	130	140	49
SEP 19...	1130	--	115	7.2	26.0	2.0	6.8	1300	300	200	160	52
DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, DIS- SOLVED (MG/L AS Na)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CaCO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS Cl)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
FEH 07...	7.2	13	22	.6	2.4	30	0	25	1.0	78	18	.1
MAR 29...	5.7	11	22	.5	2.3	23	0	19	.6	57	15	.1
APR 19...	6.6	11	21	.5	1.9	28	0	23	.9	57	16	.1
MAY 24...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 28...	12	18	20	.6	3.2	--	--	25	--	130	21	.2
JUL 13...	8.6	13	19	.5	2.4	--	--	30	--	91	14	.2
AUG 30...	13	25	23	.8	3.7	--	--	36	--	150	27	.3
SEP 19...	16	30	25	.9	3.8	--	--	34	--	170	29	.3
DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN+NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN+AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)
FEH 07...	5.9	177	167	.24	--	1.0	.51	.39	.00	.98	1.9	8.4
MAR 29...	5.6	160	131	.22	--	1.1	.29	.64	.26	.67	2.0	9.0
APR 19...	4.9	155	136	.21	18000	.83	.30	.22	.02	.50	1.4	6.0
MAY 24...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 28...	5.3	279	248	.38	32900	1.2	.17	.48	.16	.49	1.9	8.2
JUL 13...	5.6	223	186	.30	8790	1.3	.03	.91	.38	.56	1.9	9.9
AUG 30...	5.3	317	295	.43	6270	.63	.01	.33	.00	.56	.97	4.3
SEP 19...	4.6	336	326	.46	--	1.5	.00	.26	.04	.22	1.8	7.8

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WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

[illegible]

OHIO RIVER MAIN STEM

03112510 OHIO RIVER AT BENWOOD NEAR WHEELING, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SILVER, SUS- PENDE REC-OV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL REC-OV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE REC-OV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. STIEVE DIAM. % FINER THAN .062 MM
FEB 07...	1	0	80	40	40	--	--	--	--	--	--	--
MAR 24...	--	--	--	--	--	9.2	--	--	180	--	--	--
APR 19...	--	--	--	--	--	9.3	--	--	--	--	--	--
MAY 24...	--	--	--	--	--	--	--	--	2000	76	17400	67
JUN 28...	--	--	--	--	--	5.1	--	--	4300	80	9440	79
JUL 13...	--	--	--	--	--	5.9	--	--	3000	30	1180	59
AUG 30...	0	0	80	40	40	--	3.5	.2	18000	14	277	22
SEP 19...	--	--	--	--	--	2.4	--	--	15000	11	--	77

PHYTOPLANKTON ANALYSES, OCTOBER 1977 TO SEPTEMBER 1978

DATE TIME	MAR 29,78 1335	MAY 24,78 1400	JUN 28,78 1400	JUL 13,78 1600	AUG 30,78 1500	SEP 19,78 1130
TOTAL CELLS/ML	120	2000	5300	3000	18000	15000
DIVERSITY: DIVISION	0.0	1.5	1.0	0.9	1.6	1.5
...CLASS	0.0	1.5	1.0	0.9	1.6	1.5
...ORDER	0.4	2.1	1.3	1.2	2.0	1.6
...FAMILY	1.9	2.7	1.7	2.7	2.3	2.0
...GENUS	2.2	3.2	2.3	4.0	3.5	3.1

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)												
...CHLOROPHYCEAE												
...CHLOROCOCCALES												
...DUCYSTACEAE												
...GLUCOCYCTINUM	--	-	--	-	--	-	--	-	--	-	720	5
...CHAFACIACEAE												
...SCHROEDERIA	--	-	--	-	--	-	--	-	* 0		--	-
...COELASTRACEAE												
...COELASTRUM	--	-	--	-	220	2	230	8	--	-	440	3
...HYDRODICTYACEAE												
...PEDIASTRUM	--	-	--	-	--	-	110	4	--	-	--	-
...MICRACIINIACEAE												
...GOLENKINIA	--	-	--	-	--	-	86	3	--	-	--	-
...MICRACIINIUM	--	-	--	-	--	-	230	8	--	-	--	-
...DUCYSTACEAE												
...ANKISTRODESMUS	--	-	86	4	82	1	230	8	* 0		--	-
...CHLORELLA	--	-	--	-	--	-	86	3	--	-	--	-
...CHODATELLA	--	-	29	1	270	3	* 0		400	2	* 0	
...DICTYOSPHAERIUM	--	-	110	6	--	-	490	16	540	3	2600	18
...FRANCEIA	--	-	--	-	--	-	--	-	* 0		--	-
...KIRCHNERIELLA	--	-	--	-	--	-	130	4	800	4	--	-
...DUCYSTIS	--	-	--	-	--	-	170	6	* 0		330	2
...SELENASTRUM	--	-	--	-	--	-	--	-	470	3	280	2
...TETRAEDRON	--	-	--	-	* 0		--	-	--	-	--	-
...WESTELLA	--	-	--	-	440	5	--	-	--	-	--	-
...SCENEDESMACEAE												
...ACTINASTRUM	--	-	--	-	660	7	110	4	--	-	--	-
...CHOCIGEMIA	--	-	110	6	--	-	110	4	1100	6	--	-
...SCENEDESMUS	--	-	29	1	630	7	340	11	800	4	330	2
...TETRASTRUM	--	-	--	-	110	1	--	-	270	1	440	3
...TETRASPORALES												
...COCCOMYXACEAE												
...ELAKATOTHRIX	--	-	--	-	--	-	57	2	--	-	--	-
...VOLVOCELES												
...CHLAMYDOMONADACEAE												
...CHLAMYDOMONAS	--	-	14	1	55	1	--	-	130	1	110	1
...VOLVOCEAE												
...GONIUM	--	-	57	3	--	-	--	-	--	-	--	-
...ZYGNEATALES												
...DESMIDIACEAE												
...CLOSTERIUM	--	-	--	-	* 0		* 0		--	-	--	-
...COSMARIUM	--	-	--	-	--	-	--	-	--	-	* 0	
CHRYSTOPHYTA												

NOTE: # = DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* = OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

OHIO RIVER MAIN STEM

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03112510 OHIO RIVER AT BENWOOD NEAR WHEELING, WV--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1977 TO SEPTEMBER 1978

DATE TIME	MAR 29,78 1335		MAY 24,78 1400		JUN 28,78 1400		JUL 13,78 1600		AUG 30,78 1500		SEP 19,78 1130	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
..BACILLARIOPHYCEAE												
...CENTRALES												
...COSCINODISCACEAE												
....CYCLOTELLA	14	8	430#	22	410	4	110	4	2500	14	1200	8
....MELOSIRA	--	-	57	3	5700#	61	110	4	1900	10	5100#	34
....SKELETONEMA	--	-	--	-	--	-	--	-	340	2	1300	9
....STEPHANODISCUS	--	-	29	1	55	1	--	-	--	-	--	-
..PENNALES												
...ACHNANTHACEAE												
....ACHNANTHES	--	-	--	-	--	-	--	-	--	-	*	0
...CYMBELLACEAE												
....AMPHORA	--	-	--	-	*	0	--	-	--	-	--	-
....CYMBELLA	--	-	14	1	--	-	--	-	--	-	--	-
...DIATOMACEAE												
....DIATOMA	--	-	57	3	--	-	--	-	--	-	--	-
...FRAGILARIACEAE												
....ASTERIONELLA	57#	31	--	-	110	1	--	-	--	-	--	-
....FRAGILARIA	--	-	--	-	--	-	190	6	--	-	--	-
....SYNEDRA	--	-	29	1	220	2	--	-	*	0	--	-
...GOMPHONEMACEAE												
....GOMPHONEMA	14	8	14	1	--	-	--	-	--	-	--	-
...NAVICULACEAE												
....GYROSIGMA	14	8	--	-	--	-	--	-	--	-	--	-
....NAVICULA	71#	38	110	6	55	1	--	-	--	-	--	-
....PINNULARIA	--	-	14	1	--	-	--	-	--	-	--	-
...NITZSCHACEAE												
....NANTZSCHIA	--	-	14	1	--	-	--	-	--	-	--	-
....NITZSCHIA	14	8	130	7	*	0	--	-	470	3	170	1
CRYPTOPHYTA (CRYPTOMONADS)												
..CRYPTOPHYCEAE												
...CRYPTOMONADALES												
....CRYPTOMONADACEAE												
....CRYPTOMONAS	--	-	--	-	--	-	--	-	130	1	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)												
..CYANOPHYCEAE												
...CHROOCOCCALES												
....CHROOCOCCACEAE												
....AGMENELLUM	--	-	--	-	--	-	--	-	3800#	21	--	-
....ANACYSTIS	--	-	--	-	110	1	110	4	3000#	17	1500	10
...HORMOGONALES												
...NOSTOCACEAE												
....ANABAENA	--	-	--	-	--	-	--	-	870	5	--	-
...OSCILLATORIA												
....OSCILLATORIA	--	-	630#	32	--	-	--	-	--	-	--	-
...CHROOCOCCALES												
....CHROOCOCCACEAE												
....GOMPHOSPHERIA	--	-	--	-	--	-	57	2	--	-	--	-
EUGLENOPHYTA (EUGLENIDS)												
..EUGLENOPHYCEAE												
...EUGLENALES												
....EUGLENACEAE												
....EUGLENA	--	-	--	-	--	-	--	-	--	-	*	0
....TRACHELOMONAS	--	-	--	-	55	1	*	0	*	0	280	2

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
 * - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

LITTLE GRAVE CREEK BASIN

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03113706 LITTLE GRAVE CREEK AT MOUNDSVILLE, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
OCT												
18...	68	12	15	13	.4	2.1	170	0	140	1.4	77	17
NOV												
15...	71	12	16	13	.5	2.0	140	0	150	11	75	16
DEC												
05...	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	62	10	12	12	.4	2.0	130	0	110	2.1	75	15
JAN												
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
31...	64	11	12	11	.4	2.3	130	0	110	5.2	88	14
FEB												
12...	--	--	--	--	--	--	--	--	--	--	--	--
14...	67	11	13	12	.4	1.5	150	0	120	12	95	15
MAR												
09...	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
21...	48	8.3	9.2	11	.3	1.5	110	0	90	3.5	71	9.2
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
06...	--	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--	--
25...	56	10	12	13	.4	1.4	130	0	110	1.3	81	12
MAY												
08...	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
16...	59	11	12	12	.4	1.8	150	0	120	3.0	83	12
17...	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	360	--	300	23	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
03...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
13...	70	12	14	12	.4	2.0	--	--	130	--	81	13
19...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
03...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--
18...	73	12	16	13	.5	2.2	--	--	140	--	84	18
AUG												
01...	81	13	15	11	.4	1.9	--	--	150	--	100	14
06...	--	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
16...	--	--	--	--	--	--	--	--	--	--	--	--
20...	65	10	15	14	.5	2.4	--	--	140	--	66	14

LITTLE GRAVE CREEK BASIN

03113706 LITTLE GRAVE CREEK AT MOUNDSVILLE, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS P04)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDED RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CD)
OCT											
18...	--	--	--	--	.00	.00	--	--	40	--	--
NOV											
15...	--	--	--	--	.00	.00	--	--	20	--	--
DEC											
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	.00	.00	--	--	20	--	--
JAN											
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	.03	.09	--	--	40	--	--
FEB											
12...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	.00	.00	--	--	30	--	--
MAR											
09...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	1200	1200	20	--	0	0
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	.00	.00	--	--	40	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
APR											
06...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	.00	.00	--	--	20	--	--
MAY											
04...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	.00	.00	--	--	30	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	2400	2400	30	--	0	0
19...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
JUN											
03...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	.00	.00	--	--	40	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
JUL											
03...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
18...	.05	.01	.05	.01	.00	.00	--	--	20	--	--
AUG											
01...	.12	.02	.11	.00	.00	.00	--	--	10	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--
SEP											
14...	--	--	--	--	--	--	--	--	--	--	--
20...	.01	.04	.05	.02	.01	.03	--	--	40	1	2

LITTLE GRAVE CREEK BASIN

111

03113706 LITTLE GRAVE CREEK AT MOUNDSVILLE, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDED RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, HEXA- VALENT, DIS- SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)
OCT											
18...	--	--	--	--	--	--	--	--	--	--	90
NOV											
15...	--	--	--	--	--	--	--	--	--	--	90
DEC											
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	160
JAN											
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	50
FEB											
12...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	140
MAR											
09...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
14...	0	<10	--	--	0	--	--	--	1000	--	20
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	10
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
APR											
06...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	40
MAY											
08...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	20
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
18...	0	10	--	--	0	--	--	--	4100	--	20
19...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
JUN											
03...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	30
19...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
JUL											
03...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	40
AUG											
01...	--	--	--	--	--	--	--	--	--	--	330
06...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--
SEP											
16...	--	--	--	--	--	--	--	--	--	--	--
20...	1	10	9	1	--	3	2	1	2200	2200	10

LITTLE GRAVE CREEK BASIN

03113706 LITTLE GRAVE CREEK AT MOUNDSVILLE, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	FLUORIDE- DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO ₂)	SOLIDS, RESIDUE AT 130 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO ₃)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO ₂)	NITRO- GEN, NO ₂ +NO ₃ DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)
OCT												
1P...	.1	4.9	294	280	.40	1.2	.02	.09	.00	.00	.02	
NOV												
1P...	.2	4.6	309	290	.42	1.4	.16	.71	.00	.00	.16	
DEC												
05...	--	--	--	--	--	--	--	--	--	--	--	
05...	--	--	--	--	--	--	--	--	--	--	--	
05...	--	--	--	--	--	--	--	--	--	--	--	
06...	--	--	--	--	--	--	--	--	--	--	--	
20...	--	--	--	--	--	--	--	--	--	--	--	
20...	.1	6.0	260	251	.35	14.0	1.1	4.9	.00	.00	1.1	
JAN												
06...	--	--	--	--	--	--	--	--	--	--	--	
06...	--	--	--	--	--	--	--	--	--	--	--	
08...	--	--	--	--	--	--	--	--	--	--	--	
08...	--	--	--	--	--	--	--	--	--	--	--	
25...	--	--	--	--	--	--	--	--	--	--	--	
25...	--	--	--	--	--	--	--	--	--	--	--	
25...	--	--	--	--	--	--	--	--	--	--	--	
31...	.1	6.9	282	271	.38	7.0	2.0	8.8	.01	.03	2.0	
FEB												
12...	--	--	--	--	--	--	--	--	--	--	--	
14...	.1	5.9	274	289	.37	2.7	1.4	6.2	.00	.00	1.4	
MAR												
09...	--	--	--	--	--	--	--	--	--	--	--	
11...	--	--	--	--	--	--	--	--	--	--	--	
12...	--	--	--	--	--	--	--	--	--	--	--	
13...	--	--	--	--	--	--	--	--	--	--	--	
14...	--	--	--	--	--	--	--	--	--	--	--	
14...	--	--	--	--	--	--	--	--	--	--	--	
14...	--	--	--	--	--	--	--	--	--	--	--	
16...	--	--	--	--	--	--	--	--	--	--	--	
20...	--	--	--	--	--	--	--	--	--	--	--	
21...	.1	6.1	243	216	.33	18.7	1.8	7.9	.02	.07	1.8	
25...	--	--	--	--	--	--	--	--	--	--	--	
25...	--	--	--	--	--	--	--	--	--	--	--	
26...	--	--	--	--	--	--	--	--	--	--	--	
APR												
06...	--	--	--	--	--	--	--	--	--	--	--	
07...	--	--	--	--	--	--	--	--	--	--	--	
25...	.1	3.6	257	243	.35	11.8	.53	2.3	.01	.03	.54	--
MAY												
09...	--	--	--	--	--	--	--	--	--	--	--	
09...	--	--	--	--	--	--	--	--	--	--	--	
13...	--	--	--	--	--	--	--	--	--	--	--	
16...	.1	4.5	276	260	.38	11.5	.42	1.9	.01	.03	.43	
17...	--	--	--	--	--	--	--	--	--	--	--	
17...	--	--	--	--	--	--	--	--	--	--	--	
17...	--	--	--	--	--	--	--	--	--	--	--	
18...	--	--	--	--	--	--	--	--	--	--	--	
18...	--	--	--	--	--	--	--	--	--	--	--	
18...	--	--	--	--	--	--	--	--	--	--	--	
23...	--	--	--	--	--	--	--	--	--	--	--	
JUN												
03...	--	--	--	--	--	--	--	--	--	--	--	
09...	--	--	--	--	--	--	--	--	--	--	--	
09...	--	--	--	--	--	--	--	--	--	--	--	
13...	.1	4.5	306	--	.42	2.81	--	--	--	--	.19	
15...	--	--	--	--	--	--	--	--	--	--	--	
26...	--	--	--	--	--	--	--	--	--	--	--	
28...	--	--	--	--	--	--	--	--	--	--	--	
JUL												
03...	--	--	--	--	--	--	--	--	--	--	--	
10...	--	--	--	--	--	--	--	--	--	--	--	
14...	--	--	--	--	--	--	--	--	--	--	--	
18...	.1	5.7	326	--	.44	.98	.18	.80	.01	.03	.19	.04
AUG												
01...	.1	7.7	367	--	.50	.37	.02	.09	.00	.00	.02	.09
09...	--	--	--	--	--	--	--	--	--	--	--	
07...	--	--	--	--	--	--	--	--	--	--	--	
07...	--	--	--	--	--	--	--	--	--	--	--	
30...	--	--	--	--	--	--	--	--	--	--	--	
31...	--	--	--	--	--	--	--	--	--	--	--	
SEP												
15...	--	--	--	--	--	--	--	--	--	--	--	
20...	.1	5.6	273	--	.37	.04	.28	1.2	.01	.03	.29	.01

03113706 LITTLE GRAVE CREEK AT MOUNDSVILLE, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDED RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	
OCT								
18...	--	--	--	--	--	290	--	
NOV								
15...	--	--	--	--	--	250	--	
DEC								
05...	--	--	--	--	--	--	--	
05...	--	--	--	--	--	--	--	
05...	--	--	--	--	--	--	--	
06...	--	--	--	--	--	--	--	
20...	--	--	--	--	--	150	--	
JAN								
06...	--	--	--	--	--	--	--	
06...	--	--	--	--	--	--	--	
07...	--	--	--	--	--	--	--	
07...	--	--	--	--	--	--	--	
25...	--	--	--	--	--	--	--	
25...	--	--	--	--	--	--	--	
26...	--	--	--	--	--	--	--	
31...	--	--	--	--	--	40	--	
FEB								
12...	--	--	--	--	--	--	--	
14...	--	--	--	--	--	110	--	
MAR								
09...	--	--	--	--	--	--	--	
11...	--	--	--	--	--	--	--	
12...	--	--	--	--	--	--	--	
13...	--	--	--	--	--	--	--	
14...	88	88	0	60	40	20	<.5	
14...	--	--	--	--	--	--	--	
14...	--	--	--	--	--	--	--	
14...	--	--	--	--	--	--	--	
16...	--	--	--	--	--	--	--	
20...	--	--	--	--	--	--	--	
21...	--	--	--	--	--	20	--	
25...	--	--	--	--	--	--	--	
25...	--	--	--	--	--	--	--	
26...	--	--	--	--	--	--	--	
APR								
06...	--	--	--	--	--	--	--	
07...	--	--	--	--	--	--	--	
25...	--	--	--	--	--	40	--	
	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDED RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDED RECOV- ERABLE (UG/L AS HG)
MAY								
04...	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	100	--	--
17...	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--
18...	8	8	0	140	110	30	<.5	.0
19...	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--
JUN								
03...	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	220	--	--
19...	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--
JUL								
03...	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	630	--	--
AUG								
01...	--	--	--	--	--	2500	--	--
06...	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--
SEP								
10...	--	--	--	--	--	--	--	--
20...	13	6	7	120	80	40	--	--

LITTLE GRAVE CREEK BASIN

03113706 LITTLE GRAVE CREEK AT MOUNDSVILLE, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	MERCURY SUS- PENDE RECov- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	ZINC, TOTAL RECov- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECov- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)
OCT							
18...	--	--	--	--	--	13	.06
NOV							
15...	--	--	--	--	--	15	.07
DEC							
05...	--	--	--	--	--	596	137
05...	--	--	--	--	--	1320	2350
05...	--	--	--	--	--	1000	1110
06...	--	--	--	--	--	23	2.9
20...	--	--	--	--	--	19	1.0
JAN							
06...	--	--	--	--	--	2	.02
06...	--	--	--	--	--	4	.05
08...	--	--	--	--	--	41	--
08...	--	--	--	--	--	42	3.6
25...	--	--	--	--	--	32	.19
25...	--	--	--	--	--	128	1.9
26...	--	--	--	--	--	269	261
31...	--	--	--	--	--	2	.05
FEB							
12...	--	--	--	--	--	19	.92
14...	--	--	--	--	--	3	.03
MAR							
09...	--	--	--	--	--	22	.37
11...	--	--	--	--	--	64	4.0
12...	--	--	--	--	--	1330	1010
13...	--	--	--	--	--	566	130
14...	.0	<.5	30	20	10	--	--
14...	--	--	--	--	--	1630	3430
14...	--	--	--	--	--	1370	2890
14...	--	--	--	--	--	1690	3560
16...	--	--	--	--	--	41	5.5
20...	--	--	--	--	--	12	.94
21...	--	--	--	--	--	16	1.2
25...	--	--	--	--	--	1420	633
25...	--	--	--	--	--	159	44
26...	--	--	--	--	--	142	21
APR							
06...	--	--	--	--	--	24	1.9
07...	--	--	--	--	--	21	2.9
25...	--	--	--	--	--	19	.87

DATE	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	ZINC, TOTAL RECov- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECov- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)
MAY							
08...	--	--	--	--	--	61	3.1
09...	--	--	--	--	--	17	.92
13...	--	--	--	--	--	22	.95
16...	--	--	--	--	--	--	--
17...	--	--	--	--	--	146	11
17...	--	--	--	--	--	1680	522
17...	--	--	--	--	--	288	86
18...	--	--	--	--	--	183	45
18...	<.5	--	30	30	0	--	--
19...	--	--	--	--	--	25	2.0
23...	--	--	--	--	--	23	.81
JUN							
03...	--	--	--	--	--	45	1.0
08...	--	--	--	--	--	80	1.3
08...	--	--	--	--	--	775	27
13...	--	--	--	--	--	15	.14
19...	--	--	--	--	--	160	3.6
26...	--	--	--	--	--	154	2.5
28...	--	--	--	--	--	220	11
JUL							
03...	--	--	--	--	--	38	.72
14...	--	--	--	--	--	5390	1090
18...	--	--	--	--	--	7	.02
AUG							
01...	--	--	--	--	--	30	.03
06...	--	--	--	--	--	70	.85
07...	--	--	--	--	--	130	2.6
07...	--	--	--	--	--	348	11
30...	--	--	--	--	--	73	.26
31...	--	--	--	--	--	28	.08
SEP							
16...	--	--	--	--	--	144	.43
20...	<.5	0	30	30	0	4	.00

LITTLE GRAVE CREEK BASIN

115

03113708 PAR RUN AT MOUNDSVILLE, WV

LOCATION.--Lat 39°55'35", long 80°44'34", Marshall County, Hydrologic Unit 05030106, 1000 ft (304 m) upstream from Jefferson Ave. bridge, and at mile 0.3 (0.5 km).

DRAINAGE AREA.--1.30 mi² (3.37 km²).

PERIOD OF RECORD.--October 1977 to September 1978.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	STREP- TOCOCOCCI FECAL, (COLS. PER 100 ML)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)
OCT												
18...	1215	.48	633	7.6	18.0	2.0	9.2	640	4400	70	240	130
NOV												
15...	1320	.37	628	7.3	16.0	3.0	8.4	540	4600	140	240	130
16...	1700	17	225	--	--	--	--	--	--	--	--	--
DEC												
05...	1145	80	306	--	--	--	--	--	--	--	--	--
05...	1525	50	357	--	--	--	--	--	--	--	--	--
20...	1110	1.6	513	--	--	--	--	--	--	--	--	--
20...	1305	2.1	711	7.6	10.0	5.0	10.3	14000	27000	640	270	170
JAN												
06...	0835	.63	799	--	--	--	--	--	--	--	--	--
06...	1500	.98	752	--	--	--	--	--	--	--	--	--
08...	1230	2.0	662	--	--	--	--	--	--	--	--	--
08...	1645	4.6	502	--	--	--	--	--	--	--	--	--
25...	0845	4.9	779	--	--	--	--	--	--	--	--	--
25...	1440	9.6	689	--	--	--	--	--	--	--	--	--
26...	1125	33	500	--	--	--	--	--	--	--	--	--
31...	1315	1.4	694	7.4	6.0	5.0	11.5	8200	240	2400	270	160
FEB												
12...	1630	1.4	659	--	--	--	--	--	--	--	--	--
14...	1315	.87	625	7.4	10.0	6.0	10.5	575	4600	207	250	140
MAR												
09...	1610	1.8	587	--	--	--	--	--	--	--	--	--
10...	1425	2.4	515	--	--	--	--	--	--	--	--	--
11...	1700	9.6	523	--	--	--	--	--	--	--	--	--
12...	1620	5.2	540	--	--	--	--	--	--	--	--	--
13...	1605	18	501	--	--	--	--	--	--	--	--	--
14...	1400	--	--	--	--	--	--	--	--	--	--	--
14...	1525	18	382	--	--	--	--	--	--	--	--	--
16...	1530	4.9	506	--	--	--	--	--	--	--	--	--
21...	1220	1.5	640	7.5	14.0	5.0	9.8	--	--	--	240	130
25...	1025	74	420	--	--	--	--	--	--	--	--	--
25...	1715	10	420	--	--	--	--	--	--	--	--	--
26...	1700	13	350	--	--	--	--	--	--	--	--	--
APR												
06...	1505	2.4	500	--	--	--	--	--	--	--	--	--
25...	1245	3.6	475	8.2	11.0	75	10.2	--	--	--	190	110
MAY												
08...	1925	3.4	420	--	--	--	--	--	--	--	--	--
09...	0803	2.0	470	--	--	--	--	--	--	--	--	--
16...	1210	1.3	585	7.7	14.0	4.0	10.4	380	3200	2300	250	140
17...	0935	8.3	352	--	--	--	--	--	--	--	--	--
17...	1330	20	411	--	--	--	--	--	--	--	--	--
17...	1855	13	415	--	--	--	--	--	--	--	--	--
18...	1250	10	460	7.4	14.0	--	11.9	--	--	--	--	--
18...	1355	11	415	--	--	--	--	--	--	--	--	--
19...	1630	2.6	497	--	--	--	--	--	--	--	--	--
23...	1750	1.2	530	--	--	--	--	--	--	--	--	--
JUN												
03...	1050	1.8	468	--	--	--	--	--	--	--	--	--
08...	0925	3.4	300	--	--	--	--	--	--	--	--	--
08...	2020	1.8	433	--	--	--	--	--	--	--	--	--
13...	1230	.73	590	7.7	17.0	4.0	10.8	1100	5000	400	260	--
19...	2030	1.3	533	--	--	--	--	--	--	--	--	--
26...	2010	2.9	428	--	--	--	--	--	--	--	--	--
28...	0735	3.4	456	--	--	--	--	--	--	--	--	--
JUL												
03...	0720	.87	471	--	--	--	--	--	--	--	--	--
10...	1555	2.4	412	--	--	--	--	--	--	--	--	--
14...	0805	1.4	465	--	--	--	--	--	--	--	--	--
18...	1245	.82	555	8.0	22.0	.00	8.0	0	2000	0	250	--
AUG												
01...	1215	.66	410	8.2	23.0	1.0	7.7	0	420	0	220	--
07...	1120	2.4	450	--	--	--	--	--	--	--	--	--
07...	1825	1.1	476	--	--	--	--	--	--	--	--	--
30...	1915	2.0	280	--	--	--	--	--	--	--	--	--
31...	2110	2.2	440	--	--	--	--	--	--	--	--	--
SEP												
15...	2040	.78	475	--	--	--	--	--	--	--	--	--
16...	1630	2.2	384	--	--	--	--	--	--	--	--	--
20...	1300	.56	545	7.2	25.0	2.0	6.8	>600	3300	125	210	--

LITTLE GRAVE CREEK BASIN

03113708 PAR RUN AT MOUNDSVILLE, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
OCT												
18...	73	14	36	24	1.0	4.2	140	0	110	5.6	130	46
NOV												
15...	74	14	31	21	.9	4.2	140	0	110	11	130	39
16...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
05...	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	83	16	32	20	.8	3.7	130	0	110	5.2	130	68
JAN												
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
31...	83	15	36	22	1.0	3.4	130	0	110	8.3	150	55
FEB												
12...	--	--	--	--	--	--	--	--	--	--	--	--
14...	75	14	45	28	1.3	3.2	130	0	110	8.3	130	71
MAR												
09...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--
21...	72	14	26	19	.7	2.9	130	0	110	6.6	130	47
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
06...	--	--	--	--	--	--	--	--	--	--	--	--
25...	59	11	22	20	.7	2.5	99	0	81	1.0	110	34
MAY												
08...	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--	--
16...	77	15	29	20	.8	3.4	140	0	110	4.5	130	47
17...	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	160	--	130	10	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
03...	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--
13...	82	14	30	20	.8	3.9	--	--	120	--	130	40
14...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
03...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--
18...	78	13	25	18	.7	4.1	--	--	120	--	120	34
AUG												
01...	68	12	23	18	.7	3.2	--	--	110	--	110	30
07...	--	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
15...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--
20...	65	11	24	20	.7	3.0	--	--	110	--	110	27

LITTLE GRAVE CREEK BASIN

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03113708 PAR RUN AT MOUNDSVILLE, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS P04)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDED RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CD)
OCT												
18...	--	--	--	--	.06	.18	--	--	230	--	--	--
NOV												
15...	--	--	--	--	.03	.09	--	--	80	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
05...	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	.03	.09	--	--	50	--	--	--
JAN												
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	.04	.12	--	--	100	--	--	--
FEB												
12...	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	.01	.03	--	--	270	--	--	--
MAR												
09...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	17000	17000	60	--	0	0
14...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	.00	.00	--	--	90	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
06...	--	--	--	--	--	.03	--	--	--	--	--	--
25...	--	--	--	--	.01	.03	--	--	40	--	--	--
MAY												
08...	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	.00	.00	--	--	60	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	1700	1600	120	--	0	0
18...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
03...	--	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	.04	.12	--	--	110	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
03...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--
18...	.14	.07	.18	.15	.04	.12	--	--	70	--	--	--
AUG												
01...	.14	.56	.67	.14	.03	.09	--	--	80	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
15...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--
20...	.26	.26	.26	.25	.04	.12	--	--	70	1	1	1

LITTLE GRAVE CREEK BASIN

03113708 PAR RUN AT MOUNDSVILLE, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDED RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, HEXA- VALENT, DIS- SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)
OCT											
18...	--	--	--	--	--	--	--	--	--	--	100
NOV											
15...	--	--	--	--	--	--	--	--	--	--	120
16...	--	--	--	--	--	--	--	--	--	--	--
DEC											
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	50
JAN											
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	200
FEB											
12...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	460
MAR											
09...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
14...	1	20	--	--	0	--	--	--	26000	--	50
14...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	20
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
APR											
06...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	40
MAY											
08...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	20
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
18...	0	10	--	--	0	--	--	--	3000	--	150
18...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
JUN											
03...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	20
19...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
JUL											
03...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	30
AUG											
01...	--	--	--	--	--	--	--	--	--	--	10
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--
SEP											
15...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
20...	0	10	9	1	--	9	4	5	270	240	30

LITTLE GRAVE CREEK BASIN

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03113708 PAR RUN AT MOUNDSVILLE, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)
OCT												
18...	.9	14	409	392	.56	.53	.69	3.1	.08	.26	.77	
NOV												
15...	1.0	13	399	380	.54	.40	.67	3.0	.05	.16	.72	
16...	--	--	--	--	--	--	--	--	--	--	--	
DEC												
05...	--	--	--	--	--	--	--	--	--	--	--	
05...	--	--	--	--	--	--	--	--	--	--	--	
20...	--	--	--	--	--	--	--	--	--	--	--	
20...	.4	10	448	415	.61	2.54	1.6	7.0	.02	.07	1.6	
JAN												
06...	--	--	--	--	--	--	--	--	--	--	--	
06...	--	--	--	--	--	--	--	--	--	--	--	
08...	--	--	--	--	--	--	--	--	--	--	--	
08...	--	--	--	--	--	--	--	--	--	--	--	
25...	--	--	--	--	--	--	--	--	--	--	--	
25...	--	--	--	--	--	--	--	--	--	--	--	
26...	--	--	--	--	--	--	--	--	--	--	--	
31...	.5	11	464	428	.63	1.75	2.1	5.2	.02	.07	2.1	
FEB												
12...	--	--	--	--	--	--	--	--	--	--	--	
14...	.9	10	435	421	.59	1.02	1.6	7.0	.02	.07	1.6	
MAR												
09...	--	--	--	--	--	--	--	--	--	--	--	
10...	--	--	--	--	--	--	--	--	--	--	--	
11...	--	--	--	--	--	--	--	--	--	--	--	
12...	--	--	--	--	--	--	--	--	--	--	--	
13...	--	--	--	--	--	--	--	--	--	--	--	
14...	--	--	--	--	--	--	--	--	--	--	--	
14...	--	--	--	--	--	--	--	--	--	--	--	
16...	--	--	--	--	--	--	--	--	--	--	--	
21...	.3	9.3	400	375	.54	2.05	2.0	8.7	.04	.13	2.0	
25...	--	--	--	--	--	--	--	--	--	--	--	
25...	--	--	--	--	--	--	--	--	--	--	--	
26...	--	--	--	--	--	--	--	--	--	--	--	
APR												
06...	--	--	--	--	--	--	--	--	--	--	--	
25...	.4	6.8	332	298	.45	3.23	.77	3.4	.02	.07	.79	
MAY												
08...	--	--	--	--	--	--	--	--	--	--	--	
09...	--	--	--	--	--	--	--	--	--	--	--	
16...	.4	9.0	433	384	.59	1.52	.73	3.2	.02	.07	.75	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
03...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
13...	.7	12	463	--	.63	.92	--	--	--	--	.91	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
03...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--
18...	.6	12	397	--	.54	.88	.88	3.9	.01	.03	.89	.11
AUG												
01...	.8	12	371	--	.50	.66	.60	2.7	.03	.10	.63	.11
07...	--	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
15...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--
20...	.8	13	328	--	.45	.50	.50	2.2	.04	.13	.54	.20

LITTLE GRAVE CREEK BASIN

03113708 PAR RUN AT MOUNDSVILLE, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	
OCT 18...	--	--	--	--	--	970	--	
NOV 15...	--	--	--	--	--	910	--	
16...	--	--	--	--	--	--	--	
DEC 05...	--	--	--	--	--	--	--	
05...	--	--	--	--	--	--	--	
20...	--	--	--	--	--	--	--	
20...	--	--	--	--	--	300	--	
JAN 06...	--	--	--	--	--	--	--	
06...	--	--	--	--	--	--	--	
08...	--	--	--	--	--	--	--	
08...	--	--	--	--	--	--	--	
25...	--	--	--	--	--	--	--	
25...	--	--	--	--	--	--	--	
26...	--	--	--	--	--	--	--	
31...	--	--	--	--	--	50	--	
FEB 12...	--	--	--	--	--	--	--	
14...	--	--	--	--	--	450	--	
MAR 09...	--	--	--	--	--	--	--	
10...	--	--	--	--	--	--	--	
11...	--	--	--	--	--	--	--	
12...	--	--	--	--	--	--	--	
13...	--	--	--	--	--	--	--	
14...	69	69	0	150	90	60	<.5	
14...	--	--	--	--	--	--	--	
16...	--	--	--	--	--	--	--	
21...	--	--	--	--	--	220	--	
25...	--	--	--	--	--	--	--	
25...	--	--	--	--	--	--	--	
26...	--	--	--	--	--	--	--	
APR 06...	--	--	--	--	--	--	--	
25...	--	--	--	--	--	150	--	
MAY 08...	--	--	--	--	--	--	--	
09...	--	--	--	--	--	--	--	
	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)
MAY 16...	--	--	--	--	--	310	--	--
17...	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--
18...	20	19	1	150	50	100	<.5	.0
18...	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--
JUN 03...	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	480	--	--
19...	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--
JUL 03...	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	500	--	--
AUG 01...	--	--	--	--	--	890	--	--
07...	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--
SEP 15...	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--
20...	17	13	4	1100	0	1100	<.5	.0

LITTLE GRAVE CREEK BASIN

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03113708 PAR RUN AT MOUNDSVILLE, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	MERCURY SUS- PENDED RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS FG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDED RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT							
13...	--	--	--	--	--	4	.01
NOV							
15...	--	--	--	--	--	7	.01
16...	--	--	--	--	--	5	.23
DEC							
15...	--	--	--	--	--	2460	531
15...	--	--	--	--	--	1290	174
20...	--	--	--	--	--	54	.29
20...	--	--	--	--	--	15	.09
JAN							
05...	--	--	--	--	--	17	.03
06...	--	--	--	--	--	166	.44
08...	--	--	--	--	--	72	.37
08...	--	--	--	--	--	210	2.6
25...	--	--	--	--	--	134	1.8
25...	--	--	--	--	--	246	15
26...	--	--	--	--	--	246	25
31...	--	--	--	--	--	6	.02
FEB							
12...	--	--	--	--	--	14	.39
14...	--	--	--	--	--	12	.03
MAR							
09...	--	--	--	--	--	202	.70
10...	--	--	--	--	--	585	3.8
11...	--	--	--	--	--	571	15
12...	--	--	--	--	--	71	1.0
13...	--	--	--	--	--	2680	130
14...	.0	<.5	350	340	10	--	--
14...	--	--	--	--	--	1547	75
15...	--	--	--	--	--	57	.75
21...	--	--	--	--	--	11	.06
25...	--	--	--	--	--	646	129
25...	--	--	--	--	--	162	4.4
26...	--	--	--	--	--	500	18
APR							
06...	--	--	--	--	--	31	.20
25...	--	--	--	--	--	106	1.0
MAY							
08...	--	--	--	--	--	188	1.7
09...	--	--	--	--	--	50	.32
DATE	MERCURY DIS- SOLVED (UG/L AS HG)	SEDI- MENT, DIS- SOLVED (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDED RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
MAY							
16...	--	--	--	--	--	14	.05
17...	--	--	--	--	--	586	15
17...	--	--	--	--	--	2000	105
17...	--	--	--	--	--	239	6.4
18...	<.5	--	73	50	28	--	--
18...	--	--	--	--	--	115	3.4
19...	--	--	--	--	--	21	.15
23...	--	--	--	--	--	5	.02
JUN							
13...	--	--	--	--	--	28	.14
08...	--	--	--	--	--	231	2.1
08...	--	--	--	--	--	100	.49
13...	--	--	--	--	--	5	.01
17...	--	--	--	--	--	26	.09
26...	--	--	--	--	--	343	2.7
28...	--	--	--	--	--	109	1.0
JUL							
03...	--	--	--	--	--	19	.04
19...	--	--	--	--	--	620	4.0
14...	--	--	--	--	--	139	.53
18...	--	--	--	--	--	7	.02
AUG							
01...	--	--	--	--	--	12	.02
07...	--	--	--	--	--	204	1.3
07...	--	--	--	--	--	53	.16
30...	--	--	--	--	--	41	.49
31...	--	--	--	--	--	27	.16
SEP							
15...	--	--	--	--	--	51	.11
16...	--	--	--	--	--	1120	6.7
20...	<.5	0	40	10	30	3	.00

GRAVE CREEK BASIN

03113732 MIDDLE GRAVE CREEK AT KNOXVILLE, WV

LOCATION.--Lat 39°53'07", long 80°38'29", Marshall County, Hydrologic Unit 05030106, at site 175 ft (53 m) upstream from State Route 17/3, 5.1 mi (8.2 km) southeast of Moundsville, and at mile 9.3 (15.0 km).

DRAINAGE AREA.--7.73 mi² (20.02 km²).

PERIOD OF RECORD.--October 1977 to September 1978.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT 18...	1040	5.8	230	10.1	9.0	11.1	680	2000	1600
NOV 15...	1215	3.2	240	8.3	9.0	11.8	570	1300	440
DEC 20...	1130	25	240	8.0	8.0	11.3	6600	19000	13000
JAN 31...	1045	10	220	7.9	.5	12.3	480	2000	200
FEB 14...	1000	1.8	280	7.7	3.0	12.7	320	1700	180
MAR 21...	0915	14	220	8.0	9.0	11.2	390	3500	1800
APR 25...	0900	9.2	230	8.5	8.0	10.8	1300	1500	640
MAY 16...	0910	12	160	8.2	11.0	11.2	1000	7000	570
JUN 13...	0915	3.7	295	8.3	16.5	10.2	4200	16000	2600
JUL 18...	0915	1.2	350	8.2	16.0	9.5	3700	4500	1500
AUG 01...	0920	1.1	340	8.5	19.0	8.8	7300	18000	6500
SEP 20...	0910	.35	340	7.9	20.0	7.6	6300	1100	2100

GRAVE CREEK BASIN

03113738 MIDDLE GRAVE CREEK AT MOUNDSVILLE, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
OCT												
18...	58	8.4	8.6	9	.3	2.5	150	0	120	--	60	11
NOV												
15...	63	9.3	9.8	10	.3	2.2	150	0	120	1.5	62	12
17...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
05...	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
20...	52	7.6	8.0	10	.3	2.1	110	0	90	1.1	62	10
20...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
31...	53	7.7	7.2	9	.2	1.7	110	0	90	3.5	68	9.9
FEB												
12...	--	--	--	--	--	--	--	--	--	--	--	--
14...	57	8.7	9.5	10	.3	1.7	130	0	110	4.2	71	13
MAR												
13...	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
21...	42	6.2	6.2	9	.2	1.6	98	0	80	2.0	57	8.7
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
06...	--	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--	--
25...	50	7.4	7.4	9	.3	1.5	130	0	110	.7	64	9.0
MAY												
08...	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
16...	51	7.8	7.2	9	.2	1.7	130	0	110	1.0	63	9.2
17...	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	86	--	71	5.5	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
03...	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
13...	59	9.2	8.3	9	.3	2.0	--	--	120	--	57	9.3
19...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
03...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--
18...	62	9.5	10	10	.3	2.2	--	--	42	--	62	12
AUG												
01...	61	8.8	12	12	.4	2.5	--	--	130	--	56	12
06...	--	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
15...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--
20...	97	10	15	10	.4	1.7	--	--	160	--	160	14

GRAVE CREEK BASIN

125

03113738 MIDDLE GRAVE CREEK AT MOUNDSVILLE, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS P04)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDED RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CD)
OCT											
18...	--	--	--	--	.00	.00	--	--	30	--	--
NOV											
15...	--	--	--	--	.14	.43	--	--	0	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
DEC											
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	.01	.03	--	--	5	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
JAN											
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	.02	.06	--	--	20	--	--
FEB											
12...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	.01	.03	--	--	20	--	--
MAR											
13...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	11000	11000	50	--	0
14...	--	--	--	--	--	--	--	--	--	0	0
14...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	.00	.00	--	--	40	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
APR											
06...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	.00	.00	--	--	20	--	--
MAY											
08...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	.00	.00	--	--	30	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	1500	1500	30	0	0
19...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
JUN											
03...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	.00	.00	--	--	50	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
JUL											
03...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
18...	.00	.00	.00	.01	.00	.00	--	--	30	--	--
AUG											
01...	.01	.43	.44	.01	.00	.00	--	--	20	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--
SEP											
15...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
20...	.04	.00	.01	.00	.00	.00	--	--	20	1	0

GRAVE CREEK BASIN

03113738 MIDDLE GRAVE CREEK AT MOUNDSVILLE, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	CADMIUM DIS- SOLVED (UG/L AS CU)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, SUS- PENDED RECOVERABLE (UG/L AS CR)	CHROMIUM, DIS- SOLVED (UG/L AS CR)	CHROMIUM, HEXA- VALENT, DIS- SOLVED (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUS- PENDED RECOVERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOVERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)
OCT											
18...	--	--	--	--	--	--	--	--	--	--	50
NOV											
15...	--	--	--	--	--	--	--	--	--	--	0
17...	--	--	--	--	--	--	--	--	--	--	--
DEC											
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	10
20...	--	--	--	--	--	--	--	--	--	--	--
JAN											
06...	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	40
FEB											
12...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	950
MAR											
13...	--	--	--	--	--	--	--	--	--	--	--
14...	2	<10	--	--	0	--	--	--	16000	--	80
14...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	0
21...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
APR											
06...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	10
MAY											
08...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	10
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
18...	0	<10	--	--	0	--	--	--	2500	--	20
19...	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--
JUN											
03...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	50
13...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
JUL											
03...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	30
AUG											
01...	--	--	--	--	--	--	--	--	--	--	10
06...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--
SEP											
15...	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
20...	1	<10	<9	1	--	1	0	1	1000	860	140

GRAVE CREEK BASIN

127

03113738 MIDDLE GRAVE CREEK AT MOUNDSVILLE, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)
OCT												
18...	.1	2.9	232	226	.32	7.5	.08	.35	.01	.03	.09	--
NOV												
15...	.2	3.1	255	237	.35	5.1	.15	.66	.01	.03	.16	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
05...	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
20...	.1	5.7	222	206	.30	22.8	.91	4.0	.01	.03	.92	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
06...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
31...	.1	6.4	223	215	.30	10.2	1.6	7.0	.01	.03	1.6	--
FEB												
12...	--	--	--	--	--	--	--	--	--	--	--	--
14...	.1	5.8	243	236	.33	9.1	.99	4.4	.01	.03	1.0	--
MAR												
13...	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
21...	.1	5.8	204	183	.28	63.3	1.5	6.6	.01	.03	1.5	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
06...	--	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--	--
25...	.1	1.8	237	206	.32	22.7	.20	.89	.02	.07	.22	--
MAY												
08...	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
16...	.1	3.1	228	208	.31	24.0	.26	1.2	.01	.03	.27	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
03...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
13...	.1	2.9	243	--	.33	10.5	--	--	--	--	.13	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
03...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--	--
18...	.1	4.9	256	--	.35	6.2	.52	2.3	.01	.03	.53	.00
AUG												
01...	.2	5.0	261	--	.36	3.7	.22	.97	.01	.03	.23	.01
06...	--	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
15...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--
20...	.1	9.8	432	--	.59	1.9	.00	.00	.00	.00	.00	.03

GRAVE CREEK BASIN

03113738 MIDDLE GRAVE CREEK AT MOUNDSVILLE, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDED RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOV- (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)
OCT							
14...	--	--	--	--	--	--	--
NOV							
15...	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--
DEC							
19...	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--
JAN							
16...	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--
31...	--	--	--	--	--	1	--
FEB							
12...	--	--	--	--	--	--	--
14...	--	--	--	--	--	13	--
MAR							
13...	--	--	--	--	--	--	--
14...	25	26	3	600	580	2	<.5
14...	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--
21...	--	--	--	--	--	2	--
25...	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--
APR							
10...	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--
25...	--	--	--	--	--	2	--
MAY							
14...	--	--	--	--	--	--	--
MAY							
09...	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--
16...	--	--	--	--	--	20	--
17...	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--
18...	11	11	0	100	80	20	<.5
19...	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--
JUN							
03...	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--
13...	--	--	--	--	--	30	--
19...	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--
JUL							
03...	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--
18...	--	--	--	--	--	40	--
AUG							
01...	--	--	--	--	--	40	--
06...	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--
SEP							
15...	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--
20...	1	0	1	6500	0	6500	--

03113738 MIDDLE GRAVE CREEK AT MOUNDSVILLE, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	CHROMIUM SUS- PENDE REC OV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	ZINC, TOTAL REC OV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE REC OV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)
APR							
15...	--	--	--	--	--	1	.03
16...	--	--	--	--	--	2	.04
17...	--	--	--	--	--	547	183
DEC							
15...	--	--	--	--	--	4760	7450
16...	--	--	--	--	--	2000	6750
17...	--	--	--	--	--	1830	6180
18...	--	--	--	--	--	972	2050
20...	--	--	--	--	--	39	4.0
21...	--	--	--	--	--	45	9.1
JUN							
15...	--	--	--	--	--	5	.32
16...	--	--	--	--	--	77	5.0
18...	--	--	--	--	--	234	95
18...	--	--	--	--	--	157	53
19...	--	--	--	--	--	20	41
25...	--	--	--	--	--	685	3150
26...	--	--	--	--	--	813	2420
31...	--	--	--	--	--	2	.09
FEB							
12...	--	--	--	--	--	45	18
14...	--	--	--	--	--	2	.08
MAR							
13...	--	--	--	--	--	689	526
14...	.0	<.5	20	80	10	--	--
14...	--	--	--	--	--	1750	3900
14...	--	--	--	--	--	1930	4270
15...	--	--	--	--	--	42	12
20...	--	--	--	--	--	17	2.5
21...	--	--	--	--	--	11	3.4
25...	--	--	--	--	--	3300	6420
25...	--	--	--	--	--	266	474
26...	--	--	--	--	--	251	116
APR							
16...	--	--	--	--	--	59	14
17...	--	--	--	--	--	38	34
25...	--	--	--	--	--	11	1.1
MAY							
03...	--	--	--	--	--	123	11

DATE	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	ZINC, TOTAL REC OV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE REC OV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)
MAY							
14...	--	--	--	--	--	65	7.4
13...	--	--	--	--	--	62	8.5
16...	--	--	--	--	--	10	1.1
17...	--	--	--	--	--	288	62
17...	--	--	--	--	--	2210	1920
17...	--	--	--	--	--	496	509
18...	<.5	--	20	20	0	126	93
19...	--	--	--	--	--	21	5.3
23...	--	--	--	--	--	4	9.9
JUN							
03...	--	--	--	--	--	23	1.6
04...	--	--	--	--	--	631	46
08...	--	--	--	--	--	1810	841
13...	--	--	--	--	--	14	.60
14...	--	--	--	--	--	119	5.5
26...	--	--	--	--	--	215	13
28...	--	--	--	--	--	300	87
JUL							
03...	--	--	--	--	--	28	2.6
10...	--	--	--	--	--	85	5.0
14...	--	--	--	--	--	256	12
18...	--	--	--	--	--	13	.32
AUG							
01...	--	--	--	--	--	12	.17
06...	--	--	--	--	--	17	.50
17...	--	--	--	--	--	346	14
17...	--	--	--	--	--	60	2.6
31...	--	--	--	--	--	165	4.9
SEP							
15...	--	--	--	--	--	172	6.5
16...	--	--	--	--	--	196	8.5
20...	<.5	0	30	10	20	--	--

MIDDLE ISLAND CREEK BASIN

03114500 MIDDLE ISLAND CREEK AT LITTLE, WV

LOCATION.--Lat 39°28'30", long 80°59'50", Tyler County, Hydrologic Unit 05030201, on right bank at downstream side of highway bridge at Little, 0.1 mi (0.2 km) upstream from Stewarts Run, 5.0 mi (8.0 km) west of Middlebourne, and at mile 24.5 (39.4 km).

DRAINAGE AREA.--458 mi² (1,186 km²).

PERIOD OF RECORD.--May 1915 to September 1916, October 1916 to September 1922 (gage heights only), October 1928 to current year.

GAGE.--Water-stage recorder. Datum of gage is 631.32 ft (192.426 m) National Geodetic Vertical Datum, adjustment of 1912. Prior to July 11, 1947, nonrecording gage at same site and datum.

REMARKS.--Records good except those for Dec. 27 to Mar. 6, which are poor.

AVERAGE DISCHARGE.--51 years (water years 1916, 1929-78), 630 ft³/s (17.84 m³/s), 18.68 in/yr (474 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,000 ft³/s (708 m³/s) June 26, 1950, gage height, 28.0 ft (8.53 m), from floodmarks; no flow during parts of 1922 and Sept. 1 to Nov. 4, Nov. 7-10, 1930.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in August 1875 reached a stage of about 33.5 ft (10.2 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 9,000 ft³/s (250 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 26	1900	*20800 589	22.27 6.788	Mar. 14	2300	9620 272	12.93 3.941

Minimum discharge, 24 ft³/s (0.68 m³/s) Oct. 1, Sept. 30, gage height, 2.22 ft (0.677 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	54	3010	122	310	127	481	335	592	242	1870	823
2	159	50	1680	159	260	120	387	286	294	164	676	371
3	503	47	810	160	190	110	315	249	210	5760	330	176
4	252	46	592	130	170	105	282	231	179	4400	2290	115
5	148	53	1840	150	150	100	325	431	156	1150	1040	92
6	102	60	3140	170	140	97	492	758	142	563	492	80
7	106	73	1190	200	130	117	1130	552	129	306	1150	60
8	124	415	525	1680	120	127	1170	481	200	345	2470	46
9	525	536	713	5390	110	145	771	2520	569	1870	921	40
10	921	470	910	2330	96	286	569	2210	382	844	628	35
11	498	858	640	800	87	2780	464	1050	238	956	676	30
12	263	569	430	600	91	4730	409	664	245	481	616	44
13	179	330	376	540	95	4530	371	640	4020	256	398	91
14	129	235	431	500	100	8400	306	1050	1240	1840	998	124
15	104	182	797	400	110	6770	263	1060	492	1400	475	111
16	92	150	784	330	95	2080	231	797	302	508	249	96
17	294	282	508	409	100	1770	207	1080	217	2070	170	100
18	676	1440	355	3550	120	1250	203	2240	164	752	127	91
19	371	758	266	3560	110	879	586	1360	132	325	104	82
20	294	420	290	1690	110	700	2620	907	113	191	91	64
21	266	302	563	1000	105	574	2640	610	104	134	80	51
22	235	245	442	700	100	664	2210	437	278	111	76	43
23	185	203	298	580	94	580	1430	310	282	96	73	67
24	145	185	235	520	85	481	907	371	153	94	67	98
25	115	160	266	2500	100	2050	713	646	109	113	64	80
26	98	150	442	18600	111	3640	907	525	100	132	64	65
27	85	140	400	6000	119	4230	732	340	1060	176	59	53
28	76	180	330	3100	122	2010	604	252	1420	122	60	39
29	70	498	290	1300	---	1160	475	200	706	106	46	29
30	65	1730	250	690	---	791	393	203	350	124	57	25
31	59	---	134	350	---	580	---	1540	---	1080	117	---
TOTAL	7178	10821	22937	58210	3530	51983	22593	24335	14578	26711	16534	3221
MEAN	232	361	740	1878	126	1677	753	785	486	862	533	107
MAX	921	1730	3140	18600	310	8400	2640	2520	4020	5760	2470	823
MIN	39	46	134	122	85	97	203	200	100	94	46	25
CFSM	.51	.79	1.62	4.10	.28	3.66	1.64	1.71	1.06	1.88	1.16	.23
IN.	.58	.88	1.86	4.73	.29	4.22	1.84	1.98	1.18	2.17	1.34	.26

CAL YR 1977	TOTAL	171575.9	MEAN 470	MAX 6180	MIN 8.7	CFSM 1.03	IN 13.94
WTR YR 1978	TOTAL	262631.0	MEAN 720	MAX 18600	MIN 25	CFSM 1.57	IN 21.33

OHIO RIVER MAIN STEM

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03150800 OHIO RIVER NEAR MARIETTA, OH

LOCATION.--Lat 39°23'21", long 81°29'03", Washington County, Hydrologic Unit 05030202, on right bank 1.5 mi (2.4 km) southwest of Marietta, 2.0 mi (3.2 km) downstream from Muskingum River, and at mile 174.3 (280.4 km), measured downstream from Pittsburgh, Pa.

DRAINAGE AREA.--35,600 mi² (92,200 km²), approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 567.12 ft (172.858 m) Sandy Hook datum.

REMARKS.--Records published as a stage control station. Corps of Engineers gage height telemeter at station. Stilling well frozen Jan. 11 to Feb. 1.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 36.09 ft (11.000 m) June 26, 1972; minimum, 10.83 ft (3.301 m) Oct. 6, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum recorded gage height, 30.44 ft (9.278 m) Mar. 15; minimum, 14.87 ft (4.532 m) Aug. 23.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.92	15.44	18.62	17.79	---	16.40	22.14	15.52	16.14	15.80	16.26	16.04
2	17.39	15.15	20.44	17.23	21.28	16.34	21.69	15.97	15.53	15.63	15.92	16.21
3	18.27	15.83	21.32	17.40	20.90	15.97	21.12	15.58	15.63	16.83	15.47	15.47
4	17.37	16.05	20.51	17.09	20.48	15.75	21.74	15.66	15.55	18.82	15.78	15.86
5	17.41	16.04	20.50	16.24	18.78	15.83	21.77	16.01	15.93	20.19	15.37	15.39
6	17.65	15.89	23.46	16.85	18.46	15.92	22.47	16.44	15.35	17.43	15.56	15.70
7	16.87	15.17	21.46	16.43	18.69	16.38	23.71	15.94	15.73	16.67	15.94	15.77
8	16.60	16.00	19.73	17.54	18.93	16.23	23.63	16.37	16.45	16.14	17.05	15.41
9	16.78	17.16	19.27	21.42	18.80	16.05	23.11	16.86	18.34	16.10	15.79	15.45
10	18.07	16.96	19.03	23.47	18.27	16.38	22.03	18.08	17.01	15.60	16.21	15.11
11	19.38	16.66	18.34	---	17.55	17.08	21.44	17.89	16.48	16.44	16.74	15.06
12	19.26	16.74	17.27	---	17.52	18.46	20.78	17.30	15.97	16.08	16.18	15.66
13	17.90	17.10	16.98	---	16.73	20.01	19.92	16.94	16.15	15.60	15.65	15.84
14	17.17	16.40	18.11	---	16.49	24.23	19.05	17.68	16.10	15.69	15.84	15.38
15	16.58	16.12	22.39	---	16.47	29.77	18.38	18.97	15.54	16.60	15.34	15.76
16	16.49	16.24	26.67	---	16.29	30.00	17.47	20.03	15.39	15.86	15.33	15.72
17	15.97	16.47	25.75	---	16.48	26.79	17.05	21.57	15.61	15.93	15.66	15.94
18	16.48	17.89	23.58	---	16.68	24.17	16.45	24.82	15.76	15.92	15.08	15.61
19	17.00	18.57	22.18	---	16.13	23.14	16.77	27.64	15.64	15.46	15.36	15.39
20	16.25	18.41	22.02	---	15.79	22.40	17.66	24.75	16.43	15.83	15.53	15.73
21	16.27	17.51	22.62	---	16.34	22.14	18.40	22.79	16.24	15.41	15.07	15.52
22	15.53	17.50	22.36	---	16.45	22.91	18.75	21.71	15.89	15.34	15.08	15.54
23	15.84	17.83	21.19	---	16.04	24.27	18.53	20.38	15.54	15.45	14.93	15.35
24	15.82	17.87	20.60	---	16.30	24.47	18.08	19.57	15.77	15.64	15.17	15.62
25	15.57	17.31	20.45	---	16.83	24.52	17.69	20.83	15.36	15.48	15.33	15.69
26	15.43	17.22	20.33	---	16.77	26.01	17.65	21.14	15.67	15.55	15.36	16.12
27	15.88	17.48	20.56	---	16.04	25.93	17.19	20.12	16.53	15.77	15.41	15.62
28	15.99	17.23	19.54	---	16.32	24.43	16.90	18.23	17.02	15.76	15.47	15.09
29	15.47	17.32	18.63	---	---	23.29	16.55	16.91	17.51	15.68	15.69	15.14
30	15.88	17.62	18.18	---	---	23.12	15.99	16.15	16.94	15.65	15.76	15.13
31	16.09	---	17.94	---	---	22.59	---	16.44	---	15.68	15.95	---
MEAN	16.76	16.84	20.65	---	---	21.32	19.47	18.85	16.11	16.13	15.65	15.58
MAX	19.38	18.57	26.67	---	---	30.00	23.71	27.64	18.34	20.19	17.05	16.21
MIN	15.43	15.15	16.98	---	---	15.75	15.99	15.52	15.35	15.34	14.93	15.06

NOTE.--Add 567.12 ft to obtain elevation.

LITTLE KANAWHA RIVER BASIN

03151400 LITTLE KANAWHA RIVER NEAR WILDCAT, WV

LOCATION.--Lat 38°44'35", long 80°31'36" (corrected), Braxton County, Hydrologic Unit 05030203, on right bank on State Secondary Route 24/1, 200 ft (61 m) upstream from footbridge at Gregory, 3.9 mi (6.2 km) west of Wildcat, and at mile 138.6 (223.1 km).

DRAINAGE AREA.--112 mi² (290 km²).

PERIOD OF RECORD.--December 1973 to current year.

GAGE.--Water-stage recorder. Datum of gage is 850.00 ft (259.080 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for Dec. 21 to Mar. 8, which are poor. Corps of Engineers gage-height tele-meter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,090 ft³/s (201 m³/s) Jan. 26, 1978, gage height, 12.62 ft (3.847 m); minimum, 1.6 ft³/s (0.045 m³/s) Aug. 4, 5, 1975, gage height, 3.87 ft (1.180 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,200 ft³/s (62 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)	Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)
Jan. 26	0700	*7090	201	12.62	3.847	July 3	1630	3980	113	10.28	3.133
Mar. 14	1930	2760	78.2	9.06	2.761						

Minimum discharge, 6.5 ft³/s (0.18 m³/s) Sept. 30, gage height, 3.90 ft (1.189 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978.
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	33	1190	117	150	57	210	126	49	124	360	405
2	161	31	609	110	110	55	163	106	36	87	166	126
3	131	30	348	106	86	52	138	90	49	2200	100	102
4	92	29	269	100	76	50	124	251	71	1590	133	70
5	62	28	380	110	68	47	140	435	45	598	96	46
6	55	28	642	124	66	45	124	336	33	304	142	33
7	76	31	410	124	63	51	133	266	30	170	284	25
8	67	57	269	131	58	60	126	251	144	121	670	21
9	392	55	230	631	55	234	124	348	466	183	332	18
10	380	68	200	450	50	626	119	376	266	119	183	16
11	173	237	160	330	48	820	119	304	151	694	131	13
12	117	195	140	270	50	1150	149	234	94	340	201	13
13	81	151	155	220	52	1570	138	248	85	180	266	23
14	62	119	183	180	54	2300	126	1100	64	198	826	17
15	51	102	659	160	58	1530	112	814	44	207	292	15
16	415	88	461	130	59	659	100	554	35	140	156	15
17	874	98	308	150	54	410	90	455	30	104	98	20
18	348	110	241	796	53	308	88	368	25	75	67	22
19	204	100	192	521	51	266	102	415	23	54	49	15
20	180	94	173	396	50	284	356	360	19	40	37	12
21	156	90	160	276	54	304	1260	276	36	32	30	11
22	131	115	140	190	52	292	1400	198	80	25	23	11
23	106	316	130	150	49	227	700	158	46	23	19	13
24	85	410	120	130	47	192	400	168	27	35	16	13
25	70	388	372	1500	50	178	300	138	21	61	14	12
26	62	348	425	4550	60	227	269	108	42	67	17	10
27	61	266	300	1240	56	472	237	85	981	40	16	8.9
28	54	376	200	600	52	609	192	68	916	48	14	8.0
29	48	549	170	360	---	494	161	55	445	33	13	7.4
30	42	1080	140	240	---	348	142	48	204	198	13	6.8
31	37	---	128	180	---	262	---	61	---	642	180	---
TOTAL	4811	5622	9504	14572	1731	14179	7842	8800	4557	8732	4944	1128.1
MEAN	155	187	307	470	61.8	457	261	284	152	282	159	37.6
MAX	874	1080	1190	4550	150	2300	1400	1100	981	2200	826	405
MIN	37	28	120	100	47	45	88	48	19	23	13	6.8
CFSM	1.38	1.67	2.74	4.20	.55	4.08	2.33	2.54	1.36	2.52	1.42	.34
IN.	1.60	1.87	3.16	4.84	.57	4.71	2.60	2.92	1.51	2.90	1.64	.37

CAL YR 1977 TOTAL 58245.8 MEAN 160 MAX 2580 MIN 2.9 CFSM 1.43 IN 19.35
WTR YR 1978 TOTAL 86422.1 MEAN 237 MAX 4550 MIN 6.8 CFSM 2.12 IN 28.70

LITTLE KANAWHA RIVER BASIN

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03151518 BURNSVILLE LAKE NEAR BURNSVILLE, WV

LOCATION.--Lat 38°50'38", long 80°37'12", Braxton County, Hydrologic Unit 05030203, at Burnsville Dam on Little Kanawha River, 2.7 mi (4.3 km) upstream from Burnsville, and at mile 124.2 (199.8 km).

DRAINAGE AREA.--163 mi² (422 km²).

PERIOD OF RECORD.--July 1976 to current year.

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

REMARKS.--Reservoir is formed by rockfill embankment with impervious core, completed in January 1976. Storage control operations have not yet begun. Spillway is a concrete ogee spillway controlled by three crest gates, 42 ft (12.8 m) by 35 ft (10.7 m) each, at crest elevation 792 ft (241.4 m) and a total crest width of 142 ft (43.3 m). Flow is controlled by five 4.0 ft (1.22 m) by 4.5 ft (1.37 m) sluices with hydraulically operated slide gates located in the concrete spillway section. Three 4.0 ft (1.22 m) by 4.0 ft (1.22 m) intakes will discharge through three 30 in (762 mm) diameter conduits for water-quality control. Streambed elevation at dam is 755 ft (230.1 m). Total capacity at flood-control pool elevation of 825 ft (251.5 m), is 65,900 acre-ft (81.3 hm³), of which 61,700 acre-ft (76.1 hm³) is controlled storage above minimum pool elevation of 776 ft (236.5 m). This is a multipurpose reservoir.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 18,760 acre-ft (23.1 hm³) Jan. 27, 1978 elevation, 793.31 ft (241.801 m); minimum, no storage, pool not filled.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 18,760 acre-ft (23.1 hm³) Jan. 27, elevation, 793.31 ft (241.801 m); minimum, no storage, pool not filled.

LITTLE KANAWHA RIVER BASIN

03151520 LITTLE KANAWHA RIVER BELOW BURNSVILLE DAM, WV

LOCATION.--Lat 38°50'41", long 80°37'45", Braxton County, Hydrologic Unit 05030203, on right bank 2600 ft (792 m) downstream from Burnsville Dam, 1.6 mi (2.6 km) southeast of Burnsville, and at mile 123.7 (199.0 km).

DRAINAGE AREA.--163 mi² (422 km²).

PERIOD OF RECORD.--July 1976 to current year.

GAGE.--Water-stage recorder. Datum of gage is 700.00 ft (213.360 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Some regulation by Burnsville Reservoir 0.5 mi (0.8 km) upstream. Dam not yet fully operational.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,530 ft³/s (71.6 m³/s) Oct. 9, 1976, gage height, 58.81 ft (17.925 m); minimum, 3.6 ft³/s (0.10 m³/s) May 26, 1977, gage height, 50.62 ft (15.429 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,430 ft³/s (68.8 m³/s) Jan. 28, gage height, 58.45 ft (17.816 m); minimum, 5.5 ft³/s (0.16 m³/s) Sept. 30, gage height, 51.75 ft (15.773 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	38	1560	152	1180	110	315	200	56	174	630	444
2	132	35	1110	162	300	100	260	165	44	130	290	272
3	159	33	575	141	160	126	210	135	267	569	170	147
4	109	32	394	82	110	126	180	360	162	1700	145	116
5	76	32	441	111	117	88	185	823	74	1800	151	73
6	65	32	733	162	122	92	185	569	49	1560	149	47
7	69	32	605	158	96	130	180	402	40	601	213	31
8	72	39	410	169	80	135	180	354	51	181	585	21
9	248	53	360	621	70	265	170	478	331	226	452	16
10	536	58	368	640	67	751	165	527	335	209	256	14
11	296	195	284	430	70	1040	160	439	207	482	163	12
12	169	261	230	310	67	1250	185	342	125	459	172	20
13	93	202	245	330	70	1470	190	297	92	261	170	158
14	65	145	222	304	105	1750	175	814	78	245	585	42
15	56	100	547	230	135	1900	155	1010	56	306	426	20
16	167	81	607	170	130	1650	135	698	43	196	216	14
17	830	79	448	257	126	993	117	586	36	129	120	18
18	579	107	346	835	126	520	109	461	31	86	74	19
19	312	103	285	792	110	396	130	434	27	61	53	18
20	235	88	236	597	100	372	285	418	23	46	40	13
21	201	80	231	457	135	390	951	340	28	34	30	10
22	167	87	214	352	122	408	1390	268	72	26	23	8.9
23	116	279	184	260	96	348	1170	213	70	21	17	9.7
24	85	457	169	210	109	285	660	205	41	23	13	11
25	70	474	335	281	109	240	432	186	25	63	11	11
26	62	438	543	1040	140	300	555	145	58	111	10	10
27	58	366	437	2060	130	653	555	110	1100	69	11	8.9
28	55	416	311	2190	122	759	360	84	1110	67	11	7.6
29	51	566	238	2200	---	720	275	65	770	67	9.9	6.6
30	46	984	205	2170	---	534	230	56	329	322	9.4	5.8
31	42	---	175	1980	---	396	---	53	---	817	92	---
TOTAL	5266	5892	13048	19853	4304	18297	10249	11237	5730	11041	5297.3	1604.5
MEAN	170	196	421	640	154	590	342	362	191	356	171	53.5
MAX	830	984	1560	2200	1180	1900	1390	1010	1110	1800	630	444
MIN	42	32	169	82	67	88	109	53	23	21	9.4	5.8
CFSM	1.04	1.20	2.58	3.93	.95	3.62	2.10	2.22	1.17	2.18	1.05	.33
IN.	1.20	1.34	2.98	4.53	.98	4.18	2.34	2.56	1.31	2.52	1.21	.37
CAL YR 1977	TOTAL	74616.9	MEAN 204	MAX 1850	MIN 3.6	CFSM 1.25	IN 17.03					
WTR YR 1978	TOTAL	111818.8	MEAN 306	MAX 2200	MIN 5.8	CFSM 1.88	IN 25.52					

LITTLE KANAWHA RIVER BASIN

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03151600 LITTLE KANAWHA RIVER AT BURNSVILLE, WV

LOCATION.--Lat 38°51'55", long 80°40'32", Braxton County, Hydrologic Unit 05030203, on right bank 70 ft (21 m) upstream from Buffalo Creek, 1.0 mi (1.6 km) northwest of Burnsville, 1.4 mi (2.3 km) downstream from Oil Creek, and at mile 119.5 (192.3 km).

DRAINAGE AREA.--248 mi² (642 km²).

PERIOD OF RECORD.--April 1974 to September 1978 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 738.66 ft (225.144 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for January and February, which are poor. Some regulation from five floodwater-detention reservoirs affecting 49.5 mi² (128.2 km²) and by Burnsville Reservoir at mile 124.2 (199.8 km). Corps of Engineers gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,890 ft³/s (195 m³/s) June 2, 1974, gage height, 16.32 ft (4.974 m); minimum observed, 2.4 ft³/s (0.068 m³/s) May 24, 1977.

EXTREMES FOR CURRENT YEAR.-- Maximum discharge, 5,820 ft³/s (165 m³/s) Jan. 26, gage height, 14.30 ft (4.359 m); minimum, 7.4 ft³/s (0.21 m³/s) Sept. 30, gage height, 3.45 ft (1.052 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	125	48	2700	206	1360	202	375	255	100	237	1050	562
2	224	41	1500	227	366	160	303	213	69	182	465	327
3	192	36	734	209	216	179	248	182	835	1700	259	164
4	146	36	513	155	160	173	220	815	385	2410	223	128
5	100	34	764	167	155	130	220	1540	176	2130	206	86
6	80	31	1180	213	155	149	223	815	100	1770	199	56
7	89	61	783	224	131	199	223	535	75	856	465	38
8	97	140	502	275	100	202	220	480	100	287	912	31
9	614	125	502	1280	110	485	206	842	465	344	686	25
10	734	143	518	930	108	1540	195	740	450	287	395	22
11	380	303	370	570	94	1920	192	562	271	632	311	18
12	234	311	290	420	91	2060	209	425	176	626	263	100
13	164	234	303	390	94	2190	209	405	140	353	259	415
14	119	179	323	380	146	2450	192	1240	117	573	692	119
15	94	146	752	310	182	3370	176	1350	80	529	590	53
16	362	122	746	240	173	1950	161	926	64	319	307	53
17	1180	122	540	480	164	1360	143	783	56	237	185	77
18	722	167	430	1680	164	704	143	590	46	170	119	53
19	376	161	362	1200	160	507	176	540	42	117	83	38
20	303	140	307	822	160	445	357	502	38	80	59	29
21	259	128	303	596	170	435	1210	400	46	59	43	22
22	200	131	275	455	150	440	1750	307	202	43	36	22
23	182	362	237	330	120	385	1440	244	146	36	27	22
24	152	562	220	350	143	319	802	244	69	38	20	20
25	131	562	535	2500	149	287	518	223	38	128	18	20
26	111	518	704	3940	195	390	1210	176	223	164	22	18
27	100	440	520	2920	192	1030	997	140	2240	105	18	15
28	94	573	360	2860	185	1020	535	111	1510	131	36	12
29	83	898	280	2670	---	912	375	86	1080	108	20	11
30	72	1700	255	2600	---	650	303	131	485	507	29	9.0
31	59	---	220	2250	---	470	---	182	---	1870	620	---
TOTAL	7728	8454	18028	31849	5593	26713	13531	15984	9824	17028	8617	2565.0
MEAN	251	282	582	1027	200	862	451	516	327	549	278	85.5
MAX	1180	1700	2700	3940	1360	3370	1750	1540	2240	2410	1050	562
MIN	59	31	220	155	91	130	143	86	38	36	18	9.0
CFSM	1.01	1.14	2.35	4.14	.81	3.48	1.82	2.08	1.32	2.21	1.12	.35
IN.	1.17	1.27	2.70	4.78	.84	4.01	2.03	2.40	1.47	2.55	1.29	.38

CAL YR 1977 TOTAL 105052.5 MEAN 288 MAX 3200 MIN 2.4 CFSM 1.16 IN 15.76
WTR YR 1978 TOTAL 165964.0 MEAN 455 MAX 3940 MIN 9.0 CFSM 1.84 IN 24.89

03152000 LITTLE KANAWHA RIVER AT GLENVILLE, WV

LOCATION.--Lat 38°56'00", long 80°50'20", Gilmer County, Hydrologic Unit 05030203, on right bank at highway bridge at Glenville, 1000 ft (305 m) upstream from Sycamore Run, and at mile 103.4 (166.4 km).

DRAINAGE AREA.--386 mi² (1,000 km²).

PERIOD OF RECORD.--June 1915 to September 1922 (gage heights only), October 1928 to current year. Monthly discharge only October to December 1928, published in WSP 1305.

REVISED RECORDS.--WSP 783: Drainage area. WSP 1305: 1930, 1932(M). WSP 1435: 1954. WSP 1555: 1947(M).

GAGE.--Water-stage recorder. Datum of gage is 697.79 ft (212.686 m) National Geodetic Vertical Datum, adjustment of 1912. Prior to Dec. 14, 1934, nonrecording gage at bridge 300 ft (91 m) upstream at same datum. Auxiliary water-stage recorder 2.7 mi (4.3 km) downstream from base gage at datum 700.23 ft (213.430 m) National Geodetic Vertical Datum of 1929. Prior to May 25, 1971, auxiliary nonrecording gage at same site and datum.

REMARKS.--Records good except those for the period Jan. 3 to Mar. 7, which are poor. Some regulation since 1968 from five floodwater detention reservoirs affecting 49.5 mi² (128.2 km²), and since 1974 by Burnsville Reservoir at mile 124.2 (199.8 km). National Weather service gage-height telemeter at station.

AVERAGE DISCHARGE.--50 years, 597 ft³/s (16.91 m³/s), 21.00 in/yr (533 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,500 ft³/s (609 m³/s) Mar. 7, 1967, gage height, 34.50 ft (10.516 m), backwater; no flow at times in 1930-33.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 16, 1926, reached a stage of 33.6 ft (10.24 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,400 ft³/s (323 m³/s) Jan. 26, gage height, 29.75 ft (9.068 m) backwater; minimum, 32 ft³/s (0.91 m³/s) Sept. 30, gage height, 2.01 ft (0.613 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	129	69	4520	269	2050	270	560	402	233	309	1510	1070
2	419	62	2330	302	682	234	447	325	155	199	659	596
3	328	57	1190	230	357	220	361	266	687	1580	326	276
4	209	56	745	180	275	210	305	945	788	2950	333	177
5	151	56	1160	190	235	190	305	2690	307	2330	271	144
6	137	56	2070	250	224	180	315	1330	177	1810	260	107
7	146	75	1230	354	190	230	316	829	135	1170	1040	83
8	149	773	730	427	180	289	324	850	138	416	955	66
9	1280	422	670	2310	170	514	292	2160	331	438	871	54
10	1190	288	800	1580	160	1970	268	1330	581	452	590	45
11	626	515	600	900	160	3010	261	892	343	759	614	37
12	343	494	460	600	150	3220	271	662	209	794	364	39
13	215	369	380	500	150	3330	276	605	193	452	351	763
14	161	266	360	430	177	3760	247	1420	155	1740	497	279
15	133	203	850	380	233	3230	219	1720	122	1120	745	147
16	346	177	1000	330	233	2440	200	1310	99	518	400	146
17	1450	175	749	360	214	2070	188	1190	81	348	262	238
18	1100	213	596	3400	215	1120	185	896	71	229	183	159
19	584	229	500	2030	200	762	247	812	62	163	133	116
20	414	197	427	1270	190	634	575	745	54	131	109	93
21	343	181	403	926	200	590	1430	599	57	105	86	75
22	271	179	377	711	190	580	2090	458	113	83	71	89
23	213	336	324	530	170	531	1930	356	224	71	60	120
24	177	674	285	490	160	444	1180	354	120	75	51	90
25	155	684	587	4960	189	399	754	343	80	142	42	71
26	140	653	941	9600	230	508	1740	255	80	195	60	63
27	120	596	724	6000	251	1640	2040	197	3940	149	63	53
28	112	690	533	4000	244	1370	932	163	1870	124	128	45
29	102	1300	427	3500	---	1240	627	137	1310	140	86	39
30	91	2410	353	2700	---	941	492	285	671	316	66	35
31	80	---	303	2470	---	690	---	777	---	2450	3790	---
TOTAL	11314	12455	26624	52179	8079	36816	19377	25303	13386	21758	14976	5315
MEAN	365	415	859	1683	289	1188	646	816	446	702	483	177
MAX	1450	2410	4520	9600	2050	3760	2090	2690	3940	2950	3790	1070
MIN	80	56	285	180	150	180	185	137	54	71	42	35
CFSM	.95	1.08	2.23	4.36	.75	3.08	1.67	2.11	1.16	1.82	1.25	.46
IN.	1.09	1.20	2.57	5.03	.78	3.55	1.87	2.44	1.29	2.10	1.44	.51
CAL YR 1977 TOTAL	157929		MEAN 433	MAX 5650	MIN 15	CFSM 1.12	IN 15.22					
WTR YR 1978 TOTAL	247582		MEAN 678	MAX 9600	MIN 35	CFSM 1.76	IN 23.86					

LITTLE KANAWHA RIVER BASIN

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03153500 LITTLE KANAWHA RIVER AT GRANTSVILLE, WV

LOCATION.--Lat 38°55'20", long 81°05'50", Calhoun County, Hydrologic Unit 05030203, on left bank 1,000 ft (305 m) downstream from bridge on State Highway 16 at Grantsville, 1,200 ft (366 m) downstream from Philip Run, and at mile 80.0 (128.7 km).

DRAINAGE AREA.--913 mi² (2,365 km²).

PERIOD OF RECORD.--October 1928 to September 1978 (discontinued). Monthly discharge only October to December 1928, published in WSP 1305.

REVISED RECORDS.--WSP 1275: 1929(M), 1932-36.

GAGE.--Water-stage recorder. Datum of gage is 652.83 ft (198.983 m) National Geodetic Vertical Datum, adjustment of 1912. Prior to Nov. 21, 1934, nonrecording gage at same site and datum.

REMARKS.--Records good except those for the period Jan. 3 to Mar. 6, which are poor. Some regulation since 1968 from five floodwater detention reservoirs affecting 49.5 mi² (128.2 km²), and since 1974 by Burnsville Reservoir at mile 124.2 (199.8 km).

AVERAGE DISCHARGE.--50 years, 1,328 ft³/s (37.61 m³/s), 19.75 in/yr (502 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,100 ft³/s (994 m³/s) Mar. 7, 1967, gage height, 43.9 ft (13.38 m), from floodmarks; no flow Sept. 10 to Nov. 16, 1930.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 28,500 ft³/s (807 m³/s) Jan. 26, gage height, 38.76 ft (11.814 m); minimum, 68 ft³/s (1.93 m³/s) Aug. 27, Sept. 30, gage height, 6.61 ft (2.015 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	194	155	8290	632	2500	578	1130	903	664	540	3140	3510
2	1100	141	5340	688	1610	530	903	739	367	337	1300	1170
3	949	130	2400	600	856	500	735	610	325	556	700	644
4	566	124	1530	510	636	480	633	1030	1570	4220	1290	406
5	369	120	2420	540	554	450	664	5140	740	2780	772	300
6	285	122	5520	612	491	430	698	3240	439	2080	478	234
7	298	127	2900	844	440	520	675	1850	316	1640	2760	188
8	341	1270	1810	1050	410	636	695	1840	270	824	2220	155
9	1740	1200	1780	4230	380	955	646	5310	310	792	1530	135
10	3200	732	2350	3610	360	3670	574	3770	612	640	1030	116
11	1380	1190	1660	2100	340	6640	542	2110	568	1840	1830	101
12	782	1000	1260	1460	320	7640	549	1490	376	1110	1090	89
13	520	757	1070	1200	330	7650	527	1190	544	736	684	681
14	382	558	956	1000	353	8940	485	1880	493	1170	596	852
15	291	434	1500	890	437	6940	431	2750	340	3330	1620	361
16	372	366	1890	800	459	3990	383	2210	237	1090	736	290
17	2360	343	1590	810	422	3590	352	2160	184	764	439	676
18	2030	450	1310	5590	410	2490	347	1810	158	520	305	457
19	1180	532	1120	4700	390	1700	531	1650	138	352	227	275
20	829	446	968	2790	390	1330	1590	1600	124	257	188	194
21	719	385	980	2040	410	1110	2640	1290	138	200	156	154
22	587	361	916	1600	390	1050	3350	1030	174	164	128	164
23	480	410	788	1300	380	951	3160	736	285	140	106	227
24	401	890	696	1200	350	829	2200	712	297	138	92	220
25	328	1020	1160	8510	370	790	1510	824	190	217	81	170
26	277	980	1990	25700	417	1250	2380	696	152	364	72	134
27	252	920	1550	21100	531	3850	5530	511	2800	340	70	110
28	228	951	1190	10000	570	3120	2500	379	3300	250	96	94
29	210	2310	928	8000	---	2450	1540	305	1830	202	146	81
30	190	4540	828	5000	---	1870	1130	310	1080	285	130	72
31	171	---	696	3500	---	1410	---	1380	---	2750	4320	---
TOTAL	23011	22964	59386	122606	15506	78339	39030	51455	19021	30628	28332	12260
MEAN	742	765	1916	3955	554	2527	1301	1660	634	988	914	409
MAX	3200	4540	8290	25700	2500	8940	5530	5310	3300	4220	4320	3510
MIN	171	120	696	510	320	430	347	305	124	138	70	72
CFSM	.81	.84	2.10	4.33	.61	2.77	1.43	1.82	.69	1.08	1.00	.45
IN.	.94	.94	2.42	5.00	.63	3.19	1.59	2.10	.78	1.25	1.15	.50
CAL YR 1977	TOTAL	333146	MEAN	913	MAX	12900	MIN	29	CFSM	1.00	IN	13.57
WTR YR 1978	TOTAL	502538	MEAN	1377	MAX	25700	MIN	70	CFSM	1.51	IN	20.48

LITTLE KANAWHA RIVER BASIN

03154000 WEST FORK LITTLE KANAWHA RIVER AT ROCKSDALE, WV

LOCATION.--Lat 38°50'48", long 81°13'26", Calhoun County, Hydrologic Unit 05030203, on right bank on State Route 11, 850 ft (259 m) downstream from Henry Fork at Rocksdales, 9.0 mi (14.5 km) southwest of Grantsville, and at mile 14.1 (22.7 km).

DRAINAGE AREA.--205 mi² (531 km²).

PERIOD OF RECORD.--October 1928 to September 1931, October 1937 to September 1975 (monthly discharge only for some periods, published in WSP 1305), October 1975 to current year (gage heights only).

REVISED RECORDS.--WSP 953: 1929-31, 1938(M), 1939. WSP 1275: 1950.

GAGE.--Water-stage recorder. Datum of gage is 657.85 ft (200.513 m) National Geodetic Vertical Datum, adjustment of 1912. Prior to June 16, 1966, nonrecording gage, crest-stage gage Nov. 4, 1946, to June 15, 1966, on bridge 800 ft (244 m) upstream at same datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--41 years (water years 1929-31, 1938-75), 258 ft³/s (7.307 m³/s), 17.09 in/yr (434 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,200 ft³/s (572 m³/s) Apr. 16, 1939, gage height, 30.3 ft (9.24 m), from floodmarks, site then in use, from rating curve extended above 13,000 ft³/s (370 m³/s); no flow at times during 1930, 1931, 1954, 1957, 1959, 1960.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 28.27 ft (8.617 m) Jan. 26; minimum gage height, 3.82 ft (1.164 m) Aug. 30, Sept. 30.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.45	4.15	12.14	5.07	6.10	5.63	5.85	5.85	4.41	3.97	7.23	6.63
2	6.85	4.12	8.14	5.19	5.84	5.31	5.61	5.55	4.29	3.96	5.76	5.38
3	5.23	4.10	6.98	5.00	5.60	5.42	5.38	5.32	4.69	4.74	5.18	4.85
4	4.65	4.09	6.52	4.85	5.42	5.27	5.30	7.83	5.16	6.13	4.87	4.54
5	4.37	4.10	10.21	4.76	5.29	5.04	5.43	9.72	4.66	5.16	4.64	4.36
6	4.29	4.12	10.61	4.98	5.23	5.14	5.27	7.52	4.39	4.65	4.54	4.24
7	4.48	4.51	7.40	5.25	5.14	5.68	5.23	6.57	4.30	4.36	8.07	4.15
8	4.52	4.78	6.45	5.76	5.02	5.71	5.10	7.81	4.35	4.62	6.67	4.08
9	7.64	4.90	7.03	9.40	4.93	7.31	4.99	10.43	4.43	6.00	5.59	4.04
10	7.62	6.07	7.00	7.33	4.92	10.90	4.94	7.84	4.54	5.22	5.22	4.00
11	6.06	7.42	6.30	6.70	4.88	11.22	4.94	6.73	4.39	5.67	6.62	3.96
12	5.36	6.20	5.98	6.38	4.87	11.52	5.01	6.20	4.29	4.96	7.36	3.93
13	4.93	5.50	5.77	6.17	4.98	11.45	4.88	6.05	4.55	4.47	5.61	4.03
14	4.64	5.06	5.72	5.88	5.20	12.52	4.76	6.53	4.42	4.47	5.09	4.11
15	4.46	4.83	6.60	5.66	5.16	9.53	4.67	6.35	4.27	6.18	5.12	4.09
16	5.07	4.72	6.23	5.47	5.03	7.84	4.60	6.08	4.19	5.84	4.71	5.68
17	7.54	4.73	5.92	6.32	5.01	7.97	4.56	5.96	4.16	7.38	4.47	5.88
18	6.52	4.94	5.77	11.46	5.04	7.03	4.72	5.75	4.12	5.73	4.31	4.70
19	5.77	4.82	5.57	8.72	5.03	6.57	5.82	5.85	4.10	5.02	4.21	4.35
20	5.44	4.63	5.47	7.76	5.09	6.13	7.15	5.67	4.07	4.61	4.20	4.18
21	5.17	4.57	5.46	7.23	5.20	5.93	6.85	5.41	4.15	4.38	4.12	4.08
22	4.89	4.60	5.28	6.78	5.03	5.86	6.99	5.17	4.67	4.24	4.04	4.02
23	4.72	4.99	5.10	6.57	4.87	5.65	6.53	5.09	4.56	4.28	3.99	4.04
24	4.58	5.77	5.03	7.01	4.96	5.48	6.10	5.76	4.22	4.81	3.94	4.05
25	4.45	5.74	6.07	16.54	4.92	5.65	5.86	5.47	4.09	5.78	3.91	4.02
26	4.39	5.70	6.52	24.75	5.24	6.42	9.70	5.09	4.58	5.96	3.89	3.98
27	4.43	5.43	5.85	10.32	5.19	8.43	10.45	4.86	4.52	5.25	3.89	3.94
28	4.42	6.02	5.58	7.90	5.50	7.54	7.47	4.69	4.31	4.99	3.92	3.90
29	4.32	8.23	5.45	6.97	---	6.98	6.53	4.66	4.14	4.68	3.86	3.86
30	4.25	9.52	5.24	6.48	---	6.41	6.15	4.77	4.08	6.37	3.84	3.85
31	4.20	---	5.12	6.21	---	6.06	---	4.56	---	11.08	9.54	---
MEAN	5.15	5.28	6.53	7.58	5.17	7.21	5.89	6.17	4.37	5.32	5.11	4.36
MAX	7.64	9.52	12.14	24.75	6.10	12.52	10.45	10.43	5.16	11.08	9.54	6.63
MIN	4.20	4.09	5.03	4.76	4.87	5.04	4.56	4.56	4.07	3.96	3.84	3.85

WTR YR 1978 MEAN 5.69 MAX 24.75 MIN 3.84

LITTLE KANAWHA RIVER BASIN

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03154500 REEDY CREEK NEAR REEDY, WV

LOCATION.--Lat 38°57'40", long 81°23'25", Wirt County, Hydrologic Unit 05030203, on left bank 0.2 mi (0.3 km) downstream from Roundbottom Run, 1.0 mi (1.6 km) north of Lucile, 4.5 mi (7.2 km) northeast of Reedy, and at mile 8.5 (13.7 km).

DRAINAGE AREA.--79.4 mi² (205.6 km²).

PERIOD OF RECORD.--October 1951 to September 1978 (discontinued).

REVISED RECORDS--WSP 1385: 1952-53(P).

GAGE.--Water-stage recorder. Altitude of gage is 650 ft (198 m), from topographic map.

REMARKS.--Records good except those for the period Jan. 2 to Mar. 9, which are poor.

AVERAGE DISCHARGE.--27 years, 113 ft³/s (3.200 m³/s), 16.30 in/yr (414 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,730 ft³/s (162 m³/s) Feb. 10, 1957, gage height, 14.7 ft (4.48 m), from rating curve extended above 3,700 ft³/s (110 m³/s); no flow at times in 1959, 1960, 1965, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,200 ft³/s (62 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 26	0900	*4420 125	13.22 4.029	Aug. 10	2100	3150 89.2	10.93 3.331

Minimum discharge, 1.9 ft³/s (0.054 m³/s) Sept. 12, 13, gage height, 2.14 ft (0.652 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	171	6.6	396	27	55	42	48	47	17	4.2	106	142
2	115	5.4	143	46	42	39	36	34	12	5.1	32	39
3	30	5.1	82	35	35	43	30	28	16	18	17	19
4	16	5.4	68	27	30	37	29	209	27	32	110	13
5	11	5.7	800	23	28	31	38	278	14	14	32	9.4
6	14	6.3	549	78	25	27	33	110	10	9.1	17	7.1
7	22	14	149	138	24	31	32	67	12	6.0	915	5.5
8	19	19	88	473	22	35	26	206	41	94	467	4.4
9	237	14	200	1290	20	60	23	688	46	129	101	3.5
10	104	72	140	235	18	650	21	220	19	59	730	2.9
11	36	104	84	147	18	761	21	94	12	152	1260	2.4
12	23	33	61	95	18	869	20	53	14	29	610	2.0
13	17	21	49	70	19	810	17	154	190	15	171	2.0
14	14	16	76	62	22	1040	14	270	33	178	127	2.9
15	11	14	133	52	23	404	13	143	17	109	275	4.1
16	37	13	86	47	20	226	11	102	12	32	80	166
17	82	36	63	184	22	257	11	109	9.7	19	41	175
18	37	59	50	740	25	136	31	70	8.1	13	25	33
19	27	30	40	244	22	98	545	44	6.6	9.7	18	16
20	27	21	63	160	23	68	250	32	9.4	7.5	32	11
21	21	19	84	120	21	59	197	27	32	5.4	22	8.0
22	17	18	55	92	19	66	195	22	12	4.2	13	12
23	15	19	40	75	18	52	112	20	7.2	3.3	9.4	7.9
24	13	19	36	64	16	42	75	70	4.4	7.5	7.5	8.2
25	10	17	52	1780	18	178	63	37	3.1	34	6.0	6.8
26	10	16	53	3530	20	337	508	23	102	38	5.1	5.0
27	11	18	36	1200	23	452	373	17	30	14	5.8	4.0
28	10	76	26	600	28	193	135	14	14	9.1	10	3.2
29	9.7	277	23	250	---	118	80	16	10	6.0	5.8	2.6
30	8.1	402	23	130	---	77	60	59	6.6	13	4.9	2.2
31	7.2	---	24	81	---	58	---	53	---	497	163	---
TOTAL	1182.0	1381.5	3772	12095	674	7296	3047	3316	747.1	1566.1	5418.5	720.1
MEAN	38.1	46.1	122	390	24.1	235	102	107	24.9	50.5	175	24.0
MAX	237	402	800	3530	55	1040	545	688	190	497	1260	175
MIN	7.2	5.1	23	23	16	27	11	14	3.1	3.3	4.9	2.0
CFSM	.48	.58	1.54	4.91	.30	2.96	1.29	1.35	.31	.64	2.20	.30
IN.	.55	.65	1.77	5.67	.32	3.42	1.43	1.55	.35	.73	2.54	.34

CAL YR 1977	TOTAL	26259.06	MEAN	71.9	MAX	1730	MIN	.46	CFSM	.91	IN	12.30
WTR YR 1978	TOTAL	41215.30	MEAN	113	MAX	3530	MIN	2.0	CFSM	1.42	IN	19.31

LITTLE KANAWHA RIVER BASIN

03155000 LITTLE KANAWHA RIVER AT PALESTINE, WV
(National stream-quality accounting network station)

LOCATION.--Lat 39°03'35", long 81°23'25", Wirt County, Hydrologic Unit 05030203, on left bank at end of Washington Street in Elizabeth, 1.0 mi (1.6 km) upstream from Tucker Creek, 2.3 mi (3.7 km) northeast of Palestine, 2.4 mi (3.9 km) upstream from old lock 3, and at mile 27.9 (44.9 km).

WATER-DISCHARGE RECORDS

DRAINAGE AREA.--1,515 mi² (3,924 km²).

PERIOD OF RECORD.--April 1915 to September 1922 (gage heights only), July to September 1939 (fragmentary), October 1939 to current year. Monthly discharge only October 1939 to September 1941, published in WSP 1305.

REVISED RECORDS.--WSP 953: 1940(M).

GAGE.--Water-stage recorder. Datum of gage is 585.51 ft (178.463 m) National Geodetic Vertical Datum of 1929. Prior to Feb. 17, 1950, water-stage recorders or nonrecording gages at old locks 3 and 4 at various datums. Auxiliary water-stage recorder 3.0 mi (4.8 km) upstream from base gage at old lock 4 at datum 596.08 ft (181.685 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. Some regulation since 1968 from five floodwater detention reservoirs affecting 49.5 mi² (128.2 km²), and since 1974 by Burnsville Reservoir at mile 124.2 (199.8 km). Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--39 years, 2,089 ft³/s (59.16 m³/s), 18.72 in/yr (475 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 50,700 ft³/s (1,440 m³/s) Mar. 7, 1967, gage height, 39.14 ft (11.930 m), backwater, from rating curve extended above 39,000 ft³/s (1,100 m³/s); minimum, 0.6 ft³/s (.017 m³/s) July 14, 1959 (filling pool above old lock 3).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 17, 1939, reached a stage of 32.25 ft (9.830 m), from flood-marks at old lock 4, discharge about 53,000 ft³/s (1,500 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 43,000 ft³/s (1,220 m³/s) Jan. 26, gage height, 35.00 ft (10.668 m); minimum, 143 ft³/s (4.05 m³/s) Aug. 29, 30, gage height, 13.96 ft (4.255 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	402	257	8830	893	3200	997	1940	1720	1780	1120	5690	6680
2	1200	235	10300	891	3100	917	1630	1400	969	722	3060	3050
3	1620	214	5200	850	2000	934	1330	1120	685	585	1570	1540
4	1130	202	2880	650	1100	859	1100	1230	841	1740	2920	994
5	756	194	4120	680	920	745	1030	5650	1730	4010	1890	706
6	613	190	9920	902	890	730	1060	6770	984	2660	1140	507
7	538	198	6650	1210	758	819	1080	3830	683	2010	3610	364
8	479	227	3540	2220	693	967	1020	2790	612	1920	5930	293
9	968	990	2720	7560	727	1330	583	8190	821	1840	2780	240
10	3730	1540	3280	7360	677	5200	513	8160	591	1620	2990	205
11	3060	1830	2980	4300	605	12100	847	4660	736	2560	8630	179
12	1690	1760	1860	2500	586	12900	816	2880	757	2010	5010	161
13	1060	1380	1630	2360	582	13600	799	2450	1010	1320	2650	162
14	740	1000	1550	2390	636	15900	758	2820	970	1160	1860	276
15	585	780	1690	1850	683	13700	699	3660	752	2650	2470	914
16	520	668	2280	1400	704	7920	631	3690	572	2810	1940	656
17	880	708	2350	1350	732	6280	568	3210	433	2380	1110	1590
18	2840	850	1950	6400	720	5100	596	2950	335	1530	746	1050
19	2140	764	1680	9830	693	3360	2160	2410	273	933	566	756
20	1480	800	1520	6950	680	2410	2470	2300	240	653	463	528
21	1090	708	1520	4600	720	1940	3440	2000	285	486	400	378
22	924	628	1410	3200	720	1810	4420	1610	275	373	312	435
23	780	578	1230	2300	640	1660	4760	1280	238	297	253	490
24	676	613	1050	2000	640	1480	3840	1180	291	286	211	360
25	571	1100	1030	9220	610	1750	2710	1310	391	478	185	360
26	479	1310	1860	38000	646	2470	2760	1230	518	840	168	324
27	418	1280	2330	36900	702	5030	9010	961	450	719	156	263
28	375	1310	1730	27000	824	6120	6330	756	3770	629	150	217
29	345	2160	1240	16000	---	4310	3240	672	2660	492	152	187
30	315	5840	1060	8500	---	3300	2160	1070	1720	512	153	165
31	285	---	1050	4600	---	2450	---	1970	---	3610	855	---
TOTAL	32689	30314	92440	214866	26188	139088	65100	85929	26372	44955	60020	24030
MEAN	1054	1010	2982	6931	935	4487	2170	2772	879	1450	1936	801
MAX	3730	5840	10300	38000	3200	15900	9010	8190	3770	4010	8630	6680
MIN	285	190	1030	650	582	730	568	672	238	286	150	161
CFSM	.70	.67	1.97	4.58	.62	2.96	1.43	1.83	.58	.96	1.28	.53
IN.	.80	.74	2.27	5.28	.64	3.42	1.60	2.11	.65	1.10	1.47	.59
CAL YR 1977 TOTAL	561183			1537	MAX	18000	MIN	62	CFSM	1.02	IN	13.78
WTR YR 1978 TOTAL	841991			2307	MAX	38000	MIN	150	CFSM	1.52	IN	20.67

LITTLE KANAWHA RIVER BASIN

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03155000 LITTLE KANAWHA RIVER AT PALESTINE, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966, 1976 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
JAN 18...	1130	6540	135	7.4	1.0	45	12.1	1400	--	42	21	12
MAR 06...	1215	692	165	7.1	3.0	5.0	12.8	--	--	53	26	15
APR 03...	1135	1340	110	7.8	15.0	10	9.4	180	77	42	14	12
MAY 23...	1100	1280	100	7.4	18.5	--	--	60	10	--	--	--
JUN 27...	1030	463	165	7.7	26.0	10	--	1600	370	60	16	17
JUL 12...	1005	2060	100	7.1	24.0	95	7.2	970	680	36	15	10
AUG 29...	0930	150	115	7.3	27.5	1.0	7.2	--	22	54	14	15
SEP 18...	1030	1060	110	6.9	24.0	65	8.1	2000	7600	48	15	13

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
JAN 18...	3.0	10	33	.7	1.5	26	0	21	1.7	20	13	.0
MAR 06...	3.8	9.3	27	.6	1.4	33	0	27	4.2	25	13	.0
APR 03...	2.8	5.1	20	.3	1.5	34	--	28	.9	20	5.7	.0
MAY 23...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 27...	4.3	9.8	25	.6	2.1	--	--	44	--	21	14	.1
JUL 12...	2.6	4.8	21	.4	2.0	--	--	21	--	16	5.6	.1
AUG 29...	3.9	6.3	20	.4	2.0	--	--	40	--	17	7.5	.1
SEP 18...	3.7	7.0	23	.4	2.8	--	--	33	--	18	9.7	.1

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)
JAN 18...	5.1	82	77	.11	1450	.46	.07	--	--	.62	--	--
MAR 06...	4.7	98	88	.13	183	.38	.02	.17	.00	.34	.57	2.5
APR 03...	5.0	64	69	.09	232	.24	.04	.28	.13	.19	.56	2.5
MAY 23...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 27...	3.4	105	98	.14	131	.03	.08	.28	.16	.20	.39	1.7
JUL 12...	5.4	82	59	.11	456	.41	.02	.70	.44	.28	1.1	4.8
AUG 29...	5.2	85	81	.12	34	1.7	.00	.35	.35	.31	.37	9.1
SEP 18...	4.4	84	79	.11	240	.29	.02	.78	.25	.55	1.1	4.8

LITTLE KANAWHA RIVER BASIN

03155000 LITTLE KANAWHA RIVER AT PALESTINE, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV- ERABLE (UG/L AS CR)
JAN 18...	.06	.01	--	--	--	--	--	--	--	--	--	--
MAR 06...	.02	.02	--	--	--	--	--	--	--	--	--	--
APR 03...	.01	.00	--	--	--	--	--	--	--	--	--	--
MAY 23...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 27...	.04	.00	--	--	--	--	--	--	--	--	--	--
JUL 12...	.09	.02	--	--	--	--	--	--	--	--	--	--
AUG 29...	.02	.00	1	1	0	0	0	1	0	1	<10	<10
SEP 18...	.13	.01	--	--	--	--	--	--	--	--	--	--
DATE	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDE RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)
JAN 18...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 06...	--	--	--	--	--	--	--	--	--	--	--	--
APR 03...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 23...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 27...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 12...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 29...	0	2	2	0	2	1	1	190	180	10	1	0
SEP 18...	--	--	--	--	--	--	--	--	--	--	--	--
DATE	TIME	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)
MAR 06...	1215	--	--	--	--	--	--	--	--	--	--	--
APR 03...	1135	--	--	--	--	--	--	--	--	--	--	--
MAY 23...	1100	--	--	--	--	--	--	--	--	--	--	--
JUN 27...	1030	--	--	--	--	--	--	--	--	--	--	--
JUL 12...	1005	--	--	--	--	--	--	--	--	--	--	--
AUG 29...	0930	1	100	100	0	<.5	.0	<.5	0	0	0	0
SEP 18...	1030	--	--	--	--	--	--	--	--	--	--	--
DATE	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. & FINER THAN .062 MM
MAR 06...	--	--	--	--	--	2.0	--	--	150	8	15	29
APR 03...	--	--	--	--	--	8.2	--	--	--	16	58	76
MAY 23...	--	--	--	--	--	--	--	--	490	14	48	75
JUN 27...	--	--	--	--	--	5.9	--	--	4400	42	53	84
JUL 12...	--	--	--	--	--	7.9	--	--	2600	196	1090	87
AUG 29...	0	0	40	30	10	--	2.7	.6	--	11	4.5	47
SEP 18...	--	--	--	--	--	6.2	--	--	3100	158	452	89

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PHYTOPLANKTON ANALYSES, OCTOBER 1977 TO SEPTEMBER 1978

DATE TIME	MAR 6,78 1215	MAY 23,78 1100	JUN 27,78 1030	JUL 12,78 1005	SEP 18,78 1030
TOTAL CELLS/ML	150	490	4400	2600	3100
DIVERSITY: DIVISION	1.2	0.7	1.7	0.6	1.5
...CLASS	1.2	0.9	1.4	0.6	1.5
...ORDER	1.2	1.9	1.9	1.5	2.1
...FAMILY	1.2	2.1	2.3	1.6	2.5
...GENUS	1.2	2.1	2.7	1.6	2.7

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
...CHARACIACEAE	--	-	--	-	27	1	--	-	--	-
...SCHROEDERIA										
...MICRACTINIACEAE	--	-	--	-	110	2	--	-	--	-
...MICRACTINIUM										
...OOCYSTACEAE	--	-	--	-	55	1	14	1	66	2
...ANKISTRODESMS	--	-	--	-	110	2	--	-	--	-
...CHLORELLA	--	-	--	-	27	1	--	-	--	-
...CHODATELLA	--	-	--	-	1300#	30	--	-	89	3
...DICTYOSPHAERIUM	--	-	29	6	55	1	29	1	--	-
...KIMCHNERIELLA	--	-	--	-	--	-	--	-	200	6
...SELENASTRUM	--	-	--	-	--	-	--	-	22	1
...TETRAEDRON	--	-	--	-	--	-	--	-	180	6
...SCENEDESMACEAE										
...SCENEDESMUS	--	-	--	-	220	5	57	2	22	1
...VOLVOCALES										
...CHLAMYDOMONADACEAE										
...CHLAMYDOMONAS	--	-	72	15	27	1	--	-	22	1
CHRYSOPHYTA										
..BACILLARIOPHYCEAE										
..CENTRALES										
...COSCINODISCACEAE										
....CYCLOTELLA	--	-	190#	38	690#	16	14	1	270	9
....MELOSIRA	--	-	--	-	--	-	--	-	44	1
..PENNALES										
...ACHNANTHACEAE										
...ACHNANTHES	7	5	--	-	--	-	--	-	44	1
...CYMBELLACEAE										
...CYMBELLA	--	-	--	-	--	-	29	1	--	-
...FRAGILARIACEAE										
...SYNEDRA	--	-	29	6	--	-	29	1	--	-
...NAVICULACEAE	--	-	--	-	--	-	72	3	89	3
...NAVICULA										
...NITZSCHIACEAE										
...NITZSCHIA	--	-	160#	32	27	1	29	1	160	5
...SURIRELLACEAE										
...SURIRELLA	--	-	--	-	27	1	--	-	22	1
..CHRYSOPHYCEAE										
...CHRYSONOMADALES										
...OCHROMONADACEAE										
...OCHROMONAS	--	-	14	3	27	1	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)										
..CYANOPHYCEAE										
...CHROOCOCCALES										
...CHROOCOCCACEAE										
...AGMENELLUM	--	-	--	-	--	-	920#	35	350	11
...ANACYSTIS	--	-	--	-	1400#	32	--	-	--	-
...HORMOGONALES										
...NOSTOCAEAE										
...ANABAENOPSIS	--	-	--	-	--	-	1400#	55	--	-
...OSCILLATORIACEAE										
...LYNGBYA	55#	36	--	-	--	-	--	-	--	-
...OSCILLATORIA	--	-	--	-	--	-	--	-	1500#	48
EUGLENOPHYTA (EUGLENOIDS)										
..EUGLENOPHYCEAE										
...EUGLENALES										
...EUGLENACEAE										
...EUGLENA	--	-	--	-	82	2	--	-	--	-
...TRACHELomonas	89#	59	--	-	140	3	--	-	66	2
PYRRHOPHYTA (FIRE ALGAE)										
..DINOPHYCEAE										
...PERIDINIALES										
...GLENODINIACEAE										
...GLENODINIUM	--	-	--	-	27	1	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

LITTLE KANAWHA RIVER BASIN

03155500 HUGHES RIVER AT CISCO, WV

LOCATION.--Lat 39°07'10", long 81°16'40", Ritchie County, Hydrologic Unit 05030203, on right bank 100 ft (30 m) downstream from confluence of North and South Forks, 1.0 mi (1.6 km) upstream from Cisco, 5.0 mi (8.0 km) south of Petroleum, and at mile 14.0 (22.5 km).

DRAINAGE AREA.--452 mi² (1,171 km²).

PERIOD OF RECORD.--May 1915 to September 1922 (gage heights only), October 1928 to September 1931, October 1938 to current year. Monthly discharge only for some periods, published in WSP 1305. Prior to October 1965, published as "at Cisko."

REVISED RECORDS.--WSP 893: 1939. WSP 1113: 1947.

GAGE.--Water-stage recorder. Datum of gage is 607.92 ft (185.294 m) National Geodetic Vertical Datum, adjustment of 1912. Prior to Sept. 30, 1931, nonrecording gage at site 0.9 mi (1.4 km) downstream and Mar. 5, 1939, to Sept. 30, 1945, nonrecording gage at site 1.0 mi (1.6 km) downstream, both at datum 2.56 ft (0.780 m) lower. Oct. 1, 1945, to June 30, 1946, nonrecording gage at bridge across mouth of North Fork at present datum.

REMARKS.--Records good except those for the period Dec. 27 to Mar. 6, which are poor.

AVERAGE DISCHARGE.--43 years, 575 ft³/s (16.28 m³/s), 17.28 in/yr (439 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,700 ft³/s (898 m³/s) June 26, 1950, gage height, 32.69 ft (9.964 m); no flow July 26, Aug. 2-6, Sept. 4 to Dec. 5, 1930.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 18,100 ft³/s (513 m³/s) Jan. 26, gage height, 26.45 ft (8.062 m) no other peak above base of 9,500 ft³/s (270 m³/s); minimum, 14 ft³/s (0.40 m³/s) Sept. 30, gage height, 2.22 ft (0.677 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	85	33	2770	184	320	162	415	288	422	150	968	899
2	417	30	1440	250	290	190	341	239	226	115	356	344
3	314	27	647	280	250	180	278	203	174	184	384	186
4	165	27	470	230	220	170	262	279	196	885	2280	128
5	100	24	1170	210	190	140	419	767	171	399	712	93
6	78	23	3050	258	180	130	472	612	140	199	363	70
7	80	26	1180	669	170	150	797	441	138	135	1210	56
8	91	713	570	1490	160	183	874	545	156	108	1070	44
9	331	575	905	3660	140	244	550	2760	495	1440	459	37
10	889	446	1350	1940	130	1410	413	2000	386	432	1000	30
11	349	1200	620	800	120	3630	351	938	209	1390	944	24
12	199	542	410	580	120	4180	326	630	162	455	541	22
13	140	298	412	540	120	4300	283	608	951	212	2140	56
14	185	206	422	480	132	6780	230	1010	776	2120	1100	37
15	78	159	784	390	140	4630	192	971	305	3190	676	74
16	89	135	740	330	125	1760	166	768	198	614	306	76
17	270	298	510	489	118	1710	150	856	163	3840	195	72
18	340	1130	403	2570	120	1110	213	746	126	822	140	54
19	219	581	336	2190	120	736	1890	762	100	319	118	56
20	193	331	345	1130	120	563	2410	576	84	190	102	47
21	289	243	608	935	130	464	2240	431	96	135	91	36
22	171	202	510	690	120	563	1790	329	93	105	72	34
23	135	171	372	560	110	499	1200	260	85	87	64	64
24	187	156	306	520	99	409	729	274	71	89	56	66
25	87	150	390	1520	104	1080	577	521	49	132	49	49
26	72	147	597	15300	115	2830	775	376	51	161	40	39
27	62	153	350	5100	130	3710	780	260	2040	122	37	33
28	53	183	320	2100	140	1840	547	198	856	87	51	23
29	45	636	270	920	---	1000	414	159	533	70	130	19
30	40	1900	220	480	---	653	342	277	235	105	87	15
31	36	---	191	351	---	486	---	1210	---	1320	669	---
TOTAL	5549	10745	22668	47146	4233	45892	20426	20294	9687	19612	16410	2783
MEAN	179	358	731	1521	151	1480	681	655	323	633	529	92.8
MAX	889	1900	3050	15300	320	6780	2410	2760	2040	3840	2280	899
MIN	36	23	191	184	99	130	150	159	49	70	37	15
CFSM	.40	.79	1.62	3.37	.33	3.27	1.51	1.45	.72	1.40	1.17	.21
IN.	.46	.88	1.87	3.88	.35	3.78	1.68	1.67	.80	1.61	1.35	.23
CAL YR 1977	TOTAL	140373.8	MEAN	385	MAX	5100	MIN	5.8	CFSM	.85	IN	11.55
WTR YR 1978	TOTAL	225445.0	MEAN	618	MAX	15300	MIN	15	CFSM	1.37	IN	18.55

OHIO RIVER MAIN STEM

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03159530 OHIO RIVER AT BELLEVILLE DAM, WV

LOCATION.--Lat 39°07'07", long 81°44'32", Wood County, Hydrologic Unit 05030202, at right end of Belleville Dam on Ohio River, at Reedsville, Ohio, 1.7 mi (2.7 km) upstream from Wood-Jackson County line, 4.6 mi (7.4 km) downstream from Hocking River, and at mile 203.9 (328.1 km), measured downstream from Pittsburgh, Pa.

DRAINAGE AREA.--39,300 mi² (101,800 km²), approximately.

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

GAGE.--Gate-opening and water-stage recorder. Headwater reference gage 0.4 mi (0.6 km) upstream at datum 570.00 ft (173.736 m) Ohio River datum. Tailwater reference gage 0.5 mi (0.8 km) downstream at datum 22.00 ft (6.706 m) lower.

REMARKS.--Records fair. Daily discharge computed from head, gate openings, and lockages. Flow regulated by Ohio River system of locks, dams, and reservoirs.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 390,000 ft³/s (11,000 m³/s) Jan. 27, 1978; minimum daily, 5,100 ft³/s (144 m³/s) Sept. 7, 8, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 390,000 ft³/s (11,000 m³/s) Jan. 27; minimum daily, 5,670 ft³/s (161 m³/s) Sept. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53900	21500	87800	68700	69400	22200	97700	44100	64600	40200	42700	35200
2	69500	17200	122000	60600	78400	26900	110000	50900	46800	29800	33300	38100
3	81800	17600	138000	57700	72400	22400	115000	40100	43800	61800	24000	21000
4	70200	19600	119000	55000	64900	21900	126000	37900	37800	92000	31500	26500
5	63000	19800	126000	46100	57600	19000	130000	50600	46900	81000	22400	22800
6	63000	24000	192000	47800	46200	16500	98900	72200	40900	64800	21800	12700
7	60400	24000	146000	47400	44300	21800	164000	61800	36000	54500	39400	14900
8	55200	33700	110000	61500	44900	15600	137000	62000	70300	46500	60300	14800
9	55200	55400	98600	146000	43100	26500	84600	87700	123000	41000	37300	14800
10	79400	57800	86000	151000	40100	23300	113000	127000	87100	31100	48300	9340
11	96300	54300	84900	152000	34900	50000	124000	115000	69500	39800	60800	5670
12	95900	52600	65400	95500	36000	105000	110000	96700	54600	52700	47000	11900
13	78700	60400	55200	87300	33000	127000	92200	88300	52000	24000	34400	22500
14	70400	47200	76800	86600	31000	235000	80400	97000	49000	34300	40200	8420
15	57900	44500	125000	80000	31000	288000	72500	140000	45200	52500	26500	16400
16	50700	45900	180000	66000	28900	295000	64000	130000	33100	35000	22600	13100
17	40900	46700	190000	50800	28000	233000	58000	160000	39000	44300	25400	18500
18	39400	72500	170000	55800	30900	197000	52000	280000	54700	34500	14700	17300
19	46400	82300	153000	61200	32300	106000	48600	220000	29800	20100	14300	15200
20	36100	76600	148000	65800	22800	121000	72000	190000	45200	24700	10800	22900
21	37400	61900	152000	52500	20500	129000	100000	160000	43200	15000	13300	17700
22	26400	61100	147000	44600	27800	129000	98000	121000	39100	17000	10400	19500
23	22500	65700	130000	36100	22400	174000	83000	149000	31000	14100	9320	11300
24	28400	69400	119000	36400	22700	157000	69000	146000	31600	23700	6810	14500
25	26300	62900	114000	71400	30700	184000	59000	147000	22500	19000	9030	7740
26	25400	61800	116000	292000	26000	246000	110000	122000	22200	22700	9830	12100
27	26500	63000	118000	390000	22000	259000	101000	156000	46200	14300	11300	14700
28	25200	56200	103000	221000	21400	212000	82800	112000	65600	16900	13800	8820
29	17600	58400	86300	125000	---	155000	73500	87600	70800	16800	13900	8870
30	19400	66900	81200	100000	---	83100	58400	63500	58600	20000	17400	8850
31	23800	---	74000	83000	---	100000	---	73700	---	28100	26500	---
TOTAL	1543200	1500900	3714200	3035200	1063600	3801600	2784000	3489100	1500100	1113000	814290	486110
MEAN	49780	50030	119800	97910	37990	122600	92800	112600	50000	35900	26270	16200
MAX	96300	82300	192000	390000	78400	295000	164000	280000	123000	92000	66300	38100
MIN	17600	17200	55200	36100	20500	15600	48000	37900	22200	14100	8320	5670
CAL YR 1977 TOTAL	20900860	MEAN	57260	MAX	333000	MIN	6120	CFSM	1.46	IN	19.78	
WTR YR 1978 TOTAL	24845300	MEAN	68070	MAX	390000	MIN	5670	CFSM	1.73	IN	23.51	

KANAWHA RIVER BASIN

03176500 NEW RIVER AT GLEN LYN, VA

LOCATION.--Lat 37°22'20", long 80°51'45", Giles County, Hydrologic Unit 05050002, on right bank at upstream side of bridge on U.S. Highway 460 at Glen Lyn, 0.3 mi (0.5 km) upstream from East River, and 6.3 mi (10.1 km) downstream from Wolf Creek.

DRAINAGE AREA.--3,768 mi² (9,759 km²).

PERIOD OF RECORD.--August 1927 to current year.

REVISED RECORDS.--WSP 758: Drainage area. WSP 1305: 1928(M), 1930(M).

GAGE.--Water-stage recorder. Datum of gage is 1,490.24 ft (454.225 m) National Geodetic Vertical Datum of 1929. Aug. 11, 1927, to Oct. 16, 1934, on left bank just upstream from highway bridge at same datum, and Oct. 17, 1934, to June 16, 1939, on left bank 200 ft (61 m) upstream from highway bridge at same datum.

REMARKS.--Records good. Flow regulated since 1939 by Claytor Reservoir (station 03169000) 55 mi (88 km) above station. Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--51 years, 4,983 ft³/s (141.1 m³/s), 17.96 in/yr (456 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 226,000 ft³/s (6,400 m³/s) Aug. 14, 1940, gage height, 27.50 ft (8.382 m), from rating curve extended above 89,000 ft³/s (2,500 m³/s) on basis of slope-area measurement of peak flow; minimum, 730 ft³/s (20.7 m³/s) Jan. 30, 1966, result of freezeup; minimum daily, 820 ft³/s (23.2 m³/s) Sept. 8, 1930; minimum gage height, 2.10 ft (0.640 m) Sept. 8, 1930.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 110,000 ft³/s (3,120 m³/s) Nov. 7, gage height, 18.12 ft (5.523 m), from rating curve extended as explained above; minimum, 966 ft³/s (27.4 m³/s) Sept. 5, 11, gage height, 3.04 ft (0.927 m); minimum daily, 1,090 ft³/s (30.9 m³/s) Sept. 5, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3660	4710	11900	2980	5840	5260	8430	15400	6030	3620	2430	1900
2	2780	3860	9480	3960	5810	5490	7480	12500	4970	1530	2990	1860
3	6090	3930	8530	4560	5430	4670	6350	8960	5050	1820	2380	1170
4	9840	3830	6980	3860	6220	4890	6820	11800	3550	7300	2580	1210
5	7020	7950	6520	3130	5010	4960	6460	12000	1950	4220	4390	1090
6	5510	15200	11000	3100	4820	1790	5720	12300	4050	5040	3130	2710
7	3220	75800	8070	4100	5560	4700	5940	11500	3440	4720	2070	2410
8	2860	69900	6890	2980	4890	5750	5960	15000	4810	4370	10200	2010
9	3310	26500	6650	11800	4530	7070	3740	18500	7690	1390	5690	2420
10	4380	16100	7230	13800	4610	15900	3470	13800	5290	1280	6260	1170
11	6010	13500	6130	13400	5120	41900	6390	12200	4040	2910	5860	1090
12	5470	9660	3130	13200	3740	24900	5220	11100	1670	2580	5610	1940
13	4030	9130	5590	8920	2730	21900	3950	11900	3640	2820	5190	1810
14	3190	5550	4960	6260	5430	26900	4460	17900	4310	2960	4360	1760
15	3600	6280	5890	5400	4400	30500	4480	15800	3420	3440	4300	1690
16	2950	5630	5230	3830	4360	23900	3640	14900	4190	1500	5950	2230
17	3190	6890	6010	6010	4860	16500	3190	12500	4500	1480	4640	1180
18	2670	6600	7580	6740	5170	14000	4150	10400	2890	3360	6220	3800
19	2460	6810	4310	6500	4530	10600	5770	8120	2660	3670	6330	2370
20	2530	5550	5510	8620	3440	7730	4280	7850	3030	4710	1450	2070
21	2750	5000	6480	6360	4790	7960	4530	7310	4850	3460	1340	1770
22	2510	6010	6320	4580	4410	8030	4330	4950	4340	2520	2560	1700
23	1350	7820	5930	1990	4290	7460	3820	6800	4480	1720	2530	1560
24	1300	7820	5150	4570	4610	6570	2370	6650	4130	1170	2400	1240
25	2270	5970	4420	6930	4090	10600	4180	7060	3420	2760	2270	1170
26	4100	7820	3890	52700	3330	18900	20000	6240	1490	2200	3020	1780
27	13000	6810	3010	53300	2830	27200	35300	6010	3640	2540	1220	1860
28	11900	5000	3600	19400	5960	19700	36400	4770	4200	2170	1200	1810
29	8070	7270	3890	13900	---	15600	26000	3950	2690	1890	2810	1870
30	5670	10500	5190	12600	---	12500	18400	3700	3570	1500	2820	1360
31	3470	---	4100	7390	---	11500	---	5910	---	1280	2890	---
TOTAL	141160	373400	189570	316870	130810	425330	261230	317680	117990	87930	114390	54010
MEAN	4554	12450	6115	10220	4672	13720	8708	10250	3933	2836	3690	1800
MAX	13000	75800	11900	53300	6220	41900	36400	18500	7690	7300	10200	3800
MIN	1300	3830	3010	1990	2730	1790	2370	3700	1490	1170	1200	1090
(*)	+157	-53	+42	-83	+69	+2	+66	-105	-52	+130	-109	-9
MEAN#	4711	12397	6157	10137	4741	13722	8774	10145	3881	2966	3581	1791
CFSM#	1.25	3.29	1.63	2.69	1.26	3.64	2.33	2.69	1.03	.79	.95	.48
IN#	1.44	3.67	1.88	3.10	1.31	4.20	2.60	3.10	1.15	.91	1.10	.53

CAL YR 1977 TOTAL 1966300 MEAN 5387 MAX 75800 MIN 1030 MEAN# 5390 CFSM# 1.43 IN# 19.42
WTR YR 1978 TOTAL 2530370 MEAN 6933 MAX 75800 MIN 1090 MEAN# 6937 CFSM# 1.84 IN# 25.00

* Change in contents, equivalent in cubic feet per second, in Claytor Reservoir; furnished by Appalachian Power Co.
* Adjusted for change in contents.

KANAWHA RIVER BASIN

147

03179000 BLUESTONE RIVER NEAR PIPESTEM, WV

LOCATION.--Lat 37°32'45", long 81°00'30", Summers County, Hydrologic Unit 05050002, on left bank 1.2 mi (1.9 km) downstream from Mountain Creek, 2.5 mi (4.0 km) west of Pipestem, and at mile 8.0 (12.9 km).

DRAINAGE AREA.--363 mi² (940 km²).

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

REVISED RECORDS.--WSP 1705: 1959.

GAGE.--Water-stage recorder. Datum at gage is 1,527.35 ft (465.536 m) National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

REMARKS.--Records good except those for January and February, which are poor.

AVERAGE DISCHARGE.--28 years, 469 ft³/s (13.38 m³/s), 17.55 in/yr (446 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,300 ft³/s (547 m³/s) Apr. 5, 1977, gage height, 15.82 ft (4.822 m); minimum, 7.0 ft³/s (0.20 m³/s) Sept. 21-23, 30, 1955, gage height, 1.60 ft (0.488 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1908, that of Apr. 5, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,500 ft³/s (130 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)	Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)
Jan. 26	2200	8950	253	11.37	3.466	Mar. 14	1700	9530	270	11.62	3.542
Mar. 10	2100	5740	163	9.90	3.018	Apr. 26	2300	*11300	320	12.40	3.780

Minimum discharge, 24 ft³/s (0.68 m³/s) Sept. 29, 30, gage height, 1.88 ft (0.573 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	131	241	1780	160	420	372	680	1180	202	63	81	51
2	2030	210	1190	140	350	323	586	914	179	64	96	47
3	1040	194	882	120	280	303	505	757	241	161	84	47
4	487	198	735	110	250	298	446	668	278	204	95	41
5	278	221	774	95	220	242	418	809	196	131	381	37
6	198	275	1170	150	190	271	370	825	161	100	198	36
7	159	1790	994	250	170	351	351	710	144	80	147	34
8	163	3690	785	317	155	530	315	2060	148	74	164	32
9	1840	2060	707	571	140	1050	287	3490	173	66	133	31
10	1580	1170	641	938	130	3680	265	2150	179	64	106	29
11	715	1010	525	653	120	4760	252	1290	144	69	125	41
12	429	885	467	533	110	3860	253	915	127	151	123	53
13	299	652	472	400	150	4110	243	905	121	104	186	53
14	237	516	512	340	250	7320	212	1200	114	78	131	38
15	217	432	820	290	333	5660	192	1010	103	82	104	40
16	217	377	781	260	294	2910	184	840	92	88	95	37
17	429	918	662	230	281	1760	187	676	100	153	81	37
18	474	1390	614	200	250	1220	213	590	100	114	70	37
19	370	926	566	180	230	954	225	499	92	88	83	34
20	293	665	514	170	210	902	259	434	141	70	163	29
21	230	536	492	150	190	843	268	385	186	60	105	27
22	194	652	445	140	170	793	246	336	260	55	83	29
23	174	2130	382	130	160	663	222	319	182	50	63	31
24	158	1660	361	180	150	585	211	676	124	50	54	27
25	149	1240	405	567	281	801	224	560	100	62	48	31
26	321	1510	368	7330	413	2770	5350	409	90	107	45	29
27	655	1250	314	5800	416	3060	8340	339	92	131	48	28
28	574	975	272	2500	385	1860	4500	263	88	88	49	27
29	453	1410	243	1200	---	1290	2450	236	76	74	44	25
30	358	2250	200	800	---	982	1520	225	65	72	44	24
31	292	---	180	600	---	795	---	212	---	66	60	---
TOTAL	15064	31433	19233	25904	6698	55318	29774	25882	4298	2819	3289	1062
MEAN	486	1048	620	836	239	1784	992	835	143	90.9	106	35.4
MAX	2030	3690	1780	7330	420	7320	8340	3490	278	204	381	53
MIN	131	194	180	95	110	242	184	212	65	50	44	24
CFSM	1.34	2.89	1.71	2.30	.66	4.92	2.73	2.30	.39	.25	.29	.10
IN.	1.54	3.22	1.97	2.65	.69	5.67	3.05	2.65	.44	.29	.34	.11

CAL YR 1977	TOTAL	190411	MEAN	522	MAX	15900	MIN	47	CFSM	1.44	IN	19.51
WTR YR 1978	TOTAL	220774	MEAN	605	MAX	8340	MIN	24	CFSM	1.67	IN	22.62

KANAWHA RIVER BASIN

03179800 BLUESTONE LAKE NEAR HINTON, WV

LOCATION.--Lat 37°38'25", long 80°53'15", Summers County, Hydrologic Unit 05050002, at Bluestone Dam on New River, 1.0 mi (1.6 km) upstream from Greenbrier River, 2.2 mi (3.5 km) upstream from Hinton, at New River mile 64.8 (104.3 km) and Kanawha River mile 161.8 (260.3 km).

DRAINAGE AREA.--4,603 mi² (11,922 km²).

PERIOD OF RECORD.--July 1949 to current year (monthend contents only). Prior to October 1960 monthend contents published in WSP 1725.

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

REMARKS.--Reservoir is formed by concrete gravity-type dam completed in 1952; closure of dam was made Dec. 18, 1947, and storage began July 1949. Spillway equipped with 21 lift gates 30 ft (9.1 m) wide by 31 ft (9.4 m) high and 16 sluice gates 5.67 ft (1.728 m) wide by 10 ft (3.0 m) high. Total level-pool capacity at elevation 1,520 ft (463.3 m), flood-control pool elevation, is 631,000 acre-ft (778 hm³) of which 600,100 acre-ft (740 hm³) is controlled storage above elevation 1,406 ft (428.5 m), minimum-pool elevation, and 10,000 acre-ft (12.3 hm³) is dead storage below elevation 1,391 ft (424.0 m), stilling-basin weir. Figures given herein represent total contents. This is a multipurpose reservoir.

COOPERATION.--Records were furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 510,900 acre-ft (630 hm³) Apr. 6, 1960, elevation, 1,505.97 ft (459.020 m), results of holding water for cofferdam construction on Ohio River; minimum since initial filling, 18,060 acre-ft (22.3 hm³) Oct. 4, 1956, elevation, 1,397.94 ft (426.092 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 279,000 acre-ft (344 hm³) Jan. 29, elevation, 1,472.06 ft (448.684 m); minimum, 28,880 acre-ft (35.6 hm³) Mar. 7, elevation, 1,404.88 ft (428.207 m).

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in Contents (acre-feet)	Change in Contents (equivalent in cfs)
Sept. 30.....	1410.83	39900	-	-
Oct. 31.....	1410.78	39800	-100	-2
Nov. 30.....	1405.60	30200	-9600	-161
Dec. 31.....	1407.27	33290	+3090	+50
CAL YR 1977	-	-	+730	+1
Jan. 31.....	1440.82	127900	+94610	+1540
Feb. 28.....	1406.95	32700	-95200	-1710
Mar. 31.....	1411.37	40960	+8260	+134
Apr. 30.....	1423.66	71190	+30230	+508
May 31.....	1410.09	38510	-32680	-531
June 30.....	1410.37	39040	+530	+9
July 31.....	1410.08	38490	-550	-9
Aug. 31.....	1410.66	39570	+1080	+18
Sept. 30.....	1410.47	39220	-350	-6
WTR YR 1978	-	-	-680	-1

KANAWHA RIVER BASIN

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03180000 NEW RIVER AT BLUESTONE DAM, WV

LOCATION.--Lat 37°38'35", long 80°53'00", Summers County, Hydrologic Unit 05050002, on right bank 0.3 mi (0.5 km) downstream from Bluestone Dam, 0.7 mi (1.1 km) upstream from Greenbrier River, 2.0 mi (3.2 km) upstream from Hinton, at New River mile 64.5 (103.8 km) and Kanawha River mile 161.5 (259.9 km).

DRAINAGE AREA.--4,604 mi² (11,924 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1923 to September 1969, October 1975 to current year. Published as "near Hinton" 1923-46. Monthly discharge only October, November 1923, published in WSP 1305.

REVISED RECORDS.--WSP 713: 1925(M). WSP 783: Drainage area. WSP 893: 1930(M), 1935-36(M). WSP 1335: 1929, 1933.

GAGE.--Water-stage recorder. Datum of gage is 1,360.00 ft (414.528 m) National Geodetic Vertical Datum of 1929 (Corps of Engineers datum). Dec. 1, 1923, to Nov. 19, 1934, nonrecording gage and Nov. 20, 1934, to July 1, 1947, water-stage recorder, at site 1.3 mi (2.1 km) upstream at datum 8.49 ft (2.588 m) higher. Auxiliary water-stage recorder 0.7 mi (1.1 km) downstream from present base gage.

REMARKS.--Water-discharge records good. Flow regulated since 1939 by Claytor Lake (station 03169000) and since 1949 by Bluestone Lake (03179800).

AVERAGE DISCHARGE.--49 years, 5,554 ft³/s (157.3 m³/s), 16.38 in/yr (416 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 232,000 ft³/s (6,570 m³/s) Aug. 15, 1940, gage height, 25.7 ft (7.83 m), from floodmarks, present site and datum, from rating curve extended above 70,000 ft³/s (2,000 m³/s) on basis of slope-area measurement of peak flow; minimum, 10 ft³/s (0.28 m³/s) Aug. 30, 1948 (estimated during construction of Bluestone Dam).

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of Apr. 21 and May 23, 1901, reached a stage of 24.2 ft (7.38 m) former site and datum, discharge, 234,000 ft³/s (6,630 m³/s). Flood in 1878 probably reached a higher stage.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 50,000 ft³/s (1,420 m³/s) Jan. 30, gage height, 13.54 ft (4.127 m); minimum discharge, 799 ft³/s (22.6 m³/s) Jan. 27, 28, gage height, 7.21 ft (2.198 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3790	5460	14100	4060	36500	6350	11600	27700	6980	3900	2420	2780
2	6320	4420	13400	4060	21700	6250	9190	18800	5950	2860	3460	2300
3	7940	4420	10900	5450	8140	5850	7100	11900	5700	2540	3340	1680
4	9020	4150	8910	4850	6750	5650	7820	11900	4530	6700	3460	1310
5	8540	8170	7340	4380	5900	5600	7580	13800	4120	6250	4530	1310
6	5900	14500	12300	3750	5900	4210	6600	14100	4120	5200	4120	1710
7	4190	29200	11100	4800	6050	4300	5750	12800	4210	5250	3950	3340
8	3380	44400	8630	4850	4800	6400	7040	16100	5250	5250	8910	2660
9	5960	45100	8210	11000	5350	9190	4950	22200	7820	3100	8070	2620
10	7340	41100	8070	17400	6000	15400	4120	21800	6500	1800	6600	1860
11	7340	34800	6920	12700	5950	32600	6450	17700	5150	2230	6600	1360
12	6380	23400	4530	9190	4850	36200	6150	13300	3660	3140	6600	1860
13	4850	12100	6300	6800	4210	34600	4900	12600	3580	3580	5650	2300
14	3460	8180	6100	7520	5400	33600	4750	18600	4750	3620	5250	2090
15	3620	6650	6920	6350	5200	17300	4800	19500	4350	3740	5400	1990
16	3380	7040	6700	5250	5250	25000	4800	18200	4750	3220	5700	2340
17	4020	7700	7280	6600	5700	39800	4260	15700	5350	2420	5250	2060
18	3840	8910	7280	7340	5800	35800	4480	12600	3780	3260	6650	3340
19	3180	9120	6400	7400	5400	25600	6200	9680	3380	4120	4660	3500
20	3100	7100	5900	8630	4710	13000	5550	8980	3860	5200	2860	2700
21	3100	5850	7400	8070	5600	9960	4800	7940	5200	4660	1710	2200
22	3180	6650	7640	5700	5450	9400	5100	5850	6250	3380	2200	1770
23	2480	11600	6800	3900	5100	9400	4570	7460	5300	2500	2460	1650
24	1980	12500	5600	4850	5150	7460	3990	8000	4900	1650	3180	1680
25	1880	8000	5100	7340	5200	11100	4350	8140	4040	2500	2540	1650
26	4540	10800	4600	21500	4390	19300	16700	7400	3580	2740	3140	1620
27	13500	9190	4330	8380	4210	12100	37100	6920	3740	3260	2740	1650
28	12100	7280	4290	6300	6250	34900	39000	6000	4390	2620	1650	2060
29	10980	10700	4290	23000	---	34100	38200	5150	3860	2620	2500	2230
30	4920	14600	5000	47300	---	23600	34500	4620	3950	2200	3380	1830
31	4380	---	4700	44200	---	14700	---	6150	---	1680	3420	---
TOTAL	168430	423090	227040	322720	200910	548720	312400	391590	143000	107190	132400	63450
MEAN	5433	14100	7324	10410	7175	17700	10410	12630	4767	3458	4271	2115
MAX	13580	45100	14100	47300	36500	39800	39000	27700	7820	6700	8910	3500
MIN	1880	4150	4290	3750	4210	4210	3590	4620	3380	1650	1650	1310

CAL YR 1977 TOTAL 2330790 MEAN 6386 MAX 48200 MIN 1420 MEAN† 6390 CFSM† 1.39 IN† 18.87
WTR YR 1978 TOTAL 3040940 MEAN 8331 MAX 47300 MIN 1310 MEAN† 8334 CFSM† 1.81 IN† 24.57

† Adjusted for change in contents in Claytor (Virginia) and Bluestone Lakes.

KANAWHA RIVER BASIN

03180000 NEW RIVER AT BLUESTONE DAM, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: May 1953 to September 1967, October 1969 to current year.

INSTRUMENTATION.--Temperature recorder since May 24, 1953.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURES: Maximum, 30.0°C July 17, 1977; minimum, 0.0°C on several days during winter months most years.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 28.5°C July 23, 24; minimum, 0.0°C Feb. 1-4.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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

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TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

[illegible]

KANAWHA RIVER BASIN

03180500 GREENBRIER RIVER AT DURBIN, WV

LOCATION.--Lat 38°32'35", long 79°50'00", Pocahontas County, Hydrologic Unit 05050003, on left bank at Durbin, 500 ft (152 m) downstream from confluence of East and West Forks, and at mile 150.1 (241.5 km).

DRAINAGE AREA.--134 mi² (347 km²).

PERIOD OF RECORD.--March 1943 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,699.71 ft (822.872 m) National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--35 years, 254 ft³/s (7.193 m³/s), 25.74 in/yr (654 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,200 ft³/s (346 m³/s) Mar. 7, 1967, gage height, 9.15 ft (2.789 m), from rating curve extended above 5,000 ft³/s (140 m³/s); maximum gage height, 9.20 ft (2.804 m) Feb. 2, 1956 (ice jam); no flow part of each day Oct. 2, 3, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,800 ft³/s (79 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 1	0500	3450 97.7	5.47 1.667	Mar. 14	2000	3860 109	5.70 1.737
Jan. 26	0800	*6130 174	6.74 2.054	Mar. 26	1300	5490 155	6.45 1.966

Minimum discharge, 9.2 ft³/s (0.26 m³/s) Sept. 29, gage height, 0.69 ft (0.210 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	165	158	2720	180	260	120	405	300	121	113	224	98
2	273	147	1210	158	220	110	386	250	104	98	160	51
3	213	136	692	140	190	100	321	230	129	792	127	37
4	178	131	488	120	160	94	263	210	133	984	227	30
5	147	127	478	100	140	90	275	220	104	535	215	25
6	131	144	572	150	130	100	233	190	94	328	400	22
7	115	196	485	243	120	110	263	170	88	218	1390	20
8	119	255	378	428	110	130	246	300	129	182	912	18
9	428	245	323	1930	100	160	240	580	233	227	515	17
10	478	231	242	875	90	250	226	480	209	172	328	16
11	344	234	210	571	84	564	211	420	177	259	248	15
12	259	212	180	538	80	554	197	380	147	191	380	15
13	201	200	235	392	76	457	169	800	129	152	296	15
14	169	182	391	292	88	1990	149	1500	105	284	600	16
15	145	172	867	224	110	2430	134	1000	86	288	368	17
16	152	172	657	190	110	1330	124	840	75	242	255	21
17	166	173	496	170	110	785	117	900	68	252	188	39
18	141	193	491	160	110	518	112	700	60	188	142	26
19	196	177	536	143	110	467	121	560	51	150	117	19
20	251	168	505	130	100	721	153	450	48	121	96	16
21	253	158	419	125	100	1280	153	370	67	137	79	15
22	231	186	326	120	90	1950	164	300	74	109	67	13
23	201	688	260	110	98	1310	170	288	55	86	57	12
24	174	716	237	110	98	1330	173	292	42	83	49	12
25	153	566	404	589	110	1290	178	248	35	119	44	12
26	245	489	393	4170	140	4040	363	218	41	90	43	13
27	289	378	350	1440	130	2360	660	188	555	135	39	12
28	271	320	298	744	130	1180	540	167	328	162	36	11
29	242	380	260	477	---	798	440	147	212	88	32	10
30	210	811	230	370	---	632	360	160	150	129	30	10
31	182	---	200	300	---	493	---	150	---	324	102	---
TOTAL	6722	8345	15533	15689	3394	27743	7546	13008	3849	7238	7766	653
MEAN	217	278	501	506	121	895	252	420	128	233	251	21.8
MAX	478	811	2720	4170	260	4040	660	1500	555	984	1390	98
MIN	115	127	180	100	76	90	112	147	35	83	30	10
CFSM	1.62	2.08	3.74	3.78	.90	6.68	1.88	3.13	.96	1.74	1.87	.16
IN.	1.87	2.32	4.31	4.36	.94	7.70	2.09	3.61	1.07	2.01	2.16	.18

CAL YR 1977	TOTAL	88057	MEAN 241	MAX 3790	MIN 22	CFSM 1.80	IN 24.45
WTR YR 1978	TOTAL	117486	MEAN 322	MAX 4170	MIN 10	CFSM 2.40	IN 32.62

KANAWHA RIVER BASIN

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03182000 KNAPP CREEK AT MARLINTON, WV

LOCATION.--Lat 38°12'40", long 80°04'30", Pocahontas County, Hydrologic Unit 05050003, at city water plant, at Marlinton, 1.0 mi (1.6 km) upstream from mouth, and 2.0 mi (3.2 km) downstream from discontinued gaging station.

DRAINAGE AREA.--108 mi² (280 km²) at discontinued gaging station.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1946 to current year.

COOPERATION.--Records were furnished by Marlinton City Water Plant.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum daily, 28.0°C July 24, 1952, June 2, 1959; minimum daily, -1.0°C several days during winter periods 1976-77.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum daily, 24.5°C July 24, Aug. 3 and 20; minimum daily, 0.0°C on many days during winter periods.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.5	9.0	4.0	1.5	.5	.5	9.0	9.0	16.5	23.5	24.0	22.0
2	14.5	8.0	5.5	.5	1.0	1.0	10.0	9.0	18.0	22.0	24.0	22.0
3	13.5	9.0	4.5	.0	1.5	.5	11.0	8.5	18.0	21.5	24.5	21.0
4	12.0	9.0	4.0	.0	1.5	.0	9.0	9.5	16.5	21.0	24.0	20.5
5	11.0	9.0	3.5	.5	.5	.0	11.0	10.0	15.5	20.5	23.5	20.5
6	11.0	11.0	1.5	1.0	.0	.5	11.0	10.0	18.0	21.0	22.0	20.0
7	10.0	13.0	.5	1.0	.0	.5	11.0	11.0	18.0	21.0	21.0	21.0
8	10.0	13.0	.0	1.5	.0	.5	12.0	10.0	18.0	21.0	21.5	21.0
9	9.0	13.0	1.0	1.0	.0	1.0	13.0	11.0	18.0	21.5	22.0	21.0
10	10.0	12.0	.0	.0	.0	1.5	13.5	10.0	17.0	23.0	22.0	21.0
11	10.0	9.0	.0	1.0	.0	1.5	12.0	10.5	18.5	23.0	21.5	22.0
12	9.0	6.5	.0	.0	1.0	1.5	11.5	11.0	20.0	21.5	21.0	22.0
13	9.0	3.5	.5	.5	1.5	2.0	11.5	11.0	21.0	21.0	21.5	21.5
14	8.5	2.0	1.0	1.0	1.0	2.0	11.0	10.0	19.5	21.0	22.0	20.5
15	7.0	3.5	2.0	.0	1.5	3.0	12.0	9.5	19.0	21.0	21.5	20.0
16	6.5	4.5	1.5	1.0	1.5	1.5	11.0	10.0	18.0	20.5	22.0	21.0
17	5.5	5.5	1.0	1.5	2.0	1.0	11.0	10.0	19.0	20.0	22.0	20.5
18	4.5	4.5	1.5	1.0	1.5	1.5	12.0	10.0	20.0	20.0	23.5	20.5
19	5.5	4.5	2.0	1.0	1.0	2.0	10.0	11.0	21.5	22.0	24.0	21.0
20	4.5	4.5	1.5	1.5	.0	3.0	9.5	12.0	21.5	22.0	24.5	21.5
21	4.5	5.5	1.0	1.5	.0	2.0	9.0	13.0	22.0	23.5	22.0	22.0
22	5.5	5.5	1.5	1.0	.0	1.5	9.0	15.5	22.0	23.5	22.0	21.5
23	6.5	5.5	1.5	.0	.0	4.5	9.0	16.5	21.5	24.0	21.0	21.0
24	8.0	4.5	2.0	.0	.5	6.5	10.0	15.5	21.0	24.5	21.5	18.5
25	8.0	4.5	2.0	1.0	1.0	5.5	10.0	16.5	20.0	23.5	22.0	18.0
26	9.0	2.0	1.0	1.5	.5	4.5	9.0	16.5	21.0	22.0	22.0	16.5
27	9.5	.5	.0	1.0	.5	3.5	9.0	17.0	23.0	23.5	22.0	16.5
28	11.0	1.0	.0	.5	1.0	4.5	9.5	18.0	22.0	24.0	22.0	15.5
29	10.0	1.5	.0	.0	---	5.5	10.0	19.0	23.5	23.5	21.0	14.5
30	10.0	3.0	1.0	.0	---	5.5	9.5	19.0	23.5	22.0	22.0	15.5
31	9.0	---	1.5	.0	---	6.5	---	16.5	---	23.5	21.5	---
MEAN	9.0	6.5	1.5	.5	.5	2.5	10.5	12.5	19.5	22.0	22.5	20.0
WTR YR 1978	MEAN	10.5	MAX	24.5	MIN	.0						

KANAWHA RIVER BASIN

03182500 GREENBRIER RIVER AT BUCKEYE, WV

LOCATION.--Lat 38°11'15", long 80°07'50", Pocahontas County, Hydrologic Unit 05050003, on right bank at upstream side of highway bridge at Buckeye, 1,000 ft (305 m) upstream from Swago Creek, 3.5 mi (5.6 km) downstream from Knapp Creek, and at mile 103.1 (165.9 km). Records include flow of Swago Creek.

DRAINAGE AREA.--540 mi² (1,399 km²), includes that of Swago Creek.

PERIOD OF RECORD.--September 1929 to current year.

REVISED RECORDS.--WSP 758: 1933. WSP 953: 1930-32, 1934-35(M), 1936, 1937(M), 1938-39, 1940(M). WSP 1275: 1936.

GAGE.--Water-stage recorder. Datum of gage is 2,085.89 ft (635.779 m) National Geodetic Vertical Datum of 1929. Prior to Feb. 27, 1939, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter periods, which are poor. Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--49 years, 868 ft³/s (24.58 m³/s), 21.83 in/yr (554 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,500 ft³/s (1,180 m³/s) Feb. 5, 1932, gage height, 17.5 ft (5.33 m), from floodmarks, from rating curve extended above 25,000 ft³/s (710 m³/s); minimum, 3.8 ft³/s (0.11 m³/s) Aug. 13, 1930, gage height, 1.19 ft (0.363 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 11,000 ft³/s (310 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 1	0800	14700 416	11.15 3.399	Mar. 14	2200	18300 518	12.34 3.761
Jan. 26	1100	28500 807	15.14 4.615	Mar. 26	1600	*28600 810	15.15 4.618

Minimum discharge, 34 ft³/s (0.99 m³/s) Sept. 30, gage height, 1.68 ft (0.512 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	244	443	10700	621	812	340	1220	878	841	271	829	217
2	779	393	4680	537	700	310	1090	706	567	223	488	227
3	589	359	2440	434	600	290	961	579	466	673	365	143
4	442	335	1640	350	520	260	807	529	475	1930	642	106
5	354	325	1520	290	450	240	768	574	404	1230	909	87
6	288	333	2510	400	390	270	690	507	333	778	738	76
7	247	513	1850	520	340	310	660	450	292	526	3220	67
8	268	1630	1320	728	310	370	655	679	289	399	2330	60
9	1780	1250	1140	7410	280	446	592	1500	385	435	1360	56
10	1880	1000	846	4730	260	633	562	1450	492	469	874	52
11	1040	975	653	2300	240	1090	539	1190	399	395	599	52
12	717	831	560	1500	230	1620	522	984	342	416	542	48
13	526	699	520	1100	220	1860	467	1620	305	312	551	49
14	425	591	1100	850	270	8330	413	4630	282	264	1010	58
15	361	515	4120	700	310	11200	368	2960	228	422	852	55
16	321	471	2590	600	300	5890	336	2250	200	438	689	52
17	349	458	1770	540	300	3140	318	2370	185	423	469	51
18	345	447	1810	490	300	2000	307	2000	170	399	356	52
19	320	428	2320	440	300	1590	321	1580	150	294	275	65
20	409	386	1930	410	280	2630	388	1260	132	228	226	61
21	454	363	1550	380	280	3490	436	1080	122	196	188	52
22	433	419	1210	350	250	5090	431	893	144	199	159	45
23	394	2280	929	330	270	3520	426	746	143	177	136	42
24	349	2640	817	504	270	3000	427	870	138	146	120	41
25	307	1880	1720	2360	330	3640	421	805	110	150	108	41
26	896	1700	2090	19200	370	19200	652	700	98	211	98	44
27	1600	1380	1460	6670	360	9920	1870	610	400	175	91	41
28	1070	1130	1110	3350	350	4240	1480	531	696	462	97	38
29	807	1140	873	1900	---	2590	1220	474	550	388	117	36
30	633	2940	779	1290	---	1890	1040	521	370	236	89	35
31	517	---	707	990	---	1480	---	1510	---	684	103	---
TOTAL	19144	28254	59264	62274	9892	100879	20387	37436	9708	13549	18630	2049
MEAN	618	942	1912	2009	353	3254	680	1208	324	437	601	68.3
MAX	1880	2940	10700	19200	812	19200	1870	4630	841	1930	3220	227
MIN	244	325	520	290	220	240	307	450	98	146	89	35
CFSM	1.14	1.74	3.54	3.72	.65	6.03	1.26	2.24	.60	.81	1.11	.13
IN.	1.32	1.95	4.08	4.29	.68	6.95	1.40	2.58	.67	.93	1.28	.14

CAL YR 1977	TOTAL	287984	MEAN	789	MAX	19600	MIN	67	CFSM	1.46	IN	19.84
WTR YR 1978	TOTAL	381466	MEAN	1045	MAX	19200	MIN	35	CFSM	1.94	IN	26.28

KANAWHA RIVER BASIN

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03182700 ANTHONY CREEK NEAR ANTHONY, WV

LOCATION.--Lat 37°54'30", long 80°17'30", Greenbrier County, Hydrologic Unit 05050003, on right bank 0.3 mi (0.5 km) downstream from Big Draft, 1.7 mi (2.7 km) downstream from Rocky Run, 2.2 mi (3.5 km) northeast of Anthony, and at mile 3.2 (5.1 km).

DRAINAGE AREA.-- 144 mi² (373 km²).

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1949, 1951-53, 1957, 1960, 1966, 1968-71. October 1971 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,850 ft (564 m), from topographic map.

REMARKS.--Records good except those for January and February, which are poor.

AVERAGE DISCHARGE.--7 years, 215 ft³/s (6.089 m³/s), 20.28 in/yr (515 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,700 ft³/s (558 m³/s) Dec. 26, 1973, gage height, 19.3 ft (5.88 m), from floodmarks, from rating curve extended above 1,100 ft³/s (31 m³/s); minimum, 6.9 ft³/s (0.20 m³/s) Sept. 7-9, 1976; minimum gage height, 6.16 ft (1.878 m) July 17-19, 23-25, Aug. 8, 9, 10, 12, 13, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,200 ft³/s (91 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 26	---	Unknown	Unknown	Mar. 26	1330	*9870 280	*15.67 4.776
Mar. 14	2100	6450 183	13.97 4.258				

Minimum discharge, 8.0 ft³/s (0.23 m³/s) Sept. 9-11, 30, gage height, 6.20 ft (1.890 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	53	1680	100	140	83	232	213	97	13	12	9.5
2	77	47	676	90	110	66	200	175	81	13	14	10
3	50	43	402	80	96	71	162	146	78	16	14	10
4	38	41	295	70	88	66	142	136	87	22	49	9.8
5	40	46	253	62	78	58	132	160	71	19	92	9.2
6	39	73	322	73	70	55	120	157	60	16	78	8.9
7	34	435	279	111	62	60	114	150	52	15	124	8.6
8	34	665	207	187	56	62	101	359	49	14	106	8.6
9	301	346	191	1300	52	77	92	645	52	13	79	8.3
10	202	245	146	600	74	448	87	471	47	12	62	8.0
11	108	197	111	350	73	698	82	334	40	12	47	8.6
12	72	155	102	270	70	721	81	256	36	12	38	8.9
13	48	127	104	210	68	712	74	816	33	10	30	8.9
14	37	104	118	170	63	3170	68	1380	31	15	26	8.9
15	31	89	360	140	58	2990	62	603	28	17	23	9.5
16	28	77	323	120	54	1310	59	439	26	26	21	9.8
17	27	77	257	110	55	657	56	415	25	33	18	9.8
18	25	75	245	100	55	441	54	359	24	29	15	9.8
19	23	68	274	90	56	357	57	289	22	23	14	9.5
20	21	64	279	80	57	458	73	232	20	18	13	9.2
21	20	62	257	74	66	516	74	197	19	15	12	8.9
22	19	152	227	68	62	499	70	165	21	14	10	8.6
23	18	976	186	64	63	354	62	144	19	13	10	8.6
24	17	521	167	150	58	279	59	182	18	13	10	8.3
25	17	343	207	600	58	538	59	200	16	13	9.5	8.3
26	262	291	279	4000	89	6280	792	185	15	13	9.2	8.3
27	348	238	236	1300	87	2330	1320	160	23	12	9.2	8.3
28	180	199	181	500	83	780	535	138	20	12	9.2	8.3
29	112	214	150	300	---	487	345	122	16	12	9.2	8.3
30	82	480	134	220	---	352	259	112	15	12	9.2	8.0
31	64	---	118	170	---	277	---	110	---	12	9.2	---
TOTAL	2405	6503	8766	11759	2001	25252	5623	9450	1141	489	981.7	267.7
MEAN	77.6	217	283	379	71.5	815	187	305	38.0	15.8	31.7	8.92
MAX	348	976	1680	4000	140	6280	1320	1380	97	33	124	10
MIN	17	41	102	62	52	55	54	110	15	10	9.2	8.0
CFSM	.54	1.51	1.97	2.63	.50	5.66	1.30	2.12	.26	.11	.22	.06
IN.	.62	1.68	2.26	3.04	.52	6.52	1.45	2.44	.29	.13	.25	.07

CAL YR 1977	TOTAL	56668.3	MEAN 155	MAX 8580	MIN 9.1	CFSM 1.08	IN 14.64
WTR YR 1978	TOTAL	74638.4	MEAN 204	MAX 6280	MIN 8.0	CFSM 1.42	IN 19.28

KANAWHA RIVER BASIN

03182950 HOWARD CREEK AT CALDWELL, WV

LOCATION.--Lat 37°46'54", long 80°23'15", Greenbrier County, Hydrologic Unit 05050003, on right bank at Caldwell, 300 ft (91 m) upstream from highway bridge on U.S. Highway 60, 0.9 mi (1.4 km) upstream from mouth, 3.5 mi (5.6 km) southeast of Lewisburg, and 5.0 mi (8.0 km) southwest of White Sulphur Springs.

DRAINAGE AREA.--84.4 mi² (218.6 km²).

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1960, 1962, 1964-66, 1968-71. October 1971 to September 1978 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 1,681.01 ft (512.372 m) National Geodetic Vertical datum of 1929.

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

AVERAGE DISCHARGE.--7 years, 124 ft³/s (3.512 m³/s), 19.95 in/yr (507 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,000 ft³/s (396 m³/s) June 21, 1972, gage height, 18.6 ft (5.67 m), from floodmarks, from rating curve extended above 1,900 ft³/s (54 m³/s) on basis of slope-area measurement of peak flow; minimum, 2.2 ft³/s (0.062 m³/s) Oct. 13, 1974, gage height, 3.64 ft (1.109 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 7	2045	3530 100	10.20 3.109	Mar. 26	1115	3610 102	10.29 3.136
Jan. 26	0530	*4930 140	11.63 3.545	Apr. 26	2145	2760 78.2	9.33 2.844
Mar. 10	1645	1460 41.3	7.58 2.310	May 13	1930	1370 38.8	7.45 2.271
Mar. 14	1900	3320 94.0	9.97 3.039	Aug. 6	2100	1270 36.0	7.29 2.222

Minimum discharge, 6.3 ft³/s (0.18 m³/s) Sept. 9, 10, 20, 21, 27-30, gage height, 3.38 ft (1.030 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	76	856	88	100	50	108	126	35	7.7	13	9.3
2	334	67	494	78	91	44	91	97	33	14	13	9.0
3	146	62	313	68	74	44	74	78	49	49	20	8.8
4	82	170	235	60	62	41	65	75	51	32	46	8.5
5	57	295	215	54	56	39	61	84	38	23	47	8.0
6	44	319	235	80	51	35	56	83	32	19	192	7.7
7	33	1020	209	110	45	42	55	78	28	16	442	7.3
8	33	1160	179	200	41	61	49	376	28	14	220	7.0
9	530	475	167	900	36	136	45	572	28	13	96	7.0
10	352	311	145	429	51	940	43	323	25	11	107	7.0
11	162	236	127	271	49	860	43	192	21	12	77	11
12	106	192	118	230	44	730	45	140	19	10	59	9.7
13	75	161	114	201	35	780	40	510	18	9.3	43	9.3
14	63	139	121	176	35	1980	37	785	16	64	33	8.5
15	54	124	260	153	32	1490	33	365	14	74	27	8.3
16	52	113	220	130	28	730	33	240	14	74	22	8.3
17	60	119	190	115	27	362	33	190	13	54	19	8.3
18	58	122	180	100	28	222	38	160	13	35	16	8.0
19	54	118	210	93	29	170	41	130	11	26	15	7.3
20	50	110	230	84	31	213	47	104	13	21	13	7.0
21	44	103	200	78	35	225	47	89	12	18	12	7.0
22	39	184	180	72	33	192	47	73	9.7	13	11	7.3
23	34	726	170	66	45	136	44	68	10	13	9.3	7.3
24	31	466	160	107	31	108	44	83	9.7	32	9.3	7.7
25	30	321	190	768	33	200	44	75	10	48	9.3	7.7
26	473	287	220	2600	61	2230	1440	68	10	31	9.3	7.0
27	476	248	190	716	57	1090	1360	60	9.0	25	9.0	6.5
28	247	211	160	355	53	438	474	54	9.0	23	9.0	6.8
29	160	226	130	207	---	255	249	48	8.8	19	9.0	6.8
30	121	360	115	155	---	175	170	46	8.3	17	9.7	6.8
31	95	---	100	118	---	132	---	42	---	16	9.3	---
TOTAL	4123	8525	6633	8862	1293	14150	4556	5414	595.5	833.0	1626.2	236.2
MEAN	133	284	214	286	46.2	456	165	175	19.9	26.9	52.5	7.87
MAX	530	1160	856	2600	100	2230	1440	785	51	74	442	11
MIN	28	62	100	54	27	35	33	42	8.3	7.7	9.0	6.5
CFSM	1.58	3.37	2.54	3.39	.55	5.40	1.96	2.07	.24	.32	.62	.09
IN.	1.82	3.76	2.92	3.91	.57	6.24	2.18	2.39	.26	.37	.72	.10

CAL YR 1977 TOTAL 39347.0 MEAN 108 MAX 3400 MIN 6.7 CFSM 1.28 IN 17.34
WTR YR 1978 TOTAL 57246.9 MEAN 157 MAX 2600 MIN 6.5 CFSM 1.86 IN 25.23

KANAWHA RIVER BASIN

157

03183500 GREENBRIER RIVER AT ALDERSON, WV

LOCATION.--Lat 37°43'30", long 80°38'30", Monroe County, Hydrologic Unit 05050003, on left bank 400 ft (122 m) upstream from highway bridge at Alderson, 0.5 mi (0.8 km) upstream from Muddy Creek, and at mile 28.4 (45.7 km).

DRAINAGE AREA.--1,357 mi² (3,515 km²).

PERIOD OF RECORD.--July 1895 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 536: 1907-9. WSP 783: Drainage area. WSP 803: 1918(M). WSP 953: 1930-41. WSP 1275: 1897, 1905, 1910, 1914(M), 1915-16, 1917(M), 1919-20(M), 1924-25(M), 1927(M), 1929, 1949.

GAGE.--Water-stage recorder. Datum of gage is 1,529.42 ft (466.167 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 15, 1929, nonrecording gage at bridge 400 ft (122 m) downstream at same datum.

REMARKS.--Records good. Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--83 years, 1,987 ft³/s (56.27 m³/s), 19.88 in/yr (505 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 77,500 ft³/s (2,190 m³/s) Mar. 14, 1918, gage height, 22.0 ft (6.71 m), from floodmarks, from rating curve extended above 37,000 ft³/s (1,000 m³/s); minimum, 24 ft³/s (0.68 m³/s) Aug. 12, Oct. 1, 2, 1930; minimum gage height, 1.63 ft (0.497 m) Sept. 20, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 19,000 ft³/s (540 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)
Dec. 1	2100	22200	629	10.70	3.261	Mar. 15	1000	35400	1000	14.48	4.414
Jan. 26	2300	42000	1190	16.36	4.987	Mar. 27	0300	*47000	1330	17.81	5.428

Minimum discharge, 82 ft³/s (2.32 m³/s) Sept. 30, gage height, 1.89 ft (0.576 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	374	942	13600	1270	1970	770	2820	2280	1790	540	548	227
2	1310	820	13600	1150	1640	710	2390	1850	1230	452	1150	243
3	1470	730	6470	1010	1450	660	2060	1520	986	556	810	264
4	1250	730	4100	850	1280	596	1780	1320	931	533	1550	330
5	850	997	3080	572	1110	533	1560	1360	850	2420	1880	247
6	640	1010	4120	650	1000	580	1410	1390	750	1640	1970	203
7	519	2100	4570	931	880	620	1340	1290	630	1090	4100	171
8	458	7820	3180	1180	760	730	1220	1900	588	760	6830	157
9	2420	5350	2510	9080	700	1020	1160	4850	580	556	4050	140
10	6500	3360	2100	12900	650	3700	1080	4730	604	458	3120	131
11	3360	2570	1600	4500	600	5870	1030	3400	710	588	2230	134
12	1970	2150	1150	3000	540	6350	1020	2660	650	498	1440	147
13	1340	1740	1050	2200	520	7040	964	2690	564	477	997	140
14	1010	1410	1160	1800	600	13200	890	9770	498	660	953	128
15	820	1190	4150	1500	710	30800	800	7730	446	900	1180	122
16	700	1040	6140	1300	670	17300	740	4900	422	740	1350	119
17	670	1020	3950	1200	650	9230	700	3900	374	890	986	128
18	650	1030	3100	1050	660	5470	690	3600	356	720	730	128
19	650	986	3750	950	660	3800	710	2980	330	604	548	119
20	604	920	3980	890	640	3980	780	2460	335	484	452	110
21	588	840	3340	840	604	5470	920	2010	305	398	380	107
22	670	942	2800	780	612	6920	997	1680	300	340	325	105
23	660	5250	2260	730	540	6770	964	1420	291	325	286	113
24	604	7190	1830	3000	604	4820	942	1520	264	404	255	113
25	548	4870	1780	10000	580	5000	920	1920	264	630	231	105
26	1160	4030	3630	30800	760	24900	4270	1640	251	428	215	97
27	3680	3530	3180	25100	820	35200	10100	1360	235	362	199	92
28	3080	2780	2440	8810	780	12600	6110	1160	239	477	211	89
29	2030	2510	1940	5770	---	6860	3800	1020	730	470	211	87
30	1470	4500	1630	4000	---	4650	2780	953	710	700	199	84
31	1150	---	1410	2600	---	3450	---	997	---	484	191	---
TOTAL	43205	74357	113600	140413	22990	229599	56947	82260	17213	20584	39577	4380
MEAN	1394	2479	3665	4529	821	7406	1898	2654	574	664	1277	146
MAX	6500	7820	13600	30800	1970	35200	10100	9770	1790	2420	6830	330
MIN	374	730	1050	572	520	533	690	953	235	325	191	84
CFSM	1.03	1.83	2.70	3.34	.61	5.46	1.40	1.96	.42	.49	.94	.11
IN.	1.18	2.04	3.11	3.85	.63	6.29	1.56	2.26	.47	.56	1.08	.12
CAL YR 1977	TOTAL	614632	MEAN	1684	MAX	47000	MIN	125	CFSM	1.24	IN	16.85
WTR YR 1978	TOTAL	845125	MEAN	2315	MAX	35200	MIN	84	CFSM	1.71	IN	23.17

KANAWHA RIVER BASIN

03184000 GREENBRIER RIVER AT HILLDALE, WV

LOCATION.--Lat 37°38'25", Long 80°48'20", Summers County, Hydrologic Unit 05050003, on left bank 100 ft (30 m) downstream from highway bridge on State Highway 3 at Hilldale, 0.1 mi (0.2 km) upstream from Howard Creek, 0.9 mi (1.4 km) upstream from Powley Creek, 5.0 mi (8.0 km) southeast of Hinton, and at mile 5.6 (9.0 km). Records include flow of Howard Creek.

DRAINAGE AREA.--1,625 mi² (4,209 km²), includes that of Howard Creek.

PERIOD OF RECORD.--June 1936 to current year.

REVISED RECORDS.--WSP 1435: 1955.

GAGE.--Water-stage recorder. Datum of gage is 1,388.66 ft (423.264 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records good except those for January and February, which are poor.

AVERAGE DISCHARGE.--42 years, 2,225 ft³/s (63.01 m³/s), 18.59 in/yr (472 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 58,100 ft³/s (1,650 m³/s) Dec. 27, 1973, gage height, 23.13 ft (7.050 m), from floodmark; minimum, 39 ft³/s (1.10 m³/s) Sept. 18-20, 1946, Sept. 16, 1964; minimum gage height, 0.32 ft (0.098 m) Sept. 16, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 18, 1936, reached a stage of 21.85 ft (6.660 m) from data furnished by Corps of Engineers, discharge, 60,800 ft³/s (1,720 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 24,000 ft³/s (680 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)	Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)
Jan. 27	Unknown	43800	1240	19.11	5.825	Mar. 27	1000	*48400	1370	20.44	6.230
Mar. 15	1400	36900	1050	17.10	5.212						

Minimum discharge, 90 ft³/s (2.55 m³/s) Sept. 30, gage height, 0.58 ft (0.177 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	408	1180	11500	1680	2300	1030	3880	3170	2180	556	460	213
2	1200	992	17000	1510	1900	974	3250	2590	1870	556	920	240
3	1730	875	8220	1290	1600	884	2810	2050	1380	580	974	270
4	1570	803	5360	1030	1300	839	2430	1760	1230	620	1520	308
5	1050	1020	4160	767	1100	692	2130	1820	1110	1480	1680	308
6	776	1140	4800	803	950	676	1910	1910	965	1820	2030	245
7	623	1480	5840	1100	860	776	1800	1790	812	1260	2940	204
8	528	8830	4320	1520	800	974	1560	2890	724	839	6110	179
9	2120	7140	3310	6840	740	1760	1450	6560	652	508	4290	163
10	7490	4800	2780	13900	670	5260	1340	6430	636	548	2950	148
11	4680	3580	2130	6670	630	9170	1260	4720	749	532	2170	159
12	2640	2980	1530	3650	590	8680	1230	3640	812	484	1530	148
13	1800	2460	1340	2900	570	9360	1180	3340	660	500	1180	163
14	1270	1960	1460	2400	700	15000	1080	10300	604	508	992	159
15	1000	1600	3430	1900	848	33400	965	9910	540	1010	884	144
16	857	1370	7370	1700	821	21700	875	6630	500	1110	1350	130
17	803	1350	5050	1500	767	12000	821	5240	444	1060	1070	134
18	812	1420	3910	1300	785	7370	812	4840	406	830	732	137
19	767	1380	4260	1200	794	5290	830	4090	385	508	436	137
20	749	1230	4770	1100	785	4720	911	3350	385	588	524	127
21	684	1110	4280	1050	758	6250	1110	2800	385	444	350	120
22	708	1080	3670	980	776	7390	1250	2360	364	392	371	117
23	740	5190	2990	960	620	8080	1240	2030	338	357	314	112
24	700	8580	2420	1800	676	5980	1170	2060	314	364	285	117
25	644	6580	2190	4000	708	5910	1150	2680	290	484	260	120
26	866	5290	3760	20000	866	21900	4610	2470	285	516	235	110
27	3760	4790	4150	32000	1050	42500	13900	2020	270	371	217	104
28	4120	3920	3140	10000	1080	16800	8440	1690	250	436	217	99
29	2650	3490	2620	5000	---	8890	5340	1480	357	532	231	94
30	1910	5140	1970	3500	---	6220	3920	1440	740	620	222	92
31	1460	---	1840	2800	---	4790	---	1610	---	540	208	---
TOTAL	51115	92760	135570	136850	26044	275265	74654	109670	20637	20953	37652	4801
MEAN	1649	3092	4373	4415	930	8880	2488	3538	688	676	1215	160
MAX	7490	8830	17000	32000	2300	42500	13900	10300	2180	1820	6110	308
MIN	408	803	1340	767	570	676	812	1440	250	357	208	92
CFSM	1.02	1.90	2.69	2.72	.57	5.47	1.53	2.18	.42	.42	.75	.10
IN.	1.17	2.12	3.10	3.13	.60	6.30	1.71	2.51	.47	.48	.86	.11
CAL YR 1977	TOTAL	759107	MEAN	2080	MAX	46200	MIN	140	CFSM	1.28	IN	17.38
WTR YR 1978	TOTAL	985971	MEAN	2701	MAX	42500	MIN	92	CFSM	1.66	IN	22.57

KANAWHA RIVER BASIN

159

03184500 NEW RIVER AT HINTON, WV

LOCATION.--Lat' 37°40'15", long 80°53'40", Summers County, Hydrologic Unit 05050004, on right bank at Hinton, 0.2 mi (0.3 km) upstream from Madam Creek, 1.5 mi (2.4 km) downstream from Greenbrier River, at New River mile 62.0 (99.8 km) and Kanawha River mile 159.0 (255.8 km).

DRAINAGE AREA.--6,257 mi² (16,206 km²).

PERIOD OF RECORD.--June 1936 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,355.18 ft (413.059 m) National Geodetic Vertical Datum of 1929. Prior to June 5, 1949, water-stage recorder at site 400 ft (122 m) upstream at same datum.

REMARKS.--Records good. Flow regulated since 1939 by Claytor Lake (station 03169000) and since 1949 by Bluestone Lake (station 03179800). Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--42 years, 7,865 ft³/s (222.7 m³/s), 7.07 in/yr (434 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 246,000 ft³/s (6,970 m³/s) Aug. 15, 1940, gage height, 18.97 ft (5.782 m), from rating curve extended above 80,000 ft³/s (2,300 m³/s) on basis of slope-area measurement at station at Bluestone Dam, and gaged inflow from Greenbrier River; minimum, 238 ft³/s (6.74 m³/s) Aug. 21, 1962, gage height, 1.03 ft (0.314 m); minimum daily, 920 ft³/s (26.1 m³/s) Oct. 22, 1941.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 54,800 ft³/s (1,550 m³/s) Nov. 8, gage height, 8.19 ft (2.496 m); minimum, 1,450 ft³/s (41.1 m³/s) Sept. 10, 11, 12, gage height, 1.62 ft (0.494 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3590	6530	23600	5570	38600	7490	15700	30800	9240	4450	2620	2740
2	6630	5250	29900	5300	24100	7310	12800	21800	7910	3370	3910	2300
3	8720	5100	18500	6410	10500	6770	10200	14500	7070	3020	4090	1830
4	9560	4800	14200	5630	8690	6470	10500	13800	5570	7250	4400	1550
5	8640	8990	11400	4700	7430	6290	10100	15900	5000	7850	6050	1580
6	6010	15100	16300	4230	7130	4700	8810	16100	4850	6950	5750	1800
7	4240	29200	16300	5300	6890	4850	7730	15000	4800	6350	6110	3280
8	3340	52100	12800	5870	5450	7550	8750	18600	5750	5990	14300	2660
9	7020	51400	11400	15000	6110	11300	6650	27900	8630	3780	12500	2500
10	13300	44900	10700	29000	6890	20300	5350	27800	7310	2230	9500	1890
11	10900	37500	9050	19400	6950	40400	7730	22500	5750	2540	8870	1450
12	8140	26100	5750	13700	5570	43700	7790	17000	4310	3550	8030	1800
13	5970	14600	7370	10400	4900	42700	6110	15800	4000	3820	6770	2200
14	4140	10200	7490	10700	5990	47100	5810	27600	5150	3910	6050	2060
15	4040	8090	9960	8930	5870	50600	5750	29300	4700	4450	6110	1890
16	3650	8330	13900	7010	5870	46100	5690	24500	5050	4090	6890	2200
17	4210	8930	12200	7850	6290	50400	5050	21000	5630	3280	6170	1990
18	4140	10200	11700	8810	6470	41600	5200	17400	4050	3870	7430	3190
19	3370	10400	10500	8870	6050	30200	7130	14200	3550	4600	5150	3370
20	3160	8330	10400	9830	5250	17300	6650	12500	4090	5570	3420	2500
21	3110	6830	11400	9570	6230	16000	5870	11100	5200	4950	2060	2060
22	3140	7730	11100	6890	6110	16500	6350	8330	6650	3640	2340	1740
23	2720	16000	9700	4700	5570	17200	5810	9700	5570	2660	2580	1600
24	2290	20000	8150	6390	5690	13600	5100	10300	5100	1920	3280	1630
25	2180	14300	7310	9220	5810	16700	5200	11000	4230	2860	2580	1600
26	4290	15400	7970	45900	5100	39500	18000	10200	3690	3150	3150	1580
27	15400	13600	8390	40100	5100	51300	48300	9180	3780	3460	2860	1600
28	15900	10900	7310	17400	7370	50400	46500	7850	4400	2900	1710	1920
29	13700	13900	6650	27600	---	42000	42900	6650	4000	2940	2460	2060
30	7430	18700	7010	50400	---	29400	38000	5990	4450	2700	3330	1740
31	5630	---	6650	46800	---	19300	---	7790	---	2200	3330	---
TOTAL	198560	503410	355060	457480	227980	805030	381530	502090	159480	124300	163800	62310
MEAN	6405	16780	11450	14760	8142	25970	12720	16200	5316	4010	5284	2077
MAX	15900	52100	29900	50400	38600	51300	48300	30800	9240	7850	14300	3370
MIN	2180	4800	5750	4230	4900	4700	5050	5990	3550	1920	1710	1450

CAL YR 1977 TOTAL 2930260 MEAN 8028 MAX 53800 MIN 1490 MEAN‡ 8032 CFSM‡ 1.28 IN‡ 17.38
WTR YR 1978 TOTAL 3941030 MEAN 10800 MAX 52100 MIN 1450 MEAN‡ 10803 CFSM‡ 1.73 IN‡ 23.48

‡ Adjusted for change in contents in Claytor (Virginia) and Bluestone Lakes.

LOCATION.--Lat 37°42'27", long 81°15'00", Raleigh County, Hydrologic Unit 05050004, at end of culvert on Old State Route 16 at Sophia, 1.5 mi (2.4 km) upstream from Laurel Branch, and 2.7 mi (4.3 km) upstream from Piney Creek.

PERIOD OF RECORD.--October 1976 to current year.

[illegible]

KANAWHA RIVER BASIN

161

03185000 PINEY CREEK AT RALEIGH, WV

LOCATION.--Lat 37°45'40", long 81°09'50", Raleigh County, Hydrologic Unit 05050004, on left bank at Raleigh, 0.5 mi (0.8 km) downstream from Whitestick Creek, 0.5 mi (0.8 km) upstream from Beaver Creek, 1.5 mi (2.4 km) southeast of Beckley, and at mile 12.0 (19.3 km).

DRAINAGE AREA.--52.2 mi² (135.2 km²).

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

REVISED RECORDS.--WSP 1435: 1955(M).

GAGE.--Water-stage recorder. Datum of gage is 2,087.24 ft (636.191 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for January and February, which are poor.

AVERAGE DISCHARGE.--27 years, 61.2 ft³/s (1.733 m³/s), 15.92 in/yr (404 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,870 ft³/s (81.3 m³/s) Mar. 12, 1963, gage height, 6.49 ft (1.978 m); minimum, 0.2 ft³/s (0.006 m³/s) Sept. 5-18, 21-23, 1964; minimum gage height, 1.07 ft (0.326 m) Sept. 9-12, 16, 17, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft³/s (20 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 26	0830	1200 34.0	4.39 1.338	Apr. 27	0330	*1220 34.6	4.42 1.347
Mar. 15	0230	705 20.0	3.50 1.067				

Minimum discharge, 2.7 ft³/s (0.076 m³/s) Sept. 29, 30, gage height, 1.23 ft (0.375 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	34	154	39	60	34	73	91	37	7.5	13	40
2	72	31	120	38	50	31	62	73	34	14	10	18
3	74	28	96	34	44	34	55	66	38	31	10	17
4	39	28	82	38	38	32	50	75	38	26	35	10
5	28	26	111	34	33	31	48	79	31	17	43	8.6
6	23	26	173	35	29	34	43	75	29	13	34	7.5
7	19	32	138	41	26	31	43	71	28	10	53	7.0
8	22	55	101	47	24	50	38	135	32	9.1	48	7.0
9	132	91	94	114	21	99	35	219	32	8.6	37	6.4
10	191	94	79	111	19	226	34	164	26	8.0	28	6.4
11	89	86	65	89	18	250	32	119	23	9.7	22	11
12	53	70	60	84	17	289	32	91	22	9.7	35	8.6
13	39	58	56	70	30	330	30	119	23	7.0	34	7.5
14	34	49	86	56	43	547	28	147	20	9.1	25	5.9
15	28	44	167	49	37	556	26	130	18	191	21	5.9
16	60	39	138	44	34	278	25	110	18	124	18	6.4
17	79	42	106	40	35	173	25	89	17	66	15	5.9
18	62	39	91	36	33	124	30	73	16	38	13	5.3
19	49	36	77	33	30	102	35	62	15	28	11	5.3
20	41	35	67	30	28	91	41	55	14	21	11	4.2
21	34	34	60	27	26	89	43	51	16	18	9.1	3.9
22	29	42	53	25	24	86	41	46	18	16	9.1	5.9
23	26	101	47	23	23	75	38	48	14	15	8.6	5.3
24	24	126	46	37	22	64	35	158	11	17	8.0	4.8
25	25	111	70	173	40	59	40	141	10	16	7.0	4.2
26	77	106	60	915	37	77	370	99	11	16	7.5	4.2
27	86	91	53	406	32	119	876	73	10	12	7.5	3.9
28	72	84	49	191	34	127	282	60	9.7	11	8.0	3.3
29	55	106	44	119	---	110	144	51	8.6	10	8.0	3.0
30	46	154	39	82	---	89	113	46	8.0	10	9.1	3.0
31	38	---	39	70	---	82	---	43	---	16	41	---
TOTAL	1668	1898	2621	3130	887	4319	2767	2859	627.3	804.7	638.9	235.4
MEAN	53.8	63.3	84.5	101	31.7	139	92.2	92.2	20.9	26.0	20.6	7.85
MAX	191	154	173	915	60	556	876	219	38	191	53	40
MIN	19	26	39	23	17	31	25	43	8.0	7.0	7.0	3.0
CFSM	1.03	1.21	1.62	1.94	.61	2.66	1.77	1.77	.40	.50	.40	.15
IN.	1.19	1.35	1.87	2.23	.63	3.08	1.97	2.04	.45	.57	.46	.17

CAL YR 1977	TOTAL	22974.9	MEAN	62.9	MAX	2090	MIN	4.8	CFSM	1.21	IN	16.37
WTR YR 1978	TOTAL	22455.3	MEAN	61.5	MAX	915	MIN	3.0	CFSM	1.18	IN	16.00

LOCATION.--Lat 37°47'23", long 81°10'21", Raleigh County, Hydrologic Unit 05050004, at the downstream end of bridge on Route 19-41 at Beckley, and 0.4 mi (0.6 km) upstream from Cranberry Creek.

DRAINAGE AREA.--4.57 mi² (11.84 km²).

PERIOD OF RECORD.--October 1976 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

[illegible]

KANAWHA RIVER BASIN

03186500 WILLIAMS RIVER AT DYER, WV

LOCATION.--Lat 38°22'45", long 80°29'05", Webster County, Hydrologic Unit 05050005, on left bank at Dyer, 0.2 mi (0.3 km) downstream from Craig Run, 7.0 mi (11.3 km) southwest of Webster Springs, and at mile 2.1 (3.4 km).

DRAINAGE AREA.--128 mi² (332 km²).

PERIOD OF RECORD.--September 1929 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 1275: 1930.

GAGE.--Water-stage recorder. Datum of gage is 2,193.46 ft (668.567 m) National Geodetic Vertical Datum, adjustment of 1912. Prior to June 11, 1930, nonrecording gage at same site and datum.

REMARKS.--Records good except those for January and February, which are poor.

AVERAGE DISCHARGE.--49 years, 327 ft³/s (9.261 m³/s), 34.69 in/yr (881 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,000 ft³/s (623 m³/s) July 4, 1932, gage height, 18.45 ft (5.624 m), from floodmarks, from rating curve extended above 7,000 ft³/s (200 m³/s) on basis of slope-area measurements at gage heights 12.33 ft (3.758 m) and 18.45 ft (5.624 m); minimum daily, 0.5 ft³/s (0.014 m³/s) Oct. 13-16, 21, 1953; minimum gage height, 0.44 ft (0.134 m) Oct. 5, 6, 1953.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,600 ft³/s (130 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 1	0230	4600 130	7.27 2.216	Mar. 14	1930	5310 150	7.92 2.414
Jan. 26	0615	*12600 357	12.90 3.932	Mar. 26	1300	5160 146	7.78 2.371

Minimum discharge, 7.6 ft³/s (0.22 m³/s) Sept. 30, gage height, 0.87 ft (0.265 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	141	184	2610	172	243	96	595	245	140	47	172	197
2	711	167	949	149	220	98	607	203	110	42	108	81
3	512	156	595	112	197	96	438	177	120	750	96	52
4	318	150	471	121	169	100	354	172	133	635	361	39
5	226	146	546	147	150	100	392	195	102	352	260	31
6	186	182	700	135	140	100	285	170	84	221	298	25
7	158	240	476	170	130	98	293	148	74	149	1310	20
8	168	597	374	226	120	241	242	284	89	135	645	17
9	1350	421	327	2070	110	348	205	520	207	114	370	15
10	829	379	231	561	105	396	185	449	169	94	254	13
11	478	403	193	394	100	320	178	343	116	305	267	14
12	340	330	179	319	94	408	199	282	91	158	309	16
13	259	279	197	260	110	625	168	977	133	108	640	16
14	211	236	581	200	105	2780	148	1690	121	126	393	16
15	180	214	1260	160	100	2770	133	837	86	154	227	14
16	280	214	643	140	96	1320	124	672	76	137	158	13
17	332	254	460	125	92	715	117	568	69	149	121	27
18	265	283	478	115	90	487	111	440	58	108	93	26
19	381	240	440	105	90	452	116	472	48	79	72	17
20	555	213	351	98	95	807	259	391	40	76	62	14
21	454	200	298	95	90	1670	378	317	68	66	52	12
22	352	289	242	90	86	2420	396	254	79	54	42	13
23	280	1290	203	86	84	1410	475	227	61	45	35	17
24	228	820	197	84	94	1600	444	318	42	41	30	15
25	196	613	431	1010	105	1670	386	252	35	77	26	13
26	635	556	353	6020	100	3240	570	205	32	65	24	12
27	535	432	271	1440	95	1940	592	173	163	45	22	10
28	378	367	223	689	98	1020	473	148	142	117	19	9.1
29	301	529	201	460	---	830	363	148	93	71	20	8.3
30	249	1260	199	353	---	667	297	162	62	119	23	7.6
31	209	---	184	279	---	514	---	169	---	357	114	---
TOTAL	11697	11644	14863	16385	3308	29338	9523	11608	2843	4996	6623	780.0
MEAN	377	388	479	529	118	946	317	374	94.8	161	214	26.0
MAX	1350	1290	2610	6020	243	3240	607	1690	207	750	1310	197
MIN	141	146	179	84	84	96	111	148	32	41	19	7.6
CFSM	2.95	3.03	3.74	4.13	.92	7.39	2.48	2.92	.74	1.26	1.67	.20
IN.	3.40	3.38	4.32	4.76	.96	8.53	2.77	3.37	.83	1.45	1.92	.23

CAL YR 1977 TOTAL 120379.0 MEAN 330 MAX 4500 MIN 18 CFSM 2.58 IN 34.98
WTR YR 1978 TOTAL 123608.0 MEAN 339 MAX 6020 MIN 7.6 CFSM 2.65 IN 35.92

KANAWHA RIVER BASIN

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03189100 GAULEY RIVER NEAR CRAIGSVILLE, WV

LOCATION.--Lat 38°17'30", long 80°38'30", Nicholas County, Hydrologic Unit 05050005, on right bank at downstream side of highway bridge on W. Va. Route 20, 200 ft (61 m) downstream from Cherry River, 1.8 mi (2.9 km) downstream from Cranberry River, 2.7 mi (4.3 km) south of Craigsville, and at mile 60.0 (96.5 km).

DRAINAGE AREA.--528 mi² (1,368 km²).

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,870.00 ft (569.976 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for January and February, which are poor. Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--14 years, 1,442 ft³/s (40.84 m³/s), 37.09 in/yr (942 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,700 ft³/s (1,150 m³/s) Mar. 7, 1967, gage height, 22.73 ft (6.928 m); minimum, 13 ft³/s (0.37 m³/s) Sept. 27, 1967, gage height, 8.62 ft (2.627 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 12,000 ft³/s (340 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 26	0800	*35800 1010	21.50 6.553	Mar. 22	0415	12100 343	15.31 4.666
Mar. 14	2145	20500 581	17.68 5.389	Mar. 26	1700	14500 411	16.00 4.877

Minimum discharge, 33 ft³/s (0.93 m³/s) Sept. 30, gage height, 9.03 ft (2.752 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	295	810	8450	766	1200	426	2150	1190	580	260	1170	794
2	1910	733	4210	695	1000	432	1430	970	474	230	684	420
3	1730	678	2750	529	850	426	1660	830	596	1120	498	265
4	1170	634	2170	468	770	450	1340	803	803	2860	1280	200
5	840	628	2340	613	690	450	1340	884	596	1530	1250	154
6	682	655	3350	690	630	444	1110	794	480	990	866	128
7	597	1010	2440	809	580	438	1070	708	408	684	3900	104
8	584	2760	1850	1040	540	559	970	960	420	524	2980	90
9	4840	2370	1500	6300	500	1100	830	1850	920	474	1710	80
10	4010	2080	1190	2940	470	2340	767	1800	990	414	1180	70
11	2270	2420	960	1960	450	2170	740	1430	676	794	1220	93
12	1570	1950	855	1570	430	2790	803	1190	510	716	1930	97
13	1170	1550	961	1300	490	3800	740	2750	700	492	2880	90
14	942	1250	1590	1100	470	11700	686	7460	676	559	2140	80
15	785	1080	5410	900	460	12600	620	3960	504	1060	1140	77
16	1350	989	3210	750	460	6320	580	3000	420	749	732	70
17	2240	1050	2290	680	450	3620	545	2600	402	866	531	74
18	1600	1170	2050	640	450	2480	510	2010	352	692	408	90
19	1730	1040	1860	590	470	2040	524	1980	300	486	330	90
20	2360	933	1490	550	500	3150	768	1720	260	379	285	70
21	2080	866	1290	520	470	5220	1480	1410	315	363	240	59
22	1630	1070	1080	490	430	8990	1830	1140	432	310	200	62
23	1290	3830	887	470	410	5270	2150	959	379	260	176	62
24	1040	3470	841	450	474	5450	1950	1220	285	245	145	62
25	877	2800	1350	3590	462	5850	1660	1080	235	285	128	59
26	1690	2570	1530	22800	450	9740	2260	875	205	330	112	54
27	2160	2040	1170	7010	426	7520	3150	740	379	275	104	46
28	1540	1750	1040	3540	438	4200	2320	636	531	408	97	41
29	1260	2090	912	2410	---	3270	1760	545	450	426	93	37
30	1090	4860	876	1900	---	2560	1430	604	320	468	90	35
31	932	---	830	1500	---	2070	---	604	---	1340	280	---
TOTAL	48264	51136	62732	69570	15420	117875	39173	48702	14598	20589	28779	3653
MEAN	1557	1705	2024	2244	551	3802	1306	1571	487	664	928	122
MAX	4840	4860	8450	22800	1200	12600	3150	7460	990	2860	3900	794
MIN	295	628	830	450	410	426	510	545	205	230	90	35
CFSM	2.95	3.23	3.83	4.25	1.04	7.20	2.47	2.98	.92	1.26	1.76	.23
IN.	3.40	3.60	4.42	4.90	1.09	8.30	2.76	3.43	1.03	1.45	2.03	.26
CAL YR 1977	TOTAL	495602	MEAN	1358	MAX	15900	MIN	92	CFSM	2.57	IN	34.92
WTR YR 1978	TOTAL	520491	MEAN	1426	MAX	22800	MIN	35	CFSM	2.70	IN	36.67

KANAWHA RIVER BASIN

03189590 SUMMERSVILLE LAKE NEAR SUMMERSVILLE, WV

LOCATION.--Lat 38°13'20", long 80°53'35", Nicholas County, Hydrologic Unit 05050005, at Summersville Dam on Gauley River, 4.6 mi (7.4 km) southwest of Summersville, and at mile 34.5 (55.5 km).

DRAINAGE AREA.--803 mi² (2,080 km²).

PERIOD OF RECORD.--May 1965 to current year (monthend contents only).

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

REMARKS.--Reservoir is formed by rockfill dam with impervious core, completed in 1971; closure of dam was made and storage began in May 1965. Spillway is uncontrolled saddle spillway 1,250 ft (381.0 m) long. Flow is controlled by three 9 ft (2.7 m) and one 2.5 ft (0.76 m) diameter Howell-Bunger fixed-cone dispersion valves. Total level-pool capacity at elevation 1,710 ft (521.2 m), flood-control pool elevation, is 413,800 acre-ft (510 hm³) of which 390,800 acre-ft (482 hm³) is controlled storage above elevation 1,520 ft (463.3 m), minimum-pool elevation. This is a multipurpose reservoir.

COOPERATION.--Records were furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 421,800 acre-ft (520 hm³) Mar. 5, 1966, elevation, 1,711.7 ft (521.73 m), caused by flood before valves were operational; minimum since initial filling, 6,990 acre-ft (8.62 hm³) Jan. 13, 1967, elevation, 1,464.5 ft (446.38 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 196,600 acre-ft (242 hm³) June 10, elevation, 1,653.8 ft (504.08 m); minimum, 57,550 acre-ft (71.0 hm³) Mar. 13, elevation, 1,574.6 ft (479.94 m).

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in Contents (acre-feet)	Change in Contents (equivalent in cfs)
Sept. 30.....	1644.9	172600	-	-
Oct. 31.....	1633.7	145900	-26700	-434
Nov. 30.....	1589.1	72610	-73290	-1230
Dec. 31.....	1576.15	59000	-13610	-221
CAL YR 1977	-	-	+430	+1
Jan. 31.....	1619.3	117100	+58100	+945
Feb. 28.....	1576.1	58950	-58150	-1050
Mar. 31.....	1576.1	58950	-	-
Apr. 30.....	1631.9	142000	+83050	+1400
May 31.....	1652.4	192700	+50700	+825
June 30.....	1652.7	193500	+800	+13
July 31.....	1652.85	193900	+400	+7
Aug. 31.....	1652.55	193100	-800	-13
Sept. 30.....	1627.6	133000	-60100	-1010
WTR YR 1978	-	-	-39600	-55

KANAWHA RIVER BASIN

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03189600 GAULEY RIVER BELOW SUMMERSVILLE DAM, WV

LOCATION.--Lat 38°13'00", long 80°53'30", Nicholas County, Hydrologic Unit 05050005, on right bank 0.4 mi (0.6 km) downstream from Summersville Dam, 5.0 mi (8.0 km) southwest of Summersville, and at mile 34.1 (54.9 km).

DRAINAGE AREA.--804 mi² (2,082 km²).

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

REVISED RECORD.--WDR WV-67: 1966.

GAGE.--Water-stage recorder. Datum of gage is 1,350.00 ft (411.480 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records good. Flow regulated by Summersville Lake (station 03189590).

AVERAGE DISCHARGE.--12 years, 2,141 ft³/s (60.63 m³/s), 36.16 in/yr (918 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,800 ft³/s (504 m³/s) Mar. 26, 1966, gage height, 19.30 ft (5.883 m); minimum, 1.9 ft³/s (0.054 m³/s) Feb. 16, 17, 1967, gage height, 3.67 ft (1.119 m); minimum daily, 2.4 ft³/s (0.068 m³/s) Feb. 10, 13-16, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13,900 ft³/s (394 m³/s) Mar. 15, gage height, 17.94 ft (5.468 m); minimum daily discharge, 113 ft³/s (3.200 m³/s) Apr. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2100	6280	4490	1060	6290	542	2410	162	568	685	2550	1400
2	2480	6700	5190	915	4460	542	2020	162	694	350	1000	1220
3	2480	4390	4710	779	3750	538	806	162	1210	434	698	716
4	2480	2370	4690	474	3720	538	171	162	1640	3920	1200	538
5	2480	2410	4650	390	3680	486	177	162	1050	2280	1880	559
6	2480	2420	4640	689	3640	398	180	162	486	1400	1470	271
7	2470	2410	4640	1020	3610	398	180	162	177	880	3760	183
8	2460	2410	4610	1030	3000	721	180	165	219	689	3220	183
9	2460	2870	3910	2570	2340	1980	149	165	880	470	2390	183
10	2480	3340	2840	3900	2150	4030	113	162	1740	470	2000	183
11	2490	3340	2830	3550	980	4430	147	162	1490	559	1650	845
12	2490	3340	1900	2780	466	5270	147	162	689	793	3170	1400
13	2490	3320	1010	2330	663	6410	147	165	604	870	3990	1400
14	2480	3310	1440	2330	743	10900	147	2370	1050	1080	3610	1400
15	2470	3290	3680	2320	743	13800	147	7990	970	1950	1740	1530
16	2470	3270	5080	2100	613	13000	147	4760	649	2080	1200	2410
17	2480	3250	4450	1470	534	8420	147	3200	595	920	779	2050
18	2480	3100	3470	1290	534	4310	150	2720	466	1340	470	1460
19	2480	2900	2800	1290	534	3280	150	2440	402	1190	362	1450
20	2480	2890	2070	1290	534	2890	150	2230	366	180	362	1450
21	2480	2590	1950	1290	530	3800	150	1900	177	180	362	1440
22	2480	1100	1800	1290	354	7500	150	1730	406	180	362	1440
23	2480	2410	1470	1290	342	7810	150	1500	546	180	362	1440
24	2470	4630	1200	1290	382	6010	153	1510	466	210	362	1440
25	2470	4360	1190	1290	478	7150	153	1500	314	617	322	1430
26	2460	3820	1540	1400	538	8780	156	1500	268	925	219	1430
27	2460	3820	1820	880	538	9830	156	1130	268	671	168	1430
28	2460	3800	1810	2920	538	6480	159	840	402	398	168	1540
29	2450	3770	1540	7810	---	4270	159	840	554	398	168	2270
30	2450	3780	1190	7730	---	3760	162	757	766	640	168	2260
31	3360	---	1190	7630	---	2900	---	568	---	1890	546	---
TOTAL	77200	101690	89800	68397	46684	151173	9413	41600	20112	28829	40708	36951
MEAN	2490	3390	2897	2206	1667	4877	314	1342	670	930	1313	1232
MAX	3360	6700	5190	7810	6290	13800	2410	7990	1740	3920	3990	2410
MIN	2100	1100	1010	390	342	398	113	162	177	180	168	183

CAL YR 1977 TOTAL 646835 MEAN 1772 MAX 10700 MIN 100 MEAN† 1773 CFSM† 2.21 IN† 30.00
WTR YR 1978 TOTAL 712557 MEAN 1952 MAX 13800 MIN 113 MEAN† 1897 CFSM† 2.36 IN† 32.04

† Adjusted for change in contents in Summersville Lake.

KANAWHA RIVER BASIN

03190400 MEADOW RIVER NEAR MT. LOOKOUT, WV

LOCATION.--Lat 38°11'25", long 80°56'55", Nicholas County, Hydrologic Unit 05050005, on right bank 1,000 ft (305 m) upstream from mouth, and 2.5 mi (4.0 km) northwest of Mt. Lookout.

DRAINAGE AREA.--365 mi² (945 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 1,200 ft (366 m), from topographic map.

REMARKS.--Records good except those for January and February, which are poor. Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--12 years, 762 ft³/s (21.58 m³/s), 28.35 in/yr (720 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,500 ft³/s (524 m³/s) Mar. 7, 1967, gage height, 13.44 ft (4.097 m); minimum, 14 ft³/s (0.40 m³/s) Sept. 12, 13, 1966, gage height, 2.51 ft (0.765 m), Sept. 30, 1978, gage height, 2.74 (0.835 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,000 ft³/s (140 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 26	0700	*12600 357	11.70 3.566	Mar. 14	2300	10900 309	11.12 3.389

Minimum discharge, 14 ft³/s (0.40 m³/s) Sept. 30, gage height, 2.74 ft (0.835 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	440	2820	425	1100	285	888	1020	285	39	246	246
2	271	368	2700	400	920	260	698	705	225	38	145	211
3	634	332	1990	313	780	275	574	540	232	62	130	121
4	515	302	1580	260	680	268	490	485	292	123	420	84
5	510	292	1670	230	580	254	450	495	257	109	775	66
6	400	292	2320	300	500	247	400	480	194	111	475	54
7	253	368	1830	368	440	240	384	435	159	80	445	44
8	183	2000	1350	465	390	392	356	485	150	63	670	38
9	1700	2610	1180	1430	350	859	320	1180	183	57	604	33
10	2770	2410	852	1100	320	1710	295	1270	232	56	435	29
11	1990	2180	592	800	300	1800	285	1170	187	127	332	55
12	1320	1650	430	600	280	2370	292	952	145	99	281	67
13	859	1200	562	500	260	2920	274	968	197	67	550	62
14	562	880	691	430	280	7290	246	2260	162	174	500	57
15	380	691	2100	370	320	8750	225	2110	140	540	332	46
16	775	580	1930	320	310	6340	208	1680	113	485	204	39
17	1570	540	1490	290	310	3520	197	1340	103	356	145	36
18	1130	545	1190	260	310	2200	197	1010	92	271	115	34
19	912	520	976	240	310	1680	215	761	88	190	95	33
20	831	475	796	220	310	1980	264	610	80	137	81	30
21	712	435	719	200	280	2370	510	505	67	105	70	27
22	580	475	634	185	260	2790	831	425	132	76	62	25
23	485	1520	540	170	240	2370	859	372	140	69	54	25
24	400	1990	475	160	240	1920	803	658	107	80	46	23
25	348	1820	540	1260	240	1750	670	866	80	117	42	21
26	485	1740	670	8870	257	2290	831	733	67	137	39	20
27	1150	1470	525	5160	268	3520	2620	592	60	117	36	18
28	1050	1230	450	3140	264	3040	2890	450	55	274	33	17
29	896	1300	370	2220	---	2230	2030	364	50	372	31	16
30	740	2220	330	1700	---	1610	1420	302	44	295	32	15
31	574	---	445	1400	---	1200	---	332	---	285	59	---
TOTAL	25045	32875	34747	33786	11099	68730	20722	25555	4318	5111	7484	1592
MEAN	808	1096	1121	1090	396	2217	691	824	144	165	241	53.1
MAX	2770	2610	2820	8870	1100	8750	2890	2260	292	540	775	246
MIN	60	292	330	160	240	240	197	302	44	38	31	15
CFSM	2.21	3.00	3.07	2.99	1.09	6.07	1.89	2.26	.40	.45	.66	.15
IN.	2.55	3.35	3.54	3.44	1.13	7.00	2.11	2.60	.44	.52	.76	.16

CAL YR 1977	TOTAL	244960	MEAN 671	MAX 11100	MIN 26	CFSM 1.84	IN 24.97
WTR YR 1978	TOTAL	271064	MEAN 743	MAX 8870	MIN 15	CFSM 2.04	IN 27.63

KANAWHA RIVER BASIN

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03192000 GAULEY RIVER ABOVE BELVA, WV

LOCATION.--Lat 38°14'00", long 81°10'45", Nicholas County, Hydrologic Unit 05050005, on right bank 0.5 mi (0.8 km) upstream from Belva, 1.0 mi (1.6 km) upstream from Twentymile Creek, and at mile 6.7 (10.8 km).

DRAINAGE AREA.--1,315 mi² (3,406 km²).

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

REVISED RECORDS.--WSP 783: Drainage area. WSP 873: 1938. WSP 1275: 1929-30.

GAGE.--Water-stage recorder. Datum of gage is 669.00 ft (203.911 m) National Geodetic Vertical Datum, adjustment of 1912.

REMARKS.--Records good. Flow regulated since 1965 by Summersville Lake (station 03189590). Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--50 years, 2,694 ft³/s (76.29 m³/s), 27.82 in/yr (707 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 105,000 ft³/s (2,970 m³/s) July 5, 1932, gage height, 28.60 ft (8.717 m), from rating curve extended above 65,000 ft³/s (1,800 m³/s) on basis of velocity-area studies and inflow and storage adjustment to record for Kanawha River at Kanawha Falls; minimum, 3.2 ft³/s (0.091 m³/s) Oct. 21, 1953, gage height, 0.10 ft (0.030 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 26,900 ft³/s (762 m³/s) Mar. 14, gage height, 13.21 ft (4.026 m); minimum, 170 ft³/s (4.81 m³/s) Aug. 30, gage height, 1.27 ft (0.387 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1610	6430	7430	1640	7900	901	3610	1390	842	788	2890	1420
2	2640	7450	8650	1400	5740	857	2940	1040	783	570	1200	1540
3	3050	5340	7140	1290	4570	895	2110	829	1040	431	880	1080
4	2880	3150	6690	873	4410	862	744	823	1910	3390	1790	481
5	2860	2640	7470	753	4360	800	684	945	1510	2880	2690	721
6	2790	2650	8480	814	4270	716	631	887	951	1780	2140	492
7	2620	2720	7230	1430	4140	708	602	804	428	993	4380	256
8	2550	4110	6490	1550	4030	1100	571	852	353	868	4160	202
9	3890	5510	5970	3730	2620	3320	530	1580	549	558	3230	193
10	5530	6110	4110	5960	2510	7290	463	1830	1570	495	2620	187
11	4560	6010	3730	5330	1880	7410	466	1590	2020	559	2120	242
12	3840	5360	3150	4300	758	9170	494	1340	928	744	3560	1410
13	3330	4820	1680	3540	835	11000	474	1190	797	874	4760	1450
14	2990	4450	1860	2800	1050	19400	447	3180	990	1020	4310	1410
15	2770	4230	5190	2700	1020	24500	417	10600	1160	2220	2200	1390
16	3270	4080	7690	2500	979	20700	395	7610	850	2880	1490	2270
17	4470	4000	6780	2100	817	13800	388	4970	681	1690	982	2400
18	3790	3900	5100	1700	824	7480	388	4110	645	1510	631	1430
19	3440	3540	4560	1600	820	5380	410	3300	465	1430	440	1410
20	3300	3470	3000	1550	791	5260	490	3010	458	613	430	1410
21	3160	3310	2840	1500	821	6120	721	2370	376	306	420	1400
22	3000	2150	2490	1500	790	9840	1070	2220	346	266	412	1410
23	2880	3190	2240	1500	549	11000	1160	1850	672	244	401	1390
24	2790	7260	1730	1500	632	8230	1100	2150	641	323	389	1390
25	2720	6820	1930	3730	636	8730	956	2350	472	676	384	1380
26	2750	6000	2210	17400	858	10700	1740	2220	351	1090	323	1380
27	3450	5700	2520	8210	855	13600	4700	1960	312	979	228	1370
28	3430	5410	2410	5660	875	11100	3940	1310	311	633	178	1370
29	3280	5390	2290	10400	---	7070	2610	1190	483	715	174	2100
30	3110	6490	1720	9450	---	5930	1850	1110	627	1050	171	2270
31	3160	---	1690	8840	---	4650	---	903	---	2290	402	---
TOTAL	99910	141690	136470	117250	60340	238519	37101	71513	23521	34865	50385	36854
MEAN	3223	4723	4402	3782	2155	7694	1237	2307	784	1125	1625	1228
MAX	5530	7450	8650	17400	7900	24500	4700	10600	2020	3390	4760	2400
MIN	1610	2150	1680	753	549	708	388	804	311	244	171	187

CAL YR 1977 TOTAL 926935 MEAN 2540 MAX 15400 MIN 190 MEAN† 2541 CFSM† 1.93 IN† 26.24
WTR YR 1978 TOTAL 1048418 MEAN 2872 MAX 24500 MIN 171 MEAN† 2817 CFSM† 2.14 IN† 29.04

† Adjusted for change in contents in Summersville Lake.

KANAWHA RIVER BASIN

03193000 KANAWHA RIVER AT KANAWHA FALLS, WV

LOCATION.--Lat 38°08'20", long 81°12'45", Fayette County, Hydrologic Unit 05050006, on right bank 150 ft (46 m) downstream from toll bridge, 0.8 mi (1.3 km) downstream from village of Kanawha Falls, 2.0 mi (3.2 km) downstream from Gauley Bridge, 2.0 mi (3.2 km) downstream from confluence of New River and Gauley River, and at mile 94.5 (152.1 km).

DRAINAGE AREA.--8,367 mi² (21,671 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1877 to current year. October 1916 to September 1918 and October 1927 to October 1928, published as "at Lock 2, Montgomery".

REVISED RECORDS.--WSP 783: Drainage area. WSP 923: 1878, 1886, 1897, 1899, 1901-3. WSP 1305: 1902(M), 1940. WSP 1335: 1931.

GAGE.--Water-stage recorder. Datum of gage is 621.20 ft (189.342 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 27, 1928, nonrecording gages at several sites within 9.0 mi (14.5 km) of present site at various datums. Oct. 27, 1928, to Sept. 30, 1964, water-stage recorder at present site at datum 2.00 ft (0.610 m) higher.

REMARKS.--Water-discharge records good. Flow regulated since 1939 by Claytor Lake (station 03169000) since 1949, by Bluestone Lake (station 03179800), and since 1965 by Summersville Lake (station 03189590). Corps of Engineers gage-height telemeter and Appalachian Power Co. remote sender at station.

AVERAGE DISCHARGE.--101 years, 12,529 ft³/s (354.8 m³/s), 20.34 in/yr (517 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 320,000 ft³/s (9,060 m³/s) Sept. 14, 1878, gage height, 37.8 ft (11.52 m), site and datum then in use, from gage-height relation and rating curve extended above 150,000 ft³/s (4,200 m³/s); minimum, 640 ft³/s (18.1 m³/s) Aug. 15, 1930, gage height, -0.95 ft (-0.290 m), datum then in use; minimum daily, 690 ft³/s (19.5 m³/s) Oct. 29, 1921.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 103,000 ft³/s (2,920 m³/s) Mar. 14, gage height, 17.65 ft (5.380 m); minimum, 1,480 ft³/s (41.9 m³/s) Sept. 7, gage height, 1.89 ft (0.576 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5410	12300	33200	8640	53200	10100	23500	37600	9640	5590	6110	5740
2	9270	14100	45200	7650	40500	8510	18500	28400	10300	5260	4610	4720
3	13700	11500	31600	7470	19400	8750	15200	19100	8490	4200	5860	3910
4	12300	8950	25500	7970	14800	7870	11900	15100	9690	8320	4900	2790
5	14600	8050	22700	6890	13600	7690	12500	18800	7100	10900	8430	2660
6	11200	14400	26800	6040	12000	7320	11300	17500	6610	8780	8580	2360
7	8930	26000	28900	6750	11900	5760	10200	19100	5770	7820	8660	2110
8	7380	54900	23100	8160	11100	8870	8900	18900	5890	7130	14900	3810
9	10600	64200	20000	12700	8630	15900	10300	32000	7000	6710	19300	2910
10	21700	58300	16800	39200	9700	27900	7070	35200	11000	3230	12500	3050
11	19500	50600	15400	30000	9380	49200	7310	29300	9230	3180	11500	2920
12	15200	41200	12400	22200	7970	61400	9760	22600	6810	3650	12300	2730
13	12000	24700	7660	16200	6660	64100	8150	19300	5680	4730	14400	3590
14	9470	18900	11600	14500	6970	81900	7060	29300	5690	4960	12500	3790
15	7460	12900	15100	14200	8010	94300	6990	45100	6840	7010	9450	3950
16	8820	13600	23900	11600	7770	76700	6870	37200	6220	8570	7990	4160
17	10500	13000	22000	9870	7400	73900	6890	30500	6240	6440	8360	5110
18	10200	14300	18800	11600	8140	58400	5930	25000	7020	5140	6960	4310
19	9130	14900	18200	12200	7910	45200	7300	20600	4370	6110	7590	4730
20	7670	13800	14100	11800	7280	30200	9180	16600	4600	6020	5380	4830
21	7450	11700	14800	13800	6920	25200	7580	15800	4910	5800	3580	4280
22	7140	9680	15100	11000	7980	29100	8540	12500	7060	5220	2950	3770
23	7070	15600	13900	8210	6680	32100	8770	10500	7520	3630	2760	3590
24	6290	31800	11600	7250	6870	26200	7410	14300	6060	3230	3270	3610
25	5610	27600	10800	13100	7140	24700	6840	14700	5730	3160	3810	2920
26	6060	22400	10600	75100	7170	43400	18100	14400	4640	4560	3260	3580
27	13700	24400	11900	71800	6750	73700	63900	12400	4120	4390	3620	2960
28	24600	18900	11300	28400	6770	68000	58000	10600	4610	4600	2980	3250
29	18500	19000	10100	36900	---	57500	51000	9100	5360	3660	2030	4180
30	15300	27600	8980	59400	---	45000	45000	8030	4820	4140	3040	4640
31	9440	---	9880	62400	---	28900	---	7570	---	4690	4560	---
TOTAL	346200	699280	561920	653000	328600	1197770	479950	647100	199020	170830	226140	110960
MEAN	11170	23310	18130	21060	11740	38640	16000	20870	6634	5511	7295	3699
MAX	24600	64200	45200	75100	53200	94300	63900	45100	11000	10900	19300	5740
MIN	5410	8050	7660	6040	6660	5760	5930	7570	4120	3160	2030	2110
CAL YR 1977 TOTAL	4461100	MEAN	12220	MAX	106000	MIN	1770	CFSM 1.46	IN 19.83			
WTR YR 1978 TOTAL	5620770	MEAN	15400	MAX	94300	MIN	2030	CFSM 1.84	IN 24.99			

KANAWHA RIVER BASIN

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03193000 KANAWHA RIVER AT KANAWHA FALLS, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: December 1957 to September 1966, July 1968 to current year.

INSTRUMENTATION.--Temperature recorder since Dec. 7, 1957.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 29.0°C Aug. 1-7, 1975; minimum, 0.0°C on several days during 1958-60, 1963, 1971, 1978.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 27.0°C July 23, 24, 25; minimum, 0.0°C Feb. 8-16.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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

03193000 KANAWHA RIVER AT KANAWHA FALLS--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

[illegible]

KANAWHA RIVER BASIN

173

03193742 KANAWHA RIVER AT GLASGOW, WV

LOCATION.--Lat 38°12'23", long 81°25'30", Kanawha County, Hydrologic Unit 05050006, on right bank at Glasgow Power Plant, at Glasgow, 0.6 mi (1.0 km) upstream from Kellys Creek, and at mile 78.4 (126 km).

DRAINAGE AREA.--8,631 mi² (22,354 km).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: July 1977 to current year.

COOPERATION.--Records were furnished by Appalachian Electric Power Company.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum daily 30.0°C Aug. 21; minimum daily, -0.5°C Jan. 29, Feb. 4, 6.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.5	15.5	6.0	1.5	.0	1.5	5.5	13.5	21.5	26.0	26.5	26.5
2	20.5	14.0	7.0	1.5	.0	2.0	10.5	11.5	21.0	26.0	26.5	26.0
3	20.0	14.0	7.0	1.0	.5	1.5	11.5	11.5	23.5	26.5	26.0	24.0
4	18.0	14.0	8.5	2.0	-0.5	2.0	12.0	12.0	24.0	25.5	24.5	23.5
5	---	14.5	8.5	.5	---	1.5	13.0	13.0	24.5	25.0	26.0	25.5
6	---	14.5	10.0	1.0	-0.5	1.0	14.0	13.0	24.5	24.0	25.0	24.0
7	16.5	15.5	9.0	1.5	1.5	3.0	13.5	12.0	21.0	23.0	22.0	25.5
8	16.0	16.5	7.0	2.0	.5	3.0	14.0	13.0	21.5	---	23.5	25.5
9	18.5	15.0	4.5	---	.5	4.0	14.0	14.5	22.0	---	23.5	26.0
10	15.5	15.0	4.0	1.5	.5	4.0	14.5	15.5	22.0	25.0	21.0	26.0
11	15.5	14.0	3.5	1.0	1.0	4.0	16.5	15.0	20.0	24.5	23.5	26.5
12	15.0	13.5	1.5	.5	.0	5.0	---	14.5	21.5	25.5	23.5	26.5
13	14.0	11.5	3.0	---	.5	4.5	16.0	15.0	22.0	25.5	23.0	22.0
14	14.0	10.0	---	.5	1.5	4.5	---	16.0	21.5	25.5	23.5	26.5
15	13.5	9.0	3.5	.5	.5	4.5	13.0	14.5	22.0	25.0	23.5	25.5
16	13.5	---	---	.5	.5	5.5	11.0	13.0	22.0	24.5	23.5	25.5
17	12.0	9.5	5.5	1.0	.5	5.5	15.5	12.0	20.0	22.0	25.5	23.5
18	11.5	9.0	8.5	2.0	.5	5.5	15.5	13.5	20.5	23.0	26.0	22.0
19	12.0	---	5.5	1.0	1.0	6.0	15.5	14.0	22.0	23.0	26.5	22.0
20	11.0	11.0	4.5	1.0	.5	5.5	14.5	15.0	24.5	24.5	28.5	24.5
21	13.0	9.0	5.0	1.5	1.0	6.5	14.0	16.5	24.5	25.0	30.0	24.5
22	14.0	9.5	6.0	2.0	1.0	7.0	13.0	18.0	24.0	25.5	25.5	25.0
23	13.5	9.5	5.5	.5	1.5	7.0	---	18.5	24.5	25.0	25.0	25.5
24	14.5	9.5	5.5	1.0	.5	8.0	12.0	13.5	24.0	28.0	25.5	25.0
25	14.5	9.0	7.0	.5	1.0	9.0	13.0	14.5	24.0	26.5	26.5	24.0
26	15.5	9.0	4.0	1.0	1.5	9.0	12.0	19.0	---	25.5	28.0	24.0
27	13.5	6.5	---	.5	1.5	6.0	13.0	19.0	25.5	28.0	27.0	23.5
28	14.0	---	1.5	.0	2.0	6.0	10.0	20.0	26.5	29.0	28.0	24.0
29	14.5	---	1.0	-0.5	---	7.0	---	20.5	24.5	26.5	28.0	24.0
30	14.0	6.0	1.0	.0	---	7.0	11.0	21.5	26.5	27.0	29.0	19.0
31	15.5	---	1.0	.5	---	7.0	---	---	---	---	25.0	---
MEAN	15.0	11.5	5.0	1.0	.5	5.0	13.0	15.0	23.0	25.5	25.5	24.5
WTR YR 1978	MEAN	14.0		MAX	30.0		MIN	-0.5				

KANAWHA RIVER BASIN

03194700 ELK RIVER BELOW WEBSTER SPRINGS, WV

LOCATION.--Lat 38°35'50", long 80°29'20", Webster County, Hydrologic Unit 05050007, on right bank 10 ft (3 m) upstream from swinging footbridge, 6.5 mi (10.5 km) upstream from town of Centralia, 8.9 mi (14.3 km) southwest of Salisbury Station, 8.9 mi (14.3 km) northwest of Webster Springs, and at mile 122.7 (197.4 km).

DRAINAGE AREA.--268 mi² (694 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1959 to current year.

GAGE.--Water-stage and rainfall recorders. Altitude of gage is 1,020 ft (311 m), by barometer.

REMARKS.--Water-discharge records good except those for January and February, which are poor. Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--19 years, 693 ft³/s (19.63 m³/s), 35.12 in/yr (892 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,900 ft³/s (677 m³/s) June 2, 1974, gage height, 13.97 ft (4.258 m), from rating curve extended above 11,000 ft³/s (310 m³/s); minimum, 6.5 ft³/s (0.18 m³/s) Oct. 1, 1959; minimum gage height, 3.01 ft (0.917 m) Oct. 1, 1959, Aug. 18, 1965.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1861, probably in September, reached a stage of 26.34 ft (8.028 m) and flood of July 26, 1896, reached a stage of 25.87 ft (7.885 m), present datum, at site 0.2 mi (0.3 km) upstream, from levels to flood marks pointed out by a local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 8,500 ft³/s (240 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 26	1400	*12600 357	10.74 3.274	Mar. 14	2300	9850 279	9.75 2.972

Minimum discharge, 37 ft³/s (1.05 m³/s) Sept. 30, gage height, 3.10 ft (0.945 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	117	291	4040	349	522	177	785	413	400	360	1290	529
2	684	265	2200	339	464	146	782	352	330	296	714	314
3	594	242	1350	261	410	179	635	307	410	1970	450	197
4	432	230	1010	258	340	161	527	307	500	3420	508	144
5	325	212	1030	293	300	148	586	393	400	1700	536	115
6	271	201	1530	299	270	161	559	376	350	1000	410	97
7	260	197	1150	337	240	173	522	335	320	676	970	86
8	229	504	838	475	220	176	517	345	650	487	1630	73
9	1530	672	717	2370	200	329	453	807	1680	501	970	65
10	1770	631	564	1360	180	864	411	1210	1210	395	669	57
11	967	885	449	947	170	927	386	921	794	487	508	51
12	638	705	397	696	160	1390	435	703	557	444	922	45
13	455	560	420	580	150	1970	388	916	508	345	990	43
14	362	452	548	460	170	5270	344	4330	410	296	1150	53
15	304	397	2720	380	210	6100	309	2320	308	360	676	58
16	521	367	1720	310	198	3020	282	1530	264	304	450	53
17	996	368	1140	280	193	1760	259	1240	229	330	365	101
18	685	400	881	250	187	1160	243	978	202	325	292	122
19	765	392	867	230	186	911	244	953	181	264	208	87
20	1180	354	734	210	174	1560	382	850	157	205	172	66
21	1020	332	636	200	192	2290	1410	706	199	187	138	56
22	772	387	526	190	179	3820	1720	571	385	166	115	56
23	607	1520	429	180	155	2330	1450	468	292	145	101	100
24	480	1710	396	180	181	2160	1180	468	208	151	91	88
25	395	1380	586	1840	177	2310	967	426	166	196	83	69
26	390	1280	807	7420	181	4090	827	365	145	260	76	62
27	849	1030	638	3670	172	3580	951	456	698	199	72	54
28	601	860	552	1830	162	2170	732	280	1000	157	63	48
29	461	839	462	1140	---	1560	583	260	778	172	57	43
30	382	2430	415	808	---	1190	480	350	522	444	53	39
31	328	---	376	605	---	890	---	470	---	2140	256	---
TOTAL	19370	20093	30128	28747	6343	52972	19349	24406	14253	18382	14985	2971
MEAN	625	670	972	927	227	1709	645	787	475	593	483	99.0
MAX	1770	2430	4040	7420	522	6100	1720	4330	1680	3420	1630	529
MIN	117	197	376	180	150	146	243	260	145	145	53	39
CFSM	2.33	2.50	3.63	3.46	.85	6.38	2.41	2.94	1.77	2.21	1.80	.37
IN.	2.69	2.79	4.18	3.99	.88	7.35	2.69	3.39	1.98	2.55	2.08	.41

CAL YR 1977	TOTAL	211884	MEAN	581	MAX	6240	MIN	54	CFSM	2.17	IN	29.41
WTR YR 1978	TOTAL	251999	MEAN	690	MAX	7420	MIN	39	CFSM	2.58	IN	34.98

KANAWHA RIVER BASIN

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03194700 ELK RIVER BELOW WEBSTER SPRINGS, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1968 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: February 1974 to June 1977, November 1977 to June 1978, September 1978.

INSTRUMENTATION.--Temperature recorder since Feb. 13, 1974.

REMARKS.--No temperature record for Oct. 1 to Nov. 18, May 27 to June 8, June 15 to Sept. 12, due to instrument malfunctions.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 31.0°C Aug. 1, 2, 1975; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 27.5°C Sept. 20, 21; minimum recorded, 0.0°C many days during winter period.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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

[illegible]

KANAWHA RIVER BASIN

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03195100 RIGHT FORK HOLLY RIVER AT GUARDIAN, WV

LOCATION.--Lat 38°38'08", long 80°27'58", Webster County, Hydrologic Unit 05050007, on right bank at Guardian, 50 ft (15 m) upstream from Bear Run, and at mile 8.1 (13.0 km).

DRAINAGE AREA.--51.1 mi² (132.3 km²).

PERIOD OF RECORD.--March 1974 to September 1978 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 1,078.00 ft (328.574 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter periods, which are poor. Corps of Engineers gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,500 ft³/s (127 m³/s) June 2, 1974, gage height, 12.55 ft (3.825 m), from rating curve extended above 2,600 ft³/s (74 m³/s); minimum, 1.6 ft³/s (0.045 m³/s) Aug. 26, 27, 1976, gage height, 2.68 ft (0.817 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft³/s (23 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 26	0700	*3120 88.4	10.85 3.307	May 14	0745	830 23.5	6.70 2.042
Mar. 14	1815	1280 36.2	7.75 2.362	July 31	0830	1100 31.2	7.37 2.246

Minimum discharge, 2.6 ft³/s (0.074 m³/s) Sept. 30, gage height, 2.90 ft (0.884 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	24	445	39	66	21	92	43	31	28	275	84
2	70	23	266	39	57	21	71	37	24	25	112	41
3	45	23	160	30	50	22	60	32	43	267	61	27
4	34	22	124	29	44	21	53	54	57	474	42	19
5	25	21	196	33	38	22	57	75	42	196	35	15
6	23	21	339	34	33	22	49	74	36	100	30	12
7	23	24	202	40	29	22	51	70	28	60	63	9.2
8	22	49	130	58	26	44	45	76	220	39	95	7.9
9	198	79	114	168	23	150	44	122	307	34	61	6.9
10	156	128	96	130	21	366	44	202	174	31	42	5.8
11	79	251	85	105	20	354	46	162	100	64	40	4.7
12	50	165	79	80	19	480	55	117	63	37	68	4.3
13	35	106	71	68	18	606	50	168	55	28	114	4.3
14	28	80	104	56	19	990	49	676	36	36	133	4.7
15	24	65	337	45	24	634	45	354	29	37	74	5.1
16	189	55	234	35	23	305	43	220	24	33	46	6.1
17	324	53	151	32	22	188	40	180	20	56	35	17
18	150	46	113	29	22	129	38	152	17	39	27	9.7
19	97	41	88	27	21	127	41	148	14	27	20	6.1
20	82	40	77	25	20	204	79	133	13	21	16	4.5
21	74	41	71	23	22	200	337	112	17	16	13	3.9
22	64	61	63	22	20	160	522	84	25	13	11	5.8
23	51	230	55	21	18	120	310	72	17	12	8.8	12
24	42	267	55	20	20	93	190	72	13	39	7.2	7.2
25	36	237	75	721	21	95	131	58	9.7	63	6.5	5.4
26	37	217	89	1860	21	152	100	46	12	80	12	4.5
27	35	167	80	456	21	287	77	39	106	47	8.3	3.9
28	32	145	64	227	21	295	62	33	120	33	6.1	3.4
29	29	189	54	140	---	237	53	28	75	24	5.1	3.0
30	27	440	48	100	---	166	49	34	43	250	4.3	2.8
31	25	---	41	72	---	120	---	49	---	728	112	---
TOTAL	2140	3310	4106	4764	759	6653	2883	3722	1770.7	2937	1583.3	346.2
MEAN	69.0	110	132	154	27.1	215	96.1	120	59.0	94.7	51.1	11.5
MAX	324	440	445	1860	66	990	522	676	307	728	275	84
MIN	22	21	41	20	18	21	38	28	9.7	12	4.3	2.8
CFSM	1.35	2.15	2.58	3.01	.53	4.21	1.88	2.35	1.16	1.85	1.00	.23
IN.	1.56	2.41	2.99	3.47	.55	4.84	2.10	2.71	1.29	2.14	1.15	.25

CAL YR 1977	TOTAL	25272.4	MEAN	69.2	MAX	1040	MIN	2.6	CFSM	1.35	IN	18.40
WTR YR 1978	TOTAL	34974.2	MEAN	95.8	MAX	1860	MIN	2.8	CFSM	1.88	IN	25.46

03195250 LEFT FORK HOLLY RIVER NEAR REPLETE, WV

LOCATION.--Lat 38°41'19", long 80°26'01", Webster County, Hydrologic Unit 05050007, on left bank at Poling, 100 ft (30 m) downstream from Potts Run, 1.8 mi (2.9 km) southeast of Replete, and at mile 8.4 (13.5 km).

DRAINAGE AREA.--48.1 mi² (124.6 km²).

PERIOD OF RECORD.--March 1974 to September 1978 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 1,190 ft (363 m), from topographic map.

REMARKS.--Records good except those for period of no gage-height record, December 5 to January 16, and winter periods, which are poor. Corps of Engineers gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,020 ft³/s (85.5 m³/s) Jan. 26, 1978, gage height, 11.47 ft (3.496 m); minimum, 2.1 ft³/s (0.059 m³/s) Aug. 27, 28, 1976, gage height, 4.30 ft (1.311 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft³/s (23 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 26	0600	*3020 85.5	11.47 3.496	July 31	0845	850 24.1	8.36 2.548
Mar. 14	1900	1500 42.5	9.54 2.908				

Minimum discharge, 4.3 ft³/s (0.12 m³/s) Sept. 12, 30, gage height, 4.52 ft (1.378 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	29	522	43	70	31	96	48	46	39	291	64
2	221	28	309	42	60	32	77	42	37	34	121	34
3	65	27	182	34	52	32	64	37	55	394	70	23
4	49	26	137	32	46	29	56	59	64	474	53	18
5	36	25	220	35	42	30	62	79	54	212	41	14
6	35	24	360	36	38	31	54	77	43	111	42	12
7	36	25	240	45	35	31	59	74	39	66	184	9.8
8	35	40	150	60	32	40	55	81	246	49	294	8.4
9	296	70	120	180	30	140	54	136	345	44	142	7.3
10	272	130	100	150	28	297	54	178	178	38	85	6.3
11	126	280	94	110	26	291	56	142	102	80	69	5.3
12	80	180	88	86	24	402	77	108	67	49	73	4.7
13	57	110	80	68	23	586	74	150	57	36	68	8.7
14	46	80	140	56	27	1100	69	542	41	44	83	10
15	38	64	330	45	30	795	61	345	35	40	59	8.4
16	248	57	250	35	29	369	55	225	26	32	44	11
17	418	59	160	32	28	212	49	174	23	27	37	20
18	200	56	120	30	27	139	47	139	20	22	29	13
19	147	51	100	28	26	126	49	160	17	18	23	6.6
20	144	50	86	26	26	184	134	137	15	15	19	5.6
21	120	53	77	24	28	249	458	108	19	13	16	4.8
22	92	80	68	23	27	255	526	82	24	11	13	8.0
23	72	220	60	22	26	162	333	70	16	11	11	13
24	57	264	60	21	28	124	202	72	12	66	9.4	9.0
25	49	235	78	715	31	120	139	58	9.8	90	8.7	7.4
26	47	210	98	1880	30	170	107	49	14	85	14	6.2
27	43	164	84	526	29	306	84	41	132	54	9.8	6.0
28	40	156	68	240	29	330	67	36	168	39	7.7	5.5
29	37	205	58	144	---	264	58	30	93	28	6.3	5.1
30	33	514	52	104	---	174	53	34	56	166	5.5	4.5
31	31	---	44	82	---	126	---	61	---	582	53	---
TOTAL	3205	3512	4535	4554	927	7177	3329	3574	2053.8	2969	1981.4	359.6
MEAN	103	117	146	160	33.1	232	111	115	68.5	95.8	63.9	12.0
MAX	418	514	522	1880	70	1100	526	542	345	582	294	64
MIN	31	24	44	21	23	29	47	30	9.8	11	5.5	4.5
CFSM	2.14	2.43	3.04	3.33	.69	4.82	2.31	2.39	1.42	1.99	1.33	.25
IN.	2.48	2.72	3.51	3.83	.72	5.55	2.57	2.76	1.59	2.30	1.53	.28
CAL YR 1977	TOTAL	31150.1	MEAN	85.3	MAX	1080	MIN	4.1	CFSM	1.77	IN	24.09
WTR YR 1978	TOTAL	38576.8	MEAN	106	MAX	1880	MIN	4.5	CFSM	2.20	IN	29.83

KANAWHA RIVER BASIN

179

03195400 SUTTON LAKE AT SUTTON, WV

LOCATION.--Lat 38°39'40", long 80°41'40", Braxton County, Hydrologic Unit 05050007, at Sutton Dam on Elk River, 1.0 mi (1.6 km) upstream from Sutton, and at mile 101.1 (162.7 km).

DRAINAGE AREA.--537 mi² (1,391 km²).

PERIOD OF RECORD.--October 1960 to current year (monthend contents only).

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

REMARKS.--Reservoir is formed by concrete gravity-type dam completed in 1961; closure of dam was made in April 1959 and storage above minimum-pool elevation began Feb. 26, 1961. Spillway equipped with 6 taintor gates 40 ft (12.2 m) long by 31 ft (9.4 m) high and 5 sluice gates 5.67 ft (1.728 m) wide by 10 ft (3.0 m) high. Total level-pool capacity at elevation 1,000 ft (304.8 m), flood-control pool elevation, is 265,300 acre-ft (327 hm³) of which 261,200 acre-ft (322 hm³) is controlled storage above elevation 850 ft (259.1 m), minimum-pool elevation. This is a multipurpose reservoir.

COOPERATION.--Records were furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 111,400 acre-ft (137 hm³) June 3, 1974, elevation, 950.19 ft (289.618 m); minimum since initial filling, 734 acre-ft (0.905 hm³) Apr. 1, 1961, elevation, 832.33 ft (253.694 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 97,630 acre-ft (120 hm³) Jan. 28, elevation, 943.72 ft (287.646 m); minimum, 24,540 acre-ft (30.3 hm³) Nov. 2, elevation 889.45 ft (271.104 m).

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in Contents (acre-feet)	Change in Contents (equivalent in cfs)
Sept. 30.....	914.19	49210	-	-
Oct. 31.....	891.43	26120	-23090	-376
Nov. 30.....	898.02	31850	+5730	+96
Dec. 31.....	895.28	29380	-2470	-40
CAL YR 1977	-	-	+24250	+33
Jan. 31.....	931.64	74820	+45440	+739
Feb. 28.....	893.62	27950	-46870	-844
Mar. 31.....	891.46	26150	-1800	-29
Apr. 30.....	922.28	60110	+33960	+571
May 31.....	922.75	60790	+680	+11
June 30.....	922.77	60820	+30	+1
July 31.....	923.85	62410	+1590	+26
Aug. 31.....	922.71	60730	-1680	-27
Sept. 30.....	922.42	60310	-420	-7
WTR YR 1977	-	-	+11100	+15

KANAWHA RIVER BASIN

03195500 ELK RIVER AT SUTTON, WV

LOCATION.--Lat 38°39'45", long 80°42'35", Braxton County, Hydrologic Unit 05050007, on left bank 150 ft (46 m) upstream from highway bridge at Sutton, 0.5 mi (0.8 km) upstream from Granny Creek, 0.9 mi (1.4 km) downstream from Sutton Dam, 2.5 mi (4.0 km) downstream from Wolf Creek, and at mile 100.1 (161.1 km).

DRAINAGE AREA.--543 mi² (1,406 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1938 to current year. Monthly discharge only October 1938 to February 1939, published in WSP 1305.

REVISED RECORDS.--WSP 1305: 1942(M), 1948-50(M).

GAGE.--Water-stage recorder. Datum of gage is 800.00 ft (243.840 m) National Geodetic Vertical Datum of 1929. Prior to Apr. 5, 1940, nonrecording gage and Apr. 5, 1940, to Sept. 30, 1960, water-stage recorder at site 150 ft (46 m) downstream at datum 8.03 ft (2.448 m) higher.

REMARKS.--Water-discharge records good. Flow regulated since 1960 by Sutton Lake (station 03195400).

AVERAGE DISCHARGE.--40 years, 1,125 ft³/s (31.86 m³/s), 28.14 in/yr (715 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 34,200 ft³/s (969 m³/s) Jan. 29, 1957, gage height, 39.30 ft (11.979 m), present datum; minimum, 0.4 ft³/s (0.011 m³/s) Oct. 25, 26, 28, 29, 1953; minimum gage height, 9.87 ft (3.008 m) Oct. 25, 1953, present datum.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 13, 1918, reached a stage of 45.2 ft (13.78 m), present datum, from floodmarks, discharge, about 49,000 ft³/s (1,390 m³/s), from rating curve extended above 28,000 ft³/s (790 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,410 ft³/s (238 m³/s) July 4, gage height, 20.41 ft (6.221 m); minimum, 71 ft³/s (2.01 m³/s) Aug. 30; minimum gage height, 10.72 ft (3.267 m) Sept. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	511	956	5490	595	4770	390	1320	736	284	909	3620	1040
2	943	475	4790	595	3380	386	1100	630	284	281	1630	702
3	1210	120	2710	487	3010	388	1020	512	412	2720	854	485
4	1200	118	2030	339	2950	386	804	529	889	6550	744	296
5	1090	119	1880	291	2890	385	660	617	889	2620	744	181
6	909	120	2590	372	2820	385	777	832	806	1490	720	160
7	883	207	2420	576	2570	385	657	827	654	1010	945	120
8	634	340	1630	803	1990	388	219	903	811	731	2170	120
9	1480	448	1430	1520	1520	417	174	1240	2510	732	1980	105
10	2890	713	1260	1930	1120	1070	171	1900	2410	595	1360	91
11	2190	1250	942	1930	821	1970	173	2050	1820	442	1150	88
12	1610	1610	721	1910	649	2770	173	2040	930	440	1060	93
13	1140	1460	677	1800	484	4480	176	1770	679	440	1100	95
14	869	1180	827	1450	395	5410	178	5790	514	445	1830	91
15	865	706	2100	1050	394	4410	178	5380	420	508	1470	88
16	1150	287	2980	600	393	5600	178	2630	359	557	1020	86
17	2290	389	2770	640	390	5440	178	1970	319	556	816	82
18	2070	660	2160	1210	390	4530	180	1770	209	555	540	80
19	1520	476	1620	1500	392	3620	183	1510	109	555	385	80
20	1990	320	1180	1490	390	3310	188	1500	83	534	310	80
21	2040	320	977	1240	390	3280	197	1310	117	375	240	80
22	1700	326	854	916	390	4020	210	996	448	338	105	80
23	1550	1260	672	693	390	4360	207	794	512	236	110	77
24	1220	2230	673	622	390	3880	779	732	228	165	115	77
25	1010	2300	692	765	389	3430	1200	732	223	179	115	77
26	999	2290	1100	218	390	4050	1260	629	160	170	110	77
27	994	2240	1250	187	390	5870	1230	429	196	223	103	77
28	994	1900	1060	1320	390	4650	1220	351	803	501	98	77
29	988	1690	989	4400	---	3370	1210	284	1260	490	82	77
30	977	3220	794	5910	---	2410	1100	284	1260	905	71	77
31	969	---	642	5620	---	1720	---	284	---	5620	283	---
TOTAL	40885	29730	51910	42979	34837	87160	17300	41961	20598	31872	25880	4939
MEAN	1319	991	1675	1386	1244	2812	577	1354	687	1028	835	165
MAX	2890	3220	5490	5910	4770	5870	1320	5790	2510	6550	3620	1040
MIN	511	118	642	187	389	385	171	284	83	165	71	77

CAL YR 1977 TOTAL 325688 MEAN 892 MAX 6880 MIN 75 MEAN† 925 CFSM† 1.70 IN† 23.08
WTR YR 1978 TOTAL 430051 MEAN 1178 MAX 6550 MIN 71 MEAN† 1193 CFSM† 2.20 IN† 29.86

† Adjusted for change in contents in Sutton Lake.

KANAWHA RIVER BASIN

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03195500 ELK RIVER AT SUTTON, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: March 1960 to current year.

TURBIDITY: January 1974 to March 1975.

INSTRUMENTATION.--Temperature recorder since Mar. 3, 1960.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 29.0°C Aug. 30, Sept. 1, 1960; minimum, 0.0°C Feb. 25, 26, 1963, many days during December 1968, January 1969, January 1970, Dec. 19, 20, 1972.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 24.0°C Aug. 9, 10, 18, 20, 21; minimum, 2.0°C Feb. 10, 12-19.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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

KANAWHA RIVER BASIN

03195500 ELK RIVER AT SUTTON, WV--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

[illegible]

KANAWHA RIVER BASIN

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03196600 ELK RIVER NEAR FRAMETOWN, WV

LOCATION.--Lat 38°35'34", long 80°53'06", Braxton County, Hydrologic Unit 05050007, on right bank opposite mouth of Birch River, at village of Glendon, 2.2 mi (3.5 km) upstream from Strange Creek, 3.2 mi (5.1 km) southwest of Frametown, and at mile 80.7 (129.8 km). Records include flow of Birch River.

DRAINAGE AREA.--752 mi² (1,948 km²), includes that of Birch River.

PERIOD OF RECORD.--October 1958 to current year.

GAGE.--Water-stage recorder. Datum of gage is 775.51 ft (236.375 m) National Geodetic Vertical Datum of 1929. Prior to Mar. 25, 1959, nonrecording gage at same site and datum.

REMARKS.--Records good. Flow regulated since 1960 by Sutton Lake (station 03195400). Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--20 years, 1,543 ft³/s (43.70 m³/s), 27.86 in/yr (708 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,600 ft³/s (612 m³/s) Mar. 15, 1967, gage height, 16.05 ft (4.892 m); minimum, 9.0 ft³/s (0.25 m³/s) Sept. 28, 29, 1959, gage height, 1.44 ft (0.439 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,800 ft³/s (476 m³/s) Jan. 26, gage height, 13.66 ft (4.164 m); minimum, 96 ft³/s (2.72 m³/s) Sept. 28-30, gage height, 1.89 ft (0.576 m).

DISCHARGE* IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	676	1050	7100	821	5210	607	1720	1140	386	1230	5060	1570
2	1160	876	6310	823	3820	545	1450	907	361	441	2230	1000
3	1410	228	3560	750	3250	589	1240	774	476	2670	1250	705
4	1350	204	2770	510	3100	551	1120	1600	927	8480	999	479
5	1290	200	2830	450	3110	505	917	1720	1010	3020	933	272
6	1050	204	3980	474	3030	541	920	1440	988	2100	923	236
7	1040	217	3500	640	2850	582	1040	1270	766	1210	1160	193
8	878	451	2340	908	2350	632	453	1300	1100	976	2450	170
9	1780	596	2050	2090	1800	1180	327	1870	2740	922	2460	165
10	3550	988	1910	2700	1360	2500	306	2490	2860	846	1720	135
11	2690	1480	1410	2470	1120	3580	310	2670	2370	775	1330	119
12	2030	1980	1130	2200	868	4520	348	2520	1280	639	1530	115
13	1420	1840	969	2000	707	6410	320	2450	958	570	1340	297
14	1020	1470	1150	1800	584	8630	308	5530	700	1200	2000	162
15	993	1120	2580	1510	589	6930	295	7340	522	1050	1910	136
16	1820	486	3810	574	574	6190	289	3670	474	891	1170	139
17	3200	464	3480	596	574	6200	285	2730	379	819	918	157
18	2920	811	2850	2220	571	5300	289	2250	348	738	657	151
19	1910	777	2140	2320	570	4150	304	2060	202	693	445	124
20	2130	455	1670	2180	545	3740	396	1900	127	675	326	114
21	2410	450	1270	1870	583	3710	821	1780	127	515	290	109
22	1960	506	1200	1390	545	4130	1200	1260	1200	445	190	110
23	1780	1320	921	1110	505	4680	594	1090	713	356	151	111
24	1500	2950	904	1080	556	4260	516	966	385	265	148	111
25	1130	3020	1340	5410	533	3700	1610	925	257	398	148	108
26	1120	2930	1360	10400	602	3960	2620	863	233	338	169	101
27	1120	2770	1750	1840	574	6530	2640	598	238	398	158	98
28	1100	2620	1360	1400	594	5760	2000	471	541	828	141	98
29	1090	2560	1290	4270	---	4300	1740	372	1340	814	137	96
30	1070	4140	1120	6070	---	3160	1590	348	1340	1400	114	96
31	1060	---	905	5840	---	2320	---	373	---	6210	479	---
TOTAL	49657	39163	70959	69516	41134	110392	28768	56677	25348	42312	32936	7477
MEAN	1602	1305	2289	2242	1469	3561	959	1828	845	1365	1062	249
MAX	3550	4140	7100	10400	5210	8630	2640	7340	2860	8480	5060	1570
MIN	676	200	904	450	505	505	285	348	127	265	114	96

CAL YR 1977 TOTAL 435632 MEAN 1194 MAX 7740 MIN 73
WTR YR 1978 TOTAL 574339 MEAN 1574 MAX 10400 MIN 96
MEAN† 1227 CFSM† 1.63 IN† 22.13
MEAN† 1589 CFSM† 2.11 IN† 28.64

† Adjusted for change in contents in Sutton Lake.

KANAWHA RIVER BASIN

03196800 ELK RIVER AT CLAY, WV

LOCATION.--Lat 38°27'36", long 81°05'15", Clay County, Hydrologic Unit 05050007, on right bank at downstream side of pier of highway bridge at Clay, 0.9 mi (1.4 km) downstream from Buffalo Creek, 2.1 mi (3.4 km) downstream from Lower Two Run Creek, and at mile 52.5 (84.5 km).

DRAINAGE AREA.--994 mi² (2,574 km²).

PERIOD OF RECORD.--October 1958 to September 1978 (discontinued). Gage-height records collected at same site since 1915 are contained in reports of National Weather Service.

GAGE.--Water-stage recorder. Datum of gage is 677.46 ft (206.490 m) National Geodetic Vertical Datum of 1929. Prior to Mar. 27, 1959, nonrecording gage at same site and datum.

REMARKS.--Records fair above 800 ft³/s (22.7 m³/s) and poor below. Flow regulated since 1960 by Sutton Lake (station 03195400). Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--20 years, 1,926 ft³/s (54.54 m³/s), 26.31 in/yr (668 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,000 ft³/s (1,360 m³/s) Mar. 15, 1967, gage height, 22.80 ft (6.949 m); minimum, 1.5 ft³/s (0.042 m³/s) Sept. 22, 1959, gage height, -0.13 ft (-0.040 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 14, 1918, reached a stage of 32.4 ft (9.88 m), from reports of National Weather Service.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 32,600 ft³/s (923 m³/s) Jan. 26, gage height, 18.40 ft (5.608 m); minimum daily, 110 ft³/s (3.12 m³/s) Sept. 27-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	403	1070	8970	1250	6020	821	2490	1990	412	1710	8330	412
2	1280	1050	7820	1130	4600	764	2110	1430	349	1170	4450	1170
3	1310	635	5010	1000	3600	770	1680	1270	480	2320	2370	842
4	1440	236	3730	788	3600	740	1540	2190	770	8990	1220	575
5	1370	219	4100	707	3600	690	1270	4210	1080	5320	1210	394
6	1200	222	5920	752	3500	690	1110	2730	1080	2880	1040	306
7	1030	250	4960	891	3100	764	1260	2340	954	1610	1160	250
8	1010	475	3550	1290	2700	842	933	2050	1590	1160	1760	210
9	1690	933	3000	2650	2200	1590	525	2690	2950	996	3230	200
10	3580	1290	2960	3500	1800	4280	439	3360	3440	982	2990	170
11	3510	2080	2270	3100	1400	5530	439	3690	3000	898	1990	140
12	2570	2480	1800	2700	1200	6670	490	3450	2090	782	1670	130
13	1820	2240	1560	2400	1000	8270	495	3390	1450	685	1970	320
14	1310	2030	1630	2100	920	11500	434	5220	1100	1310	1790	270
15	1030	1540	3120	1900	870	10300	416	8560	613	2130	2300	170
16	1450	975	5040	1580	850	6890	439	5170	439	1430	1800	170
17	3820	555	4730	1260	850	7400	470	3680	394	1540	1200	190
18	3850	701	4040	3330	849	6550	448	2790	349	933	900	180
19	2530	989	3130	3510	828	5190	457	2600	306	776	680	150
20	2170	800	2580	3280	800	4520	535	2320	226	674	520	130
21	2770	490	2030	2930	814	4390	849	2220	219	591	420	120
22	2370	550	1840	2310	764	4450	1540	1780	1060	470	350	120
23	2070	1140	1480	2020	758	5350	1560	1480	856	448	290	120
24	1860	3400	1180	1950	770	5040	1300	1260	652	398	170	120
25	1390	3920	1930	7710	729	4390	1760	1150	425	439	170	120
26	1250	3770	2020	23200	788	4320	3440	1100	412	520	180	115
27	1200	3540	2490	4970	764	6860	5660	926	369	361	180	110
28	1150	3480	2170	2400	794	7200	3460	701	550	685	170	110
29	1110	3460	1980	4280	---	5660	2680	540	1310	919	160	110
30	1130	5060	1860	6370	---	4350	2380	485	1670	1160	160	110
31	1090	---	1530	6510	---	3290	---	425	---	5050	233	---
TOTAL	55763	49580	100430	103768	50468	140071	42609	77197	30595	49337	45063	7534
MEAN	1799	1653	3240	3347	1802	4518	1420	2490	1020	1592	1454	251
MAX	3850	5060	8970	23200	6020	11500	5660	8560	3440	8990	8330	1170
MIN	403	219	1180	707	729	690	416	425	219	361	160	110

CAL YR 1977 TOTAL 550879 MEAN 1509 MAX 12600 MIN 76 MEAN‡ 1542 CFSM‡ 1.55 IN‡ 21.04
WTR YR 1978 TOTAL 752415 MEAN 2061 MAX 23200 MIN 110 MEAN‡ 2076 CFSM‡ 2.09 IN‡ 28.37

‡ Adjusted for change in contents in Sutton Lake.

KANAWHA RIVER BASIN

185

03197000 ELK RIVER AT QUEEN SHOALS, WV

LOCATION.--Lat 38°28'20", long 81°17'10", Kanawha County, Hydrologic Unit 05050007, on right bank 50 ft (15 m) upstream from Queen Shoals Creek, 100 ft (30 m) downstream from highway bridge at Queen Shoals, 4.0 mi (6.4 km) upstream from Big Sandy Creek, and at mile 25.8 (41.5 km). Records include flow of Queen Shoals Creek.

DRAINAGE AREA.--1,145 mi² (2,966 km²), includes that of Queen Shoals Creek.

PERIOD OF RECORD.--October 1928 to current year. Monthly discharge only October, November 1928, published in WSP 1305.

REVISED RECORDS.--WSP 783: Drainage area. WSP 1335: 1929-32, 1935(M), 1936, 1939, 1943(M).

GAGE.--Water-stage recorder. Datum of gage is 604.09 ft (184.127 m) National Geodetic Vertical Datum of 1929. Prior to June 19, 1932, nonrecording gage and June 19, 1932, to Sept. 30, 1946, water-stage recorder, at bridge 100 ft (30 m) upstream at same datum.

REMARKS.--Records good except those for January and February, which are poor. Flow regulated since 1960 by Sutton Lake (station 03195400). Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--50 years, 2,012 ft³/s (56.98 m³/s), 23.86 in/yr (606 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 72,000 ft³/s (2,040 m³/s) July 5, 1932, gage height, 29.2 ft (8.90 m), from rating curve extended above 40,000 ft³/s (1,100 m³/s); minimum, 0.3 ft³/s (0.008 m³/s) Nov. 4, 5, 1953.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 35,900 ft³/s (1,020 m³/s) Jan. 26, gage height, 20.74 ft (6.322 m); minimum, 81 ft³/s (2.29 m³/s) Sept. 30, gage height, 3.95 ft (1.204 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	563	1170	8950	1240	6280	1060	2500	2250	482	1430	5520	2110
2	1330	1150	8300	1170	5350	1000	2280	1650	494	1270	4720	2310
3	1400	950	6170	1090	4160	990	1870	1350	514	2100	2650	1440
4	1320	428	4480	530	3980	990	1680	1990	704	8160	1780	1030
5	1430	250	4700	760	3800	790	1500	5400	1090	6880	1470	695
6	1350	272	6930	713	3720	900	1260	3400	1140	3600	1360	464
7	1150	284	5640	731	3500	960	1280	2600	1090	2180	1920	338
8	1130	476	4180	540	3210	1120	1310	2320	1280	1470	2900	290
9	1970	930	3400	2060	2530	2040	750	2960	2780	1140	3700	225
10	3820	1240	3300	3580	1990	5470	586	3780	3740	1070	3070	196
11	3860	2280	2630	3420	1520	6600	556	4040	3250	1050	2180	174
12	2800	2480	2060	3170	1260	7770	586	3720	2390	920	1960	145
13	2040	2530	1700	2900	1090	8920	594	3520	1500	740	2220	187
14	1500	2150	1030	2500	1070	11900	549	4390	1150	880	2130	344
15	1130	1770	2920	2200	960	11300	521	8710	840	2520	2780	302
16	1370	1360	4920	1810	950	7650	494	6410	659	1530	2250	201
17	3960	760	4960	1500	940	7960	482	4410	602	1470	1500	220
18	4180	704	4370	3300	950	7120	482	3340	500	1180	1270	235
19	2980	1000	3420	4080	960	5860	521	2980	458	760	930	201
20	2290	920	2650	3820	910	5050	610	2550	362	850	659	169
21	2760	634	2100	3190	950	4740	810	2380	332	790	494	137
22	2560	650	1760	2570	930	4700	1540	2040	634	642	410	119
23	2170	1020	1540	2000	722	5420	1940	1580	1280	514	332	109
24	1940	2900	1270	1780	950	5330	1550	1530	830	488	225	106
25	1560	4370	1700	5810	850	4760	1650	1320	549	482	187	109
26	1310	4160	2200	29600	940	4540	4100	1180	404	549	178	106
27	1290	3860	2240	8790	990	6460	7460	1060	380	542	183	99
28	1270	3700	2210	3540	1000	7530	4500	790	380	549	196	93
29	1240	3840	1850	3980	---	6300	3250	626	677	950	192	88
30	1220	5640	1700	6480	---	5000	2690	535	1460	1100	187	83
31	1180	---	1460	6770	---	3840	---	494	---	7150	659	---
TOTAL	60273	53958	106740	116424	56422	154070	50301	85305	31951	55156	53312	12325
MEAN	1944	1759	3443	3756	2015	4970	1677	2752	1065	1779	1720	411
MAX	4180	5640	8950	29600	6280	11900	7460	8710	3740	8160	5520	2310
MIN	563	272	1030	713	722	790	482	494	332	482	178	83

CAL YR 1977 TOTAL 609563 MEAN 1670 MAX 15600 MIN 69 MEAN† 1703 CFSM† 1.49 IN† 20.23
WTR YR 1978 TOTAL 836237 MEAN 2291 MAX 29600 MIN 83 MEAN† 2306 CFSM† 2.01 IN† 27.28

† Adjusted for change in contents in Sutton Lake.

KANAWHA RIVER BASIN

03198000 KANAWHA RIVER AT CHARLESTON, WV

LOCATION.--Lat 38°22'10", long 81°42'05", Kanawha County, Hydrologic Unit 05050008, on left bank at old lock 6, 1.0 mi (1.6 km) upstream from Davis Creek, 1.5 mi (2.4 km) downstream from Twomile Creek, 2.0 mi (3.2 km) downstream from Patrick Street Bridge at Charleston, 3.5 mi (5.6 km) downstream from Elk River, and at mile 54.3 (87.4 km).

DRAINAGE AREA.--10,419 mi² (26,985 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1939 to current year. Monthly discharge only September 1939 to February 1940, published in WSP 1305.

REVISED RECORDS.--WSP 1335: 1943.

GAGE.--Water-discharge recorder. Datum of gage is 548.00 (167.030 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Auxiliary water-stage recorder 2.3 mi (3.7 km) upstream from base gage at datum 547.00 ft (166.726 m) Corps of Engineers datum. Prior to Oct. 1, 1955, auxiliary gages at different sites and datum.

REMARKS.--Water-discharge records good above and poor below 10,000 cfs. Since 1939, flow regulated by increasing number of reservoirs upstream from station. Corps of Engineers gage-height telemeters at station.

AVERAGE DISCHARGE.--39 years, 14,800 ft³/s (419.1 m³/s), 19.28 in/yr (490 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 216,000 ft³/s (6,120 m³/s) Aug. 15, 1940; maximum gage height, 39.72 ft (12.107 m) Mar. 7, 1955; minimum discharge, less than 1,030 ft³/s (29.2 m³/s) during period Oct. 1-5, 1953; minimum gage height, 17.12 ft (5.218 m) Feb. 13, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 29, 1861, reached a stage of about 54.3 ft (16.55 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 135,000 ft³/s (3,820 m³/s) Jan. 26, maximum gage height, 31.41 ft (9.574 m) Mar. 15; minimum gage height, 17.12 ft (5.218 m) Feb. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7500	12000	43400	11600	60900	11300	27600	41000	10300	7060	13900	9380
2	11400	15100	53100	10700	47100	12300	21700	31900	11200	7250	9180	7780
3	14300	13400	41500	10500	24400	11700	18200	22100	10700	7300	8730	5750
4	12400	10600	32100	10200	19300	11200	14300	18700	11000	13000	7210	4110
5	15200	7820	29700	8930	18200	10200	15000	27700	9300	17000	9180	3580
6	12100	12900	38000	8430	16000	8310	13400	23900	8260	12000	10300	3010
7	10200	22900	36700	8330	15700	8650	12400	24300	7550	9780	10500	2610
8	8400	45600	29700	9500	14600	11500	10700	21400	8370	8610	15300	4240
9	13200	62900	26300	16600	11500	20600	11600	36500	10800	7910	26500	3270
10	23900	60400	23200	40400	12000	36700	8790	41100	13200	4420	15900	3370
11	22800	54900	20300	35400	11200	56700	8410	34500	12800	4370	13300	3220
12	18400	45300	16400	27000	9550	73900	10500	27400	9660	4700	14000	3180
13	13800	29400	11700	21000	8050	79200	9850	24100	8490	5570	15600	3980
14	11200	21300	13700	18700	8450	96000	8760	30600	7600	5940	14500	4280
15	8760	15600	18900	18400	9670	114000	8400	51300	9600	9780	11600	4380
16	11200	15300	28400	14500	9330	89900	8250	46900	7190	11200	9700	4470
17	15500	14400	28200	12600	9090	85200	8340	34300	6340	9270	9480	5430
18	14400	14900	24500	15100	10400	70800	7380	29200	8560	5570	7800	4660
19	12900	15600	23300	17700	10100	54400	7860	23700	6320	7250	8720	5030
20	10500	15100	18400	17500	10400	37300	10700	19600	5550	7210	5980	5090
21	9810	13200	18400	17800	9860	30300	9550	18700	6000	7160	4240	4510
22	9820	11500	18800	15600	10600	33300	10100	15500	7370	5560	3520	3980
23	9480	14300	16400	11800	9260	37000	11400	12900	8360	4270	3230	3790
24	8230	32500	14200	11200	10100	32300	10500	16000	6600	3960	3620	3810
25	7400	33000	14800	22700	9250	28700	8820	16600	5800	4030	4110	3130
26	7480	26900	15300	132000	10100	41700	23000	16300	5490	5360	3560	3780
27	12100	28600	15100	97000	9780	76300	75400	13700	5770	5130	3920	3150
28	25500	23900	16300	36700	9700	77600	70200	12200	5550	5440	3290	3420
29	19300	23300	13300	43900	---	66900	57300	10900	6060	4870	2320	4340
30	17100	32000	12100	68100	---	52800	50100	9680	6020	5430	3340	4790
31	11000	---	12500	70500	---	34400	---	9380	---	12200	6690	---
TOTAL	405740	744620	724700	861590	414590	1411160	569110	762060	245810	228600	279220	129520
MEAN	13090	24820	23380	27790	14810	45520	18570	24580	8194	7374	9007	4317
MAX	25500	62900	53100	132000	60900	114000	75400	51300	13200	17000	26500	9380
MIN	7400	7820	11700	8330	8050	8310	7380	9380	5490	3960	2320	2610

CAL YR 1977 TOTAL 5424550 MEAN 14860 MAX 130000 MIN 3710 CFSM 1.43 IN 19.36
WTP YR 1978 TOTAL 6776720 MEAN 18570 MAX 132000 MIN 2320 CFSM 1.43 IN 24.19

KANAWHA RIVER BASIN

187

03198000 KANAWHA RIVER AT CHARLESTON, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: March 1953 to August 1970, October 1971 to current year.

INSTRUMENTATION.--Temperature recorder since Mar. 13, 1953.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 35.0°C Aug. 25, 26, 1959; minimum, 0.5°C Dec. 28, 29, 1969, Jan. 12-21, 1978.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 31.0°C July 29; minimum, 0.5°C Jan. 12-21.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	25.0	23.5	15.5	15.0	7.5	7.5	4.0	3.5	1.5	1.5	5.0	4.0
2	24.0	23.0	15.5	15.0	8.5	7.5	3.5	2.5	1.5	1.5	5.0	4.0
3	23.0	21.5	15.0	14.5	8.5	8.5	3.0	2.5	1.5	1.5	4.5	3.5
4	21.5	21.0	15.5	15.0	8.5	8.5	3.0	2.5	2.0	1.5	4.0	3.5
5	21.0	20.0	16.5	15.5	9.0	8.5	3.0	2.0	2.0	1.5	4.0	3.0
6	20.0	19.5	16.5	16.0	9.0	8.5	3.0	2.5	1.5	1.5	4.0	3.5
7	19.5	19.0	16.5	16.5	8.5	7.0	4.0	2.0	1.0	1.0	4.5	3.5
8	19.0	18.0	17.0	16.5	7.0	6.0	3.0	2.5	1.0	1.0	4.5	3.5
9	18.5	17.5	16.5	15.5	6.0	6.0	2.5	2.5	1.5	1.0	5.0	4.0
10	17.5	17.5	15.5	15.5	6.0	5.0	2.5	1.0	1.5	1.5	5.0	4.5
11	17.5	16.5	15.5	14.0	5.5	4.5	2.0	1.0	1.5	1.5	5.0	5.0
12	16.5	16.5	14.0	13.5	4.5	3.5	1.0	.5	1.5	1.5	5.0	5.0
13	16.5	16.0	13.5	13.0	4.0	3.0	.5	.5	2.5	1.5	5.0	4.5
14	16.0	15.5	13.0	12.0	4.5	3.5	.5	.5	2.0	1.5	6.0	5.0
15	15.5	15.5	12.0	11.0	5.0	4.5	1.0	.5	2.0	1.5	6.0	6.0
16	15.5	15.0	11.0	10.5	5.5	5.0	1.0	.5	2.5	1.5	6.5	6.0
17	15.0	14.0	11.0	10.5	5.5	5.0	.5	.5	2.5	1.5	6.0	6.0
18	14.0	13.5	11.0	10.5	6.0	5.5	1.0	.5	2.0	1.5	7.0	5.5
19	13.5	13.5	11.0	10.5	6.5	6.0	1.0	.5	2.5	1.5	7.0	6.5
20	14.0	13.5	11.0	10.5	7.0	6.5	.5	.5	2.5	2.5	7.5	7.0
21	13.5	13.0	11.0	10.5	7.0	6.5	1.0	.5	3.0	2.5	8.5	7.5
22	13.5	13.0	11.5	11.0	7.0	7.0	1.0	1.0	3.0	2.5	9.0	8.0
23	14.0	13.5	11.5	11.0	7.0	6.0	1.0	1.0	3.0	2.5	9.5	9.5
24	14.0	13.5	11.5	11.0	6.5	6.0	1.0	1.0	3.0	2.5	11.0	9.5
25	14.5	14.0	11.0	11.0	6.5	6.0	1.5	1.0	3.0	2.0	11.0	11.0
26	14.5	14.0	11.0	10.5	6.0	5.0	2.0	1.5	3.5	2.5	11.5	10.5
27	15.5	14.5	11.0	9.0	5.5	4.5	1.5	1.0	3.5	2.5	10.5	8.5
28	15.0	15.0	9.0	8.5	5.0	4.0	1.5	1.0	4.5	3.0	8.5	8.0
29	15.5	15.0	8.5	8.0	4.5	3.5	1.5	1.0	---	---	9.5	8.0
30	16.0	15.5	8.0	7.0	3.5	2.5	1.5	1.0	---	---	9.5	8.5
31	16.0	15.5	---	---	3.5	3.0	1.5	1.5	---	---	10.0	9.5
MONTH	25.0	13.0	17.0	7.0	9.0	2.5	4.0	.5	4.5	1.0	11.5	3.0

03198000 KANAWHA RIVER AT CHARLESTON, WV--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

[illegible]

KANAWHA RIVER BASIN

189

03198500 BIG COAL RIVER AT ASHFORD, WV

LOCATION.--Lat 38°10'45", long 81°42'40", Boone County, Hydrologic Unit 05050009, on left bank at downstream side of highway bridge at Ashford, 300 ft (91 m) upstream from Lick Creek, 1.0 mi (1.6 km) downstream from Brush Creek, 1.8 mi (2.9 km) upstream from Bull Creek, and at mile 29.5 (47.5 km).

DRAINAGE AREA.--393 mi² (1,018 km²).

PERIOD OF RECORD.--June 1908 to September 1916, May 1930 to current year. Published as Coal River at Brushton, June 1908 to September 1916 and as Coal River at Ashford, May 1930 to September 1960.

REVISED RECORDS.--WSP 783: Drainage area. WSP 1305: 1913-14(M). WSP 1335: 1912, 1916(M).

GAGE.--Water-stage recorder. Datum of gage is 622.46 ft (189.726 m) National Geodetic Vertical Datum of 1929. Prior to Aug. 9, 1916, nonrecording gage at site 1.0 mi (1.6 km) upstream at different datum. May 7, 1930, to Feb. 10, 1939, nonrecording gage at present site and datum.

REMARKS.--Records good except those for January and February, which are poor.

AVERAGE DISCHARGE.--56 years, 512 ft³/s (14.50 m³/s), 17.69 in/yr (449 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 35,800 ft³/s (1,010 m³/s) Aug. 9, 1916, gage height, 36.3 ft (11.06 m), from floodmark, site and datum then in use, or 35.66 ft (10.869 m), from floodmark, present site and datum, from rating curve extended above 25,000 ft³/s (710 m³/s); no flow Sept. 18-21, 24, Oct. 6-12, 1930.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,500 ft³/s (160 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 26	1230	*25100 711	26.05 7.940	Apr. 27	0530	14500 411	19.06 5.809
Mar. 14	2030	6060 172	11.00 3.353				

Minimum daily discharge, 35 ft³/s (0.99 m³/s) Sept. 28, 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	101	208	1510	350	620	546	575	965	380	56	164	625
2	744	190	1120	334	560	490	513	756	293	57	104	311
3	588	178	840	304	500	482	451	625	397	146	89	173
4	318	163	756	262	450	455	407	969	547	175	131	139
5	225	158	1460	242	400	388	396	1790	427	125	93	103
6	183	180	3360	237	360	424	368	1640	323	93	106	84
7	160	744	1800	240	330	503	365	1220	259	75	494	72
8	150	1760	1120	250	320	1480	335	1340	256	67	531	67
9	702	1520	989	594	380	3140	309	2760	273	61	204	61
10	1230	1290	1010	1050	280	4100	294	2120	246	60	142	57
11	594	1550	864	800	270	3320	288	1420	200	69	107	165
12	380	1070	720	620	260	3290	291	1050	174	54	127	201
13	268	744	630	530	250	3900	265	894	201	50	253	112
14	220	570	594	480	240	4910	243	972	171	58	186	81
15	190	522	750	430	592	4330	227	881	143	120	122	68
16	395	450	877	380	543	2450	216	760	127	567	109	58
17	1070	415	891	360	520	1760	214	645	118	396	87	59
18	756	370	846	330	520	1310	217	548	109	188	70	63
19	516	318	744	300	511	1100	229	465	100	126	61	55
20	375	283	660	280	486	1000	273	396	92	93	66	49
21	283	268	570	260	490	955	331	349	86	78	74	43
22	237	292	492	240	430	958	348	309	102	59	65	40
23	210	792	430	230	400	853	325	283	91	66	55	45
24	187	1250	380	220	390	763	311	708	81	92	49	52
25	170	1270	400	3490	360	683	304	770	74	114	51	43
26	213	1230	666	18100	370	638	3230	590	77	104	58	39
27	552	1060	684	4520	514	688	10200	449	77	85	53	36
28	425	877	594	2080	523	715	3090	364	67	123	47	35
29	322	786	510	1390	---	702	1680	313	63	111	46	35
30	271	1190	435	900	---	671	1200	358	59	82	55	37
31	230	---	390	740	---	618	---	485	---	139	550	---
TOTAL	12265	21698	27092	40943	11809	47622	27495	27194	5613	3699	4349	3008
MEAN	396	723	874	1321	422	1536	917	877	187	119	140	100
MAX	1230	1760	3360	18100	620	4910	10200	2760	547	567	550	625
MIN	101	158	380	220	240	388	214	283	59	50	46	35
CFSM	1.01	1.84	2.22	3.36	1.67	3.91	2.33	2.23	.48	.30	.36	.25
IN.	1.16	2.05	2.56	3.88	1.12	4.51	2.60	2.57	.53	.35	.41	.28

CAL YR 1977	TOTAL	172097	MEAN 471	MAX 17800	MIN 33	CFSM 1.20	IN 16.29
WTR YR 1978	TOTAL	232787	MEAN 638	MAX 18100	MIN 35	CFSM 1.62	IN 22.03

KANAWHA RIVER BASIN

03198550 BIG COAL RIVER NEAR ALUM CREEK, WV

LOCATION.--Lat 38°15'00", long 81°47'54", Kanawha County, Hydrologic Unit 05050009, at Chesapeake & Ohio Railroad bridge at end of Sproul Tunnel, 2.6 mi (4.2 km) south of Alum Creek, and at mile 2.1 (3.4 km).

DRAINAGE AREA.--442 mi² (1,145 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 588.75 ft (179.451 m) National Geodetic Vertical Datum of 1929. Prior to Apr. 14, 1976, nonrecording gage at same site. Prior to Jan. 30, 1976, at datum 0.50 ft (0.152 m) lower and Jan. 30 to Apr. 13, 1976, at same datum.

REMARKS.--Water-discharge records good above 150 ft³/s (4.25 m³/s) and fair below except those for winter periods, which are poor. No gage-height record Jan. 10 to Mar. 13.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,600 ft³/s (810 m³/s) Jan. 26, 1978, gage height, 32.24 ft (9.827 m), observed, from rating curve extended above 6,700 ft³/s (190 m³/s); minimum daily, 33 ft³/s (0.93 m³/s) Sept. 9, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,000 ft³/s (170 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 26	1800	*28600 810	a32.24 9.827	Apr. 27	---	18000 510	b23.36 7.120
Mar. 14	2130	7950 225	15.32 4.670				

a Observed.

b From floodmarks.

Minimum daily discharge, 35 ft³/s (0.99 m³/s) Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	119	262	1800	455	1000	546	625	1080	437	70	206	721
2	402	238	1350	441	800	539	565	836	337	72	155	434
3	729	220	1040	385	700	546	504	705	414	162	130	233
4	434	203	920	319	620	489	454	1060	598	220	337	172
5	298	195	1470	310	550	397	430	1940	489	162	177	126
6	235	211	3710	313	500	407	401	1780	372	117	137	99
7	200	556	1950	325	470	539	394	1350	300	80	409	88
8	175	1860	1280	355	430	1530	362	1430	316	72	836	84
9	606	1660	1180	866	400	3380	334	2920	325	70	331	70
10	1420	1400	1200	1290	370	5060	312	2310	300	72	220	66
11	713	1710	1030	500	350	3900	309	1540	246	74	162	102
12	483	1200	853	760	330	3330	303	1150	212	70	157	254
13	358	844	753	600	310	4020	286	967	225	61	259	130
14	289	651	721	540	300	6040	260	1020	212	56	254	94
15	241	606	952	480	700	5420	241	915	167	90	162	82
16	374	546	1130	430	602	2520	230	775	145	528	126	76
17	1150	457	992	400	550	1820	244	660	133	564	112	68
18	809	459	848	370	536	1410	249	590	126	263	88	65
19	623	406	745	340	525	1180	263	507	114	167	74	66
20	483	361	648	320	511	1080	294	440	106	119	70	53
21	379	343	588	290	493	1060	365	394	92	80	68	46
22	319	364	525	270	482	1040	384	353	147	80	68	42
23	283	862	466	260	465	897	369	316	117	78	66	46
24	244	1660	431	250	451	792	350	686	112	198	72	47
25	220	1440	557	4310	430	709	344	801	99	198	61	41
26	247	1230	839	2400	414	676	2860	625	92	167	53	41
27	602	884	753	10500	496	758	13200	493	86	155	63	40
28	515	839	655	2960	583	792	3880	407	78	195	63	35
29	417	884	571	1640	---	779	1760	347	74	185	47	36
30	352	1470	518	1400	---	729	1280	372	72	126	41	43
31	298	---	473	1200	---	672	---	536	---	206	719	---
TOTAL	14679	24061	30948	58019	14368	53057	31852	29295	6543	4757	5723	3500
MEAN	474	802	998	1872	513	1712	162	945	218	153	185	117
MAX	1420	1460	3710	24000	1000	6040	13200	2920	598	564	836	721
MIN	119	195	431	250	300	397	230	316	72	56	41	35
CFS ¹⁰	1.07	1.81	2.26	4.24	1.16	3.87	2.40	2.14	.49	.35	.42	.27
IN ¹⁰	1.24	2.03	2.60	4.88	1.21	4.47	2.68	2.47	.55	.40	.48	.29

CAL YR 1977 TOTAL 206646 MEAN 566 MAX 19200 MIN 37 CFS¹⁰ 1.28 IN 17.39
WTR YR 1978 TOTAL 276802 MEAN 758 MAX 24800 MIN 35 CFS¹⁰ 1.72 IN 23.30

KANAWHA RIVER BASIN

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03198550 BIG COAL RIVER NEAR ALUM CREEK, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1974 to current year.

WATER TEMPERATURES: October 1974 to current year.

SUSPENDED-SEDIMENT DISCHARGE: October 1974 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 806 micromhos Oct. 3, 1975; minimum daily, 99 micromhos Apr. 27, 1978.

WATER TEMPERATURES: Maximum daily, 30.0°C several days during summer periods 1975, 1977, 1978; minimum daily, 0.0°C many days during winter periods.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,050 mg/L Jan. 26, 1978; minimum daily mean, 1 mg/L Apr. 30, May 8, 1976.

SEDIMENT LOADS: Maximum daily, 137,000 tons (124,000 tonnes) Jan. 26, 1978; minimum daily, 0.27 ton (0.24 tonne) June 19, 1977.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 447 micromhos Sept. 30; minimum daily, 99 micromhos Apr. 27.

WATER TEMPERATURES: Maximum daily observed, 30.0°C July 21; minimum daily observed 0.0°C several days in December, January and February.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,050 mg/L Jan. 26; minimum daily mean, 2 mg/L Nov. 21.

SEDIMENT LOADS: Maximum daily, 137,000 tons (124,000 tonnes) Jan. 26; minimum daily, 0.97 ton (0.88 tonne) June 30.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	251	163	259	276	228	230	205	282	---	337	271
2	---	262	172	261	279	227	237	215	274	---	362	292
3	291	270	183	272	289	221	244	250	273	380	357	243
4	275	277	---	279	287	---	250	208	256	349	254	258
5	287	285	178	289	---	227	256	202	263	404	261	270
6	300	---	143	297	---	227	260	166	263	408	326	298
7	313	270	179	302	305	226	274	177	267	402	181	312
8	---	162	179	---	---	209	262	181	---	---	225	263
9	294	163	199	270	---	144	280	160	279	---	281	339
10	206	166	199	---	---	127	290	157	297	420	313	339
11	200	165	---	---	---	133	290	174	312	432	334	354
12	217	172	205	---	---	---	260	194	320	421	353	337
13	239	185	218	---	---	137	300	218	334	---	279	320
14	257	201	223	---	---	146	300	---	340	425	283	322
15	268	215	---	---	---	142	300	229	350	439	354	334
16	275	215	217	---	258	176	300	223	360	416	354	---
17	238	225	194	---	247	198	303	231	380	249	367	359
18	198	234	---	---	239	215	---	241	368	274	---	346
19	204	250	215	---	248	221	310	251	383	286	403	375
20	218	250	225	---	244	---	310	---	406	302	407	387
21	233	256	100	---	---	230	---	---	385	343	396	---
22	250	159	248	---	---	226	---	280	323	330	365	395
23	264	241	259	---	---	229	---	292	381	330	375	398
24	280	---	266	226	---	233	---	243	402	330	397	403
25	294	---	271	169	251	243	270	256	420	320	316	410
26	269	176	258	109	---	240	155	---	415	332	311	442
27	277	186	201	137	247	---	99	---	427	336	414	436
28	215	199	205	192	231	231	138	---	423	356	425	---
29	312	204	216	221	---	---	---	261	424	374	432	439
30	233	198	227	242	---	---	---	268	---	352	444	447
31	241	---	240	259	---	223	---	251	---	297	237	---
MEAN	255	216	207	237	262	202	257	221	343	358	338	348
WTR YR 1978	MEAN	274	MAX	447	MIN	99						

KANAWHA RIVER BASIN

03198550 BIG COAL RIVER NEAR ALUM CREEK, WV--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	13.0	10.0	5.0	.0	4.0	13.0	15.0	23.0	---	27.0	27.0
2	---	13.0	10.0	4.0	.0	2.0	14.0	13.0	21.0	---	28.0	28.0
3	15.0	13.0	11.0	2.0	1.0	3.0	15.0	15.0	23.0	25.0	28.0	27.0
4	15.0	14.0	---	1.0	---	---	16.0	15.0	20.0	---	26.0	27.0
5	14.0	---	9.0	4.0	---	3.0	16.0	15.0	20.0	25.0	28.0	27.0
6	14.0	---	6.0	4.0	---	3.0	14.0	14.0	20.0	27.0	---	27.0
7	14.0	13.0	5.0	2.0	.0	3.0	16.0	14.0	20.0	27.0	24.0	28.0
8	---	13.0	4.0	---	---	3.0	16.0	14.0	---	---	25.0	28.0
9	14.0	14.0	3.0	.0	---	2.0	15.0	14.0	22.0	---	27.0	28.0
10	14.0	10.0	3.0	---	---	3.0	16.0	15.0	22.0	26.0	25.0	24.0
11	14.0	5.0	---	---	---	3.0	16.0	15.0	23.0	25.0	26.0	29.0
12	13.0	8.0	4.0	---	---	---	16.0	16.0	22.0	26.0	26.0	27.0
13	12.0	12.0	7.0	---	---	3.0	17.0	16.0	21.0	---	28.0	27.0
14	12.0	11.0	5.0	---	---	9.0	16.0	---	22.0	27.0	28.0	27.0
15	12.0	12.0	---	---	---	8.0	16.0	16.0	20.0	27.0	27.0	28.0
16	11.0	11.0	6.0	---	4.0	6.0	16.0	15.0	23.0	24.0	28.0	---
17	9.0	---	8.0	---	4.0	5.0	15.0	15.0	24.0	24.0	28.0	27.0
18	11.0	10.0	---	---	---	6.0	---	17.0	23.0	25.0	---	28.0
19	11.0	11.0	13.0	---	.0	5.0	14.0	18.0	25.0	25.0	28.0	29.0
20	11.0	10.0	8.0	---	---	---	15.0	---	27.0	26.0	27.0	28.0
21	11.0	10.0	4.0	---	---	3.0	---	---	26.0	30.0	28.0	---
22	12.0	10.0	4.0	---	---	5.0	---	19.0	24.0	28.0	27.0	26.0
23	11.0	10.0	5.0	---	---	5.0	---	20.0	25.0	25.0	28.0	27.0
24	12.0	---	6.0	.0	---	6.0	---	21.0	24.0	27.0	28.0	27.0
25	13.0	---	4.0	.0	4.0	6.0	15.0	15.0	25.0	26.0	28.0	26.0
26	13.0	10.0	2.0	.0	---	6.0	11.0	---	26.0	27.0	28.0	27.0
27	12.0	10.0	3.0	.0	3.0	---	9.5	---	28.0	26.0	28.0	28.0
28	12.0	10.0	2.0	.0	5.0	6.0	12.0	---	29.0	26.0	28.0	26.0
29	13.0	10.0	2.0	.0	---	---	---	22.0	---	27.0	28.0	---
30	15.0	10.0	.0	.0	---	---	---	20.0	---	27.0	28.0	27.0
31	14.0	---	---	.0	---	10.0	---	20.0	---	24.0	27.0	---
MEAN	12.5	11.0	5.5	1.5	2.0	4.5	15.0	16.5	23.5	26.0	27.0	27.0
WTR YR 1978	MEAN	15.5	MAX	30.0	MIN	.0						

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH		
1	61	41	8	5.7	305	1490	8	9.8	53	143	31	46
2	285	867	5	3.2	313	1140	9	11	38	82	17	25
3	173	355	7	4.2	105	295	7	7.3	44	83	12	18
4	93	199	7	3.8	27	67	10	8.6	38	64	18	24
5	52	42	5	2.6	319	1870	8	6.7	27	40	30	32
6	25	16	32	22	446	4700	6	5.1	27	36	30	33
7	15	8.1	183	372	160	842	6	5.3	25	32	245	357
8	18	8.4	285	1430	122	420	16	16	45	52	700	2890
9	294	700	210	941	87	276	138	343	35	38	866	7900
10	594	2300	180	680	63	204	203	704	10	10	1160	15800
11	261	541	79	365	47	131	345	838	8	7.6	698	7350
12	72	94	65	211	37	85	122	231	6	5.3	565	5080
13	25	24	45	102	35	71	68	110	5	4.2	560	6080
14	13	10	43	76	24	47	65	95	4	3.2	1020	16600
15	25	16	20	33	25	64	60	78	200	378	1010	14800
16	65	66	7	10	79	240	40	46	60	98	500	3400
17	245	797	14	19	103	276	35	38	40	59	310	1520
18	131	314	11	14	72	165	30	30	35	51	220	838
19	54	91	7	7.7	35	70	23	21	25	35	240	765
20	17	22	3	2.9	24	42	12	10	20	28	190	554
21	13	13	2	1.9	10	16	8	6.3	15	20	53	152
22	9	7.8	46	45	12	17	5	3.6	10	13	83	233
23	7	5.3	183	565	14	18	4	2.8	8	10	72	174
24	7	4.6	222	995	10	12	4	2.7	10	12	60	128
25	7	4.2	172	666	99	168	862	10000	25	29	67	128
26	17	11	212	704	115	261	2050	137000	55	61	43	78
27	86	142	97	232	95	193	722	20500	70	94	41	84
28	18	25	84	190	17	30	302	2410	53	83	67	143
29	38	43	73	174	23	35	141	624	---	---	64	135
30	19	18	225	1010	13	18	90	340	---	---	47	93
31	7	5.6	---	---	7	8.9	57	185	---	---	36	65
TOTAL	---	6701.0	---	8888.0	---	13271.9	---	173688.2	---	1571.3	---	85525

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SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

[illegible]

KANAWHA RIVER BASIN

03199000 LITTLE COAL RIVER AT DANVILLE, WV

LOCATION.--Lat 38°04'47", long 81°50'12", Boone County, Hydrologic Unit 05050009, on right bank at upstream side of highway bridge at Danville, 900 ft (274 m) upstream from Turtle Creek, 2.3 mi (3.7 km) downstream from confluence of Pond and Spruce Forks, and at mile 24.7 (39.7 km).

DRAINAGE AREA.--270 mi² (699 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1930 to current year. Prior to October 1941, published as "at Madison."

REVISED RECORDS.--WSP 1725: 1951(M), 1955(M).

GAGE.--Water-stage recorder. Datum of gage is 661.09 ft (201.500 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1941, nonrecording gage at site 1.5 mi (2.4 km) upstream at datum 6.80 ft (2.073 m) higher.

REMARKS.--Water-discharge records good except those for January and February, which are poor.

AVERAGE DISCHARGE.--48 years, 350 ft³/s (9.912 m³/s), 17.60 in/yr (447 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 42,800 ft³/s (1,210 m³/s) Feb. 3, 1939, gage height, 30.2 ft (9.20 m), from floodmarks, present site and datum, from rating curve extended above 12,000 ft³/s (340 m³/s) on basis of slope-area measurement of peak flow; no flow at times July to October 1930.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 4,500 ft³/s (130 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 26	0915	*23400 663	25.80 7.864	Apr. 27	0230	6700 190	14.12 4.304

Minimum daily discharge, 25 ft³/s (0.71 m³/s) Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	133	149	767	267	480	363	377	538	211	40	114	338
2	932	144	638	253	400	318	342	452	176	68	69	172
3	413	136	559	213	360	366	312	396	313	147	55	112
4	260	130	509	170	330	318	288	724	319	93	124	82
5	186	123	1570	180	290	285	282	1210	232	71	91	65
6	156	265	2210	192	270	323	258	1010	188	54	71	53
7	129	694	1050	194	250	415	260	724	162	46	579	45
8	126	825	741	205	230	1400	229	944	181	44	575	42
9	563	791	751	544	220	2160	217	1770	189	40	236	42
10	649	860	693	539	210	2650	210	1270	155	40	146	38
11	422	1010	620	463	190	1870	206	838	132	43	124	45
12	299	714	546	400	180	1980	208	640	118	35	163	43
13	223	539	498	350	170	2040	186	596	152	33	116	36
14	183	436	504	310	399	2310	171	550	116	61	93	34
15	154	368	588	280	396	1940	162	513	98	183	76	33
16	458	316	585	250	385	1240	159	470	88	360	63	32
17	837	290	543	230	375	944	157	425	83	318	54	32
18	582	251	497	210	368	748	156	376	83	130	48	32
19	427	214	437	190	354	653	159	329	79	85	47	32
20	317	194	392	180	342	593	168	293	70	66	49	32
21	250	185	350	170	343	623	162	264	67	56	42	32
22	211	236	310	160	316	589	153	232	72	47	35	32
23	186	667	272	150	289	545	142	235	62	46	34	32
24	162	922	258	190	260	514	142	556	56	52	34	31
25	150	881	393	2650	288	478	148	447	55	58	35	31
26	287	721	375	12900	346	479	1740	362	60	56	41	28
27	210	571	365	2100	326	449	4000	300	58	43	36	27
28	196	553	334	1170	348	442	1350	254	47	62	33	25
29	185	555	310	823	---	432	801	235	42	52	32	27
30	173	672	292	650	---	414	644	228	39	47	47	29
31	161	---	281	556	---	398	---	302	---	159	667	---
TOTAL	9540	14412	18238	27139	8715	28279	13789	17483	3703	2635	3929	1634
MEAN	308	480	588	875	311	912	460	564	123	85.0	127	54.5
MAX	932	1010	2210	12900	480	2650	4000	1770	319	360	667	338
MIN	126	123	258	150	170	285	142	228	39	33	32	25
CFSM	1.14	1.78	2.18	3.24	1.15	3.38	1.70	2.09	.46	.32	.47	.20
IN.	1.31	1.99	2.51	3.74	1.20	3.90	1.90	2.41	.51	.36	.54	.23
CAL YR 1977	TOTAL	131648	MEAN 361	MAX 8780	MIN 15	CFSM 1.34	IN 18.14					
WTR YR 1978	TOTAL	149496	MEAN 410	MAX 12900	MIN 25	CFSM 1.52	IN 20.60					

KANAWHA RIVER BASIN

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03199000 LITTLE COAL RIVER AT DANVILLE, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: August 1973 to current year.

WATER TEMPERATURES: July 1973 to current year.

SUSPENDED-SEDIMENT DISCHARGE: August 1973 to current year.

INSTRUMENTATION.--Temperature recorder since July 31, 1973.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,690 micromhos Oct. 18, 1973; minimum daily, 110 micromhos Apr. 27, 1975.

WATER TEMPERATURES: Maximum, 34.5°C July 18, 19, 1977; minimum, 0.0°C Jan. 14-18, 1975.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 4,230 mg/L Nov. 27, 1973; minimum daily mean, 0 mg/L Oct. 2, 3, 5-9, 1974.

SEDIMENT LOADS: Maximum daily, 110,000 tons (99,800 tonnes) Jan. 26, 1978; minimum daily, 0 ton (0 tonne) Oct. 2, 3, 5-9, 1974.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 750 micromhos Sept. 25; minimum daily, 116 micromhos Apr. 27.

WATER TEMPERATURES: Maximum, 32.5°C July 23, minimum, 0.5°C on several days in January and February.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,990 mg/L Jan. 26; minimum daily mean, 2 mg/L on several days in September.

SEDIMENT LOADS: Maximum daily, 110,000 tons (99,800 tonnes) Jan. 26; minimum daily, 0.14 ton (0.13 tonne) Sept. 28.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	630	380	224	355	385	289	320	274	395	554	396	224
2	220	390	227	367	381	289	320	301	425	576	401	280
3	270	400	246	370	401	294	330	324	420	549	448	346
4	310	440	261	395	411	---	340	319	348	476	513	402
5	352	446	275	395	---	307	350	209	363	513	441	437
6	356	445	137	399	---	308	360	186	462	560	438	461
7	385	266	192	418	---	288	370	212	440	514	323	490
8	411	205	237	418	428	185	370	234	453	532	161	519
9	363	188	260	---	436	155	390	169	439	545	248	562
10	212	200	248	270	429	132	400	171	455	578	305	564
11	242	178	---	---	439	160	390	207	521	585	352	591
12	278	191	---	---	438	165	390	239	514	585	363	612
13	300	225	290	290	419	155	390	279	519	710	390	599
14	344	259	302	292	362	170	375	---	483	574	412	616
15	371	276	299	---	300	160	390	299	520	587	448	628
16	369	296	269	---	298	220	400	314	553	451	443	638
17	196	332	264	342	304	245	410	327	574	253	461	646
18	211	341	269	326	302	280	410	341	591	332	491	636
19	243	369	287	297	300	290	410	350	608	415	520	629
20	270	384	307	---	305	300	410	368	619	491	540	620
21	290	389	325	---	296	310	410	383	637	554	572	651
22	315	383	343	---	316	310	410	405	594	588	543	694
23	350	334	358	296	316	310	410	425	624	621	557	714
24	370	192	366	---	318	310	430	321	618	632	593	710
25	385	183	348	164	322	310	450	294	661	565	600	750
26	397	193	308	---	316	320	304	305	642	545	620	690
27	348	222	302	---	300	318	116	328	663	544	610	710
28	373	250	---	---	301	300	166	355	671	573	627	720
29	356	260	---	---	---	310	216	390	677	618	621	700
30	304	253	333	328	---	300	255	398	683	511	602	700
31	362	---	343	353	---	300	---	400	---	510	284	---
MEAN	330	296	282	338	353	260	358	304	537	569	462	585
WTR YR 1978	MEAN	393	MAX	750	MIN	116						

03199000 LITTLE COAL RIVER AT DANVILLE, WV--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	19.5	18.0	14.0	11.5	12.5	11.0	7.0	6.0	1.0	.5	4.0	3.5
2	19.0	16.5	14.5	11.5	12.5	10.0	6.5	4.5	1.5	.5	3.5	2.0
3	16.5	14.5	16.0	13.5	10.0	9.0	4.5	2.5	1.0	.5	2.0	2.0
4	15.0	13.5	17.5	16.0	10.0	9.5	2.5	2.0	.5	.5	2.5	1.5
5	15.0	13.0	18.0	16.0	12.0	10.0	2.5	2.0	.5	.5	3.0	1.5
6	15.0	14.0	17.5	16.5	12.0	10.5	5.0	2.5	.5	.5	4.5	2.0
7	16.0	14.0	16.5	13.5	10.5	5.5	5.0	3.5	.5	.5	4.5	4.0
8	15.0	14.5	15.5	15.0	6.0	5.0	7.0	5.0	.5	.5	4.5	4.0
9	15.0	14.0	15.5	15.0	8.5	6.0	8.5	7.0	.5	.5	6.0	4.5
10	14.0	13.0	15.5	14.0	7.5	5.5	7.5	2.5	.5	.5	6.0	5.5
11	14.5	13.0	12.0	10.0	5.5	5.0	2.5	2.0	.5	.5	7.0	4.5
12	14.0	12.5	10.5	8.0	6.0	4.5	2.0	2.0	1.0	.5	7.0	5.5
13	12.5	11.5	8.0	6.5	9.0	6.0	2.0	1.5	.5	.5	8.0	6.0
14	12.0	11.0	7.0	6.5	10.0	8.5	1.5	1.5	1.0	.5	9.0	7.5
15	13.0	10.5	9.0	7.0	11.0	10.5	1.5	1.5	2.5	1.0	9.0	7.5
16	12.5	11.0	10.5	9.0	10.5	9.0	1.5	1.5	2.5	2.0	8.5	6.0
17	11.0	9.5	12.0	10.5	9.0	8.5	1.5	1.5	3.5	2.5	6.0	5.0
18	10.5	9.5	11.0	5.0	10.0	9.0	1.5	1.0	3.0	2.5	6.5	4.0
19	11.0	10.5	9.0	7.5	10.5	10.0	1.5	1.0	2.5	2.0	9.0	6.0
20	11.5	10.5	8.5	7.5	10.0	9.0	2.0	1.5	2.5	1.0	9.5	7.5
21	12.0	10.5	11.5	8.5	9.5	7.5	1.5	1.5	2.5	2.0	10.5	9.0
22	12.5	10.5	11.5	10.5	7.5	5.5	1.5	1.5	2.5	1.5	11.0	9.0
23	13.5	11.5	11.5	10.0	5.5	4.0	1.5	.5	1.5	1.0	11.0	9.0
24	14.5	12.5	12.0	11.5	8.5	5.5	.5	.5	2.5	1.0	12.0	11.0
25	14.0	13.0	12.0	10.0	9.0	7.0	5.0	.5	4.5	2.0	13.0	10.5
26	14.5	13.5	10.5	6.5	7.0	3.5	4.5	3.5	4.0	3.5	12.5	9.0
27	15.0	14.5	6.5	5.0	3.5	3.5	3.5	3.0	4.0	2.5	9.5	8.0
28	16.0	15.0	8.0	5.5	3.5	3.0	3.5	2.5	4.0	3.0	11.0	7.5
29	15.0	14.0	8.5	6.0	3.0	2.5	2.5	2.0	---	---	11.0	10.0
30	14.5	13.0	11.0	6.5	4.0	2.5	2.0	1.5	---	---	11.0	8.5
31	13.5	12.0	---	---	6.0	4.0	1.5	1.0	---	---	12.5	9.5
MONTH	19.5	9.5	18.0	5.0	12.5	2.5	8.5	.5	4.5	.5	13.0	1.5
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	14.0	12.0	13.0	11.5	24.0	20.0	29.5	24.5	28.0	24.0	22.5	21.5
2	15.0	12.5	13.0	10.5	24.5	21.0	28.0	24.5	29.5	23.5	24.0	21.0
3	14.5	13.5	13.5	11.5	23.0	19.5	24.5	23.5	30.0	24.5	26.0	22.5
4	15.0	13.0	13.5	13.0	21.0	17.5	24.5	23.0	26.0	25.0	25.5	23.0
5	16.0	14.0	13.0	12.0	22.0	18.5	25.5	21.5	25.0	23.5	25.0	21.0
6	15.5	13.5	14.0	11.0	22.0	19.0	29.0	22.0	27.5	23.0	26.5	21.0
7	17.5	14.0	14.0	12.0	22.5	20.5	28.0	23.0	25.5	22.0	26.5	22.0
8	17.0	14.0	13.5	12.5	22.0	21.0	29.0	24.0	22.5	20.5	27.0	22.5
9	17.5	14.0	15.0	12.5	21.5	20.0	29.5	23.5	23.5	22.0	27.5	22.5
10	18.5	15.0	15.0	12.0	24.0	18.5	31.0	25.0	25.0	22.0	28.0	23.5
11	18.0	16.5	15.5	12.0	25.5	20.5	29.5	24.0	24.5	23.0	26.5	22.5
12	17.0	12.5	16.0	14.5	27.0	22.0	29.5	21.5	25.0	22.5	26.5	22.0
13	17.5	14.0	15.0	14.0	24.5	22.0	26.5	22.5	25.5	23.5	26.5	23.0
14	16.0	12.5	15.0	12.0	23.5	18.5	25.0	23.5	28.0	23.5	25.5	22.5
15	16.5	12.5	12.0	11.5	24.0	18.0	24.5	23.0	29.0	24.5	27.0	22.5
16	15.5	12.0	13.0	12.0	25.0	20.5	24.0	22.0	30.0	25.0	24.0	22.0
17	17.5	12.5	14.0	13.0	27.0	21.5	24.5	20.5	30.0	25.5	26.0	21.5
18	15.5	14.5	16.0	14.0	27.5	23.0	26.5	21.0	28.0	24.5	26.5	21.5
19	15.5	13.5	19.0	16.0	26.0	23.5	28.5	22.5	30.0	24.0	27.5	23.0
20	14.0	11.0	20.5	17.5	29.5	22.5	30.0	24.0	29.0	25.0	28.0	23.5
21	11.0	9.5	21.0	19.0	27.0	24.0	31.0	25.5	28.5	22.0	28.0	23.5
22	14.0	9.0	21.0	18.0	28.5	23.5	31.5	26.0	29.0	22.0	26.5	21.0
23	12.5	10.5	20.0	18.5	28.0	21.5	32.5	26.0	29.5	23.0	21.5	19.5
24	16.0	11.0	19.0	17.0	28.0	21.0	30.5	26.0	28.5	23.5	20.5	19.0
25	15.0	13.5	19.5	17.0	27.5	21.0	27.5	24.0	28.5	24.5	22.5	19.0
26	13.5	9.5	21.0	16.5	29.5	22.0	29.0	23.5	28.0	24.0	22.0	17.5
27	12.0	9.0	21.5	19.0	31.5	25.0	28.0	23.5	29.5	24.5	20.0	17.0
28	12.5	9.0	22.5	19.0	32.5	26.0	27.5	23.5	30.0	24.5	19.0	18.0
29	13.5	10.5	22.0	20.5	31.0	25.0	29.5	23.5	27.5	24.5	20.0	15.0
30	12.5	12.0	23.0	20.0	31.0	25.5	26.5	24.0	26.0	24.0	19.5	15.5
31	---	---	23.0	20.0	---	---	26.5	23.5	25.5	22.0	---	---
MONTH	18.5	9.0	23.0	10.5	32.5	17.5	32.5	20.5	30.0	20.5	28.0	15.0
YEAR	30.5	.5										

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)		MEAN CONCENTRATION (MG/L)	
	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	LOADS (T/DAY)	
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	26	26	104	151	34	19	4	43	129	40	478	436
2	17	16	43	52	32	15	22	5.5	23	4.3	86	40
3	15	13	20	21	127	122	156	62	16	2.4	40	12
4	14	11	289	711	65	56	50	12	129	46	26	5.8
5	13	9.9	322	1050	22	14	34	6.5	106	26	14	2.5
6	15	10	220	600	17	8.6	22	3.2	71	14	10	1.4
7	17	12	155	303	18	7.9	11	1.4	1310	2620	7	.85
8	13	8.0	384	1160	33	16	10	1.2	460	714	4	.45
9	7	4.1	331	1580	39	20	10	1.1	91	58	8	.91
10	7	4.0	328	1120	14	5.9	15	1.6	47	19	6	.62
11	8	4.4	222	502	26	9.3	15	1.7	100	39	6	.73
12	7	3.9	103	178	29	9.2	10	.94	124	55	3	.35
13	7	3.5	87	140	30	12	6	.53	38	12	4	.39
14	6	2.8	67	95	18	5.6	43	11	20	5.0	3	.28
15	6	2.6	54	75	7	1.9	124	63	12	2.5	5	.45
16	4	1.7	87	110	5	1.2	343	333	10	1.7	4	.35
17	4	1.7	30	34	8	1.8	196	168	7	1.0	6	.52
18	4	1.7	18	18	7	1.6	122	43	5	.65	5	.43
19	3	1.3	13	12	7	1.5	55	13	8	1.0	5	.43
20	3	1.4	13	10	7	1.3	36	6.4	10	1.3	4	.35
21	3	1.3	13	9.3	7	1.3	22	3.3	10	1.1	3	.26
22	3	1.2	7	4.4	13	2.5	19	2.4	5	.47	2	.17
23	3	1.2	7	4.4	11	1.8	15	1.9	4	.37	3	.26
24	5	1.9	304	473	9	1.4	27	3.8	5	.46	2	.17
25	20	8.0	105	127	10	1.5	46	7.2	5	.47	2	.17
26	890	6560	33	32	10	1.6	30	4.5	7	.77	2	.15
27	1110	11800	18	15	12	1.9	15	1.7	6	.58	3	.22
28	450	1640	15	10	7	.89	47	9.3	5	.45	2	.14
29	370	800	14	8.9	7	.79	13	1.8	5	.43	2	.15
30	330	574	47	34	7	.74	16	2.0	13	1.6	3	.23
31	---	---	212	181	---	---	158	97	1280	2300	---	---
TOTAL	---	21526.6	---	8825.0	---	344.22	---	870.40	---	5969.55	---	506.73

TOTAL LOAD FOR YEAR: 221500.40 TONS.

KANAWHA RIVER BASIN

03199400 LITTLE COAL RIVER AT JULIAN, WV

LOCATION.--Lat 38°09'17", long 81°51'10", Boone County, Hydrologic Unit 05050009, on left bank on downstream side of highway bridge on State Route 3 at Julian, 5.6 mi (9.0 km) north of intersection of U.S. Highway 119 and State Route 3, and at mile 17.4 (28.0 km).

DRAINAGE AREA.--319 mi² (826 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 634.13 ft (193.283 m) National Geodetic Vertical Datum of 1929. Prior to Apr. 21, 1976, nonrecording gage at same site and datum.

REMARKS.--Water-discharge records good except those for September, which are fair, and those below 70 ft³/s (1.98 m), above 5,000 ft³/s (142 m³/s), and January and February, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,600 ft³/s (527 m³/s) Jan. 26, 1978, gage height, 28.65 ft (8.733 m), from rating curve extended above 1,300 ft³/s (37 m³/s); minimum daily, 16 ft³/s (0.45 m³/s) July 20, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,700 ft³/s (130 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 6	0015	5460 155	13.47 4.106	Mar. 10	0415	4900 139	12.61 3.844
Jan. 26	1130	*18600 527	28.65 8.733	Apr. 27	0500	8530 242	17.66 5.383

Minimum discharge, 23 ft³/s (0.65 m³/s) Sept. 27, 28, 29, gage height, 1.59 ft (0.485 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	90	169	1360	304	600	494	526	809	276	42	153	650
2	1320	160	1030	290	520	456	474	634	205	52	93	237
3	507	152	788	251	450	462	429	536	348	155	93	138
4	298	145	683	200	410	453	384	1070	453	117	249	105
5	217	142	1730	210	370	369	369	1920	318	88	141	84
6	181	206	3730	221	340	441	339	1650	234	66	100	68
7	160	915	1810	222	320	543	342	1170	188	54	574	61
8	145	1170	1150	231	290	2110	300	1330	192	51	1090	52
9	622	1210	1080	713	270	3670	288	2590	225	45	375	50
10	897	1150	1010	702	260	4460	276	2020	180	45	190	50
11	501	1520	860	567	250	3200	261	1350	151	58	158	51
12	336	1070	708	500	230	3290	264	960	132	43	225	50
13	242	701	620	440	220	3300	231	823	148	32	153	45
14	206	522	603	390	554	3810	205	756	134	40	124	43
15	176	434	753	350	588	3070	188	669	114	171	96	39
16	434	371	750	320	557	1970	185	602	100	381	85	37
17	1140	329	683	290	536	1510	180	536	92	490	70	34
18	708	284	610	260	512	1160	180	468	91	162	61	34
19	473	249	522	240	501	976	185	411	86	108	59	34
20	348	222	462	220	468	851	192	354	76	85	59	32
21	261	210	415	210	477	795	198	315	73	73	53	32
22	226	212	362	190	444	778	174	276	75	63	43	32
23	203	680	312	180	366	700	162	234	71	59	38	32
24	179	1240	287	170	330	638	158	746	66	78	38	32
25	165	1290	421	4560	381	588	160	602	63	77	38	32
26	203	1070	432	14700	468	571	2870	471	63	72	41	30
27	228	743	421	4130	450	648	6030	366	70	71	43	31
28	212	701	401	1980	471	655	2290	315	54	71	38	29
29	201	682	368	1100	---	638	1350	270	51	73	38	31
30	194	959	343	820	---	602	1020	315	45	64	40	31
31	181	---	329	700	---	564	---	420	---	149	816	---
TOTAL	11254	18912	25033	35661	11633	43772	20210	24988	4374	3135	5374	2206
MEAN	363	630	808	1150	415	1412	674	806	146	101	173	73.5
MAX	1320	1520	3730	14700	600	4460	6030	2590	453	490	1090	650
MIN	90	142	287	170	220	369	158	234	45	32	38	29
CFSM	1.14	1.98	2.53	3.61	1.30	4.43	2.11	2.53	.46	.32	.54	.23
IN.	1.31	2.21	2.92	4.16	1.36	5.10	2.36	2.91	.51	.37	.63	.26

CAL YR 1977	TOTAL	169482	MEAN	464	MAX	11500	MIN	16	CFSM	1.46	IN	19.76
WTR YR 1978	TOTAL	206552	MEAN	566	MAX	14700	MIN	29	CFSM	1.77	IN	24.09

KANAWHA RIVER BASIN

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03199400 LITTLE COAL RIVER AT JULIAN, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1974 to current year.

WATER TEMPERATURES: February 1975 to current year.

SUSPENDED-SEDIMENT DISCHARGE: October 1974 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,260 micromhos July 22, 1976; minimum daily, 98 micromhos Apr. 27, 1978, Feb. 12, Mar. 14, 30, 1975, Oct. 10, 1976.

WATER TEMPERATURES: Maximum daily, 33.0°C July 18, 1977; minimum daily, -1.0°C Jan. 17, 22, Dec. 31, 1976, Jan. 1, 10, 1977.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 3,100 mg/L Jan. 26, 1978; minimum daily mean, 0 mg/L Aug. 28, 29, Sept. 2-5, 9, 10, 1975, Sept. 28, 1977.

SEDIMENT LOADS: Maximum daily, 123,000 tons (112,000 tonnes) Jan. 26, 1978; minimum daily, 0 ton (0 tonne) Aug. 28, 29, Sept. 2-5, 9, 10, 1975, Sept. 28, 1977.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 740 micromhos Sept. 25, 26; minimum daily, 98 micromhos Apr. 27.

WATER TEMPERATURES: Maximum daily, 29.0°C several days during summer period; minimum daily, 0.0°C several days during winter period.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 3,100 mg/L Jan. 26; minimum daily mean, 0 mg/L Sept. 28.

SEDIMENT LOADS: Maximum daily, 123,000 tons (112,000 tonnes) Jan. 26; minimum daily, 0 ton (0 tonne) Sept. 28.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C) • WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	443	416	188	---	337	280	290	240	324	665	420	250
2	228	---	196	341	342	280	290	260	376	670	420	300
3	266	429	218	353	---	290	300	294	338	665	---	240
4	310	428	235	362	375	280	310	213	306	---	480	430
5	335	425	240	394	365	290	320	175	308	562	490	330
6	380	429	132	389	376	290	330	170	354	554	450	490
7	---	299	170	382	387	270	330	196	386	592	320	520
8	421	193	205	---	396	260	330	---	394	614	195	570
9	323	191	218	296	402	138	360	145	392	634	255	580
10	222	194	217	231	399	132	360	160	409	672	320	---
11	263	173	217	241	351	155	350	190	463	601	330	---
12	265	178	236	247	400	150	360	200	465	639	370	630
13	328	219	252	251	400	144	350	245	475	650	355	620
14	374	234	270	273	330	160	350	---	455	640	385	610
15	405	255	272	---	250	170	340	260	469	---	440	600
16	340	275	245	296	280	210	---	270	494	---	430	650
17	201	306	240	---	---	235	390	274	522	---	490	650
18	234	322	244	294	290	260	380	292	536	---	480	650
19	276	335	251	271	350	260	380	306	559	350	520	620
20	303	367	268	---	290	270	380	332	565	---	530	600
21	319	369	283	---	---	280	412	353	664	---	570	640
22	345	381	305	248	---	280	390	365	684	---	530	660
23	382	345	321	253	---	290	420	374	608	---	540	700
24	402	190	331	252	310	280	400	---	596	---	580	730
25	418	183	313	131	300	280	436	255	---	625	---	740
26	426	---	278	98	310	---	195	281	643	570	590	740
27	375	221	273	180	290	270	98	298	654	490	600	650
28	397	236	---	229	290	260	150	328	674	520	600	650
29	385	239	291	267	---	260	185	357	662	640	600	650
30	394	225	310	250	---	270	231	---	671	510	580	660
31	359	---	323	320	---	270	---	300	---	260	300	---
MEAN	339	288	251	276	340	242	325	264	495	571	454	577
WTR YR 1978	MEAN	365	MAX	740	MIN	98						

KANAWHA RIVER BASIN

03199400 LITTLE COAL RIVER AT JULIAN, WV--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.0	15.0	12.0	---	2.0	2.0	14.0	10.0	20.0	23.0	27.0	24.0
2	17.0	---	9.0	3.0	1.0	2.0	16.0	15.0	23.0	26.0	28.0	25.0
3	16.0	17.0	8.0	2.0	---	1.0	14.0	16.0	22.0	25.0	---	25.0
4	15.0	17.0	9.0	2.0	.0	.0	14.0	15.0	21.0	---	24.0	25.0
5	15.0	16.0	10.0	---	1.0	2.0	13.0	13.0	18.0	24.0	23.0	25.0
6	15.0	18.0	9.0	---	.0	1.0	15.0	15.0	23.0	27.0	24.0	25.0
7	---	16.0	2.0	---	.0	3.0	15.0	14.0	23.0	27.0	23.0	26.0
8	16.0	16.0	2.0	---	.0	3.0	14.0	---	22.0	26.0	23.0	27.0
9	15.0	15.0	5.0	---	1.0	2.0	16.0	16.0	21.0	26.0	24.0	27.0
10	15.0	13.0	1.0	---	1.0	1.0	21.0	15.0	24.0	29.0	25.0	---
11	15.0	10.0	1.0	.0	.0	2.0	17.0	18.0	25.0	26.0	24.0	---
12	13.0	8.0	---	.0	1.0	1.0	16.0	16.0	26.0	26.0	25.0	25.0
13	13.0	7.0	7.0	1.0	2.0	1.0	14.0	16.0	22.0	25.0	23.0	26.0
14	12.0	5.0	4.0	.0	1.0	8.0	17.0	---	21.0	29.0	28.0	25.0
15	13.0	6.0	9.0	---	3.0	3.0	13.0	11.0	22.0	---	24.0	26.0
16	12.0	9.0	7.0	.0	3.0	1.0	---	12.0	25.0	---	29.0	25.0
17	11.0	11.0	0.0	---	---	1.0	12.0	14.0	26.0	---	29.0	26.0
18	12.0	8.0	9.0	1.0	2.0	2.0	14.0	14.0	26.0	---	27.0	27.0
19	12.0	6.0	8.0	2.0	3.0	9.0	15.0	15.0	25.0	26.0	29.0	23.0
20	13.0	9.0	8.0	---	3.0	10.0	12.0	23.0	27.0	---	26.0	29.0
21	13.0	10.0	7.0	---	---	11.0	10.0	22.0	25.0	---	26.0	28.0
22	13.0	9.0	---	1.0	---	13.0	9.0	22.0	26.0	---	26.0	23.0
23	14.0	9.0	3.0	1.0	---	13.0	5.0	19.0	26.0	---	24.0	22.0
24	15.0	12.0	4.0	1.0	2.0	11.0	11.0	---	27.0	---	27.0	21.0
25	15.0	9.0	6.0	4.0	2.0	11.0	5.0	17.0	---	20.0	---	22.0
26	16.0	---	1.0	1.0	4.0	---	11.0	23.0	28.0	26.0	27.0	21.0
27	16.0	4.0	---	2.0	1.0	8.0	5.0	24.0	29.0	25.0	29.0	22.0
28	16.0	5.0	---	1.0	2.0	11.0	5.0	24.0	29.0	25.0	28.0	20.0
29	15.0	7.0	.0	---	---	12.0	11.0	23.0	25.0	26.0	26.0	20.0
30	15.0	8.0	1.0	2.0	---	12.0	5.0	---	29.0	26.0	29.0	20.0
31	14.0	---	4.0	---	---	15.0	---	25.0	---	26.0	23.0	---
MEAN	14.5	10.5	5.5	1.5	1.5	5.5	13.0	17.5	24.5	26.5	26.0	24.5
WTR YR 1978	MEAN	14.5	MAX	29.0	MIN	.0						

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)
OCTOBER			NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	135	50	6	2.7	162	595	23	19	54	87	20	27
2	774	2860	5	2.2	85	236	24	19	38	53	20	25
3	162	222	5	2.1	57	121	16	11	32	39	30	37
4	57	46	6	2.4	39	72	15	8.1	28	31	18	22
5	37	22	3	1.2	500	2340	17	9.6	27	27	34	34
6	25	12	52	48	625	6290	24	14	25	23	38	45
7	18	7.8	345	850	245	1200	28	17	32	28	50	73
8	23	9.1	241	761	110	342	122	82	27	21	695	5500
9	317	679	240	779	85	248	319	581	28	20	690	7060
10	203	492	254	805	101	275	79	150	33	23	1590	19400
11	96	130	261	1090	65	151	54	83	94	63	445	3840
12	55	50	145	415	43	82	77	104	57	35	200	1780
13	18	12	69	131	37	62	86	102	56	33	269	2380
14	13	7.2	30	42	55	90	50	53	129	197	367	3730
15	7	3.3	27	32	45	91	28	26	54	86	295	2450
16	139	281	32	32	65	132	25	22	35	53	200	1060
17	299	899	28	25	37	68	57	45	32	46	195	795
18	105	201	17	13	31	51	56	39	27	37	137	429
19	44	56	18	12	34	48	53	34	23	31	197	519
20	24	23	9	5.4	22	27	278	165	24	30	102	234
21	12	8.5	7	4.0	25	28	228	129	25	32	142	303
22	5	3.1	12	6.9	32	31	24	12	25	30	92	193
23	3	1.6	176	426	18	15	25	12	44	43	53	100
24	4	1.9	317	547	24	19	26	12	56	50	42	72
25	6	2.7	104	362	170	204	1140	21200	17	17	32	51
26	11	6.0	84	243	63	73	3100	123000	30	38	55	85
27	17	10	65	130	25	28	490	5460	22	27	53	93
28	11	6.3	40	76	25	27	195	1040	23	29	38	67
29	22	12	87	160	25	25	116	345	---	---	51	88
30	12	6.3	493	1270	18	17	70	155	---	---	35	57
31	10	4.9	---	---	23	20	53	100	---	---	28	43
TOTAL	---	6125.7	---	8689.9	---	13008	---	153048.7	---	1229	---	50592

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

[illegible]

KANAWHA RIVER BASIN

03199700 COAL RIVER AT ALUM CREEK, WV

LOCATION.--Lat 38°17'11", long 81°48'25", Kanawha County, Hydrologic Unit 05050009, on downstream side of highway bridge on State Route 214 at Alum Creek, 1.1 mi (1.8 km) downstream from confluence of Big Coal and Little Coal Rivers, and at mile 17.5 (28.2 km).

DRAINAGE AREA.--835 mi² (2,163 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Altitude of gage is 590 ft (180 m), from topographic map. Prior to Mar. 19, 1976, nonrecording gage at same site and datum.

REMARKS.--Water-discharge records fair except those for winter periods, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 34,100 ft³/s (966 m³/s) Jan. 26, 1978, gage height, 33.61 ft (10.244 m), from rating curve extended above 14,000 ft³/s (400 m³/s); minimum daily, 32 ft³/s (0.91 m³/s) July 21, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 15,000 ft³/s (420 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 26	1930	*34100 966	33.61 10.244	Mar. 27	1000	19600 555	24.11 7.349

Minimum daily discharge, 75 ft³/s (2.12 m³/s) Sept. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	245	400	2380	750	1700	1280	1220	2130	810	107	430	1520
2	1880	370	2500	734	1500	1200	1110	1680	578	116	270	743
3	1390	350	1900	655	1300	1190	976	1410	813	356	210	411
4	750	320	1670	480	1200	1080	882	2140	1220	333	800	300
5	522	320	2660	500	970	1010	846	4330	932	258	436	248
6	411	340	8320	520	920	1080	778	3880	702	203	312	203
7	360	1100	6630	520	860	1280	762	2820	562	163	407	175
8	366	2580	2500	580	800	2620	706	2820	590	144	2060	163
9	871	2950	2380	1600	740	8970	658	5090	622	133	798	146
10	2460	2480	2260	2000	690	10500	610	5020	550	116	506	133
11	1320	3180	1930	1600	660	8820	602	4020	474	144	429	122
12	850	2290	1610	1400	620	8330	594	2350	394	130	439	309
13	624	1550	1430	1200	600	8250	554	1920	425	99	453	203
14	498	1220	1340	570	1200	9740	492	1930	408	80	432	170
15	420	1060	1710	510	1400	9220	460	1770	312	79	312	144
16	557	922	1990	820	1200	5330	442	1550	265	469	253	128
17	1920	830	1650	760	1100	3820	428	1340	245	1140	220	116
18	1680	758	1450	690	1000	2880	436	1170	233	490	180	118
19	1140	666	1180	640	950	2310	453	1010	218	303	159	120
20	838	596	1100	590	920	2030	495	887	205	203	155	109
21	652	564	990	550	900	1860	562	782	170	159	163	92
22	522	575	873	500	860	1850	562	682	210	137	141	90
23	459	1180	770	480	860	1650	542	614	190	130	126	90
24	396	2680	710	470	950	1480	523	1370	160	276	118	95
25	366	2590	891	5700	990	1340	512	1550	155	377	111	105
26	390	2220	1230	26000	1120	1300	4720	1220	157	240	109	101
27	784	1690	1160	16000	1140	1670	16600	959	159	208	116	90
28	690	1510	1050	4700	1230	1660	7280	798	148	270	133	77
29	599	1550	913	2900	---	1560	3740	654	126	248	101	75
30	515	2370	859	2400	---	1420	2620	742	120	213	110	88
31	460	---	802	2100	---	1320	---	1040	---	354	1420	---
TOTAL	24935	41291	58838	79719	28470	108050	51165	60478	12153	7678	11909	6484
MEAN	804	1376	1898	2572	1017	3485	1706	1951	405	248	384	216
MAX	2460	3180	8320	26000	1700	10500	16600	5890	1220	1140	2060	1520
MIN	245	320	710	470	660	1010	428	614	120	79	101	75
CFSM	.96	1.65	2.27	3.08	1.22	4.17	2.04	2.34	.49	.30	.46	.26
IN.	1.11	1.84	2.62	3.55	1.27	4.81	2.28	2.69	.54	.34	.53	.29
CAL YR 1977	TOTAL	391089	MEAN	1071	MAX	25900	MIN	44	CFSM	1.28	IN	17.42
WTR YR 1978	TOTAL	491170	MEAN	1346	MAX	26000	MIN	75	CFSM	1.61	IN	21.88

KANAWHA RIVER BASIN

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03199700 COAL RIVER AT ALUM CREEK, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1974 to December 1976, March to September 1977.

WATER TEMPERATURES: December 1974 to December 1976, April to September 1977.

SUSPENDED-SEDIMENT DISCHARGE: October 1974 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 884 micromhos Sept. 7, 1975; minimum daily, 103 micromhos Apr. 27, 1978.

WATER TEMPERATURES: Maximum daily, 31.0°C July 17, 1977, July 23, 1978; minimum daily, 0.0°C on many days

during winter periods.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 3,500 mg/L Jan. 26, 1978; minimum daily mean, 0 mg/L Nov. 22, 1976,

June 23, 1977.

SEDIMENT LOADS: Maximum daily, 246,000 tons (223,000 tonnes) Jan. 26, 1978; minimum daily, 0 ton (0 tonne)

Nov. 22, June 23.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily observed, 505 micromhos June 30, July 1; minimum daily observed, 103 micromhos Apr. 27.

WATER TEMPERATURES: Maximum daily observed, 31.0°C July 23; minimum daily observed, 0.0°C on several days during winter periods.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 3,500 mg/L Jan. 26; minimum daily mean, 2 mg/L Sept. 28, 29.

SEDIMENT LOADS: Maximum daily, 246,000 tons (223,000 tonnes) Jan. 26; minimum daily, 0.41 ton (0.37 tonne)

Nov. 22, June 23.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	376	---	177	259	---	230	153	210	272	505	---	162
2	303	---	178	267	---	229	154	225	274	492	358	176
3	243	---	194	279	---	237	154	240	267	441	360	155
4	250	---	206	289	---	241	155	210	258	428	226	162
5	263	---	207	295	---	238	155	185	261	434	294	180
6	275	---	140	299	---	243	156	175	---	426	300	---
7	294	306	163	305	---	237	156	175	269	433	325	209
8	280	180	190	304	---	206	157	185	270	---	160	212
9	270	161	211	---	---	135	157	140	284	457	201	215
10	257	170	215	---	---	123	158	150	297	448	262	229
11	186	166	207	---	---	111	157	170	308	446	293	---
12	210	166	209	---	---	112	320	185	326	459	303	243
13	233	181	224	---	---	112	320	---	328	455	332	194
14	255	203	233	---	---	114	320	235	344	450	266	219
15	276	216	238	---	---	117	320	230	355	---	278	238
16	280	217	221	---	---	138	320	230	363	---	351	250
17	203	227	209	---	---	150	327	235	---	244	366	251
18	182	244	213	---	---	151	340	240	397	267	378	250
19	192	246	227	---	---	152	330	245	405	287	402	258
20	211	253	235	---	---	153	340	270	471	295	404	271
21	234	267	259	---	---	153	340	280	---	360	426	281
22	261	263	264	---	---	153	320	290	---	---	418	276
23	263	273	270	---	---	153	310	300	---	384	439	---
24	286	174	294	---	---	153	300	293	445	270	---	279
25	300	166	212	---	---	154	300	269	465	263	270	285
26	309	171	---	---	---	154	170	258	459	---	---	295
27	310	185	---	---	251	152	103	257	492	343	280	312
28	219	197	---	203	234	152	122	---	490	299	425	320
29	225	208	247	---	---	151	179	288	495	378	230	321
30	239	193	---	---	---	152	195	263	505	396	272	---
31	---	---	263	---	---	152	---	247	---	301	140	---
MEAN	256	210	219	278	243	165	233	230	364	383	313	240
WTR YR 1978	MEAN	259	MAX	505	MIN	103						

KANAWHA RIVER BASIN

03199700 COAL RIVER AT ALUM CREEK, WV--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.0	---	9.0	5.0	---	3.0	12.0	13.0	24.0	29.0	---	23.0
2	14.0	---	---	2.0	---	.0	14.0	13.0	24.0	26.0	26.0	23.0
3	15.0	---	8.0	.0	---	.0	15.0	14.0	20.0	25.0	27.0	23.0
4	15.0	---	7.0	.0	---	.0	15.0	13.0	20.0	24.0	19.0	24.0
5	15.0	---	8.0	.0	---	2.0	16.0	12.0	22.0	25.0	23.0	25.0
6	15.0	---	---	2.0	---	4.0	15.0	14.0	---	25.0	26.0	---
7	14.0	16.0	---	5.0	---	3.0	16.0	13.0	22.0	27.0	25.0	23.0
8	14.0	15.0	3.0	7.0	---	4.0	17.0	14.0	21.0	---	22.0	26.0
9	14.0	15.0	3.0	---	---	5.0	16.0	15.0	20.0	29.0	23.0	23.0
10	13.0	13.0	.0	---	---	5.0	15.0	15.0	22.0	29.0	24.0	28.0
11	14.0	9.0	.0	---	---	5.0	17.0	16.0	24.0	25.0	24.0	---
12	13.0	7.0	.0	---	---	5.0	18.0	15.0	25.0	26.0	25.0	24.0
13	12.0	7.0	2.0	---	---	7.0	17.0	15.0	24.0	25.0	25.0	26.0
14	12.0	6.0	6.0	---	---	8.0	16.0	13.0	22.0	24.0	26.0	25.0
15	13.0	7.0	7.0	---	---	7.0	15.0	12.0	27.0	---	27.0	26.0
16	11.0	9.0	8.0	---	---	6.0	15.0	13.0	24.0	---	27.0	25.0
17	9.0	9.0	8.0	---	---	5.0	16.0	15.0	---	24.0	28.0	27.0
18	10.0	9.0	7.0	---	---	5.0	16.0	16.0	26.0	25.0	27.0	27.0
19	10.0	7.0	7.0	---	---	9.0	14.0	---	25.0	27.0	28.0	24.0
20	11.0	8.0	7.0	---	---	10.0	12.0	20.0	25.0	24.0	28.0	28.0
21	12.0	9.0	5.0	---	---	11.0	10.0	21.0	---	29.0	27.0	23.0
22	12.0	8.0	5.0	---	---	11.0	12.0	21.0	---	---	27.0	22.0
23	13.0	4.0	4.0	---	---	12.0	14.0	20.0	---	31.0	28.0	---
24	13.0	---	5.0	---	---	12.0	15.0	19.0	25.0	---	---	20.0
25	13.0	9.0	5.0	---	---	11.0	13.0	20.0	27.0	24.0	25.0	22.0
26	15.0	5.0	---	---	---	10.0	---	22.0	29.0	---	---	18.0
27	15.0	3.0	---	---	4.0	7.0	10.0	22.0	29.0	25.0	28.0	23.0
28	15.0	4.0	---	.0	3.0	10.0	10.0	---	29.0	25.0	29.0	21.0
29	14.0	6.0	.0	---	---	10.0	13.0	23.0	29.0	25.0	26.0	20.0
30	14.0	8.0	---	---	---	11.0	13.0	21.0	29.0	26.0	25.0	---
31	---	---	4.0	---	---	13.0	---	22.0	---	24.0	23.0	---
MEAN	13.5	8.5	5.0	2.5	3.5	7.0	14.5	16.5	24.5	26.0	25.5	24.0
WTR. YR 1978	MEAN	16.0	---	---	---	---	---	---	---	---	---	---

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
1	64	42	17	18	185	1190	14	28	120	551	25	86
2	850	4310	16	16	140	945	11	22	104	421	13	42
3	365	1370	15	14	75	385	10	18	71	249	20	64
4	104	211	14	12	93	419	8	10	68	220	16	47
5	43	61	14	12	195	1400	10	13	53	139	16	44
6	25	28	13	12	395	8870	8	11	46	114	24	70
7	20	19	133	395	275	4920	10	14	40	93	33	114
8	115	114	314	2190	178	1200	41	77	34	73	181	1280
9	325	833	175	1410	200	1280	116	501	28	56	681	16500
10	161	1070	177	1230	98	598	164	886	26	48	882	25000
11	92	328	338	2960	73	380	116	501	25	45	663	15800
12	50	115	112	692	31	134	95	359	24	40	622	14000
13	33	56	60	257	32	123	71	230	23	37	620	13800
14	26	35	32	105	43	155	50	131	71	230	856	22500
15	17	19	20	57	88	407	43	106	95	359	695	17300
16	56	115	21	52	276	1480	36	80	71	230	435	6260
17	509	2640	16	36	122	544	33	68	57	169	279	2880
18	106	481	7	14	47	183	26	48	52	140	185	1440
19	45	139	4	7.2	46	146	24	41	47	121	132	823
20	23	52	3	4.8	26	77	23	37	46	114	110	603
21	17	30	9	14	19	51	23	34	41	100	81	407
22	13	18	10	16	13	31	21	28	41	97	141	704
23	7	8.7	188	773	14	29	20	26	41	97	97	432
24	7	7.5	170	1230	21	40	20	25	47	121	67	268
25	10	9.9	155	1080	92	257	550	8460	52	139	43	156
26	13	14	178	1070	120	397	3500	246000	100	302	65	237
27	72	152	42	191	46	143	1200	51800	85	273	157	694
28	27	50	40	163	35	99	362	4590	62	206	113	506
29	16	26	74	310	30	74	198	1550	---	---	86	362
30	12	17	244	1520	25	58	162	1050	---	---	57	219
31	20	25	---	---	20	43	138	782	---	---	43	153
TOTAL	---	12396.1	---	15861.0	---	26058	---	317526	---	4784	---	142791

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SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN CONCEN- TRATION (MG/L)		MEAN CONCEN- TRATION (MG/L)		MEAN CONCEN- TRATION (MG/L)		MEAN CONCEN- TRATION (MG/L)		MEAN CONCEN- TRATION (MG/L)		MEAN CONCEN- TRATION (MG/L)	
	LOADS (T/DAY)		LOADS (T/DAY)		LOADS (T/DAY)		LOADS (T/DAY)		LOADS (T/DAY)		LOADS (T/DAY)	
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	33	109	94	541	119	260	8	2.3	8	9.3	548	2250
2	24	72	57	258	42	66	10	3.1	17	12	193	387
3	18	47	37	140	101	269	108	115	17	9.6	123	136
4	17	40	139	1070	158	520	76	68	136	318	67	54
5	13	30	372	4350	44	111	40	28	62	73	37	25
6	11	23	166	1740	20	38	25	14	34	29	26	14
7	10	21	107	815	17	26	16	7.1	160	176	18	8.5
8	7	13	152	1290	31	49	13	5.0	674	4050	13	5.7
9	5	8.9	541	8420	36	60	11	3.9	190	409	10	3.9
10	7	12	228	3090	22	33	6	1.9	73	100	9	3.2
11	6	9.8	133	1440	14	18	5	1.9	38	44	20	6.6
12	5	8.0	83	526	11	12	4	1.4	50	59	54	45
13	4	6.0	52	269	13	15	6	1.6	69	84	111	61
14	3	4.0	159	2250	11	12	13	2.8	313	365	71	33
15	3	3.7	115	548	10	8.4	13	2.8	133	112	32	12
16	3	3.6	90	376	8	5.7	228	673	57	39	18	6.2
17	5	5.8	58	210	10	6.6	254	782	23	14	12	3.7
18	4	4.7	44	139	9	5.6	188	249	12	5.8	12	3.8
19	3	3.7	35	96	7	4.1	77	63	8	3.4	11	3.6
20	3	4.0	28	67	8	4.4	38	21	6	2.5	6	1.8
21	4	6.1	20	42	15	6.9	17	7.3	7	3.1	5	1.2
22	5	7.6	13	24	53	30	10	3.7	8	3.1	6	1.5
23	5	7.3	12	20	37	19	12	4.2	7	2.4	6	1.5
24	3	4.2	296	1230	20	8.6	33	34	7	2.2	5	1.3
25	3	4.1	178	745	13	5.4	52	53	6	1.8	5	1.4
26	687	14700	82	269	12	5.1	40	26	5	1.5	3	.82
27	1300	60600	30	78	11	4.7	38	21	5	1.6	2	.49
28	515	10100	18	39	12	4.8	53	39	5	1.8	2	.41
29	250	2520	15	26	10	3.4	42	28	5	1.4	2	.41
30	135	456	74	167	7	2.3	23	13	4	1.2	4	.95
31	---	---	303	859	---	---	62	59	901	4270	---	---
TOTAL	---	89334.5	---	31134	---	1614.0	---	2335.0	---	10204.7	---	3073.98
TOTAL LOAD FOR YEAR: 657112.28 TONS.												

03200500 COAL RIVER AT TORNADO, WV

LOCATION.--Lat 38°20'20", long 81°50'30", Kanawha County, Hydrologic Unit 05050009, on downstream side of highway bridge at Tornado, 0.2 mi (0.3 km) upstream from Falls Creek, and at mile 11.5 (18.5 km).

DRAINAGE AREA.--861 mi² (2,230 km²), includes that of Falls Creek.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1908 to September 1911, October 1911 to June 1912 (gage heights only), November 1928 to September 1931, August 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 570.46 ft (173.876 m) National Geodetic Vertical Datum of 1929. Aug. 1, 1971, to Jan. 9, 1973, nonrecording gage at same site and datum. Prior to Aug. 1, 1961, nonrecording gage at same site at different datum.

REMARKS.--Water-discharge records good except those below 1,000 ft³/s and those for January and February, which are poor. Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--22 years (water years, 1909-11, 1930-31, 1962-78), 1,232 ft³/s (34.89 m³/s), 19.43 in/yr (494 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,500 ft³/s (1,010 m³/s) Mar. 7, 1967, gage height, 31.98 ft (9.748 m); minimum (estimated), 2.0 ft³/s (0.057 m³/s) Oct. 1-10, 1930.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 16,000 ft³/s (450 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 26	2200	*34200 969	29.57 9.013	Apr. 27	1100	20000 566	21.50 6.553

Minimum discharge, 72 ft³/s (2.04 m³/s) Sept. 29, 30, gage height, 10.21 ft (3.112 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	244	417	3400	725	1800	1140	1160	1900	752	112	446	1530
2	1680	377	2660	693	1500	1040	1060	1480	545	122	280	752
3	1440	360	2010	608	1300	1020	914	1240	932	262	220	400
4	770	338	1750	493	1200	1020	824	1880	1200	358	824	288
5	530	325	2480	489	1000	824	752	3900	878	262	434	220
6	390	351	6340	509	950	914	680	3570	650	199	288	185
7	333	1110	3960	513	890	1140	680	2610	506	157	470	157
8	275	3050	2490	686	820	2460	620	2630	605	131	1970	136
9	752	2980	2250	1660	760	6840	575	5160	605	122	824	126
10	2460	2450	2250	2080	710	9640	545	4580	518	117	482	122
11	1440	3140	1990	1700	680	7060	530	3020	422	136	434	131
12	896	2390	1730	1400	630	6750	518	2190	358	126	446	296
13	620	1730	1440	1200	600	7220	482	1790	347	103	446	199
14	502	1280	1330	1000	970	8510	434	1810	358	96	458	145
15	350	1100	1650	940	1500	8820	389	1660	280	178	316	126
16	621	950	1900	850	1300	4800	378	1460	246	518	254	112
17	2100	842	1750	780	1200	3570	378	1300	228	1160	228	103
18	1810	770	1530	710	1200	2730	378	1140	213	458	185	108
19	1240	650	1330	660	1200	2250	400	950	199	280	157	103
20	907	575	1150	610	1100	1990	422	806	185	206	150	92
21	685	530	1020	570	1100	1840	482	698	178	164	171	86
22	558	575	897	520	1000	1810	494	605	213	141	157	86
23	480	1160	771	500	950	1660	458	560	192	126	140	86
24	413	2700	693	480	890	1480	434	1300	164	237	122	89
25	364	2680	901	5510	920	1340	446	1480	150	389	112	96
26	375	2320	1280	27300	1000	1320	4780	1160	150	254	117	92
27	773	1810	1190	16400	1020	1770	17100	896	150	199	117	92
28	756	1590	1070	4820	1080	1660	6780	716	141	288	108	78
29	622	1660	1280	2970	---	1530	3310	590	126	262	96	72
30	533	2510	891	2500	---	1300	2340	734	117	192	108	72
31	470	---	774	2200	---	1260	---	1000	---	358	1470	---
TOTAL	25429	42720	56197	82476	29270	96708	48743	54815	11608	7713	12030	6180
MEAN	820	1424	1813	2661	1045	3120	1625	1768	387	249	388	206
MAX	2460	3140	6340	27300	1800	9640	17100	5160	1200	1160	1970	1530
MIN	244	325	693	480	600	824	378	560	117	96	96	72
CFSM	4.95	1.65	2.11	3.09	1.21	3.62	1.89	2.05	.45	.29	.45	.24
IN.	1.10	1.85	2.43	3.56	1.26	4.18	2.11	2.37	.50	.33	.52	.27
CAL YR 1977	TOTAL	381518	MEAN	1045	MAX	26100	MIN 28	CFSM 1.21	IN 16.48			
WTR YR 1978	TOTAL	473889	MEAN	1298	MAX	27300	MIN 72	CFSM 1.51	IN 20.47			

KANAWHA RIVER BASIN

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03200500 COAL RIVER AT TORNADO, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1973 to current year.

TEMPERATURE: May to July 1975 (partial-record station), June to September 1976 (published as once-daily),

October 1976 to current year.

SUSPENDED-SEDIMENT DISCHARGE: December 1972 to current year.

INSTRUMENTATION.--Temperature recorder since Nov. 13, 1973.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,020 micromhos Oct. 23, 24, 1973; minimum daily, 101 micromhos Jan. 11, 1974.

WATER TEMPERATURES: Maximum recorded, 31.5°C July 8, 19, 20, 1977; minimum recorded, 0.5°C Dec. 26 to Feb. 20, 1976-77.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 4,000 mg/L Mar. 17, 1973; minimum daily mean, 0 mg/L on several days in April 1978.

SEDIMENT LOADS: Maximum daily, 263,000 tons (239,000 tonnes) Jan. 26, 1978; minimum daily, 0 ton (0 tonne) on several days in April 1978.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum observed, 517 micromhos July 16; minimum observed, 106 micromhos Jan. 26.

TEMPERATURE: Maximum, 31.0°C July 22; minimum, 1.0°C on many days in February and March.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 3,480 mg/L Jan. 26; minimum daily mean, 0 mg/L on several days in April.

SEDIMENT LOADS: Maximum daily, 263,000 tons (239,000 tonnes) Jan. 26; minimum daily, 0 tons (0 tonnes) on several days in April.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	336	263	167	255	278	250	240	245	---	485	311	---
2	332	320	170	276	297	255	265	220	---	485	371	---
3	375	307	---	284	295	250	275	---	281	489	199	---
4	271	321	---	295	320	265	265	---	284	500	196	---
5	305	316	---	310	330	260	290	155	---	502	197	280
6	307	275	---	278	---	260	290	153	---	497	315	375
7	321	303	---	312	---	260	260	---	---	502	298	387
8	341	213	179	328	---	250	310	156	---	501	---	---
9	323	177	195	---	---	134	245	148	---	430	196	301
10	271	196	---	---	380	132	320	150	---	488	215	325
11	215	187	196	---	380	136	325	205	---	496	217	421
12	288	167	205	---	390	142	330	200	---	436	258	383
13	268	224	218	---	390	142	330	205	---	462	304	424
14	297	228	228	---	360	---	---	220	---	472	306	421
15	293	222	235	---	---	150	---	220	---	475	308	---
16	207	220	235	---	290	136	---	233	---	517	295	390
17	210	267	206	---	270	225	335	260	---	507	308	406
18	208	274	206	---	270	225	340	249	---	499	295	399
19	210	280	212	---	275	---	350	266	---	296	---	431
20	232	196	228	---	270	250	350	279	---	297	267	430
21	223	190	240	---	270	255	350	290	---	339	243	431
22	249	188	251	---	280	255	320	314	---	284	397	424
23	243	188	264	---	280	260	340	314	---	282	430	429
24	322	191	274	---	285	265	325	301	---	284	429	431
25	323	---	278	---	280	265	340	260	---	286	412	454
26	266	---	---	106	300	240	214	250	---	323	427	457
27	267	---	230	129	270	240	108	261	458	284	421	454
28	267	205	225	188	260	240	130	263	433	---	426	476
29	268	239	246	220	---	235	117	296	486	346	437	448
30	281	168	250	247	---	235	170	297	465	360	---	---
31	316	---	274	226	---	240	---	284	---	358	---	---
MEAN	279	234	226	247	305	222	279	239	401	416	314	408
WTR YR 1978	MEAN	292	MAX	517	MIN	106						

03200500 COAL RIVER AT TORNADO, WV--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	19.5	19.0	11.5	11.5	---	---	4.0	3.0	1.0	1.0	3.0	3.0
2	19.5	18.0	11.5	11.5	---	---	4.0	4.0	1.0	1.0	3.0	2.0
3	18.0	16.0	12.0	11.5	---	---	4.0	3.5	1.0	1.0	2.0	1.5
4	16.0	14.5	13.5	12.0	---	---	3.5	2.5	1.0	1.0	1.5	1.5
5	14.5	14.0	15.0	14.0	---	---	2.5	2.5	1.0	1.0	1.5	1.0
6	14.5	14.0	15.5	15.0	---	---	2.5	2.5	1.0	1.0	3.0	1.0
7	14.5	14.0	15.5	15.0	---	---	3.5	2.5	1.0	1.0	3.5	3.0
8	14.0	14.0	15.0	14.5	---	---	5.0	3.5	1.0	1.0	3.5	3.5
9	14.5	14.0	14.5	14.0	---	---	5.0	4.0	1.0	1.0	5.0	3.5
10	14.5	13.5	---	---	---	---	3.5	2.5	1.0	1.0	5.5	5.0
11	13.5	13.5	---	---	---	---	2.5	2.5	1.0	1.0	5.5	5.0
12	13.5	13.0	---	---	---	---	2.5	2.0	1.0	1.0	5.5	5.0
13	13.0	12.5	---	---	---	---	2.0	2.0	1.0	1.0	6.5	5.5
14	12.5	10.5	---	---	---	---	2.0	2.0	1.0	1.0	8.5	6.5
15	10.5	10.0	---	---	---	---	2.0	2.0	1.0	1.0	8.5	8.0
16	10.5	10.0	---	---	7.0	7.0	2.0	2.0	1.0	1.0	8.0	6.5
17	10.0	9.0	---	---	7.0	7.0	2.0	2.0	1.0	1.0	6.0	5.5
18	9.0	8.0	---	---	7.0	7.0	2.0	2.0	2.0	1.0	5.5	5.0
19	9.0	8.5	---	---	7.5	7.0	2.0	2.0	2.0	2.0	7.5	5.5
20	9.0	9.0	---	---	7.5	7.5	2.0	2.0	2.0	1.5	9.5	7.5
21	9.5	9.0	---	---	7.5	7.0	2.0	2.0	1.5	1.5	10.0	9.0
22	9.5	9.5	---	---	7.0	6.0	2.0	2.0	1.5	1.0	10.5	10.0
23	10.5	10.0	---	---	6.0	5.0	2.0	2.0	1.0	1.0	11.0	10.0
24	11.0	10.5	---	---	5.0	5.0	2.0	2.0	1.0	1.0	11.0	11.0
25	11.5	11.0	---	---	5.5	5.0	1.5	1.0	2.0	1.0	12.0	11.0
26	11.5	11.5	---	---	5.5	4.5	3.5	1.0	3.0	2.0	12.0	11.0
27	13.0	12.0	---	---	4.5	3.0	3.5	2.5	3.0	3.0	10.5	8.0
28	13.0	13.0	---	---	3.0	2.5	2.5	2.0	3.0	3.0	9.0	7.5
29	13.0	13.0	---	---	2.5	2.5	2.0	1.0	---	---	10.0	9.0
30	13.0	12.0	---	---	2.5	2.5	1.0	1.0	---	---	10.0	9.5
31	12.0	11.5	---	---	3.0	2.5	1.0	1.0	---	---	11.5	9.5
MONTH	19.5	8.0	15.5	11.5	7.5	2.5	5.0	1.0	3.0	1.0	12.0	1.0
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	13.0	11.5	12.5	12.0	23.0	21.5	25.5	27.5	25.0	24.5	22.5	21.5
2	14.0	13.0	12.5	11.5	23.5	23.0	28.5	26.5	27.0	25.0	22.5	22.0
3	14.0	14.0	13.0	12.0	23.5	20.5	26.5	25.0	28.0	25.5	23.5	22.5
4	14.5	14.0	13.0	12.5	20.5	19.5	25.0	24.0	26.0	23.0	24.5	23.5
5	15.0	14.5	12.5	12.0	20.5	19.5	24.5	23.0	23.5	22.5	25.5	22.5
6	15.0	14.5	12.5	11.5	21.0	20.5	28.0	23.0	25.5	22.5	26.0	22.0
7	16.5	15.0	13.0	12.5	21.5	21.5	27.5	24.0	24.0	24.0	26.5	22.5
8	16.5	16.0	13.0	13.0	21.5	21.5	27.0	25.0	23.5	22.0	26.5	23.5
9	16.5	16.0	13.5	13.0	21.5	21.0	28.0	25.5	22.5	21.5	27.0	24.0
10	18.0	16.5	14.0	13.5	21.5	20.0	28.5	26.5	23.5	22.5	27.5	25.0
11	18.5	17.5	14.5	13.0	22.5	21.5	28.0	26.5	24.0	21.5	26.5	25.0
12	17.0	16.0	15.5	14.5	24.0	23.0	27.5	26.0	24.0	22.5	26.0	24.0
13	16.5	16.0	15.5	15.0	24.0	23.0	26.0	25.0	---	---	26.5	25.0
14	16.0	15.5	15.0	13.5	23.0	21.5	26.0	25.0	---	---	25.5	24.5
15	15.5	15.5	13.5	12.5	21.5	21.0	26.0	25.0	---	---	27.5	24.0
16	15.5	15.0	12.5	12.0	22.5	21.0	25.0	24.0	---	---	24.5	23.5
17	15.5	15.0	14.0	12.0	24.0	22.0	23.5	22.0	---	---	25.0	23.5
18	16.0	15.5	15.0	13.5	26.5	23.5	23.0	22.0	---	---	26.0	23.5
19	15.5	15.5	18.0	15.0	26.5	24.5	26.5	23.5	---	---	27.0	24.5
20	15.5	13.0	20.0	18.0	27.0	24.5	28.5	24.5	---	---	27.0	25.0
21	13.0	11.0	20.5	20.0	27.5	25.0	30.0	26.0	---	---	27.0	25.0
22	11.5	10.5	20.5	20.0	27.5	25.0	31.0	27.0	---	---	26.5	24.0
23	12.0	11.5	20.5	20.0	28.0	24.0	30.5	28.0	---	---	24.0	23.0
24	14.0	12.0	20.0	19.0	26.5	23.0	25.5	27.5	---	---	23.5	21.0
25	14.5	14.0	19.0	18.0	27.0	23.5	27.0	24.5	---	---	21.5	20.5
26	14.5	10.0	21.0	19.0	27.0	24.5	26.0	24.5	---	---	21.0	19.5
27	10.5	9.5	21.5	20.5	29.5	25.5	27.5	24.5	---	---	20.5	19.5
28	11.0	10.5	22.5	21.0	30.5	27.0	26.0	24.5	---	---	20.0	19.5
29	12.0	11.0	22.5	22.0	30.5	28.0	25.5	24.5	---	---	20.5	18.5
30	12.5	12.0	22.5	21.5	29.5	28.0	26.5	25.0	27.0	25.5	19.5	18.5
31	---	---	22.5	21.0	---	---	25.5	24.5	25.5	22.0	---	---
MONTH	18.5	9.5	22.5	11.5	30.5	19.5	31.0	22.0	28.0	21.5	27.5	18.5
YEAR	31.0	1.0										

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)
OCTOBER			NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	564	528	5	5.6	287	2630	3	5.9	52	253	11	34
2	1220	7260	6	6.1	104	747	2	3.7	104	421	25	70
3	266	1030	7	6.8	45	244	4	6.6	62	218	17	47
4	54	112	8	7.3	18	85	12	16	18	58	10	28
5	25	36	11	9.7	161	1080	73	96	19	51	10	22
6	38	40	7	6.6	490	8390	21	29	25	64	13	32
7	14	13	33	99	365	3900	8	11	27	65	20	62
8	13	9.7	282	2320	270	1820	40	94	21	46	131	1120
9	82	166	357	2870	190	1150	87	419	15	31	520	9600
10	146	1000	150	1050	95	577	106	595	7	13	829	21600
11	52	202	234	1980	327	1760	32	147	7	13	611	11600
12	21	51	115	742	185	864	30	113	15	26	865	15800
13	15	25	44	207	15	58	40	130	27	44	840	16400
14	7	9.5	7	24	19	68	22	59	34	89	951	22800
15	27	28	12	36	88	402	33	84	160	648	761	19400
16	79	174	5	13	381	1950	28	64	75	263	374	4850
17	250	1420	187	1350	136	642	20	42	60	194	225	2170
18	125	611	143	896	20	83	15	29	28	91	94	693
19	14	47	2	3.5	15	54	11	20	15	49	54	328
20	14	34	77	120	12	37	10	16	11	33	6	32
21	7	13	104	149	13	36	14	22	14	42	26	129
22	3	4.5	232	1570	14	34	12	17	17	46	33	161
23	2	2.6	158	430	9	19	15	20	10	26	31	139
24	12	13	220	1590	6	11	17	22	4	9.6	34	136
25	15	15	87	630	8	19	321	10600	11	27	26	94
26	15	15	43	269	164	567	3480	263000	6	16	13	46
27	66	138	33	161	38	122	880	39000	10	28	55	263
28	10	20	23	99	18	52	307	4000	10	29	23	103
29	7	12	79	353	10	35	153	1230	---	---	3	12
30	5	7.2	132	895	7	17	73	493	---	---	17	60
31	7	8.9	---	---	5	10	40	238	---	---	16	54
TOTAL	---	13045.4	---	17898.6	---	27463	---	320622.2	---	2893.6	---	127885
DAY	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)
APRIL			MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	4	13	17	87	85	173	30	9.1	56	67	467	1930
2	3	8.6	11	44	65	96	25	8.2	47	36	132	268
3	4	9.9	13	44	110	277	66	53	44	26	21	23
4	1	2.2	79	571	130	421	49	47	133	88	17	13
5	1	2.0	349	3680	46	109	50	35	128	150	30	18
6	3	5.5	204	966	58	102	48	26	53	41	12	6.0
7	3	5.5	150	1060	43	59	57	24	74	138	3	1.3
8	2	3.3	163	1160	34	50	76	27	465	2470	4	1.5
9	0	.0	500	6970	2	3.3	36	12	140	311	3	1.0
10	0	.0	200	2470	2	2.8	13	4.1	97	126	4	1.3
11	0	.0	72	587	13	15	34	12	113	154	46	16
12	2	2.8	17	101	14	14	23	7.8	25	30	44	35
13	3	3.9	20	97	19	18	13	3.6	67	81	31	17
14	1	1.2	29	142	15	14	6	1.6	144	178	12	4.7
15	0	.0	15	67	15	11	11	5.3	136	116	13	4.4
16	0	.0	20	79	15	10	97	228	31	21	27	8.2
17	0	.0	10	35	5	3.1	185	579	2	1.2	44	12
18	0	.0	7	22	2	1.2	117	144	1	.50	30	8.7
19	0	.0	14	36	4	2.1	133	101	3	1.3	38	11
20	1	1.1	12	26	6	3.0	100	56	5	2.0	36	8.9
21	2	2.6	14	26	8	3.8	45	20	7	3.2	21	4.9
22	1	1.3	19	31	12	6.9	77	29	21	8.9	20	4.6
23	1	1.2	23	35	23	12	132	45	23	8.7	20	4.6
24	1	1.2	140	491	24	11	125	80	22	7.2	19	4.6
25	1	1.2	145	579	17	6.9	110	116	37	11	15	3.9
26	1120	31900	44	138	15	6.1	95	65	22	6.9	16	4.0
27	2740	126000	18	44	15	6.1	77	41	7	2.2	17	4.2
28	701	14800	17	33	7	2.7	86	67	16	4.7	15	3.2
29	65	581	13	21	20	6.8	51	36	14	3.6	13	2.5
30	63	398	23	61	52	16	77	40	22	6.4	16	3.1
31	---	---	114	308	---	---	67	65	298	1180	---	---
TOTAL	---	173745.5	---	20011	---	1462.8	---	1987.7	---	5280.80	---	2428.6
TOTAL LOAD FOR YEAR:				714724.20 TONS.								

KANAWHA RIVER BASIN

03200650 KANAWHA RIVER AT POCA, WV

LOCATION.--Lat 38°28'29", long 81°49'09", Putnam County, Hydrologic Unit 05050008, on left bank at John Amos Power Plant, at Poca, 200 ft (61 m) upstream from Pocatalico River, and at mile 39.2 (63.1 km).

DRAINAGE AREA.--11,435 mi² (29,617 km²), excludes that of Pocatalico River.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1975 to current year.

COOPERATION.--Records were furnished by Appalachian Electric Power Company.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum daily, 34.5°C July 7-9, 19, 21, 1977, Aug. 17, 1978; minimum daily, 0.0°C Jan. 18, 1977.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum daily, 34.5°C Aug. 17; minimum, 3.5°C Dec. 12.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.0	25.5	29.0	24.5	15.0	15.5	22.5	20.0	29.0	29.5	29.0	30.5
2	22.0	25.5	17.0	12.0	15.5	10.5	23.5	16.5	29.5	29.0	29.0	17.0
3	24.0	30.0	20.5	13.5	12.0	19.5	24.0	25.0	30.0	31.0	31.5	29.5
4	23.0	31.5	16.0	13.5	11.0	4.5	29.0	29.0	30.0	29.0	32.0	31.5
5	20.0	22.0	24.5	14.0	15.5	4.0	23.5	23.5	25.5	28.0	31.0	29.0
6	26.0	30.0	16.5	21.0	12.0	11.0	24.0	22.0	26.5	31.5	29.5	23.5
7	24.0	30.0	8.0	21.5	9.0	14.5	22.0	21.0	30.0	28.0	32.0	30.5
8	26.0	30.0	13.0	24.0	9.0	15.5	21.5	20.5	32.0	31.5	31.0	29.5
9	25.5	28.5	18.5	---	9.0	16.5	20.5	24.5	30.0	29.0	30.0	28.5
10	24.0	26.0	10.5	5.5	11.0	16.0	26.0	26.5	25.0	31.5	30.0	31.5
11	25.5	23.0	10.5	5.0	14.0	15.5	32.0	25.5	28.5	28.0	30.0	30.0
12	21.5	21.5	3.5	13.5	13.5	19.0	---	27.0	25.5	24.0	30.5	30.0
13	23.0	20.0	24.5	---	14.5	19.0	25.0	26.0	26.5	31.0	30.5	---
14	22.0	16.0	26.0	16.0	14.5	28.0	22.0	21.0	20.0	31.5	33.5	31.0
15	24.0	23.5	22.0	15.5	15.0	21.0	21.0	21.5	23.5	28.5	26.5	30.0
16	21.0	24.0	15.5	11.5	15.5	16.5	21.0	21.5	28.5	29.5	---	31.0
17	16.0	28.0	18.0	10.0	15.5	16.5	23.0	21.5	29.5	28.0	34.5	30.5
18	25.0	23.0	17.0	11.5	16.5	15.5	25.5	22.0	30.0	28.0	31.0	33.5
19	24.5	20.0	15.5	15.0	16.0	16.5	24.0	26.5	32.0	28.5	31.0	32.0
20	23.5	23.0	20.5	15.5	16.5	16.5	21.0	24.5	---	20.0	30.5	33.5
21	18.5	29.0	19.5	15.0	14.0	23.5	22.0	25.5	31.5	33.0	31.0	33.5
22	16.0	22.0	15.0	13.5	15.5	16.5	19.0	25.0	29.5	31.5	29.5	28.5
23	18.5	24.5	14.5	6.0	9.0	20.5	18.0	28.0	30.0	32.0	31.0	29.5
24	14.5	22.0	14.5	6.0	13.0	22.0	21.5	---	28.0	31.5	32.0	29.0
25	15.5	21.5	15.5	20.5	16.5	21.0	23.5	26.5	27.0	31.0	31.0	29.0
26	19.0	16.5	9.0	20.5	13.5	20.0	24.5	24.5	30.0	30.5	31.0	28.0
27	26.5	15.5	13.0	13.0	14.5	20.0	25.0	25.0	30.5	31.0	33.0	28.0
28	26.5	13.5	13.0	12.0	---	21.5	21.0	26.0	31.0	30.0	32.0	27.0
29	27.0	21.0	16.5	10.0	---	23.0	21.0	28.0	30.0	29.0	32.0	23.5
30	26.0	22.0	19.0	14.5	---	14.5	22.0	29.0	31.0	30.0	33.0	27.0
31	23.0	---	22.0	14.5	---	19.0	---	29.0	---	30.5	33.0	---
MEAN	22.5	23.5	16.5	14.0	13.5	17.0	23.5	24.5	28.5	29.5	31.0	29.0
WTR YR 1978	MEAN	23.0	MAX	34.5	MIN	3.5						

03201000 POCATALICO RIVER AT SISSONVILLE, WV

LOCATION.--Lat 38°31'35", long 81°37'50", Kanawha County, Hydrologic Unit 05050008, on right bank at downstream side of bridge on U.S. Highway 21 at Sissonville, 0.3 mi (0.5 km) downstream from Grapevine Creek, 1.8 mi (2.9 km) downstream from Pocatamico Creek, and at mile 25.0 (40.2 km).

DRAINAGE AREA.-- 238 mi² (616 km²).

PERIOD OF RECORD.--June 1908 to September 1916, May 1930 to September 1931, February 1937 to September 1978 (discontinued).

REVISED RECORDS.--WSP 1335: 1908-10, 1912-13, 1915-16.

GAGE.--Water-stage recorder. Datum of gage is 594.56 ft (181.222 m) National Geodetic Vertical Datum, adjustment of 1912. Prior to Nov. 5, 1948, nonrecording gage at same site, at datum 0.59 ft (0.180 m) lower June 26, 1908, to Sept. 30, 1916.

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

AVERAGE DISCHARGE.--50 years, 296 ft³/s (8.383 m³/s), 16.89 in/yr (429 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,000 ft³/s (481 m³/s) June 27, 1910, from rating curve extended above 9,100 ft³/s (260 m³/s); maximum gage height, 34.4 ft (10.49 m) Apr. 16, 1939 (from floodmarks); no flow Sept. 25-29, 1959, July 9, Aug. 4, 6-8, 20, 21, Sept. 11, 12, 17, 18, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,600 ft³/s (100 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)
Dec. 5	2130	3910	111	17.02	5.188	Apr. 26	1930	5180	147	20.16	6.145
Jan. 26	---	*13100	371	31.8	9.693	Aug. 11	2330	3880	110	16.93	5.160

a From floodmark.

Minimum discharge, 2.0 ft³/s (0.06 m³/s) June 22, gage height, 1.79 ft (0.546 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	340	34	1870	126	250	252	235	258	69	21	922	700
2	767	32	1030	129	190	220	193	198	48	40	217	180
3	223	30	412	113	140	180	158	156	166	86	108	86
4	104	30	334	111	115	165	141	625	490	110	93	54
5	65	32	1550	87	100	150	169	1650	158	96	64	40
6	61	30	3270	96	105	140	169	695	82	47	64	30
7	76	33	922	134	135	135	147	394	58	30	1380	25
8	90	58	416	208	119	250	129	602	67	20	1180	21
9	862	75	528	2740	106	962	109	2170	72	15	330	18
10	915	175	675	1340	100	2460	103	1100	57	12	167	15
11	269	832	382	577	98	2690	102	492	41	12	1810	12
12	159	312	320	450	87	2780	105	328	30	8.9	2830	11
13	110	178	261	372	95	2600	100	320	31	8.1	775	11
14	81	124	250	310	138	2880	84	610	32	14	338	52
15	64	52	328	240	130	1980	72	492	27	103	189	43
16	156	85	306	210	120	845	64	372	21	260	107	46
17	358	83	252	180	110	990	59	294	18	1490	75	100
18	250	94	220	165	100	652	70	237	15	265	55	79
19	164	92	192	150	98	470	577	190	14	94	43	45
20	124	75	176	140	115	356	508	149	11	53	41	28
21	99	67	200	130	100	288	454	115	11	35	32	20
22	80	66	184	125	95	278	512	95	9.4	26	27	17
23	68	78	153	120	105	246	410	93	18	21	22	17
24	59	104	136	500	98	212	292	338	21	32	19	28
25	52	116	184	3000	88	220	240	268	14	308	17	28
26	52	114	255	11000	90	416	2720	146	17	394	15	21
27	51	110	204	4000	139	940	3510	96	20	121	18	17
28	50	118	167	800	221	672	857	72	21	63	20	13
29	47	458	162	500	---	478	444	60	72	50	16	10
30	42	1320	132	350	---	346	324	204	35	209	15	8.1
31	37	---	126	300	---	269	---	122	---	1060	623	---
TOTAL	5875	5093	15597	28703	3378	25522	13057	12941	1745.4	5104.0	11612	1775.1
MEAN	190	170	503	926	121	823	435	417	58.2	165	375	59.2
MAX	915	1320	3270	11000	250	2880	3510	2170	490	1490	2830	700
MIN	37	30	126	87	87	135	59	60	9.4	8.1	15	8.1
CFSM	.80	.71	2.11	3.89	.51	3.46	1.83	1.75	.25	.69	1.58	.25
IN.	.92	.80	2.44	4.49	.53	3.99	2.04	2.02	.27	.80	1.81	.28

CAL YR 1977 TOTAL 95558.3 MEAN 262 MAX 6190 MIN 4.4 CFSM 1.10 IN 14.94
WTR YR 1978 TOTAL 130402.5 MEAN 357 MAX 11000 MIN 8.1 CFSM 1.50 IN 20.38

KANAWHA RIVER BASIN

03201300 KANAWHA RIVER AT WINFIELD DAM, AT WINFIELD, WV
(National stream-quality accounting network station)

LOCATION.--Lat 38°31'32", long 81°54'40", Putnam County, Hydrologic Unit 05050008, on left bank at intake line to Ohio River Valley Water Sanitation Commission (ORSANCO) monitor at Kanawha Valley Power Company raw water intake at Winfield Dam, 1.0 mi (1.6 km) downstream from Winfield Toll Bridge, and at mile 31.1, (50.0 km).

DRAINAGE AREA.--11,809 mi² (30,585 km²).

PERIOD OF RECORD.--Water years 1957-70, 1974 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1956 to September 1970, January 1974 to current year.

pH: October 1974 to current year.

WATER TEMPERATURES: October 1956 to September 1970, January 1974 to current year.

DISSOLVED OXYGEN: October 1974 to current year.

REMARKS.--Discharges in quality-water tables are estimated.

COOPERATION.--Records of specific conductance, pH, water temperatures, and dissolved oxygen were furnished by ORSANCO.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 2,700 micromhos Apr. 21, 1961; minimum 76 micromhos Mar. 17, 1978.

pH: Maximum daily, 8.6 units May 14, 1977; minimum daily, 6.3 units July 19, 20, 1976, Sept. 2, 1977, Jan. 27, Sept. 3, 12-14, 1978.

WATER TEMPERATURES: Maximum daily, 33.0°C July 24, 1964; minimum daily, 0.0°C Feb. 14, 1958, Mar. 12, 1960, Jan. 30, 1978.

DISSOLVED OXYGEN: Maximum daily, 16.0 mg/L Feb. 19, 20, 1977; minimum daily, 3.1 mg/L July 28, 1977.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 378 micromhos Aug. 30; minimum recorded, 76 micromhos Mar. 17.

pH: Maximum daily, 7.3 units June 18, 21-23; minimum daily, 6.3 units Jan. 27, Sept. 3, 12-14.

WATER TEMPERATURES: Maximum recorded, 32.0°C July 8, 9; minimum daily, 0.0°C Jan. 30.

DISSOLVED OXYGEN: Maximum recorded, 14.7 mg/L Jan. 12; minimum recorded, 4.9 mg/L Sept. 10.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW- INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	pH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (CULS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT												
12...	1245	20100	143	--	16.0	35	--	800	700	53	28	14
NOV												
21...	0900	13600	170	7.2	10.0	25	10.2	120	68	48	22	13
DEC												
20...	0940	19400	200	7.3	6.0	6.0	13.8	140	170	50	25	13
JAN												
16...	1030	15400	150	7.4	4.0	10	11.8	0	--	49	26	13
FEB												
16...	1030	11700	220	7.3	1.0	15	12.8	--	130	68	38	17
MAR												
07...	0900	9340	240	7.5	5.0	10	11.7	--	--	66	32	17
APR												
04...	0900	15500	150	7.8	15.0	15	9.7	10	480	52	20	14
MAY												
18...	1000	31000	110	7.0	14.0	15	--	330	110	45	19	12
JUN												
20...	0930	5390	240	7.1	25.0	6.0	--	220	0	76	42	20
JUL												
18...	0930	7370	220	7.5	24.0	95	5.2	600	1000	75	33	20
AUG												
09...	1000	4410	250	7.2	28.0	5.0	4.7	420	11	78	42	21
22...	0930	4090	240	7.3	28.0	1.0	5.8	530	360	96	43	24

KANAWHA RIVER BASIN

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03201300 KANAWHA RIVER AT WINFIELD DAM, AT WINFIELD, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)		SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)		CAR- BONATE (MG/L AS CO3)		ALKA- LINIT (MG/L AS CaCO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
DATE			SODIUM PERCENT											
OCT 12...	4.4	9.3	27	.6	2.3	31	--	25	--	24		9.8	.0	
NOV 21...	3.8	12	34	.8	1.7	32	0	26	3.2	22		14	.1	
DEC 20...	4.2	10	29	.6	1.8	30	0	25	2.4	24		9.8	.0	
JAN 16...	3.9	11	32	.7	1.3	27	0	22	1.7	25		14	.7	
FEB 16...	6.1	23	42	1.2	1.8	36	0	30	2.9	48		27	.0	
MAR 07...	5.7	20	39	1.1	1.6	41	0	34	2.1	38		25	.1	
APR 04...	4.2	9.2	27	.6	1.5	39	--	32	1.0	25		10	.0	
MAY 18...	3.6	7.0	25	.5	1.3	32	--	26	5.1	21		9.0	.0	
JUN 20...	6.4	18	33	.9	1.8	--	--	34	--	40		25	.1	
JUL 18...	6.2	18	33	.9	2.3	--	--	42	--	39		22	.1	
SEP 08...	6.3	24	39	1.2	2.3	--	--	36	--	50		32	.1	
22...	8.7	24	35	1.1	2.3	--	--	53	--	47		27	.1	
	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN+AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN+NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN+AM- MONIA + ORGANIC DIS. (MG/L AS N)			
DATE														
OCT 12...	5.4	99	--	85	.13	--	.39	.09	--	--	--	.21		
NOV 21...	5.7	90	97	89	.12	14	.68	.31	--	--	--	.86		
DEC 20...	5.5	68	--	83	.09	--	.57	.17	--	--	--	.48		
JAN 16...	6.2	85	--	88	.12	--	.66	.16	.30	.46	.00	.47		
FEB 16...	5.7	169	--	147	.23	--	.81	.08	.73	.81	.16	.65		
MAR 07...	6.0	151	--	134	.21	--	.86	.23	.33	.64	.00	.64		
APR 04...	5.9	95	--	89	.13	--	.75	.12	.33	.45	.03	.42		
MAY 18...	5.4	80	--	75	.11	--	.53	.07	.25	.32	.03	.29		
JUN 20...	3.8	157	--	136	.21	--	.40	.28	.44	.72	.11	.61		
JUL 18...	4.1	150	--	138	.20	--	.78	.23	.51	.74	.12	.62		
SEP 08...	4.4	173	--	162	.24	--	.00	.06	.82	.88	.00	.98		
22...	4.3	175	--	165	.24	--	.37	.13	.38	.51	.00	.77		

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

[illegible]

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WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

[illegible]

KANAWHA RIVER BASIN

03201300 KANAWHA RIVER AT WINFIELD DAM, AT WINFIELD, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	GROSS DETAILED SUSP. TOTAL (PC/L) AS SH/ YT-CP	RADIUM 226 DISE- SOLVED METHOD (PC/L)	URANIUM NATURAL DISE- SOLVED (UG/L AS D)	URANIUM DISE- SOLVED EXTRACTION (UG/L)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISE- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	PCB, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	ATRA- ZINE, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)
OCT												
12...	--	--	--	--	5.9	--	--	--	--	--	--	--
NOV												
21...	6	10	--	0.5	--	5.6	3	ND	ND	ND	ND	ND
DEC												
25...	--	--	--	--	4.8	--	--	--	--	--	--	--
FEB												
15...	--	--	--	--	--	3.6	--	--	ND	ND	ND	ND
MAR												
07...	--	--	--	--	3.2	--	--	--	--	--	--	--
APR												
04...	--	--	--	--	5.8	--	--	--	--	--	--	--
MAY												
18...	--	0.5	4.4	--	--	11	4	ND	ND	ND	ND	ND
JUN												
20...	--	--	--	--	6.3	--	--	--	--	--	--	--
JUL												
15...	--	--	--	--	17	--	--	--	--	--	--	--
SEP												
05...	--	--	--	--	--	3.4	1	ND	ND	ND	ND	ND
22...	--	--	--	--	2.0	--	--	--	--	--	--	--

DATE	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)	DI- ELURIN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)	AROCLOR TOTAL 1254 PCB SERIES (UG/L)
OCT												
12...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
21...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
DEC												
25...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
15...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
MAR												
07...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
04...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
18...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
JUN												
20...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
15...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
05...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
22...	--	--	--	--	--	--	--	--	--	--	--	--

ND Not detected.

KANAWHA RIVER BASIN

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03201300 KANAWHA RIVER AT WINFIELD DAM, AT WINFIELD, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVER, TOTAL (UG/L)	SILVER, TOTAL (UG/L)	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M
OCT 12...	--	--	--	--	--	--	--	--	--	--	--	--
NOV 21...	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	470	--
DEC 20...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 16...	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--	--
MAR 07...	--	--	--	--	--	--	--	--	--	--	56	--
APR 04...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 16...	ND	ND	ND	ND	ND	ND	ND	ND	ND	31.3	500	25.2
JUN 20...	--	--	--	--	--	--	--	--	--	--	2500	--
JUL 16...	--	--	--	--	--	--	--	--	--	--	3000	--
SEP 08...	ND	ND	ND	ND	ND	ND	ND	ND	ND	40.6	1800	31.2
22...	--	--	--	--	--	--	--	--	--	--	11000	--

DATE	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUORUM (MG/M2)	SEDI- MENT, SUS- PENDED (MG/L)	SEC. SUSP. SIEVE DIAM. * FINE THAN 0.62 MM
OCT 12...	--	35	85
NOV 21...	--	23	72
DEC 20...	--	14	59
FEB 16...	--	28	71
MAR 07...	--	14	39
APR 04...	--	27	39
MAY 16...	81.3	26	89
JUN 20...	--	14	47
SEP 08...	123	15	75
22...	--	12	67

ND Not detected.

KANAWHA RIVER BASIN

03201300 KANAWHA RIVER AT WINFIELD DAM, AT WINFIELD, WV--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	169	---	---	---	224	179	---	---	289	---	337
2	---	---	---	---	---	226	187	185	---	283	---	268
3	---	---	---	---	---	217	195	183	---	276	---	232
4	195	---	---	180	---	207	206	181	---	275	---	241
5	192	---	---	183	152	207	150	181	---	234	---	249
6	180	---	---	199	163	211	---	176	---	152	---	255
7	181	---	103	202	149	228	---	170	---	156	195	258
8	188	143	106	216	149	226	101	160	---	173	189	267
9	194	---	115	213	149	224	111	145	---	179	188	272
10	195	---	---	181	155	157	106	143	---	179	155	281
11	196	---	---	135	161	126	107	145	---	182	146	301
12	135	---	133	130	167	117	114	153	---	192	163	321
13	129	---	141	125	169	103	128	157	---	211	156	330
14	142	---	156	129	180	93	148	176	---	237	157	314
15	155	---	166	137	196	86	165	177	---	289	154	290
16	157	---	155	143	221	81	184	178	---	308	---	301
17	175	136	140	144	224	76	187	---	---	285	158	294
18	178	140	128	160	227	84	189	---	---	238	151	294
19	163	142	128	193	228	94	194	---	---	237	---	288
20	153	143	125	170	216	110	207	---	---	240	---	282
21	156	140	134	167	220	118	220	---	---	244	---	288
22	158	147	148	164	220	125	220	---	---	243	---	289
23	161	152	150	168	224	122	224	---	---	240	---	289
24	161	148	152	173	232	112	231	---	---	240	201	287
25	162	132	152	188	218	116	226	---	---	248	227	266
26	172	121	159	170	219	117	227	---	---	256	254	258
27	176	124	170	---	230	104	220	---	---	278	309	274
28	---	121	173	---	229	90	216	---	---	301	357	274
29	---	---	166	---	---	77	218	---	---	306	376	---
30	---	---	160	---	---	---	221	---	277	284	378	---
31	168	---	164	---	---	---	---	---	---	290	357	---
MEAN	167	140	145	168	196	141	181	167	277	243	225	282
WTR YR 1978	MEAN	191	MAX	378	MIN	76						

PH (UNITS), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.6	7.0	---	---	6.9	7.0	6.9	7.1	---	6.8	---	6.6
2	6.7	---	---	---	6.9	7.0	6.9	6.9	---	6.8	---	6.5
3	6.7	---	---	---	6.9	7.0	6.8	7.1	---	7.1	---	6.3
4	6.7	---	---	7.0	6.9	7.1	6.9	7.1	---	7.1	---	6.4
5	6.9	---	---	7.0	6.9	7.0	6.7	7.0	---	7.0	---	6.5
6	6.9	---	---	7.0	6.9	7.1	---	7.0	---	6.9	---	6.4
7	6.9	---	6.8	7.0	6.9	7.2	6.6	7.0	7.1	7.0	6.5	6.4
8	6.9	6.9	6.9	7.0	6.9	7.1	6.8	6.9	---	7.1	6.8	6.4
9	6.9	---	6.9	6.9	6.8	7.0	6.9	6.9	---	7.0	6.9	6.4
10	6.9	---	---	7.0	6.9	6.8	6.9	6.9	7.0	6.9	6.8	6.4
11	6.8	---	---	7.0	6.9	6.7	7.0	6.9	---	6.9	6.7	6.4
12	6.8	---	7.0	7.0	6.9	6.9	7.0	7.0	---	6.8	6.7	6.3
13	6.7	---	7.0	7.0	6.9	6.8	7.1	7.1	---	6.7	6.6	6.3
14	6.8	---	7.0	6.9	6.9	6.8	7.1	---	6.8	6.7	6.7	6.3
15	6.8	---	6.9	6.8	6.9	6.7	7.0	7.2	6.8	6.6	6.7	---
16	6.8	---	7.0	6.8	6.9	6.7	7.1	7.1	7.2	6.9	---	---
17	6.8	6.9	7.1	6.8	7.0	6.7	7.1	7.1	7.2	6.8	6.7	---
18	6.9	6.8	7.0	6.8	6.9	6.9	7.0	7.1	7.3	6.8	6.6	---
19	6.9	6.8	7.0	6.9	6.9	7.0	6.9	7.1	7.2	6.9	---	6.6
20	6.9	6.8	7.0	6.8	7.0	7.0	6.8	7.1	7.1	6.9	---	6.5
21	6.9	6.8	7.0	6.9	7.0	7.0	6.8	7.1	7.3	6.7	---	6.4
22	6.8	6.8	7.0	6.9	7.0	7.0	6.8	7.2	7.3	6.7	---	6.4
23	6.8	6.8	7.0	6.9	7.0	7.0	6.8	7.0	7.3	6.7	---	6.4
24	6.8	6.9	7.0	6.9	7.0	6.9	6.8	---	7.1	6.8	7.0	6.4
25	6.8	6.9	7.0	6.8	7.0	6.9	6.8	7.2	---	6.7	7.1	6.4
26	6.8	6.8	7.0	6.4	7.0	6.9	6.9	7.0	---	6.7	6.9	6.4
27	6.8	6.9	7.0	6.3	7.0	6.9	6.9	6.9	---	6.8	6.9	6.4
28	---	6.8	7.0	---	7.0	7.0	6.9	7.1	---	6.8	6.9	6.4
29	---	---	7.0	---	---	7.1	7.1	6.9	---	6.8	6.8	---
30	---	---	6.9	6.6	---	---	7.1	6.9	6.9	6.7	7.0	---
31	---	---	6.9	6.8	---	---	---	6.9	---	6.6	6.9	---
MEAN	6.8	6.9	7.0	6.9	6.9	6.9	6.9	7.0	7.1	6.8	6.8	6.4
WTR YR 1978	MEAN	6.9	MAX	7.3	MIN	6.3						

KANAWHA RIVER BASIN

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03201300 KANAWHA RIVER AT WINFIELD DAM, AT WINFIELD, WV--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.5	15.0	---	---	1.0	3.5	14.0	17.0	---	24.0	---	24.0
2	23.5	---	---	---	1.0	3.5	15.0	18.0	---	26.5	---	26.5
3	22.0	---	---	---	1.0	3.5	15.5	18.5	---	26.5	---	26.5
4	21.0	---	---	3.5	1.0	3.5	15.5	18.0	---	27.0	---	26.0
5	20.0	---	---	3.5	1.0	3.5	13.5	18.0	---	29.0	---	26.0
6	15.5	---	---	3.5	1.0	3.5	11.0	19.0	---	30.0	---	26.0
7	15.0	---	8.0	3.5	.5	3.5	---	19.5	25.5	31.0	27.0	26.5
8	18.5	16.5	6.5	4.0	.5	3.5	---	19.0	---	32.0	26.0	26.5
9	18.0	---	5.5	4.0	.5	4.0	---	18.5	---	32.0	25.5	26.5
10	17.0	---	---	3.0	.5	4.5	11.0	18.0	24.0	31.0	25.5	27.0
11	16.5	---	---	1.5	.5	4.5	11.5	18.0	---	29.0	24.5	27.0
12	16.5	---	4.0	1.0	1.0	5.0	12.0	17.0	---	28.5	25.0	27.0
13	15.5	---	3.5	1.0	1.0	4.5	13.5	17.0	---	29.0	25.0	28.0
14	15.5	---	4.0	1.0	1.5	5.5	14.5	18.0	24.0	30.0	25.5	28.0
15	15.5	---	4.5	1.0	1.5	6.0	15.0	18.5	24.0	30.5	25.5	28.0
16	15.5	---	5.0	1.0	1.5	6.0	15.5	19.0	26.0	31.5	---	28.0
17	15.0	10.5	6.0	1.0	1.5	5.5	16.5	19.5	25.5	31.5	25.5	28.5
18	14.0	11.0	6.5	1.0	1.5	5.5	17.0	20.5	26.0	25.0	26.0	29.0
19	13.5	11.0	6.5	1.0	1.5	6.0	18.0	21.0	26.0	26.0	---	28.5
20	13.0	11.0	6.5	1.0	1.5	7.0	18.5	21.5	26.0	26.5	---	28.0
21	13.0	11.0	7.0	.5	1.5	7.0	---	22.0	26.0	26.5	---	28.0
22	12.0	10.5	6.5	1.0	1.5	8.5	---	---	25.5	27.0	---	28.0
23	12.5	10.5	6.5	1.0	2.0	9.0	---	---	25.5	28.0	---	27.0
24	13.5	11.0	6.5	1.0	2.0	9.5	---	---	25.5	28.0	28.0	28.5
25	13.5	10.5	6.5	1.0	2.0	10.0	---	---	---	27.0	28.5	26.5
26	14.0	10.0	6.0	1.5	3.0	10.5	---	---	---	27.0	28.5	26.0
27	14.5	9.0	5.0	2.0	3.0	10.0	18.5	---	---	28.0	28.5	25.5
28	---	8.5	4.5	---	3.5	8.5	18.5	---	---	28.0	29.0	25.5
29	---	7.0	4.0	---	---	8.0	18.5	---	---	28.0	29.0	---
30	---	7.0	4.0	.0	---	---	18.0	---	25.5	28.5	28.5	---
31	15.0	---	3.5	1.0	---	---	---	---	---	28.5	28.5	---
MEAN	16.5	10.5	5.5	1.5	1.5	6.0	15.5	19.0	25.5	29.0	27.0	27.0
WTR YR 1978	MEAN	15.0	MAX	32.0	MIN	.0						

DISSOLVED OXYGEN (DO), MG/L, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.8	---	---	---	14.6	10.9	8.9	9.5	---	7.1	---	5.2
2	6.9	---	---	---	14.1	11.0	---	9.9	---	6.1	---	---
3	7.1	---	---	---	14.3	10.6	---	9.9	---	6.0	---	---
4	7.5	---	---	13.1	14.2	10.9	10.5	8.8	---	---	---	---
5	7.6	---	---	13.1	14.0	11.2	10.9	8.5	---	---	---	---
6	7.4	---	---	13.1	13.8	11.8	11.4	8.9	---	---	---	---
7	7.3	---	10.6	13.0	14.0	12.7	---	8.7	5.2	---	---	---
8	7.2	8.8	11.4	12.8	14.0	12.2	11.3	8.8	---	---	6.9	---
9	7.4	---	12.0	12.9	13.2	12.0	10.7	9.8	---	---	6.8	---
10	7.4	---	---	13.2	13.3	11.9	10.6	10.1	10.1	---	6.6	4.9
11	7.4	---	---	14.1	13.9	11.5	11.4	8.9	8.9	---	7.1	5.1
12	7.4	---	12.1	14.7	13.3	11.2	11.5	8.6	8.6	---	6.5	5.0
13	6.6	---	12.8	14.6	12.9	11.0	11.4	---	---	---	6.8	---
14	6.0	---	12.8	14.5	12.7	---	---	---	---	---	7.7	---
15	7.4	---	12.7	14.3	13.3	12.7	11.1	---	---	---	7.7	---
16	7.7	---	12.5	14.1	13.0	12.8	11.4	8.1	8.1	---	---	---
17	7.6	10.9	12.4	14.0	12.9	14.1	11.0	8.5	8.5	---	7.0	---
18	9.2	10.1	12.3	14.0	13.6	14.0	9.7	9.1	9.1	6.5	6.9	---
19	10.2	9.5	12.3	13.9	12.8	13.9	9.1	9.3	9.3	6.7	---	5.8
20	10.2	9.5	12.2	13.9	12.8	13.6	8.8	9.8	9.8	6.8	---	5.5
21	10.1	9.8	12.0	13.8	12.1	13.4	---	10.1	10.1	6.6	---	5.7
22	10.0	10.4	12.3	13.4	12.2	13.0	---	9.3	9.3	6.2	---	5.6
23	9.9	10.3	12.1	13.8	12.9	12.7	---	8.9	8.9	6.3	---	5.6
24	9.8	10.5	12.0	13.8	13.1	12.5	---	8.6	8.6	6.4	7.8	5.4
25	9.3	10.5	12.0	13.7	12.6	11.9	5.2	8.2	8.2	6.4	7.6	---
26	9.0	10.5	12.2	13.3	12.4	11.3	9.9	---	---	6.4	---	5.5
27	9.4	10.4	12.4	---	12.1	11.4	9.5	---	---	7.6	---	5.3
28	---	10.2	12.5	---	---	12.5	8.8	---	---	7.2	---	5.4
29	---	---	12.7	---	---	13.1	8.9	---	---	6.7	---	---
30	---	11.5	12.8	14.0	---	---	9.4	---	---	6.7	6.8	---
31	8.8	---	13.1	14.6	---	---	---	---	---	5.9	6.5	---
MEAN	8.2	10.3	12.3	13.8	13.3	12.2	10.3	9.1	8.8	6.6	7.1	5.4
WTR YR 1978	MEAN	10.2	MAX	14.7	MIN	4.9						

03201300 KANAWHA RIVER AT WINFIELD DAM, AT WINFIELD, WV--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1977 TO SEPTEMBER 1978

DATE TIME	NOV 21, 77 0900	MAR 7, 78 0900	MAY 18, 78 1000	JUN 20, 78 0930				
TOTAL CELLS/ML	470	56	500	2504				
DIVERSITY: DIVISION	0.7	0.7	0.9	1.2				
...CLASS	0.7	1.5	0.9	1.2				
...ORDER	0.5	1.5	1.4	1.5				
...FAMILY	0.9	2.1	3.0	1.5				
...GENUS	0.9	2.3	3.2	1.9				
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCLES								
...CHAPACIACEAE								
...SCHROEDERIA	--	-	--	-	--	-	--	-
...COELASTRACEAE								
...COELASTRUM	--	-	--	-	--	-	--	-
...MICHACTINIACEAE								
...GOLENKINIA	--	-	--	-	14	3	--	-
...DUCYSTACEAE								
...ANKISTRODESIMUS	--	-	--	-	--	-	17	1
...CHODATELLA	--	-	--	-	--	-	--	-
...DICTYOSPHAERIUM	--	-	--	-	--	-	--	-
...KIRCHNERIELLA	--	-	--	-	--	-	--	-
...DUCYSTIS	--	-	--	-	--	-	--	-
...SELENASTRUM	--	-	--	-	--	-	--	-
...TETRAEDRON	--	-	--	-	--	-	--	-
...TREUBARIA	--	-	--	-	--	-	--	-
...SCENEDESMACEAE								
...ACTINASTRUM	--	-	--	-	--	-	530#	21
...CHUCIGENIA	--	-	--	-	--	-	--	-
...SCENEDESPUS	--	-	9#	17	24	6	120	5
...VOLVOCALES								
...CHLAMYDOMONADACEAE								
...CARTERIA	--	-	--	-	--	-	--	-
...CHLAMYDOMONAS	10	2	--	-	--	-	--	-
...ZYGNEATALES								
...DESMIDIACEAE								
...COSMARION	--	-	--	-	--	-	24	1
CHRYSPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
...COSCINOIDISCEAE								
...CYCLOTELLA	30	6	--	-	14	3	73	3
...MELOSIRA	--	-	--	-	43	9	1500#	59
...SKELETONEMA	--	-	--	-	--	-	--	-
...STEPHANODISCUS	--	-	--	-	--	-	--	-
...PENNALES								
...ACHNANTHACEAE								
...ACHNANTHES	8	0	--	-	14	3	--	-
...RHUICOSPHEA	8	0	--	-	14	3	--	-
...CYMBELLACEAE								
...CYMBELLA	8	0	5	8	80#	17	--	-
...FRAGILARIACEAE								
...FRAGILARIA	8	0	--	-	--	-	44	2
...SYNEDRA	10	2	--	-	14	3	44	2
...GOMPHONEMATACEAE								
...GOMPHONEMA	8	0	9#	17	14	3	--	-
...NAVICULACEAE								
...NAVICULA	20	4	--	-	130#	26	15	1
...NEIDIA	--	-	5	8	--	-	--	-
...PINNULARIA	--	-	5	8	--	-	--	-
...NITZSCHIACEAE								
...NITZSCHIA	--	-	--	-	85#	17	--	-
CHRYSPHYCEAE								
..CHRYSOMONADALES								
...MALLOMONADACEAE								
...MALLOMONAS	--	-	--	-	--	-	--	-
...UCHROMONADACEAE								
...UCHROMONAS	--	-	24#	42	--	-	--	-
...UCHROMONAS	--	-	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)								
..CRYPTOPHYCEAE								
...CRYPTOMONADALES								
...CRYPTOMONADACEAE								
...CRYPTOMONAS	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 1%.

* - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%.

03201300 KANAWHA RIVER AT WINFIELD DAM, AT WINFIELD, WV--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1977 TO SEPTEMBER 1978

DATE Time	NOV 21,77 0900	MAR 7,78 0900	MAY 18,78 1000	JUN 20,78 0930				
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROCOCCIDLES								
...CHROCOCCACEAE								
....AGMONELLUM	--	--	--	--	--	--	--	--
....ACYSTIS	--	--	--	--	14	3	180	7
....GLOPHOSPHACIA	400#	35	--	--	--	--	--	--
EUGLENOPHYTA (EUGLENOIDS)								
..EUGLENOPHYCEAE								
...EUGLENALES								
...EUGLENACEAE								
....TRACHELOMONAS	--	--	--	--	29	6	--	--
PYRRHOPHYTA (FIRE ALGAE)								
..PYRRHOPHYCEAE								
...PERIDINIACEAE								
...GLENODINIACEAE								
...GLENODINIUM	--	--	--	--	--	--	--	--
...PERIDINIACEAE								
...PERIDINIUM	--	--	--	--	--	--	--	--
DATE Time	JUL 18,78 0930	SEP 8,78 1000	SEP 22,78 0930					
TOTAL CELLS/ML	3000	1000	11000					
DIVERSITY: DIVISION	1.2	1.8	1.6					
..CLASS	1.2	1.4	1.6					
...ORDER	1.4	2.1	1.8					
...FAMILY	2.6	2.3	1.9					
...GENUS	3.7	2.4	2.7					
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT		
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCIDLES								
...CHLORACIACEAE								
....SCHROEDERIA	25	1	--	--	--	--		
...COELASTRACEAE								
...COELASTRUM	200	5	--	--	--	--		
...CHLORACTINIACEAE								
...GLENKINIA	--	--	--	--	--	--		
...DUCYSTACEAE								
...ALGISTRODESUS	130	3	130	7	560	5		
...CHODATELLA	25	1	22	1	--	--		
...DICTYOSPHAERIUM	200	5	--	--	74	1		
...KIRCHNERIELLA	250	7	--	--	300	3		
...DUCYSTIS	25	1	--	--	--	--		
...SLENASTRUM	--	--	22	1	--	--		
...TETRAEDRUM	25	1	--	--	--	--		
...TREPANIA	100	3	--	--	--	--		
...SCENEDESMACEAE								
...ACTINASTRUM	340	10	--	--	--	--		
...CHUCIGENIA	200	5	--	--	--	--		
...SCENEDESMUS	250	7	200	11	300	3		
...VOLVOCALES								
...CHLAMYDOMONADACEAE								
...CHLAMYDOMONAS	--	--	--	--	260	2		
...ZYGNEMALES	150	4	--	--	260	2		
...DESMIDIACEAE								
...COSMARION	25	1	--	--	--	--		
CHRYSPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
...COSCINODISACEAE								
...CYCLOTELLA	880#	23	330#	18	670	6		
...MELOSIRA	50	1	--	--	300	3		
...SKELETONEMA	140	5	--	--	2500#	23		
...STEPHANODISCUS	75	2	--	--	--	--		
...PENNALES								
...ACHNANTHACEAE								
...ACHNANTHES	--	--	22	1	*	0		
...RHUICOSPHENIA	--	--	--	--	--	--		

NOTE: # = DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 1%.

* = OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%.

03201300 KANAWHA RIVER AT WINFIELD DAM, AT WINFIELD, WV--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1977 TO SEPTEMBER 1978

DATE TIME	JUL 18, 78 0930		SEP 8, 78 1000		SEP 22, 78 0930	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
...CYMBELLACEAE						
....CYMBELLA	--	-	--	-	--	-
...FRAGILARIACEAE						
....FRAGILARIA	--	-	--	-	--	-
....SYNEORA	--	-	--	-	--	-
...GOMPHONEMATACEAE						
....GOMPHONEMA	--	-	--	-	--	-
...NAVICULACEAE						
....NAVICULA	--	-	--	-	--	-
....NEIDIUM	--	-	--	-	--	-
....PINNULARIA	--	-	--	-	--	-
...NITZSCHIACEAE						
....NITZSCHIA	480	13	66	4	*	0
..CHRYSOPHYCEAE						
..CHRYSOMONADALES						
...MALLOMONADACEAE						
....MALLOMONAS	--	-	22	1	--	-
...OCHROMONADACEAE						
....DINOBYRON	--	-	--	-	--	-
....OCHROMONAS	--	-	22	1	--	-
CRYPTOPHYTA (CRYPTOMONADS)						
..CRYPTOPHYCEAE						
..CRYPTOMONADALES						
...CRYPTOMONADACEAE						
....CRYPTOMONAS	25	1	22	1	220	2
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
..CHROOCOCCALES						
...CHROOCOCCACEAE						
....AGMENELLUM	--	-	890#	49	4200#	39
....ANACYSTIS	100	3	--	-	1100	10
....GOMPHOSPHERIA	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)						
..EUGLENOPHYCEAE						
..EUGLENALES						
...EUGLENACEAE						
....TRACHELOMONAS	--	-	22	1	--	-
PYRRHOPHYTA (FIRE ALGAE)						
..DINOPHYCEAE						
..PERIDINIALES						
...GLENODINIACEAE						
....GLENODINIUM	--	-	44	2	--	-
...PERIDINIACEAE						
....PERIDINIUM	25	1	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

KANAWHA RIVER BASIN

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03201410 POPLAR FORK AT TEAYS, WV

LOCATION.--Lat 38°27'23", long 81°55'54", Putnam County, Hydrologic Unit 05050008, on left bank at Teays, and 50 ft (15 m) upstream from culvert on Interstate Highway 64 at Winfield interchange.

DRAINAGE AREA.--8.71 mi² (22.56 km²).

PERIOD OF RECORD.--January 1967 to September 1978 (discontinued).

GAGE.--Water-stage recorder and concrete dam and culvert control. Altitude of gage is 640 ft (195 m), from topographic map.

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

AVERAGE DISCHARGE.--11 years, 13.1 ft³/s (0.371 m³/s), 20.42 in/yr (519 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,800 ft³/s (51.0 m³/s) May 27, 1968, gage height, 15.34 ft (4.676 m), from rating curve extended above 330 ft³/s (9.3 m³/s) on basis of culvert rating computation; minimum daily, 0.02 ft³/s (0.001 m³/s) July 7, 9, 10, 18, 21, 24, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 600 ft³/s (17 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Oct. 1	1500	723 20.5	11.22 3.420	May 8	1615	666 18.9	10.98 3.347
Dec. 5	1245	1130 32.0	12.90 3.932	July 10	2200	1580 44.7	14.59 4.447
Jan. 8	2000	970 27.5	12.25 3.734	Aug. 7	0100	*1640 46.4	14.81 4.514
Jan. 26	---	1370 38.8	13.90 4.237	Aug. 11	0245	1030 29.2	12.50 3.810
Apr. 26	1300	1170 33.1	13.08 3.987				

a From floodmarks.

Minimum discharge, 0.09 ft³/s (0.003 m³/s) July 1, gage height, 6.89 ft (2.100 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	145	1.7	51	5.6	5.2	11	7.3	9.4	2.8	1.14	6.3	10
2	21	1.5	17	5.1	4.5	15	5.9	5.9	1.3	4.0	2.9	4.0
3	4.6	1.3	11	4.1	3.8	7.7	5.1	5.4	60	67	2.8	2.5
4	4.6	1.5	22	5.0	3.4	8.4	5.3	54	14	9.0	2.7	1.6
5	3.2	1.5	345	3.9	3.2	8.0	5.4	52	5.9	2.3	1.3	1.2
6	1	3.4	72	6.9	3.1	6.2	4.9	18	3.5	1.0	189	.99
7	6.3	4.4	25	6.8	4.4	10	4.9	12	2.8	.62	633	.82
8	7.5	7.6	17	21.1	4.3	44	4.0	201	6.8	.46	84	.76
9	24	6.2	26	153	3.7	147	3.4	134	4.4	.54	17	.69
10	15	39	15	32	3.2	216	3.3	23	2.5	302	7.7	.61
11	4.4	15	10	18	3.5	183	3.3	14	1.6	132	250	.38
12	6.6	8.0	8.5	14	2.3	156	3.0	9.8	1.1	9.0	47	.30
13	4.7	6.0	8.3	11	4.4	128	2.5	14	1.8	4.0	20	.46
14	3.9	4.7	10	9.0	3.8	147	2.1	15	.86	15	9.0	.30
15	3.2	4.1	10	8.2	4.6	40	1.8	16	.70	13	5.2	.38
16	17	3.9	8.3	7.6	3.5	29	1.6	12	.46	5.4	3.2	5.9
17	1	7.2	7.3	7.2	3.6	26	1.6	9.0	.30	3.0	2.3	12
18	6.6	6.4	6.7	6.1	3.5	16	5.9	6.5	.28	1.6	1.8	1.8
19	5.2	4.3	6.3	6.5	3.4	12	73	5.4	.26	1.0	1.5	.86
20	4.0	4.1	7.5	6.1	5.3	9.1	23	4.0	.28	.78	1.3	.70
21	3.2	4.0	7.0	5.8	3.3	8.6	20	3.0	.30	.70	1.1	4.4
22	2.9	4.5	6.1	5.6	2.8	9.2	14	2.3	.30	.54	.90	8.2
23	2.7	5.1	5.4	5.4	2.9	7.6	5.8	5.9	.22	.46	.80	3.5
24	2.3	5.2	5.7	5.4	2.6	6.5	7.7	30	.18	1.1	.70	2.1
25	2.3	5.4	15	7.1	2.7	12	23	8.2	.16	2.5	.60	1.3
26	4.7	5.3	12	76.0	5.0	44	701	5.4	.54	1.1	.68	.94
27	3.5	4.5	7.0	9.1	5.0	49	149	3.3	.28	.70	.70	.78
28	3.2	8.1	5.8	25	14	23	4.1	2.3	.18	.54	.64	.70
29	2.0	47	4.6	1	---	16	17	1.6	.14	.38	.60	.62
30	2.2	59	4.3	6.7	---	11	13	6.8	.12	.54	5.0	.62
31	2.0	---	5.0	6.2	---	8.7	---	5.3	---	94	20	---
TOTAL	413.6	280.4	762.8	1517.2	124.1	1414.9	1201.8	677.8	114.14	674.40	1325.72	69.41
MEAN	13.3	9.35	24.6	48.9	4.03	45.6	4.1	21.9	3.80	21.8	42.8	2.31
MAX	145	59	346	760	14	210	701	201	60	302	633	12
MIN	2.0	1.3	4.3	3.0	2.0	6.2	1.6	1.6	.12	.14	.60	.30
CFS/2	1.53	1.07	2.82	5.61	.51	5.24	4.51	2.51	.44	2.50	4.91	.27
IN.	1.77	1.20	3.26	6.40	.53	6.04	5.13	2.39	.49	2.88	5.66	.30

CAL YR 1977 TOTAL 4539.76 MEAN 12.4 MAX 444 MIN .02 CFS/2 1.42 IN 19.39
WTR YR 1978 TOTAL 8576.27 MEAN 23.5 MAX 760 MIN .12 CFS/2 2.70 IN 36.62

OHIO RIVER MAIN STEM

03201500 OHIO RIVER AT POINT PLEASANT, WV

LOCATION.--Lat 38°50'25", long 82°08'30", Mason County, Hydrologic Unit 05030202, on left bank at Point Pleasant, 1,200 ft (366 m) upstream from Kanawha River, and at mile 265.4 (427.0 km) measured downstream from Pittsburgh, Pa.

DRAINAGE AREA.--52,760 mi² (136,650 km²), approximately, includes that of Kanawha River.

PERIOD OF RECORD.--Discharge records: March 1940 to September 1977 (discontinued) (since October 1952, no low-flow records). Gage-height records: October 1977 to September 1978. Records of gage heights collected in this vicinity since 1889 are in reports of National Weather Service.

GAGE.--Water-stage recorder. Datum of gage is 514.10 ft (156.698 m) Sandy Hook datum. Prior to Oct. 1, 1951, water-stage recorder at site 0.3 mi (0.5 km) upstream at same datum.

REMARKS.--Station converted from discharge to stage effective Oct. 1, 1977. Corps of Engineers gage-height telemeters at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 55.00 ft (16.764 m) Apr. 16, 1948; minimum gage height recorded, 22.52 ft (6.864 m) Sept. 10, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1896, 62.8 ft (19.14 m) Mar. 30, 1913. Flood of Jan. 27, 1937, reached a stage of 62.7 ft (19.11 m).

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 43.31 ft (13.201 m) Jan. 28; minimum gage height, 23.51 ft (7.166 m) Mar. 8.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24.81	25.06	26.37	25.32	27.25	24.94	28.02	25.70	24.73	24.64	25.13	24.77
2	24.83	24.50	27.45	24.78	27.41	24.91	27.25	25.52	24.61	24.60	24.32	24.07
3	25.44	24.76	28.12	24.75	26.71	24.11	27.23	25.28	24.59	24.58	24.35	24.50
4	25.15	24.79	27.04	24.74	26.32	24.39	27.17	24.45	24.76	25.18	24.55	24.38
5	24.84	24.34	27.02	24.76	26.34	24.49	27.48	25.17	24.40	26.35	24.61	24.23
6	24.85	24.53	29.38	24.50	25.73	24.15	27.55	25.49	24.93	25.42	24.61	24.45
7	24.81	24.76	28.86	24.57	26.00	24.19	28.04	25.56	24.82	24.90	24.83	24.55
8	24.84	24.65	26.66	24.76	26.78	23.81	28.39	25.34	24.81	24.58	24.28	24.68
9	24.95	25.66	26.03	27.01	26.61	24.33	28.06	25.73	25.56	24.41	24.54	24.45
10	25.36	25.87	26.17	26.76	26.15	24.64	27.56	26.76	25.22	24.35	24.73	24.75
11	26.20	25.82	25.59	24.53	26.33	25.74	26.96	26.48	24.69	24.59	25.13	24.51
12	26.31	25.30	25.10	26.59	25.75	27.46	26.70	25.93	24.53	24.23	24.21	24.54
13	25.55	25.16	24.73	25.05	25.76	29.06	26.38	25.42	24.32	24.38	24.60	24.49
14	24.77	24.66	25.02	25.75	25.70	33.14	25.94	26.12	24.52	24.24	24.01	24.30
15	24.58	24.66	26.01	25.78	25.33	39.94	25.22	27.13	24.37	24.74	24.48	24.49
16	24.49	24.75	29.17	25.27	25.24	42.40	25.25	27.93	24.44	24.42	24.46	24.43
17	24.91	24.80	30.64	25.03	25.42	41.53	25.05	27.97	24.47	24.47	24.64	24.49
18	25.01	24.85	28.75	25.17	25.18	37.93	24.56	24.63	24.61	24.42	24.39	24.55
19	24.93	25.34	27.49	25.37	25.03	32.55	25.23	31.28	24.27	24.14	24.62	24.54
20	24.36	25.38	27.02	25.45	25.24	29.05	25.52	30.07	24.68	24.53	24.59	24.55
21	24.24	25.02	27.07	25.00	25.47	27.53	25.70	27.80	24.79	24.45	24.13	24.53
22	24.31	24.76	27.36	25.05	25.07	28.03	25.95	27.10	24.39	24.01	24.21	24.42
23	24.61	25.00	26.67	24.75	25.32	29.00	26.17	26.28	24.44	24.58	24.67	24.64
24	24.76	25.71	26.15	25.04	25.37	29.61	25.64	26.18	24.39	24.38	24.73	24.55
25	24.59	25.57	26.13	25.57	24.98	28.76	25.52	26.39	24.45	24.14	24.79	24.57
26	24.28	25.25	26.47	32.76	25.47	30.17	26.12	27.20	24.54	24.42	24.73	24.92
27	24.33	25.29	26.31	41.92	25.11	33.41	27.49	26.56	24.51	24.05	24.71	24.45
28	24.92	25.06	26.00	42.21	24.75	34.42	27.26	25.57	24.66	24.28	24.66	24.44
29	24.30	25.02	25.40	36.35	---	32.30	26.35	24.74	24.92	24.50	24.26	24.37
30	24.13	25.50	25.10	28.14	---	30.00	25.75	24.78	24.90	24.78	24.41	24.34
31	24.71	---	25.03	28.29	---	28.83	---	24.92	---	25.00	24.87	---
MEAN	24.84	25.06	26.80	27.35	25.66	29.92	26.55	26.43	24.66	24.63	24.64	24.57
MAX	26.31	25.87	30.64	42.21	27.25	42.40	28.39	30.28	25.56	26.35	25.28	25.07
MIN	24.13	24.34	24.73	24.50	24.75	23.81	24.56	24.78	24.27	24.14	24.13	24.23

WTR YR 1978 MEAN 25.92 MAX 42.40 MIN 23.81

NOTE.--Add 514.10 ft to obtain elevation.

GUYANDOTTE RIVER BASIN

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03202240 ALLEN CREEK AT ALLEN JUNCTION, WV

LOCATION.--Lat 37°35'33", long 81°20'48", Wyoming County, Hydrologic Unit 05070101, on right bank, 0.3 mi (0.5 km) upstream from mouth, on county road 0.4 mi (0.6 km) north of intersection with State Route 16, 0.4 mi (0.6 km) northeast of Allen Junction, and 1.5 mi (2.4 km) north of Corinne.

DRAINAGE AREA.--8.43 mi² (21.83 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1977 to September 1978.

GAGE.--Water-stage recorder. Altitude of gage is 1,500 ft (457 m) from topographic map.

REMARKS.--Water-discharge records fair.

EXTREMES FOR CURENT YEAR.--Peak discharges above base of 100 ft³/s (2.8 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 7	1745	110 3.12	4.72 1.439	Mar. 14	1300	153 4.33	4.93 1.503
Jan. 26	0430	*732 20.7	6.08 1.853	Apr. 26	2130	286 8.10	5.34 1.628

Minimum daily discharge, 0.35 ft³/s (0.010 m³/s) Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	34	10	8.0	6.7	13	13	5.6	1.5	2.6	2.4
2		---	28	9.6	7.0	6.4	12	12	4.6	3.6	1.5	1.5
3		6.4	23	8.2	6.0	5.8	11	12	5.2	5.2	1.6	1.2
4		6.0	20	7.1	5.2	5.4	9.6	15	4.9	3.4	3.1	1.2
5		5.6	34	6.7	4.7	5.1	9.1	20	4.4	2.6	3.4	1.2
6		12	46	7.5	4.3	5.1	8.6	19	3.9	2.4	2.0	1.1
7		70	36	7.9	4.0	5.2	8.2	18	4.1	2.2	2.2	1.1
8		82	29	5.6	3.8	13	7.9	60	4.6	2.2	2.0	.94
9		44	28	20	3.7	25	7.5	52	4.4	2.0	1.8	.94
10		35	25	18	3.6	58	7.1	25	3.6	2.9	1.6	.84
11		28	20	14	3.6	56	7.1	18	3.4	3.1	1.5	.94
12		22	16	12	3.6	59	6.7	15	3.1	2.0	1.4	.84
13		17	14	10	3.7	67	6.0	25	2.9	3.1	1.4	.84
14		15	19	9.0	5.2	102	5.6	25	2.4	2.6	1.3	.84
15		13	26	8.0	7.9	62	5.2	20	2.2	2.6	1.2	.84
16		13	27	7.1	7.5	43	5.2	15	2.0	3.1	1.2	.74
17		13	25	7.9	7.0	32	4.9	12	2.0	2.6	1.1	.64
18		13	23	7.9	6.8	27	5.6	9.0	1.8	2.0	1.1	.64
19		12	19	7.5	6.6	25	6.4	8.0	2.2	1.6	1.0	.55
20		11	17	6.8	6.4	22	6.2	7.5	4.4	1.6	1.0	.64
21		10	16	6.2	6.2	19	5.9	8.0	3.9	1.5	.96	.49
22		13	14	5.8	6.0	17	5.6	8.6	3.4	1.5	.90	.49
23		24	13	5.6	5.9	16	5.4	10	2.4	1.3	.90	.49
24		28	13	6.0	5.8	14	5.2	22	2.2	1.5	.86	.44
25		25	14	25	5.7	13	10	19	1.8	1.8	.80	.44
26		22	13	282	5.7	15	98	14	2.0	1.6	.80	.39
27		17	13	65	5.8	17	113	11	2.0	1.5	.76	.44
28		17	12	25	6.0	18	31	9.6	2.0	1.5	.76	.44
29		20	11	16	---	18	20	8.2	1.8	1.3	.76	.39
30		31	11	12	---	17	15	7.5	1.6	1.6	.76	.35
31		---	11	9.5	---	15	---	7.1	---	1.8	3.6	---
TOTAL		---	650	652.9	155.7	809.7	462.0	525.5	94.8	69.2	45.86	24.29
MEAN		---	21.0	21.1	5.56	26.1	15.4	17.0	3.16	2.23	1.48	.81
MAX		---	46	282	8.0	102	113	60	5.6	5.2	3.6	2.4
MIN		---	11	5.6	3.6	5.1	4.9	7.1	1.6	1.3	.76	.35
CFS-1		---	2.49	2.50	.66	3.10	1.83	2.02	.38	.27	.18	.10
IN.		---	2.87	2.88	.69	3.57	2.04	2.32	.42	.31	.20	.11

GUYANDOTTE RIVER BASIN

03202240 ALLEN CREEK AT ALLEN JUNCTION, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1977 to September 1978.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1977 to September 1978.

pH: March to September 1978.

WATER TEMPERATURES: November 1977 to September 1978.

TURBIDITY: March to September 1978.

SUSPENDED-SEDIMENT DISCHARGE: November 1977 to September 1978.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 554 micromhos June 24; minimum daily, 104 micromhos Jan. 26.

pH: Maximum observed, 8.5 Sept. 14-26, 28-30; minimum observed, 6.8 May 24.

WATER TEMPERATURES: Maximum daily, 24.0°C June 12, 18; minimum daily, 0.0°C Jan. 10, 11.

TURBIDITY: Maximum observed, 100 NTU Apr. 26; minimum observed, 2 NTU Apr. 6, 21-23, 25, May 21.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 902 mg/L Jan. 26; minimum daily mean, 4 mg/L Jan. 3, 18-20, May 21.

SEDIMENT LOADS: Maximum daily, 917 tons (832 tonnes) Jan. 26; minimum daily, 0.01 tons (0.01 tonnes) on several days in September.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	pH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
NOV												
21...	1510	10	490	8.1	11.0	--	--	--	--	--	--	--
22...	1100	13	480	7.5	19.0	--	--	--	--	--	--	--
DEC												
08...	1730	34	320	7.4	5.5	--	--	--	--	--	--	--
12...	1100	18	325	7.5	2.5	--	13.8	--	--	--	--	--
FEB												
27...	1110	5.9	430	7.5	3.5	--	13.0	--	--	--	--	--
MAR												
09...	1315	24	288	7.4	7.0	60	--	78	37	16	9.3	21
APR												
05...	1730	8.6	367	--	--	4.0	--	120	43	28	13	34
26...	1115	55	160	7.2	8.5	150	--	--	--	--	--	--
MAY												
15...	1710	20	260	7.3	10.5	6.0	--	93	39	19	11	21
28...	1120	9.5	430	7.9	16.0	6.0	9.7	--	--	--	--	--
JUN												
22...	1535	2.9	410	7.4	22.0	15	--	140	0	33	14	55
JUL												
13...	1020	2.2	500	7.8	17.5	4.0	--	--	--	--	--	--
20...	0830	1.7	480	7.9	19.5	7.0	8.9	160	0	38	15	75
AUG												
03...	1320	1.6	780	7.8	26.5	8.0	8.2	--	--	--	--	--
SEP												
06...	1250	1.1	800	7.9	22.5	5.0	8.7	--	--	--	--	--
13...	1145	2.0	543	7.7	21.0	5.0	--	--	--	--	--	--
13...	1315	1.6	510	8.4	23.0	5.0	9.0	160	0	38	15	86
22...	1045	.49	530	7.2	19.0	4.0	--	160	0	38	15	85

GUYANDOTTE RIVER BASIN

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03202240 ALLEN CREEK AT ALLEN JUNCTION, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SODIUM PERCENT	SODIUM RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS S)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
NOV												
21...	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
04...	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
27...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
04...	36	1.0	2.3	50	--	41	3.2	81	.8	.1	7.1	171
APR												
05...	37	1.3	2.5	98	--	80	--	95	2.3	.1	7.8	262
26...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
15...	32	1.0	2.1	65	--	53	5.2	87	.7	.0	7.7	179
22...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
22...	45	2.0	3.0	--	--	150	--	130	1.6	.1	8.6	318
JUL												
13...	--	--	--	--	--	--	--	--	--	--	--	--
20...	50	2.6	3.8	--	--	160	--	140	3.0	.1	9.0	382
AUG												
03...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
06...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	54	3.0	3.9	--	--	180	--	160	2.7	.1	8.8	430
22...	53	3.0	4.0	--	--	190	--	160	2.8	.1	9.0	427
DATE	SOLIDS, SUM OF CONSTIT- UENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDED RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
NOV												
21...	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
04...	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
27...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
04...	163	.23	11.1	--	--	90	--	--	--	--	--	--
APR												
05...	232	.36	6.08	270	170	100	--	--	0	0	0	10
26...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
15...	181	.24	9.67	--	--	70	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
22...	336	.43	2.49	--	--	80	--	--	--	--	--	--
JUL												
13...	--	--	--	--	--	--	--	--	--	--	--	--
20...	381	.52	1.75	--	--	40	--	--	--	--	--	--
AUG												
03...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
06...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	423	.58	1.86	--	--	40	1	1	0	0	0	20
22...	429	.58	.56	--	--	40	--	--	--	--	--	--

03202240 ALLEN CREEK AT ALLEN JUNCTION, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

	CHROMIUM, SUSPENDED RECOVERY (UG/L AS CR)	CHROMIUM, DIS- SOLVED (UG/L AS CR)	CHROMIUM, HEXAVALENT, DIS- SOLVED (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)
NOV												
21...	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
02...	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
27...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
09...	--	--	--	--	--	--	--	80	--	--	--	--
APR												
05...	--	--	0	--	--	--	860	80	14	10	4	390
26...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
15...	--	--	--	--	--	--	--	130	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
22...	--	--	--	--	--	--	--	60	--	--	--	--
JUL												
13...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	30	--	--	--	--
AUG												
03...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
06...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
13...	20	0	--	2	1	1	--	0	10	8	2	--
22...	--	--	--	--	--	--	--	140	--	--	--	--

[illegible]

03202240 ALLEN CREEK AT ALLEN JUNCTION, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
NOV												
21...	7	.19	--	--	--	--	--	--	--	--	--	--
22...	499	17	--	--	--	--	--	--	--	--	--	--
DEC												
08...	34	3.1	--	--	--	--	--	--	--	--	--	--
12...	7	.34	--	--	--	--	--	--	--	--	--	--
MAR												
09...	243	16	--	--	--	--	--	--	--	--	--	--
APR												
05...	10	.23	--	--	--	--	--	--	--	--	--	--
26...	954	142	52	65	77	84	91	94	97	98	99	99
MAY												
15...	9	.49	--	--	--	--	--	--	--	--	--	--
22...	5	.13	--	--	--	--	--	--	--	--	--	--
JUN												
22...	35	.27	--	--	--	--	--	--	--	--	--	--
JUL												
13...	8	.05	--	--	--	--	--	--	--	--	--	--
20...	15	.07	--	--	--	--	--	--	--	--	--	--
AUG												
03...	17	.07	--	--	--	--	--	--	--	--	--	--
SEP												
13...	33	.18	--	--	--	--	--	--	--	--	--	--
13...	11	.05	--	--	--	--	--	--	--	--	--	--
22...	13	.02	--	--	--	--	--	--	--	--	--	--

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	277	343	316	355	309	260	357	493	480	425
2		---	278	345	311	368	318	280	365	418	520	500
3		426	---	355	330	358	332	300	349	385	523	509
4		---	---	361	328	370	342	310	360	442	487	531
5		---	---	378	339	415	360	300	386	459	401	537
6		---	---	353	355	388	390	300	390	477	469	516
7		---	---	348	352	359	410	300	388	486	452	499
8		---	320	342	402	319	420	210	381	490	485	498
9		---	---	250	401	252	430	156	394	495	497	491
10		---	---	235	413	172	410	220	405	496	518	474
11		---	---	249	413	181	360	245	414	471	521	494
12		---	292	253	434	183	350	270	428	497	519	500
13		---	301	271	424	181	410	260	439	500	517	520
14		---	277	278	375	156	430	240	439	464	519	505
15		---	262	289	367	182	430	252	439	471	532	499
16		---	248	305	366	224	440	263	440	411	534	496
17		---	255	321	363	260	430	282	451	472	535	498
18		---	262	321	364	269	420	294	452	490	536	507
19		---	275	323	352	283	410	311	456	499	533	509
20		---	294	351	352	304	400	335	419	494	530	508
21		490	304	334	350	326	420	334	421	511	538	511
22		480	322	358	348	329	420	390	410	514	542	502
23		---	329	325	347	339	420	356	452	513	543	500
24		---	332	331	367	341	420	224	554	513	541	498
25		---	306	236	378	342	420	219	461	488	543	505
26		269	322	104	359	338	184	250	460	505	536	510
27		281	368	184	371	318	114	250	471	506	536	511
28		294	325	226	363	297	205	300	490	524	542	510
29		258	333	245	---	286	250	301	490	525	543	511
30		230	338	278	---	295	250	336	495	490	545	510
31		---	340	291	---	307	---	341	---	506	415	---
MEAN		341	303	296	366	293	363	280	429	484	514	503
WTR YR 1978	MEAN		384	MAX	554	MIN		104				

GUYANDOTTE RIVER BASIN

03202240 ALLEN CREEK AT ALLEN JUNCTION, WV--Continued

PH (UNITS), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---				7.2	8.1	7.8	7.9	8.3	8.4	8.2
2		---				7.8	8.0	7.8	8.0	8.2	8.4	8.3
3		---				8.0	8.1	7.9	8.0	8.2	8.1	8.3
4		---				8.0	8.1	7.8	8.0	8.3	8.3	8.4
5		---				8.1	8.2	7.9	8.0	8.3	8.3	8.4
6		---				8.1	8.1	7.9	8.1	8.3	8.3	8.3
7		---				8.2	8.2	7.9	8.1	8.3	8.3	8.3
8		---				8.2	8.2	8.0	8.1	8.3	8.3	8.4
9		---				8.1	8.2	7.9	8.1	8.3	8.3	8.4
10		---				8.0	8.2	7.9	7.9	8.3	8.4	8.3
11		---				7.9	8.2	7.8	8.0	8.3	8.4	8.4
12		---				7.8	8.2	7.8	8.1	8.2	8.4	8.4
13		---				7.8	8.2	7.8	7.2	8.1	8.4	8.3
14		---				7.8	8.3	7.4	7.6	8.3	8.4	8.5
15		---				7.7	8.3	7.4	7.8	8.3	8.4	8.5
16		---				7.7	8.2	7.6	7.9	8.3	8.4	8.5
17		---				7.8	8.3	7.6	8.0	8.3	8.4	8.5
18		---				7.8	8.3	7.7	8.1	8.3	8.4	8.5
19		---				7.9	8.3	7.8	8.1	8.3	8.4	8.5
20		---				7.9	8.3	7.8	8.2	8.1	8.4	8.5
21		8.1				8.0	8.3	7.9	8.2	8.3	8.4	8.5
22		7.9				8.0	8.3	8.0	7.9	8.2	8.4	8.5
23		---				8.1	8.3	8.0	8.2	8.2	8.4	8.5
24		---				8.1	8.3	6.8	8.2	8.3	8.4	8.5
25		---				8.1	8.3	7.1	8.2	8.3	8.4	8.5
26		---				8.1	8.1	7.1	8.3	8.3	8.4	8.5
27		---				8.1	8.0	7.3	8.4	8.3	8.4	8.4
28		---				8.1	7.8	7.5	8.3	8.4	8.4	8.5
29		---				8.1	7.7	7.6	8.3	8.4	8.4	8.5
30		---				8.1	7.7	7.7	8.3	8.4	8.4	8.5
31		---				8.1	---	7.8	---	8.4	8.2	---
MEAN		8.0				8.0	8.2	7.7	8.1	8.3	8.4	8.4
WTR YR 1978	MEAN	8.1		MAX	8.5		MIN	6.8				

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	5.0	5.0	3.0	5.0	16.0	15.0	23.0	22.0	20.0	20.0
2		---	6.5	4.0	4.0	4.0	10.0	14.0	21.0	21.0	20.0	20.0
3		---	---	3.5	3.0	4.0	15.0	16.0	19.0	21.0	23.0	19.0
4		---	---	2.5	3.5	3.5	16.0	12.0	---	21.0	20.0	20.0
5		---	---	6.0	3.5	2.0	15.0	15.0	---	21.0	20.0	20.0
6		---	---	5.0	3.0	8.0	16.0	12.0	---	22.0	19.0	22.0
7		---	---	9.0	2.0	7.0	17.0	13.0	---	22.0	19.0	22.0
8		---	5.5	8.0	3.5	5.0	12.0	19.0	19.0	23.0	20.0	21.0
9		---	---	.5	4.0	7.5	15.0	17.0	20.0	21.0	19.0	21.0
10		---	---	.0	4.0	5.0	20.0	17.0	22.0	23.0	19.0	20.0
11		---	---	.0	4.0	4.0	15.0	17.0	19.0	21.0	20.0	21.0
12		---	4.0	2.0	2.0	5.0	18.0	16.5	24.0	22.0	20.0	21.0
13		---	7.0	4.0	4.5	5.0	19.0	15.0	20.0	19.0	20.0	22.0
14		---	7.0	3.0	4.0	8.5	16.0	13.5	23.0	20.0	20.0	20.0
15		---	6.5	2.0	4.5	10.0	13.0	12.0	20.0	21.0	20.0	21.0
16		---	7.5	2.0	5.0	7.0	11.0	14.0	20.0	19.0	21.0	22.0
17		---	8.0	4.0	5.0	8.0	17.0	14.0	22.0	21.0	21.0	21.0
18		---	8.0	4.0	5.0	5.0	15.0	18.0	24.0	21.0	21.0	21.0
19		---	9.0	3.0	3.0	5.5	14.0	20.0	22.0	21.0	21.0	22.0
20		---	8.0	4.0	4.0	13.0	11.0	18.0	20.0	20.0	19.0	22.0
21		11.0	7.0	3.0	5.0	12.0	11.0	16.5	21.0	21.0	20.0	22.0
22		10.0	6.0	3.0	3.5	13.0	10.0	18.5	22.0	22.0	20.0	21.0
23		---	5.0	2.0	2.0	9.0	10.0	20.0	21.0	21.0	20.0	21.0
24		---	8.0	5.0	5.0	12.0	18.5	17.0	20.0	21.0	21.0	21.0
25		---	7.0	3.0	3.0	11.0	13.0	20.0	21.0	19.0	20.0	22.0
26		6.0	3.0	2.0	4.0	9.0	10.0	18.0	21.0	20.0	20.0	19.0
27		5.0	3.0	2.0	6.0	9.0	9.5	16.0	21.0	19.0	21.0	20.0
28		7.0	1.0	3.5	5.5	14.0	15.0	19.0	21.0	20.0	20.0	19.0
29		8.5	4.0	1.0	---	12.0	14.0	19.0	22.0	20.0	21.0	20.0
30		9.0	4.5	3.0	---	13.0	12.0	22.0	21.0	19.0	19.0	20.0
31		---	5.0	3.0	---	14.0	---	20.0	---	20.0	20.0	---
MEAN		8.0	6.0	3.5	4.0	8.0	14.5	16.5	21.0	21.0	20.0	21.0
WTR YR 1978	MEAN	13.5		MAX	24.0		MIN	.0				

03202240 ALLEN CREEK AT ALLEN JUNCTION, WV--Continued

TURBIDITY (NTU), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						5	10	9	3	4	35	30
2						6	3	6	4	40	10	6
3						4	4	6	10	35	10	6
4						4	4	30	5	8	10	5
5						6	4	5	3	6	30	5
6						4	2	4	4	4	9	4
7						15	3	6	6	5	10	4
8						30	4	50	30	4	8	4
9						65	9	20	5	3	7	3
10						50	3	10	5	4	15	4
11						20	3	6	4	8	5	3
12						30	3	4	7	5	5	3
13						30	3	90	5	4	3	4
14						100	3	8	3	35	6	3
15						40	3	5	4	5	5	4
16						20	3	4	50	20	4	3
17						8	3	5	4	5	4	3
18						6	3	4	4	4	3	5
19						4	70	3	3	4	3	3
20						6	5	3	50	6	3	3
21						5	2	2	30	3	3	3
22						10	2	4	15	4	4	4
23						7	2	5	10	5	4	5
24						4	3	90	7	4	3	4
25						5	2	30	6	9	4	3
26						10	100	9	6	3	3	3
27						20	90	9	5	7	4	3
28						9	30	6	4	4	4	4
29						7	15	4	4	6	4	4
30						6	15	4	4	35	4	3
31						5	---	4	---	10	65	---
MEAN						15	15	15	10	10	9	5
WTR YR 1978	MEAN		10	MAX	100	MIN		2				

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1			---	---	51	4.7	5	.14	12	.26	11	.20
2			---	---	19	1.4	5	.13	14	.26	9	.16
3			---	---	17	1.1	4	.09	12	.19	12	.19
4			---	---	13	.70	11	.21	13	.18	36	.52
5			---	---	57	5.4	15	.18	8	.10	37	.51
6			---	---	35	4.3	7	.14	8	.09	21	.29
7			---	---	27	2.6	6	.13	32	.35	36	.51
8			---	---	28	2.2	32	1.1	24	.25	88	3.1
9			---	---	14	1.1	63	3.4	15	.15	250	20
10			---	---	10	.68	43	2.1	12	.12	232	36
11			---	---	10	.54	33	1.2	17	.17	98	15
12			---	---	9	.39	23	.75	14	.14	108	17
13			---	---	10	.38	12	.32	7	.07	127	24
14			---	---	121	7.5	6	.15	11	.15	496	145
15			---	---	39	2.7	7	.15	9	.19	132	22
16			---	---	17	1.2	22	.42	6	.12	63	7.3
17			---	---	11	.74	11	.23	8	.15	25	2.2
18			---	---	30	1.9	4	.09	8	.15	15	1.1
19			---	---	17	.87	4	.08	7	.12	12	.81
20			---	---	13	.60	4	.07	10	.17	15	.89
21			7	.19	12	.52	5	.08	7	.12	14	.72
22			211	7.6	11	.42	5	.08	34	.55	18	.83
23			97	6.3	10	.35	37	.56	63	1.0	30	1.3
24			30	2.3	15	.53	12	.19	8	.13	10	.38
25			20	1.4	20	.76	423	72	11	.17	11	.39
26			18	1.1	12	.42	502	917	8	.12	14	.57
27			18	.83	12	.42	192	34	10	.16	27	1.2
28			35	1.6	9	.29	32	2.2	13	.21	20	.97
29			60	3.2	9	.27	15	.65	---	---	15	.73
30			58	4.9	8	.24	14	.45	---	---	12	.55
31			---	---	7	.21	7	.18	---	---	12	.49
TOTL			---	29.42	---	45.43	---	1038.47	---	5.84	---	304.91

GUYANDOTTE RIVER BASIN

03202240 ALLEN CREEK AT ALLEN JUNCTION, WV--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

[illegible]

GUYANDOTTE RIVER BASIN

233

03202245 MARSH FORK AT MABEN, WV

LOCATION.--Lat 37°38'19", long 81°23'38", Wyoming County, Hydrologic Unit 05070101, on left bank, 0.1 mi (0.2 km) upstream, 0.1 mi (0.2 km) west of Maben, and on State Secondary Route 97 0.2 mi (0.3 km) northwest of intersection with State Secondary Route 54.

DRAINAGE AREA.--4.85 mi² (12.56 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1977 to September 1978.

GAGE.--Water-stage and rainfall recorders. Altitude of gage is 1,600 ft (488 m), from topographic map.

REMARKS.--Water-discharge records fair except those for June 9 - July 1 and those for January and February, which are poor. Rainfall records collected at site since November 1977 are contained in files of U.S. Geological Survey with only monthly totals published in this report.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 150 ft³/s (4.2 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 6	0315	385 10.9	6.06 1.847	Mar. 14	1400	153 4.33	5.35 1.631
Dec. 6	1500	153 4.33	5.36 1.634	Apr. 26	2115	313 8.86	5.93 1.807
Jan. 26	0430	*724 20.5	6.72 2.048				

Minimum daily discharge, 0.08 ft³/s (0.002 m³/s) Aug. 23-28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	13	3.9	3.5	3.9	4.8	8.7	2.1	.70	.28	1.1
2		---	9.6	3.4	3.1	3.4	4.2	7.8	1.9	1.8	.19	.62
3		3.5	8.1	2.8	2.7	3.0	3.5	6.9	2.7	.92	.13	.76
4		3.4	8.4	2.3	2.4	2.7	3.4	9.6	2.2	.76	.47	.47
5		7.2	38	2.5	2.2	2.5	3.4	18	1.8	.66	.57	.38
6		125	26	3.7	2.0	2.3	3.0	16	1.5	.38	.62	.28
7		46	12	4.0	1.8	2.3	2.9	11	1.7	.38	1.1	.26
8		21	10	4.0	1.7	5.0	2.6	46	2.9	.38	.66	.22
9		15	10	25	1.6	32	2.5	48	2.2	.38	.47	.19
10		12	8.7	25	1.5	57	2.4	19	1.5	.28	.42	.19
11		9.0	9.0	14	1.5	48	2.4	11	1.2	.28	.38	.28
12		6.9	8.4	7.2	1.4	55	2.4	8.1	1.1	.20	.42	.24
13		5.9	6.2	6.2	1.5	60	2.1	12	.90	.19	.28	.22
14		5.0	14	5.1	5.8	107	2.0	15	.76	.47	.26	.20
15		4.8	32	4.6	5.8	43	1.9	13	.66	.47	.24	.33
16		4.4	17	4.2	5.4	17	1.8	8.4	.57	1.5	.24	.33
17		3.7	10	4.4	4.6	10	1.9	6.4	.47	.62	.20	.22
18		3.2	8.4	4.5	4.2	7.2	2.2	5.5	.47	.33	.19	.19
19		2.9	6.4	4.1	3.9	6.4	2.5	4.4	.52	.22	.17	.19
20		2.9	5.7	3.8	3.7	5.9	2.6	3.7	.62	.19	.15	.17
21		5.9	5.0	3.5	3.5	5.9	2.5	3.0	1.1	.17	.11	.13
22		33	4.2	3.2	3.3	5.3	2.4	2.4	.66	.15	.09	.71
23		25	3.9	3.1	3.2	4.8	2.2	4.6	.51	.11	.08	.38
24		16	4.0	3.0	3.2	4.4	2.5	42	.57	.19	.08	.28
25		13	7.2	30	3.2	4.0	3.4	18	.57	.33	.08	.33
26		8.7	7.8	280	3.4	5.0	143	8.1	.57	.28	.08	.26
27		7.5	6.2	25	4.5	5.7	97	5.0	.38	.17	.08	.20
28		10	5.2	9.6	4.3	6.6	21	3.7	.28	.22	.08	.19
29		28	4.4	7.4	---	6.9	12	3.0	.28	.15	.09	.19
30		23	4.2	6.0	---	6.2	10	2.7	.28	.19	.20	.17
31		---	3.9	4.5	---	5.5	---	2.9	---	.66	2.2	---
TOTAL	---	---	316.9	510.0	88.9	533.9	350.5	373.9	32.97	13.73	10.61	9.68
MEAN	---	---	10.2	16.5	3.18	17.2	11.7	12.1	1.10	.44	.34	.32
MAX	---	---	38	280	5.8	107	143	48	2.9	1.8	2.2	1.1
MIN	---	---	3.9	2.3	1.4	2.3	1.8	2.4	.28	.11	.08	.13
CF5M	---	---	2.10	3.40	.66	3.55	2.41	2.50	.23	.09	.07	.07
IN.†	---	---	2.43	3.91	.68	4.09	2.69	2.87	.25	.11	.08	.07
IN.‡	---	---	2.50	3.49	1.31	2.84	4.37	5.12	1.32	3.93	3.85	1.41

† Runoff.

‡ Rainfall.

GUYANDOTTE RIVER BASIN

03202245 MARSH FORK AT MABEN, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1977 to September 1978.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1977 to September 1978.

pH: March to September 1978.

WATER TEMPERATURES: November 1977 to September 1978.

TURBIDITY: March to September 1978.

SUSPENDED-SEDIMENT DISCHARGE: November 1977 to September 1978.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 223 micromhos Aug. 22; minimum daily, 45 micromhos Dec. 15.

pH: Maximum observed, 8.1 units Aug. 22; minimum observed, 6.2 units Apr. 25, May 9.

WATER TEMPERATURES: Maximum observed, 26.0°C June 27, 28, July 24; minimum observed -1.0°C several days in December, January and February.

TURBIDITY: Maximum observed, 150 NTU Aug. 31; minimum observed, 1 NTU Mar. 3, Apr. 13, 14, 16, 22, Jul. 8.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 259 mg/L Jan. 26; minimum daily mean, 0 mg/L on several days in February, May and September.

SEDIMENT LOADS: Maximum daily, 293 tons (266 tonnes) Jan. 26; minimum daily, 0 tons (0 tonnes) on many days during year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
NOV												
21...	1430	2.9	90	6.9	9.0	--	--	--	--	--	--	--
22...	1200	4.2	90	7.0	8.5	--	--	--	--	--	--	--
DEC												
08...	1650	9.6	60	6.7	3.5	--	--	--	--	--	--	--
13...	1030	6.0	70	7.2	4.0	--	15.8	--	--	--	--	--
FEB												
27...	1610	4.6	100	7.1	3.0	--	--	--	--	--	--	--
MAR												
09...	1100	23	75	6.9	3.5	10	--	16	6	3.5	1.7	9.5
APR												
06...	1045	2.8	--	--	--	3.0	--	19	11	4.6	1.9	6.8
26...	1500	194	<50	6.7	8.0	100	--	--	--	--	--	--
MAY												
16...	1110	9.2	55	7.0	11.0	3.0	--	14	1	3.3	1.5	3.9
22...	1620	2.2	80	7.6	19.0	2.0	8.9	--	--	--	--	--
JUN												
23...	1110	.52	125	7.6	19.0	3.0	--	39	0	10	3.4	13
JUL												
11...	1530	.27	170	7.5	24.0	--	--	--	--	--	--	--
21...	0855	.16	155	7.7	22.0	3.0	7.6	47	1	12	4.2	17
AUG												
03...	1110	.14	240	7.5	23.0	4.0	8.5	--	--	--	--	--
SEP												
06...	1720	.26	220	7.7	23.0	4.0	8.7	--	--	--	--	--
13...	1330	.26	175	7.5	22.0	3.0	--	--	--	--	--	--
15...	0930	.47	160	7.7	19.0	200	8.2	45	0	13	3.0	23

GUYANDOTTE RIVER BASIN

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03202245 MARSH FORK AT MABEN, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SODIUM PERCENT	SODIUM AD-SUPP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS <)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
NOV												
21...	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
08...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
27...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
09...	54	1.0	1.3	12	0	10	2.4	8.0	14	.0	5.5	48
APR												
06...	41	.7	1.3	10	--	8	--	11	8.5	.0	5.6	71
26...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
16...	35	.4	1.1	16	--	13	2.6	7.6	5.6	.0	5.5	35
22...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
23...	41	.9	1.8	--	--	39	--	7.1	14	.0	5.6	88
JUL												
11...	--	--	--	--	--	--	--	--	--	--	--	--
21...	43	1.1	2.2	--	--	46	--	7.2	20	.0	4.9	96
AUG												
03...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
06...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
15...	51	1.5	2.2	--	--	48	--	14	28	.1	2.4	120
DATE	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	ALUM-INUM, SUS-PENDED RECOV. (UG/L AS AL)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM SUS-PENDED RECOV-ERABLE (UG/L AS CD)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)
NOV												
21...	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
08...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
27...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
09...	50	.07	2.98	--	--	30	--	--	--	--	--	--
APR												
06...	45	.10	.54	70	50	20	--	--	0	0	6	10
26...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
16...	36	.05	.67	--	--	30	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
23...	79	.12	.12	--	--	60	--	--	--	--	--	--
JUL												
11...	--	--	--	--	--	--	--	--	--	--	--	--
21...	95	.13	.04	--	--	30	--	--	--	--	--	--
AUG												
03...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
06...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
15...	115	.16	.15	--	--	80	1	0	1	1	0	60

GUYANDOTTE RIVER BASIN

03202245 MARSH FORK AT MABEN, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	CHROMIUM, SUSPENDED RECOV. (UG/L AS CR)	CHROMIUM, DISSOLVED (UG/L AS CR)	CHROMIUM, HEXAVALENT, DIS. (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)
NOV												
21...	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
08...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
27...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
09...	--	--	--	--	--	--	--	50	--	--	--	--
APR												
06...	--	--	0	--	--	--	280	290	19	0	27	30
26...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
16...	--	--	--	--	--	--	--	50	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
23...	--	--	--	--	--	--	--	190	--	--	--	--
JUL												
11...	--	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	180	--	--	--	--
AUG												
03...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
06...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
15...	60	0	--	38	37	1	--	20	150	150	4	--
DATE	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY SUSPENDED RECOVERABLE (UG/L AS HG)	MERCURY DISSOLVED (UG/L AS HG)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, SUSPENDED TOTAL (UG/L AS SE)	SELENIUM, DISSOLVED (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)	PHYTOPLANKTON, TOTAL (CELLS PER ML)
NOV												
21...	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
08...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
27...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
09...	--	30	--	--	--	--	--	--	--	--	--	--
APR												
06...	10	20	<.5	.0	<.5	--	--	--	10	0	10	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
16...	--	20	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
23...	--	30	--	--	--	--	--	--	--	--	--	--
JUL												
11...	--	--	--	--	--	--	--	--	--	--	--	--
21...	--	40	--	--	--	--	--	--	--	--	--	--
AUG												
03...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
06...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	170
15...	--	80	<.5	.0	<.5	1	0	1	160	160	0	--

GUYANDOTTE RIVER BASIN

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03202245 MARSH FORK AT MABEN, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
NOV		
21...	7	.05
22...	23	.26
DEC		
08...	14	.36
13...	12	.19
MAR		
09...	26	1.6
APR		
06...	4	.03
26...	561	294
MAY		
16...	3	.07
22...	0	.00
JUN		
23...	14	.02
JUL		
21...	1	.00
AUG		
03...	0	.00
SEP		
06...	4	.00
13...	0	.00
15...	1450	1.8

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	56	73	---	104	72	56	85	124	158	161
2		---	55	72	70	97	69	66	100	124	157	159
3		77	---	68	73	91	74	68	105	132	162	158
4		---	---	70	80	132	77	70	96	133	158	157
5		---	---	68	80	134	72	55	97	138	154	167
6		---	---	90	80	133	76	49	106	144	143	172
7		---	---	72	93	131	73	55	105	144	139	175
8		---	60	71	96	178	76	52	96	147	159	174
9		---	---	56	102	98	77	48	96	146	159	177
10		---	---	51	104	111	75	55	100	147	160	178
11		---	---	54	105	62	76	61	102	160	161	178
12		---	---	53	107	60	75	66	99	149	161	184
13		---	63	59	111	57	77	58	111	152	169	176
14		---	102	68	133	50	77	57	110	144	169	179
15		---	45	83	100	50	81	60	111	108	169	166
16		---	46	72	108	73	80	60	112	107	177	178
17		---	49	71	113	71	79	69	114	129	176	177
18		---	56	128	106	69	88	71	114	148	177	180
19		---	55	110	109	70	86	75	122	152	183	181
20		---	56	---	109	102	85	80	121	157	182	183
21		90	55	---	90	69	79	80	119	156	183	182
22		90	59	---	89	72	75	80	121	171	223	172
23		---	57	---	91	75	76	91	126	166	192	173
24		---	56	---	106	73	79	46	131	166	191	173
25		---	58	135	110	94	95	47	133	157	190	172
26		51	48	53	109	95	52	54	132	153	194	174
27		53	48	---	98	81	57	65	132	158	192	175
28		93	50	---	94	69	60	65	136	164	195	181
29		77	51	---	---	62	73	96	140	159	193	184
30		48	53	---	---	63	73	74	142	158	185	185
31		---	75	---	---	65	---	80	---	147	118	---
MEAN		72	57	75	99	87	75	65	114	146	172	174
WTR YR 1978	MEAN		108		MAX	223		MIN	45			

GUYANDOTTE RIVER BASIN

03202245 MARSH FORK AT MABEN, WV--Continued

PH (UNITS), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						6.4	6.9	6.3	6.6	7.1	7.5	7.8
2						6.5	7.0	6.4	6.8	7.2	7.5	7.8
3						6.6	7.0	6.4	6.9	7.2	7.6	7.8
4						6.6	7.0	6.5	6.9	7.2	7.5	7.8
5						6.6	7.4	6.6	7.0	7.1	7.5	7.8
6						6.7	7.2	6.6	7.0	7.2	7.5	7.8
7						6.7	7.5	6.6	6.9	7.2	7.5	7.8
8						6.7	7.4	6.6	7.0	7.3	7.5	7.9
9						6.9	7.4	6.2	7.0	7.3	7.6	7.9
10						6.8	7.4	6.3	7.0	7.4	7.5	7.9
11						7.0	7.4	6.4	6.7	7.5	7.6	7.9
12						7.0	7.4	6.4	6.6	7.4	7.6	7.9
13						7.0	7.3	6.5	6.5	7.5	7.6	7.7
14						6.9	7.4	6.5	6.6	7.5	7.7	8.0
15						6.8	7.4	6.6	6.6	7.5	7.7	7.8
16						6.8	7.4	6.8	6.7	7.4	7.7	7.8
17						6.8	7.4	6.6	6.8	7.4	7.7	7.8
18						6.8	7.4	6.6	6.8	7.5	7.6	7.8
19						6.8	7.4	6.6	6.8	7.5	7.7	7.9
20						6.8	7.4	6.7	6.9	7.5	7.7	7.9
21						7.0	7.4	6.7	6.8	7.6	7.7	7.9
22						6.9	7.4	---	6.9	7.5	8.1	7.9
23						6.9	7.4	6.5	7.0	7.5	8.0	7.9
24						7.0	7.3	6.6	7.0	7.5	8.0	7.9
25						6.9	6.2	6.6	7.1	7.5	8.0	7.9
26						7.0	6.5	6.6	7.0	7.5	8.0	7.9
27						7.0	6.5	6.7	7.1	7.5	8.0	7.9
28						7.0	6.5	6.5	7.2	7.5	8.0	7.9
29						7.0	6.5	6.6	7.2	7.5	8.0	7.9
30						7.0	6.5	6.7	6.9	7.5	7.9	7.9
31						7.0	---	6.8	---	7.5	7.9	---
MEAN						6.8	7.1	6.6	6.9	7.4	7.7	7.9
WTR YR 1978	MEAN	7.2		MAX	8.1		MIN	6.2				

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	6.5	6.0	---	2.0	15.0	11	21	21.0	24.0	23
2		---	8.5	.0	-1.0	.0	14.0	13	19	19.0	24.0	21
3		16.0	---	.0	.0	.0	14.0	13	17	19.0	21.0	22
4		---	---	.0	1.0	.0	15.0	10	18	20.0	23.0	19
5		---	---	.0	.0	1.0	16.0	11	20	20.0	20.0	22
6		---	---	2.0	-1.0	3.0	15.0	11	15	22.0	19.5	21
7		---	---	5.0	-1.0	3.0	17.0	12	17	21.0	20.5	20
8		---	3.5	6.0	.0	2.0	16.0	13	17	20.0	20.0	22
9		---	---	1.0	-1.0	5.0	16.0	10	20	22.0	21.0	22
10		---	---	-1.0	.0	5.0	17.0	12	21	22.0	20.0	22
11		---	---	-1.0	.0	5.0	14.0	16	24	23.5	21.0	23
12		---	---	-1.0	.0	4.0	9.0	14	23	22.0	19.0	22
13		---	6.5	1.0	.0	7.0	11.0	12	19	20.0	19.0	22
14		---	5.0	.0	.0	6.5	11.0	11	18	21.0	22.0	22
15		---	6.5	.0	1.0	7.0	13.0	10	21	20.0	23.0	20
16		---	6.0	1.0	2.0	4.0	14.0	11	21	19.5	22.0	22
17		---	7.0	2.0	1.0	4.0	17.0	14	21	23.0	22.0	22
18		---	7.0	1.0	2.0	8.0	12.0	16	22	24.0	22.0	22
19		---	6.0	1.0	1.0	10.0	12.0	17	23	25.0	24.0	22
20		---	6.0	---	.0	12.0	9.0	---	24	25.0	23.0	22
21		9.0	4.0	---	1.5	12.0	9.0	19	22	23.5	23.0	22
22		8.5	3.0	---	-1.0	11.0	13.0	19	22	23.0	19.0	22
23		---	3.0	---	.0	12.0	12.0	16	21	22.0	22.0	18
24		---	4.0	---	1.0	13.0	17.0	14	23	26.0	24.0	19
25		---	3.0	.5	1.0	6.0	11.0	18	23	23.0	24.0	20
26		5.0	.0	5.0	2.0	7.0	7.5	17	23	24.0	21.0	19
27		3.0	4.0	---	4.0	5.0	11.0	19	26	23.0	21.0	19
28		5.5	-1.0	---	2.0	11.0	13.0	19	26	23.0	20.0	18
29		8.0	.0	---	---	9.0	12.0	18	25	23.0	21.0	15
30		10.0	3.0	---	---	10.0	10.0	19	25	19.0	23.0	19
31		---	6.0	---	---	12.0	---	16	---	22.0	22.0	---
MEAN		8.0	4.5	1.5	.5	6.5	13.0	14	21	22.0	21.5	21
WTR YR 1978	MEAN	13.0		MAX	26.0		MIN	-1.0				

GUYANDOTTE RIVER BASIN

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03202245 MARSH FORK AT MABEN, WV--Continued

TURBIDITY (NTU), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						2	3	6	3	15	5	3
2						3	3	3	3	12	4	3
3						1	3	3	10	3	4	3
4						3	2	30	3	3	30	3
5						3	5	10	3	2	30	7
6						4	3	10	2	2	130	3
7						3	3	5	3	2	37	2
8						15	2	40	10	1	3	3
9						30	2	10	4	2	3	2
10						20	3	5	3	2	3	3
11						10	3	4	3	2	4	7
12						10	2	4	2	2	4	3
13						20	1	5	2	2	3	5
14						50	1	5	2	8	3	3
15						10	2	3	2	80	3	110
16						7	1	4	2	65	3	7
17						5	2	3	2	6	3	8
18						6	6	2	2	3	3	7
19						6	8	3	2	3	3	4
20						5	4	2	3	3	3	3
21						4	2	3	2	2	3	3
22						4	1	2	3	3	7	3
23						3	2	8	2	3	4	3
24						3	10	30	2	3	4	3
25						20	5	9	3	6	3	3
26						20	80	6	3	3	5	4
27						6	20	4	2	2	4	3
28						5	8	3	2	3	5	3
29						4	8	4	2	3	3	3
30						4	8	3	2	3	3	3
31						3	---	15	---	70	150	---
MEAN						9	7	8	3	10	15	7
WTR YR 1978	MEAN		9	MAX	150	MIN	1					

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1			---	---	9	.32	2	.02	6	.06	10	.11
2			---	---	6	.16	3	.03	4	.03	8	.07
3			---	---	5	.13	3	.02	2	.01	9	.07
4			---	---	4	.18	2	.05	1	.01	9	.07
5			---	---	43	1.5	5	.03	0	.00	34	.23
6			---	---	22	1.5	23	.23	0	.00	2	.01
7			---	---	15	.49	10	.11	0	.00	2	.01
8			---	---	13	.35	43	.46	0	.00	24	.32
9			---	---	10	.27	37	2.5	0	.00	118	13
10			---	---	7	.16	10	.68	2	.01	60	9.2
11			---	---	5	.12	5	.19	3	.01	27	3.5
12			---	---	5	.11	7	.14	5	.02	58	9.3
13			---	---	7	.12	3	.05	6	.02	54	8.7
14			---	---	56	3.1	3	.04	17	.27	157	51
15			---	---	31	2.6	9	.11	18	.28	33	3.8
16			---	---	13	.60	4	.05	7	.10	12	.55
17			---	---	7	.19	3	.04	7	.09	5	.14
18			---	---	14	.32	3	.04	5	.06	5	.10
19			---	---	6	.10	2	.02	14	.15	6	.10
20			---	---	3	.05	3	.03	10	.10	7	.11
21			12	.29	7	.09	3	.03	3	.03	5	.08
22			43	3.5	6	.07	3	.03	3	.03	4	.06
23			14	.94	3	.03	3	.03	35	.30	5	.06
24			11	.48	2	.02	17	.14	12	.10	6	.07
25			7	.25	4	.08	153	12	10	.09	16	.17
26			5	.12	4	.08	259	293	17	.16	19	.26
27			3	.06	3	.05	30	2.0	7	.09	17	.26
28			8	.26	4	.06	23	.60	7	.08	14	.25
29			39	2.8	6	.07	57	1.1	---	---	8	.15
30			16	.99	5	.06	18	.29	---	---	6	.10
31			---	---	2	.02	11	.13	---	---	12	.18
TOTAL			---	9.69	---	13.00	---	314.19	---	2.10	---	102.03

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

[illegible]

GUYANDOTTE RIVER BASIN

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03202255 STILL RUN AT ITMANN, WV

LOCATION.--Lat 37°34'51", long 81°25'42", Wyoming County, Hydrologic Unit 05070101, on right bank, on dirt road 0.2 mi (0.3 km) east of intersection with State Route 10/16, 0.3 mi (0.5 km) upstream from mouth, 0.9 mi (1.4 km) northwest of Itmann, and 2.7 mi (4.3 km) west of Mullens.

DRAINAGE AREA.--7.12 mi² (18.44 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1977 to September 1978.

GAGE.--Water-stage and rainfall recorders. Altitude of gage is 1,380 ft (421 m), from topographic map.

REMARKS.--Water-discharge records poor. Rainfall records collected at site since November 1977 are contained in files of U.S. Geological Survey with only monthly totals published in this report.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 100 ft³/s (2.8 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 7	0845	591 16.7	6.19 1.887	Apr. 26	1945	423 12.0	5.82 1.774
Jan. 26	0345	*1510 42.8	6.94 2.115	May 8	2130	130 3.68	5.18 1.579
Mar. 14	1500	179 5.07	5.51 1.679				

Minimum daily discharge, 0.12 ft³/s (0.003 m³/s) Aug. 26, 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	29	6.7	6.0	7.0	10	19	2.3	2.3	2.3	11
2		4.9	19	6.2	5.4	6.3	8.5	17	2.1	11	.79	5.7
3		4.7	15	4.7	4.8	5.5	7.0	16	3.0	3.0	.47	3.4
4		4.1	13	4.0	4.4	5.0	6.0	18	2.0	2.0	.8	1.9
5		3.6	27	4.1	4.3	4.6	5.4	22	1.5	1.7	.9	1.2
6		33	42	4.7	3.7	4.4	5.4	25	1.3	1.5	4.5	.41
7		267	26	6.2	3.5	5.0	4 9	21	1.3	1.3	9.6	.32
8		83	18	6.6	3.3	15	4.4	66	2.6	1.2	6.2	.27
9		49	17	23	3.1	36	4.1	83	2.9	1.2	3.8	.22
10		29	15	26	2.9	64	3.8	42	2.5	1.2	2.7	.46
11		19	13	16	2.8	60	4.1	28	2.2	1.1	2.3	1.3
12		15	11	14	2.8	66	3.8	21	2.0	1.0	2.2	.60
13		12	11	9.0	2.9	70	3.3	22	1.7	1.1	1.3	.32
14		9.9	15	8.0	8.6	121	2.8	24	1.5	1.6	1.2	.41
15		9.0	29	7.0	9.9	63	2.4	21	1.3	2.4	.97	1.1
16		8.0	23	6.4	9.6	34	2.4	16	1.2	5.7	.65	1.3
17		8.0	17	6.6	9.0	23	2.4	13	1.2	3.6	.51	.70
18		6.7	15	7.2	8.0	18	3.4	10	1.2	1.9	.36	.27
19		5.9	12	6.6	7.5	17	4.4	8.0	1.1	1.2	.32	.25
20		5.4	11	6.0	7.0	15	4.6	6.0	1.1	.88	.46	.24
21		5.2	9.6	5.5	6.6	15	4.2	5.5	1.2	.65	.36	.35
22		8.3	8.6	5.3	6.3	13	3.8	4.9	1.3	.56	.27	.92
23		29	7.4	5.1	6.2	12	3.8	4.9	1.2	.51	.22	.70
24		29	7.4	5.0	6.2	11	3.8	19	1.2	.65	.19	.50
25		23	11	30	6.3	11	4.9	14	1.2	1.2	.16	.40
26		18	12	445	7.5	13	134	8.6	1.2	1.1	.12	.30
27		14	11	27	8.6	15	139	5.4	1.2	.70	.12	.26
28		13	9.6	16	8.0	19	46	4.0	1.1	.65	.15	.26
29		19	8.0	11	---	18	29	3.0	1.0	.46	.20	.23
30		36	7.4	9.0	---	15	24	3.0	.90	.60	.41	.22
31		---	6.9	7.5	---	12	---	3.5	---	1.6	8.0	---
TOTAL	---	---	476.9	752.4	164.3	793.9	485.6	573.8	47.50	55.56	61.53	35.51
MEAN	---	---	15.4	24.3	5.87	25.6	16.2	18.5	1.58	1.79	1.98	1.18
MAX	---	---	42	445	9.9	121	139	83	3.0	11	9.6	11
MIN	---	---	6.9	4.0	2.8	4.4	2.4	3.0	.90	.46	.12	.22
CFSM	---	---	2.16	3.41	.62	3.60	2.28	2.60	.22	.25	.28	.17
IN.	---	---	2.49	3.93	.66	4.15	2.54	3.00	.25	.29	.32	.19
IN.†	---	---	---	3.53	1.32	3.02	3.70	3.88	2.58	5.03	3.73	1.01

† Runoff.

† Rainfall.

GUYANDOTTE RIVER BASIN

03202255 STILL RUN AT ITMANN, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1977 to September 1978.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1977 to September 1978.

pH: March to September 1978.

WATER TEMPERATURES: November 1977 to September 1978.

TURBIDITY: March to September 1978.

SUSPENDED-SEDIMENT DISCHARGE: November 1977 to September 1978.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum observed, 686 micromhos Sept. 22; minimum observed, 48 micromhos Jan. 26.

pH Maximum observed, 8.3 units Aug. 24, 25, Sept. 23, 24; minimum observed, 6.1 units Apr. 27, May 3, 6.

WATER TEMPERATURES: Maximum observed, 28.0°C July 19, 21, Aug. 3, 16, 18, 25; minimum observed, 0.5°C

Jan. 16.

TURBIDITY: Maximum observed, 120 NTU Aug. 31; minimum observed, 2 NTU many days during period March to August.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 960 mg/L Jan. 26; minimum daily mean, 1 mg/L Dec. 27, Jan. 2, 3.

SEDIMENT LOADS: Maximum daily, 1,150 tons (1,040 tonnes) Jan. 26; 1,150 tons (1,040 tonnes) Jan. 26; minimum daily, 0 tons (0 tonnes) on several days in August and September.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
NOV												
21...	1630	4.9	200	7.0	9.5	--	--	--	--	--	--	--
22...	1225	9.9	245	7.7	9.0	--	--	--	--	--	--	--
22...	1330	12	230	7.5	9.0	--	--	--	--	--	--	--
DEC												
08...	1510	19	110	6.6	5.0	--	--	--	--	--	--	--
12...	1215	11	140	7.0	3.0	--	13.3	--	--	--	--	--
FEB												
27...	1300	9.1	150	7.0	2.5	--	--	--	--	--	--	--
MAR												
10...	1230	60	61	6.5	4.0	30	--	18	10	3.9	2.0	2.3
APR												
05...	1600	5.7	--	--	--	4.0	--	35	18	8.2	3.6	9.4
26...	1245	103	50	6.6	8.0	100	--	--	--	--	--	--
26...	1615	184	50	6.9	9.0	50	8.5	--	--	--	--	--
MAY												
15...	1530	20	90	7.1	11.0	4.0	--	27	11	6.2	2.8	4.5
22...	1400	4.9	170	7.5	18.5	2.0	9.2	--	--	--	--	--
24...	1315	20	70	--	14.0	10	--	--	--	--	--	--
JUN												
22...	1415	1.3	210	7.4	23.0	9.0	--	66	26	16	6.4	29
JUL												
12...	1410	1.1	460	7.7	24.0	3.0	--	--	--	--	--	--
20...	1145	.77	405	7.9	24.0	5.0	8.4	94	11	23	8.8	75
AUG												
03...	1510	.47	520	7.9	28.5	3.0	7.7	--	--	--	--	--
SEP												
06...	1520	.40	790	7.9	24.0	4.0	8.5	--	--	--	--	--
13...	0850	.41	365	7.8	20.0	3.0	8.7	100	5	25	10	85
13...	1030	.41	365	7.8	21.0	3.0	--	--	--	--	--	--
21...	1115	--	510	7.5	22.0	--	--	120	17	28	11	85
22...	0940	--	650	7.1	21.0	--	--	--	--	--	--	--

03202255 STILL RUN AT ITMANN, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

[illegible][illegible]

GUYANDOTTE RIVER BASIN

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03202255 STILL RUN AT ITMANN, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
NOV		
21...	3	.04
22...	577	15
22...	356	12
DEC		
08...	7	.36
12...	4	.12
MAR		
10...	98	16
APR		
05...	11	.17
26...	776	216
26...	1140	566
MAY		
15...	7	.38
24...	15	.81
JUN		
22...	14	.05
JUL		
12...	8	.02
20...	8	.02
AUG		
03...	3	.00
SEP		
06...	8	.01
13...	6	.01

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	94	137	122	---	94	---	222	303	300	187
2		132	92	148	---	155	107	---	223	189	343	272
3		---	---	149	143	---	116	120	203	146	388	127
4		---	---	145	155	---	125	110	186	176	319	354
5		---	---	175	---	122	114	95	174	206	184	497
6		---	---	139	---	152	106	93	181	225	230	468
7		---	---	134	---	149	106	90	178	240	154	450
8		---	110	121	---	---	120	58	190	249	180	456
9		---	91	64	203	80	110	58	187	270	213	472
10		---	91	---	191	55	110	77	205	270	228	490
11		---	94	---	194	67	115	95	226	244	281	380
12		---	125	---	203	---	122	106	242	344	424	446
13		---	110	90	235	60	139	90	238	387	395	428
14		---	104	---	137	56	146	77	269	392	402	506
15		---	59	---	141	71	139	88	---	390	434	482
16		---	72	108	120	92	126	122	274	263	370	443
17		---	77	107	140	111	123	120	344	300	349	420
18		---	85	132	140	120	117	138	332	357	348	449
19		---	109	130	134	122	129	153	344	399	355	437
20		---	100	---	---	110	---	155	316	415	361	428
21		200	126	---	119	119	---	139	334	447	371	604
22		238	130	74	---	130	118	160	230	479	541	686
23		---	141	108	129	119	118	153	281	481	625	625
24		---	140	109	168	144	103	68	301	337	659	587
25		---	112	57	163	159	126	80	321	334	665	547
26		85	105	48	146	135	52	103	311	364	526	557
27		95	103	---	152	99	59	113	323	491	523	589
28		104	112	---	145	91	---	129	280	493	490	608
29		78	121	91	---	77	---	146	287	443	517	525
30		68	127	106	---	87	---	185	289	443	475	580
31		---	131	108	---	93	---	153	---	267	487	---
MEAN		125	106	113	156	107	114	113	258	334	392	470
WTR YR 1978	MEAN	225	MAX	686	MIN	48						

GUYANDOTTE RIVER BASIN

03202255 STILL RUN AT ITMANN, WV--Continued

PH (UNITS), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	7.3	---	6.9	7.6	8.0	7.9
2						6.8	7.3	---	7.0	7.7	8.0	7.8
3						---	7.4	6.1	7.1	7.7	8.0	7.8
4						---	7.4	6.3	7.3	7.7	8.1	7.9
5						7.0	7.2	6.4	7.3	7.5	8.1	7.9
6						7.0	6.7	6.1	7.0	7.6	8.0	8.1
7						7.0	6.8	6.3	7.1	7.6	7.9	8.1
8						---	6.8	6.4	7.2	7.6	7.9	8.1
9						7.1	6.9	6.4	7.3	7.6	7.8	8.1
10						6.8	6.9	6.4	7.3	7.7	7.8	8.1
11						7.0	7.0	6.4	7.1	7.5	7.8	8.1
12						---	7.0	6.5	7.3	7.7	7.8	8.1
13						7.0	7.0	6.6	7.4	7.7	8.0	8.0
14						7.0	7.0	6.6	7.5	7.7	8.0	8.2
15						6.9	7.0	6.9	---	7.7	8.0	8.1
16						6.9	7.2	6.6	7.5	7.8	8.0	8.1
17						7.0	7.2	6.7	7.3	7.8	8.0	8.1
18						7.0	7.3	6.7	7.5	7.7	8.0	8.1
19						7.1	7.3	6.7	7.6	7.9	8.0	8.1
20						7.1	---	6.8	7.6	8.0	8.0	8.1
21						7.1	---	7.2	7.7	8.1	8.1	8.2
22						7.2	7.3	7.2	7.6	8.1	8.1	8.2
23						7.2	7.3	7.0	7.4	8.1	8.2	8.3
24						7.2	7.4	7.1	7.5	8.1	8.3	8.3
25						7.3	7.3	7.1	7.6	8.1	8.3	8.2
26						7.3	6.9	7.1	7.7	8.1	7.8	8.2
27						7.3	6.1	7.1	7.7	8.0	8.0	8.2
28						7.3	---	7.0	7.5	8.1	8.0	8.2
29						7.4	---	7.0	7.5	8.1	8.1	8.2
30						7.3	---	7.1	7.6	8.0	8.1	8.2
31						7.3	---	7.2	---	8.1	8.0	---
MEAN						7.1	7.1	6.7	7.4	7.8	8.0	8.1
WTR YR 1978	MEAN	7.5		MAX	8.3		MIN	6.1				

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	4.0	5.0	1.0	---	8.5	---	---	23.5	27.5	20.0
2		15.0	6.5	3.0	---	5.0	9.5	---	---	21.0	27.0	18.5
3		---	---	2.0	3.5	---	8.5	---	---	22.5	28.0	20.0
4		---	---	1.5	1.0	---	9.0	---	---	20.0	24.0	24.0
5		---	---	3.0	---	---	17.0	---	---	23.0	20.0	25.0
6		---	---	4.0	---	5.5	---	---	---	27.0	22.5	25.0
7		---	---	3.5	---	5.0	---	---	---	24.0	24.0	23.0
8		---	5.0	6.0	---	---	---	---	---	22.0	25.0	27.0
9		---	5.0	1.5	3.5	7.0	---	---	---	23.0	24.0	27.0
10		---	2.5	---	3.5	5.0	---	---	---	27.0	25.5	26.0
11		---	3.0	---	1.0	7.0	---	---	---	22.0	25.0	23.0
12		---	3.5	---	3.0	---	---	---	---	24.0	22.0	25.0
13		---	6.5	3.0	3.0	8.0	---	---	---	19.0	22.5	22.5
14		---	6.0	---	2.0	7.5	---	---	---	22.0	27.0	23.0
15		---	8.0	---	4.0	9.0	---	11.0	---	20.0	27.5	24.0
16		---	8.0	.5	3.5	5.5	---	---	---	20.0	28.0	23.0
17		---	5.0	2.0	4.0	6.0	---	---	---	27.0	25.5	23.0
18		---	7.5	2.5	3.5	6.5	---	---	---	26.5	28.0	25.0
19		---	7.5	2.0	5.0	6.5	---	---	---	28.0	21.0	21.0
20		---	8.0	---	---	6.0	---	---	---	26.0	23.0	26.0
21		9.5	5.0	---	3.0	9.0	---	---	---	28.0	27.0	26.0
22		9.0	3.5	2.0	---	9.5	---	18.5	23.0	25.5	27.0	23.0
23		---	4.0	3.0	1.0	9.0	---	---	---	23.5	27.5	20.0
24		---	7.0	3.0	5.0	9.0	---	14.0	---	26.5	27.0	20.0
25		---	6.0	3.0	3.5	7.0	---	---	---	23.5	28.0	20.0
26		5.0	2.0	2.5	3.5	7.5	8.5	---	---	26.5	23.5	22.0
27		3.5	1.0	---	4.5	5.5	---	---	---	24.5	21.0	22.0
28		5.0	1.0	---	4.0	7.5	---	---	---	25.0	25.0	20.0
29		8.0	2.5	2.0	---	8.0	---	---	26.0	23.5	25.5	20.0
30		9.0	2.5	3.0	---	8.5	---	---	26.0	21.5	23.5	19.0
31		---	4.0	2.5	---	9.0	---	---	---	27.0	23.0	---
MEAN		8.0	5.0	3.0	3.0	7.0	10.0	14.5	25.0	24.0	25.0	23.0
WTR YR 1978	MEAN	14.0		MAX	28.0		MIN	.5				

GUYANDOTTE RIVER BASIN

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03202255 STILL RUN AT ITMANN, WV--Continued

TURBIDITY (NTU), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	2	---	20	2	5	10
2						2	4	---	10	20	3	4
3						---	4	5	70	30	3	7
4						---	3	8	3	9	2	4
5						6	3	5	10	4	9	4
6						10	2	4	3	3	2	6
7						8	6	2	3	3	8	10
8						---	2	50	10	2	3	7
9						100	2	10	2	2	3	4
10						40	2	5	2	2	3	9
11						15	2	4	2	9	5	4
12						---	2	3	3	4	3	5
13						40	2	20	5	3	3	4
14						40	2	4	3	2	15	5
15						10	2	4	---	2	3	4
16						7	2	2	3	6	3	9
17						5	2	3	2	3	3	6
18						4	3	2	3	4	2	20
19						2	4	2	3	9	2	15
20						3	---	2	20	7	3	4
21						3	---	3	5	6	3	5
22						3	2	2	9	2	3	10
23						2	2	3	6	3	2	30
24						2	2	10	5	5	2	6
25						3	95	5	20	6	3	3
26						3	100	70	5	3	2	4
27						9	30	4	6	2	2	30
28						6	---	3	2	2	2	8
29						6	---	4	2	5	2	3
30						4	---	20	2	4	8	4
31						8	---	5	---	4	120	---
MEAN						13	11	9	8	5	7	8
WTR YR 1978	MEAN		9	MAX	120	MIN		2				

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	16	1.3	3	.05	26	.42	5	.09		
2	---	---	6	.31	1	.02	10	.15	5	.09		
3	---	---	5	.20	1	.01	7	.09	8	.12		
4	---	---	5	.18	4	.04	8	.10	13	.18		
5	---	---	119	13	3	.03	7	.08	18	.22		
6	---	---	48	5.4	41	.63	6	.06	22	.26		
7	---	---	13	.91	18	.29	5	.05	17	.23		
8	---	---	9	.44	44	1.8	7	.06	27	1.1		
9	---	---	8	.37	76	5.4	8	.07	183	20		
10	---	---	4	.16	17	1.2	8	.06	103	16		
11	---	---	5	.18	7	.30	10	.08	95	15		
12	---	---	6	.18	31	.92	7	.05	175	32		
13	---	---	36	1.0	6	.15	13	.10	124	23		
14	---	---	101	7.2	8	.17	19	.41	250	91		
15	---	---	11	5.9	9	.17	20	.53	63	11		
16	---	---	13	.81	8	.14	13	.34	31	2.8		
17	---	---	6	.28	5	.09	11	.27	15	.93		
18	---	---	7	.28	5	.10	12	.26	10	.49		
19	---	---	4	.29	3	.05	7	.14	15	.69		
20	---	---	7	.21	2	.03	7	.13	12	.49		
21		4	.06	5	.13	3	.04	5	.09	10	.41	
22		103	2.8	3	.07	3	.04	50	.85	14	.49	
23		154	12	3	.06	7	.16	28	.47	8	.26	
24		35	2.7	6	.14	15	.23	7	.12	5	.15	
25		22	1.4	41	1.2	663	157	2	.03	7	.21	
26		10	.49	2	.06	560	1150	2	.04	12	.42	
27		6	.23	1	.03	122	8.9	15	.35	24	.97	
28		13	.40	2	.05	26	1.3	5	.11	20	1.0	
29		37	2.0	5	.11	6	.18	---	---	9	.44	
30		125	12	3	.06	7	.17	---	---	4	.16	
31		---	---	2	.04	123	2.5	---	---	9	.29	
TOTAL		---	34.14	---	40.55	---	1332.02	---	5.51	---	220.49	

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

[illegible]

03202310 BEARHOLE FORK AT PINEVILLE, WV

LOCATION.--Lat 37°35'16", long 81°31'12", Wyoming County, Hydrologic Unit 05070101, on left bank, 0.6 mi (1.0 km) upstream from mouth, on State Secondary Route 97 0.7 mi (1.1 km) east of intersection with State Route 10, and 1.0 mi (1.6 km) east of Pineville.

DRAINAGE AREA.--6.27 mi² (16.24 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1977 to September 1978.

GAGE.--Water-stage and rainfall recorders. Altitude of gage is 1,380 ft (421 m), from topographic map.

REMARKS.--Water-discharge records fair. Rainfall records collected at site since November 1977 are contained in files of U.S. Geological Survey with only monthly totals published in this report.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 100 ft³/s (2.8 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 25	2400	*1060 30.0	6.46 1.969	Apr. 26	1845	350 9.91	5.62 1.713
Mar. 14	1215	143 4.05	5.15 1.570				

Minimum daily discharge, 0.18 ft³/s (0.005 m³/s) Aug. 24, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	21	6.0	6.4	7.2	8.2	11	2.1	.60	.50	3.3
2		---	14	5.2	5.6	6.2	7.0	9.5	1.6	4.7	.40	3.0
3		---	12	3.8	4.9	6.7	6.0	8.5	3.3	7.0	1.5	2.6
4		---	10	3.3	4.3	5.5	5.5	12	2.6	2.7	6.7	1.1
5		---	27	3.7	3.9	4.5	5.5	19	1.6	1.8	5.5	.65
6		---	37	5.0	3.6	5.7	4.7	19	1.3	1.2	4.2	.43
7		---	18	5.7	3.3	7.7	4.7	15	1.4	.90	7.5	.38
8		---	13	5.9	3.1	16	4.0	45	3.5	.79	4.0	.38
9		---	14	25	3.0	41	3.8	55	3.1	.76	2.2	.30
10		---	13	19	2.9	63	3.8	25	2.2	.72	1.5	.33
11		---	11	12	2.4	45	3.7	15	1.5	.67	1.4	.56
12		---	9.8	18	2.7	50	3.5	11	1.4	.65	1.3	.30
13		---	9.0	8.0	2.8	49	3.1	23	1.5	.56	.84	.22
14		---	12	7.0	12	75	2.7	29	1.0	.65	.60	.27
15		---	21	6.0	10	37	2.6	18	.90	.60	.51	.43
16		---	17	5.0	8.5	21	2.3	13	.80	3.1	.43	.43
17		---	13	6.0	7.7	16	2.5	10	.70	2.1	.41	.43
18		---	12	6.5	7.3	13	2.8	8.0	.65	.75	.35	.38
19		---	9.3	6.0	6.8	12	3.5	6.2	.70	.46	.35	.38
20		---	8.5	5.5	6.5	11	3.8	5.0	.80	.38	.30	.35
21		3.7	7.5	5.0	6.2	11	3.8	4.2	1.8	.33	.24	.30
22		8.2	6.5	4.8	6.0	9.8	3.7	3.3	1.5	.26	.22	.38
23		36	5.5	4.6	5.9	8.5	3.3	4.2	1.2	.51	.19	.38
24		25	5.7	4.4	6.0	7.7	3.8	9.8	1.1	.80	.18	.38
25		17	11	176	6.0	7.0	7.0	7.7	1.0	.80	.18	.46
26		13	11	276	6.4	8.0	135	6.0	.93	.45	.19	.35
27		10	10	34	7.7	9.3	95	4.5	.86	.40	.22	.33
28		10	8.5	17	7.5	12	27	3.7	.78	.42	.24	.33
29		17	7.5	12	---	13	15	3.1	.70	.39	.33	.27
30		30	5.7	5.8	---	11	13	3.0	.65	.44	.35	.27
31		---	6.2	7.5	---	9.5	---	2.8	---	1.0	7.0	---
TOTAL		---	387.7	712.8	159.8	599.3	398.3	409.5	43.17	36.89	49.83	19.67
MEAN		---	12.5	23.0	5.71	19.3	13.3	13.2	1.44	1.19	1.61	.66
MAX		---	37	276	12	75	139	55	3.5	7.0	7.5	3.3
MIN		---	5.5	3.3	2.7	4.5	2.3	2.8	.65	.26	.18	.22
CFSM		---	1.99	3.67	.91	3.08	2.12	2.11	.23	.19	.26	.11
IN. †		---	2.30	4.23	.95	3.56	2.36	2.43	.26	.22	.30	.12
IN. ‡		---	2.25	2.99	1.07	2.78	4.13	---	2.81	3.98	5.05	1.99

† Runoff.

‡ Rainfall.

03202310 BEARHOLE FORK AT PINEVILLE, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1977 to September 1978.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1977 to September 1978.

pH: March to September 1978.

WATER TEMPERATURES: November 1977 to September 1978.

TURBIDITY: March to September 1978.

SUSPENDED-SEDIMENT DISCHARGE: November 1977 to September 1978.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 146 micromhos July 31; minimum daily, 39 micromhos Dec. 16, May 9.

pH: Maximum observed, 8.2 units July 20; minimum observed 6.2 units Apr. 27, 28.

WATER TEMPERATURES: Maximum observed, 28.0 Sept. 4; minimum observed, 0.0°C Jan. 10.

TURBIDITY: Maximum observed, 150 NTU Aug. 31; minimum observed, 1 NTU Mar. 4.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 290 mg/L Apr. 26; minimum daily mean, 1 mg/L Jan. 21.

SEDIMENT LOADS: Maximum daily, 216 tons (196 tonnes) Jan. 26; minimum daily, 0 tons (0 tonnes) July 21, 22, Aug. 18-20, 22-30, Sept. 28, 29.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
NOV												
21...	1200	4.7	80	7.0	--	--	--	--	--	--	--	--
22...	0945	5.5	80	7.1	--	--	--	--	--	--	--	--
22...	1430	11	90	7.0	8.5	--	--	--	--	--	--	--
DEC												
08...	1400	13	55	6.8	3.5	--	--	--	--	--	--	--
12...	1330	10	<50	6.7	1.0	--	12.6	--	--	--	--	--
FEB												
28...	0925	7.4	75	7.1	.0	--	--	--	--	--	--	--
MAR												
09...	1530	49	60	7.3	6.0	80	--	--	--	--	--	--
APR												
05...	1415	4.8	--	--	--	6.0	--	16	0	4.0	1.5	5.8
26...	1020	85	50	6.9	9.0	80	8.0	--	--	--	--	--
26...	1330	330	<50	6.8	9.0	100	--	--	--	--	--	--
26...	1735	223	<50	6.1	8.5	--	8.8	--	--	--	--	--
MAY												
15...	1310	18	<50	7.1	11.0	7.0	--	11	2	2.6	1.1	2.8
22...	2000	2.9	69	7.4	17.0	3.0	9.1	--	--	--	--	--
JUN												
22...	1215	1.3	105	7.5	20.0	8.0	--	29	5	7.4	2.5	11
JUL												
12...	0950	.71	170	7.2	16.5	3.0	--	--	--	--	--	--
20...	1410	.38	110	8.3	27.0	3.0	8.8	28	0	7.1	2.5	13
AUG												
03...	1700	.28	160	7.5	26.0	3.0	8.1	--	--	--	--	--
SEP												
07...	1040	.36	150	7.2	18.5	4.0	9.4	--	--	--	--	--
12...	1345	.86	130	7.2	22.5	3.0	--	--	--	--	--	--
14...	1415	.35	115	7.4	21.5	3.0	9.3	37	0	9.4	3.3	16
21...	0845	.27	148	7.1	19.5	--	--	40	0	10	3.7	17
22...	0915	.35	150	7.2	22.0	--	--	--	--	--	--	--

03202310 BEARHOLE FORK AT PINEVILLE, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

[illegible][illegible]

GUYANDOTTE RIVER BASIN

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03202310 BEARHOLE FORK AT PINEVILLE, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
NOV		
21...	58	.74
22...	4	.06
22...	37	1.1
DEC		
08...	4	.14
12...	23	.62
MAR		
09...	215	28
APR		
05...	10	.13
26...	393	90
26...	417	372
MAY		
15...	15	.73
22...	2	.02
JUN		
22...	14	.05
JUL		
12...	7	.01
20...	7	.01
AUG		
03...	0	.00
SEP		
07...	296	.29
12...	9	.02
14...	11	.01

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	49	56	56	---	52	---	68	111	117	82
2		---	48	59	56	79	55	54	71	104	121	94
3		---	---	58	67	73	59	61	79	91	125	93
4		66	---	61	74	75	62	59	77	94	99	96
5		---	---	64	73	82	65	52	79	95	95	105
6		---	---	82	66	94	60	44	78	101	112	108
7		---	---	65	66	117	62	46	84	100	81	115
8		---	55	69	73	116	61	47	85	99	93	111
9		---	53	43	96	62	61	39	81	100	90	115
10		---	44	42	89	49	62	43	78	106	93	117
11		---	42	50	84	43	63	45	77	108	104	109
12		---	44	46	84	---	62	51	81	138	99	122
13		---	45	53	108	45	63	52	88	110	101	117
14		---	62	54	90	41	63	42	90	113	102	120
15		---	44	55	70	46	72	45	92	113	105	120
16		---	39	58	76	53	65	48	95	101	110	117
17		---	42	76	82	59	66	50	92	106	111	123
18		---	45	96	74	56	70	49	94	131	113	122
19		---	49	78	82	54	68	51	95	110	117	125
20		---	49	66	72	54	---	54	98	110	121	126
21		80	51	69	67	52	---	55	107	119	124	127
22		85	53	70	66	56	58	60	104	117	123	130
23		---	50	74	67	57	58	64	113	116	123	127
24		---	51	87	135	56	60	58	108	110	123	134
25		---	54	84	106	58	77	48	108	117	129	129
26		48	41	44	89	71	43	48	105	114	119	131
27		46	40	58	75	77	40	52	110	117	120	129
28		60	43	49	89	56	44	55	107	117	142	133
29		58	46	50	---	49	---	58	104	123	120	132
30		42	49	56	---	49	---	67	107	118	113	134
31		---	48	54	---	50	---	63	---	146	72	---
MEAN		61	48	62	80	63	60	52	92	111	110	118
WTR YR 1978	MEAN	80		MAX	146	MIN	39					

GUYANDOTTE RIVER BASIN

03202310 BEARHOLE FORK AT PINEVILLE, WV--Continued

PH (UNITS), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	7.3	---	6.8	7.0	7.8	7.4
2						7.3	7.3	6.3	6.9	7.1	7.8	7.4
3						7.4	7.2	6.3	6.9	7.1	7.7	7.4
4						7.4	7.2	6.4	6.9	7.0	7.8	7.4
5						7.4	7.3	6.4	6.9	7.1	7.8	7.4
6						7.3	7.4	6.5	6.8	7.1	7.7	7.5
7						7.3	7.3	6.5	6.9	7.2	7.7	7.6
8						7.3	7.4	6.5	7.0	7.2	7.6	7.5
9						7.4	7.3	6.6	7.0	7.2	7.6	7.5
10						7.4	7.3	6.6	7.0	7.2	7.6	7.5
11						7.4	7.2	6.6	6.9	7.2	7.6	7.6
12						---	7.3	6.6	6.9	7.2	7.6	7.4
13						7.4	7.3	6.6	7.0	7.2	7.6	7.5
14						7.3	7.3	6.7	7.1	7.2	7.6	7.6
15						7.3	7.2	6.9	7.1	7.2	7.6	7.7
16						7.3	7.3	6.6	6.9	7.3	7.6	7.7
17						7.3	7.3	6.7	7.1	7.3	7.7	7.7
18						7.2	7.3	6.6	7.1	8.0	7.7	7.7
19						7.3	7.2	6.6	7.2	8.0	7.7	7.7
20						7.3	---	6.6	7.2	8.2	7.7	7.7
21						7.3	---	6.6	7.2	7.9	7.7	7.7
22						7.3	7.3	7.2	7.3	7.9	7.7	7.6
23						7.2	7.3	6.5	7.0	7.9	7.7	7.6
24						7.2	7.3	6.6	7.1	7.9	7.7	7.7
25						7.2	7.2	6.7	7.0	7.9	7.1	7.7
26						7.2	6.7	6.7	7.1	7.9	7.2	7.8
27						7.2	6.2	7.0	7.2	7.9	7.3	7.8
28						7.2	6.2	6.9	6.9	7.8	7.3	7.7
29						7.3	---	6.9	6.9	7.8	7.4	7.7
30						7.3	---	6.9	7.0	7.8	7.5	7.8
31						7.3	---	7.0	---	7.8	7.5	---
MEAN						7.3	7.2	6.7	7.0	7.5	7.6	7.6
WTR YR 1978	MEAN	7.3		MAX	8.2		MIN	6.2				

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	6.5	7.0	2.5	---	9.0	---	---	25.0	24.0	18.5
2		---	8.0	4.5	3.5	2.5	9.0	---	---	22.0	25.0	20.0
3		---	---	2.5	3.5	3.0	8.0	---	---	20.5	25.0	20.0
4		15.0	---	3.5	4.0	4.0	8.5	---	---	19.0	24.0	28.0
5		---	---	5.0	4.0	1.5	---	---	---	23.5	23.0	22.0
6		---	---	4.0	3.5	3.0	---	---	---	24.0	24.0	20.0
7		---	---	7.0	2.5	5.0	---	---	---	23.0	20.0	20.0
8		---	3.5	1.5	3.0	3.0	---	---	---	26.0	22.0	23.0
9		---	---	1.0	2.0	6.0	---	---	---	25.5	22.0	23.0
10		---	3.0	.0	1.5	6.0	---	---	---	24.0	24.0	23.0
11		---	2.0	1.0	1.5	5.5	---	---	---	23.0	23.0	21.0
12		---	2.0	2.5	1.5	---	---	---	---	20.0	25.5	23.0
13		---	6.5	3.0	1.5	7.0	---	---	---	20.0	22.0	22.0
14		---	7.0	3.0	2.0	9.0	---	---	---	20.0	24.0	21.0
15		---	7.0	3.0	4.5	8.5	---	11.0	---	22.5	24.0	22.0
16		---	7.0	3.0	4.0	5.0	---	---	---	21.5	25.0	19.0
17		---	7.5	4.0	4.5	4.5	---	---	---	24.0	25.0	20.0
18		---	9.0	4.0	3.0	6.0	---	---	---	23.5	24.0	20.0
19		---	8.5	2.5	4.5	9.5	---	---	---	25.0	23.5	20.0
20		---	9.5	1.0	3.0	10.5	---	---	---	26.0	24.0	20.0
21		---	7.0	1.5	3.5	10.0	---	---	---	25.5	25.0	22.0
22		8.5	5.5	4.0	2.0	10.5	---	17.0	20.0	25.5	24.0	19.5
23		---	6.5	2.0	3.0	10.0	---	---	---	27.0	25.0	19.0
24		---	8.0	4.0	3.5	10.0	---	---	---	25.0	25.0	19.0
25		---	6.0	3.5	5.0	7.5	---	---	---	23.0	24.5	19.0
26		5.0	3.0	3.5	3.5	6.5	9.0	---	---	24.0	25.5	19.0
27		3.0	3.5	3.0	3.5	5.0	---	---	---	24.0	22.0	19.0
28		6.0	2.0	2.0	4.5	7.0	---	---	---	25.0	24.5	18.0
29		8.0	3.0	2.0	---	8.0	---	---	20.5	23.5	24.0	19.0
30		9.5	4.0	2.5	---	8.5	---	---	24.0	24.0	24.0	18.0
31		---	6.5	2.5	---	9.0	---	---	---	25.0	21.0	---
MEAN		8.0	5.5	3.0	3.0	6.5	8.5	14.0	21.5	23.5	24.0	20.5
WTR YR 1978	MEAN	12.5		MAX	28.0		MIN	.0				

03202310 BEARHOLE FORK AT PINEVILLE, WV--Continued

TURBIDITY (NTU), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	4	---	5	2	4	40
2						2	5	3	3	15	3	7
3						2	4	4	9	30	3	8
4						1	4	45	5	7	9	15
5						90	6	15	3	4	9	30
6						60	3	6	3	3	55	4
7						10	3	4	5	4	20	4
8						40	2	40	30	3	60	3
9						75	3	10	9	2	6	8
10						20	3	6	4	6	4	5
11						10	3	4	3	50	15	4
12						---	3	3	4	4	8	3
13						20	3	65	6	6	5	3
14						35	2	9	5	10	3	3
15						20	15	6	5	10	4	5
16						9	2	5	5	15	3	3
17						6	2	4	4	9	3	2
18						5	9	4	4	3	3	3
19						6	9	4	3	3	3	3
20						6	---	3	3	3	3	2
21						5	---	3	80	2	2	2
22						6	2	3	8	2	2	3
23						6	3	7	6	2	3	2
24						6	4	20	4	7	2	8
25						4	100	8	4	20	2	4
26						20	85	6	5	4	2	5
27						10	20	5	4	3	2	3
28						10	10	5	2	3	2	2
29						7	---	4	2	2	2	3
30						4	---	5	2	5	2	4
31						4	---	5	---	15	150	---
MEAN						15	10	10	8	8	10	6
WTR YR 1978	MEAN		10	MAX	150	MIN	1					

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6	.13	10	.30	7	.04	7	.01	12	.02	42	.37
2	5	.09	7	.18	8	.03	97	1.2	4	.00	54	.44
3	5	.08	7	.16	41	.37	67	1.3	14	.06	27	.19
4	27	.40	105	3.8	7	.05	17	.12	51	.92	20	.06
5	16	.24	64	3.1	4	.02	10	.05	22	.33	20	.04
6	6	.08	17	.87	5	.02	8	.03	215	2.4	17	.02
7	3	.04	13	.53	7	.03	10	.02	53	1.1	10	.01
8	3	.03	155	19	54	.51	10	.02	15	.16	15	.02
9	3	.03	45	6.7	13	.11	6	.01	13	.08	17	.01
10	6	.06	16	1.1	9	.05	11	.02	14	.06	42	.04
11	5	.05	10	.41	6	.02	11	.02	34	.13	13	.02
12	5	.05	8	.24	35	.13	14	.02	18	.06	10	.01
13	5	.04	184	10	20	.08	30	.05	12	.03	12	.01
14	4	.03	48	3.8	10	.03	35	.06	7	.01	12	.01
15	4	.01	15	.73	7	.02	56	.09	7	.01	29	.03
16	2	.01	13	.46	8	.02	136	1.1	6	.01	12	.01
17	3	.02	9	.24	7	.01	35	.20	5	.01	13	.02
18	16	.12	6	.13	5	.01	12	.02	5	.00	15	.02
19	7	.07	5	.08	6	.01	7	.01	3	.00	10	.01
20	8	.08	4	.05	11	.02	6	.01	6	.00	9	.01
21	6	.06	4	.05	41	.20	4	.00	8	.01	12	.01
22	5	.05	5	.04	17	.07	5	.00	6	.00	23	.02
23	3	.03	45	.51	13	.04	10	.01	7	.00	16	.02
24	5	.05	44	1.2	9	.03	30	.06	6	.00	14	.01
25	66	1.7	13	.27	13	.04	32	.07	6	.00	13	.02
26	290	113	10	.16	12	.03	13	.02	6	.00	12	.01
27	49	13	10	.12	9	.02	6	.01	6	.00	8	.01
28	25	1.8	12	.12	7	.01	7	.01	5	.00	5	.00
29	14	.57	6	.05	5	.01	7	.01	4	.00	5	.00
30	11	.39	7	.06	6	.01	25	.03	5	.00	7	.01
31	---	---	7	.05	---	---	25	.07	123	2.3	---	---
TOTAL	---	132.31	---	54.51	---	2.04	---	4.65	---	7.70	---	1.46
TOTAL LOAD FOR YEAR:			440.18	TONS.								

GUYANDOTTE RIVER BASIN

03202310 BEARHOLE FORK AT PINEVILLE, WV--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1			---	---	4	.23	9	.15	4	.97	13	.25
2			---	---	4	.15	6	.08	4	.06	4	.07
3			---	---	5	.16	5	.05	17	.22	2	.04
4			---	---	12	.32	6	.05	44	.51	2	.03
5			---	---	108	7.9	5	.05	5	.05	83	1.1
6			---	---	57	5.7	24	.37	6	.06	71	1.1
7			---	---	12	.58	22	.34	12	.11	23	.48
8			---	---	7	.25	70	2.4	36	.30	98	6.1
9			---	---	4	.15	64	25	64	.52	151	18
10			---	---	4	.14	12	.62	64	.50	112	20
11			---	---	8	.24	9	.29	55	.42	25	3.0
12			---	---	15	.40	9	.24	52	.38	126	17
13			---	---	7	.17	8	.17	36	.27	121	16
14			---	---	40	1.8	5	.09	78	2.5	123	25
15			---	---	54	3.1	2	.03	22	.59	115	11
16			---	---	10	.46	3	.04	13	.30	21	1.2
17			---	---	7	.25	3	.05	7	.15	7	.30
18			---	---	7	.23	3	.05	5	.10	7	.25
19			---	---	20	.50	3	.05	7	.13	14	.45
20			---	---	15	.34	2	.03	9	.16	11	.33
21			41	.41	7	.14	1	.01	6	.10	9	.27
22			54	1.2	7	.12	2	.03	2	.03	7	.19
23			151	15	5	.07	16	.20	35	.56	6	.14
24			22	1.5	15	.29	16	.19	16	.26	6	.12
25			10	.46	22	.65	226	203	25	.41	66	1.7
26			9	.32	6	.18	199	216	11	.19	15	.32
27			7	.19	4	.11	26	2.4	5	.10	13	.33
28			7	.19	9	.21	10	.46	22	.45	18	.58
29			17	.78	14	.28	6	.19	---	---	34	1.2
30			33	2.7	6	.11	6	.16	---	---	12	.36
31			---	---	5	.03	5	.10	---	---	6	.15
TOTAL			---	22.75	---	25.31	---	452.89	---	9.50	---	127.06

GUYANDOTTE RIVER BASIN

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03202400 GUYANDOTTE RIVER NEAR BAILEYSVILLE, WV

LOCATION.--Lat 37°36'15", long 81°38'44", Wyoming County, Hydrologic Unit 05070101, on right bank 75 ft (23 m) upstream from Doublecamp Branch, and 3.1 mi (5.0 km) east of Baileysville.

DRAINAGE AREA.--308 mi² (798 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 1,140.00 ft (347.472 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 10, 1969, at site 25 ft (8 m) upstream at same datum.

REMARKS.--Water-discharge records good except those for January and February, which are poor. Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--10 years, 453 ft³/s (12.83 m³/s), 19.97 in/yr (507 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,700 ft³/s (1,040 m³/s) Apr. 5, 1977, gage height, 26.89 ft (8.196 m), from rating curve extended above 14,000 ft³/s (400 m³/s) on basis of slope-area measurement of peak flow; minimum, 21 ft³/s (0.59 m³/s) Oct. 14, 1970, gage height, 2.44 ft (0.744 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,400 ft³/s (120 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 26	0930	*13100 371	17.18 5.236	Apr. 27	0245	8420 238	13.11 3.996
Mar. 14	1930	4810 136	9.66 2.944				

Minimum discharge, 54 ft³/s (1.53 m³/s) Sept. 27, 28, gage height, 2.77 ft (0.844 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	132	298	1100	322	620	395	625	884	314	109	109	238
2	1220	270	856	314	550	354	560	752	286	138	116	123
3	620	254	706	262	490	363	498	665	302	294	90	138
4	354	238	635	232	440	338	458	740	322	217	408	96
5	244	226	862	250	400	274	449	944	259	160	615	79
6	202	742	1660	266	370	318	417	914	245	138	286	70
7	172	2600	1150	310	340	368	399	776	238	121	294	73
8	172	2770	850	326	320	521	359	1270	274	109	266	70
9	2010	1680	808	850	300	998	342	2190	306	105	217	64
10	1530	1150	742	868	290	2230	326	1530	252	103	169	68
11	736	922	655	660	280	2240	330	1060	229	160	140	90
12	475	748	585	570	270	2250	326	854	208	126	154	92
13	350	615	555	450	270	2600	294	908	214	107	143	79
14	290	515	565	370	467	3590	274	1180	187	107	109	68
15	247	455	1000	320	476	3010	256	1070	175	181	114	68
16	382	414	952	280	435	1820	245	914	163	259	114	75
17	630	442	778	260	426	1350	238	770	160	229	103	68
18	570	438	695	240	431	1060	252	655	160	145	92	61
19	455	406	610	220	444	926	274	575	154	116	81	61
20	370	374	550	210	431	848	314	516	178	100	75	70
21	302	346	505	200	440	824	330	471	184	103	72	64
22	258	390	455	190	417	788	318	426	229	98	73	63
23	235	982	406	180	342	675	286	408	169	92	77	64
24	214	1110	390	170	390	605	282	728	138	92	77	66
25	211	904	475	1020	354	570	310	776	128	105	75	64
26	630	826	470	8370	395	610	2600	590	123	114	73	59
27	808	690	430	2640	368	896	5500	489	135	103	63	56
28	620	630	402	1520	390	950	1590	426	131	100	66	56
29	485	700	354	1080	---	932	1260	381	121	94	68	61
30	402	1100	354	830	---	812	1030	363	112	90	77	59
31	338	---	342	734	---	698	---	368	---	100	138	---
TOTAL	15664	23235	20897	24514	11146	34213	21142	24593	6096	4115	4554	2363
MEAN	505	775	674	791	398	1104	705	793	203	133	147	78.8
MAX	2010	2770	1660	8370	620	3590	5500	2190	322	294	615	238
MIN	132	226	342	170	270	274	238	363	112	90	63	56
CFSM	1.64	2.52	2.19	2.57	1.29	3.58	2.29	2.58	.66	.43	.48	.26
IN.	1.89	2.81	2.52	2.96	1.35	4.13	2.55	2.97	.74	.50	.55	.29

CAL YR 1977	TOTAL	194488	MEAN 533	MAX 17900	MIN 70	CFSM 1.73	IN 23.49
WTR YR 1978	TOTAL	192532	MEAN 527	MAX 8370	MIN 56	CFSM 1.71	IN 23.25

GUYANDOTTE RIVER BASIN

03202400 GUYANDOTTE RIVER NEAR BAILEYSVILLE, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1973 to October 1976, January to September 1977.

WATER TEMPERATURES: June 1976 to current year. Once daily readings prior to October 1976.

SUSPENDED-SEDIMENT DISCHARGE: July 1973 to current year.

INSTRUMENTATION.--Temperature recorder since June 1976.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 764 micromhos Oct. 22, 1973, Oct. 14, 1974; minimum daily, 58 micromhos Mar. 30, 1975.

WATER TEMPERATURES: Maximum, 30.5°C June 28, 1978; minimum, 0.0°C many days during winter periods.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,200 mg/L Jan. 26, 1978; minimum daily mean, 0 mg/L Nov. 12, 23, 1976.

SEDIMENT LOADS.--Maximum daily, 56,800 tons (51,500 tonnes) Jan. 26, 1978; minimum daily, 0 ton (0 tonne) Nov. 12, 23, 1976.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 587 micromhos July 26; minimum daily, 91 micromhos Jan. 26.

WATER TEMPERATURES: Maximum 30.5°C June 28; minimum, 0.0°C several days in January and February.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,200 mg/L Jan. 26; minimum daily mean, 1 mg/L Jan. 3.

SEDIMENT LOADS: Maximum daily, 56,800 tons (51,500 tonnes) Jan. 26; minimum daily, 0.71 ton (0.64 tonne) Jan. 3.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	177	314	319	---	273	241	---	536	559	414
2	318	---	198	318	339	---	280	---	398	---	560	---
3	185	341	---	321	338	324	295	285	402	461	552	---
4	---	357	---	337	343	329	305	267	410	400	450	330
5	291	---	219	338	362	341	319	234	---	366	269	---
6	---	300	152	333	361	346	---	221	---	414	201	462
7	364	124	171	328	371	329	341	---	427	472	---	487
8	---	108	204	305	---	---	340	204	426	493	302	506
9	302	123	230	---	385	237	355	133	415	505	313	517
10	136	153	233	157	388	138	---	---	393	---	321	517
11	187	174	260	---	394	127	---	200	406	522	357	462
12	234	---	273	210	390	136	---	235	427	467	393	500
13	---	207	---	225	392	123	376	253	437	459	435	524
14	304	227	264	---	352	122	380	205	---	497	---	---
15	341	246	---	239	---	128	425	208	---	533	407	508
16	---	262	177	258	317	179	429	232	480	515	449	520
17	279	---	201	286	327	207	331	252	490	---	468	540
18	---	269	217	---	322	240	412	274	500	362	500	556
19	240	---	235	274	312	258	410	300	508	388	516	555
20	262	285	---	---	306	---	407	320	---	433	532	548
21	291	287	267	267	310	262	372	328	527	489	552	553
22	323	275	---	270	310	269	359	346	476	522	539	---
23	---	198	290	282	318	279	351	354	461	546	---	557
24	359	145	300	285	338	288	361	348	433	561	---	---
25	330	164	---	269	326	301	366	230	470	578	559	566
26	319	178	260	91	339	298	178	250	492	587	567	577
27	186	---	261	144	322	341	99	---	522	573	565	---
28	202	208	280	190	318	211	144	310	525	555	568	565
29	231	221	290	241	---	212	---	338	528	548	569	569
30	251	171	306	272	---	223	227	358	524	552	571	571
31	---	---	---	---	---	244	---	372	---	---	467	---
MEAN	270	218	238	262	342	240	325	270	462	494	464	518
WTR YR 1978	MEAN	343	MAX	587	MIN	91						

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TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	19.5	13.5	11.5	10.5	10.0	8.5	4.5	3.5	.5	.0	3.0	2.5
2	13.5	17.5	12.0	11.0	10.0	8.5	4.0	3.0	1.0	.0	2.5	1.5
3	17.5	16.0	14.0	12.0	8.5	7.5	3.0	1.5	1.5	.5	1.5	.5
4	16.0	15.0	15.0	14.0	8.5	7.5	1.5	1.0	1.5	.5	1.5	.5
5	15.0	14.0	16.0	15.0	9.0	8.5	1.0	.5	1.5	1.0	1.5	.0
6	14.5	14.5	16.0	15.5	4.0	1.5	2.5	1.0	1.5	.0	3.0	.5
7	15.0	14.0	15.0	14.0	---	---	4.0	2.5	.5	.0	4.0	2.5
8	15.0	14.5	14.0	13.5	---	---	5.0	4.0	.5	.0	4.0	3.5
9	14.5	14.0	14.0	13.5	---	---	5.0	2.0	.5	.0	5.0	3.5
10	13.5	12.5	14.0	11.5	---	---	2.0	1.0	.5	.0	5.0	4.0
11	13.5	12.5	11.5	8.5	---	---	1.0	1.0	.5	.0	4.5	3.0
12	13.5	12.5	3.5	7.0	---	---	1.0	1.0	1.0	.0	4.5	4.0
13	12.5	11.5	6.5	5.5	4.0	2.0	1.0	1.0	1.0	.0	6.0	4.0
14	11.5	11.0	5.5	5.0	5.5	4.0	1.0	1.0	2.0	1.0	7.0	5.5
15	11.0	10.0	6.5	5.5	6.5	5.5	1.0	.5	2.5	2.0	7.0	6.0
16	11.0	10.5	7.5	6.5	6.5	6.0	1.0	1.0	2.5	1.5	7.0	4.5
17	10.5	9.5	8.5	7.5	6.0	5.5	1.0	1.0	3.0	2.5	4.5	4.0
18	9.5	9.0	8.5	7.5	7.0	6.0	1.0	1.0	3.0	2.5	4.5	3.5
19	9.5	9.5	7.5	6.5	7.5	7.0	1.0	.5	3.5	2.0	6.5	4.0
20	10.5	10.0	6.5	6.0	7.0	6.5	1.0	.5	2.5	1.5	9.0	6.5
21	10.5	10.0	8.0	6.5	7.0	6.0	1.0	.5	2.0	1.0	9.5	8.0
22	11.5	10.5	9.5	8.5	5.5	4.0	1.0	1.0	1.0	.0	10.0	8.0
23	12.0	11.0	10.5	9.5	4.0	3.0	1.0	.5	.5	.0	10.0	8.0
24	12.5	11.5	10.5	10.5	4.5	3.0	1.0	.5	1.0	.0	11.5	9.0
25	12.5	12.0	10.5	9.0	5.5	4.5	2.0	1.0	3.0	1.0	11.5	10.0
26	13.0	12.5	9.0	6.5	5.0	2.5	2.5	2.0	3.0	2.5	10.0	7.5
27	13.5	13.0	---	---	2.0	1.0	2.0	1.5	3.0	1.5	7.5	6.0
28	14.0	13.5	---	---	1.0	1.0	1.5	1.0	2.5	1.5	7.5	5.5
29	14.0	13.5	---	---	1.0	1.0	.5	.0	---	---	8.5	7.5
30	13.5	13.0	8.5	7.5	1.5	1.0	.5	.0	---	---	9.0	7.0
31	13.0	11.5	---	---	3.5	2.0	.5	.0	---	---	10.0	7.5
MONTH	19.5	9.0	16.0	5.0	10.0	1.0	5.0	.0	3.5	.0	11.5	.0
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	11.5	9.0	11.5	9.0	23.0	20.5	25.5	26.5	25.0	22.5	25.0	24.0
2	13.0	10.5	11.5	9.5	23.0	21.0	28.5	26.0	25.0	21.5	25.0	22.5
3	13.0	12.0	11.5	9.0	22.0	20.0	26.5	24.0	24.5	22.0	26.0	23.5
4	13.0	12.0	11.5	10.5	21.0	19.0	24.0	23.0	24.0	21.0	25.0	23.0
5	14.5	12.0	10.5	10.0	21.5	19.0	24.5	22.0	21.0	19.5	24.5	23.0
6	13.5	12.5	12.0	10.0	22.5	19.5	26.5	22.0	22.0	19.5	24.5	22.5
7	15.0	12.5	12.0	11.5	21.5	20.5	26.5	23.0	22.5	21.0	25.0	22.5
8	15.0	12.5	12.0	11.0	21.0	20.5	27.5	24.0	22.5	21.5	25.0	23.0
9	15.5	13.0	12.0	10.5	22.0	19.5	27.5	24.5	23.5	22.0	24.0	22.5
10	16.5	14.0	12.5	11.5	23.0	19.5	28.0	25.5	24.5	22.0	24.5	23.0
11	15.5	14.5	13.0	10.5	24.5	21.0	27.0	25.0	24.0	22.0	23.5	21.5
12	15.5	12.5	14.0	12.5	26.0	22.0	26.5	22.5	26.0	22.0	26.5	21.5
13	15.0	12.5	13.5	12.5	26.0	23.0	26.0	22.5	25.5	23.5	27.0	25.0
14	14.5	12.0	12.5	10.0	24.0	21.0	24.0	22.5	26.0	23.0	26.0	24.0
15	14.0	12.0	10.0	9.5	24.0	19.5	24.0	22.5	27.0	23.5	25.0	23.5
16	13.5	11.0	10.5	9.5	24.5	20.5	23.5	21.5	28.0	24.5	25.0	23.0
17	15.0	12.0	12.0	10.0	25.5	21.5	24.0	21.5	28.0	25.5	25.5	23.5
18	14.0	14.0	14.5	11.5	27.0	23.0	25.5	21.0	27.5	25.0	26.0	24.0
19	13.5	12.5	16.5	13.5	27.5	24.0	27.0	22.0	28.0	24.5	26.5	24.5
20	12.0	10.0	17.5	14.5	28.0	24.5	27.5	24.0	28.0	26.0	26.5	25.0
21	9.5	8.0	13.0	10.5	27.0	25.0	28.5	25.0	27.0	24.0	27.0	25.5
22	11.0	7.5	---	---	26.0	24.5	29.0	26.0	27.0	24.0	26.5	23.5
23	11.0	9.5	---	---	26.0	23.0	29.5	26.0	27.5	24.5	23.5	22.5
24	13.5	10.5	17.5	15.5	26.5	22.0	29.5	26.0	27.5	24.5	23.0	21.5
25	13.0	11.5	16.5	14.5	27.0	22.5	28.0	24.5	27.5	25.5	24.0	22.5
26	11.5	7.0	19.0	15.5	28.0	24.0	26.0	23.5	27.5	25.5	22.0	20.0
27	9.5	6.5	20.0	17.0	30.0	25.5	26.0	22.5	27.5	25.5	21.0	19.5
28	9.5	8.0	21.0	18.0	30.5	27.0	25.0	22.5	28.0	26.0	21.0	20.0
29	10.0	9.5	21.0	19.5	30.0	26.5	25.0	22.0	27.5	26.0	20.0	18.0
30	10.5	9.5	21.5	20.0	30.0	27.0	24.0	22.0	27.0	25.5	20.5	18.0
31	---	---	22.5	20.0	---	---	25.0	22.0	26.5	25.0	---	---
MONTH	16.5	6.5	22.5	9.0	30.5	19.0	29.5	21.0	28.0	19.5	27.0	18.0
YEAR	30.5	.0										

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)		MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)		MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)		MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)		MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)	
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH									
1	70	37	12	4.7	54	160	2	1.7	13	22	5	5.3								
2	320	1130	13	5.5	133	307	2	1.7	11	10	7	6.7								
3	114	191	13	5.9	47	90	1	.71	10	15	7	6.9								
4	45	43	6	3.9	25	43	2	1.3	8	9.5	6	5.5								
5	27	18	5	3.1	125	376	2	1.4	8	8.6	7	5.2								
6	27	15	126	477	203	925	2	1.4	8	8.0	11	9.4								
7	32	15	341	2420	52	161	2	1.7	7	6.4	17	17								
8	34	16	392	2930	21	43	7	6.2	7	6.0	34	48								
9	218	1470	125	567	13	24	91	213	7	5.7	57	154								
10	120	496	42	130	10	20	42	90	7	5.5	232	1460								
11	53	105	26	65	7	12	37	66	9	6.6	261	1560								
12	22	28	15	3	7	11	34	52	8	5.8	193	1170								
13	15	14	5	0.3	11	16	26	32	8	5.8	243	1670								
14	10	7.8	2	2.8	17	26	17	17	42	53	832	8760								
15	7	4.7	3	3.7	54	171	8	6.9	15	19	598	4660								
16	43	50	2	2.2	22	57	3	2.3	7	8.2	492	2420								
17	36	61	5	0.5	11	23	3	2.1	7	8.1	172	653								
18	21	32	8	9.5	13	24	4	2.5	8	9.3	33	94								
19	10	12	5	5.5	34	56	3	1.8	9	11	18	45								
20	11	11	2	2.5	9	13	3	1.7	8	9.3	14	32								
21	10	8.2	4	3.7	4	5.5	2	1.1	5	5.9	11	24								
22	7	4.5	27	20	3	3.7	2	1.0	7	7.9	10	21								
23	6	3.8	142	37	3	3.3	2	.97	7	6.5	5	9.1								
24	7	4.7	46	130	22	23	2	.95	7	7.4	6	9.8								
25	5	2.8	17	41	55	71	152	714	10	9.6	7	11								
26	56	108	12	27	15	19	2200	56400	11	12	10	16								
27	35	76	10	15	4	4.6	430	3070	16	16	98	237								
28	27	45	7	12	2	2.2	104	427	8	8.4	35	90								
29	17	22	26	49	2	1.9	33	96	---	---	7	18								
30	11	12	75	223	2	1.9	26	54	---	---	5	20								
31	10	9.1	---	---	3	2.8	16	32	---	---	7	13								
TOTAL	---	4052.3	---	7604.8	---	2705.9	---	61712.50	---	310.7	---	23450.9								

DAY	MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)		MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)		MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)		MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)		MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)	
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER									
1	7	12	33	79	10	8.5	5	1.5	17	5.0	175	118								
2	5	7.6	15	30	10	7.7	23	8.5	13	4.1	96	32								
3	6	11	10	18	27	22	138	112	15	3.6	127	47								
4	5	6.2	27	54	38	33	104	61	306	471	97	25								
5	5	6.1	47	120	19	7.0	87	38	331	564	77	16								
6	6	6.8	23	57	10	6.6	54	20	374	289	56	11								
7	6	6.5	30	63	11	7.1	32	10	210	167	43	8.5								
8	9	8.7	143	609	22	16	22	6.5	123	80	44	8.3								
9	5	4.6	270	1631	18	15	17	4.8	89	52	35	6.0								
10	4	3.5	77	318	10	6.8	22	6.1	73	33	37	7.9								
11	5	4.5	30	66	6	3.7	58	29	62	23	114	28								
12	5	4.4	15	30	5	3.4	54	22	65	27	60	15								
13	4	3.2	42	127	8	4.6	74	21	43	17	40	8.5								
14	4	3.0	94	292	5	4.5	39	11	42	12	38	7.0								
15	4	2.8	27	76	7	3.3	46	73	40	12	37	6.8								
16	3	2.1	17	42	7	3.1	149	114	33	10	33	6.7								
17	4	2.6	24	50	5	2.2	113	70	40	11	34	6.2								
18	10	6.4	15	27	5	2.2	120	47	47	12	28	4.6								
19	27	20	14	22	7	2.9	96	31	33	7.2	27	4.4								
20	16	14	11	15	27	13	57	15	25	5.1	26	4.9								
21	7	6.2	9	11	19	9.4	44	12	18	3.5	23	4.0								
22	5	4.3	10	12	45	28	37	7.8	15	3.0	26	4.4								
23	5	3.9	12	13	29	13	31	7.7	15	3.1	29	5.0								
24	4	3.0	114	224	32	12	30	7.5	17	3.5	27	4.8								
25	10	8.4	56	187	20	6.9	37	10	17	3.4	23	4.0								
26	696	8980	26	41	11	3.7	24	7.4	19	3.7	32	5.1								
27	824	12200	15	20	9	3.3	17	4.7	17	2.9	20	3.0								
28	225	1210	12	14	7	2.5	19	5.1	13	2.3	17	2.6								
29	112	381	10	10	6	2.0	24	6.1	15	2.8	17	2.8								
30	98	273	11	11	5	1.5	25	6.1	22	4.6	14	2.2								
31	---	---	10	5.9	---	---	22	5.9	163	68	---	---								
TOTAL	---	23206.1	---	4241.9	---	254.9	---	783.8	---	1913.8	---	409.7								

TOTAL LOAD FOR YEAR: 130647.30 TONS.	
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GUYANDOTTE RIVER BASIN

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03202490 INDIAN CREEK AT FANROCK, WV

LOCATION.--Lat 37°34'00", long 81°39'10", Wyoming County, Hydrologic Unit 05070101, on left bank at Fanrock, 20 ft (6 m) downstream from Brier Creek, 1.8 mi (2.9 km) downstream from Stop Branch, and at mile 2.5 (4.0 km).

DRAINAGE AREA.--40.7 mi² (105.4 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Altitude of gage is 1,210 ft (369 m), from topographic map. Prior to Oct. 22, 1974, nonrecording gage at same site and datum.

REMARKS.--Water-discharge records good except those for period of no gage-height record, July 30 to Aug. 30, which are fair and those for Dec. 22 to Feb. 11, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,300 ft³/s (178 m³/s) Apr. 4, 1977, gage height, 18.67 ft (5.691 m), from rating curve extended above 700 ft³/s (20 m³/s) on basis of slope-area measurement of peak flow; minimum, 1.1 ft³/s (0.03 m³/s) July 22, 23, 24, Aug. 12, 13, 14, 1976, gage height, 6.54 ft (1.993 m).

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 500 ft³/s (14 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Oct. 9	1345	699 19.8	10.95 3.338	Mar. 10	1645	576 16.3	10.44 3.182
Nov. 6	1900	954 27.0	11.74 3.578	Apr. 26	2300	1200 34.0	12.37 3.770
Jan. 26	0545	*3180 90.1	15.60 4.755				

Minimum discharge, 1.7 ft³/s (0.05 m³/s) Aug. 24-27, gage height, 6.65 ft (2.027 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	37	167	38	45	46	84	93	16	2.3	3.8	14
2	244	32	115	36	39	43	75	77	12	12	3.0	4.7
3	78	29	90	24	33	42	66	65	19	27	2.4	9.3
4	40	26	76	19	30	39	59	63	17	6.9	38	4.0
5	24	23	136	22	28	34	53	88	11	4.3	67	2.8
6	18	288	242	26	26	35	49	112	9.3	3.5	21	2.3
7	14	587	157	33	25	50	46	106	8.9	3.0	23	2.1
8	19	386	108	41	24	128	42	111	17	2.6	14	2.1
9	417	205	109	168	23	304	38	229	21	2.5	9.3	1.9
10	220	159	109	159	22	547	35	209	16	3.5	7.2	2.1
11	92	138	100	125	24	400	32	111	10	25	7.2	5.6
12	56	108	85	84	26	358	31	76	8.9	6.2	9.6	3.8
13	38	83	74	60	28	354	29	66	8.9	3.8	5.4	2.8
14	29	67	76	46	55	352	26	82	6.2	3.4	4.1	2.3
15	23	58	93	40	65	286	23	89	5.2	3.4	3.7	2.3
16	63	50	100	36	61	186	21	81	4.7	29	3.1	2.3
17	119	51	93	32	54	132	19	65	4.5	15	2.7	2.2
18	95	48	84	30	56	100	18	54	4.3	7.2	2.4	2.1
19	71	44	64	28	56	87	17	45	4.0	4.3	2.3	2.1
20	51	40	60	27	54	75	18	37	4.0	3.5	2.2	2.1
21	38	38	55	26	52	66	18	29	4.5	3.0	2.1	2.1
22	31	53	48	25	49	61	15	25	6.2	2.5	2.0	2.3
23	26	199	41	24	40	48	13	21	4.3	2.3	1.9	2.3
24	23	212	39	23	42	42	15	33	3.8	3.0	1.7	2.4
25	22	151	59	240	47	37	25	38	3.0	7.2	1.7	2.5
26	133	108	56	1660	57	41	535	31	3.4	6.0	1.7	2.5
27	136	83	49	350	54	51	729	22	4.0	3.5	1.7	2.4
28	96	77	44	120	50	73	280	19	3.1	4.1	1.8	2.3
29	73	107	42	80	---	94	149	24	2.7	3.3	2.3	2.3
30	56	190	40	68	---	97	108	38	2.5	3.3	3.7	2.1
31	45	---	40	53	---	94	---	25	---	5.6	9.3	---
TOTAL	2420	3677	2656	3743	1165	4302	2668	2164	245.4	212.2	261.3	96.1
MEAN	78.1	123	85.7	121	41.6	139	88.9	69.8	8.18	6.85	8.43	3.20
MAX	417	587	242	1660	65	547	729	229	21	29	67	14
MIN	14	23	39	19	22	34	13	19	2.5	2.3	1.7	1.9
CFSM	1.92	3.02	2.11	2.97	1.02	3.42	2.18	1.72	.20	.17	.21	.08
IV.	2.21	3.36	2.43	3.42	1.06	3.93	2.44	1.98	.22	.19	.24	.09

CAL YR 1977	TOTAL	25609.4	MEAN 70.2	MAX 2670	MIN 1.7	CFSM 1.73	IN 23.41
WTR YR 1978	TOTAL	23610.0	MEAN 64.7	MAX 1660	MIN 1.7	CFSM 1.59	IN 21.58

GUYANDOTTE RIVER BASIN

03202490 INDIAN CREEK AT FANROCK, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: June 1974 to current year.

WATER TEMPERATURES: November 1974 to March 1975, August 1975 to current year.

SUSPENDED-SEDIMENT DISCHARGE: June 1974 to current year.

INSTRUMENTATION.--Temperature recorder since Nov. 20, 1974.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 349 micromhos July 20, 1976; minimum daily, 42 micromhos Jan. 1, 1976.

WATER TEMPERATURES: Maximum, 26.0°C Aug. 24, 1975; minimum, 0.0°C on many days during winter periods.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,130 mg/L Mar. 10, 1978; minimum daily mean, 1 mg/L Oct. 8, 1974, several days during 1976, and April 17, 1978.

SEDIMENT LOADS: Maximum daily, 5,410 tons (4,910 tonnes) Apr. 4, 1977; minimum daily, 0 ton (0 tonne) Oct. 8, 1974.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 243 micromhos Aug. 27, 28; minimum daily, 45 micromhos Apr. 27.

WATER TEMPERATURES: Maximum, 25.5°C July 22, 23; minimum, 0.0°C on many days in January, February, and March.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,130 mg/L Mar. 10; minimum daily mean, 1 mg/L Apr. 17.

SEDIMENT LOADS: Maximum daily, 1,680 tons (1,520 tonnes) Mar. 10; minimum daily, 0.04 ton (0.04 tonne) July 1, 24.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93	92	61	79	---	76	77	62	112	173	156	---
2	86	93	69	79	---	85	77	67	95	119	210	---
3	91	91	70	78	---	74	83	76	101	124	---	---
4	105	141	74	---	85	86	87	66	103	---	160	139
5	130	103	81	128	93	101	---	65	106	146	108	153
6	119	67	61	87	---	91	---	57	---	153	---	160
7	56	54	61	85	---	---	---	---	120	154	---	161
8	80	68	65	101	---	69	---	56	107	191	---	184
9	105	71	70	---	97	60	---	72	117	223	---	176
10	176	75	63	---	---	51	100	---	104	---	110	198
11	88	61	62	---	134	57	107	84	101	109	119	163
12	83	65	77	---	98	56	101	76	110	151	116	156
13	89	74	75	---	88	62	107	68	114	166	150	181
14	94	77	94	79	77	61	117	70	128	123	135	176
15	115	100	70	82	73	---	122	---	142	118	155	204
16	93	83	62	---	73	70	114	---	148	129	155	---
17	90	85	61	99	75	69	105	99	---	118	223	200
18	68	---	70	84	72	69	117	88	---	---	---	234
19	80	---	69	82	71	---	107	91	---	---	172	225
20	---	56	70	---	72	70	104	---	---	159	201	231
21	89	55	69	---	69	66	101	---	---	186	183	---
22	93	64	73	71	---	77	100	---	---	178	214	237
23	94	64	78	75	76	89	---	98	158	162	185	188
24	99	68	77	---	75	81	107	101	155	177	185	215
25	118	72	71	61	89	83	109	116	149	198	210	---
26	75	74	66	---	77	82	51	---	175	154	---	213
27	74	70	67	53	75	84	45	---	172	140	243	---
28	78	70	91	59	77	82	54	112	169	---	243	---
29	78	69	72	63	---	61	54	121	183	161	215	238
30	81	61	93	68	---	72	---	86	187	134	187	234
31	88	---	81	---	---	72	---	111	---	---	151	---
MEAN	94	76	72	80	82	73	93	84	133	154	174	194
WTR YR 1978	MEAN	107	MAX	243	MIN	45						

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TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Day	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
	October		November		December		January		February		March	
1	17.0	16.5	11.5	10.5	10.0	9.0	4.5	4.0	.5	.0	3.0	2.0
2	17.0	16.5	12.0	11.0	10.0	8.5	4.5	3.5	.5	.0	1.5	.5
3	16.0	14.5	13.5	12.0	8.5	7.5	3.5	2.5	.5	.0	.5	.0
4	14.5	13.5	14.0	13.5	8.5	8.0	2.5	2.0	.5	.0	1.5	.0
5	13.5	13.0	14.5	14.0	9.5	8.5	2.0	2.0	.5	.0	1.0	.0
6	13.5	13.5	15.0	14.5	9.5	8.0	2.5	2.0	.0	.0	3.5	.0
7	14.0	13.5	14.5	14.0	7.5	5.0	4.0	2.5	.0	.0	3.5	2.0
8	14.0	13.5	14.0	14.0	5.0	4.0	4.5	4.0	.5	.0	3.5	3.0
9	14.0	14.0	14.5	14.0	6.0	5.0	4.5	3.0	.5	.0	6.0	3.0
10	14.0	13.5	14.0	12.5	5.5	4.0	2.5	2.0	.5	.0	5.0	4.0
11	13.5	13.0	12.5	10.5	4.0	3.0	2.0	1.5	.5	.0	5.5	3.5
12	13.5	13.0	10.5	9.0	3.5	3.0	1.5	1.5	.5	.0	5.5	4.5
13	13.0	12.0	9.0	7.5	3.0	3.5	2.0	1.5	.5	.0	6.0	5.0
14	12.0	11.5	7.5	7.0	6.0	5.0	2.0	2.0	.5	.5	7.0	6.0
15	11.5	11.0	8.0	7.5	7.0	6.0	2.0	2.0	1.5	.5	7.5	6.5
16	11.5	11.0	8.5	8.0	7.0	6.0	2.0	1.5	2.0	.5	7.0	5.5
17	11.0	10.0	9.5	8.5	6.0	6.0	1.5	1.5	2.0	1.5	5.5	5.0
18	10.5	9.5	9.5	8.0	7.0	6.0	2.0	1.5	2.5	2.0	5.0	4.0
19	10.5	10.0	8.0	7.0	7.0	7.0	2.0	2.0	3.0	1.0	6.5	4.5
20	11.0	10.5	7.5	6.5	7.0	6.5	2.0	1.5	1.5	.0	7.5	6.5
21	11.0	10.5	9.0	7.5	7.0	6.0	2.0	1.5	1.5	.0	8.0	7.5
22	11.0	10.5	9.0	9.0	6.0	4.5	2.0	2.0	.5	.0	8.5	8.0
23	11.0	10.5	10.5	9.0	4.5	4.0	2.0	1.5	.0	.0	8.5	8.0
24	11.5	11.0	10.5	10.5	5.5	4.0	2.0	1.5	1.5	.0	10.0	8.5
25	11.5	11.5	10.5	9.5	6.0	5.5	2.5	2.0	2.5	.0	10.0	9.5
26	12.5	11.5	10.0	7.0	5.5	3.5	3.5	1.5	2.5	1.5	9.5	8.5
27	13.0	12.5	7.0	5.5	3.0	2.5	2.5	1.5	2.5	.0	8.5	7.5
28	13.5	13.0	6.5	5.5	2.5	2.5	1.5	.5	2.5	1.0	8.0	7.0
29	13.5	13.0	7.5	5.5	2.5	2.0	.5	.0	---	---	8.5	7.5
30	13.0	12.5	9.0	8.0	2.5	2.0	.5	.0	---	---	8.0	7.5
31	12.5	11.5	---	---	4.0	2.5	.5	.0	---	---	9.0	7.5
Month	17.0	9.5	15.0	5.5	10.0	2.0	4.5	.0	3.0	.0	10.0	.0
Day	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
	April		May		June		July		August		September	
1	10.0	9.0	12.0	10.0	21.0	17.5	24.5	22.0	24.0	22.0	21.5	20.5
2	11.0	10.0	11.5	9.5	21.0	18.5	24.0	21.0	24.0	21.5	22.0	20.0
3	12.0	11.0	11.5	10.0	20.5	18.0	21.5	20.5	23.5	22.0	22.5	20.5
4	12.0	11.0	12.0	11.0	19.5	17.0	21.5	20.5	23.0	20.0	21.5	20.0
5	12.5	11.5	11.5	11.0	19.0	16.5	22.5	20.0	20.0	18.5	21.5	19.5
6	12.5	12.0	12.5	10.5	19.5	16.5	23.0	19.5	21.0	19.0	22.0	20.0
7	13.0	12.0	12.5	11.0	19.5	18.0	22.5	20.5	21.5	20.5	22.0	20.5
8	13.0	12.0	12.0	11.5	19.0	18.5	23.0	21.0	21.5	20.5	22.0	20.5
9	13.5	12.0	13.0	11.0	20.0	18.0	23.5	21.0	22.0	20.5	22.0	21.0
10	14.5	13.0	12.5	11.5	20.5	17.0	24.0	21.5	22.5	20.5	22.5	21.5
11	14.5	14.0	13.0	11.0	21.0	18.0	22.5	20.5	22.0	20.5	22.5	20.5
12	13.5	12.5	13.0	13.0	22.5	19.0	21.5	19.0	22.5	20.5	22.0	20.5
13	13.5	12.5	13.0	12.5	21.5	19.5	20.5	19.0	22.5	21.5	22.0	21.0
14	13.0	12.0	13.0	11.5	20.0	17.0	21.0	19.5	23.5	21.0	22.0	20.5
15	12.5	12.0	11.5	11.0	20.0	15.5	21.5	20.0	24.0	21.5	21.0	20.5
16	12.5	11.5	11.5	11.0	20.0	17.5	21.5	19.0	24.5	22.0	21.0	20.0
17	13.5	12.0	12.0	11.5	22.0	18.5	21.5	19.0	24.0	22.5	21.5	20.5
18	13.5	13.0	13.5	12.0	23.0	19.5	22.0	19.0	23.5	22.0	21.5	21.0
19	13.0	12.5	14.5	13.0	23.5	21.0	23.0	20.0	24.0	21.5	22.0	21.5
20	12.5	11.0	15.5	14.0	23.5	21.0	24.0	21.0	24.0	22.5	22.5	22.0
21	11.0	10.0	16.5	15.5	23.0	21.0	24.5	22.0	23.0	20.5	22.5	22.0
22	11.0	9.5	16.5	15.5	22.5	20.5	25.5	23.0	22.5	20.5	22.5	20.5
23	11.5	10.5	16.5	16.0	22.5	20.0	25.5	23.5	22.5	21.0	20.5	19.5
24	12.5	11.0	16.0	15.5	22.0	19.0	25.0	23.5	22.5	21.0	19.5	18.5
25	12.5	12.0	16.5	15.5	22.5	19.0	23.5	22.0	23.0	22.0	19.5	18.5
26	12.0	9.5	17.5	16.0	23.0	20.5	23.5	21.5	23.0	22.0	18.5	17.5
27	11.5	8.5	18.0	16.5	25.0	21.5	23.5	21.5	23.5	22.0	18.0	16.5
28	11.5	9.0	18.5	17.0	25.0	23.0	23.5	21.5	23.5	22.5	18.0	17.0
29	11.5	9.5	18.5	16.0	25.0	22.5	23.5	21.0	23.5	22.5	17.0	15.5
30	11.5	10.5	19.5	17.5	24.5	22.5	23.0	21.0	23.0	21.5	16.5	15.0
31	---	---	20.5	18.0	---	---	23.5	21.0	22.5	21.5	---	---
Month	14.5	8.5	20.5	9.5	25.0	15.5	25.5	19.0	24.5	18.5	22.5	15.0
Year	25.5	.0										

GUYANDOTTE RIVER BASIN

03202490 INDIAN CREEK AT FANROCK, WV--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)		MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)		MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)		MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)		MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)		MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)		
OCTOBER																									
1	109	24	3	.30	135	61	3	.31	17	2.1	7	.87	2	130	107	2	.17	27	8.4	4	.34	16	1.7	52	6.0
3	27	5.7	3	.23	7	1.7	4	.26	13	1.2	22	2.5	4	10	1.1	3	.21	7	1.4	3	.15	9	.73	2	.21
5	5	.32	2	.12	233	95	7	.42	7	.53	7	.64	6	3	.15	179	282	143	93	15	1.1	6	.42	33	3.1
7	2	.08	580	919	40	17	14	1.3	8	.54	77	10	8	54	2.8	174	181	7	2.0	51	5.6	10	.65	175	61
9	632	810	30	17	12	3.5	30	14	7	.43	313	257	10	237	141	48	21	9	2.6	24	10	8	.48	1130	1680
11	48	12	23	8.6	3	.81	22	7.4	5	.32	480	518	12	10	1.5	18	5.2	4	.92	20	4.5	5	.35	107	103
13	7	.72	18	4.0	13	2.6	17	2.8	6	.45	52	50	14	7	.55	10	1.8	142	29	15	1.9	34	5.0	157	149
15	8	.50	5	.78	48	12	7	.76	17	3.0	115	89	16	54	9.2	5	.68	10	2.7	2	.19	10	1.6	30	15
17	55	18	2	.28	7	1.8	2	.17	5	.73	12	4.3	18	12	3.1	3	.39	31	7.0	3	.24	6	.91	5	1.4
19	13	2.5	6	.71	13	2.4	5	.38	7	1.1	7	1.6	20	10	1.4	7	.76	6	.97	5	.36	10	1.5	9	1.8
21	6	.62	5	.51	23	3.4	5	.35	7	.98	10	1.8	22	5	.42	47	6.7	17	2.2	5	.34	7	.93	10	1.6
23	5	.35	227	122	7	.77	14	.91	9	.97	13	1.7	24	4	.25	70	40	5	.52	63	3.9	11	1.2	10	1.1
25	10	.59	48	20	13	2.1	335	374	11	1.4	9	.90	26	111	42	49	14	24	3.6	210	1190	6	.92	8	.89
27	33	12	28	6.3	22	2.9	47	44	7	1.0	24	3.3	28	40	10	22	4.6	11	1.3	21	6.8	7	.95	23	4.5
29	17	3.4	334	105	6	.68	17	3.7	---	---	22	5.6	30	5	.76	278	143	7	.76	19	3.5	---	---	13	3.4
31	7	.85	---	---	5	.53	18	2.6	---	---	7	1.8	TOTAL	---	1212.86	---	1906.34	---	364.56	---	1682.33	---	32.09	---	2981.01
APRIL																									
1	40	9.1	10	2.5	17	.73	7	.04	40	.41	216	8.2	2	22	4.5	7	1.5	18	.59	350	11	37	.30	82	1.0
3	7	1.2	5	.88	70	3.7	125	9.1	41	.27	143	3.6	4	6	.96	13	2.2	38	1.7	80	1.5	842	115	83	.90
5	7	1.0	52	12	23	.71	60	.70	570	103	40	.30	6	7	.93	28	8.5	17	.43	40	.38	62	3.5	22	.14
7	7	.87	11	3.1	17	.41	35	.28	22	1.4	33	.19	8	7	.79	35	10	73							
9	6	.62	218	143	78	4.5	38	.26	33	.83	20	.10	10	5	.47	108	61	38	1.6	62	.59	32	.62	35	.20
11	5	.43	32	9.6	14	.38	546	40	107	2.1	232	3.5	12	8	.67	16	3.3	11	.26	184	3.1	132	3.4	112	1.1
13	11	.86	14	2.5	38	.91	30	.31	39	.57	58	.44	14	9	.63	9	2.0	16	.27	27	.25	19	.21	42	.26
15	4	.25	8	1.9	10	.14	65	.60	13	.13	25	.16	16	2	.11	8	1.7	8	.10	206	17	13	.11	17	.11
17	1	.05	7	1.2	8	.10	45	1.8	13	.09	13	.08	18	4	.19	7	1.0	7	.08	23	.45	15	.10	10	.06
19	5	.23	8	.97	7	.08	22	.26	15	.09	10	.06	20	5	.24	10	1.0	10	.08	19	.18	13	.08	12	.07
21	5	.24	12	.94	32	.39	13	.11	13	.07	13	.07	22	12	.45	14	.95	46	.77	12	.08	11	.06	63	.39
23	10	.35	12	.68	25	.29	12	.07	12	.06	17	.11	24	7	.28	63	5.7	20	.21	5	.04	11	.05	14	.09
25	76	10	14	1.4	14	.11	122	2.4	10	.05	15	.10	26	567	890	13	1.1	7	.06	68	1.1	12	.06	14	.09
27	180	354	12	.72	8	.09	37	.35	15	.07	13	.08	28	55	42	10	.51	7	.06	30	.33	38	.18	13	.08
29	23	9.3	46	3.6	8	.06	25	.22	45	.28	12	.07	30	15	4.4	54	5.8	10	.07	95	.45	23	.23	12	.07
31	---	---	27	1.8	---	---	205	3.1	370	9.3	---	---	TOTAL	---	1335.16	---	293.05	---	22.31	---	96.67	---	243.62	---	21.76
TOTAL LOAD FOR YEAR: 10191.76 TONS.																									

GUYANDOTTE RIVER BASIN

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03202695 MILAM FORK AT MCGRAWS, WV

LOCATION.--Lat 37°40'48", long 81°28'27", Wyoming County, Hydrologic Unit 05070101, on left bank, 0.9 mi (1.4 km) upstream from mouth, and 0.9 mi (1.4 km) northwest of McGraws.

DRAINAGE AREA.--6.64 mi² (17.20 km²)

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1977 to September 1978.

GAGE.--Water-stage and rainfall recorders. Altitude of gage is 1,760 ft (536 m), from topographic map.

REMARKS.--Water-discharge records fair except those for winter periods, which are poor. Rainfall records collected at site since December 1977 are contained in files of U.S. Geological Survey with only monthly totals published in this report.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft³/s (2.8 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 7	1445	301 8.52	8.27 2.521	Apr. 26	2245	389 11.0	8.72 2.658
Jan. 26	0500	*609 17.2	10.29 3.136	May 9	0015	126 3.57	6.60 2.012
Mar. 14	1630	203 5.75	7.39 2.252	May 24	1230	117 3.31	6.51 1.984

Minimum daily discharge, 0.09 ft³/s (0.003 m³/s) Aug. 27, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	35	6.8	5.6	6.6	8.8	17	4.4	.57	.39	4.1
2		---	22	6.0	5.0	5.4	7.1	14	3.7	.83	.26	1.3
3		---	17	4.6	4.4	5.6	6.0	12	5.6	2.3	.19	1.5
4		4.8	14	3.9	3.9	4.8	5.2	25	4.4	1.8	.48	.91
5		4.6	38	4.1	3.5	3.7	5.2	47	3.4	1.2	.57	.62
6		29	66	5.2	3.2	3.9	4.4	36	2.7	.83	.66	.48
7		188	30	6.6	3.0	5.6	4.3	23	2.7	.66	1.4	.39
8		132	18	10	2.8	13	3.7	66	4.3	.62	.91	.35
9		59	20	39	2.7	40	3.6	98	4.4	.62	.57	.30
10		31	17	31	2.6	85	3.4	41	3.4	.57	.44	.26
11		24	14	19	2.5	79	3.2	22	2.7	.53	.35	.39
12		19	12	13	2.4	87	3.2	14	2.3	.53	.30	.39
13		13	11	10	2.5	98	3.0	25	1.9	.44	.21	.26
14		11	18	9.0	12	153	2.7	35	1.6	.66	.19	.19
15		9.0	49	8.0	11	89	2.4	25	1.4	1.0	.19	.30
16		8.0	32	7.0	8.8	37	2.3	16	1.3	4.1	.18	.30
17		7.8	20	7.2	8.0	22	2.4	12	1.2	1.5	.16	.26
18		6.2	15	7.6	7.0	16	2.7	9.3	1.1	.83	.14	.19
19		5.2	12	6.5	6.5	13	3.6	7.6	1.0	.62	.14	.18
20		4.6	10	6.1	6.0	12	3.6	6.4	1.1	.53	.14	.16
21		4.4	8.8	5.7	5.7	11	3.4	5.8	1.1	.48	.14	.16
22		7.8	7.6	5.3	5.5	10	3.0	5.0	1.8	.44	.13	.66
23		64	6.2	5.0	5.3	9.0	2.9	13	1.1	.35	.13	.53
24		47	6.6	4.9	5.4	8.0	3.0	104	.91	.35	.13	.35
25		30	16	20	5.5	7.1	3.9	62	.83	.48	.11	.30
26		22	20	157	6.0	8.0	137	25	.83	.48	.11	.21
27		15	16	66	6.8	9.0	204	14	.83	.35	.09	.18
28		13	11	20	6.8	10	49	10	.74	.35	.09	.18
29		22	9.3	10	---	12	25	7.6	.66	.30	.14	.16
30		50	8.0	8.0	---	11	20	6.2	.62	.26	.13	.14
31		---	7.3	6.5	---	10	---	5.8	---	.53	2.9	---
TOTAL		---	586.8	519.0	150.4	884.7	532.0	809.7	64.02	25.11	11.97	15.70
MEAN		---	18.9	16.7	5.37	28.5	17.7	26.1	2.13	.81	.39	.52
MAX		---	66	157	12	153	204	104	5.6	4.1	2.9	4.1
MIN		---	6.2	3.9	2.4	3.7	2.3	5.0	.62	.26	.09	.14
CFSM		---	2.85	2.52	.81	4.29	2.67	3.93	.32	.12	.06	.08
IN.†		---	3.29	2.91	.84	4.96	2.98	4.54	.36	.14	.07	.09
IN.‡		---	---	3.24	1.13	2.39	4.22	---	---	---	---	2.21

† Runoff.

‡ Rainfall.

GUYANDOTTE RIVER BASIN

03202695 MILAM FORK AT MCGRAWS, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1977 to September 1978.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

		STREAM- FLOW, INSTAN- TANEOUS (CFS)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	
DEC 12...	1430	11	11.6	--	--	--	--	--	--	--	--	
MAR 10...	1000	81	--	13	4	2.7	1.5	4.2	39	.5	1.2	
APR 06...	0915	4.3	--	25	0	5.3	2.5	22	64	1.9	1.3	
APR 26...	1230	81	8.2	--	--	--	--	--	--	--	--	
MAY 16...	0930	17	--	19	0	4.3	2.0	9.0	49	.9	1.3	
MAY 23...	1930	6.5	7.2	--	--	--	--	--	--	--	--	
JUN 23...	0915	1.1	--	40	0	10	3.6	60	76	4.1	1.8	
JUL 20...	1550	.50	9.0	44	0	11	4.0	85	80	5.6	1.8	
AUG 03...	0900	.20	7.3	--	--	--	--	--	--	--	--	
SEP 07...	0905	.37	7.5	--	--	--	--	--	--	--	--	
SEP 14...	1000	.16	7.2	52	0	13	4.7	110	81	6.7	2.1	
		BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINIT (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
MAR 10...	11	0	9	5.6	9.2	2.4	.0	5.5	36	32	.05	
APR 06...	60	--	49	3.0	11	7.7	.1	6.3	92	87	.13	
MAY 16...	29	--	24	4.6	11	4.0	.0	6.4	50	53	.07	
JUN 23...	--	--	150	--	7.6	14	.1	7.1	202	195	.27	
JUL 20...	--	--	200	--	4.9	20	.1	7.9	249	255	.34	
SEP 14...	--	--	240	--	8.2	27	.2	6.7	329	316	.45	
		SOLIDS, DIS- SOLVED (TONS PER DAY)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDE RECOV. (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)
MAR 10...	7.87	--	--	30	--	--	--	--	--	--	--	--
APR 06...	1.07	100	80	20	--	--	0	0	0	10	--	--
MAY 16...	2.29	--	--	30	--	--	--	--	--	--	--	--
JUN 23...	.60	--	--	60	--	--	--	--	--	--	--	--
JUL 20...	.34	--	--	30	--	--	--	--	--	--	--	--
SEP 14...	.14	--	--	40	1	1	0	0	0	<10	<10	--

03202695 MILAM FORK AT MCGRAWS, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	CHROMIUM, DIS-SOLVED (UG/L AS CR)	CHROMIUM, HEXA-VALENT, DIS-SOLVED (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUS-PENDED RECOVERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, SUS-PENDED RECOVERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)
MAR 10...	--	--	--	--	--	--	70	--	--	--	--
APR 06...	--	0	--	--	--	730	90	12	5	7	90
MAY 16...	--	--	--	--	--	--	140	--	--	--	--
JUN 23...	--	--	--	--	--	--	300	--	--	--	--
JUL 20...	--	--	--	--	--	--	70	--	--	--	--
SEP 14...	0	--	2	1	1	--	20	13	9	4	--

DATE	MANGANESE, SUS-PENDED RECOVERABLE (UG/L AS MN)	MANGANESE, DIS-SOLVED (UG/L AS MN)	MERCURY, TOTAL RECOVERABLE (UG/L AS HG)	MERCURY, SUS-PENDED RECOVERABLE (UG/L AS HG)	MERCURY, DIS-SOLVED (UG/L AS HG)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, SUS-PENDED (UG/L AS SE)	SELENIUM, DIS-SOLVED (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, SUS-PENDED RECOVERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)
MAR 10...	--	--	--	--	--	--	--	--	--	--	--
APR 06...	0	90	<.5	.0	<.5	--	--	--	10	0	10
MAY 16...	--	60	--	--	--	--	--	--	--	--	--
JUN 23...	--	80	--	--	--	--	--	--	--	--	--
JUL 20...	--	60	--	--	--	--	--	--	--	--	--
SEP 14...	--	60	<.5	.0	<.5	0	0	0	10	10	0

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (NTU)	SEDIMENT, SUS-PENDED (MG/L)	SEDIMENT DIS-CHARGE, SUS-PENDED (T/DAY)
NOV 04...	1200	5.0	158	--	15.0	--	5	.07
21...	1330	4.4	190	7.8	8.5	--	4	.05
22...	0915	5.2	190	7.8	8.0	--	11	.15
DEC 08...	1605	18	55	6.8	4.5	--	10	.49
12...	1430	11	130	6.7	3.0	--	4	.12
13...	0915	11	101	--	4.5	--	3	.09
14...	1400	18	109	--	--	--	67	3.3
14...	1545	21	120	--	6.0	--	45	2.6
15...	0640	54	53	--	--	--	42	6.1
17...	1400	19	65	--	15.0	--	7	.36
JAN 26...	0940	417	45	--	3.5	--	104	117
26...	0950	417	43	--	3.5	--	102	115
26...	1300	301	44	--	--	--	64	52
26...	1640	209	44	--	3.0	--	74	42
FEB 14...	1100	13	91	--	--	--	25	.88
14...	1500	14	85	--	--	--	26	.98
14...	2000	14	82	--	--	--	49	1.9
21...	1530	--	96	--	3.0	--	5	--
27...	1745	7.9	105	7.3	3.0	--	--	--
MAR 08...	1800	19	97	--	--	--	58	3.0
08...	2200	24	84	--	--	--	56	3.6
09...	0800	30	74	--	--	--	43	3.5
09...	1800	53	70	--	--	--	161	23
09...	2200	66	69	--	--	--	169	30
10...	1000	81	50	6.5	3.0	--	58	13
12...	1000	86	56	--	--	--	29	6.7
12...	1200	86	51	--	--	--	54	13
12...	1500	86	57	--	--	--	32	7.4
12...	2000	93	53	--	--	--	42	11
14...	0700	114	56	--	--	--	126	39
14...	1000	142	49	--	--	--	132	51
14...	1300	170	53	--	--	--	435	200
14...	1600	197	47	--	--	--	180	96
14...	2000	190	44	--	--	--	98	50
14...	2300	165	48	--	--	--	309	138
APR 06...	0915	4.3	112	7.5	--	5.0	6	.07

GUYANDOTTE RIVER BASIN

03202695 MILAM FORK AT MCGRAWS, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- HOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
APR								
07...	0500	4.6	112	7.6	--	4.0	8	.10
08...	1600	3.7	113	7.7	--	5.0	7	.07
09...	1600	3.6	121	7.7	--	5.0	9	.09
10...	1600	3.4	121	7.8	--	4.0	8	.07
11...	1600	3.2	121	7.8	--	3.0	6	.05
12...	1500	3.4	122	7.5	--	4.0	7	.06
13...	1700	2.9	125	7.9	--	4.0	4	.03
14...	1500	2.6	133	7.9	--	3.0	4	.03
15...	1700	2.3	141	7.9	--	4.0	8	.05
16...	1300	2.3	143	8.0	--	3.0	4	.02
17...	1600	2.4	139	7.9	--	3.0	4	.03
18...	1300	2.9	140	8.0	--	10	23	.18
19...	1300	3.0	139	8.0	--	3.0	37	.30
20...	1300	3.0	140	8.0	--	4.0	5	.05
21...	0900	3.4	127	8.0	--	3.0	4	.04
22...	1000	3.2	120	8.0	--	4.0	4	.03
23...	0900	2.9	130	8.0	--	4.0	2	.02
24...	0500	2.9	120	8.0	--	3.0	7	.05
25...	0600	3.2	129	8.0	--	6.0	12	.10
26...	0700	23	82	7.8	--	70	217	13
27...	1230	51	51	8.0	8.5	70	441	96
28...	1400	117	53	8.9	8.5	90	350	111
29...	1600	173	59	8.1	--	70	377	170
30...	1900	301	40	8.3	--	90	371	302
31...	2200	383	45	8.3	--	50	252	201
32...	0500	253	40	8.3	--	20	57	45
33...	1300	175	44	8.4	--	40	100	78
34...	0800	54	51	8.3	--	10	--	--
35...	0800	25	77	8.4	--	7.0	15	1.1
36...	0800	20	92	8.5	--	7.0	15	.51
MAY								
03...	1100	12	102	8.6	--	80	154	5.0
04...	1000	23	72	8.7	--	20	39	2.4
04...	1200	25	100	8.7	--	80	103	11
04...	1500	35	75	8.8	--	40	74	7.0
05...	0600	37	72	8.8	--	30	70	7.0
05...	1200	59	71	8.9	--	30	71	11
05...	1600	89	59	8.9	--	30	92	22
05...	2000	113	55	8.9	--	20	99	30
13...	1500	32	92	8.8	--	20	50	4.3
16...	0930	17	90	7.0	11.0	4.0	7	.32
23...	0900	4.8	89	8.1	--	200	2440	32
23...	1100	4.6	--	8.3	--	200	710	8.8
23...	1930	6.5	180	7.5	10.0	10	25	.44
24...	1900	113	55	7.1	--	50	141	43
24...	2300	102	52	7.1	--	50	107	29
JUN								
23...	0915	1.1	211	7.5	18.5	9.0	10	.03
JUL								
13...	0840	.43	600	7.1	17.0	10	19	.02
16...	0700	3.9	145	8.1	--	30	66	.69
16...	1100	6.0	142	7.8	--	30	68	1.1
16...	1500	4.1	132	7.8	--	40	73	.81
16...	2000	3.0	142	7.8	--	30	70	.57
20...	1550	.50	335	8.0	25.0	10	16	.02
AUG								
03...	0900	.20	590	7.6	21.0	10	16	.01
31...	1000	1.1	195	7.5	--	150	410	1.2
31...	1400	3.7	195	7.7	--	140	368	3.7
31...	1800	5.6	191	7.7	--	170	532	13
31...	2200	7.3	194	7.7	--	150	401	7.9
SEP								
07...	0905	.37	541	7.5	18.0	15	20	.02
14...	1000	.16	410	8.0	20.5	8.0	21	.01

GUYANDOTTE RIVER BASIN

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03202750 CLEAR FORK AT CLEAR FORK, WV

LOCATION (REVISED).--Lat 37°37'26", long 81°42'13", revised, Wyoming County, Hydrologic Unit 05070101, on right bank 1.2 mi (1.9 km) southwest of Clear Fork, 1.7 mi (2.7 km) downstream from Laurel Branch, 0.3 mi (0.5 km) upstream from Cedar Creek, and at mile 3.3 (5.3 km). Prior to Oct. 27, 1977, at site 0.7 mi (1.1 km) upstream.

DRAINAGE AREA.--124 mi² (321 km²), revised.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1974 to current year. Prior to October 22, 1974, partial record station.

GAGE.--Water-stage recorder. Altitude of gage is 1,150 ft (351 m), from topographic map, revised. June 28, 1974 to Oct. 22, 1974, non-recording gage, Oct. 23, 1974 to Oct. 27, 1977, digital recorder at site 0.7 mi (1.1 km) upstream at different datum.

REMARKS.--Water-discharge records good except those for January and February, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,900 ft³/s (280 m³/s) Apr. 5, 1977, gage height, 18.64 ft (5.681 m), site and datum then in use, from rating curve extended above 3,000 ft³/s (85 m³/s) on basis of slope-area measurement of peak flow, minimum, 8.5 ft³/s (0.24 m³/s), Aug. 26, 1976, gage height, 7.25 ft (2.210 m), site and datum then in use.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,600 ft³/s (45 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Oct. 9	2015	1620 45.9	11.81 3.600	Mar. 14	1900	2440 69.1	7.67 2.338
Nov. 7	---	Unknown	Unknown	Apr. 27	0400	5190 147	9.88 3.011
Jan. 26	0900	*8000 227	11.89 3.624	May 9	0300	1920 54.4	7.20 2.195

Minimum discharge, 9.5 ft³/s (0.27 m³/s) Aug. 28, Sept. 8; minimum gage height, 3.62 ft (1.103 m) Aug. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	112	554	128	160	145	159	275	88	17	23	417
2	354	100	359	123	130	123	142	234	73	28	19	105
3	208	90	278	100	110	123	121	201	92	62	16	54
4	129	80	237	78	90	114	107	322	94	51	22	37
5	94	86	275	88	82	118	107	816	73	36	46	27
6	75	674	880	92	78	107	94	514	59	29	35	22
7	64	1500	536	104	75	139	92	391	55	25	36	17
8	73	1260	303	131	86	250	82	794	71	21	13	16
9	895	794	334	482	92	662	75	1530	96	20	45	13
10	683	608	338	446	102	1360	71	686	76	20	34	15
11	285	446	268	338	92	1110	69	395	61	20	29	59
12	181	334	220	260	107	1130	69	286	55	18	25	49
13	134	251	195	200	123	1270	61	242	48	16	34	31
14	110	174	216	160	240	1880	58	326	42	16	34	25
15	95	171	440	130	254	1350	52	300	37	47	30	31
16	186	147	404	110	192	662	49	258	34	183	25	33
17	394	123	314	100	174	458	48	213	33	118	21	26
18	255	109	264	94	171	342	52	177	32	51	17	22
19	202	96	216	90	174	296	58	147	30	33	16	18
20	154	82	183	88	168	272	69	123	27	27	14	15
21	124	75	159	86	168	254	75	107	28	25	14	14
22	105	88	141	84	147	240	73	94	32	21	13	21
23	94	650	114	82	118	207	66	90	28	19	12	28
24	84	632	109	82	139	186	66	888	26	22	11	23
25	80	470	264	1070	114	162	78	590	24	26	10	24
26	395	346	364	5440	142	159	1830	318	24	26	11	17
27	390	272	303	1140	147	174	3150	216	25	21	10	16
28	282	234	225	524	145	174	770	159	22	19	9.9	14
29	216	322	169	342	---	189	442	123	19	17	11	12
30	165	644	156	240	---	192	330	102	18	17	21	11
31	126	---	142	200	---	174	---	112	---	25	238	---
TOTAL	6688	10970	8980	12637	3821	14022	8555	11169	1422	1076	975.9	1212
MEAN	216	366	290	408	136	452	285	368	47.4	34.7	31.5	40.4
MAX	895	1500	880	5440	254	1880	3150	1530	96	183	238	417
MIN	56	75	109	70	76	107	48	90	18	16	9.9	11
CFSM	1.74	2.95	2.34	3.29	1.10	3.65	2.30	2.94	.38	.28	.25	.33
IN.	2.01	3.29	2.69	3.79	1.15	4.21	2.57	3.35	.43	.32	.29	.36

CAL YR 1977	TOTAL	75237.0	MEAN 206	MAX 6380	MIN 12	CFSM 1.66	IN 22.57
WTR YR 1978	TOTAL	81527.9	MEAN 223	MAX 5440	MIN 9.9	CFSM 1.80	IN 24.46

GUYANDOTTE RIVER BASIN

03202750 CLEAR FORK AT CLEAR FORK, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: June 1974 to October 1976, January 1977 to current year.

WATER TEMPERATURES: November 1974 to May 1975, October 1975 to October 1977, December 1977 to current year.

SUSPENDED-SEDIMENT DISCHARGE: June 1974 to current year.

INSTRUMENTATION.--Temperature recorder Nov. 20, 1974 to Oct. 25, 1977, and since Dec. 13, 1977.

REMARKS.--Prior to Oct. 27, 1977, sampling site was 0.7 mi (1.1 km) upstream.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 916 micromhos July 27, 1976; minimum daily, 54 micromhos May 19, 1975.

WATER TEMPERATURES: Maximum, 30.5°C July 20, 1977; minimum, 0.0°C on several days during most winter periods.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,670 mg/L Oct. 8, 1976; minimum daily mean, 0 mg/L May 27, 28, June 3, 1977.

SEDIMENT LOADS: Maximum daily, 16,900 tons (15,300 tonnes) Apr. 4, 1977; minimum daily, 0 ton (0 tonne) May 27, 28, June 3, 1977.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 658 micromhos Aug. 28; minimum daily, 91 micromhos Jan. 26.

WATER TEMPERATURES: Maximum recorded, 29.5°C July 23, 24; minimum recorded; 1.0°C Feb. 4, 9-12.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,910 mg/L Oct. 9; minimum daily mean, 1 mg/L June 2, 21, 30.

SEDIMENT LOADS: Maximum daily, 9,300 tons (8,440 tonnes) Apr. 27; minimum daily, 0.05 ton (0.05 tonne) June 30.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	154	241	252	---	264	270	---	580	561	266
2	258	---	185	248	251	---	269	275	340	---	563	---
3	210	271	---	261	274	244	281	235	327	477	555	---
4	244	285	213	278	297	243	290	205	326	424	564	385
5	276	---	186	288	305	265	299	138	349	455	556	235
6	306	230	131	278	305	277	---	144	---	468	410	253
7	327	120	159	---	312	254	319	---	373	511	---	389
8	---	128	185	245	---	---	322	144	363	522	432	269
9	213	143	200	---	331	160	336	118	357	523	429	282
10	153	160	188	143	404	120	---	---	348	576	456	284
11	190	165	185	---	408	130	---	190	---	---	461	265
12	226	---	201	170	385	133	339	220	377	550	---	231
13	254	191	---	182	340	134	---	230	386	530	519	244
14	278	207	217	---	258	147	360	210	418	570	---	---
15	299	231	---	215	---	159	360	195	435	610	501	284
16	---	232	165	223	230	207	370	215	---	323	527	261
17	193	---	183	240	236	217	370	230	---	---	558	268
18	---	259	196	---	230	229	360	245	464	370	---	384
19	211	---	212	---	228	240	360	260	---	413	579	284
20	226	298	229	---	227	---	370	280	---	441	585	311
21	250	297	236	---	225	252	370	290	493	473	608	296
22	271	288	---	---	223	259	360	310	508	497	606	295
23	---	140	256	---	235	271	350	320	---	514	---	303
24	302	128	268	214	243	278	340	122	---	---	---	---
25	314	147	---	138	254	284	320	136	538	525	637	275
26	202	160	167	91	247	289	134	177	561	528	646	292
27	158	---	170	155	234	294	110	---	572	529	655	---
28	177	200	187	197	229	283	170	237	---	548	658	---
29	199	192	204	210	---	253	---	268	---	552	613	318
30	216	141	220	226	---	245	220	295	573	569	620	---
31	234	---	---	---	---	253	---	304	---	---	275	---
MEAN	238	201	196	212	276	227	306	224	427	503	543	290
WTR YR 1978	MEAN	302	MAX	658	MIN	91						

GUYANDOTTE RIVER BASIN

03202750 CLEAR FORK AT CLEAR FORK, WV--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)		MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)		MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)		MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)		MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)		MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)																				
OCTOBER																								NOVEMBER				DECEMBER				JANUARY				FEBRUARY				MARCH			
1	57	14			6	1.8			52	78			3	1.9			13	5.6			8	3.1																					
2	507	511			6	1.6			20	19			7	2.3			11	3.9			7	2.3																					
3	102	57			6	1.5			12	9.3			4	1.1			8	2.4			10	3.3																					
4	17	5.5			6	1.3			12	7.7			5	1.1			7	1.7			8	2.5																					
5	8	2.0			5	1.2			205	197			7	1.7			20	4.4			17	5.4																					
6	8	1.6			261	981			115	273			9	2.2			15	3.2			19	5.5																					
7	7	1.2			400	1620			36	52			12	3.5			9	1.8			25	9.4																					
8	29	3.9			136	463			10	8.2			17	6.0			8	1.9			51	34																					
9	1910	5960			73	156			30	27			93	121			7	1.7			100	179																					
10	244	544			77	126			69	63			35	42			12	3.3			345	1270																					
11	42	32			45	54			35	25			26	24			14	3.5			95	285																					
12	15	7.3			21	19			19	5.9			17	12			16	4.6			88	268																					
13	7	2.5			11	7.5			12	6.3			25	13			17	5.6			105	360																					
14	4	1.2			10	4.7			17	9.9			20	8.6			50	32			684	3610																					
15	4	1.0			11	5.1			52	62			7	2.5			70	48			170	620																					
16	175	125			10	4.0			27	29			2	.59			16	8.3			65	116																					
17	117	129			9	3.0			12	10			5	1.4			8	3.8			37	46																					
18	17	12			5	1.5			10	7.1			6	1.5			5	2.3			23	21																					
19	8	4.4			5	1.3			9	5.2			7	1.7			6	2.8			19	15																					
20	8	2.5			4	.89			9	4.4			19	4.5			6	2.7			22	16																					
21	5	1.7			4	.81			7	3.0			17	3.9			10	4.5			25	17																					
22	4	1.1			51	12			6	2.3			13	2.9			39	15			22	14																					
23	4	1.0			546	958			7	2.2			8	1.8			25	8.0			20	11																					
24	4	.91			92	157			8	2.4			42	9.3			14	5.3			15	7.5																					
25	25	5.4			26	33			98	70			631	2270			14	4.3			20	8.7																					
26	113	121			16	15			42	41			529	8030			13	5.0			19	8.2																					
27	45	47			14	10			15	12			200	616			9	3.6			18	8.5																					
28	15	11			10	6.3			7	4.3			43	61			7	2.7			20	9.4																					
29	7	4.1			31	27			6	3.1			20	18			---	---			18	9.2																					
30	7	3.1			95	165			5	2.1			13	8.4			---	---			14	7.3																					
31	7	2.4			---	---			4	1.5			14	7.6			---	---			13	6.1																					
TOTAL	---	7616.21			---	4838.59			---	1042.6			---	11280.59			---	191.9			---	6978.4																					

DAY	MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)		MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)		MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)		MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)		MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)		MEAN CONCENTRATION (MG/L)		LOADS (T/DAY)																				
APRIL																								MAY				JUNE				JULY				AUGUST				SEPTEMBER			
1	13	5.6			17	13			2	.48			2	.09			17	1.1			259	311																					
2	10	3.8			16	10			1	.20			41	3.1			4	.21			175	50																					
3	6	2.0			13	7.1			22	5.5			55	9.2			3	.13			90	13																					
4	5	1.4			143	152			6	1.5			17	2.3			13	.77			33	3.3																					
5	8	1.7			115	253			6	1.2			10	.97			40	5.0			16	1.2																					
6	5	1.3			58	96			5	.80			6	.47			7	.66			14	.83																					
7	6	1.5			35	37			4	.59			6	.41			36	5.4			9	.41																					
8	5	1.1			172	533			6	1.2			7	.40			20	3.9			7	.30																					
9	19	2.0			199	912			5	1.3			5	.27			8	.99			9	.32																					
10	18	3.5			60	111			4	.82			6	.32			7	.64			15	.61																					
11	16	3.0			25	27			3	.49			6	.32			8	.63			80	13																					
12	14	2.6			17	13			2	.30			5	.24			7	.47			33	4.4																					
13	11	1.8			37	24			2	.26			5	.22			17	1.6			23	1.9																					
14	8	1.3			117	103			2	.23			6	.26			15	1.4			20	1.4																					
15	14	2.0			42	34			3	.30			55	7.5			25	2.0			18	1.5																					
16	15	2.0			12	8.4			3	.28			468	279			16	1.1			50	4.5																					
17	8	1.0			11	6.3			4	.36			160	51			7	.40			17	1.2																					
18	7	.92			14	6.7			4	.35			55	7.6			6	.28			11	.65																					
19	9	1.4			9	3.6			3	.24			24	2.1			5	.22			10	.49																					
20	9	1.7			6	2.0			2	.15			18	1.3			8	.30			9	.36																					
21	9	1.8			6	1.7			1	.08			17	1.1			7	.26			10	.38																					
22	7	1.4			5	1.3			2	.17			15	.85			5	.18			20	1.1																					
23	7	1.2			10	2.4			2	.15			14	.72			5	.16			34	2.6																					
24	9	1.6			356	976			4	.28			30	1.8			6	.18			20	1.2																					
25	20	4.2			130	207			6	.39			27	1.9			8	.22			16	1.0																					
26	983	7320			20	17			5	.32			12	.84			7	.21			9	.41																					
27	821	9300			11	6.4			4	.27			10	.57			10	.27			8	.35																					
28	83	173			3	1.3			3	.18			8	.41			7	.19			7	.26																					
29	46	55			2	.60			2	.10			6	.20			17	.50			6	.19																					
30	30	27			3	.83			1	.05			8	.37			29	1.6			6	.18																					
31	---	---			3	.91			---	---			22	1.5			503	532			---	---																					
TOTAL	---	16926.68			---	3571.60			---	18.54			---	377.41			---	562.97			---	418.04																					
TOTAL LOAD FOR YEAR:		53423.64 TONS.																																									

GUYANDOTTE RIVER BASIN

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03203600 GUYANDOTTE RIVER AT LOGAN, WV

LOCATION.--Lat 37°50'34", long 81°58'34", Logan County, Hydrologic Unit 05070101, on right bank 200 ft (61 m) downstream from Middelburg Bridge at Logan, 0.8 mi (1.3 km) downstream from Dingess Run, 1.1 mi (1.8 km) upstream from Island Creek, and at mile 80.5 (129.5 km).

DRAINAGE AREA.--836 mi² (2,165 km²).

PERIOD OF RECORD.--Annual maximum, water years 1961-62. October 1962 to current year. Gage-height records collected in this vicinity since November 1915 are contained in reports of National Weather Service.

GAGE.--Water-stage recorder. Datum of gage is 640.00 ft (195.072 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1962, at datum 1.32 ft (0.402 m) lower.

REMARKS.--Water-discharge records good except those for January and February, which are poor. High flows affected since 1974 by R. D. Bailey Lake at mile 112 (180 km). Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--16 years, 1,171 ft³/s (33.16 m³/s), 19.02 in/yr (483 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 55,000 ft³/s (1,560 m³/s) Mar. 12, 1963, gage height, 34.98 ft (10.662 m), from rating curve extended above 26,000 ft³/s (740 m³/s) on basis of slope-area measurements at gage heights 25.6 ft (7.80 m) and 34.98 ft (10.662 m); minimum, 33 ft³/s (0.93 m³/s) Sept. 17, 1964, gage height, 4.07 ft (1.241 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 31,700 ft³/s (898 m³/s) Jan. 26, gage height, 25.33 ft (7.721 m), from rating curve extended above 26,000 ft³/s (740 m³/s) on basis of slope-area measurements at gage heights 25.6 ft (7.80 m) and 34.98 ft (10.662 m); minimum, 109 ft³/s (3.09 m³/s) Sept. 30, gage height, 4.39 ft (1.338 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	380	784	3380	878	1460	1020	1320	2020	685	237	279	1420
2	1940	699	2440	835	1300	949	1180	1700	594	332	231	740
3	1960	653	1900	740	1100	923	1040	1470	744	503	226	431
4	1050	611	1640	631	1000	882	939	1700	706	548	349	350
5	720	577	3670	610	900	753	899	3230	636	414	638	271
6	562	1710	6230	661	800	767	843	3480	538	322	800	217
7	478	6590	3990	708	740	999	813	2460	478	272	853	183
8	450	7210	2470	791	680	1830	761	2750	550	242	759	164
9	2470	5080	2240	1960	640	3650	702	6790	574	211	550	157
10	5620	3450	2280	2640	600	6830	676	5050	601	195	431	147
11	2180	3280	2010	1950	560	7000	661	2970	538	225	351	249
12	1320	2370	1720	1630	540	6090	662	2090	508	257	391	258
13	944	1820	1530	1400	520	6860	627	2030	478	242	339	224
14	752	1450	1460	1200	1100	7500	578	2240	450	209	323	188
15	636	1230	1790	1000	1420	8650	549	2200	415	225	319	172
16	971	1080	2200	900	1250	5220	520	1910	380	629	283	170
17	2070	990	1920	800	1170	3500	509	1660	344	629	248	166
18	1850	959	1680	720	1160	2560	515	1410	324	491	217	152
19	1370	867	1520	660	1170	2110	545	1210	308	337	194	135
20	1110	791	1310	620	1150	1880	567	1050	296	266	184	123
21	890	746	1200	580	1130	1760	593	935	288	216	162	119
22	728	813	1070	540	1070	1700	591	836	284	196	145	126
23	643	2190	951	520	904	1530	560	836	284	186	137	125
24	574	3680	880	500	913	1370	546	2280	288	179	134	133
25	532	2860	1230	3710	891	1240	573	2530	280	214	138	140
26	1100	2300	1550	22500	990	1220	3670	1700	269	232	144	127
27	2140	1860	1440	15200	1020	1360	14500	1250	264	251	143	120
28	1750	1670	1250	6840	991	1610	9280	990	247	287	134	115
29	1360	1810	1060	2900	---	1680	3320	836	252	199	167	112
30	1090	3190	984	2020	---	1630	2340	760	240	218	218	110
31	908	---	918	1730	---	1450	---	768	---	302	879	---
TOTAL	40548	63320	59913	78374	27169	86523	51279	63141	12843	9466	10366	7144
MEAN	1308	2111	1933	2528	970	2791	1709	2037	428	305	334	238
MAX	5620	7210	6230	22500	1460	8650	14500	6790	744	829	879	1420
MIN	380	577	880	500	520	753	509	760	240	179	134	110
CFSM	1.57	2.53	2.31	3.02	1.16	3.34	2.04	2.44	.51	.37	.40	.29
IN.	1.80	2.82	2.67	3.49	1.21	3.85	2.28	2.81	.57	.42	.46	.32

CAL YR 1977 TOTAL 502803 MEAN 1378 MAX 33400 MIN 134 CFSM 1.65 IN 22.37
WTR YR 1978 TOTAL 510086 MEAN 1397 MAX 22500 MIN 110 CFSM 1.67 IN 22.70

GUYANDOTTE RIVER BASIN

03204000 GUYANDOTTE RIVER AT BRANCHLAND, WV
(National stream-quality accounting network station)

LOCATION.--Lat 38°13'15", long 82°12'10", Lincoln County, Hydrologic Unit 05070102, on right bank at upstream side of highway bridge at Branchland, opposite mouth of Fourmile Creek, and at mile 34.4 (55.3 km). Records include flow of Fourmile Creek.

DRAINAGE AREA.--1,226 mi² (3,175 km²), includes that of Fourmile Creek.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1915 to September 1917, October 1917 to September 1922 (gage heights only), December 1928 to current year. Prior to October 1959, published as Guyandot River at Branchland. Monthly discharge only for July to September 1916, published in WSP 1305.

REVISED RECORDS.--WSP 803: Drainage area. WSP 853: 1918(M). WSP 1335: 1916-17, 1929-30, 1932-35.

GAGE.--Water-stage recorder. Datum of gage is 547.91 ft (167.003 m) National Geodetic Vertical Datum, adjustment of 1912. Prior to June 20, 1932, nonrecording gage and June 20, 1932, to Oct. 24, 1968, water-stage recorder at site 20 ft (6 m) downstream at same datum. Oct. 1, 1942, to Jan. 23, 1969, auxiliary nonrecording gage and since Jan. 24, 1969, auxiliary water-stage recorder 4.0 mi (6.4 km) upstream from base gage at datum 4.99 ft (1.521 m) higher.

REMARKS.--Water-discharge records good except those for January, February, May and June, which are poor. High flows affected since 1974 by R. D. Bailey Lake at mile 112 (180 km). Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--51 years (water years 1916-17, 1930-78), 1,623 ft³/s (45.96 m³/s), 17.98 in/yr (457 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 44,500 ft³/s (1,260 m³/s) Mar. 13, 1963, gage height, 43.83 ft (13.359 m); minimum, 3.6 ft³/s (0.10 m³/s) Oct. 25, 1930, gage height, 2.66 ft (0.811 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood, probably in 1907, reached a stage of about 44 ft (13.4 m), from flood-mark, discharge, 43,500 ft³/s (1,230 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 28,400 ft³/s (804 m³/s) Jan. 27, gage height, 34.22 ft (10.430 m), backwater; minimum, 123 ft³/s (3.48 m³/s) Sept. 30, gage height, 3.16 ft (0.963 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	641	949	4770	1190	2400	1680	2260	3820	1100	340	504	1930
2	1470	818	4840	1120	2150	1620	2000	3070	1000	470	395	1640
3	3070	741	3530	994	1900	1590	1760	2530	980	680	320	818
4	2040	690	2890	860	1650	1600	1560	2960	1100	760	672	552
5	1190	648	3000	762	1400	1420	1430	5390	1200	640	546	432
6	845	734	6310	762	1300	1360	1330	6330	1100	504	853	340
7	656	3720	6970	818	1100	1620	1290	4930	1000	431	2230	280
8	613	6840	4960	1030	1050	2420	1190	4270	860	331	3110	242
9	989	7080	3820	1950	980	3210	1090	6380	920	300	1440	222
10	4270	6020	3700	3000	930	5460	1010	8370	1000	280	860	206
11	4680	5440	3430	3800	880	10800	967	6310	940	305	678	210
12	2500	4520	2900	2900	830	11000	950	4710	900	280	832	266
13	1580	3220	2460	2500	780	10800	907	3630	830	291	654	280
14	1140	2420	2220	2200	1380	11000	841	3360	760	303	522	254
15	912	1940	2500	1800	1850	12100	783	2000	680	345	450	226
16	865	1630	2900	1500	2160	10400	740	1900	630	293	420	206
17	1800	1420	3200	1300	2100	7020	709	3500	580	941	375	206
18	2760	1270	2700	1200	1830	4990	705	2800	540	826	330	194
19	2270	1160	2340	1100	1790	4050	774	2400	500	545	295	186
20	1690	1010	1990	1000	1760	3470	779	2000	470	394	262	170
21	1340	908	1750	940	1780	3090	785	1700	440	318	246	154
22	1050	884	1520	880	1680	2970	784	1500	430	270	218	144
23	872	1160	1340	830	1460	2720	762	1400	430	248	198	144
24	772	2830	1160	770	1400	2400	736	3000	430	295	186	147
25	785	4230	1500	6200	1390	2150	767	4600	420	275	178	147
26	688	4000	2000	16800	1480	2060	3130	3500	400	305	198	162
27	1400	3150	2200	26300	1590	2280	13800	2500	380	295	206	150
28	2690	2610	1800	18300	1670	2630	16700	1700	370	320	186	141
29	2150	2440	1580	9000	---	2950	8320	1400	360	350	174	132
30	1790	3040	1380	4500	---	2910	4760	1300	350	280	182	126
31	1260	---	1290	2800	---	2790	---	1200	---	552	1370	---
TOTAL	50558	77522	88950	119106	42670	136560	73619	104460	21100	12767	19090	10307
MEAN	1631	2584	2869	3842	1524	4405	2454	3370	703	412	616	344
MAX	4680	7080	6970	26300	2400	12100	16700	8370	1200	941	3110	1930
MIN	613	648	1160	762	780	1360	705	1200	350	248	174	126
CFSM	1.33	2.11	2.34	3.13	1.24	3.59	2.00	2.75	.57	.34	.50	.28
IN.	1.53	2.35	2.70	3.61	1.29	4.14	2.23	3.17	.64	.39	.58	.31

CAL YR 1977 TOTAL 698561 MEAN 1914 MAX 31800 MIN 158 CFSM 1.56 IN 21.20
WTR YR 1978 TOTAL 756709 MEAN 2073 MAX 26300 MIN 126 CFSM 1.69 IN 22.96

GUYANDOTTE RIVER BASIN

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03204000 GUYANDOTTE RIVER AT BRANCHLAND, WV--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1975 to November 1976, February to September 1977 (discontinued).

WATER TEMPERATURES: March to December 1976, February to September 1977 (discontinued).

TURBIDITY: October 1975 to December 1976 (discontinued).

SUSPENDED SEDIMENT DISCHARGE: March 1976 to September 1977 (discontinued).

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 845 micromhos Aug. 27, 1976; minimum daily, 108 micromhos Feb. 11, 1977.

WATER TEMPERATURES: Maximum daily, 32.0°C July 14, 1977; minimum daily, 1.0°C several days in February 1977.

TURBIDITY: Maximum daily, 200 JTU Mar. 21, Aug. 15, 1976; minimum daily, 1 JTU on several days in 1976.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 3,250 mg/L Dec. 9, 1976; minimum daily mean, 5 mg/L Oct. 24, 1976 and July 17, 20, 1977.

SEDIMENT LOADS: Maximum daily, 205,000 tons (186,000 tonnes) Apr. 5, 1977; minimum daily, 2.3 tons (2.1 tonne) July 20, 1977.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCUCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	
OCT 12...	1020	2530	165	--	13.0	50	--	6000	3000	59	38	14	
NOV 21...	1330	900	475	7.6	9.0	6.0	10.2	1200	240	110	45	24	
DEC 20...	1220	1990	340	7.5	7.0	6.0	10.6	1400	600	72	41	17	
FEB 16...	1430	1940	270	7.3	2.0	30	11.0	--	600	89	55	20	
MAR 08...	0935	2190	260	7.4	6.5	55	11.5	1100	130	81	52	18	
APR 04...	1345	1530	280	7.2	19.0	8.0	8.8	540	160	96	53	22	
MAY 19...	1100	2400	260	7.0	17.0	10	--	1200	230	81	39	18	
JUN 21...	1000	440	510	8.0	25.5	7.0	--	83	100	160	65	38	
JUL 18...	1315	755	350	7.6	24.0	7.0	7.5	5600	8500	110	47	25	
SEP 07...	1015	280	375	7.8	25.0	7.0	7.5	322	155	130	57	30	
21...	1030	150	525	8.0	27.0	1.0	7.8	44	66	200	90	44	
DATE		MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINEITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT 12...	5.9	11	28	.6	2.7	26	--	21	--	50	4.1	.1	
NOV 21...	11	32	39	1.4	2.9	74	0	61	3.0	100	8.2	.1	
DEC 20...	7.1	16	32	.8	2.2	38	0	31	1.9	77	6.2	.0	
FEB 16...	9.5	24	36	1.1	2.6	42	0	34	3.4	88	10	.1	
MAR 08...	8.7	23	38	1.1	2.1	35	0	29	2.2	80	11	.1	
APR 04...	10	25	35	1.1	2.4	52	--	43	5.2	92	11	.1	
MAY 19...	8.7	22	36	1.1	2.1	51	--	42	8.2	82	10	.0	
JUN 21...	17	70	47	2.4	4.0	--	--	100	--	180	27	.1	
JUL 18...	11	41	44	1.7	3.4	--	--	61	--	120	8.6	.1	
SEP 07...	14	48	43	1.8	3.6	--	--	76	--	140	17	.1	
21...	22	80	46	2.5	5.0	--	--	110	--	220	32	.1	

GUYANDOTTE RIVER BASIN

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03204000 GUYANDOTTE RIVER AT BRANCLAND, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)
OCT	12...	1020	--	--	--	--	--	--	--	--	--	--
NOV	21...	1330	5	70	--	60	--	<.5	--	--	0	0
DEC	20...	1220	--	--	--	--	--	--	--	--	--	--
FEB	16...	1430	0	170	80	90	--	<.5	--	--	0	2
MAR	08...	0935	--	--	--	--	--	--	--	--	--	--
APR	04...	1345	--	--	--	--	--	--	--	--	--	--
MAY	19...	1100	6	90	50	40	<.5	.0	<.5	1	0	1
JUN	21...	1000	--	--	--	--	--	--	--	--	--	--
JUL	18...	1315	--	--	--	--	--	--	--	--	--	--
SEP	07...	1015	3	110	70	40	<.5	.0	<.5	1	0	0
	21...	1030	--	--	--	--	--	--	--	--	--	--

DATE	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. * FINER .062 MM
OCT	12...	--	--	--	--	8.0	--	--	--	160	1090	55
NOV	21...	--	0	20	--	10	--	4.4	.0	98	19	48
DEC	20...	--	--	--	--	3.4	--	--	--	29	156	40
FEB	16...	2	0	30	20	10	--	2.0	--	106	555	69
MAR	08...	--	--	--	--	2.0	--	--	1400	188	1110	67
APR	04...	--	--	--	--	7.3	--	--	--	44	152	26
MAY	19...	1	0	10	10	0	--	10	2.2	230	41	266
JUN	21...	--	--	--	--	7.2	--	--	--	24	29	53
JUL	18...	--	--	--	--	23	--	--	3700	1200	2450	97
SEP	07...	0	0	10	0	10	--	1.6	.2	2400	59	45
	21...	--	--	--	--	2.1	--	--	11000	18	7.3	67

GUYANDOTTE RIVER BASIN

03204000 GUYANDOTTE RIVER AT BRANCLAND, WV--Continued

PHYTOPLANKTON ANALYSIS, OCTOBER 1977 TO SEPTEMBER 1978

DATE TIME	NOV 21.77 1330	MAR 8.78 0935	MAY 19.78 1100	JUL 18.78 1315	SEP 7.78 1015	SEP 21.78 1030
TOTAL CELLS/ML	94	1400	230	3700	2400	11000
DIVERSITY: DIVISION	0.0	0.7	0.0	0.6	1.0	1.1
..CLASS	0.0	0.7	0.0	0.6	1.0	1.2
...ORDER	1.0	0.7	0.0	1.5	1.7	1.6
....FAMILY	2.1	1.3	1.2	2.7	2.7	2.2
.....GENUS	2.1	1.8	1.2	3.1	3.0	2.5

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)												
..CHLOROPHYCEAE												
...CHLOROCOCCALES												
....HYDRODICTYACEAE												
.....PEDICULUM	--	-	--	-	--	-	--	-	310	13	--	-
.....MICRACETINIUM	--	-	--	-	--	-	--	-	--	-	470	4
....OOCYSTACEAE												
.....ANKISTRODES MUS	--	-	--	-	--	-	--	-	60	3	2500#	22
.....CHODATELLA	--	-	--	-	--	-	--	-	44	2	--	-
.....DICTYOSPHAERIUM	--	-	--	-	--	-	--	-	89	4	--	-
.....KIRCHNERIELLA	--	-	--	-	--	-	--	-	--	-	470	4
.....OOCYSTIS	--	-	--	-	--	-	--	-	--	-	94	1
.....SELENASTRUM	--	-	--	-	--	-	--	-	22	1	--	-
....SCENEDESMACEAE												
.....SCENEDESMUS	--	-	--	-	--	-	--	-	420#	18	1700	15
..VOLVOCALES												
...CHLAMYDOMONADACEAE												
....CHLAMYDOMONAS	--	-	--	-	--	-	--	-	--	-	94	1
....CHLAMYDOMONAS	--	-	--	-	--	-	--	-	89	4	--	-
..ZYGNEMATALES												
...DESMIDIACEAE												
....CLOSTERIUM	--	-	230#	17	--	-	--	-	--	-	94	1
CHRYSTOPHYTA												
..BACILLARIOPHYCEAE												
...CENTRALES												
....COSCIPODISACEAE												
.....CYCLOTELLA	--	-	--	-	--	-	620#	17	660#	28	4700#	41
....MELUSINA	35#	40	--	-	--	-	480#	24	44	2	--	-
....STEPHANODISCUS	--	-	--	-	--	-	--	-	--	-	94	1
...PENNALES												
....ACHNANTHACEAE												
.....ACHNANTHES	13	13	--	-	--	-	88	2	22	1	--	-
....CYMBELLACEAE												
.....CYMBELLA	--	-	--	-	--	-	88	2	--	-	--	-
....DIATOMACEAE												
.....DIATOMA	--	-	--	-	--	-	180	5	--	-	--	-
....FRAGILIARIACEAE												
.....SYNEDRA	--	-	--	-	--	-	--	-	--	-	190	2
....GUMPHONEMACEAE												
.....GUMPHONEMA	7	7	230#	17	14	6	180	5	89	4	--	-
....NAVICULACEAE												
.....NAVICULA	26#	27	590#	50	140#	63	620#	17	130	6	--	-
....NEIDIUM	--	-	230#	17	--	-	--	-	--	-	--	-
....NITZSCHACEAE												
.....NITZSCHIA	13	13	--	-	71#	31	440	12	380#	16	660	6
....SURIPELLACEAE												
.....SURIPELLA	--	-	--	-	--	-	180	5	--	-	--	-
..CHRYSTOPHYCEAE												
...CHRYSONOMADACEAE												
....OCHROMONAS	--	-	--	-	--	-	--	-	--	-	190	2
CYANOPHYTA (BLUE-GREEN ALGAE)												
..CYANOPHYCEAE												
...HORMOGONALES												
....OSCILLATORIA												
.....OSCILLATORIA	--	-	--	-	--	-	350	10	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)												
..EUGLENOPHYCEAE												
...EUGLENALES												
....EUGLENACEAE												
.....EUGLENA	--	-	--	-	--	-	--	-	--	-	94	1
....TRACHELUMONAS	--	-	--	-	--	-	88	2	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

GUYANDOTTE RIVER BASIN

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03204500 MUD RIVER NEAR MILTON, WV

LOCATION.--Lat 38°23'15", long 82°06'46", Cabell County, Hydrologic Unit 05070102, on right bank 75 ft (23 m) downstream from highway bridge, 700 ft (213 m) downstream from Little Twomile Creek, 0.9 mi (1.4 km) upstream from Charley Creek, 3.4 mi (5.5 km) south of Milton, and at mile 25.3 (40.7 km).

DRAINAGE AREA.--256 mi² (663 km²).

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

REVISED RECORDS.--WSP 1555: 1953, drainage area.

GAGE.--Water-stage recorder. Datum of gage is 572.64 ft (174.541 m) National Geodetic Vertical datum, adjustment of 1912 (levels by Corps of Engineers). Prior to Nov. 21, 1957, nonrecording gage at site 75 ft (23 m) upstream at same datum.

REMARKS.--Records good except those for January and February, which are poor.

AVERAGE DISCHARGE.--40 years, 284 ft³/s (8.043 m³/s), 15.07 in/yr (383 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,100 ft³/s (428 m³/s) Feb. 27, 1962, gage height, 28.60 ft (8.717 m); maximum gage height, 29.35 ft (8.946 m) Feb. 3, 1939, from floodmarks; minimum discharge, 0.01 ft³/s (<0.001 m³/s) Sept. 8, 1957; minimum gage height, 0.06 ft (0.018 m) Sept. 21, 23, 1959.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,700 ft³/s (100 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 26	2100	*7850 222	23.06 7.029	Apr. 27	1200	6030 171	20.55 6.264

Minimum discharge, 5.3 ft³/s (0.15 m³/s) Sept. 30, gage height 0.59 ft (0.180 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	153	26	1300	98	330	260	309	399	87	11	207	813
2	488	24	777	86	270	250	255	304	63	12	87	240
3	277	23	396	74	230	240	212	243	110	24	48	114
4	128	22	398	66	210	250	186	619	300	59	276	70
5	72	21	1370	62	200	262	171	1960	164	51	225	49
6	56	35	2680	60	176	283	156	1090	99	30	181	38
7	51	319	899	74	165	440	144	564	68	21	2620	32
8	47	696	435	160	150	617	136	991	218	16	799	26
9	184	544	491	2420	140	1840	121	2420	340	13	454	22
10	383	414	569	1170	130	2910	114	1230	163	12	212	19
11	208	701	343	485	125	3160	110	607	107	17	214	17
12	126	367	285	366	120	2870	106	409	78	20	174	15
13	87	224	246	290	120	2570	98	385	93	17	212	24
14	64	161	216	250	187	2590	85	450	73	24	122	17
15	51	125	217	210	300	1930	76	589	58	64	93	15
16	51	103	201	180	250	907	69	539	45	31	80	13
17	197	97	175	160	230	888	66	399	39	22	54	12
18	155	112	161	140	220	679	69	305	34	18	41	11
19	108	91	146	125	250	524	433	238	31	17	34	10
20	82	72	133	115	230	418	266	190	29	17	29	9.6
21	63	63	128	105	230	350	224	156	26	12	24	9.6
22	51	60	113	98	200	362	171	128	25	9.9	21	11
23	43	101	97	94	180	326	136	117	25	8.2	19	8.9
24	38	164	87	90	170	277	119	898	23	8.9	17	7.9
25	33	189	183	2990	165	282	118	680	18	35	16	7.9
26	32	187	249	6840	260	540	2540	311	17	71	15	7.3
27	35	176	179	2300	300	1340	5650	204	17	44	17	6.7
28	36	178	139	1100	260	1110	2520	153	16	29	16	6.7
29	37	310	154	800	---	700	720	117	13	22	16	6.1
30	32	835	133	560	---	481	490	103	12	23	13	5.5
31	29	---	112	420	---	369	---	103	---	127	205	---
TOTAL	3397	6440	13012	21988	5798	30025	16270	16901	2391	886.0	6541	1644.2
MEAN	110	215	420	709	207	969	542	545	79.7	28.6	211	54.8
MAX	488	835	2680	6840	330	3160	5650	2420	340	127	2620	813
MIN	29	21	87	60	120	240	66	103	12	8.2	13	5.5
CFSM	.43	.84	1.64	2.77	.81	3.79	2.12	2.13	.31	.11	.82	.21
IN.	.49	.94	1.89	3.20	.84	4.36	2.36	2.46	.35	.13	.95	.24

CAL YR 1977	TOTAL	79446.1	MEAN 218	MAX 6390	MIN 2.2	CFSM .85	IN 11.54
WTR YR 1978	TOTAL	125293.2	MEAN 343	MAX 6840	MIN 5.5	CFSM 1.34	IN 18.21

OHIO RIVER MAIN STEM

03206000 OHIO RIVER AT HUNTINGTON, WV

LOCATION.--Lat 38°24'48", long 82°30'02", Lawrence County, Ohio, Hydrologic Unit 05090101, on right bank at lock 28 at Sybene, Ohio, 0.1 mi (0.2 km) upstream from Fourpole Creek, 3.0 mi (4.8 km) downstream from Symmes Creek, and at mile 311.6 (501.4 km), measured downstream from Pittsburgh, Pa.

DRAINAGE AREA.--55,900 mi² (144,800 km²), approximately.

PERIOD OF RECORD.--August 1934 to current year (since October 1968, no low-flow records). Gage-height records collected at same site since 1913 are in reports of National Weather Service.

REVISED RECORDS.--WSP 853: 1934, 1936. WSP 893: Drainage area. WSP 1305: 1935(M), 1939(M).

GAGE.--Water-stage recorder. Datum of gage is 490.263 ft (149.432 m) Sandy Hook datum. Prior to July 8, 1942, at datum 1.737 ft (0.529 m) higher. Auxiliary water-stage recorder 4.7 mi (7.6 km) upstream from base gage at datum 490.102 ft (149.383 m) Sandy Hook datum.

REMARKS.--Records good. Discharge less than 50,000 ft³/s (1,420 m³/s) on days for which no discharge is shown. Flow partly regulated by locks, dams, and reservoirs upstream. Corps of Engineers gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 654,000 ft³/s (18,500 m³/s) Jan. 28, 1937; maximum gage height, 69.45 ft (21.168 m) Jan. 27, 1937, present datum; minimum daily discharge determined, 3,200 ft³/s (90.6 m³/s) Sept. 6, 13, Nov. 2, 1934, Oct. 3, 1935, Oct. 1, 1937.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 406,000 ft³/s (11,498 m³/s) Jan. 28, gage height, 49.54 ft (15.100 m); minimum, not determined; minimum gage height, 24.90 ft (7.590 m) Oct. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57700	---	137000	89400	164000	---	185000	102000	70400	54400	133000	---
2	80100	---	168000	81000	151000	---	166000	87000	55100	---	104000	---
3	94300	---	189000	70600	133000	---	151000	82000	---	68900	---	---
4	95900	---	169000	63800	92700	---	146000	---	---	108000	---	---
5	77800	---	162000	58200	84400	---	154000	76800	---	138000	---	---
6	77800	---	224000	50000	77200	---	157000	95000	54700	117000	---	---
7	71300	---	224000	58200	73100	---	168000	87400	---	69800	51800	---
8	66000	78200	171000	73000	60100	---	179000	78600	52800	62400	96800	---
9	71800	115000	117000	167000	69300	---	180000	120000	94800	62900	75800	---
10	102000	138000	130000	217000	57900	79900	165000	158000	108000	---	69400	---
11	120000	131000	119000	210000	---	124000	150000	154000	80200	---	88700	---
12	123000	117000	93500	152000	50500	182000	141000	127000	65500	---	84400	---
13	104000	103000	74200	117000	---	230000	131000	111000	61600	---	56000	---
14	88900	81700	81000	117000	---	265000	120000	123000	58000	---	61000	---
15	71800	61600	136000	112000	---	333000	99100	157000	52500	65400	51100	---
16	62700	61700	206000	90900	---	375000	87500	183000	---	59600	---	---
17	54800	66500	241000	70200	---	372000	75800	188000	---	54200	---	---
18	58800	83700	217000	69600	---	329000	64200	204000	53900	63200	---	---
19	66100	100000	186000	91700	---	280000	74400	244000	---	---	---	---
20	56100	101000	166000	101000	---	235000	84000	243000	---	---	---	---
21	---	96800	160000	78600	---	194000	91000	193000	59800	---	---	---
22	---	77200	167000	73600	---	190000	100000	171000	---	---	---	---
23	---	75300	157000	59300	---	211000	102000	150000	---	---	---	---
24	---	103000	142000	---	---	223000	99000	134000	---	---	---	---
25	---	113000	130000	123000	---	215000	89000	139000	---	---	---	---
26	---	100000	132000	295000	---	237000	100000	156000	---	---	---	---
27	---	97300	139000	402000	---	279000	178000	150000	52300	---	---	---
28	---	90900	134000	350000	---	292000	202000	121000	70800	---	---	---
29	---	83700	111000	270000	---	271000	175000	85900	81900	---	---	---
30	---	103000	98300	189000	---	240000	132000	66200	77000	---	---	---
31	---	---	92700	179000	---	208000	---	68800	---	---	---	---
TOTAL	---	---	4673700	---	---	---	3948400	---	---	---	---	---
MEAN	---	---	150800	---	---	---	131600	---	---	---	---	---
MAX	---	---	241000	---	---	---	202000	---	---	---	---	---
MIN	---	---	74200	---	---	---	64200	---	---	---	---	---

TWELVEPOLE CREEK BASIN

281

03206600 EAST FORK TWELVEPOLE CREEK NEAR DUNLOW, WV

LOCATION.--Lat 38°01'02", long 82°17'46", Wayne County, Hydrologic Unit 05090102, on left bank 0.2 mi (0.3 km) upstream from Maynard Branch, 0.9 mi (1.4 km) downstream from McComas Branch, 1.5 mi (2.4 km) upstream from Deviltrace Branch, and 7.5 mi (12.1 km) east of Dunlow.

DRAINAGE AREA.--38.2 mi² (98.9 km²).

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 710.00 ft (216.408 m) National Geodetic Vertical Datum of 1929. Prior to Dec. 22, 1964, nonrecording gage at same site and datum.

REMARKS.--Records good except those for January and February, which are poor. Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--14 years, 52.9 ft³/s (1.498 m³/s), 18.81 in/yr (478 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,660 ft³/s (75.3 m³/s) Nov. 27, 1973, gage height, 13.26 ft (4.042 m), from rating curve extended above 1,300 ft³/s (37 m³/s); minimum, 0.01 ft³/s (<0.001 m³/s) July 2-13, 1966, Sept. 18-28, 1967, Sept. 8, 9, 1973; minimum gage height, 4.44 ft (1.353 m) Sept. 26, 27, 1967.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 840 ft³/s (24 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 26	0630	*2350 66.6	12.59 3.837	Aug. 7	1500	845 23.9	9.35 2.850
Apr. 26	2200	1670 47.3	11.34 3.456				

Minimum daily discharge, 0.36 ft³/s (0.010 m³/s) Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	8.4	202	23	55	56	63	86	29	1.7	29	59
2	57	8.1	133	20	47	50	52	69	24	8.2	16	27
3	18	8.1	92	16	42	62	44	57	48	20	11	18
4	12	8.1	69	14	37	60	40	162	49	22	58	12
5	9.3	8.0	246	15	34	64	38	324	37	11	23	8.4
6	9.1	41	274	18	31	71	34	187	28	7.0	16	6.1
7	8.7	228	137	16	29	87	38	125	25	4.7	354	4.3
8	11	268	92	75	27	332	33	206	31	3.5	179	3.3
9	62	126	114	263	25	469	32	334	48	4.4	69	2.8
10	38	211	100	138	24	540	31	202	36	5.6	41	3.2
11	24	169	86	100	23	421	31	129	28	6.0	38	4.5
12	18	96	72	80	22	457	30	91	24	4.6	51	2.1
13	13	59	55	62	21	358	27	91	22	2.3	28	2.1
14	11	43	56	52	40	351	25	86	18	3.9	20	1.7
15	10	35	54	45	67	221	23	85	15	9.8	19	1.6
16	21	30	48	40	63	161	22	79	13	5.9	13	1.2
17	21	27	45	36	60	134	22	68	11	7.0	10	1.1
18	19	22	41	33	56	105	22	55	9.6	3.9	7.7	.87
19	17	19	35	30	51	90	23	44	8.7	1.8	6.2	.72
20	14	17	32	27	52	75	23	37	7.9	1.3	9.8	.60
21	11	16	27	25	51	70	21	31	10	1.0	6.9	.50
22	10	22	24	23	42	68	19	26	13	.69	3.5	.50
23	9.8	37	20	22	40	61	17	55	8.6	.39	2.7	.51
24	9.0	59	20	21	42	56	20	300	5.6	5.7	2.1	.47
25	9.1	73	40	941	45	61	22	146	4.1	17	1.9	.69
26	13	65	33	1590	53	78	896	85	6.1	12	2.2	.51
27	13	50	34	319	49	129	824	56	7.4	23	1.7	.41
28	11	58	32	166	55	130	235	41	4.1	19	1.5	.38
29	10	70	30	106	---	111	133	43	2.7	7.4	1.7	.39
30	9.0	125	26	81	---	87	112	51	2.0	22	23	.36
31	8.7	---	25	63	---	74	---	37	---	83	301	---
TOTAL	525.7	2006.7	2294	4460	1183	5089	2552	3388	575.8	325.78	1346.9	165.31
MEAN	17.0	66.9	74.0	144	42.3	164	98.4	109	19.2	10.5	43.4	5.51
MAX	62	268	274	1590	67	540	896	334	49	83	354	59
MIN	8.7	8.0	20	14	21	50	17	26	2.0	.39	1.5	.36
CFSM	.45	1.75	1.94	3.77	1.11	4.29	2.58	2.85	.50	.28	1.14	.14
IN.	.51	1.95	2.23	4.34	1.15	4.96	2.87	3.30	.56	.32	1.31	.16

CAL YR 1977	TOTAL	16843.22	MEAN 46.1	MAX 1300	MIN .64	CFSM 1.21	IN 16.40
WTR YR 1978	TOTAL	24312.19	MEAN 66.6	MAX 1590	MIN .36	CFSM 1.74	IN 23.68

TWELVEPOLE CREEK BASIN

03206780 EAST LYNN LAKE NEAR EAST LYNN, WV

LOCATION.--Lat 38°08'43", long 82°22'58", Wayne County, Hydrologic Unit 05090102, at East Lynn Dam on East Fork Twelvepole Creek, 0.1 mi (0.2 km) upstream from Laurel Creek, 1.5 mi (2.4 km) south of East Lynn, and at mile 42.0 (67.6 km).

DRAINAGE AREA.--133 mi² (344 km²).

PERIOD OF RECORD.--March 1972 to current year (monthend contents only).

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

REMARKS.--Reservoir is formed by rockfill dam with impervious core, completed in 1972; closure of dam was made and storage began in March 1972. Spillway is uncontrolled saddle spillway, crest elevation, 701.0 ft (213.66 m). Flow is controlled by one 2.5 ft (0.76 m) diameter bypass valve and three 5.67 ft (1.728 m) wide by 10.0 ft (3.05 m) high gates. Total level-pool capacity at elevation 701.0 ft (213.66 m), spillway crest, is 82,500 acre-ft (102 hm³) of which 70,790 acre-ft (87.3 hm³) is controlled storage above elevation 656.0 ft (199.95 m), minimum-pool elevation. This is a multipurpose reservoir.

COOPERATION.--Records were furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 33,030 acre-ft (40.7 hm³) Jan. 14, 1974, elevation, 674.95 ft (205.725 m); minimum since first filling, 10,050 acre-ft (12.4 hm³) Feb. 25, 1974, elevation, 653.90 ft (199.309 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 28,220 acre-ft (34.8 hm³) Jan. 29, elevation, 671.49 ft (204.670 m); minimum, 11,790 acre ft (14.5 hm³) Mar. 20, elevation, 656.10 ft (199.979 m).

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in Contents (acre-feet)	Change in Contents (equivalent in cfs)
Sept. 30.....	662.15	17340	-	-
Oct. 31.....	662.16	17350	+10	0
Nov. 30.....	657.25	12760	-4590	-77
Dec. 31.....	656.33	11980	-780	-13
CAL YR 1977	-	-	-220	0
Jan. 31.....	664.60	19910	+7930	+129
Feb. 28.....	656.40	12040	-7870	-142
Mar. 31.....	657.53	13010	+970	+16
Apr. 30.....	663.82	19070	+6060	+102
May 31.....	662.77	17970	-1100	-18
June 30.....	662.58	17780	-190	-3
July 31.....	663.35	18580	+800	+13
Aug. 31.....	664.36	19650	+1070	+17
Sept. 30.....	662.31	17500	-2150	-36
WTR YR 1978	-	-	+160	0

TWELVEPOLE CREEK BASIN

283

03206790 EAST FORK TWELVEPOLE CREEK BELOW EAST LYNN DAM, WV

LOCATION.--Lat 38°08'52", long 82°23'00", Wayne County, Hydrologic Unit 05090102, on left bank 800 ft (244 m) downstream from Laurel Creek, 1,700 ft (518 m) downstream from East Lynn Dam, 1.4 mi (2.3 km) south of East Lynn, and at mile 41.7 (67.1 km).

DRAINAGE AREA.--138 mi² (357 km²).

PERIOD OF RECORD.--June 1962 to current year. Prior to October 1967 published as "near East Lynn."

GAGE.--Water-stage recorder. Datum of gage is 600.00 ft (182.880 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Oct. 1, 1967, water-stage recorder at site 0.7 mi (1.1 km) downstream at same datum.

REMARKS.--Records good. Flow regulated since March 1972 by East Lynn Lake (station 03206780).

AVERAGE DISCHARGE.--16 years, 168 ft³/s (4.758 m³/s), 16.53 in/yr (420 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,960 ft³/s (140 m³/s) Mar. 12, 1968, gage height, 31.50 ft (9.601 m), from floodmarks; no flow Sept. 10-27, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge known since at least 1913, about 13,000 ft³/s (368 m³/s) Feb. 3, 1939, gage height, about 37 ft (11.3 m), from floodmarks, from rating curve based on conveyance-slope study. Flood of Feb. 28, 1962, reached a stage of 36.25 ft (11.049 m), from floodmarks, discharge, about 12,000 ft³/s (340 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,100 ft³/s (59.5 m³/s) Jan. 29, gage height, 21.14 ft (6.443 m); minimum, 9.9 ft³/s (0.28 m³/s) July 24, minimum gage height, 11.50 (3.505 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71	80	610	137	1900	150	138	625	81	14	138	413
2	158	142	538	83	1490	149	106	420	47	18	137	394
3	120	136	303	59	809	182	106	268	66	18	129	232
4	51	117	321	46	372	198	51	310	90	22	146	80
5	30	104	503	41	168	172	23	611	86	24	157	27
6	30	105	790	42	124	165	22	673	58	23	150	27
7	29	157	810	42	63	228	22	662	39	23	497	16
8	30	353	545	66	42	484	22	706	38	23	1460	11
9	65	433	388	421	41	867	22	592	70	23	1060	11
10	68	628	349	688	41	1120	21	156	85	23	341	11
11	62	702	261	541	41	1340	21	317	84	22	162	11
12	59	684	160	468	41	1420	21	422	52	22	223	10
13	64	557	132	297	80	1390	21	475	38	15	209	10
14	64	306	132	216	172	1380	21	433	36	12	116	10
15	60	161	131	215	199	1330	21	585	27	14	92	10
16	58	161	130	110	198	1100	21	501	17	12	66	10
17	54	155	130	74	198	823	17	424	15	12	47	10
18	50	159	130	224	196	561	16	242	14	11	30	10
19	53	157	129	341	137	321	20	114	15	11	22	10
20	64	153	81	379	110	221	21	113	15	11	22	10
21	40	154	61	319	110	193	23	70	15	12	21	10
22	25	156	60	278	108	191	22	49	16	12	21	11
23	19	155	60	172	108	191	22	68	15	11	16	11
24	19	162	61	218	136	154	23	966	15	14	14	11
25	19	163	70	862	147	141	24	1070	16	12	14	11
26	20	161	117	201	149	147	677	699	16	11	14	11
27	20	160	140	40	149	296	1260	272	16	10	14	11
28	20	247	139	31	150	400	1470	138	16	16	14	11
29	20	294	138	1040	---	394	1420	75	14	19	15	11
30	20	462	137	2030	---	256	1110	68	13	28	14	11
31	20	---	137	1940	---	194	---	78	---	106	194	---
TOTAL	1482	7568	7693	11621	7479	16158	6784	12202	1125	604	5555	1432
MEAN	47.8	252	248	375	267	521	226	394	37.5	19.5	179	47.7
MAX	158	702	810	2030	1900	1420	1470	1070	90	106	1460	413
MIN	19	80	60	31	41	141	16	49	13	10	14	10

CAL YR 1977 TOTAL 54835.4 MEAN 150 MAX 2340 MIN 6.9 MEAN† 150 CFSM† 1.09 IN† 14.80
WTR YR 1978 TOTAL 79703.0 MEAN 218 MAX 2030 MIN 10 MEAN† 218 CFSM† 1.58 IN† 21.45

† Adjusted for change in contents in East Lynn Lake.

TWELVEPOLE CREEK BASIN

03207020 TWELVEPOLE CREEK BELOW WAYNE, WV

LOCATION.--Lat 38°14'56", long 82°26'06", Wayne County, Hydrologic Unit 05090102, on left bank just downstream from highway bridge on Secondary State Route 52/43, 1.9 mi (3.1 km) northeast of Wayne, and at mile 29.2 (47.0 km).

DRAINAGE AREA.--300 mi² (777 km²).

PERIOD OF RECORD.--July 1915 to September 1917, October 1917 to September 1922 (gage heights only), February 1927 to September 1931, August 1946 to September 1954, October 1955 to current year. Prior to October 1966 published as "at Wayne." Gage-height records collected at site 2.0 mi (3.2 km) upstream from 1924 to March 1949 are contained in reports of National Weather Service.

REVISED RECORDS.--WSP 1335: 1916-17, 1930.

GAGE.--Water-stage recorder. Datum of gage is 560.00 ft (170.688 m) National Geodetic Vertical Datum of 1929. Prior to Aug. 29, 1957, nonrecording gage, and Aug. 29, 1957, to Sept. 30, 1966, water-stage recorder at site 2.0 mi (3.2 km) upstream at datum 16.53 ft (5.038 m) higher. Oct. 1, 1966, to Dec. 15, 1966, non-recording gage at present site and datum.

REMARKS.--Records good except those for January, which are poor. Flow regulated since March 1972 by East Lynn Lake (station 03206780). Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--36 years (water years 1916-17, 1929-31, 1947-54, 1956-78), 340 ft³/s (9.629 m³/s), 15.39 in/yr (391 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,900 ft³/s (450 m³/s) Feb. 28, 1962, gage height, 29.46 ft (8.979 m) site and datum then in use, from rating curve extended above 9,500 ft³/s (270 m³/s) on basis of slope-area measurement of peak flow; no flow Oct. 21-27, Nov. 2, 1953, Nov. 4, 1959.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 30, 1928, reached a stage of 28.3 ft (8.63 m) former site and datum, discharge, 14,000 ft³/s (396 m³/s) and flood of Feb. 4, 1939, reached a stage of 31.03 ft (9.458 m) former site and datum, discharge, 22,000 ft³/s (623 m³/s), from readings by National Weather Service.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,000 ft³/s (170 m³/s) Jan. 25, gage height, 21.00 ft (6.401 m); minimum, 16 ft³/s (0.45 m³/s) Sept. 28, 29, 30, gage height, 3.69 ft (1.125 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	615	79	1130	258	1980	332	387	1090	181	24	265	734
2	587	176	1010	236	1750	295	292	704	151	35	213	554
3	327	202	688	158	1090	340	265	545	171	100	201	415
4	192	180	570	135	671	370	233	635	225	73	183	215
5	111	162	1690	129	320	322	175	1260	197	80	215	78
6	100	212	1460	135	259	362	157	1310	159	55	215	61
7	93	497	1370	135	193	515	151	1110	106	45	315	52
8	94	790	952	190	147	983	141	1670	203	40	1660	33
9	272	823	760	1060	130	2050	129	1940	205	37	1430	29
10	270	901	646	1110	121	2710	124	929	215	35	686	27
11	216	1160	542	868	111	2860	123	821	185	48	287	27
12	178	1000	412	655	111	2830	118	776	149	38	385	24
13	152	823	370	500	132	2630	111	947	109	32	395	23
14	145	525	347	410	312	2540	100	914	89	24	247	23
15	132	297	347	340	345	2170	93	1030	80	141	159	23
16	141	288	320	290	350	1740	87	980	61	42	141	22
17	142	278	305	250	360	1380	85	764	48	29	89	21
18	142	266	295	370	259	1100	89	605	44	25	72	20
19	129	254	282	430	297	725	197	332	41	22	45	19
20	139	244	262	470	247	557	132	273	39	21	42	19
21	127	240	210	440	265	445	114	219	39	20	38	19
22	91	246	192	390	233	450	99	137	39	19	36	20
23	73	274	178	320	229	412	89	159	37	18	35	19
24	66	300	174	250	253	365	94	1780	33	27	28	18
25	63	340	297	2630	271	357	121	1950	31	60	24	18
26	69	360	282	4850	315	500	2030	1260	33	38	24	18
27	67	337	288	2810	292	845	3220	653	32	28	23	17
28	67	370	270	749	342	926	2870	330	28	28	23	17
29	67	525	260	647	---	824	1890	253	28	42	21	16
30	63	817	258	2000	---	662	1590	213	25	50	23	17
31	61	---	262	2120	---	460	---	199	---	269	195	---
TOTAL	4991	12966	16429	25335	11385	33057	15306	25788	2983	1545	7715	2598
MEAN	161	432	530	817	407	1066	510	832	99.4	49.8	249	86.6
MAX	615	1160	1690	4850	1980	2860	3220	1950	225	269	1660	734
MIN	61	79	174	129	111	295	85	137	25	18	21	16

CAL YR 1977 TOTAL 116719 MEAN 320 MAX 3750 MIN 14 MEAN† 320 CFSM† 1.07 IN† 14.53
WTR YR 1978 TOTAL 160098 MEAN 439 MAX 4850 MIN 16 MEAN† 439 CFSM† 1.46 IN† 19.82

† Adjusted for change in contents in East Lynn Lake.

TWELVEPOLE CREEK BASIN

285

03207055 BEECH FORK LAKE NEAR LAVALETTE, WV

LOCATION.--Lat 38°18'14", long 82°24'58", Wayne County, Hydrologic Unit 05090102, 2.1 mi (3.4 km) southeast of Lavalette and at mile 3.4 (5.5 km).

DRAINAGE AREA.--78.0 mi² (202 km²).

PERIOD OF RECORD.--January to September, 1978 (monthend contents only).

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

REMARKS.--Reservoir is formed by random earth and rockfill dam with impervious core, completed in 1977. Closure of dam was made and storage began in January 1978. Spillway is uncontrolled, broad-crested, crest elevation 614.5 ft (187.30 m). Low flow is controlled by two 2.5 ft (0.76 m) wide by 3.0 ft (0.91 m) high gates and high flows are controlled by two 4.5 ft (1.37 m) wide by 10 ft (3.05 m) high gates. Total level - pool capacity at elevation 614.5 ft (187.30 m), spillway crest, is 37,500 acre-ft (46.2 hm³) of which 33,300 acre-ft (41.1 hm³) is controlled storage above elevation 583.5 ft (177.85 m), minimum - pool elevation. This is a multipurpose reservoir.

COOPERATION.--Records were furnished by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum contents during period January to September, 9,878 acre-ft (12.2 hm³) May 24, elevation 592.95 ft (180.73 m), minimum since initial filling, 8,151 acre-ft (10.1 hm³), elevation 590.52 ft (179.99 m) May 13.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in Contents (acre-feet)	Change in Contents (equivalent in cfs)
Sept. 30	-	-	-	-
Oct. 31	-	-	-	-
Nov. 30	-	-	-	-
Dec. 31	-	0	-	-
CAL YR 1977			-	-
Jan. 31	578.53	2267	+2267	+37
Feb. 28	578.67	2313	+46	+1
Mar. 31	583.74	4317	+2004	+33
Apr. 30	590.99	8470	+4153	+70
May 31	592.11	9258	+788	+13
June 30	591.65	8929	-329	-6
July 31	591.56	8866	-63	-1
Aug. 31	592.58	9602	+736	+12
Sept. 30	591.65	8929	-673	-11
WTR YR 1978			+8929	+12

TWELVEPOLE CREEK BASIN

03207057 BEECH FORK BELOW BEECH FORK DAM, WV

LOCATION.--Lat 38°18'18", long 82°25'28", Wayne County, Hydrologic Unit 05090102, on left bank 2,500 ft (762 m) downstream from Beech Fork Dam, and 1.7 mi (2.7 km) southeast of Lavalette and at mile 3.0 (4.8 km).

DRAINAGE AREA.--80.4 mi² (208 km²).

PERIOD OF RECORD.--July 1976 to current year.

GAGE.--Water-stage recorder. Datum of gage is 550.00 ft (167.640 m), National Geodetic Vertical Datum of 1929. (levels by Corps of Engineers).

REMARKS.--Records good. Flow regulated since January 1978 by Beech Fork Lake (station 03207055).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,840 ft³/s (52.1 m³/s) Apr. 5, 1977, gage height, 10.29 ft (3.136 m); minimum, 0.02 ft³/s (0.001 m³/s) July 20, 1977, gage height, 0.15 ft (0.046 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,620 ft³/s (45.9 m³/s) Apr. 26, gage height, 9.33 ft (2.844 m); minimum daily, 4.6 ft³/s (0.13 m³/s) Sept. 19, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	335	6.9	395	35	130	21	57	91	12	11	10	55
2	525	5.5	154	30	83	32	66	106	11	12	10	39
3	87	5.5	97	16	30	32	66	106	13	12	10	27
4	39	5.3	163	13	13	32	52	177	20	11	10	11
5	25	5.3	650	11	13	32	43	370	19	11	10	12
6	21	109	911	11	13	64	32	230	19	11	13	10
7	20	682	246	12	13	175	13	104	19	11	82	10
8	19	1250	108	36	13	280	13	861	51	12	124	10
9	149	581	184	336	13	376	13	854	134	11	78	11
10	113	192	154	546	13	783	13	230	99	11	56	11
11	49	202	98	205	13	981	15	112	21	11	15	9.3
12	31	94	76	46	13	967	11	110	14	11	13	10
13	21	58	65	78	13	847	11	114	14	10	13	10
14	15	41	68	86	13	723	11	113	14	11	13	7.5
15	13	33	86	67	13	528	11	136	12	11	13	5.5
16	18	27	67	52	13	103	11	107	13	11	13	5.5
17	27	27	56	39	13	27	11	60	13	10	12	5.3
18	21	31	49	60	13	27	11	13	13	10	10	4.9
19	16	25	41	107	13	27	13	12	12	10	9.5	4.6
20	13	20	45	125	13	18	12	12	13	10	9.5	4.7
21	11	19	54	122	13	13	12	12	11	11	9.9	5.0
22	9.5	20	45	120	13	13	11	12	13	11	10	5.1
23	8.5	39	36	104	13	13	10	14	12	10	13	4.9
24	8.0	49	34	48	13	13	9.5	175	11	11	11	4.8
25	7.7	46	144	470	13	14	8.8	266	12	9.9	10	4.7
26	9.0	47	114	1010	14	64	794	109	12	9.6	8.8	4.7
27	9.8	41	70	1070	14	290	951	62	13	12	8.2	4.8
28	10	43	56	1300	14	420	18	48	13	13	8.2	4.6
29	9.0	136	44	1160	---	250	18	23	13	9.8	8.5	4.9
30	7.5	344	38	698	---	144	40	13	12	10	9.2	5.5
31	7.5	---	36	228	---	95	---	13	---	12	57	---
TOTAL	1654.5	4184.9	4384	8241	571	7404	2357.3	4665	658	337.3	677.8	312.3
MEAN	53.4	139	141	266	20.4	239	78.6	150	21.9	10.9	21.9	10.4
MAX	525	1250	911	1300	130	981	951	861	134	13	124	55
MIN	7.5	5.3	34	11	13	13	8.8	12	11	9.6	8.2	4.6

CAL YR 1977 TOTAL 28148.89 MEAN 77.1 MAX 1700 MIN .09 MEAN 77.1 CFSM 0.96 IN 13.03
WTR YR 1978 TOTAL 35447.10 MEAN 97.1 MAX 1300 MIN 4.6 MEAN 109 CFSM 1.36 IN 18.46

† Adjusted for change in contents in Beech Fork Lake near Lavalette.

03213000 TUG FORK AT LITWAR, WV

LOCATION.--Lat 37°29'05", long 81°50'40", McDowell County, Hydrologic Unit 05070201, on left bank 200 ft (61 m) downstream from War Branch, 0.5 mi (0.8 km) downstream from Litwar, 2.2 mi (3.5 km) northwest of Iaeger, 2.7 mi (4.3 km) downstream from Dry Fork, and at mile 105.6 (169.9 km).

DRAINAGE AREA.--505 mi² (1,308 km²), (corrected).

PERIOD OF RECORD.--May 1930 to current year.

REVISED RECORDS.--WSP 728: 1931. WSP 1335: 1930, 1931-35(M), 1937, 1943-46, 1947(M), 1948, 1949(P), 1950, 1952-53.

GAGE.--Water-stage recorder. Datum of gage is 936.36 ft (285.403 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 16, 1942, nonrecording gage at highway bridge 0.5 mi (0.8 km) upstream at same datum.

REMARKS.--Records good except those for period November through February, which are poor. National Weather Service gage-height telemeter at station.

AVERAGE DISCHARGE.--48 years, 550 ft³/s (15.58 m³/s), 14.79 in/yr (376 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 54,500 ft³/s (1,540 m³/s) Apr. 4, 1977, gage height, 27.37 ft (8.342 m); minimum observed, 11 ft³/s (0.31 m³/s) Oct. 3, 4, 7, 1930.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,000 ft³/s (170 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 6	2100	10800 306	8.78 2.676	Apr. 27	0400	10700 303	8.73 2.661
Jan. 26	a1000	*25800 731	b16.64 5.072				

a Approximately.
b From floodmark.

Minimum discharge, 92 ft³/s (2.61 m³/s) Sept. 29, 30, gage height, 0.90 ft (0.274 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	175	290	2000	380	880	650	816	1320	560	196	193	253
2	1320	285	1300	360	800	575	753	1130	467	300	212	182
3	526	260	1000	330	720	603	674	990	488	516	165	186
4	285	218	900	310	660	575	634	1110	460	335	639	154
5	206	250	2100	330	600	491	610	1410	384	253	1400	138
6	175	3690	3000	350	540	547	568	1340	351	208	582	128
7	160	4200	1900	370	500	717	561	1140	335	193	582	121
8	178	2890	1300	410	480	1160	512	1830	373	175	647	121
9	1530	1780	1200	400	512	2480	484	3150	404	179	481	119
10	1170	1430	1400	590	460	4530	464	2380	346	189	397	121
11	526	1500	1100	800	440	3700	464	1720	315	362	340	146
12	368	1130	980	700	420	2880	458	1390	295	249	509	126
13	285	843	880	640	415	2680	440	1410	276	196	351	116
14	255	682	820	600	410	2600	410	1540	262	179	411	119
15	234	596	760	547	620	2600	392	1420	249	172	446	124
16	540	540	762	542	666	2080	386	1270	244	244	305	121
17	950	674	717	512	682	1720	386	1140	249	330	232	116
18	699	870	726	610	717	1420	386	1000	244	220	249	116
19	519	780	690	699	771	1250	410	880	236	175	460	116
20	392	650	650	807	753	1120	392	798	271	165	285	110
21	305	589	618	690	726	1030	368	717	253	157	216	107
22	265	800	547	626	682	960	356	639	276	151	186	107
23	238	1200	533	582	554	852	340	590	232	146	175	105
24	218	1600	560	634	610	780	340	690	212	271	160	105
25	222	1300	660	1520	582	735	392	639	208	446	151	105
26	666	1100	700	15500	666	762	2760	552	216	552	204	99
27	780	960	580	3730	634	890	6590	502	212	290	172	99
28	603	900	520	2240	642	990	2850	474	189	240	146	101
29	505	1000	470	1640	---	1030	1870	530	186	204	179	94
30	404	1400	430	1270	---	970	1580	861	258	189	244	94
31	350	---	400	1070	---	880	---	735	---	200	232	---
TOTAL	15049	34407	30203	40189	17142	44257	28046	35297	9051	7682	10951	3749
MEAN	485	1147	974	1296	612	1428	935	1139	302	248	353	125
MAX	1530	4200	3000	15500	880	4530	6590	3150	560	552	1400	253
MIN	160	218	400	310	410	491	340	474	186	146	146	94
CFSM	.96	2.27	1.93	2.57	1.21	2.83	1.85	2.26	.60	.49	.70	.25
IN.	1.11	2.53	2.22	2.96	1.26	3.26	2.07	2.60	.67	.57	.81	.28
CAL YR 1977 TOTAL	241915		MEAN 663	MAX 22000	MIN 100	CFSM 1.31	IN 17.82					
WTR YR 1978 TOTAL	276023		MEAN 756	MAX 15500	MIN 94	CFSM 1.50	IN 20.33					

03213500 PANTHER CREEK NEAR PANTHER, WV

LOCATION.--Lat 37°26'45", long 81°52'15", McDowell County, Hydrologic Unit 05070201, on left bank 200 ft (61 m) downstream from Cub Branch, 2.1 mi (3.4 km) upstream from Trace Fork, 3.0 mi (4.8 km) southwest of Panther, and at mile 4.1 (6.6 km).

DRAINAGE AREA.--31.0 mi² (80.3 km²), corrected.

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

REVISED RECORDS.--WSP 1505: 1955(P). WSP 1908: 1955(M), 1957(M).

GAGE.--Water-stage recorder. Altitude of gage is 1,050 ft (320 m), from topographic map.

REMARKS.--Records fair except those for period of no gage-height record Oct. 18 to Feb. 23, which are poor.

AVERAGE DISCHARGE.--32 years, 36.5 ft³/s (1.034 m³/s), 16.09 in/yr (409 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,600 ft³/s (187 m³/s) Apr. 4, 1977, gage height, 12.10 ft (3.688 m), from floodmarks, from rating curve extended above 2,800 ft³/s (79 m³/s) on basis of slope-area measurement at gage height, 10.67 ft (3.252 m); no flow at times during August and September 1955.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft³/s (20 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 26	---	*3210 90.9	a9.46 2.883	Apr. 26	2300	1080 30.6	6.69 2.039

a From floodmarks.

Minimum discharge, 0.85 ft³/s (0.024 m³/s) Sept. 18, gage height, 1.66 ft (0.506 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	23	100	22	38	38	38	77	13	3.9	2.4	48
2	18	20	120	19	60	36	34	64	11	8.3	1.7	26
3	6.9	18	55	14	32	32	29	52	13	10	4.0	14
4	4.3	16	48	12	27	34	26	122	10	9.1	20	9.1
5	3.2	80	190	13	26	29	24	182	8.8	7.2	12	6.6
6	2.6	350	170	16	41	27	22	116	8.3	4.9	12	7.5
7	4.3	370	350	22	34	31	21	79	8.7	4.4	31	6.6
8	207	210	110	28	31	122	19	250	15	4.1	23	6.6
9	48	120	90	50	27	303	18	291	15	6.4	17	4.4
10	17	80	76	93	24	396	18	128	11	11	13	4.7
11	8.4	110	68	70	21	246	19	76	8.8	28	10	6.6
12	5.7	75	58	40	21	211	18	57	8.3	8.8	9.1	5.5
13	16	50	49	24	24	176	17	53	8.0	5.8	7.2	5.0
14	20	41	44	18	32	176	15	47	6.7	5.0	24	4.4
15	118	32	52	17	44	160	13	46	6.2	4.7	40	4.4
16	92	29	52	16	40	106	12	44	6.0	15	17	1.8
17	65	28	44	16	35	75	13	40	5.7	31	11	.95
18	40	28	27	16	40	60	14	34	5.5	10	9.7	1.4
19	25	28	24	36	50	54	14	28	5.1	4.7	14	3.7
20	16	29	22	35	32	48	15	24	4.9	3.7	9.7	3.5
21	10	35	21	58	28	44	13	21	5.9	4.7	7.2	3.5
22	6.0	100	20	23	27	41	12	19	5.4	4.0	6.1	3.5
23	4.5	70	19	33	26	36	11	18	4.9	4.0	5.2	3.5
24	4.2	56	20	37	28	34	12	30	4.7	13	4.7	3.7
25	100	80	40	90	30	31	23	23	4.0	19	5.5	3.5
26	88	72	80	1100	38	29	455	19	6.4	15	20	4.0
27	66	68	35	350	40	32	488	15	5.6	8.1	5.5	3.3
28	50	66	24	150	39	35	143	12	4.9	4.7	3.1	3.1
29	38	110	20	70	---	40	80	11	4.0	3.3	25	3.1
30	32	100	16	52	---	41	76	32	3.8	3.5	47	2.8
31	25	---	15	42	---	41	---	16	---	3.3	36	---
TOTAL	1204.1	2494	2059	2582	935	2764	1712	2026	228.6	268.6	453.1	204.75
MEAN	38.8	83.1	66.4	83.3	33.4	89.2	57.1	65.4	7.62	8.66	14.6	6.83
MAX	207	370	350	1100	60	396	488	291	15	31	47	48
MIN	2.6	16	15	12	21	27	11	11	3.8	3.3	1.7	.95
CFSM	1.25	2.68	2.14	2.69	1.08	2.88	1.84	2.11	.25	.28	.47	.22
IN.	1.44	2.99	2.47	3.10	1.12	3.32	2.05	2.43	.27	.32	.54	.25

CAL YR 1977	TOTAL	15904.00	MEAN 43.6	MAX 2300	MIN 2.6	CFSM 1.41	IN 19.08
WTR YR 1978	TOTAL	16931.15	MEAN 46.4	MAX 1100	MIN .95	CFSM 1.50	IN 20.32

03213700 TUG FORK AT WILLIAMSON, WV

LOCATION.--Lat 37°40'21", long 82°16'50", Pike County, Ky., Hydrologic Unit 05070201, on left bank at Williamson, 100 ft (30 m) upstream from bridge on U.S. Highway 119, 0.8 mi (1.3 km) downstream from Pond Creek, and at mile 56.4 (90.7 km).

DRAINAGE AREA.--936 mi² (2,424 km²), (corrected).

PERIOD OF RECORD.--October 1967 to current year. Gage-height records collected in this vicinity since 1926 are contained in reports of National Weather Service.

GAGE.--Water-stage recorder. Datum of gage is 620.90 ft (189.250 m) National Geodetic Vertical Datum of 1929, (levels by Corps of Engineers). Prior to Jan. 21, 1969, at datum 0.92 ft (0.280 m) lower.

REMARKS.--Records good except for November, December, and January, which are poor. Corps of Engineers gage-height telemeter at station. No gage-height record January 11-27.

AVERAGE DISCHARGE.--11 years, 1,196 ft³/s (33.87 m³/s), 17.35 in/yr (441 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 94,000 ft³/s (2660 m³/s) Apr. 5, 1977, gage height, 52.56 ft (16.020 m), from floodmarks, from rating curve extended above 18,000 ft³/s (510 m³/s); minimum, 59 ft³/s (1.67 m³/s) Oct. 18-20, 1969, gage height, 2.04 ft (0.622 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of Jan. 30, 1957, Mar. 12, 1963, and Mar. 7, 1967, reached stages of 43.6 ft (13.29 m), 44.5 ft (13.56 m), and 40.7 ft (12.41 m) respectively, from readings by National Weather Service.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 9,000 ft³/s (250 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 7	0300	15200 430	a24.30 7.407	Apr. 27	1100	17000 481	26.15 7.971
Jan. 26	1745	*36500 1030	a37.80 11.521				

a Observed.

Minimum discharge, 129 ft³/s (3.65 m³/s) Sept. 30, gage height, 2.28 ft (0.695 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	308	670	3380	820	1590	1260	1430	2410	842	298	468	1990
2	2890	580	2660	790	1520	1170	1300	1940	678	430	310	694
3	1970	510	1960	685	1340	1180	1160	1670	746	626	318	491
4	1040	464	1660	565	1210	1210	1060	2120	714	634	520	391
5	655	428	3350	535	1160	1040	1010	4660	602	449	1230	318
6	480	3100	4750	570	1100	1110	942	3600	529	364	1120	272
7	396	12700	3340	610	960	1440	918	2500	507	310	1420	242
8	368	7260	2480	1100	890	2090	862	4230	577	292	1240	220
9	2560	4360	2330	1800	890	4250	806	7580	662	285	866	202
10	3640	3160	2550	2000	830	7050	770	5310	606	268	626	225
11	1700	2990	2280	1500	790	7980	750	3460	520	292	532	312
12	1070	2530	1910	1100	760	5790	746	2540	465	468	834	292
13	740	1920	1630	580	682	5440	710	2240	440	343	798	238
14	585	1530	1560	560	1330	5050	662	2440	406	290	552	200
15	488	1310	1570	540	1710	5400	618	2340	376	275	718	192
16	786	1160	1470	930	1520	4140	594	2140	361	438	654	192
17	2000	1070	1410	920	1450	3350	584	1920	349	702	472	186
18	1790	1420	1360	1000	1460	2670	590	1680	340	513	394	176
19	1330	1260	1310	1300	1500	2230	602	1450	335	358	368	174
20	985	1050	1180	1460	1470	1930	626	1260	325	290	513	168
21	715	935	1120	1300	1430	1730	594	1120	343	255	394	160
22	575	1010	1020	1150	1330	1640	561	985	343	240	315	150
23	476	2490	915	1080	1120	1490	542	898	349	225	272	148
24	416	2960	870	1100	1130	1360	542	1040	312	238	255	148
25	372	2460	1170	3300	1090	1270	686	1060	288	446	238	148
26	1060	2110	1270	22000	1270	1250	4880	906	310	646	222	148
27	1860	1800	1140	8000	1310	1400	14800	790	308	854	275	139
28	1500	1710	1030	4540	1250	1630	7170	710	292	462	265	132
29	1160	2030	895	3120	---	1740	3800	666	262	349	238	132
30	970	3910	870	2410	---	1690	2770	810	248	300	349	130
31	785	---	845	2000	---	1540	---	938	---	330	1610	---
TOTAL	35670	70887	55285	70565	34282	82520	53085	67413	13435	12070	16386	8610
MEAN	1151	2363	1783	2276	1224	2662	1770	2175	448	389	593	287
MAX	3640	12700	4750	22000	1710	7980	14800	7580	842	702	1610	1990
MIN	308	428	845	535	760	1040	542	666	248	225	222	130
CFSM	1.23	2.53	1.91	2.43	1.31	2.84	1.89	2.32	.48	.42	.63	.31
IN.	1.42	2.82	2.20	2.89	1.36	3.28	2.11	2.68	.53	.48	.73	.34

CAL YR 1977	TOTAL	488888	MEAN	1339	MAX	74000	MIN	158	CFSM	1.43	IN	19.43
WTR YR 1978	TOTAL	522208	MEAN	1431	MAX	22000	MIN	130	CFSM	1.53	IN	20.75

BIG SANDY RIVER BASIN

03214000 TUG FORK NEAR KERMIT, WV

LOCATION.--Lat 37°49'05", long 82°23'20", Mingo County, Hydrologic Unit 05070201, on right bank 2.0 mi (3.2 km) upstream from Wolf Creek, 3.0 mi (4.8 km) upstream from Kermit, 3.0 mi (4.8 km) downstream from Pigeon Creek, and at mile 37.7 (60.7 km).

DRAINAGE AREA.--1,188 mi² (3,077 km²), corrected.

PERIOD OF RECORD.--July 1934 to current year.

REVISED RECORDS.--WSP 953: 1934-41. WSP 1505: 1955.

GAGE.--Water-stage recorder. Datum of gage is 581.82 ft (177.339 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for January and February, which are poor. National Weather Service gage-height telemeter at station.

AVERAGE DISCHARGE.--44 years, 1,404 ft³/s (39.76 m³/s), 16.05 in/yr (408 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 104,000 ft³/s (2,950 m³/s) Apr. 6, 1977, gage height, 52.91 ft (16.127 m), from floodmarks, from rating curve extended above 29,000 ft³/s (820 m³/s) on basis of slope-area measurements at gage heights 45.65 ft (13.914 m) and 52.91 ft (16.127 m); minimum, 23 ft³/s (0.65 m³/s) Sept. 14, 1939, gage height, 1.13 ft (0.344 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Stage of about 43.3 ft (13.20 m) was reached on unknown date prior to 1915.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 10,000 ft³/s (280 m³/s) and maximum (*):

Date	Time	Discharge		Gage height		Date	Time	Discharge		Gage height	
		(ft ³ /s)	(m ³ /s)	(ft)	(m)			(ft ³ /s)	(m ³ /s)	(ft)	(m)
Nov. 7	1400	16400	464	25.40	7.742	Apr. 27	1700	24200	685	31.17	9.501
Jan. 27	0100	*44300	1250	39.60	12.070	May 9	0600	10600	300	19.53	5.953
Mar. 11	0800	11100	314	20.17	6.148						

Minimum discharge, 147 ft³/s (4.16 m³/s) Sept. 29, gage height, 1.66 ft (0.506 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	551	914	4450	1150	2090	1680	1900	3110	1060	320	516	2300
2	2780	818	3390	1110	1850	1590	1720	2620	899	538	401	1060
3	2650	752	2630	1010	1720	1600	1530	2220	1410	864	338	752
4	1400	699	2210	896	1450	1730	1400	2870	1220	904	592	560
5	931	652	3410	800	1320	1590	1350	6050	982	655	916	422
6	719	1880	6900	770	1250	1580	1260	4750	802	480	1530	334
7	593	14500	4530	800	1180	1940	1230	3360	713	390	1680	285
8	538	11500	3250	760	1120	3270	1150	5900	831	352	1950	254
9	2250	6080	2930	2070	1070	5970	1060	9980	1220	362	1190	233
10	4620	4200	3100	2600	1020	9640	1010	6440	1080	320	876	229
11	2380	4010	2890	2100	1000	10300	986	4030	855	320	724	453
12	1460	3370	2490	1800	990	7220	970	3080	705	443	968	366
13	1050	2560	2180	1820	980	6430	929	2830	641	457	956	296
14	858	2020	2020	1860	1550	5800	872	2940	573	334	768	247
15	747	1690	1990	1600	1750	6280	813	2860	507	317	728	229
16	924	1470	1870	1400	1550	4990	778	2700	472	331	872	229
17	2120	1340	1770	1300	1450	4060	766	2420	450	788	632	222
18	2270	1480	1710	1670	1550	3340	784	2100	437	684	484	208
19	1730	1530	1650	1500	1600	2850	797	1780	420	443	432	198
20	1320	1270	1520	2100	1880	2530	818	1530	410	338	536	198
21	1030	1130	1410	2000	1840	2270	798	1360	408	292	468	191
22	865	1200	1320	1920	1600	2160	738	1230	440	264	355	191
23	747	2790	1210	1770	1400	1950	697	1450	435	247	299	174
24	664	3940	1130	2000	1470	1770	698	1860	380	233	268	171
25	601	3470	1440	10000	1460	1670	845	1690	360	383	261	180
26	1020	2920	1660	38100	1660	1660	7000	1430	400	656	306	171
27	2180	2460	1560	30900	1730	1910	21500	1190	388	748	268	165
28	1900	2270	1410	7740	1670	2230	13300	1040	366	660	292	159
29	1500	2390	1280	3980	---	2370	4540	937	325	422	247	150
30	1240	4110	1230	2980	---	2290	3560	909	310	352	334	150
31	1060	---	1180	2480	---	2080	---	1200	---	418	1130	---
TOTAL	44698	89415	71720	133386	41200	106750	76599	87866	19499	14315	21317	10777
MEAN	1442	2981	2314	4303	1471	3444	2553	2834	650	462	688	359
MAX	4620	14500	6900	38100	2090	10300	21500	9980	1410	904	1950	2300
MIN	538	652	1130	760	980	1580	697	909	310	233	247	150
CFSM	1.21	2.51	1.95	3.62	1.24	2.90	2.15	2.39	.55	.39	.58	.30
IN.	1.40	2.80	2.25	4.18	1.29	3.34	2.40	2.75	.61	.45	.67	.34

CAL YR 1977 TOTAL 653000 MEAN 1789 MAX 78000 MIN 210 CFSM 1.51 IN 20.45
WTR YR 1978 TOTAL 717542 MEAN 1966 MAX 38100 MIN 150 CFSM 1.66 IN 22.47

BIG SANDY RIVER BASIN

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03214900 TUG FORK AT GLENHAYES, WV

LOCATION.--Lat 38°00'20", long 82°30'53", Wayne County, Hydrologic Unit 05070201, on right bank 400 ft (122 m) upstream from Lost Creek, 0.2 mi (0.3 km) downstream from Rock Castle Creek, 0.9 mi (1.4 km) southeast of Glenhayes, and at mile 10.1 (16.3 km).

DRAINAGE AREA.--1,507 mi² (3,903 km²), corrected.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1976 to current year.

GAGE.--Water-stage recorder. Datum of gage is 536.57 ft (163.547 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good except those for winter periods, which are fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,000 ft³/s (1,360 m³/s) Apr. 6, 1977, gage height, 44.00 ft (13.411 m); minimum, 125 ft³/s (3.54 m³/s) Sept. 9, 1976, gage height, 2.30 ft (0.701 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 11,000 ft³/s (310 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 8	0500	12000 340	22.26 6.785	Mar. 11	--	Unknown	Unknown
Jan. 27	1500	*28300 801	34.88 10.631	Apr. 28	0500	18500 524	28.21 8.598

Minimum discharge, 196 ft³/s (5.55 m³/s) Sept. 30, gage height, 2.29 ft (0.698 m).

REVISIONS.--Revised daily discharges and revised monthly summaries, in cubic feet per second, for water year 1977 are given below. These figures supersede those published in WDR WV 77-1.

Aug. 26, 1977	1740	Sept. 7, 1977	298	Sept. 19, 1977	688
27	1270	8	305	20	1310
28	946	9	306	21	754
29	751	10	288	22	494
30	645	11	256	23	374
31	576	12	252	24	307
Sept. 1, 1977	504	13	242	25	272
2	470	14	212	26	395
3	436	15	341	27	635
4	389	16	709	28	516
5	358	17	627	29	402
6	326	18	454	30	379

	<u>AUG.</u>	<u>SEPT.</u>	<u>WTR YR 1977</u>
TOTAL	78091	13279	648977
MEAN	2519	443	1778
MAX	18700	1310	45800
MIN	402	212	208
CFSM	1.67	.29	1.18
IN.	1.93	.33	16.02

BIG SANDY RIVER BASIN

03214900 TUG FORK AT GLENHAYES, WV--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1400	994	4780	1230	3050	2200	2470	4360	1310	300	650	2860
2	3320	863	4160	1190	2760	2200	2250	3700	1160	380	583	1820
3	2200	802	3380	1070	2300	2200	2020	3130	1360	1110	410	1090
4	1300	721	2890	915	2100	2280	1840	3000	1680	1240	391	875
5	910	671	2880	835	1900	2290	1750	6240	1270	925	665	660
6	720	689	6150	830	1700	2280	1620	6830	1000	635	1450	524
7	602	6860	5390	870	1600	2440	1560	4940	860	495	1570	450
8	702	11100	4000	840	1500	3880	1480	4940	825	422	2530	394
9	3180	7290	3450	2330	1400	7000	1370	9910	1330	394	1660	369
10	3910	4720	3380	3300	1400	10000	1280	9460	1540	391	1150	345
11	2350	4580	3310	2800	1350	14000	1240	6340	1130	355	910	520
12	1580	4000	3010	2400	1300	12000	1200	4470	885	369	945	620
13	1150	3290	2700	2250	1250	9200	1150	3870	765	512	1130	474
14	907	2670	2470	2320	1800	8000	1080	3800	670	426	998	369
15	792	2210	2410	2070	2300	8600	593	3820	578	359	740	326
16	962	1890	2290	1640	2100	6600	925	3640	520	349	875	307
17	2160	1680	2130	1580	1900	5520	880	3300	486	495	845	300
18	2340	1540	2030	1980	2000	4550	880	2870	462	790	610	291
19	1860	1800	1950	2380	2100	3880	515	2480	446	565	529	278
20	1430	1540	1830	2670	2300	3390	515	2120	430	406	551	265
21	1130	1330	1690	2770	2410	3000	500	1870	422	339	685	262
22	931	1270	1550	2530	2220	2810	640	1670	430	303	486	255
23	799	2080	1410	2270	2030	2560	775	1640	422	281	391	262
24	706	3770	1300	2300	1850	2330	750	4680	410	265	339	249
25	634	3820	1410	4690	1800	2220	790	3160	387	271	319	230
26	713	3400	1750	18900	2000	2300	4440	2390	355	495	329	230
27	1910	2960	1750	27300	2210	2630	14500	1870	414	685	339	220
28	2110	2690	1580	19200	2230	2990	16700	1540	384	825	300	210
29	1700	2640	1420	7270	---	3130	8890	1330	355	569	310	207
30	1380	3490	1320	4660	---	3010	5180	1200	323	422	316	200
31	1160	---	1280	3740	---	2740	---	1290	---	592	1590	---
TOTAL	46948	87360	81050	131330	54860	142230	81983	115860	22609	15965	24596	15462
MEAN	1514	2912	2615	4236	1959	4588	2733	3737	754	515	793	515
MAX	3910	11100	6150	27300	3050	14000	16700	9910	1680	1240	2530	2860
MIN	602	671	1280	830	1250	2200	750	1200	323	265	300	200
CFSM	1.01	1.93	1.74	2.81	1.30	3.04	1.81	2.48	.50	.34	.53	.34
IN.	1.16	2.16	2.00	3.24	1.35	3.51	2.02	2.86	.56	.39	.61	.38
CAL YR 1977	TOTAL	728611	MEAN	1996	MAX	45800	MIN	208	CFSM	1.32	IN	17.99
WTR YR 1978	TOTAL	820253	MEAN	2247	MAX	27300	MIN	200	CFSM	1.49	IN	20.25

03214900 TUG FORK AT GLENHAYES, WV--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: March 1977 to current year.

SUSPENDED SEDIMENT DISCHARGE: March 1977 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum observed, 793 micromhos June 30, 1977; minimum observed, 128 micromhos Jan. 26, 1978.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 4,020 mg/L Apr. 5, 1977; minimum daily mean, 4 mg/L Sept. 29, 30, 1978.

SEDIMENT LOADS: Maximum daily, 320,000 tons (290,000 tonnes) Apr. 5, 1977; minimum daily, 2.2 tons (2.0 tonnes) Sept. 29, 30, 1978.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum observed, 705 micromhos June 30; minimum observed, 128 micromhos Jan. 26.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 3,420 mg/L Jan. 26; minimum daily mean, 4 mg/L Sept. 29, 30.

SEDIMENT LOADS: Maximum daily, 198,000 tons (180,000 tonnes) Jan. 27; minimum daily, 2.2 tons (2.0 tonnes) Sept. 29, 30.

REVISIONS.--Revised sediment concentrations and sediment loads for water year 1977 are given below. These figures supersede those published in WDR WV 77-1.

			MEAN CONCEN- TRATION (mg/L)	LOADS (T/Day)				MEAN CONCEN- TRATION (mg/L)	LOADS (T/Day)				MEAN CONCEN- TRATION (mg/L)	LOADS (T/Day)
Aug.	26, 1977		220	1030	Sept.	7, 1977		13	10	Sept.	19, 1977		28	52
	27		172	590		8		15	12		20		117	414
	28		147	375		9		12	9.9		21		465	947
	29		83	168		10		12	9.3		22		270	360
	30		50	87		11		20	14		23		245	247
	31		47	73		12		26	18		24		157	130
Sept.	1		43	58		13		24	16		25		84	62
	2		37	47		14		22	13		26		43	46
	3		33	39		15		20	18		27		208	357
	4		28	29		16		17	33		28		311	433
	5		24	23		17		182	308		29		201	218
	6		19	17		18		78	96		30		158	162

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C); WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	482	304	---	---	---	---	280	245	480	---	424	---
2	410	---	---	---	272	---	300	---	400	---	---	---
3	---	341	---	---	---	---	320	270	400	426	444	---
4	---	---	---	351	---	---	340	280	---	457	---	---
5	---	354	---	---	---	254	350	230	350	---	---	---
6	---	---	---	---	---	---	360	185	390	---	---	---
7	---	170	197	---	---	---	---	220	420	---	---	---
8	---	---	---	---	---	213	390	---	440	---	---	---
9	---	168	---	---	---	---	400	165	---	514	---	---
10	---	---	---	---	361	156	---	170	---	---	---	---
11	---	193	235	---	---	135	410	190	400	---	---	---
12	---	---	---	---	---	---	390	230	419	650	381	---
13	---	---	244	---	---	---	410	---	---	668	---	---
14	---	220	---	---	336	164	---	---	444	634	383	---
15	---	---	---	---	---	200	---	285	491	656	426	---
16	---	272	---	---	---	215	420	---	531	---	392	---
17	---	---	---	---	---	220	---	280	545	627	449	---
18	---	---	---	---	---	---	420	---	557	---	---	---
19	---	---	189	---	---	---	420	300	---	462	---	---
20	---	---	---	---	---	---	420	310	---	525	376	612
21	---	---	---	---	---	290	430	---	632	---	---	---
22	---	---	---	---	---	300	430	350	660	535	451	635
23	---	314	---	---	---	310	---	---	661	527	---	405
24	---	---	---	---	266	---	---	268	666	569	---	435
25	---	---	---	154	277	290	---	---	---	---	---	420
26	---	---	331	128	---	320	---	310	646	---	---	427
27	423	---	---	---	---	---	152	---	---	547	---	431
28	---	---	---	---	---	280	---	360	629	---	547	438
29	---	---	300	---	---	290	175	390	---	460	---	447
30	---	---	---	---	---	---	---	400	705	---	---	452
31	---	---	324	---	---	280	---	460	---	373	306	---
MEAN	438	260	260	211	302	245	359	281	517	539	416	470
WTR YR 1978	MEAN	376		MAX	705	MIN	128					

03214900 TUG FORK AT GLENHAYES, WV--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	122	493	27	72	730	9420	20	66	310	2550	471	2800
2	845	7340	17	40	185	2080	20	64	275	2050	471	2800
3	515	3060	10	22	125	1140	21	61	483	3000	471	2800
4	170	597	12	23	65	507	21	52	441	2500	504	3100
5	33	130	10	18	92	771	18	41	390	2000	501	3100
6	33	64	17	32	1140	19400	18	40	327	1500	504	3100
7	26	42	1530	35300	375	5460	20	47	312	1350	569	3750
8	23	44	560	16800	160	1730	57	129	284	1150	954	9990
9	80	878	470	9250	35	326	588	4100	251	949	1500	28400
10	694	7720	430	5480	49	447	136	1210	251	949	1100	28200
11	111	704	470	5810	134	1200	20	151	219	798	710	26800
12	36	154	267	2880	107	870	14	91	245	860	710	23000
13	26	81	232	2060	79	576	469	2850	213	719	630	15600
14	19	47	200	1440	67	447	495	3100	370	1800	500	10800
15	15	32	168	1000	57	371	447	2500	499	3100	770	17900
16	15	39	113	577	47	291	327	1450	441	2500	540	9620
17	145	924	73	331	36	207	305	1300	390	2000	322	4800
18	94	594	68	282	27	148	430	2300	426	2300	177	2170
19	63	316	195	952	21	111	552	3550	441	2500	143	1500
20	46	178	94	391	16	79	610	4400	483	3000	139	1270
21	33	101	81	291	13	59	642	4800	553	3600	137	1110
22	23	58	86	295	10	42	600	4100	484	2900	134	1020
23	18	39	208	1310	9	34	473	2900	429	2350	117	809
24	17	32	956	9690	10	35	483	3000	370	1850	107	673
25	12	21	230	2370	18	69	682	12500	370	1800	102	611
26	16	31	130	1190	220	1040	3420	180000	426	2300	142	882
27	166	1020	110	279	18	85	2750	198000	469	2800	161	1140
28	137	780	80	581	73	311	630	32700	473	2850	129	1040
29	72	330	70	499	35	134	470	9230	---	---	125	1060
30	47	175	998	10400	21	75	370	4660	---	---	103	837
31	35	110	---	---	20	69	---	---	---	---	72	533
TOTAL	---	26134	---	110265	---	47534	---	479392	---	58025	---	211215

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	66	440	370	4360	88	311	5	4.1	26	46	2650	20200
2	36	340	207	2070	123	385	301	405	28	46	460	2260
3	43	235	143	1210	205	814	1250	3950	13	14	30	88
4	40	195	204	1730	173	785	591	3320	13	14	13	31
5	37	175	1080	18200	136	466	430	1070	112	215	11	20
6	40	175	430	7930	90	243	152	261	710	3070	11	16
7	38	160	227	3030	55	128	49	65	1030	4660	14	17
8	33	132	185	2660	55	123	30	34	871	6200	13	14
9	29	107	935	24400	134	699	32	34	49	220	12	12
10	27	93	365	9320	167	694	32	34	17	53	12	11
11	27	90	304	5200	113	345	30	29	137	360	63	110
12	24	78	256	3090	64	201	29	29	47	138	46	77
13	25	78	221	2310	69	143	60	80	138	460	22	28
14	23	67	194	1990	56	101	20	23	97	261	12	12
15	21	56	168	1730	34	53	32	31	63	126	11	9.7
16	20	50	170	1670	22	31	25	24	72	170	12	9.9
17	18	43	183	1630	20	26	98	185	47	107	12	9.7
18	20	48	149	1150	17	21	92	195	32	53	14	11
19	22	54	103	690	19	23	28	43	23	33	14	11
20	24	59	93	532	17	20	15	16	76	144	14	10
21	25	61	73	369	14	16	18	16	91	183	17	12
22	27	61	47	212	14	16	67	53	18	24	17	12
23	25	52	68	342	15	17	52	39	15	16	15	11
24	26	53	730	9530	17	19	32	23	12	11	12	8.1
25	37	79	380	3240	16	17	20	15	10	8.6	11	6.8
26	924	17600	260	1680	13	12	54	72	33	32	10	6.2
27	1790	70500	167	843	44	49	190	368	25	23	10	5.9
28	940	42400	105	437	28	29	204	462	28	23	6	3.4
29	830	19900	87	312	20	19	48	74	28	23	4	2.2
30	670	9370	69	224	10	8.7	17	19	22	19	4	2.2
31	---	---	76	277	---	---	92	155	1670	9940	---	---
TOTAL	---	162755	---	112368	---	5814.7	---	11128.1	---	26692.6	---	23027.1

TOTAL LOAD FOR YEAR:	1274350.5	TONS.
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WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	DISSOLVED OXYGEN (MG/L)
POTOMAC RIVER BASIN							
01595200 STONY RIVER NEAR MT. STORM, WV (LAT 39 16 10 LONG 79 15 45)							
OCT 04	1315	13	10.0	13.5	350	6.8	9.1
27	1030	19	11.0	16.5	270	3.2	6.2
NOV 08	1225	2390	17.5	--	140	7.0	7.8
DEC 08	1025	76	0.5	-3.0	260	4.8	7.8
20	1405	213	4.7	1.0	140	7.0	10.0
JAN 05	1220	34	--	6.0	255	5.2	7.4
31	1315	33	0.0	-5.0	260	5.0	3.2
MAR 01	1110	34	0.0	0.0	240	<4.0	10.3
14	1120	215	4.0	--	160	6.0	9.6
APR 25	1130	83	9.0	6.0	160	5.0	8.0
JUN 07	1215	35	17.0	19.0	120	<4.0	8.1
JUL 11	1520	209	24.0	17.0	150	<4.0	6.6
AUG 23	1120	11	18.0	22.5	220	<4.0	--
01595300 ABRAM CREEK AT OAKMONT, WV (LAT 39 22 00 LONG 79 10 45)							
OCT 04	1130	7.0	10.0	12.5	625	5.5	9.0
NOV 08	--	416	--	--	--	5.1	8.2
DEC 20	1210	127	3.0	3.0	220	4.8	8.8
JAN 31	1145	70	0.0	-5.0	240	5.0	10.0
MAR 23	1010	422	4.0	13.0	100	5.0	10.0
APR 25	0955	58	8.0	12.0	240	5.0	8.0
JUN 07	1100	31	--	25.0	410	>4.0	7.6
JUL 11	1100	97	--	25.0	240	>4.0	7.4
AUG 23	1000	8.8	17.0	18.0	320	>4.0	--
01604500 PATTERSON CREEK NEAR HEADSVILLE, WV (LAT 39 26 35 LONG 78 49 20)							
OCT 04	1320	8.9	15.0	19.0	250	8.0	9.2
NOV 17	1150	65	10.0	19.0	210	7.9	13.6
DEC 29	1050	120	1.0	7.0	160	8.8	12.8
MAR 20	1135	1380	7.0	17.0	60	7.0	14.4
MAY 03	0850	84	11.0	8.0	175	7.6	9.6
JUN 09	1305	64	22.0	27.0	235	7.9	8.4
JUL 27	1140	53	25.0	28.0	215	8.1	6.9
SEP 13	1135	41	21.0	19.0	270	7.6	6.9
01605500 SOUTH BRANCH POTOMAC RIVER AT FRANKLIN, WV (LAT 38 38 14 LONG 79 20 14)							
OCT 17	1300	45	8.0	10.0	180	9.3	12.0
DEC 05	1100	246	5.0	8.0	155	8.6	12.4
FEB 28	1110	90	1.5	7.0	170	7.8	15.1
APR 11	1305	178	14.0	23.0	130	9.2	14.5
MAY 31	1300	400	18.0	27.5	150	8.1	10.0
AUG 14	1130	500	18.0	28.0	190	8.4	9.5
01605600 FRIENDS RUN NEAR FRANKLIN, WV (LAT 38 39 23 LONG 79 23 31)							
OCT 05	1430	0.06	15.0	20.0	200	7.8	8.6
01606000 NORTH FORK SOUTH BRANCH POTOMAC RIVER AT CABINS, WV (LAT 38 59 05 LONG 79 14 10)							
DEC 06	1150	1030	5.0	3.5	100	8.7	14.9
01606500 SOUTH BRANCH POTOMAC RIVER NEAR PETERSBURG, WV (LAT 38 59 34 LONG 79 10 26)							
OCT 18	0915	149	8.0	7.0	185	9.3	8.9
DEC 06	0915	1640	5.0	4.0	135	8.6	12.7
MAR 01	0920	380	2.0	1.0	170	7.9	12.8
APR 11	0905	783	12.0	19.0	125	8.0	11.0
JUN 01	1145	748	20.0	22.5	155	7.6	9.0
JUL 06	1815	642	21.5	31.0	140	8.2	8.9
AUG 15	0940	1420	19.5	25.0	150	8.4	9.2
01607500 SOUTH FORK SOUTH BRANCH POTOMAC RIVER AT BRANDYWINE, WV (LAT 38 37 53 LONG 79 14 38)							
OCT 17	1135	14	8.0	10.0	155	9.3	11.0
DEC 05	1330	131	6.0	6.5	90	9.2	12.6
JAN 23	1315	48	0.0	7.0	--	6.7	16.6
FEB 28	1255	57	1.5	4.5	105	7.7	15.0
APR 11	1140	62	14.0	23.0	105	8.4	11.3
MAY 31	1130	197	19.0	25.5	85	8.0	9.5
JUL 06	1505	22	25.0	30.5	140	8.1	9.3
01608000 SOUTH FORK SOUTH BRANCH POTOMAC RIVER NEAR MOOREFIELD, WV (LAT 39 00 44 LONG 78 57 23)							
OCT 18	1130	36	8.5	11.0	185	9.0	9.4
DEC 05	1555	400	6.5	6.5	90	9.3	12.8
APR 10	1510	179	13.0	25.0	120	6.8	11.4
JUN 01	0855	298	18.0	21.0	120	7.2	8.2
JUL 07	0905	112	20.0	22.0	130	8.2	7.6
AUG 14	1510	1540	20.5	31.0	80	7.9	8.0

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	DISSOLVED OXYGEN (MG/L)
POTOMAC RIVER BASIN--Continued							
01608050 FORT RUN NEAR MOOREFIELD, WV (LAT 39 03 56 LONG 78 54 49)							
OCT 05	1200	0.19	14.0	16.0	85	8.0	9.0
01608400 BUFFALO CREEK NEAR ROMNEY, WV (LAT 39 22 18 LONG 78 43 51)							
OCT 04	1400	No flow	--	15.0	--	--	--
01608500 SOUTH BRANCH POTOMAC RIVER NEAR SPRINGFIELD, WV (LAT 39 26 49 LONG 78 39 16)							
OCT 04	1520	169	15.0	18.0	210	7.9	10.9
NOV 17	0950	753	8.0	17.0	170	8.7	12.2
FEB 09	1645	717	1.0	10.0	--	8.3	14.2
MAR 20	1500	5330	8.0	19.0	130	7.3	13.4
MAY 03	1210	1280	13.0	17.0	120	8.1	10.2
JUL 27	0925	848	25.5	22.5	200	8.2	6.5
SEP 13	0935	271	22.0	18.5	235	7.6	6.2
01609800 LITTLE CACAPON RIVER NEAR LEVELS, WV (LAT 39 29 55 LONG 78 29 20)							
OCT 04	1055	1.0	15.0	15.0	90	8.8	7.5
01610200 LOST RIVER AT MCCAULEY NEAR BAKER, WV (LAT 39 03 18 LONG 78 43 31)							
OCT 05	0930	9.9	11.0	11.0	145	8.2	7.6
NOV 16	1500	92	7.0	20.5	110	8.3	12.9
DEC 28	1400	74	0.0	1.0	85	8.6	16.0
FEB 09	1125	60	1.0	-1.0	--	8.0	14.5
MAR 21	1115	640	6.0	15.0	60	7.4	13.0
MAY 02	1345	69	12.0	18.0	70	8.1	9.9
JUN 08	1505	43	21.0	26.0	120	7.1	7.9
JUL 26	1430	60	25.0	30.5	130	8.4	7.5
SEP 12	1400	16	25.0	29.0	155	8.5	9.8
01611500 CACAPON RIVER NEAR GREAT CACAPON, WV (LAT 39 34 43 LONG 78 18 34)							
OCT 04	0850	90	14.0	12.5	155	8.9	8.2
NOV 16	1045	437	6.0	11.5	100	8.8	11.4
DEC 28	0830	362	0.0	-2.0	80	8.6	14.6
FEB 08	1700	478	4.0	3.0	--	8.2	14.0
MAR 21	1605	2900	8.0	25.0	35	6.8	12.6
MAY 02	0950	324	12.0	12.0	85	8.0	9.4
JUN 08	0955	286	21.0	23.0	120	7.5	8.0
JUL 26	0930	138	24.0	23.5	115	8.4	7.2
SEP 12	1000	123	23.0	24.0	125	8.0	8.1
01616500 OPEQUON CREEK NEAR MARTINSBURG, WV (LAT 39 25 25 LONG 77 56 20)							
OCT 03	1055	50	14.5	17.5	540	9.5	8.3
NOV 15	1420	153	7.0	17.0	440	7.2	11.6
DEC 27	1345	241	1.0	5.0	410	8.9	14.2
FEB 08	1345	204	2.0	9.0	--	9.0	13.6
MAR 22	1225	820	10.0	17.0	370	7.5	10.6
MAY 01	1420	178	14.0	17.0	450	8.5	13.6
JUN 07	1545	183	19.0	26.0	540	8.1	8.9
JUL 25	1500	149	22.5	30.0	510	8.3	8.9
SEP 11	1120	144	19.0	25.0	530	8.2	9.1
01617000 TUSCARORA CREEK ABOVE MARTINSBURG, WV (LAT 39 28 10 LONG 77 58 18)							
OCT 03	1645	2.5	14.0	18.0	430	8.9	9.9
01636500 SHENANDOAH RIVER AT MILLVILLE, WV (LAT 39 16 55 LONG 77 47 22)							
OCT 03	1410	487	17.0	16.5	615	9.0	10.6
MONONGAHELA RIVER BASIN							
03050500 TYGART VALLEY RIVER NEAR ELKINS, WV (LAT 38 55 30 LONG 79 52 45)							
OCT 20	1545	714	8.0	10.0	80	7.0	--
DEC 01	1045	2940	9.5	19.0	70	7.0	10.0
APR 06	1115	358	12.0	12.0	80	7.0	8.2
MAY 17	1600	1430	12.0	16.0	42	7.0	10.6
AUG 16	1700	270	24.0	26.0	85	--	--
SEP 19	1615	38	25.0	26.0	100	7.0	--

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

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WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	DISSOLVED OXYGEN (MG/L)
MONONGAHELA RIVER BASIN--Continued							
03051000 TYGART VALLEY RIVER AT BELINGTON, WV (LAT 39 01 45 LONG 79 56 10)							
OCT 18	1510	1090	9.0	16.0	82	7.0	--
NOV 30	1640	3930	7.0	14.0	75	7.0	10.0
JAN 16	1430	442	1.0	5.0	--	--	--
FEB 21	1215	178	2.0	7.0	110	6.0	--
APR 04	1235	540	12.0	24.0	100	6.8	8.1
MAY 17	1200	2270	11.0	16.0	60	6.8	10.8
JUN 20	1515	111	24.0	26.0	130	7.0	8.0
AUG 08	1520	2550	21.0	31.0	80	7.0	--
SEP 19	1355	80	24.5	28.0	140	7.5	--
03052000 MIDDLE FORK RIVER AT AUDRA, WV (LAT 39 02 25 LONG 80 04 10)							
OCT 19	1530	476	8.5	9.0	45	6.4	--
NOV 30	1440	1320	7.0	14.0	48	6.3	4.0
JAN 17	1437	190	10.0	5.0	--	--	--
FEB 22	1445	132	1.0	0.0	80	5.0	--
APR 05	1415	343	12.0	24.0	50	6.0	8.0
MAY 18	1330	527	12.0	16.0	40	6.0	8.8
JUN 21	1225	39	23.0	23.0	50	5.5	7.8
AUG 16	1340	123	24.0	26.0	55	--	--
SEP 25	1350	21	--	18.0	120	6.5	--
03052500 SAND RUN NEAR BUCKHANNON, WV (LAT 38 57 50 LONG 80 09 10)							
OCT 04	1305	13	16.0	21.5	120	7.8	9.3
DEC 24	1300	25	6.0	15.0	95	8.9	15.0
FEB 21	1430	10	1.0	4.0	85	7.0	2.4
MAR 29	1350	54	8.5	19.0	80	7.0	--
APR 14	1030	16	10.0	17.0	60	7.4	10.0
MAY 11	1050	36	10.5	20.0	<50	7.1	9.2
JUN 21	1410	2.4	21.5	20.5	220	6.0	11.8
JUL 27	1500	3.4	25.5	30.5	160	7.1	8.2
SEP 05	1125	4.9	17.5	22.0	125	7.1	9.5
03053500 BUCKHANNON RIVER AT HALL, WV (LAT 39 03 05 LONG 80 06 50)							
OCT 19	1150	824	8.0	7.5	65	6.9	--
NOV 30	1140	2070	7.0	18.0	75	6.8	9.4
JAN 17	1205	367	1.0	5.0	--	--	--
FEB 22	1110	186	0.0	2.0	100	6.8	--
APR 05	1020	394	13.0	22.0	90	6.8	8.8
MAY 18	1040	852	12.0	16.0	55	7.0	9.2
JUN 21	1005	64	24.0	26.0	95	7.0	7.0
AUG 08	1055	1390	21.0	23.0	90	6.8	--
SEP 25	--	56	--	--	200	7.2	--
03054500 TYGART VALLEY RIVER AT PHILIPPI, WV (LAT 39 09 00 LONG 80 02 25)							
OCT 18	1205	3830	8.0	13.0	70	7.0	--
JAN 16	1210	1220	1.0	3.0	--	--	--
APR 04	1020	1220	12.0	22.0	80	7.0	8.2
JUN 20	1230	258	26.0	31.0	100	6.8	8.8
AUG 16	1050	1530	24.0	28.0	60	--	--
SEP 19	1100	234	24.0	27.0	160	7.0	--
03057000 TYGART VALLEY RIVER AT COLFAX, WV (LAT 39 26 15 LONG 80 07 55)							
OCT 19	1445	2920	10.0	9.0	130	6.5	8.0
MAR 14	1355	7960	2.0	4.5	70	7.0	15.8
MAY 09	1110	4170	12.0	19.0	70	9.3	11.0
SEP 28	1200	803	22.0	19.0	100	7.4	7.5
03058000 WEST FORK RIVER AT BROWNSVILLE, WV (LAT 39 00 10 LONG 80 28 35)							
OCT 04	1100	46	15.0	20.5	150	8.6	8.9
DEC 14	1100	97	4.0	15.5	110	9.0	15.0
MAR 30	1025	195	7.5	12.0	--	7.1	9.0
MAY 10	1640	355	14.0	17.0	80	7.1	8.8
JUN 22	1510	32	28.0	29.0	180	7.5	9.8
SEP 26	1000	8.6	21.5	17.5	200	7.3	5.4
03058500 WEST FORK RIVER AT BUTCHERVILLE, WV (LAT 39 05 25 LONG 80 28 05)							
OCT 04	1235	113	15.5	22.0	210	9.1	7.6
DEC 14	0830	173	3.0	15.0	170	9.0	14.5
MAR 30	1230	325	8.0	13.0	--	7.2	9.0
MAY 11	0905	398	12.5	8.5	130	7.2	8.8
JUN 22	1230	58	24.5	28.5	420	6.5	9.2

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	DISSOLVED OXYGEN (MG/L)
MONONGAHELA RIVER BASIN--Continued							
03059000 WEST FORK RIVER AT CLARKSBURG, WV (LAT 39 16 15 LONG 80 21 20)							
OCT 06	1100	168	15.0	15.5	340	6.8	8.2
NOV 02	1405	64	13.0	19.0	405	7.9	7.0
DEC 09	1020	649	1.5	0.0	260	7.1	9.2
MAR 13	1240	3040	3.0	12.0	190	8.0	14.7
MAY 10	1120	1540	10.0	11.0	180	7.5	12.0
JUN 22	1450	140	24.0	29.0	520	7.6	9.0
SEP 26	1245	40	22.0	20.0	450	7.8	6.2
03061000 WEST FORK RIVER AT ENTERPRISE, WV (LAT 39 25 20 LONG 80 16 40)							
OCT 06	1300	306	15.5	18.0	590	6.8	8.1
DEC 09	1310	1190	2.0	-2.0	470	7.1	9.0
JUN 29	1225	2130	22.5	31.5	310	7.1	7.2
AUG 08	0945	1670	--	--	400	7.2	7.5
SEP 28	0900	74	21.0	19.5	400	7.0	6.5
03061410 LAUREL RUN AT CURTISVILLE, WV (LAT 39 31 14 LONG 80 26 20)							
OCT 28	1330	0.28	13.6	--	138	7.2	9.0
JAN 04	1120	0.80	0.5	1.0	110	7.0	--
12	1130	2.1	0.0	-12.0	100	7.0	--
24	0940	1.6	0.0	-9.0	95	7.2	10.5
FEB 08	1230	0.47	1.0	0.5	60	7.0	9.2
22	1025	0.35	0.0	-3.0	80	7.1	10.6
MAR 07	1015	0.41	0.5	-3.0	120	7.0	9.0
22	0910	2.5	4.5	8.0	60	7.0	10.2
APR 06	0945	0.87	7.5	7.0	100	7.6	9.6
19	1005	0.70	11.5	21.5	70	7.0	10.2
MAY 09	1410	5.5	15.5	23.0	60	7.0	8.8
JUN 06	1100	0.12	19.0	20.0	95	7.6	9.8
JUL 06	0845	1.4	17.0	20.5	70	7.0	10.6
AUG 07	1245	9.7	19.0	26.0	<50	7.1	9.1
23	1020	0.08	29.5	32.5	100	8.6	9.0
03061435 HIBS RUN NEAR MANNINGTON, WV (LAT 39 32 35 LONG 80 23 25)							
OCT 28	1755	0.37	13.4	--	95	7.4	9.0
JAN 04	1245	0.76	0.0	1.0	95	7.1	--
12	1015	2.5	0.0	-14.0	85	7.1	--
24	1110	2.0	0.0	-8.0	90	7.1	11.0
FEB 08	1045	0.49	0.0	-2.0	60	7.1	9.6
22	0930	0.45	0.0	-7.0	60	7.2	11.2
MAR 07	0855	0.42	0.0	-3.0	80	6.9	9.6
22	1030	2.8	6.0	12.0	55	7.0	9.2
APR 06	0835	1.1	7.0	8.0	60	7.0	9.8
19	1055	1.1	11.5	16.5	70	7.2	9.6
MAY 03	1000	0.80	6.5	18.0	60	7.1	10.0
09	1300	6.5	14.0	20.5	60	7.0	8.8
JUN 06	0925	0.11	15.0	19.5	80	7.3	10.2
JUL 06	0930	1.8	17.5	23.0	60	6.9	11.0
AUG 07	1120	1.5	20.0	24.5	60	7.1	8.5
23	1125	0.05	29.0	32.5	60	7.0	8.0
03061495 DAVY RUN AT KATY, WV (LAT 39 30 38 LONG 80 12 51)							
OCT 28	1210	0.71	13.0	--	604	8.2	10.3
JAN 04	1450	1.3	1.5	1.5	530	7.8	--
12	1230	3.4	1.5	-12.0	510	8.0	--
24	1225	2.2	2.0	-2.0	425	8.0	11.4
FEB 08	1500	1.4	2.5	1.0	510	8.0	9.4
22	1130	0.79	0.0	-2.0	510	8.0	9.6
MAR 07	1300	0.62	2.5	1.5	520	8.0	5.0
22	1255	4.7	7.5	13.0	440	8.1	9.6
APR 06	1105	3.0	8.0	8.0	470	8.0	10.0
19	1225	1.4	13.5	23.0	500	7.9	9.6
MAY 09	1140	5.4	13.5	23.0	390	8.0	8.6
JUN 06	1335	0.80	18.5	22.0	530	7.8	10.2
JUL 06	1130	3.4	17.5	29.5	440	7.7	13.6
27	1530	0.92	20.5	29.5	520	7.8	--
AUG 23	1315	0.56	28.5	33.5	450	7.1	12.0
03061500 BUFFALO CREEK AT BARRACKSVILLE, WV (LAT 39 30 15 LONG 80 10 20)							
OCT 07	1255	81	13.0	16.0	820	6.9	9.0
28	0950	46	13.0	15.0	710	7.4	9.8
DEC 08	1115	226	0.0	-2.5	280	7.3	9.6
JAN 05	1050	85	1.0	1.0	590	7.7	--
FEB 22	1255	59	0.0	-1.0	650	7.6	9.8
MAR 23	0945	268	6.5	13.0	255	7.5	8.8
MAY 03	1130	80	11.0	19.5	740	8.0	8.8
JUN 05	1040	35	19.0	24.5	1020	7.5	9.4
JUL 06	1215	208	20.5	29.0	300	7.1	9.2
27	1430	30	25.5	31.0	1400	8.1	--
AUG 23	1400	18	30.5	31.5	1000	7.8	8.0

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DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	DISSOLVED OXYGEN (MG/L)
MONONGAHELA RIVER BASIN--Continued							
03062213 STEWART RUN AT CROWN, WV (LAT 39 34 55 LONG 80 06 17)							
OCT 27	1320	0.84	15.5	--	2000	6.2	--
DEC 19	1425	2.7	8.0	9.5	340	7.3	8.8
20	1035	5.0	5.0	5.5	395	7.3	8.4
JAN 05	1340	1.4	1.0	1.0	470	7.8	--
26	1330	50	0.5	-17.0	180	7.3	--
FEB 13	1015	1.9	0.0	-5.0	480	7.6	--
MAR 02	1045	0.93	0.5	2.5	490	7.4	11.6
21	1030	5.9	7.0	17.0	330	7.1	9.2
APR 05	1000	2.9	10.0	10.0	370	7.8	8.8
20	0830	2.9	9.5	9.0	350	7.8	9.2
MAY 09	1015	5.6	14.0	18.5	330	7.5	9.2
JUN 05	1355	1.3	20.0	21.5	500	6.9	10.1
JUL 06	1325	1.4	25.0	29.5	510	7.7	10.4
27	1225	0.58	27.5	30.5	490	7.6	--
AUG 24	1045	0.70	20.0	27.0	560	8.1	10.1
03062215 INDIAN CREEK AT CROWN, WV (LAT 39 34 36 LONG 80 05 50)							
OCT 07	1125	5.3	12.0	14.0	2500	5.7	10.0
27	1030	4.1	13.5	17.5	1800	6.7	7.2
NOV 09	1335	18	16.0	22.5	760	7.3	8.6
DEC 08	0930	20	0.5	-7.5	770	7.2	9.8
19	1525	15	7.0	6.5	860	7.2	8.4
20	1125	28	5.5	7.5	860	7.4	8.0
JAN 05	1210	7.1	0.5	2.5	1600	7.8	--
12	1430	27	0.0	-10.0	360	7.1	--
FEB 13	0910	6.0	0.0	-4.0	570	7.5	--
MAR 02	1240	7.4	0.5	1.5	1800	6.8	11.0
21	0845	33	5.0	15.0	250	7.2	9.6
APR 05	0815	15	10.5	8.5	1050	7.3	8.6
20	0915	19	9.0	8.0	700	7.6	8.6
MAY 09	0805	29	12.0	14.0	510	7.6	9.2
JUN 05	1210	4.2	19.5	21.5	1700	7.1	11.1
JUL 06	1330	8.4	22.0	25.0	1200	7.3	11.3
27	1010	2.5	25.5	29.0	1100	7.7	--
AUG 24	0945	2.6	19.5	25.0	1800	7.7	9.1
03062400 COBUN CREEK AT MORGANTOWN, WV (LAT 39 36 30 LONG 79 57 20)							
OCT 19	1610	9.3	9.0	7.5	200	7.2	7.7
DEC 12	1520	20	1.0	2.5	--	7.1	10.2
MAR 14	1000	171	3.0	10.5	100	7.1	14.2
MAY 11	1505	23	16.5	23.0	85	7.2	10.8
JUN 21	1205	2.3	21.5	27.0	140	8.1	11.4
AUG 08	1145	51	19.0	28.0	130	8.5	8.5
03063600 HORSECAMP RUN AT HARMAN, WV (LAT 38 54 51 LONG 79 30 32)							
OCT 06	1130	0.70	10.0	10.0	200	7.8	--
03065000 DRY FORK AT HENDRICKS, WV (LAT 39 04 20 LONG 79 37 20)							
OCT 05	1445	245	12.0	15.0	65	7.0	--
NOV 09	--	1120	--	--	--	7.0	7.8
MAR 16	1510	2800	4.0	4.0	40	7.0	6.2
APR 27	1440	1350	10.0	15.0	50	7.0	8.0
JUN 06	1240	366	18.0	27.0	45	7.0	8.2
JUL 12	1255	330	19.5	25.0	60	7.0	8.0
AUG 22	1415	133	24.0	26.0	60	8.0	--
03066000 BLACKWATER RIVER AT DAVIS, WV (LAT 39 07 35 LONG 79 28 10)							
OCT 04	1545	159	10.0	10.0	120	6.8	--
NOV 15	1335	192	--	--	--	4.4	4.0
DEC 20	1610	268	--	3.0	100	5.1	--
FEB 17	1310	49	0.0	2.0	--	--	--
MAR 23	1300	1030	4.0	15.0	48	6.0	10.4
APR 25	1440	155	--	5.0	80	5.0	6.4
JUL 12	1025	163	25.0	--	100	<4.0	6.4
AUG 23	1335	34	23.0	26.0	100	6.0	--

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DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	DISSOLVED OXYGEN (MG/L)
MONONGAHELA RIVER BASIN--Continued							
03068000 SHAVERS FORK AT BEMIS, WV (LAT 38 48 27 LONG 79 44 16)							
OCT 27	1305	480	11.5	16.0	35	6.4	--
DEC 08	1504	284	--	0.0	34	6.8	10.2
JAN 24	1215	92	2.0	4.0	32	6.4	2.6
MAR 29	1140	949	6.0	3.5	30	5.5	10.2
JUN 01	1105	206	17.0	21.0	28	6.4	8.8
27	1630	1190	20.0	27.0	36	6.0	--
JUL 27	1010	104	20.0	25.0	29	7.0	--
SEP 06	1530	54	20.5	31.0	--	--	--
26	1120	27	16.5	20.0	33	7.0	--
03068600 SHAVERS FORK ABOVE BOWDEN, WV (LAT 38 54 10 LONG 79 41 41)							
MAR 28	1045	1170	5.0	12.0	30	6.0	9.2
JUL 26	1015	170	25.0	23.0	31	6.8	--
AUG 24	1130	70	28.0	23.0	31	7.0	--
SEP 26	1415	31	19.0	23.0	39	7.0	--
03068610 TAYLOR RUN AT BOWDEN, WV (LAT 38 54 27 LONG 79 41 49)							
OCT 26	1324	11	14.0	12.5	70	7.0	--
DEC 07	1120	17	0.0	-11.0	58	7.0	12.4
JAN 04	1347	7.9	2.0	8.0	70	7.0	11.0
23	1535	5.4	--	2.0	70	7.0	11.0
FEB 28	1350	2.8	2.0	4.0	55	7.0	10.6
MAR 30	1415	22	8.0	14.0	46	7.0	9.0
MAY 02	1245	7.2	8.0	10.0	55	7.0	8.4
31	1435	6.6	17.0	21.0	46	7.0	8.6
JUN 28	1215	27	22.0	--	55	7.0	--
JUL 26	1535	2.4	19.5	25.0	62	7.0	--
AUG 24	1345	1.4	20.0	26.0	70	7.0	--
29	1005	2.9	18.0	19.0	70	7.0	--
SEP 18	1440	1.4	18.5	28.0	90	7.0	--
27	1415	0.55	14.5	20.0	130	7.0	--
03068800 SHAVERS FORK BELOW BOWDEN, WV (LAT 38 54 47 LONG 79 46 14)							
OCT 26	1505	306	12.5	19.0	39	7.0	7.0
DEC 09	1055	353	1.0	0.0	40	7.0	3.4
JAN 04	1600	151	1.0	6.0	50	7.0	--
13	1220	330	0.5	2.0	--	--	--
23	1355	139	1.0	1.0	38	7.0	8.2
FEB 28	1515	74	2.0	6.0	33	6.8	8.8
MAR 29	1540	1150	6.0	13.0	35	6.2	9.8
MAY 03	1530	207	14.0	21.0	38	7.0	8.4
JUN 01	1440	230	22.0	30.0	35	7.0	8.2
JUL 27	1335	105	25.0	33.0	41	7.0	--
AUG 29	1400	78	23.0	26.0	48	7.8	--
SEP 27	1040	33	18.0	20.0	38	7.4	--
03068900 SHAVERS FORK NEAR ELKINS, WV (LAT 38 57 58 LONG 79 46 02)							
NOV 16	1100	253	--	--	--	6.8	4.0
MAR 28	1315	1350	6.0	12.0	35	6.5	9.8
AUG 29	1130	87	22.0	23.0	58	7.0	--
03069000 SHAVERS FORK AT PARSONS, WV (LAT 39 05 45 LONG 79 40 40)							
OCT 05	1640	248	--	16.0	48	7.0	--
DEC 21	1502	629	4.5	4.0	45	7.0	8.0
FEB 01	0945	355	0.0	-5.0	48	7.0	2.0
MAR 17	0935	988	2.5	3.5	40	7.0	11.8
APR 27	1620	521	11.5	17.0	44	7.0	9.4
JUN 06	1405	314	21.0	25.0	39	7.0	8.6
JUL 12	1705	292	24.0	24.0	41	7.0	7.2
AUG 22	1550	145	26.0	26.0	40.0	7.0	--

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DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	DISSOLVED OXYGEN (MG/L)
MONONGAHELA RIVER BASIN--Continued							
03069500 CHEAT RIVER NEAR PARSONS, WV (LAT 39 07 20 LONG 79 40 50)							
OCT 05	1200	801	11.0	15.0	65	6.6	--
NOV 09	1135	2880	--	--	--	7.0	7.4
DEC 21	1220	2280	5.0	3.0	56	7.0	7.6
MAR 16	1205	6520	4.0	4.0	50	7.0	9.6
APR 27	1212	2900	9.0	15.0	40	7.0	10.2
JUN 06	1037	803	17.0	22.0	72	6.6	8.1
JUL 12	1555	1080	23.0	19.0	60	7.0	6.8
AUG 22	1200	299	21.0	23.0	65	7.0	--
03069880 BUFFALO CREEK NEAR ROWLESBURG, WV (LAT 39 17 19 LONG 79 42 16)							
OCT 20	1140	29	8.0	7.5	70	7.2	8.1
DEC 12	1310	24	0.0	-1.0	55	7.1	9.6
03070000 CHEAT RIVER AT ROWLESBURG, WV (LAT 30 20 50 LONG 79 40 00)							
OCT 20	1000	2510	9.5	8.5	75	6.9	7.2
DEC 12	1210	1070	0.5	-1.0	85	7.0	9.0
DEC 15	1140	12400	4.0	6.5	60	7.1	8.6
FEB 23	1300	441	0.5	3.0	40	7.0	12.2
MAY 11	1115	3080	12.0	20.0	25	7.8	12.2
JUN 30	1115	2420	21.0	24.5	40	7.3	8.4
AUG 28	1220	289	22.5	25.5	80	7.2	11.1
SEP 27	1155	189	18.0	20.0	75	7.2	5.9
03070200 SALT LICK CREEK AT ROWLESBURG, WV (LAT 39 21 00 LONG 79 39 50)							
FEB 23	1230	20	0.5	3.0	60	5.8	12.0
MAY 11	1100	112	10.0	20.0	25	6.9	12.9
JUN 30	1055	70	16.0	24.5	55	7.4	9.2
03070500 BIG SANDY CREEK AT ROCKVILLE, WV (LAT 39 37 15 LONG 79 42 20)							
OCT 19	1100	328	9.0	6.0	90	7.2	9.8
DEC 14	1045	576	1.0	7.5	120	7.0	10.1
FEB 02	1335	351	2.0	1.5	--	--	--
23	1600	122	0.5	1.5	60	6.1	12.0
MAR 17	1105	1020	2.0	6.0	65	6.6	14.1
MAY 12	1150	465	14.0	23.0	40	8.0	10.3
JUN 26	0915	67	19.0	22.5	100	7.2	9.0
AUG 10	1055	140	20.0	23.0	100	8.5	8.5
SEP 27	0845	43	13.0	15.5	150	7.6	9.2
KINGS CREEK RIVER BASIN							
03110830 KINGS CREEK AT WEIRTON, WV (LAT 40 26 08 LONG 80 35 34)							
OCT 19	1240	13	11.0	19.5	320	9.4	11.1
NOV 16	1100	14	10.0	15.0	325	8.4	11.4
DEC 21	1310	75	6.0	4.5	260	7.9	11.8
JAN 25	1450	33	4.0	9.0	360	7.5	12.4
FEB 15	1315	22	3.0	--	430	7.6	12.8
MAR 22	1250	120	10.0	--	300	7.8	11.2
APR 26	1220	41	11.0	14.0	380	9.4	13.8
MAY 17	1345	282	11.5	14.5	300	7.5	10.6
18	0900	730	11.0	16.0	220	6.9	11.0
JUN 14	1200	79	13.5	17.0	370	7.6	10.3
JUL 19	1230	13	22.0	27.0	560	8.7	10.1
AUG 02	1245	8.6	23.5	27.5	535	8.7	10.1
SEP 18	1515	8.8	23.0	32.0	500	8.7	10.0
WHEELING CREEK RIVER BASIN							
03112000 WHEELING CREEK AT ELM GROVE, WV (LAT 40 02 40 LONG 80 39 40)							
OCT 20	1410	113	11.0	17.5	210	9.0	--
NOV 30	0835	133	2.5	4.0	315	9.2	12.6
MAR 30	0905	560	5.0	5.0	280	8.0	11.6
APR 24	1535	387	13.0	20.0	270	8.7	13.0
MAY 15	1440	452	12.0	16.0	320	8.2	11.7
JUN 12	1530	81	26.0	31.0	325	8.3	9.8
AUG 03	0840	27	23.0	22.0	405	8.4	6.5
SEP 21	0900	17	21.0	23.0	375	8.4	6.0

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OHIO RIVER BASIN							
03112510 OHIO RIVER AT BENWOOD NEAR WHEELING, WV (LAT 40 00 54 LONG 80 44 20)							
MAY 24	1645	84600	17.0	24.0	220	6.8	10.1
JUN 28	1400	43700	28.0	29.0	--	--	7.4
JUL 13	1600	14600	23.0	26.0	295	7.4	8.1
AUG 30	1500	7320	27.0	23.5	450	8.7	6.4
LITTLE GRAVE CREEK RIVER BASIN							
03113700 LITTLE GRAVE CREEK NEAR GLENDALE, WV (LAT 39 57 50 LONG 80 42 04)							
OCT 13	1405	1.3	10.5	14.0	340	7.9	12.8
03113706 LITTLE GRAVE CREEK AT MOUNDSVILLE, WV (LAT 39 55 45 LONG 80 44 54)							
OCT 18	1315	1.6	15.0	18.0	280	8.3	9.0
NOV 15	1400	1.7	10.0	18.0	390	7.4	9.3
DEC 06	1045	47	6.0	2.5	260	8.1	10.8
20	1405	20	9.0	10.0	260	8.0	11.8
JAN 31	1400	9.2	3.0	--	270	7.6	10.9
FEB 14	1415	3.7	6.0	--	400	7.3	10.7
MAR 21	1400	28	12.0	--	320	7.7	10.2
APR 25	1415	17	9.0	12.0	385	8.2	10.2
MAY 16	1340	15	12.5	15.5	400	7.9	11.8
18	1415	84	13.5	21.0	285	7.4	11.6
JUN 13	1350	3.4	16.5	17.0	440	7.5	10.0
JUL 18	1430	1.1	23.0	29.5	475	7.9	8.3
AUG 01	1330	0.37	20.5	28.0	520	7.9	7.0
SEP 20	1400	0.05	23.5	29.0	615	6.9	3.6
03113708 PAR RUN AT MOUNDSVILLE, WV (LAT 39 55 35 LONG 80 44 34)							
OCT 18	1215	0.48	18.0	17.5	510	7.6	9.2
NOV 15	1320	0.37	16.0	19.0	390	7.3	8.4
DEC 20	1305	2.1	10.0	9.0	390	7.6	10.3
JAN 31	1315	1.4	6.0	--	420	7.4	11.5
FEB 14	1315	0.86	10.0	--	625	7.4	10.5
MAR 21	1220	1.9	14.0	--	530	7.5	9.8
APR 25	1245	3.6	11.0	14.0	475	8.2	10.2
MAY 16	1210	1.3	14.0	15.0	585	7.7	10.4
18	1250	10	14.0	20.0	460	7.4	11.9
JUN 13	1230	0.73	17.0	18.0	590	7.7	10.8
JUL 18	1245	0.82	22.0	28.0	555	8.0	8.0
AUG 01	1215	0.66	23.0	27.0	410	8.2	7.7
SEP 20	1300	0.56	25.0	29.0	545	7.2	7.2
GRAVE CREEK RIVER BASIN							
03113732 MIDDLE GRAVE CREEK AT KNOXVILLE, WV (LAT 39 53 07 LONG 80 38 29)							
OCT 18	1040	5.8	9.0	11.5	230	10.1	11.1
NOV 15	1215	3.2	9.0	18.0	240	8.3	11.8
DEC 20	1130	25	8.0	9.5	240	8.0	11.3
JAN 31	1045	10	0.5	12.0	220	7.9	12.3
FEB 14	1000	1.8	3.0	--	280	7.7	12.7
MAR 21	0915	14	9.0	--	220	8.0	11.2
APR 25	0900	9.2	8.0	12.0	230	8.5	10.8
MAY 16	0910	12	11.0	15.0	160	8.2	11.2
JUN 13	0915	3.7	16.5	17.0	295	8.3	10.2
JUL 18	0915	1.2	16.0	21.0	350	8.2	9.5
AUG 01	0920	1.1	19.0	22.0	340	8.5	8.8
SEP 20	0910	0.35	20.0	23.0	340	7.9	7.6
03113738 MIDDLE GRAVE CREEK AT MOUNDSVILLE, WV (LAT 39 54 46 LONG 80 43 43),							
OCT 18	0950	12	8.0	11.0	250	10.3	10.8
NOV 15	1105	7.5	9.0	18.5	200	8.2	11.4
DEC 06	0935	124	5.5	1.5	210	8.0	11.3
20	1000	38	7.0	10.5	240	8.2	11.1
JAN 31	1145	17	0.5	12.0	270	7.7	12.1
FEB 14	1125	14	3.0	--	360	7.7	13.2
MAR 21	1040	115	11.0	--	290	7.9	11.0
APR 25	1030	35	9.0	11.0	320	8.5	10.6
MAY 16	1030	39	12.0	15.0	325	8.3	11.8
18	1140	272	13.0	19.5	335	7.4	10.8
JUN 13	1040	16	18.0	18.5	360	8.5	11.8
JUL 18	1100	9.1	21.0	25.0	390	8.3	9.9
AUG 01	1030	5.3	21.0	24.0	390	8.6	10.1
SEP 20	1100	1.6	25.0	28.0	425	8.1	9.7

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

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WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	DISSOLVED OXYGEN (MG/L)
MIDDLE ISLAND CREEK BASIN							
03114500 MIDDLE ISLAND CREEK AT LITTLE, WV (LAT 39 28 30 LONG 80 59 50)							
OCT 20	1040	287	11.0	8.5	160	8.5	9.6
MAR 23	1110	586	10.0	--	150	7.4	10.4
APR 27	1125	750	11.0	19.0	100	8.1	11.1
MAY 23	1030	313	18.0	21.0	115	8.7	9.6
JUL 20	1105	193	24.0	30.0	95	8.0	6.9
SEP 07	1115	56	23.5	28.0	165	8.0	9.0
03114650 BUFFALO RUN NEAR LITTLE, WV (LAT 39 29 13 LONG 81 00 27)							
OCT 04	1115	0.40	14.0	22.0	220	9.2	9.0
LITTLE KANAWHA RIVER BASIN							
03151400 LITTLE KANAWHA RIVER NEAR WILDCAT, WV (LAT 38 44 35 LONG 80 31 36)							
OCT 05	1615	60	14.5	14.0	<50	6.0	10.1
NOV 14	1150	117	4.0	7.5	55	7.3	6.4
DEC 30	1220	142	0.5	4.0	<50	7.1	--
FEB 03	1045	86	0.0	-8.0	60	7.2	--
MAR 13	1200	1460	2.5	7.0	70	7.2	9.0
29	0935	513	6.0	11.5	<50	6.9	--
MAY 10	1400	375	12.0	15.5	<50	7.0	9.0
JUN 21	1150	39	23.0	25.0	80	7.5	11.2
JUL 27	1315	36	24.5	31.5	<50	7.2	8.2
SEP 05	1340	46	20.5	30.5	<50	7.0	9.3
03151520 LITTLE KANAWHA RIVER BELOW BURNSVILLE DAM, WV (LAT 38 50 41 LONG 80 37 45)							
OCT 05	1310	74	14.5	18.0	60	6.4	10.1
NOV 02	1040	35	12.0	20.0	70	7.1	9.0
14	1355	142	6.0	6.0	60	7.0	6.4
DEC 30	0920	209	0.0	1.0	50	7.0	--
FEB 02	1655	241	1.0	-1.0	70	7.0	--
MAR 13	1730	1480	5.0	10.0	60	7.2	9.4
MAY 10	1035	521	14.0	12.0	40	7.0	9.0
JUN 15	1155	61	22.0	23.0	<50	7.2	8.2
JUL 27	0955	72	24.5	25.5	<50	7.3	6.5
SEP 05	1615	67	25.0	30.0	<50	6.1	8.8
03151600 LITTLE KANAWHA RIVER AT BURNSVILLE, WV (LAT 38 51 55 LONG 80 40 32)							
OCT 05	1415	98	16.0	16.5	85	6.7	9.1
NOV 02	0945	42	14.0	15.0	95	7.2	7.4
NOV 14	1635	169	5.5	3.5	65	7.3	5.8
DEC 30	1025	249	0.0	1.5	195	7.2	--
FEB 02	1525	302	1.0	0.0	120	7.4	--
MAR 13	1500	2020	6.5	12.0	50	7.2	9.6
MAY 10	0910	735	13.5	11.5	--	--	--
JUN 15	1355	76	26.0	21.0	<50	7.1	7.4
JUL 27	1130	101	27.0	27.5	<50	7.4	5.9
SEP 06	0910	58	22.5	19.0	60	6.6	8.8
03152000 LITTLE KANAWHA RIVER AT GLENVILLE, WV (LAT 38 56 00 LONG 80 50 20)							
OCT 05	1040	156	12.0	14.5	160	6.5	7.6
NOV 15	0905	216	5.5	4.5	120	7.0	9.0
DEC 29	1540	446	0.5	1.5	140	7.0	--
FEB 02	1245	621	1.0	-4.0	110	7.0	--
MAR 14	1035	3560	6.0	11.0	420	7.0	9.0
APR 24	1230	1220	11.0	19.0	70	7.1	9.2
JUN 15	1600	115	22.0	27.0	105	7.0	6.8
JUL 26	1715	183	25.0	24.5	150	7.3	7.2
SEP 06	1025	110	21.0	19.0	105	7.0	7.6
03152200 BUCK RUN NEAR LEOPOLD, WV (LAT 39 07 26 LONG 80 41 26)							
OCT 03	1100	1.4	14.0	13.0	85	6.7	8.8
03153500 LITTLE KANAWHA RIVER AT GRANTSVILLE, WV (LAT 38 55 20 LONG 81 05 50)							
OCT 04	1715	465	13.0	15.0	150	7.3	7.2
NOV 15	1145	425	7.0	15.0	155	7.2	8.2
DEC 29	1330	915	0.5	2.0	165	7.2	--
FEB 01	1625	2380	1.0	-4.0	130	7.1	--
MAR 14	1330	8770	6.0	10.0	200	7.0	8.6
APR 24	1510	2110	12.0	19.0	70	7.3	8.8
JUN 16	0915	243	19.0	16.5	140	7.4	7.7
JUL 26	1235	385	24.5	27.5	<50	7.4	6.5
SEP 06	1220	231	22.5	25.0	145	7.2	7.6

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	DISSOLVED OXYGEN (MG/L)
LITTLE KANAWHA RIVER BASIN--Continued							
03154250 TANNER RUN AT SPENCER, WV (LAT 38 48 11 LONG 81 21 58)							
OCT 04	1325	0.02	15.0	17.0	290	7.7	10.2
03154500 REEDY CREEK NEAR REEDY, WV (LAT 38 57 40 LONG 81 23 25)							
OCT 04	1210	16	14.5	16.5	140	7.1	6.6
NOV 15	1455	14	7.5	14.0	180	7.4	8.2
DEC 29	1030	23	0.0	-3.0	175	7.0	--
FEB 01	1130	55	0.0	-12.0	110	7.1	--
MAR 14	1630	1230	6.6	15.0	70	7.1	8.4
APR 25	0920	63	11.5	12.0	120	7.2	9.4
JUN 09	0945	57	20.5	19.0	110	7.5	7.0
JUL 25	1415	42	24.0	24.5	160	7.6	7.0
SEP 06	1515	6.9	24.0	35.5	150	7.1	7.6
03155000 LITTLE KANAWHA RIVER AT PALESTINE, WV (LAT 39 03 35 LONG 81 23 25)							
NOV 15	1700	712	7.5	14.0	165	7.3	8.8
APR 25	1225	2650	11.5	15.0	90	7.0	9.0
JUN 08	1345	566	22.5	24.5	100	7.2	8.5
JUL 25	1045	443	26.5	23.0	80	7.4	7.2
SEP 07	0905	380	22.5	21.0	110	6.9	8.0
03155500 HUGHES RIVER AT CISCO, WV (LAT 39 07 10 LONG 81 16 40)							
OCT 04	1040	167	13.5	17.0	250	7.1	7.3
NOV 16	0940	130	6.0	12.0	160	7.3	7.8
DEC 28	1440	326	0.0	-5.0	190	7.1	--
JAN 31	1320	351	0.0	-8.0	110	7.3	10.6
MAY 18	1345	735	13.0	17.0	130	7.2	9.0
JUN 08	1200	149	21.5	25.5	100	7.3	9.4
JUL 24	1540	77	25.0	26.0	140	7.2	7.5
SEP 07	1100	58	21.5	27.0	150	7.5	8.0
KANAWHA RIVER BASIN							
03179000 BLUESTONE RIVER NEAR PIPESTEM, WV (LAT 37 32 45 LONG 81 00 30)							
NOV 02	1430	213	13.5	17.0	260	8.6	11.0
JAN 04	1410	108	0.0	5.0	295	--	15.0
FEB 28	1210	382	1.0	3.0	260	7.5	--
APR 10	1430	289	--	17.5	280	9.2	--
MAY 10	1200	2170	13.0	15.0	150	7.0	9.8
JUN 07	1030	147	20.0	18.5	280	8.0	9.2
JUL 18	1115	102	21.5	22.0	380	8.2	9.4
AUG 23	1150	65	24.0	25.0	360	--	9.8
SEP 28	1240	25	19.0	19.0	480	--	12.3
03180000 NEW RIVER AT BLUESTONE DAM, WV (LAT 37 38 35 LONG 80 53 00)							
NOV 30	1350	16700	7.0	10.0	150	7.6	11.8
FEB 27	1430	4250	2.5	7.0	190	7.5	13.5
MAR 20	1605	12800	7.0	20.0	150	7.4	--
MAY 31	1140	7140	22.0	23.0	170	--	9.2
JUL 07	1230	5170	24.0	26.0	190	7.4	8.5
AUG 24	1100	4120	26.0	27.0	155	--	8.3
03180500 GREENBRIER RIVER AT DURBIN, WV (LAT 38 32 35 LONG 79 50 00)							
OCT 04	1230	178	11.0	13.0	--	--	--
APR 19	1220	121	--	--	--	--	--
MAY 22	1235	302	15.0	24.0	<50	--	--
JUN 16	1150	70	15.0	18.0	170	--	--
JUL 20	1145	118	20.5	27.0	90	--	--
AUG 30	0920	27	21.0	19.0	380	--	--
SEP 29	1200	11	16.0	15.0	800	--	--
03181200 INDIAN DRAFT NEAR MARLINTON, WV (LAT 38 16 48 LONG 80 04 31)							
OCT 05	1245	3.2	14.0	17.0	--	--	--
03182500 GREENBRIER RIVER AT BUCKEYE, WV (LAT 38 11 15 LONG 80 07 50)							
OCT 04	0955	434	13.0	12.0	--	--	--
APR 19	1005	298	--	--	--	--	--
MAY 22	0830	830	17.0	15.0	60	8.7	--
JUN 16	0920	198	18.0	13.0	110	--	--
JUL 20	0920	218	23.0	20.0	95	--	--
AUG 24	0950	123	23.0	18.0	120	--	--
SEP 29	0950	34	15.5	7.0	250	--	--

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

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WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	DISSOLVED OXYGEN (MG/L)
KANAWHA RIVER BASIN--Continued							
03182700 ANTHONY CREEK NEAR ANTHONY (LAT 37 54 30 LONG 80 17 30)							
FEB 15	1445	60	2.0	2.0	--	--	--
JUN 07	1520	47	21.0	23.0	90	7.0	9.0
JUL 17	1600	34	23.0	21.5	140	7.8	9.2
AUG 22	1430	10	23.0	22.0	150	--	9.3
03182950 HOWARD CREEK AT CALDWELL (LAT 37 46 54 LONG 80 23 15)							
NOV 07	1330	454	14.0	16.0	120	6.7	9.6
FEB 15	1225	35	2.0	6.0	270	7.1	--
MAR 29	1315	247	9.0	15.0	130	7.0	--
MAY 11	1055	192	10.5	14.5	115	7.3	11.0
JUN 07	1330	28	20.0	23.0	300	7.9	9.2
JUL 17	1400	50	22.5	24.0	310	8.4	10.0
AUG 22	1240	11	21.5	22.0	415	--	10.8
03183500 GREENBRIER RIVER AT ALDERSON, WV (LAT 37 43 30 LONG 80 38 30)							
NOV 30	1430	4910	6.0	--	140	8.0	12.3
FEB 15	0945	686	--	--	180	7.0	--
MAR 29	1100	7100	8.0	14.0	115	7.1	--
JUN 07	1855	603	23.0	23.0	180	7.3	8.4
AUG 22	1030	346	23.0	18.0	175	--	--
SEP 12	0910	146	22.5	18.0	250	--	7.5
03184000 GREENBRIER RIVER AT HILLDALE, WV (LAT 37 38 25 LONG 80 48 20)							
NOV 30	1105	4510	6.0	9.0	150	--	12.0
MAR 06	1520	698	3.0	8.0	--	--	--
JUN 06	1620	938	23.0	23.0	150	8.2	9.8
AUG 17	1515	1060	26.5	28.0	150	--	8.4
SEP 11	1230	167	24.0	23.0	240	--	8.1
03184200 BIG CREEK NEAR BELLEPOINT, WV (LAT 37 40 28 LONG 80 48 52)							
OCT 04	1000	3.7	10.0	12.0	--	--	--
03184500 NEW RIVER AT HINTON, WV (LAT 37 40 15 LONG 80 53 40)							
FEB 14	1620	7050	0.0	--	170	7.4	--
MAR 20	1400	17700	8.0	25.0	120	7.3	--
JUN 06	1415	4860	23.0	28.0	170	7.8	9.2
AUG 28	1525	1520	28.5	29.5	190	--	11.6
03185000 PINEY CREEK AT RALEIGH, WV (LAT 37 45 40 LONG 81 09 50)							
JAN 03	1420	32	1.0	-2.0	320	6.9	13.8
FEB 14	1140	45	0.0	1.0	420	7.0	--
MAR 31	0940	88	8.0	10.0	225	6.6	--
APR 24	1200	35	15.0	17.0	260	7.4	--
MAY 30	1120	47	--	--	270	7.5	10.2
JUL 06	1110	12	21.0	22.0	420	7.9	9.8
AUG 28	1155	6.1	24.0	27.0	420	--	10.5
SEP 27	1120	3.8	15.5	16.5	480	--	11.6
03186500 WILLIAMS RIVER AT DYER, WV (LAT 38 22 45 LONG 80 29 05)							
OCT 05	1100	232	10.0	14.0	--	--	--
APR 18	0950	113	--	--	--	--	--
MAY 23	0835	217	15.0	18.0	<50	8.8	--
JUN 19	0910	50	20.0	21.0	<50	--	--
JUL 19	0920	81	19.0	23.0	<50	--	--
AUG 25	0910	26	21.0	21.0	55	--	--
03189100 GAULEY RIVER NEAR CRAIGSVILLE, WV (LAT 38 17 30 LONG 80 38 30)							
MAY 23	1115	939	17.0	22.0	--	8.7	--
JUN 19	1150	295	--	25.0	<50	--	--
JUL 19	1130	471	22.0	27.0	<50	--	--
SEP 28	1200	43	17.0	16.0	200	--	--
03189600 GAULEY RIVER BELOW SUMMERSVILLE DAM, WV (LAT 38 13 00 LONG 80 53 30)							
NOV 01	1450	7180	14.0	--	80	6.4	10.0
JAN 05	1055	408	4.0	--	80	--	13.4
MAR 30	1340	3660	6.0	11.0	<50	6.1	--
APR 17	1320	147	8.0	18.0	70	6.5	--
JUN 05	1350	780	11.0	24.0	60	--	11.4
AUG 18	1020	586	19.5	26.5	80	--	--
SEP 26	1430	1430	21.0	20.0	90	--	9.6
03189650 COLLISON CREEK NEAR NALLEN, WV (LAT 38 10 35 LONG 80 52 07)							
OCT 05	0915	0.29	9.0	5.0	--	--	--

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WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	DISSOLVED OXYGEN (MG/L)
KANAWHA RIVER BASIN--Continued							
03190400 MEADOW RIVER NEAR MT LOOKOUT, WV (LAT 38 11 25 LONG 80 56 55)							
NOV 03	1030	347	13.5	20.0	90	7.1	9.6
APR 17	1100	193	12.5	11.0	100	7.2	--
MAY 09	1030	1200	13.0	16.0	90	6.7	10.5
AUG 29	1020	34	24.0	23.0	155	--	--
03192000 GAULEY RIVER ABOVE BELVA, WV (LAT 38 14 00 LONG 81 10 45)							
NOV 01	1210	5250	13.5	20.0	80	6.7	10.8
JAN 05	1400	721	1.5	4.0	90	6.2	16.2
MAR 30	1100	6320	7.0	7.0	70	6.3	--
MAY 09	1400	1700	15.0	22.0	100	6.6	11.2
JUL 10	1215	535	20.5	26.0	--	--	--
AUG 21	1240	418	24.5	28.0	105	--	8.7
SEP 26	1145	1410	20.5	18.0	90	--	8.9
03193000 KANAWHA RIVER AT KANAWHA FALLS, WV (LAT 38 08 20 LONG 81 12 45)							
APR 24	1040	7000	11.5	--	--	--	--
JUL 18	1250	5280	21.5	--	--	--	--
03193830 GILMER RUN NEAR MARLINTON, WV (LAT 38 19 12 LONG 80 05 52)							
OCT 05	1315	1.7	11.0	17.0	--	--	--
03194700 ELK RIVER BELOW WEBSTER SPRINGS (LAT 38 35 50 LONG 80 29 20)							
OCT 03	1150	642	14.0	9.0	--	--	--
APR 20	1005	294	12.0	7.0	--	--	--
MAY 19	1030	1030	13.0	23.0	65	8.8	--
JUN 15	1000	327	16.0	13.0	65	--	--
JUL 18	0945	341	20.0	18.0	75	--	--
AUG 22	1045	117	20.5	21.5	95	--	--
SEP 25	1035	68	20.5	19.0	105	--	--
03195100 RIGHT FORK HOLLY RIVER AT GUARDIAN, WV (LAT 38 38 08 LONG 80 27 58)							
NOV 16	1100	55	9.0	19.0	--	--	--
JAN 16	1210	35	1.0	--	--	--	--
MAR 02	1040	22	1.0	-2.0	--	--	--
APR 12	1315	52	15.0	22.0	--	--	--
MAY 18	0840	160	11.0	12.0	<50	8.7	--
JUN 14	1205	33	17.0	18.0	<50	--	--
JUL 17	1130	60	19.5	22.0	55	--	--
AUG 23	1240	8.7	21.0	26.5	65	--	--
SEP 27	0950	3.8	16.0	16.5	78	--	--
03195250 LEFT FORK HOLLY RIVER NEAR REPLETE, WV (LAT 38 41 19 LONG 80 26 01)							
NOV 16	1005	56	8.0	13.0	--	--	--
JAN 16	1040	35	0.0	-13.0	--	--	--
FEB 28	1240	30	1.0	0.0	--	--	--
APR 13	1120	71	11.0	--	--	--	--
MAY 16	1415	231	11.0	14.0	<50	--	--
JUN 20	1320	15	23.0	25.0	<50	--	--
JUL 17	0955	27	19.0	20.0	<50	--	--
AUG 21	1040	16	19.0	20.0	<50	--	--
SEP 27	1140	5.8	17.0	18.0	70	--	--
03195500 ELK RIVER AT SUTTON, WV (LAT 38 39 45 LONG 80 42 35)							
NOV 14	1205	1290	11.5	6.0	--	--	--
JAN 17	1200	794	--	--	--	--	--
FEB 28	1010	381	2.0	-4.0	--	--	--
APR 12	1135	179	10.0	--	--	--	--
MAY 18	1145	1880	14.0	23.0	<50	--	--
JUN 14	1030	598	16.0	17.0	70	--	--
AUG 23	0915	109	21.0	19.0	65	--	--
SEP 26	1145	76	21.5	19.0	90	--	--
03196600 ELK RIVER NEAR FRAMETOWN, WV (LAT 38 35 34 LONG 80 53 06)							
NOV 15	1100	1240	12.0	16.0	--	--	--
FEB 28	0840	606	2.0	-3.0	--	--	--
APR 13	1345	342	13.0	24.0	--	--	--
MAY 17	0940	3050	13.0	15.0	60	--	--
JUN 20	1025	152	22.0	25.0	70	--	--
JUL 31	1250	6980	22.0	25.0	--	--	--
AUG 23	1040	149	24.0	22.0	72	--	--
SEP 26	1025	105	21.0	14.0	125	--	--

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

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WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	DISSOLVED OXYGEN (MG/L)
KANAWHA RIVER BASIN--Continued							
03196800 ELK RIVER AT CLAY, WV (LAT 38 27 36 LONG 81 05 15)							
FEB 27	1045	762	2.0	4.0	--	--	--
APR 10	1325	450	16.5	25.0	--	--	--
MAY 17	1210	3800	14.0	19.0	80	9.3	--
JUN 21	1145	206	25.0	26.0	70	--	--
SEP 18	1200	176	25.0	31.0	110	6.9	--
03197000 ELK RIVER AT QUEEN SHOALS, WV (LAT 38 28 20 LONG 81 17 10)							
APR 14	0935	552	15.0	24.0	--	--	--
JUN 21	1340	280	25.0	27.0	60	--	--
SEP 19	1515	203	27.5	33.0	115	7.0	--
03198000 KANAWHA RIVER AT CHARLESTON, WV (LAT 38 22 10 LONG 81 42 05)							
JAN 27	1210	104000	--	--	--	--	--
APR 04	1255	14300	13.0	30.0	--	--	--
JUN 20	1245	6000	26.0	--	--	--	--
AUG 10	1130	15600	27.0	29.0	--	--	--
03198450 DRAWDY CREEK NEAR PEYTONA, WV (LAT 38 07 29 LONG 81 41 33)							
OCT 12	1100	4.5	--	--	--	--	--
03198500 BIG COAL RIVER AT ASHFORD, WV (LAT 38 10 45 LONG 81 42 40)							
NOV 07	1100	393	17.0	17.0	--	--	--
MAR 13	1300	3880	7.0	15.0	170	6.4	11.8
APR 13	1405	260	17.0	21.0	350	7.0	8.5
MAY 18	1000	561	14.0	16.0	300	7.2	6.8
JUN 22	1010	113	23.0	22.5	580	--	5.2
JUL 27	1455	74	27.5	--	600	--	--
03198550 BIG COAL RIVER NEAR ALUM CREEK, WV (LAT 38 15 00 LONG 81 47 54)							
MAR 13	1000	5670	9.0	15.0	180	6.9	9.4
14	1710	6640	10.0	--	--	--	--
APR 17	1230	230	15.0	24.0	400	7.8	7.7
JUN 20	1130	111	29.5	30.0	450	--	5.6
JUL 31	1125	244	24.0	--	350	7.2	8.2
SEP 01	1315	647	23.0	--	360	7.2	8.4
03199000 LITTLE COAL RIVER AT DANVILLE, WV (LAT 38 04 47 LONG 81 50 12)							
MAR 09	1305	2310	7.0	14.0	170	6.8	12.0
APR 14	1405	154	15.5	24.0	470	8.5	--
MAY 17	1305	458	13.5	--	400	7.5	9.6
JUN 21	1435	64	25.5	28.5	>800	--	6.5
JUL 25	1120	68	24.0	25.0	800	--	--
AUG 31	1215	582	22.5	28.5	380	7.0	7.0
03199400 LITTLE COAL RIVER AT JULIAN, WV (LAT 38 09 17 LONG 81 51 10)							
MAR 13	1635	2650	8.0	18.5	180	6.7	10.5
APR 18	1220	175	16.5	19.0	510	8.0	7.4
MAY 17	1535	543	15.0	--	360	7.4	7.5
JUN 21	1150	72	25.0	--	750	--	5.8
JUL 25	1330	77	26.0	--	750	--	--
03199700 COAL RIVER AT ALUM CREEK, WV (LAT 38 17 11 LONG 81 48 25)							
APR 17	1630	428	17.0	29.0	440	7.8	7.6
MAY 18	1410	1170	15.5	29.0	310	--	7.6
JUN 20	1600	196	26.0	33.5	520	--	7.0
JUL 31	1515	417	24.0	--	390	--	8.3
AUG 28	1340	105	31.0	33.0	650	7.3	3.8
03200500 COAL RIVER AT TORNADO, WV (LAT 38 20 20 LONG 81 50 30)							
NOV 10	1345	2400	14.0	6.0	--	--	--
MAR 08	1200	1690	3.0	9.0	296	6.8	12.2
15	1230	8950	9.0	--	--	--	--
APR 24	1605	460	15.0	23.0	410	7.6	7.6
MAY 18	1630	1100	14.0	28.0	310	7.0	8.6
JUN 22	1415	219	26.0	28.5	700	--	5.7
JUL 26	1530	266	25.5	33.5	390	--	--
AUG 29	1235	96	26.5	28.0	680	7.5	7.8
03201000 POCATALICO RIVER AT Sissonville, WV (LAT 38 31 35 LONG 81 37 50)							
FEB 16	1055	109	0.0	0.5	450	--	--
MAR 20	1250	350	--	--	--	--	--
JUN 08	1520	78	22.0	25.0	270	--	5.5
SEP 06	1110	30	21.0	20.0	290	--	7.2

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	DISSOLVED OXYGEN (MG/L)
KANAWHA RIVER BASIN--Continued							
03201410 POPLAR FORK AT TEAYS, WV (LAT 38 27 23 LONG 81 55 54)							
FEB 16	1500	3.8	0.0	0.0	--	--	--
MAR 24	1325	61	9.0	--	--	--	--
APR 28	1135	22	12.0	25.0	--	--	--
JUN 08	1230	18	20.0	23.0	220	--	6.1
SEP 07	1020	0.82	20.0	22.0	290	--	7.0
GUYANDOTTE RIVER BASIN							
03202240 ALLEN CREEK AT ALLEN JUNCTION, WV (LAT 37 35 33 LONG 81 20 48)							
NOV 03	1140	6.4	16.0	--	426	--	--
DEC 12	1125	17	2.5	--	325	--	--
JAN 25	1210	16	3.5	--	242	--	--
25	1615	20	3.0	--	226	--	--
26	1140	247	2.0	--	--	--	--
26	1500	191	2.0	--	110	--	--
FEB 27	1110	5.9	3.5	-1.0	430	7.5	13.0
MAR 09	1405	24	7.0	--	248	8.0	--
APR 05	1730	8.6	--	--	367	8.2	--
MAY 15	1710	20	10.5	--	260	7.3	--
22	1100	9.5	16.0	23.5	430	7.9	9.7
JUL 13	1020	2.2	17.5	21.5	500	7.8	--
20	0830	1.7	19.5	--	480	7.9	--
AUG 03	1320	1.6	26.5	32.0	780	7.8	8.2
SEP 06	1250	1.1	22.5	28.5	800	7.9	8.7
03202245 MARSH FORK AT MABEN, WV (LAT 37 38 19 LONG 81 23 38)							
NOV 03	1425	3.6	16.0	--	77	--	--
DEC 13	1030	6.0	4.0	--	70	--	--
JAN 25	1100	25	0.5	--	146	--	--
25	1515	33	1.5	--	113	--	--
26	1040	224	5.0	--	53	--	--
FEB 27	1605	4.6	3.0	3.0	100	7.1	--
MAR 09	1100	23	3.5	--	75	6.9	--
APR 06	1045	2.8	--	--	80	6.9	--
MAY 16	1110	9.2	11.0	--	55	7.0	--
22	1620	2.2	19.0	27.0	80	7.6	8.9
JUN 23	1110	0.52	19.0	--	125	7.6	--
JUL 11	1530	0.27	24.0	--	170	7.5	--
21	0855	0.16	22.0	--	22	7.6	--
AUG 03	1110	0.14	23.0	--	240	7.5	8.5
SEP 06	1720	0.26	23.0	30.0	220	7.7	8.7
03202255 STILL RUN AT ITMANN, WV (LAT 37 34 51 LONG 81 25 42)							
NOV 02	1500	4.9	15.0	--	132	--	--
DEC 12	1215	11.3	3.0	--	140	--	--
JAN 25	1615	51	2.5	--	60	--	--
25	1645	47	2.5	--	54	--	--
26	1330	195	2.5	--	50	--	--
FEB 27	1255	9.1	2.5	-0.5	150	7.0	--
MAR 10	1240	60	4.0	--	50	6.5	--
APR 15	1600	5.7	17.0	--	125	--	--
26	1555	184	9.0	5.5	51	6.9	8.5
MAY 09	1310	70	14.5	26.5	--	--	--
15	1530	20	11.0	--	90	7.1	--
22	1400	4.9	18.5	29.0	170	7.5	9.2
31	1235	3.5	--	--	--	--	--
JUN 19	1305	1.2	23.5	30.0	344	7.6	--
22	1415	1.3	23.0	--	210	7.4	--
JUL 12	1410	1.1	24.0	26.0	460	7.7	--
20	1145	0.77	24.0	--	405	7.9	8.4
AUG 03	1510	0.47	28.5	31.5	520	7.9	7.7
SEP 06	1520	0.40	24.0	30.0	790	7.9	8.5
03202310 BEARHOLE FORK AT PINEVILLE, WV (LAT 37 35 16 LONG 81 31 12)							
NOV 04	0935	5.6	15.0	--	66	--	--
DEC 12	1230	10	1.0	--	44	--	--
JAN 25	1335	56	3.0	--	91	--	--
25	1500	59	3.0	--	82	--	--
26	1615	141	3.5	--	45	--	--
FEB 28	0920	7.4	0.0	0.0	73	7.1	--
MAR 09	1610	49	6.0	--	60	7.3	--
APR 05	1415	4.8	--	--	67	7.2	--
26	1020	85	9.0	8.0	49	6.9	8.0
26	1730	223	8.5	5.0	41	--	8.8
MAY 15	1310	18	11.0	5.0	<50	7.1	--
22	2000	2.9	17.0	20.0	69	7.4	9.1
JUN 22	1215	1.3	20.0	--	105	7.5	--
JUL 12	0950	0.71	16.5	21.5	170	7.2	--
20	1410	0.38	27.0	--	110	8.3	--
AUG 03	1700	0.28	26.0	28.0	160	7.5	8.1
SEP 07	1030	0.36	18.5	21.0	150	7.2	9.4

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

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WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	DISSOLVED OXYGEN (MG/L)
GUYANDOTTE RIVER BASIN--Continued							
03202400 GUYANDOTTE RIVER NEAR BAILEYSVILLE, WV (LAT 37 36 15 LONG 81 38 44)							
NOV 08	1000	2940	13.0	15.5	--	--	--
09	0930	1840	--	--	--	--	--
JAN 26	1140	13200	7.5	-6.0	--	--	--
26	1140	12400	7.5	-6.0	--	--	--
FEB 10	1130	299	0.0	5.0	--	--	--
JUL 24	1150	86	28.5	30.0	800	--	--
AUG 04	0940	123	25.0	27.5	650	7.5	6.4
03202480 BRIER CREEK AT FANROCK, WV (LAT 37 33 50 LONG 81 39 16)							
OCT 20	1435	6.0	10.5	--	--	--	--
03202490 INDIAN CREEK AT FANROCK, WV (LAT 37 34 00 LONG 81 39 10)							
NOV 09	1130	174	15.0	20.0	--	--	--
JAN 25	1400	210	2.0	7.5	--	--	--
FEB 09	1835	26	0.0	-2.5	--	--	--
APR 25	1530	20	13.0	11.5	90	7.7	6.7
MAY 23	1445	20	16.5	25.0	102	7.4	6.7
AUG 02	1630	4.9	24.5	28.0	240	8.2	8.2
SEP 07	1655	1.9	22.5	28.0	>800	7.5	8.0
03202695 MILAM FORK AT MCGRAWS, WV (LAT 37 40 48 LONG 81 28 27)							
NOV 04	1200	5.0	15.0	--	158	--	--
DEC 12	1430	11.0	3.0	--	130	--	--
JAN 26	1300	417	--	--	44	--	--
26	1740	198	3.0	6.0	44	--	--
FEB 27	1740	7.9	3.0	0.0	105	7.3	--
MAR 10	0950	81	3.0	--	50	--	--
APR 06	0915	4.3	--	--	112	7.5	--
26	1225	81	8.5	--	61	6.8	8.2
MAY 16	0930	17	11.0	--	90	7.0	--
23	1930	6.5	16.0	22.0	180	7.5	7.2
JUN 23	0915	1.1	18.5	--	210	7.5	--
JUL 13	0840	0.43	17.0	17.0	600	7.1	--
20	1500	0.50	--	--	40	7.8	--
AUG 03	0900	0.20	21.0	22.0	590	7.6	7.3
SEP 07	0905	0.37	18.0	18.0	540	7.5	7.5
03202750 CLEAR FORK AT CLEAR FORK, WV (LAT 37 37 26 LONG 81 42 13)							
NOV 08	1400	1240	13.0	16.0	--	--	--
FEB 09	1620	97	0.0	2.5	--	--	--
28	1110	140	2.0	--	260	6.6	--
MAY 21	1415	244	9.0	23.0	330	6.7	11.3
APR 19	1400	60	15.0	21.5	480	8.1	7.2
JUL 10	1330	17	24.5	34.0	610	8.3	8.0
AUG 02	1310	18	24.5	32.0	>800	8.8	8.3
SEP 07	1410	16	24.0	32.0	700	8.0	8.5
03203600 GUYANDOTTE RIVER AT LOGAN, WV (LAT 37 50 34 LONG 81 58 50)							
NOV 02	0955	707	12.0	15.0	--	--	--
MAR 22	1045	1660	10.0	15.0	340	7.2	--
APR 24	1155	511	15.0	24.0	--	--	--
JUN 05	1225	623	23.0	27.0	500	--	--
JUL 13	1100	246	25.0	25.0	530	--	--
AUG 16	1315	278	28.0	31.0	430	--	--
SEP 18	1250	158	26.5	32.0	625	--	--
03204000 GUYANDOTTE RIVER AT BRANCHLAND, WV (LAT 38 13 15 LONG 82 12 10)							
FEB 15	1420	2160	1.0	6.0	200	--	--
23	1320	1530	--	--	--	--	--
APR 19	1100	790	15.0	--	--	--	--
MAY 25	1355	4410	18.0	26.0	--	--	--
JUL 24	1400	280	28.0	32.0	--	--	--
SEP 05	1230	435	23.0	21.5	--	--	--
03204500 MUD RIVER NEAR MILTON, WV (LAT 38 23 15 LONG 82 06 46)							
FEB 21	1530	231	0.0	-2.0	--	--	--
MAR 27	1420	1500	8.0	--	--	--	--
JUN 07	1430	66	20.0	25.0	112	--	6.0
JUL 19	1135	18	22.0	23.0	--	--	--
SEP 05	1020	51	21.0	18.0	--	--	--

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	DISSOLVED OXYGEN (MG/L)
TWELVEPOLE CREEK BASIN							
03206600 EAST FORK TWELVEPOLE CREEK NEAR DUNLOW, WV (LAT 38 01 02 LONG 82 17 46)							
OCT 31	1305	8.7	12.0	19.0	--	--	--
JAN 05	0900	17	--	-3.0	--	--	--
MAR 23	1120	61	8.0	--	--	--	--
MAY 02	1230	67	10.5	--	--	--	--
23	1400	26	17.0	20.0	--	--	--
JUL 20	1245	1.2	26.0	27.0	--	--	--
SEP 06	0900	6.5	19.0	17.0	80	--	--
03206790 EAST FORK TWELVEPOLE CREEK BELOW EAST LYNN DAM (LAT 38 08 52 LONG 82 23 00)							
FEB 17	1155	191	2.0	1.5	--	--	--
MAR 21	1420	200	8.0	--	--	--	--
APR 17	1405	142	--	29.0	--	--	--
MAY 25	1115	1100	16.0	24.0	--	--	--
JUN 06	1255	41	20.5	29.0	75	--	6.3
JUL 24	1135	12	23.0	25.0	--	--	--
SEP 05	1435	35	19.0	26.0	--	--	--
03207020 TWELVEPOLE CREEK BELOW WAYNE, WV (LAT 38 14 56 LONG 82 26 06)							
FEB 17	1430	381	--	--	--	--	--
APR 18	1130	80	15.0	18.0	--	--	--
MAY 24	1125	1960	17.0	20.0	--	--	--
JUL 25	1210	54	24.0	24.0	--	--	--
SEP 06	1315	65	23.0	28.0	80	--	--
03207057 BEECH FORK BELOW BEECH FORK DAM, WV (LAT 38 18 28 LONG 82 25 28)							
NOV 04	0800	5.3	16.0	18.0	--	--	--
JAN 06	0930	11	2.0	3.0	--	--	--
MAR 21	1135	14	10.0	--	--	--	--
APR 18	1015	10	14.0	14.0	--	--	--
MAY 23	1050	11	16.0	19.0	--	--	--
JUL 25	1430	9.8	23.0	24.0	--	--	--
SEP 06	1140	6.7	22.0	25.5	175	--	--
BIG SANDY RIVER BASIN							
03213000 TUG FORK AT LITWAR, WV (LAT 37 29 05 LONG 81 50 40)							
NOV 01	1130	293	12.0	18.5	--	--	--
MAR 21	1400	1040	12.0	18.0	550	8.0	--
APR 25	0820	340	16.0	14.0	--	--	--
JUN 06	1210	337	22.0	27.0	675	--	--
JUL 11	1150	340	24.0	23.0	800	--	--
AUG 15	1145	462	--	27.0	450	--	--
SEP 19	0945	118	24.5	19.0	1100	--	--
03213500 PANTHER CREEK NEAR PANTHER, WV (LAT 37 26 45 LONG 81 52 15)							
NOV 01	1045	23	10.0	18.0	--	--	--
JAN 10	1105	93	1.0	-17.0	--	--	--
FEB 23	1115	26	--	--	--	--	--
MAR 21	1515	48	10.0	18.0	185	7.7	--
APR 25	1005	11	9.0	17.0	--	--	--
MAY 10	1120	130	12.0	17.0	--	--	--
10	1145	129	12.0	17.0	--	--	--
JUN 06	1055	8.4	18.0	21.0	360	--	--
JUL 11	1045	21	20.0	20.5	195	--	--
AUG 15	1010	42	19.5	22.0	115	--	--
SEP 19	1050	4.0	22.0	25.0	470	--	--
03213700 TUG FORK AT WILLIAMSON, WV (LAT 37 40 21 LONG 82 16 50)							
MAR 21	1330	1720	12.0	18.0	480	7.5	--
APR 26	--	5050	--	--	--	--	--
JUN 07	1000	509	22.0	22.5	700	--	--
JUL 12	1015	452	23.0	21.0	700	--	--
AUG 16	--	739	--	--	--	--	--
SEP 21	1025	164	27.0	26.0	850	--	--
03214000 TUG FORK NEAR KERMIT, WV (LAT 37 49 05 LONG 82 23 20)							
JAN 26	1540	25300	--	--	--	--	--
26	1720	27900	--	--	--	--	--
27	0945	25600	--	--	--	--	--
FEB 03	0955	1660	--	--	--	--	--
MAR 23	0955	2070	11.0	13.0	440	7.2	--
APR 27	1500	23200	--	--	--	--	--
JUN 07	1240	694	23.0	28.0	550	--	--
JUL 12	1115	475	24.0	22.0	675	--	--
AUG 17	0930	668	27.0	26.0	510	--	--
SEP 21	1145	186	27.0	30.0	910	--	--

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

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WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	DISSOLVED OXYGEN (MG/L)
BIG SANDY RIVER BASIN--Continued							
03214900 TUG FORK AT GLEN HAYES, WV (LAT 38 00 20 LONG 82 30 53)							
NOV 03	1000	853	14.0	16.0	--	--	--
FEB 22	1040	2200	--	-4.0	--	--	--
MAR 22	1800	2760	12.0	17.0	210	6.9	--
APR 27	0920	16200	--	--	--	--	--
JUN 08	0855	887	22.5	20.0	520	--	--
JUL 13	0820	499	24.0	19.5	730	--	--
AUG 17	1205	880	27.0	28.0	490	--	--
SEP 22	0810	250	25.0	20.0	860	--	--

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 stream-flow 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 a 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 at low-flow partial-record stations during water year 1978

					Measurements	
Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Date	Discharge (ft ³ /s)
Monongahela River basin						
03070200	Salt Lick Creek at Rowlesburg, WV	Lat 39°21'00", long 79°39'50", Preston County, Hydrologic Unit 05020004, at timber railroad and highway bridge at Rowlesburg, and 0.2 mile upstream from mouth.	34.6	1942-69, 1973, 1975-76, 1978	10-20-77 12-12-77 8-28-78	72 50 3.4
03182000	Knapp Creek at Marlinton, WV	Lat 38°12'40", long 80°04'30" Pocahontas County, Hydrologic Unit 05050003, on right bank 0.2 mile downstream from Spice Run, and 1.0 mile southeast of Marlinton.	108	1945-58†, 1959, 1962, 1972, 1974, 1976, 1978	8-24-78	15
03189800	Big Clear Creek near Rupert, WV	Lat 37°59'00", long 18°40'10", Greenbrier County, at post office at Kessler, 2.0 miles (3.2 km) northeast of Rupert, and at mile 3.0 (4.8 km).	47.9	1947-49, 1951-53, 1955, 1966, 1968, 1972, 1974, 1978	9-29-78	3.4
03189900	Little Sewell Creek at East Rainelle, WV	Lat 37°57'55", long 80°45'15" Greenbrier County, 0.7 mile (1.1 km) downstream from Boggs Creek, 0.7 mile (1.1 km) upstream from Sewell Creek, and 0.7 mile (1.1 km) southeast of of East Rainelle.	16.1	1949-53 1955, 1957, 1970, 1974, 1978	9-29-78	.18

† Operated as a continuous-record gaging station.

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 during water year 1978

					Annual maximum		
Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Date	Gage height (feet)	Dis-charge (ft ³ /s)
Potomac River basin							
01606000	North Fork South Branch Potomac River at Cabins, WV	Lat 38°59'05", long 79°14'10" Grant County, Hydrologic Unit 02070001, on left bank 380 feet upstream from highway bridge at Cabins, 1.8 miles downstream from Jordan Run, 6.0 miles west of Petersburg, and at mile 3.0.	314	1940-61‡, 1962-78a	1-26-78	11.16	11,800
Monongahela River basin							
03057500	Skin Creek near Brownsville, WV	Lat 38°58'30", long 80°26'40" Lewis County, Hydrologic Unit 05020002, 2.6 miles southeast of Brownsville, 4.7 miles south-east of Weston, and at mile 3.0.	25.7	1946-60‡, 1961-78a	1-26-78	7.64	1,700
Guyandotte River basin							
03203000	Guyandotte River at Man, WV	Lat 37°44'30", long 81°52'45", Logan County, Hydrologic Unit 05070101, on right bank at down-stream side of highway bridge at Man, 500 feet upstream from Buffalo Creek, and 0.7 mile down-stream from Huff Creek, and at mile 93.4.	762	1928-62‡, 1963-78a	1-26-78	16.65	23,500

‡ Not detected.

a Recorder chart on file in district office.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES
DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1978

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
Ohio River basin						
Ohio River	Mississippi	Lat 39°53'42", long 80°48'10", Marshall County, Hydrologic Unit 05030106 at River Mile 106.7, 3.1 miles west-south-west of Moundsville, WV.	a25,300	--	9-12-78	12,300
					9-13-78	13,800
					9-13-78	14,800
					9-14-78	12,100
					9-14-78	15,500
					9-15-78	15,500
					9-15-78	16,100
	9-16-78	12,300				
Monongahela River basin						
Owen Davy Fork	Buffalo Creek	Lat 39°31'30", long 80°28'14", Marion County, Hydrologic Unit 05020003, at bridge, on Route 7 and 1.6 miles west of Curtisville.	--	--	11-3-77	0.23
Owen Davy Fork	Buffalo Creek	Lat 39°31'00", long 80°27'26", Marion County, Hydrologic Unit 05020003, at bridge on Route 7/2, and 0.9 mile west of Curtisville.	--	--	11-3-77	0.18
Brush Run	Buffalo Creek	Lat 39°30'09", long 80°24'28", Marion County, Hydrologic Unit 05020003, 1.1 miles southeast of Logansport.	--	--	11-3-77	0.03
Brush Run	Buffalo Creek	Lat 39°30'57", long 80°24'13", Marion County, Hydrologic Unit 05020003, at bridge on Route 36, and 0.6 miles southeast of Logansport.	--	--	11-3-77	0.08
Rex Run	Dents Run	Lat 39°34'09", long 80°23'37", Marion County, Hydrologic Unit 05020003, on Route 5/3, 1.0 mile upstream from mouth, and 3.3 miles northwest of Mannington.	--	--	11-3-77	0.02
Rex Run	Dents Run	Lat 39°33'24", long 80°24'50", Marion County, Hydrologic Unit 05020003, 100 feet upstream from bridge on Route 5, and 3.1 miles northwest of Mannington.	--	--	11-3-77	0.23
Mahan Run	Buffalo Creek	Lat 39°33'25", long 80°19'26", Marion County, Hydrologic Unit 05020003 at bridge on Route 250/8, and 2.1 miles northeast of Mannington.	--	--	11-3-77	0.09
Mahan Run	Buffalo Creek	Lat 39°32'22", long 80°19'42", Marion County, Hydrologic Unit 05020003, at private bridge 1.7 miles upstream from mouth and 1 mile northeast of Mannington.	--	--	11-3-77	0.16
East Run	Buffalo Creek	Lat 39°29'54", long 80°18'10", Marion County, Hydrologic Unit 05020003, and 1.25 miles north of Four States.	--	--	11-3-77	0.12
East Run	Buffalo Creek	Lat 39°30'17", long 80°17'31", Marion County, Hydrologic Unit 05020003, 1.2 miles southeast of Rachel.	--	--	11-3-77	0.33
Little Laurel Run	Buffalo Creek	Lat 39°31'14", long 80°15'08", Marion County, Hydrologic Unit 05020003, 0.3 mile north of Farmington, and 0.7 mile upstream from mouth.	--	--	11-8-77	0.18

a Approximately.

Water-quality partial-record stations are particular sites where chemical-quality, biological and/or sediment data are collected systematically over a period of years for use in hydrologic analyses. The data are collected usually less than quarterly.

MONONGAHELA RIVER BASIN

03061410 LAUREL RUN AT CURTISVILLE

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT
OCT , 1977												
28...	1330	.27	125	7.2	13.6	9.0	46	11	13	3.2	8.4	28
JUL , 1978												
05...	1000	3.5	50	6.6	16.5	9.8	30	17	8.1	2.4	3.0	17

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT , 1977											
28...	.5	2.0	42	0	34	4.2	23	8.5	.0	7.3	84
JUL , 1978											
05...	.2	1.6	--	--	13	--	17	2.5	--	8.1	64

DATE	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	CADMIUM DIS- SOLVED (UG/L AS CU)	CHRO- MIUM, HEXA- VALENT, DIS- SOLVED (UG/L AS CR)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT , 1977											
28...	86	.11	.06	30	0	0	80	5	40	<.5	0
JUL , 1978											
05...	51	.09	.60	50	<10	--	60	<100	40	.5	10

03061435 HIBBS RUN NEAR MANNINGTON

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT
OCT , 1977												
28...	1800	.37	95	7.4	13.4	9.0	40	9	11	3.0	3.0	14
JUL , 1978												
05...	1055	4.6	120	6.8	17.0	9.6	32	9	8.8	2.4	2.3	13

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT , 1977											
28...	.2	1.5	38	0	31	2.4	15	2.1	.0	6.3	63
JUL , 1978											
05...	.2	1.5	--	--	23	--	18	1.7	--	7.2	62

DATE	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	CADMIUM DIS- SOLVED (UG/L AS CU)	CHRO- MIUM, HEXA- VALENT, DIS- SOLVED (UG/L AS CR)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT , 1977											
28...	65	.09	.06	30	0	0	40	5	40	<.5	0
JUL , 1978											
05...	56	.08	.77	50	10	--	70	<100	30	.5	10

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

MONONGAHELA RIVER BASIN--Continued

03061495 DAVY RUN AT KATY

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCTI- VANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT
OCT . 1977												
28...	1200	.71	604	8.2	13.0	10.3	240	26	66	18	40	26
JUL . 1978												
05...	1300	4.6	400	7.8	16.5	10.0	190	58	54	13	22	20

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT . 1977											
28...	1.1	2.5	260	0	210	2.6	110	4.3	.2	7.4	361
JUL . 1978											
05...	.7	2.3	--	--	130	--	83	1.8	--	8.5	299

DATE	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	CADMIUM, DIS- SOLVED (UG/L AS CU)	CHRO- MIUM, HEXA- VALENT, DIS- SOLVED (UG/L AS CR)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY, DIS- SOLVED (UG/L AS HG)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT . 1977											
28...	377	.45	.70	40	0	0	600	3	10	<.5	10
JUL . 1978											
05...	263	.41	3.71	40	10	--	30	<100	20	.5	10

03061500 BUFFALO CREEK AT BARRACKVILLE

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCTI- VANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT
OCT . 1977												
28...	0950	.46	710	7.4	13.0	9.8	160	70	46	11	80	52
JUL . 1978												
05...	1330	415	375	7.2	14.0	9.4	110	71	32	7.9	30	36

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT . 1977											
28...	2.0	2.8	110	0	90	7.0	210	24	.2	4.7	441
JUL . 1978											
05...	1.2	2.2	--	--	41	--	110	8.1	--	7.8	252

DATE	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	CADMIUM, DIS- SOLVED (UG/L AS CU)	CHRO- MIUM, HEXA- VALENT, DIS- SOLVED (UG/L AS CR)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY, DIS- SOLVED (UG/L AS HG)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT . 1977											
28...	433	.60	55	40	0	0	330	0	100	<.5	10
JUL . 1978											
05...	223	.34	282	70	<10	--	90	<100	180	.5	10

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

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MONONGAHELA RIVER BASIN--Continued

03062213 STEWART RUN AT CROWN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)
JUL , 1978 05...	1500	1.7	440	7.4	23.0	9.8	150	36	42	10

DATE	TIME	SODIUM, DIS- SOLVED (MG/L AS Na)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINEITY (MG/L AS CaCO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS Cl)	SILICA, DIS- SOLVED (MG/L SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
JUL , 1978 05...	29	30	1.0	2.6	110	81	4.3	8.5	270	244	

DATE	TIME	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	CAUDIUM DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	ZINC, DIS- SOLVED (UG/L AS ZN)
JUL , 1978 05...		.37	1.2	100	<10	100	<100	80	.5	10

03062215 INDIAN CREEK AT CROWN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, DIS- SOLVED (MG/L AS Na)	SODIUM PERCENT
OCT , 1977 27...	1100	4.0	2300	6.7	13.8	7.2	720	690	210	48	370	53
JUL , 1978 05...	1430	12	860	7.3	21.5	9.6	220	140	64	14	80	44

DATE	TIME	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINEITY (MG/L AS CaCO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS Cl)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT , 1977 27...	6.0	4.7	42			34	13	1400	18	.4	7.7	2250
JUL , 1978 05...	2.4	2.9	--	--		77	--	350	6.9	--	8.0	574

DATE	TIME	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	CAUDIUM DIS- SOLVED (UG/L AS CU)	CHRO- MIUM, HEXA- VALENT, DIS- SOLVED (UG/L AS CR)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT , 1977 27...	2100	3.06	24	20	0	0	16000	0	1400	<.5	260	
JUL , 1978 05...	573	.78	18	110	10	--	50	<100	180	.5	10	

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

MONONGAHELA RIVER BASIN

Samples are collected at sites other than gaging stations and partial-record stations to give better areal coverage in a river basin. Such sites are referred to as miscellaneous sites.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	
385326079590400 - ROARING CR TRIB 6-12 NR COALTON WV (LAT 38 53 26 LONG 079 59 04)												
FEB , 1978	23...	1600	.09	2100	2.4	12.5	7.0	320	970	80	30	5.9
385346079581400 - ROARING CR TRIB 6-2 AT COALTON WV (LAT 38 53 48 LONG 079 58 14)												
FEB , 1978	23...	1645	.11	1300	2.9	3.0	7.0	300	180	64	33	.9
385517079583300 - MINE DR TO GRASSY RUN TRIB NR NORTON WV (GT 6-1) (LAT 38 55 17 LONG 079 58 33)												
FEB , 1978	24...	0935	1.0	1700	2.7	10.5	6.0	440	540	120	34	2.8
385558079574800 - GRASSY RUN TRIB AT NORTON WV (GT 1-9) (LAT 38 55 58 LONG 079 57 48)												
FEB , 1978	24...	0900	.40	1800	2.6	7.0	5.0	500	450	130	43	1.7
03050800 - ROARING CREEK AT NORTON W VA (LAT 38 56 05 LONG 079 57 00)												
FEB , 1978	23...	1400	21	280	3.4	1.0	12.0	70	57	16	7.3	2.2
385606079544400 - TYGART VALLEY R AT AGGREGATE BL ELKINS WV (LAT 38 56 06 LONG 079 54 44)												
FEB , 1978	24...	1015	--	90	6.2	1.0	9.0	38	6.2	12	1.9	6.2
03050900 - GRASSY RUN AT NORTON W VA (LAT 38 56 10 LONG 079 57 40)												
FEB , 1978	23...	1145	6.1	1500	2.7	2.5	11.0	350	370	91	29	4.8
03052500 - SAND RUN NEAR BUCKHANNON, W. VA. (LAT 38 57 50 LONG 080 09 10)												
FEB , 1978	23...	0930	9.3	70	8.3	1.0	14.2	39	2.7	8.3	4.4	4.5
03052400 - BUCKHANNON R AT TENNERTON WV (LAT 38 58 07 LONG 080 13 49)												
FEB , 1978	23...	1130	--	65	7.4	2.0	13.0	--	--	--	--	--
03057500 - SKIN CREEK NEAR BROWNSVILLE, W. VA. (LAT 38 58 30 LONG 080 26 40)												
FEB , 1978	24...	0900	12	150	6.4	1.0	12.8	75	2.8	20	6.1	5.1
03058000 - WEST FORK RIVER AT BROWNSVILLE, W. VA. (LAT 39 00 10 LONG 080 28 35)												
FEB , 1978	24...	1015	44	100	6.0	1.0	13.9	51	4.1	14	3.8	5.3
390019000123500 - BUCKHANNON R AT SEC RT 4 BR NR BUCKHANNON WV (LAT 39 00 19 LONG 080 12 35)												
FEB , 1978	23...	--	--	100	5.9	1.0	11.6	32	53	7.8	3.0	5.0

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

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MONONGAHELA RIVER BASIN--Continued

DATE	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM DIS- SOLVED (MG/L AS K)	ALKA- LITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	SILICA, DIS- SOLVED (MG/L AS SiO2)	ALUM- INUM, DIS- SOLVED (MG/L AS AL)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	ZINC, DIS- SOLVED (UG/L AS ZN)
385326079590400 - ROARING CR TRIB 6-12 NR COALTON WV (LAT 38 53 26 LONG 079 59 04)											
FEB , 1978 23...	4	.1	.4	--	1300	39	38000	400	170000	3100	1000
385348079581400 - ROARING CR TRIB 6-2 AT COALTON WV (LAT 38 53 48 LONG 079 58 14)											
FEB , 1978 23...	1	.0	1.3	--	510	32	16000	70	10000	2800	580
385517079583300 - MINE DP TO GRASSY RUN TRIB NR NORTON WV (GT 6-1) (LAT 38 55 17 LONG 079 58 33)											
FEB , 1978 24...	1	.1	.6	--	820	39	28000	240	91000	3200	1000
385558079574800 - GRASSY RUN TRIB AT NORTON WV (GT 1-9) (LAT 38 55 56 LONG 079 57 48)											
FEB , 1978 24...	1	.0	.5	--	820	3.6	26000	270	61000	3000	960
03050800 - ROARING CREEK AT NORTON W VA (LAT 38 56 05 LONG 079 57 00)											
FEB , 1978 23...	6	.1	.9	--	110	11	3800	20	3300	1500	210
385606079544400 - TYGART VALLEY R AT AGGREGATE BL ELKINS WV (LAT 38 56 06 LONG 079 54 44)											
FEB , 1978 24...	26	.4	1.2	8	18	6.4	800	10	200	50	40
03050900 - GRASSY RUN AT NORTON W VA (LAT 38 56 10 LONG 079 57 40)											
FEB , 1978 23...	3	.1	1.1	--	710	32	22000	250	66000	3200	850
03052500 - SAND RUN NEAR BUCKHANNON, W. VA. (LAT 38 57 50 LONG 080 09 10)											
FEB , 1978 23...	19	.3	1.6	2	30	2.1	<300	10	200	560	80
03052400 - BUCKHANNON R AT TENNERTON WV (LAT 38 58 07 LONG 080 13 49)											
FEB , 1978 23...	--	--	--	--	--	--	--	--	--	--	--
03057500 - SKIN CREEK NEAR BROWNSVILLE, W. VA. (LAT 38 58 30 LONG 080 26 40)											
FEB , 1978 24...	13	.3	1.4	24	40	6.4	400	--	100	150	60
03058000 - WEST FORK RIVER AT BROWNSVILLE, W. VA. (LAT 39 00 10 LONG 080 28 35)											
FEB , 1978 24...	18	.3	1.2	6	25	6.4	330	--	<100	100	--
390019080123500 - BUCKHANNON R AT SEC RT 4 BR NR BUCKHANNON WV (LAT 39 00 19 LONG 080 12 35)											
FEB , 1978 23...	25	.4	1.1	1	32	4.3	500	--	200	540	100

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

MONONGAHELA RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CAC03)	ACIDITY (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
390046000113600 - BUCKHANNON R AT POST MILL WV (LAT 39 00 46 LONG 080 11 36)											
FEB , 1978 23...	--	--	--	6.3	2.0	13.3	--	--	--	--	--
03053500 - BUCKHANNON RIVER AT HALL, W. VA. (LAT 39 03 05 LONG 080 06 50)											
FEB , 1978 23...	1430	180	100	6.5	1.0	13.3	43	6.4	11	3.7	6.1
390407080061500 - BUCKHANNON R AT RANBOON WV (LAT 39 04 07 LONG 080 06 15)											
FEB , 1978 23...	--	--	135	6.2	1.0	13.4	--	--	--	--	--
03054300 - BUCKHANNON R NR TYGART JUNCTION NR CARROLTON WV (LAT 39 05 24 LONG 080 05 12)											
FEB , 1978 23...	1520	--	100	5.7	1.0	13.1	45	4.2	12	3.7	5.7
03058500 - W. F. RIVER AT BUTCHERVILLE, W. VA. (LAT 39 05 25 LONG 080 28 05)											
FEB , 1978 24...	1200	132	165	6.4	1.0	14.4	72	3.6	20	5.3	7.7
03054500 - TYGART VALLEY RIVER AT PHILIPPI, W. VA. (LAT 39 09 00 LONG 080 02 25)											
FEB , 1978 24...	1145	475	105	5.6	.0	11.0	49	4.1	13	3.9	4.4
390952080013000 - FORDS RN AT PHILIPPI WV (LAT 39 09 52 LONG 080 01 30)											
FEB , 1978 24...	1230	1.0	1950	3.0	2.5	.6	350	1000	84	33	14
391034080014600 - TYGART VALLEY R BL FORDS RN AT PHILIPPI WV (LAT 39 10 34 LONG 080 01 46)											
FEB , 1978 24...	1315	476	150	4.8	.5	11.0	53	28	14	4.4	4.9
03056100 - TYGART VALLEY R ABV THREEFORK CR AT GRAFTON WV (LAT 39 20 15 LONG 080 01 24)											
FEB , 1978 24...	1030	700	125	5.6	.5	11.6	52	8.8	14	4.1	3.8
03056200 - THREEFORK CREEK AT THORNTON, W. VA. (LAT 39 20 40 LONG 079 56 40)											
FEB , 1978 24...	0945	10	310	4.4	.5	12.4	120	53	31	10	5.9
03070000 - CHEAT RIVER AT ROWLESBURG, W. VA. (LAT 39 20 50 LONG 079 40 00)											
FEB , 1978 23...	1300	441	40	7.0	.5	12.2	30	1.6	8.7	1.9	2.2
03070200 - SALTICK CREEK AT ROWLESBURG, W VA (LAT 39 21 00 LONG 079 39 50)											
FEB , 1978 23...	1245	20	60	5.8	.5	12.0	33	1.2	9.2	2.5	3.4

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

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MONONGAHELA RIVER BASIN--Continued

DATE	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVE) (MG/L AS K)	ALKA- LINIT (MG/L AS CA CO3)	SULFATE DIS- SOLVE) (MG/L AS SO4)	SILICA, DIS- SOLVE) (MG/L AS SiO2)	ALUM- INUM, DIS- SOLVE) (UG/L AS AL)	COPPER, DIS- SOLVE) (UG/L AS CU)	IRON, DIS- SOLVE) (UG/L AS FE)	MANGA- NESE, DIS- SOLVE) (UG/L AS MN)	ZINC, DIS- SOLVE) (UG/L AS ZN)
390046080113600 - BUCKHANNON R AT POST MILL WV (LAT 39 00 46 LONG 080 11 36)											
FEB , 1978 23...	--	--	--	--	--	--	--	--	--	--	--
03053500 - BUCKHANNON RIVER AT HALL, W. VA. (LAT 39 03 05 LONG 080 06 50)											
FEB , 1978 23...	23	.4	1.1	5	32	2.1	300	--	700	600	80
390407080061500 - BUCKHANNON R AT RANGSOON WV (LAT 39 04 07 LONG 080 06 15)											
FEB , 1978 23...	--	--	--	--	--	--	--	--	--	--	--
03054300 - BUCKHANNON R NR TYGART JUNCTION NR CARROLTON WV (LAT 39 05 24 LONG 080 05 12)											
FEB , 1978 23...	21	.4	1.1	2	38	2.1	700	--	400	440	70
03058500 - W. F. RIVER AT BUTCHERVILLE, W. VA. (LAT 39 05 25 LONG 080 28 05)											
FEB , 1978 24...	19	.4	1.4	10	26	2.1	<300	--	200	420	50
03054500 - TYGART VALLEY RIVER AT PHILIPPI, W. VA. (LAT 39 09 00 LONG 080 02 25)											
FEB , 1978 24...	16	.3	1.2	2	22	4.3	400	20	300	510	100
390952080013000 - FORDS RN AT PHILIPPI WV (LAT 39 09 52 LONG 080 01 30)											
FEB , 1978 24...	8	.3	2.0	--	1300	41	64000	70	269000	6900	660
391034080014600 - TYGART VALLEY R BL FORDS RN AT PHILIPPI WV (LAT 39 10 34 LONG 080 01 46)											
FEB , 1978 24...	16	.3	1.1	3	60	4.3	1700	10	3900	640	90
03056100 - TYGART VALLEY R ABV THREEFORK CR AT GRAFTON WV (LAT 39 20 15 LONG 080 01 24)											
FEB , 1978 24...	13	.2	1.2	1	47	8.6	800	--	1100	520	100
03056200 - THREEFORK CREEK AT THORNTON, W. VA. (LAT 39 20 40 LONG 079 56 40)											
FEB , 1978 24...	10	.2	1.6	--	150	8.6	4400	30	800	1500	240
03070000 - CHEAT RIVER AT ROWLESBURG, W. VA. (LAT 39 20 50 LONG 079 40 00)											
FEB , 1978 23...	13	.2	.9	5	25	6.4	300	--	<100	100	70
03070200 - SALTICK CREEK AT ROWLESBURG, W. VA. (LAT 39 21 00 LONG 079 39 50)											
FEB , 1978 23...	18	.3	1.2	13	19	2.1	400	20	<100	--	150

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

MONONGAHELA RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
392941079384400 - CHEAT R AT ALBRIGHT WV (LAT 39 29 41 LONG 079 38 44)											
FEB , 1978 23...	1410	475	80	6.5	.5	11.6	41	--	12	2.7	2.2
393001080110500 - MOODY RUN NR BARRACAVILLE WV (LAT 39 30 01 LONG 080 11 05)											
OCT , 1977 28...	1115	1.0	3600	7.9	13.5	11.0	850	740	260	49	640
393017080173100 - EAST RUN NR FARMINGTON WV (LAT 39 30 17 LONG 080 17 31)											
OCT , 1977 28...	1600	.38	490	7.7	13.0	--	200	29	59	13	35
393018080102300 - BETHLEHEM NO 1 (LAT 39 30 18 LONG 080 10 23)											
OCT , 1977 31...	1055	.44	5600	7.4	17.0	8.0	1700	1500	480	110	900
FEB , 1978 24...	1520	--	4500	7.1	1.0	8.0	1600	--	410	130	520
393026080110500 - BETHLEHEM NO 3 (LAT 39 30 26 LONG 080 11 05)											
OCT , 1977 31...	1115	.05	3600	8.1	11.0	10.0	830	710	250	50	560
393037080161400 - UNNAMED TRIB TO BUFFALO CR NR FARMINGTON WV (LAT 39 30 37 LONG 080 16 14)											
OCT , 1977 28...	1530	.38	680	7.8	13.0	--	210	0	61	15	68
393039080234800 - JOES RUN SHAFT (LAT 39 30 39 LONG 080 23 48)											
OCT , 1977 28...	1430	.06	5400	8.4	15.6	9.0	270	4	67	24	1300
393047080132400 - DUNKARD MILL RUN AT KATY WV (LAT 39 30 47 LONG 080 13 24)											
OCT , 1977 28...	1245	3.3	440	8.3	13.0	11.2	210	39	60	15	46
393050080153300 - LAUREL RUN NR FARMINGTON WV (LAT 39 30 50 LONG 080 15 33)											
OCT , 1977 28...	1500	.66	700	8.0	13.0	--	230	0	63	18	68
FEB , 1978 24...	1430	--	750	7.8	1.0	9.8	250	--	68	19	77
JUL 05...	1225	3.9	420	7.5	16.5	9.5	170	23	48	13	31
393051080210300 - EASTERN NO 2 (LAT 39 30 51 LONG 080 21 03)											
OCT , 1977 29...	1300	.17	13000	6.5	12.0	.0	1400	1000	360	120	2500
393052080150200 - LITTLE LAUREL RUN AT FARMINGTON WV (LAT 39 30 52 LONG 080 15 02)											
OCT , 1977 29...	0905	.43	550	8.1	9.0	10.0	230	40	65	16	38

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

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MONONGAHELA RIVER BASIN--Continued

DATE	PHTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICARB- ONATE (MG/L AS HCO3)	CARB- ONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CAO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
392941079384400 - CHEAT R AT ALBRIGHT WV (LAT 39 29 41 LONG 079 38 44)										
FEB , 1978 23...	.9	--	--	0	--	35	--	--	4.3	--
393001080110500 - MOODY RUN NR BARRACKVILLE WV (LAT 39 30 01 LONG 080 11 05)										
OCT , 1977 28...	--	140	0	110	2.8	1800	130	--	--	--
393017080173100 - EAST RUN NR FARMINGTON WV (LAT 39 30 17 LONG 080 17 31)										
OCT , 1977 28...	--	210	0	170	6.7	96	4.1	--	--	--
393018080102300 - BETHLEHEM NO 1 (LAT 39 30 18 LONG 080 10 23)										
OCT , 1977 31...	--	130	0	110	8.3	2700	160	--	--	--
FEB , 1978 24...	15	--	--	76	--	1300	--	--	2.1	--
393026080110500 - BETHLEHEM NO 3 (LAT 39 30 26 LONG 080 11 05)										
OCT , 1977 31...	--	150	0	120	1.9	1700	140	--	--	--
393037080161400 - UNNAMED TRIB TO BUFFALO CR NR FARMINGTON WV (LAT 39 30 37 LONG 080 16 14)										
OCT , 1977 28...	--	270	0	220	6.8	110	5.3	--	--	--
393039080234800 - JOES RUN SHAFT (LAT 39 30 39 LONG 080 23 48)										
OCT , 1977 28...	--	320	0	260	2.0	2000	400	--	--	--
393047080132400 - DUNKARD MILL RUN AT KATY WV (LAT 39 30 47 LONG 080 13 24)										
OCT , 1977 28...	--	210	0	170	1.7	120	7.1	--	--	--
393050080153300 - LAUREL RUN NR FARMINGTON WV (LAT 39 30 50 LONG 080 15 33)										
OCT , 1977 28...	--	320	0	260	5.1	120	4.1	--	--	--
FEB , 1978 24...	2.1	--	--	110	--	160	--	--	6.4	--
JUL 05...	2.5	--	--	150	--	78	2.1	--	7.6	287
393051080210300 - EASTERN NO 2 (LAT 39 30 51 LONG 080 21 03)										
OCT , 1977 29...	--	460	0	380	233	5500	230	--	--	--
393052080150200 - LITTLE LAUREL RUN AT FARMINGTON WV (LAT 39 30 52 LONG 080 15 02)										
OCT , 1977 29...	--	230	0	190	2.9	100	11	--	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

MONONGAHELA RIVER BASIN--Continued

DATE	SOLIDS, SOLUBLE (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	CADMIUM DIS- SOLVED (UG/L AS CU)	CHRO- MIUM, HEXA- VALENT, DIS- SOLVED (UG/L AS CR)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	ZINC, DIS- SOLVED (UG/L AS ZN)
392941079384400 - CHEAT R AT ALBRIGHT WV (LAT 39 29 41 LONG 079 38 44)										
FEB, 1978 23...	--	--	900	--	--	300	--	180	--	100
393001080110500 - MOODY RUN NR BARRACKVILLE WV (LAT 39 30 01 LONG 080 11 05)										
OCT, 1977 28...	--	--	--	--	--	120	--	700	--	--
393017080173100 - EAST RUN NR FARMINGTON WV (LAT 39 30 17 LONG 080 17 31)										
OCT, 1977 28...	--	--	--	--	--	20	--	10	--	--
393018080102300 - BETHLEHEM NO 1 (LAT 39 30 18 LONG 080 10 23)										
OCT, 1977 31...	--	--	--	--	--	50	--	5100	--	--
FEB, 1978 24...	--	--	800	--	--	100	--	4200	--	300
393026080110500 - BETHLEHEM NO 3 (LAT 39 30 26 LONG 080 11 05)										
OCT, 1977 31...	--	--	--	--	--	120	--	90	--	--
393037080161400 - UNNAMED TRIS TO BUFFALO CR NR FARMINGTON WV (LAT 39 30 37 LONG 080 16 14)										
OCT, 1977 28...	--	--	--	--	--	30	--	30	--	--
393039080234800 - JOES RUN SHAFT (LAT 39 30 39 LONG 080 23 48)										
OCT, 1977 28...	--	--	--	--	--	60	--	50	--	--
393047080132400 - DUNKARD MILL RUN AT KATY WV (LAT 39 30 47 LONG 080 13 24)										
OCT, 1977 28...	--	--	--	--	--	30	--	40	--	--
393050080153300 - LAUREL RUN NR FARMINGTON WV (LAT 39 30 50 LONG 080 15 33)										
OCT, 1977 28...	--	--	--	--	--	20	--	40	--	--
FEB, 1978 24...	--	--	300	--	--	100	--	90	--	70
JUL 05...	273	3.0	60	10	--	0	<100	20	.5	20
393051080210300 - EASTERN NO 2 (LAT 39 30 51 LONG 080 21 03)										
OCT, 1977 29...	--	--	--	--	--	45000	--	3800	--	--
393052080150200 - LITTLE LAUREL RUN AT FARMINGTON WV (LAT 39 30 52 LONG 080 15 02)										
OCT, 1977 29...	--	--	--	--	--	10	--	10	--	--

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ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

MONONGAHELA RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPEC- IFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
393056080170900 - PLUM RUN NR RACHEL WV (LAT 39 30 56 LONG 080 17 09)											
OCT , 1977 28...	1715	2.7	300	8.6	13.5	--	120	10	33	8.3	23
393056080181500 - GRAYS RUN NR RACHEL WV (LAT 39 30 56 LONG 080 18 15)											
OCT , 1977 29...	1000	.39	395	7.6	8.5	10.4	160	27	47	10	23
393057080241300 - BRUSH RUN NR LOGANSPOUT WV (LAT 39 30 57 LONG 080 24 13)											
OCT , 1977 28...	1400	.10	150	7.6	14.0	9.0	55	9	16	3.6	3.7
393059080190900 - SALT LICK RUN NR MANNINGTON WV (LAT 39 30 59 LONG 080 19 09)											
OCT , 1977 29...	1130	.62	435	7.4	10.5	8.0	150	0	44	10	37
393107080194800 - FLAGGY MEADOW RUN NR MANNINGTON WV (LAT 39 31 07 LONG 080 19 48)											
OCT , 1977 29...	1200	.48	390	8.2	10.0	12.8	120	18	34	7.7	34
393113080181500 - EASTERN RD 1 (LAT 39 31 13 LONG 080 18 15)											
OCT , 1977 29...	1700	.66	8000	5.9	15.0	.0	1500	1500	400	120	2000
393113080232300 - JOES RUN AT DEEP VALLEY WV (LAT 39 31 13 LONG 080 23 23)											
OCT , 1977 28...	1500	.11	800	8.5	14.0	12.0	120	40	33	8.5	100
393116080231800 - BUFFALO CREEK AT DEEP VALLEY WV (LAT 39 31 16 LONG 080 23 18)											
OCT , 1977 28...	1530	7.4	129	7.2	14.2	9.0	46	17	13	3.3	4.6
393119080221100 - WHETSTONE RUN NR MANNINGTON WV (LAT 39 31 19 LONG 080 22 11)											
OCT , 1977 29...	1900	.53	2170	7.8	12.0	7.0	280	240	91	13	380
393120080134700 - BETHEL RUN NR KATY WV (LAT 39 31 20 LONG 080 13 47)											
OCT , 1977 28...	1340	1.8	470	8.2	13.0	--	190	0	52	14	32
393123080185900 - MAHAN RUN NR MANNINGTON WV (LAT 39 31 23 LONG 080 18 59)											
OCT , 1977 29...	1105	.49	235	7.5	9.5	10.4	85	44	24	6.2	12

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

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MONONGAHELA RIVER BASIN--Continued

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CAO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
393056080170900 - PLUM RUN NR RACHEL WV (LAT 39 30 56 LONG 080 17 09)										
OCT , 1977 28...	--	130	0	110	.5	43	8.1	--	--	--
393056080181500 - GRAYS RUN NR RACHEL WV (LAT 39 30 56 LONG 080 18 15)										
OCT , 1977 29...	--	160	0	130	6.4	63	5.1	--	--	--
393057080241300 - BRUSH RUN NR LOGANSPOUT WV (LAT 39 30 57 LONG 080 24 13)										
OCT , 1977 28...	--	56	0	46	2.3	19	1.9	--	--	--
393059080190500 - SALT LICK RUN NR MANNINGTON WV (LAT 39 30 59 LONG 080 19 09)										
OCT , 1977 29...	--	200	0	160	13	56	4.1	--	--	--
393107080194800 - FLAGGY MEADOW RUN NR MANNINGTON WV (LAT 39 31 07 LONG 080 19 48)										
OCT , 1977 29...	--	120	0	98	1.2	38	32	--	--	--
393113080181500 - EASTERN NO 1 (LAT 39 31 13 LONG 080 18 15)										
OCT , 1977 29...	--	14	0	11	28	4800	380	--	--	--
393113080232300 - JOES RUN AT DEEP VALLEY WV (LAT 39 31 13 LONG 080 23 23)										
OCT , 1977 28...	--	94	0	77	.5	350	74	--	--	--
393116080231800 - BUFFALO CREEK AT DEEP VALLEY WV (LAT 39 31 16 LONG 080 23 18)										
OCT , 1977 28...	2.0	36	0	30	3.6	17	5.1	.0	4.4	68
393119080221100 - WHETSTONE RUN NR MANNINGTON WV (LAT 39 31 19 LONG 080 22 11)										
OCT , 1977 29...	--	54	0	44	1.4	980	130	--	--	--
393120080134700 - BETHEL RUN NR KATY WV (LAT 39 31 20 LONG 080 13 47)										
OCT , 1977 28...	--	230	0	190	2.3	71	3.9	--	--	--
393123080185900 - MAHAN RUN NR MANNINGTON WV (LAT 39 31 23 LONG 080 18 59)										
OCT , 1977 29...	--	51	0	42	2.6	30	26	--	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

MONONGAHELA RIVER BASIN--Continued

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, HEXA- VALENT, DIS- SOLVED (UG/L AS CR)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	ZINC, DIS- SOLVED (UG/L AS ZN)
393056080170900 - PLUM RUN NR RACHEL WV (LAT 39 30 56 LONG 080 17 09)										
OCT , 1977 28...	--	--	--	--	--	170	--	20	--	--
393056080181500 - GRAYS RUN NR RACHEL WV (LAT 39 30 56 LONG 080 18 15)										
OCT , 1977 29...	--	--	--	--	--	30	--	50	--	--
393057080241300 - BRUSH RUN NR LOGANSPOUT WV (LAT 39 30 57 LONG 080 24 13)										
OCT , 1977 28...	--	--	--	--	--	30	--	20	--	--
393059080190900 - SALT LICK RUN NR MANNINGTON WV (LAT 39 30 59 LONG 080 19 09)										
OCT , 1977 29...	--	--	--	--	--	30	--	40	--	--
393107080194800 - FLAGGY MEADOW RUN NR MANNINGTON WV (LAT 39 31 07 LONG 080 19 48)										
OCT , 1977 29...	--	--	--	--	--	40	--	170	--	--
393113080181500 - EASTERN NO 1 (LAT 39 31 13 LONG 080 18 15)										
OCT , 1977 29...	--	--	--	--	--	75000	--	11000	--	--
393113080232300 - JOES RUN AT DEEP VALLEY WV (LAT 39 31 13 LONG 080 23 23)										
OCT , 1977 28...	--	--	--	--	--	80	--	50	--	--
393116080231800 - BUFFALO CREEK AT DEEP VALLEY WV (LAT 39 31 16 LONG 080 23 18)										
OCT , 1977 28...	67	1.3	20	0	0	180	6	80	.5	0
393119080221100 - WHETSTONE RUN NR MANNINGTON WV (LAT 39 31 19 LONG 080 22 11)										
OCT , 1977 29...	--	--	--	--	--	20	--	120	--	--
393120080134700 - BETHEL RUN NR KATY WV (LAT 39 31 20 LONG 080 13 47)										
OCT , 1977 28...	--	--	--	--	--	30	--	20	--	--
393123080185900 - MAHAN RUN NR MANNINGTON WV (LAT 39 31 23 LONG 080 18 59)										
OCT , 1977 29...	--	--	--	--	--	60	--	20	--	--

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ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

MONONGAHELA RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, DIS- SOLVED (MG/L AS Na)
393125080241200 - LONG DRAIN NR LOGANSPOUT WV (LAT 39 31 25 LONG 080 24 12)											
OCT , 1977 28...	1430	.16	100	7.3	13.8	10.0	43	15	12	3.1	3.3
393129040180800 - MOD RUN NR RACHEL WV (LAT 39 31 29 LONG 080 18 08)											
OCT , 1977 29...	1030	.75	2950	7.0	8.5	8.6	440	360	120	33	520
393149980221400 - DENTS RUN NR MANNINGTON WV (LAT 39 31 49 LONG 080 22 14)											
OCT , 1977 28...	1715	1.6	130	7.3	14.7	8.0	46	14	13	3.4	5.1
393210080145200 - SLATE DUMP DRAIN (LAT 39 32 10 LONG 080 14 52)											
OCT , 1977 31...	1150	.12	5450	6.8	13.0	3.0	1900	1900	510	160	390
FEB , 1978 24...	1345	--	4000	6.6	1.0	9.6	1500	--	570	15	670
393228080264000 - BUFFALO CREEK AT RYMER WV (LAT 39 32 28 LONG 080 26 40)											
OCT , 1977 28...	1230	.36	125	7.2	13.2	10.0	42	6	12	3.0	5.7
393231080204300 - CLEAR DRAIN NR MANNINGTON WV (LAT 39 32 31 LONG 080 20 43)											
OCT , 1977 29...	1445	.15	145	7.8	12.5	10.0	50	24	14	3.6	4.5
393232080263700 - WARRIOR FORK AT RYMER WV (LAT 39 32 32 LONG 080 26 37)											
OCT , 1977 28...	1200	1.5	115	7.1	13.0	9.0	46	19	13	3.2	3.7
393248080204200 - BRUSH RUN NR MANNINGTON W VA (LAT 39 32 48 LONG 080 20 42)											
OCT , 1977 29...	1410	.13	450	8.0	11.0	11.6	110	44	31	8.2	48
393252080151100 - LITTLE DUNKARD MILL RUN NR CONSOL NO 9 WV (LAT 39 32 52 LONG 080 15 11)											
OCT , 1977 28...	1415	.58	230	8.2	13.0	--	130	33	37	9.5	18
393307080205400 - FLAT RUN NR MANNINGTON WV (LAT 39 33 07 LONG 080 20 54)											
OCT , 1977 29...	1500	2.0	950	7.9	11.4	11.0	110	0	29	8.0	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

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MONONGAHELA RIVER BASIN--Continued

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINEITY (MG/L AS CAO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 100 DEG. C DIS- SOLVED (MG/L)
393125080241200 - LONG DRAIN NR LOGANSPOUT WV (LAT 39 31 25 LONG 080 24 12)										
OCT , 1977 28...	--	34	0	28	2.7	19	1.3	--	--	--
393129080140800 - MOD RUN NR RACHEL WV (LAT 39 31 29 LONG 080 18 08)										
OCT , 1977 29...	--	96	0	79	15	1100	230	--	--	--
393149080221400 - DENTS RUN NR MANNINGTON WV (LAT 39 31 49 LONG 080 22 14)										
OCT , 1977 28...	--	39	0	32	3.1	19	2.0	--	--	--
393210080145200 - SLATE DUMP DRAIN (LAT 39 32 10 LONG 080 14 52)										
OCT , 1977 31...	--	24	0	20	6.1	2500	60	--	--	--
FEB , 1978 24...	11	--	--	26	--	1400	--	--	4.3	--
393228080264000 - BUFFALO CREEK AT RYMER WV (LAT 39 32 28 LONG 080 26 40)										
OCT , 1977 28...	--	44	0	36	4.4	18	4.4	--	--	--
393231080204300 - CLEAR DRAIN NR MANNINGTON WV (LAT 39 32 31 LONG 080 20 43)										
OCT , 1977 29...	--	31	0	25	.8	22	4.9	--	--	--
393232080263700 - WARRIOR FORK AT RYMER WV (LAT 39 32 32 LONG 080 26 37)										
OCT , 1977 28...	--	32	0	26	4.1	18	2.5	--	--	--
393248080204200 - BRUSH RUN NR MANNINGTON W VA (LAT 39 32 48 LONG 080 20 42)										
OCT , 1977 29...	--	82	0	67	1.3	120	12	--	--	--
393252080151100 - LITTLE DUNKARD MILL RUN NR CONSOL NO 9 WV (LAT 39 32 52 LONG 080 15 11)										
OCT , 1977 28...	--	120	0	98	1.2	58	6.5	--	--	--
393307080205400 - FLAT RUN NR MANNINGTON WV (LAT 39 33 07 LONG 080 20 54)										
OCT , 1977 29...	--	250	0	210	5.0	120	77	--	150	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

MONONGAHELA RIVER BASIN--Continued

DATE	SOLIDS, SUM OF CONSTITUENTS DISELVED (MG/L)	SOLIDS, DISELVED (TONS PER DAY)	ALUM- INUM, DISELVED (UG/L AS AL)	CADMIUM DISELVED (UG/L AS CU)	CHROMIUM, HEXAVALENT, DISELVED (UG/L AS CR)	IRON, DISELVED (UG/L AS FE)	LEAD, DISELVED (UG/L AS Pb)	MANGANESE, DISELVED (UG/L AS MN)	MERCURY DISELVED (UG/L AS HG)	ZINC, DISELVED (UG/L AS ZN)
393125080241200 - LONG DRAIN NR LOGANSPOUT WV (LAT 39 31 25 LONG 080 24 12)										
OCT , 1977 28...	--	--	--	--	--	20	--	50	--	--
393129080180800 - MOD RUN NR RACHEL WV (LAT 39 31 29 LONG 080 16 08)										
OCT , 1977 29...	--	--	--	--	--	21000	--	1800	--	--
393149080221400 - DENTS RUN NR MANNINGTON WV (LAT 39 31 49 LONG 080 22 14)										
OCT , 1977 28...	--	--	--	--	--	90	--	140	--	--
393210080145200 - SLATE DUMP DRAIN (LAT 39 32 10 LONG 080 14 52)										
OCT , 1977 31...	--	--	--	--	--	50000	--	14000	--	--
FEB , 1978 24...	--	--	400	--	--	2000	--	3700	--	160
393228080264000 - BUFFALO CREEK AT RYMER WV (LAT 39 32 28 LONG 080 26 40)										
OCT , 1977 28...	--	--	--	--	--	100	--	100	--	--
393231080204300 - CLEAR DRAIN NR MANNINGTON WV (LAT 39 32 31 LONG 080 20 43)										
OCT , 1977 29...	--	--	--	--	--	30	--	30	--	--
393232080263700 - WAKRION FORK AT RYMER WV (LAT 39 32 32 LONG 080 26 37)										
OCT , 1977 28...	--	--	--	--	--	180	--	90	--	--
393248080204200 - BRUSH RUN NR MANNINGTON W VA (LAT 39 32 48 LONG 080 20 42)										
OCT , 1977 29...	--	--	--	--	--	10	--	10	--	--
393252080151100 - LITTLE DUNKARD MILL RUN NR CONSOL NO 9 WV (LAT 39 32 52 LONG 080 15 11)										
OCT , 1977 28...	--	--	--	--	--	80	--	50	--	--
393367080205400 - FLAT RUN NR MANNINGTON WV (LAT 39 33 07 LONG 080 20 54)										
OCT , 1977 29...	--	--	--	--	--	80	--	80	--	--

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ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

MONONGAHELA RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHUS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
393317080212200 - PYLES FORK NR MANNINGTON WV (LAT 39 33 17 LONG 080 21 22)											
OCT , 1977 29...	1330	5.6	1400	7.7	11.4	9.0	100	0	26	9.3	300
393320080212500 - DRAKES RUN NR MANNINGTON WV (LAT 39 33 20 LONG 080 21 25)											
OCT , 1977 29...	1400	.24	125	7.3	11.8	9.0	45	20	13	3.3	3.4
393324080240000 - REX RUN NR MANNINGTON WV (LAT 39 33 24 LONG 080 24 00)											
OCT , 1977 28...	1830	.22	120	7.5	13.5	8.0	47	17	13	3.5	5.3
393333080170000 - PLUM RUN NR MCCLELLAN WV (LAT 39 33 33 LONG 080 17 00)											
OCT , 1977 28...	1645	1.4	250	8.1	14.0	--	89	7	25	6.5	18
393344080183400 - MUD RUN PUMP (LAT 39 33 44 LONG 080 18 34)											
OCT , 1977 29...	1604	.46	10000	7.3	16.0	7.4	1600	960	440	110	3300
393353080160800 - 10 RIGHT PUMP (LAT 39 33 53 LONG 080 16 08)											
OCT , 1977 29...	1820	.00	200	5.9	12.0	8.0	67	29	19	4.8	5.4
393358080263800 - RT FK BARTHOLOMEW FORK AT SEVEN PINES WV (LAT 39 33 58 LONG 080 26 38)											
OCT , 1977 28...	1100	.94	125	6.9	12.8	10.0	45	20	13	3.1	3.4
393402080263300 - LEFT FK BARTHOLOMEW FORK AT SEVEN PINES WV (LAT 39 34 02 LONG 080 26 33)											
OCT , 1977 28...	1000	.84	135	7.2	12.5	10.0	43	10	12	3.1	3.4
393405080193300 - LLEWELLYN RUN ABOVE MANNINGTON WV (LAT 39 34 05 LONG 080 19 33)											
OCT , 1977 29...	1320	.39	365	7.8	13.5	10.2	100	11	29	7.1	36
393414080212300 - 250 BORE HOLE (LAT 39 34 14 LONG 080 21 23)											
OCT , 1977 29...	1245	.55	13300	7.7	16.3	.0	310	0	41	51	3800
393437080201700 - 8 NORTH PUMP (LAT 39 34 37 LONG 080 20 17)											
OCT , 1977 29...	1745	.13	6760	8.4	15.0	5.0	180	0	39	19	1900

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

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MONONGAHELA RIVER BASIN--Continued

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
393317080212200 - PYLES FORK NR MANNINGTON WV (LAT 39 33 17 LONG 080 21 22)										
OCT , 1977 29...	--	280	0	230	8.9	500	100	--	--	--
393320080212500 - DRAKES RUN NR MANNINGTON WV (LAT 39 33 20 LONG 080 21 25)										
OCT , 1977 29...	--	32	0	26	2.6	22	.1	--	--	--
393324080240000 - REX RUN NR MANNINGTON WV (LAT 39 33 24 LONG 080 24 00)										
OCT , 1977 28...	--	37	0	30	1.9	21	1.7	--	--	--
393333080170000 - PLUM RUN NR MCCLELLAN WV (LAT 39 33 33 LONG 080 17 00)										
OCT , 1977 28...	--	100	0	82	1.3	35	3.3	--	--	--
393344080183400 - MOD RUN PUMP (LAT 39 33 44 LONG 080 18 34)										
OCT , 1977 29...	--	720	0	590	58	5000	1500	--	--	--
393353080160800 - 10 RIGHT PUMP (LAT 39 33 53 LONG 080 16 08)										
OCT , 1977 29...	--	46	0	38	93	38	1.3	--	--	--
393358080263800 - RT FK BARTHOLOMEW FORK AT SEVEN PINES WV (LAT 39 33 58 LONG 080 26 38)										
OCT , 1977 28...	--	31	0	25	6.2	20	2.5	--	--	--
393402080263300 - LEFT FK BARTHOLOMEW FORK AT SEVEN PINES WV (LAT 39 34 02 LONG 080 26 33)										
OCT , 1977 28...	--	40	0	33	4.0	19	2.5	--	--	--
393405080193300 - LLEWELLYN RUN ABOVE MANNINGTON WV (LAT 39 34 05 LONG 080 19 33)										
OCT , 1977 29...	--	110	0	90	2.8	32	38	--	--	--
393414080212300 - 250 BORE HOLE (LAT 39 34 14 LONG 080 21 23)										
OCT , 1977 29...	--	2290	0	1880	73	4900	940	--	--	--
393437080201700 - 8 NORTH PUMP (LAT 39 34 37 LONG 080 20 17)										
OCT , 1977 29...	--	2450	170	2290	18	780	760	--	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

MONONGAHELA RIVER BASIN--Continued

DATE	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	CADMIUM DIS- SOLVED (UG/L AS CU)	CHRO- MIUM, HEXA- VALENT, DIS- SOLVED (UG/L AS CR)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	ZINC, DIS- SOLVED (UG/L AS ZN)
393317080212200 - PYLES FORK NR MANNINGTON WV (LAT 39 33 17 LONG 080 21 22)										
OCT , 1977 29...	--	--	--	--	--	110	--	100	--	--
393326080212500 - DRAKES RUN NR MANNINGTON WV (LAT 39 33 20 LONG 080 21 25)										
OCT , 1977 29...	--	--	--	--	--	30	--	20	--	--
393324080240000 - REA RUN NR MANNINGTON WV (LAT 39 33 24 LONG 080 24 00)										
OCT , 1977 28...	--	--	--	--	--	300	--	80	--	--
393333080170000 - PLUM RUN NR MCCLELLAN WV (LAT 39 33 33 LONG 080 17 00)										
OCT , 1977 28...	--	--	--	--	--	110	--	140	--	--
393344080183400 - MOD RUN PUMP (LAT 39 33 44 LONG 080 18 34)										
OCT , 1977 29...	--	--	--	--	--	1000	--	1100	--	--
393353080160800 - 10 RIGHT PUMP (LAT 39 33 53 LONG 080 16 08)										
OCT , 1977 29...	--	--	--	--	--	500	--	240	--	--
393358080263800 - RT FK BARTHOLOMEW FORK AT SEVEN PINES WV (LAT 39 33 58 LONG 080 26 38)										
OCT , 1977 28...	--	--	--	--	--	60	--	90	--	--
393402080263300 - LEFT FK BARTHOLOMEW FORK AT SEVEN PINES WV (LAT 39 34 02 LONG 080 26 33)										
OCT , 1977 28...	--	--	--	--	--	40	--	60	--	--
393405080193300 - LLEWELLYN RUN ABOVE MANNINGTON WV (LAT 39 34 05 LONG 080 19 33)										
OCT , 1977 29...	--	--	--	--	--	20	--	100	--	--
393414080212300 - 250 HOME HOLE (LAT 39 34 14 LONG 080 21 23)										
OCT , 1977 29...	--	--	--	--	--	60	--	40	--	--
393437080201700 - 8 NORTH PUMP (LAT 39 34 37 LONG 080 20 17)										
OCT , 1977 29...	--	--	--	--	--	30	--	30	--	--

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ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

MONONGAHELA RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
393447080222400 - STATE ROAD FORK AT METZ WV (LAT 39 34 47 LONG 080 22 24)											
OCT , 1977 29...	1100	1.0	120	7.2	9.0	10.5	50	21	14	3.6	4.2
393450080221300 - PYLES FORK AT METZ WV (LAT 39 34 50 LONG 080 22 13)											
OCT , 1977 29...	1200	3.2	155	7.2	9.5	9.0	61	22	18	4.0	7.4
393513080061200 - STUARTS RN AB MINE PUMP 4/65 NR CROWN WV (LAT 39 35 13 LONG 080 06 12)											
OCT , 1977 27...	1300	.47	590	7.9	16.4	10.0	190	0	51	14	60
393513080064200 - UNNAMED TRIB TO INDIAN CR NR CROWN WV (LAT 39 35 13 LONG 080 06 42)											
OCT , 1977 27...	1430	.28	300	7.3	17.1	8.2	140	62	41	10	23
393513080221300 - CAMPBELL RUN AT METZ WV (LAT 39 35 13 LONG 080 22 13)											
OCT , 1977 29...	1030	1.3	130	7.1	8.1	10.0	53	19	15	3.7	5.3
393524080185800 - DUDLEY SHAFT (LAT 39 35 24 LONG 080 18 58)											
OCT , 1977 29...	1700	.04	8600	8.2	14.3	9.0	450	3	93	54	2300
393534080202200 - UNNAMED TRIB TO FLAT RN BELOW FLAT RN MINE SHAFT (LAT 39 35 34 LONG 080 20 22)											
OCT , 1977 29...	1630	.22	280	7.6	12.5	8.0	68	0	20	4.3	29
393536080202700 - UNNAMED TRIB TO FLAT RUN ABOVE CONDIT WV (LAT 39 35 36 LONG 080 20 27)											
OCT , 1977 29...	1600	.28	230	7.6	14.2	9.0	71	2	21	4.6	19
393537080201900 - UNNAMED TRIB TO FLAT RN ABOVE FLAT RN MINE SHAFT (LAT 39 35 37 LONG 080 20 19)											
OCT , 1977 29...	1530	.27	180	7.6	10.6	9.5	68	19	20	4.5	7.8
393558080072900 - CRAIGS RUN NR CROWN WV (LAT 39 35 58 LONG 080 07 29)											
OCT , 1977 27...	1500	.04	360	7.3	16.9	8.2	140	45	39	9.3	16
393603080072601 - HAGANS AIR SHAFT 4057 (LAT 39 36 03 LONG 080 07 26.01)											
NOV , 1977 14...	1000	.01	2300	7.8	10.5	--	560	360	170	34	480

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

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MONONGAHELA RIVER BASIN--Continued

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICARB- ONATE (MG/L AS HC03)	CARB- ONATE (MG/L AS CO3)	ALKA- LITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
393447080222400 - STATE ROAD FORK AT METZ WV (LAT 39 34 47 LONG 080 22 24)										
OCT , 1977 29...	--	35	0	29	3.5	21	3.5	--	--	--
393450080221300 - PYLES FORK AT METZ WV (LAT 39 34 50 LONG 080 22 13)										
OCT , 1977 29...	--	48	0	39	4.8	22	7.9	--	--	--
393513080061200 - STUARTS RN AB MINE PUMP 4.65 NR CROWN WV (LAT 39 35 13 LONG 080 06 12)										
OCT , 1977 27...	2.7	230	0	190	4.6	110	3.8	.3	7.9	349
393513080064200 - UNNAMED TRIB TO INDIAN CR NR CROWN WV (LAT 39 35 13 LONG 080 06 42)										
OCT , 1977 27...	--	100	0	82	4.0	95	3.5	--	--	--
393513080221300 - CAMPBELL RUN AT METZ WV (LAT 39 35 13 LONG 080 22 13)										
OCT , 1977 29...	--	41	0	34	5.2	21	3.2	--	--	--
393524080185800 - DUDLEY SHAFT (LAT 39 35 24 LONG 080 18 58)										
OCT , 1977 29...	--	550	0	450	5.6	2900	1100	--	--	--
393534080202200 - UNNAMED TRIB TO FLAT RN BELOW FLAT RN MINE SHAFT (LAT 39 35 34 LONG 080 20 22)										
OCT , 1977 29...	--	100	0	82	4.0	30	6.8	--	--	--
393536080202700 - UNNAMED TRIB TO FLAT RUN ABOVE CONDIT WV (LAT 39 35 36 LONG 080 20 27)										
OCT , 1977 29...	--	84	0	69	3.4	32	6.4	--	--	--
393537080201900 - UNNAMED TRIB TO FLAT RN ABOVE FLAT RN MINE SHAFT (LAT 39 35 37 LONG 080 20 19)										
OCT , 1977 29...	--	60	0	49	2.4	29	3.9	--	--	--
393558080072900 - CRAIGS RUN NR CROWN WV (LAT 39 35 58 LONG 080 07 29)										
OCT , 1977 27...	--	110	0	90	8.8	68	2.6	--	--	--
393603080072601 - HAGANS AIR SHAFT 4057 (LAT 39 36 03 LONG 080 07 26.01)										
NOV , 1977 14...	--	250	0	210	6.3	1300	55	--	--	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

MONONGAHELA RIVER BASIN--Continued

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, HEXA- VALENT, DIS- SOLVED (UG/L AS CR)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	ZINC, DIS- SOLVED (UG/L AS ZN)
393447J80222400 - STATE ROAD FORK AT METZ WV (LAT 39 34 47 LONG 080 22 24)										
OCT , 1977 29...	--	--	--	--	--	170	--	70	--	--
393450080221300 - PYLES FORK AT METZ WV (LAT 39 34 50 LONG 080 22 13)										
OCT , 1977 29...	--	--	--	--	--	140	--	170	--	--
393513080061200 - STUARTS RN AB MINE PUMP 4065 NR CROWN WV (LAT 39 35 13 LONG 080 06 12)										
OCT , 1977 27...	363	.44	0	0	0	0	0	20	<.5	50
393513080064200 - UNNAMED TRIBE TO INDIAN CR NR CROWN WV (LAT 39 35 13 LONG 080 06 42)										
OCT , 1977 27...	--	--	--	--	--	120	--	190	--	--
393513080221300 - CAMPBELL RUN AT METZ WV (LAT 39 35 13 LONG 080 22 13)										
OCT , 1977 29...	--	--	--	--	--	80	--	110	--	--
393524080185800 - DUDLEY SHAFT (LAT 39 35 24 LONG 080 18 58)										
OCT , 1977 29...	--	--	--	--	--	10	--	70	--	--
393534080202200 - UNNAMED TRIB TO FLAT RN BELOW FLAT RN MINE SHAFT (LAT 39 35 34 LONG 080 20 22)										
OCT , 1977 29...	--	--	--	--	--	60	--	50	--	--
393536080202700 - UNNAMED TRIB TO FLAT RUN ABOVE CONDOT WV (LAT 39 35 36 LONG 080 20 27)										
OCT , 1977 29...	--	--	--	--	--	140	--	130	--	--
393537080201900 - UNNAMED TRIB TO FLAT RN ABOVE FLAT RN MINE SHAFT (LAT 39 35 37 LONG 080 20 19)										
OCT , 1977 29...	--	--	--	--	--	30	--	40	--	--
393558080072900 - CRAIGS RUN NR CROWN WV (LAT 39 35 58 LONG 080 07 29)										
OCT , 1977 27...	--	--	--	--	--	30	--	20	--	--
393603080072601 - MAGANS AIR SHAFT 4057 (LAT 39 36 03 LONG 080 07 26.01)										
NOV , 1977 14...	--	--	--	--	--	12000	--	8900	--	--

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ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

MONONGAHELA RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
393620080070300 - MC FAULAND RUN NR HAGANS WV (LAT 39 36 20 LONG 080 07 03)											
OCT , 1977	27...	1545	.16	280	7.4	15.6	10.0	110	35	31	8.1 11
393635080242001 - PYLES FORK AT GLOVER GAP WV (LAT 39 36 35 LONG 080 24 20.01)											
OCT , 1977	29...	1000	.98	135	6.9	8.0	9.5	59	20	17	3.9 5.5
393658080073600 - DUGWOOD LAKE (LAT 39 36 58 LONG 080 07 36)											
OCT , 1977	27...	1700	1.1	6800	6.6	15.0	8.0	1500	1900	550	130 1400
03070500 - BIG SANDY CREEK AT ROCKVILLE, W. VA. (LAT 39 37 15 LONG 079 42 20)											
FEB , 1978	23...	1600	122	60	6.1	.5	12.0	54	--	14	4.7 2.9
393715080071800 - UNNAMED TRIB TO INDIAN CR NR HAGANS WV (LAT 39 37 15 LONG 080 07 18)											
OCT , 1977	27...	1600	.14	600	7.4	16.4	9.0	230	64	65	16 58
393718080080000 - UNNAMED TRIB TO INDIAN CR NR HAGANS WV (LAT 39 37 18 LONG 080 08 00)											
OCT , 1977	27...	1605	.11	295	7.6	17.0	7.8	120	9	35	8.8 25
393722080080300 - UNNAMED TRIB TO INDIAN CR NR HAGANS W VA (LAT 39 37 22 LONG 080 08 03)											
OCT , 1977	27...	1620	.13	165	7.2	15.0	9.6	66	27	18	5.0 5.8
393751080080301 - HAGANS PORTAL 3441 (LAT 39 37 51 LONG 080 08 03.01)											
NOV , 1977	14...	0945	.06	560	6.6	8.5	9.0	90	0	22	8.4 70
393802080081200 - INDIAN CR NR HAGANS WV (LAT 39 38 02 LONG 080 08 12)											
OCT , 1977	27...	1545	.13	255	6.7	17.0	8.1	83	42	24	5.7 16
03071500 - CHEAT RIVER NEAR MORGANTOWN, W. VA. 5 (LAT 39 40 00 LONG 079 51 45)											
FEB , 1978	23...	1715	616	100	4.5	.5	11.0	62	--	17	4.8 5.4

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

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MONONGAHELA RIVER BASIN--Continued

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
393620020070300 - MC FARLAND RUN NR HAGANS WV (LAT 39 36 20 LONG 080 07 03)										
OCT , 1977 27...	--	92	0	75	5.9	50	2.6	--	--	--
393635080242001 - PYLES FORK AT GLOVER GAP WV (LAT 39 36 35 LONG 080 24 20.01)										
OCT , 1977 29...	--	47	0	39	9.5	23	5.4	--	--	--
393658080073600 - DOGWOOD LAKE (LAT 39 36 58 LONG 080 07 36)										
OCT , 1977 27...	--	24	0	20	9.6	4600	55	--	--	--
03070500 - BIG SANDY CREEK AT ROCKVILLE, W. VA. (LAT 39 37 15 LONG 079 42 20)										
FEB, 1978 23...	1.1	--	--	1	--	45	--	--	6.4	--
393715080071800 - UNNAMED TRIB TO INDIAN CR NR HAGANS WV (LAT 39 37 15 LONG 080 07 18)										
OCT , 1977 27...	--	200	0	160	13	180	4.9	--	--	--
393718080080000 - UNNAMED TRIB TO INDIAN CR NR HAGANS WV (LAT 39 37 18 LONG 080 08 00)										
OCT , 1977 27...	--	140	0	110	5.6	52	3.5	--	--	--
393722080060300 - UNNAMED TRIB TO INDIAN CR NR HAGANS W VA (LAT 39 37 22 LONG 080 08 03)										
OCT , 1977 27...	--	47	0	39	4.7	35	2.5	--	--	--
393751080080301 - HAGANS PORTAL 3441 (LAT 39 37 51 LONG 080 08 03.01)										
NOV , 1977 14...	--	230	0	190	.9	47	14	--	--	--
393802080081200 - INDIAN CR NR HAGANS WV (LAT 39 38 02 LONG 080 08 12)										
OCT , 1977 27...	--	50	0	41	16	34	29	--	--	--
03071500 - CHEAT RIVER NEAR MORGANTOWN, W. VA. (LAT 39 40 00 LONG 079 51 45)										
FEB, 1978 23...	1.5	--	--	--	--	50	--	--	8.6	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

MONONGAHELA RIVER BASIN--Continued

DATE	SOLIDS, SOLUBLE (MG/L)	SOLIDS, DISSOLVED (TONS PER DAY)	ALUM- INUM, DISSOLVED (UG/L AS AL)	CADMIUM DISSOLVED (UG/L AS CU)	CHRO- MIUM, HEXA- VALENT, DISSOLVED (UG/L AS CR)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGA- NESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	ZINC, DISSOLVED (UG/L AS ZN)
393620080070300 - MC FARLAND RUN NR HAGANS WV (LAT 39 36 20 LONG 080 07 03)										
OCT , 1977 27...	--	--	--	--	--	80	--	50	--	--
393635080242001 - PYLES FORK AT GLOVER GAP WV (LAT 39 36 35 LONG 080 24 20.01)										
OCT , 1977 29...	--	--	--	--	--	110	--	120	--	--
393658080073600 - DOGWOOD LAKE (LAT 39 36 58 LONG 080 07 36)										
OCT , 1977 27...	--	--	--	--	--	1300	--	2500	--	--
03070500 - BIG SANDY CREEK AT ROCKVILLE, W. VA. (LAT 39 37 15 LONG 079 42 20)										
FEB, 1978 23...	--	--	600	--	--	<100	--	590	--	110
393715080071800 - UNNAMED TRIB TO INDIAN CR NR HAGANS WV (LAT 39 37 15 LONG 080 07 18)										
OCT , 1977 27...	--	--	--	--	--	60	--	430	--	--
393718080080000 - UNNAMED TRIB TO INDIAN CR NR HAGANS WV (LAT 39 37 18 LONG 080 08 00)										
OCT , 1977 27...	--	--	--	--	--	120	--	60	--	--
393722080080300 - UNNAMED TRIB TO INDIAN CR NR HAGANS W VA (LAT 39 37 22 LONG 080 08 03)										
OCT , 1977 27...	--	--	--	--	--	90	--	40	--	--
393751080080301 - HAGANS PORTAL 3441 (LAT 39 37 51 LONG 080 08 03.01)										
NOV , 1977 14...	--	--	--	--	--	40	--	10	--	--
393802080081200 - INDIAN CR NR HAGANS WV (LAT 39 38 02 LONG 080 08 12)										
OCT , 1977 27...	--	--	--	--	--	240	--	290	--	--
03071500 - CHEAT RIVER NEAR MORGANTOWN, W. VA. (LAT 39 40 00 LONG 079 51 45)										
FEB, 1978 23...	--	--	2200	--	--	1000	--	650	--	30

GROUND-WATER RECORDS

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GROUND-WATER LEVELS

BERKELEY COUNTY

392725077582401. Local number, 20-5-7.

LOCATION.--Lat 39°27'35", long 77°58'24", Hydrologic Unit 02070004, at John Street and Porter Avenue, Martinsburg.

Owner: Martinsburg Mills, Inc.

AQUIFER.--Beekmantown Limestone of Lower Ordovician Age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 8 in (0.20 m), depth 250 ft (76.2 m), cased with steel to 10 ft (3.05 m).

DATUM.--Land-surface datum is about 445 ft (136 m) National Geodetic Vertical Datum of 1929. Measuring point:

Top edge of recorder shelter base, 3.3 ft (1.01 m) above land-surface datum.

REMARKS.--No water level record Oct 1, 2, 4-31, Nov. 1-14.

PERIOD OF RECORD.--November 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, *23.00 ft (7.01 m) below land-surface datum, June 24, 1972; lowest, 68.45 ft (20.86 m) below land-surface datum, Dec. 7, 1969.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
NOON VALUES FROM DIGITAL RECORDER

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	*57.50	.....	48.99	45.61	39.87	41.55	35.52	37.68	34.35	33.47	34.60	39.81
10	.....	*49.70	49.76	42.54	40.65	42.10	36.54	37.51	35.09	33.72	34.98	40.93
15	.....	51.88	50.27	43.00	41.10	36.95	37.21	33.48	35.86	32.45	36.80	41.70
20	.....	53.81	46.82	43.69	41.53	35.87	36.88	29.99	36.69	33.01	38.09	42.80
25	.....	52.93	44.56	43.47	41.94	36.97	37.39	32.25	36.77	35.27	39.27	43.85
Eom	.....	51.73	44.71	38.32	41.28	34.38	37.78	33.61	36.82	36.63	38.50	44.95
WTR YEAR 1978	MAX	28.64	MAY 17, 1978	MIN	457.01	OCT 3, 1977						

BRAXTON COUNTY

384003080462601. Local number, 34-2-15.

LOCATION.--Lat 38°40'03", long 80°46'26", Hydrologic Unit 05050007, at Kanawha Street, Gassaway.

Owner: Claude Cunningham.

AQUIFER.--Conemaugh Group of Upper Pennsylvanian Age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in (0.15 m), depth 100 ft (30.5 m), cased with steel.

DATUM.--Land-surface datum is about 1,100 ft (335 m) National Geodetic Vertical Datum of 1929. Measuring point:

Top of casing, 1.92 ft (0.59 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 72.28 ft (22.03 m) below land-surface datum, Mar. 7, 1973; lowest measured, 74.88 ft (22.82 m) below land-surface datum, Aug. 11, 1971.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	73.85	DEC 7	73.56	FEB 1	73.26	APR 5	73.36	JUN 7	73.60	AUG 2	73.48
12	73.83	14	73.43	8	73.20	12	73.48	14	73.62	9	73.44
19	73.78	21	73.30	15	73.36	19	73.59	21	73.63	16	73.41
26	73.77	28	73.63	22	73.55	26	73.56	28	73.58	23	73.48
NOV 6	73.76	JAN 4	73.55	MAR 1	73.61	MAY 3	73.55	JUL 5	73.53	30	73.58
9	73.75	11	73.49	8	73.61	10	73.48	12	73.55	SEP 6	73.68
16	73.75	18	73.37	15	73.20	17	73.33	19	73.58	13	73.73
23	73.75	25	73.31	22	73.12	24	73.43	26	73.62	20	73.74
30	73.68			29	73.28	31	73.51			27	73.68

GILMER COUNTY

385604080495901. Local number, 33-3-1.

LOCATION.--Lat 38°56'04", long 80°49'59", Hydrologic Unit 05030203, at Glenville State College Campus, Glenville.

Owner: Glenville State College.

AQUIFER.--Upper part of Conemaugh Formation of Upper Pennsylvanian Age.

WELL CHARACTERISTICS.--Dug unused water-table well, diameter 3 ft (0.91 m), depth 25 ft (7.62 m), cased with concrete tile.

DATUM.--Land-surface datum is about 820 ft (250 m) National Geodetic Vertical Datum of 1929. Measuring point:

Top of concrete cover at land-surface datum.

REMARKS.--West Virginia index well.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.58 (414 m) below land-surface datum, Jan. 26, 1958; lowest measured, 18.75 ft (5.72 m) below land-surface datum, Nov. 30, 1953.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	17.46	DEC 5	16.40	FEB 13	16.31	APR 3	15.82	JUN 5	15.54	AUG 7	15.31
10	17.19	12	16.11	20	16.51	10	16.15	12	16.01	14	15.12
14	17.07	21	16.29	27	16.47	17	16.50	20	16.27	21	15.92
24	16.93	JAN 3	16.55	MAR 6	16.21	24	16.65	26	15.60	28	16.35
31	16.99	16	16.31	13	14.74	MAY 1	16.43	JUL 3	15.50	SEP 5	15.59
NOV 7	17.23	23	15.63	20	15.24	8	16.20	10	15.44	11	16.20
14	17.28	30	15.12	27	15.63	15	15.99	17	15.28	20	16.24
21	17.32					22	15.66	24	16.21	25	16.42
28	17.27					29	15.20	31	16.20		

* Estimated.

† Manual water-level measurement.

GROUND-WATER LEVELS

GREENBRIER COUNTY

374804080174001. Local number, 45-8-2.

LOCATION.--Lat 37°48'04", long 80°17'40", Hydrologic Unit 05050003, at Fish Culture Station, U.S. Fish and Wildlife Service Hatchery, White Sulphur Springs.

Owner: U.S. Government.

AQUIFER.--Marcellus Formation and Hamilton Formation of Middle Devonian Age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in (0.15 m), depth 61 ft (18.6 m), cased with steel.

DATUM.--Land-surface datum is about 1,875 ft (572 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.9 ft (0.27 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.80 ft (0.85 m) below land-surface datum, Mar. 16, 1955; lowest measured, 7.77 ft (2.37 m) below land-surface datum, Sept. 28, Oct. 5, 1968.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 1	5.30	DEC 3	4.88	FEB 4	6.05	APR 1	4.88	JUN 3	5.05	AUG 5	5.54
8	5.31	10	5.14	11	5.20	8	5.03	10	5.35	12	5.28
15	5.51	17	5.08	18	5.27	15	5.10	17	5.52	19	5.56
22	5.63	24	5.15	25	5.29	22	5.25	24	5.72	26	5.74
29	5.27	31	5.25	MAR 4	5.15	29	5.10	JUL 1	5.81	SEP 2	5.80
NOV 5	5.07	JAN 7	5.22	11	4.55	MAY 6	5.28	8	5.95	9	5.90
12	5.06	14	5.08	18	4.77	13	5.08	15	5.53	16	5.87
19	5.17	21	5.30	25	4.65	20	5.21	22	5.70	23	5.90
26	4.91	28	4.79			27	5.26	29	5.68	30	5.90

HAMPSHIRE COUNTY

391257078404601. Local number, 23-6-46.

LOCATION.--Lat 39°12'57", long 78°40'46", Hydrologic Unit 02070003, about 4 miles (6.4 km) south of Augusta on State Route 7.

Owner: Loring Hott.

AQUIFER.--Hampshire Formation of Upper Devonian Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in (0.15 m), depth 37 ft (11.3 m), cased with tile.

DATUM.--Land-surface datum is about 1,400 ft (427 m) National Geodetic Vertical Datum of 1929. Measuring point:

Top of casing at land-surface datum.

REMARKS.--No water-level record Dec. 23-27, Jan 9-11, 16-23, 26-31, Feb. 1-8, 16-28, Mar. 1-4, Apr. 24-30, May 14-26.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.30 ft (0.09 m) below land-surface datum. Sept. 25, 1975; lowest, *16.69 ft (5.09 m) below land surface datum, July 15, 1973.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
NOON VALUES FROM GRAPHIC RECORDER

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	14.22	13.13	2.00	11.48	.....	.....	5.89	11.86	11.47	2.30	0.85	12.10
10	14.12	1.33	9.59	.....	10.51	10.47	19.42	10.63	11.95	10.25	2.08	12.48
15	14.13	9.81	8.63	10.94	11.22	1.08	10.68	.....	12.65	11.53	3.64	11.85
20	14.15	11.71	1.40	.....	.....	1.18	11.02	.....	12.85	12.22	10.16	12.03
25	14.12	5.07	.....	2.55	.....	2.80	.....	.....	12.99	11.74	11.20	12.46
Eom	13.54	2.00	10.66	.....	.....	1.62	.....	10.81	13.05	1.00	11.87	12.93

WTR YEAR 1978 MAX 0.70 AUG 7, 1978 MIN 14.25 OCT 7, 1977

HARDY COUNTY

385714078441301. Local number, 25-4-5.

LOCATION.--Lat 38°57'14", long 78°44'13", Hydrologic Unit 02070003, about 3 miles (4.8 km) east of Lost River near entrance to Trout Pond Recreation Area.

Owner: U.S. Forest Service

AQUIFER.--Helderberg Group of Early Devonian Age and Tonoloway Formation of Late Silurian Age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in (0.15 m), depth 460 ft (140 m), cased with steel to 190 ft (57.9 m).

DATUM.--Land-surface datum is about 1,920 ft (585 m) National Geodetic Vertical Datum of 1929. Measuring point:

Top of well casing, 0.9 ft (0.27 m) above land-surface datum.

REMARKS.--Crooked well bore causes drag on float tape.

PERIOD OF RECORD.--March 1968 to November 1976, water-level recorder, November 1976 to current year, periodic water-level measurements.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, *263.00 ft (80.16 m) below land-surface datum, July 15, 1972; lowest, *274.15 ft (83.56 m) below land-surface datum November 6, 1970.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	272.25	APR 10	269.85

* Estimated.

† Manual water-level measurement.

GROUND-WATER LEVELS

347

LEWIS COUNTY

390553080280802. Local number, 16-1-9.

LOCATION.--Lat 39°05'53", long 80°28'08", Hydrologic Unit 05020002, at Jackson's Mill State 4-H Camp, Jackson's Mill.

Owner: West Virginia University.

AQUIFER.--Conemaugh and Allegheny Formations of Upper and Middle Pennsylvanian Age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 12 in (0.30 m), depth 122 ft (37.2 m), cased.

DATUM.--Land-surface datum is about 1,020 ft (311 m) National Geodetic Vertical Datum of 1929. Measuring point:

Drilled hole in steel plate covering casing at land-surface datum.

REMARKS.--Water level affected by stage of West Fork River.

PERIOD OF RECORD.--May 1961 to May 1976, weekly water-level measurements; October 1977 to current year, periodic water-level measurements.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.88 ft (2.71 m) below land-surface datum, Dec. 30, 1969; lowest measured, 24.80 ft (7.56 m) below land-surface datum, Oct. 6, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 6	24.80	FEB 23	22.03	APR 14	22.01	JUN 22	21.67

MARSHALL COUNTY

395608080452301. Local number, 4-3-8.

LOCATION.--Lat 39°56'08", long 80°45'23", Hydrologic Unit 05030106, on U.S. Highway 250, Glendale.

Owner: Triangle Conduit and Cable Company.

AQUIFER.--Gravel.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 10 in (0.25 m), depth 100 ft (30.5 m), cased.

DATUM.--Land-surface datum is about 650 ft (198 m) National Geodetic Vertical Datum of 1929. Measuring point:

Top edge of recorder shelter base, 4 ft (1.22 m) below land-surface datum.

PERIOD OF RECORD.--June 1950 to August 1965, water-level recorder, January 1967 to August 1968, water-level

recorder, August 1968 to current year, weekly water-level measurements.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 54.68 ft (16.67 m) below land-surface datum, Jan. 31, 1952; lowest, 73.80 ft (22.49 m) below land-surface datum, Nov. 8, Nov. 22, 1957.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	61.15	DEC 6	61.02	FEB 1	60.86	APR 4	59.85	JUN 6	60.00	AUG 2	60.42
12	61.05	13	61.12	8	60.55	11	60.13	13	60.05	9	60.77
19	61.29	22	60.40	15	60.88	18	60.30	21	60.50	16	61.00
24	61.49	29	60.27	24	61.17	24	60.60	28	60.75	25	61.45
NOV 2	61.59	JAN 3	60.10	MAR 1	61.40	MAY 2	60.93	JUL 5	60.58	31	61.51
9	61.64	10	60.36	8	61.75	9	61.08	12	60.02	SEP 7	61.58
15	61.58	16	60.55	15	61.35	17	60.47	19	59.40	13	61.66
22	61.65	23	61.00	22	60.68	24	60.32	26	60.05	19	61.95
29	61.50			29	59.90	31	60.22			26	62.06

MASON COUNTY

385450082064601. Local number, 38-3-53.

LOCATION.--Lat 38°54'50", long 82°06'46", Hydrologic Unit 05030202, 4 miles (6.4 km) north of Pt. Pleasant on State Route 62.

Owner: West Virginia University, Ohio Valley Agricultural Experiment Station.

AQUIFER.--Alluvial sand and gravel.

WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 12 in (0.30 m), depth 73 ft (22.3 m), cased with steel to 61 ft (18.6 m), screened 61-73 ft (18.6 m-22.3 m).

DATUM.--Land-surface datum is about 600 ft (183 m) National Geodetic Vertical Datum of 1929. Measuring point:

Edge of pump housing above hole on east side of pump, 1.4 ft (0.43 m) above land-surface datum.

PERIOD OF RECORD.--May 1958 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 35.62 ft (10.86 m) below land-surface datum, July 11, 1975; lowest measured, 42.54 ft (12.97 m) below land-surface datum, Jan. 16, 1970.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 7	39.79	DEC 2	40.30	FEB 3	40.44	APR 7	40.28	JUN 2	39.40	AUG 4	39.49
14	39.86	9	40.34	10	40.40	14	39.82	9	39.37	11	39.37
21	39.95	16	40.40	17	40.37	21	39.74	16	39.33	18	39.55
28	40.01	23	40.41	24	40.30	28	39.68	23	39.37	25	39.54
NOV 4	40.04	30	40.45	MAR 3	40.28	MAY 5	39.71	30	39.33	SEP 1	39.58
11	40.10	JAN 6	40.50	10	40.28	12	39.64	JUL 7	39.48	8	39.68
18	40.18	13	40.51	17	40.27	19	39.52	14	39.46	15	39.72
25	40.12	20	40.53	24	40.20	26	39.52	21	39.36	22	39.81
		27	40.49	31	40.25			28	39.38	29	39.86

GROUND-WATER LEVELS

MASON COUNTY--Continued

385451082062001. Local number, 38-3-54.

LOCATION.--Lat 38°54'51", long 82°06'20", Hydrologic Unit 05030202, about 0.5 mile (0.8 km) east of intersection of State Route 62 and Secondary State Route 13.

Owner: West Virginia University, Ohio Valley Agricultural Experiment Station.

AQUIFER.--Conemaugh Formation of Upper Pennsylvanian Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in (0.15 m), depth 131 ft (39.9 m), cased with steel to 60 ft (18.3 m).

DATUM.--Land-surface datum is about 615 ft (187 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.0 ft (0.91 m) above land-surface datum.

REMARKS.--No water-level record Jan. 23 to Feb. 10, Apr. 26 to May 3.

PERIOD OF RECORD.--November 1959 to January 1960, weekly water-level measurements, January 1960 to current year, water-level recorder.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 23.28 ft (7.10 m) below land-surface datum, June 12-14, 1975; lowest, 26.20 ft (7.99 m) below land surface datum, Jan. 1, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
NOON VALUES FROM GRAPHIC RECORDER

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	25.13	25.23	25.13	25.15	.....	24.76	24.60	24.56	24.48	24.62	24.83	24.93
10	25.08	25.18	25.12	25.05	24.90	24.77	24.58	24.50	24.47	24.68	24.85	25.01
15	25.11	25.21	25.11	25.04	24.79	24.74	24.60	24.44	24.50	24.71	24.88	25.06
20	25.13	25.19	25.10	24.93	24.77	24.72	24.53	24.44	24.55	24.75	24.95	25.05
25	25.18	25.20	25.10	.....	24.78	24.67	24.52	24.42	24.59	24.78	25.01	25.07
Eom	25.20	25.20	25.14	.....	24.80	24.60	*24.54	24.46	24.61	24.78	24.95	25.12

WTR YEAR 1978 MAX 24.42 MAY 24, 25, 1978 MIN 25.23 NOV 5, 6, 1977

MERCER COUNTY

372149081055001. Local number, 48-5-1.

LOCATION.--Lat 37°21'49", long 81°05'50", Hydrologic Unit 05050002, at Princeton Water Service, Company No. 1 well, Princeton.

Owner: West Virginia Service Company

AQUIFER.--Sandstone and shale of Hinton Group of Upper Mississippian Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in (0.15 m), depth 249 ft (75.9 m), cased.

DATUM.--Land-surface datum is about 2,387 ft (728 m) National Geodetic Vertical Datum of 1929. Measuring point:

Top of iron collar, 5.50 ft (1.68 m) above land-surface datum.

REMARKS.--Water level affected by nearby pumping. Well flows at times.

PERIOD OF RECORD.--March 1960 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.0 ft (0.00 m) flowing at land-surface datum, many days since 1968; lowest measured, 90.58 ft (27.61 m) below land-surface datum, Dec. 10, 1969.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	19.71	DEC 7	26.57	FEB 1	25.36	APR 5	4.77	JUN 7	flowing	AUG 2	5.40
12	17.08	14	25.09	8	22.43	12	flowing	14	flowing	9	5.33
19	16.60	21	23.67	15	20.69	19	flowing	21	flowing	16	5.19
26	19.52	28	24.50	22	17.45	26	flowing	28	59.04	23	5.27
NOV 2	21.34	JAN 4	25.52	MAR 1	13.39	MAY 3	flowing	JUL 5	59.19	30	5.42
9	25.28	11	27.40	8	9.57	10	flowing	12	59.33	SEP 6	4.03
16	27.36	18	28.48	15	7.52	17	flowing	19	59.45	13	4.05
23	31.48	25	26.61	22	4.19	24	flowing	26	5.45	20	4.08
30	38.39			29	4.58	31	flowing			27	5.68

MINERAL COUNTY

393018078455301. Local number, 22-1-32.

LOCATION.--Lat 39°30'18", long 78°45'53", Hydrologic Unit 02070002, at Mineral County School, Fort Ashby.

Owner: Mineral County Board of Education.

AQUIFER.--Mahantango Formation of Middle Devonian Age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 10 in (0.25 m), depth 96 ft (29.3 m), cased with steel.

DATUM.--Land-surface datum is about 600 ft (183 m) National Geodetic Vertical Datum of 1929. Measuring point:

Top of casing, 1.5 ft (0.46 m) below land-surface datum.

PERIOD OF RECORD.--October 1968 to May 1978, discontinued.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.86 ft (2.70 m) below land-surface datum, May 17, 1978; lowest measured, 14.08 ft (4.29 m) below land-surface datum, Sept. 21, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	14.01	JAN 11	12.26	MAR 2	11.07	MAY 3	11.42
12	13.66	18	12.41	8	11.01	10	10.66
19	13.53	25	11.45	15	9.84	17	8.86
26	13.71	FEB 1	11.46	22	9.93	24	9.38
NOV 2	13.54	8	11.50	29	9.45	31	10.64
		15	11.62	APR 5	9.94		
		22	10.96	12	10.19		
				19	10.34		
				26	10.71		

* Estimated.

GROUND-WATER LEVELS

349

MINERAL COUNTY--Continued

392114079081101. Local number, 22-5-23.

LOCATION.--Lat 39°21'14", long 79°08'11", Hydrologic Unit 02070002, 2.2 miles (3.5 km) north of U.S. Route 50 on State Route 42 at Sulphur City near Elk Garden.

Owner: Gerald Whisner.

AQUIFER.--Conemaugh Formation of Late Pennsylvanian Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in (0.15 m), depth 37 ft (11.3 m), cased with steel. DATUM.--Land-surface datum is about 2,480 ft (756 m) National Geodetic Vertical Datum of 1929. Measuring point:

Top of casing, 0.7 ft (0.21 m) above land-surface datum.

REMARKS.--Well flows at times. Water level affected by recent pumpage.

PERIOD OF RECORD.--August 1968 to October 1976, weekly water-level measurements, May 1977 to current year, periodic water-level measurements.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, +0.69 ft (0.21 m) above land-surface datum, many days since 1968; lowest measured, 10.81 ft (3.29 m) below land-surface datum, Oct. 29, 1968.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	7.87	APR 10	+0.60

+, Water level above land-surface datum.

MONONGALIA COUNTY

394006080194801. Local number, 9-1-47.

LOCATION.--Lat 39°40'06", long 80°19'48", Hydrologic Unit 05020005, 1 mile (1.6 km) east of Wadestown on State Route 7.

Owner: Howard Shriver.

AQUIFER.--Dunkard Group of Permian Age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in (0.15 m), depth 65 ft (19.8 m), cased with steel.

DATUM.--Land-surface datum is about 1,060 ft (323 m) National Geodetic Vertical Datum of 1929. Measuring point:

Top of casing, 1.2 ft (0.37 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.83 ft (1.78 m) below land-surface datum, Dec. 18, 1975; lowest measured, 11.35 ft (3.46 m) below land-surface datum, Aug. 6, 1971.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	8.74	DEC 6	8.16	FEB 7	7.44	APR 4	6.99	JUN 6	7.95	AUG 1	8.34
11	8.36	13	8.11	14	7.58	11	7.06	13	8.30	8	7.95
18	8.32	20	8.18	21	7.66	18	7.24	20	8.34	15	8.37
25	8.31	27	8.22	28	7.56	25	7.62	27	8.38	22	8.45
NOV 1	8.56	JAN 3	8.27	MAR 7	7.42	MAY 2	7.27	JUL 4	8.10	29	8.20
8	8.59	10	8.25	14	7.71	9	7.44	11	8.15	SEP 5	8.09
15	8.39	17	8.31	21	6.75	16	7.25	18	8.49	12	7.86
22	8.34	23	8.36	28	6.54	23	7.15	25	8.33	19	8.08
29	8.09	31	7.48			30	7.76			26	7.88

392923070571801. Local number, 9-7-33.

LOCATION.--Lat 39°29'23", long 79°57'18", Hydrologic Unit 05020003, 1 mile (1.6 km) northwest of Halleck on Secondary State Route 79.

Owner: Paul H. Price.

AQUIFER.--Buffalo-Mahoning Sandstone of Conemaugh Formation of Upper Pennsylvanian Age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in (0.15 m), depth 141 ft (43.0 m), cased with steel to 21 ft (6.40 m).

DATUM.--Land-surface datum is about 1,850 ft (564 m) National Geodetic Vertical Datum of 1929. Measuring point:

Top of casing, flush with shelter floor, 0.35 ft (0.11 m) above land-surface datum.

PERIOD OF RECORD.--March 1953 to May 1961, monthly water-level measurements, May 1961 to May 1962, water-level recorder, May 1962 to current year, monthly water-level measurements.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 40.95 ft (12.48 m) below land-surface datum, Jan. 4, 1960; lowest measured, 80.57 ft (24.56 m) below land-surface datum, Oct. 25, 1973.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 8	50.84	FEB 23	58.57	APR 20	51.03	JUN 6	67.79	AUG 28	70.14
DEC 28	51.70	MAR 23	49.25	MAY 25	54.27	JUL 28	57.92	SEP 27	75.02

GROUND-WATER LEVELS

MONROE COUNTY

373435080323101. Local number, 47-3-3.

LOCATION.--Lat 37°34'35", long 80°32'31", Hydrologic Unit 05050002, 1.3 miles (2.1 km) south of Union on Secondary State Route 13.

Owner: Robert Riner.

AQUIFER.--Greenbrier Group of Middle Mississippian Age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in (0.15 m), depth 133 ft (40.5 m), cased with steel to 12 ft (3.66 m).

DATUM.--Land-surface datum is about 2,050 ft (625 m) National Geodetic Vertical Datum of 1929. Measuring point:

Top of sanitary seal on casing, 0.6 ft (0.18 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 49.60 ft (15.12 m) below land-surface datum, Mar. 1, 1972; lowest measured, 53.36 ft (16.26 m) below land-surface datum, Oct. 20, 1971.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	52.00	DEC 7	51.80	FEB 1	51.70	APR 5	51.30	JUN 7	51.30	AUG 2	52.20
12	52.10	14	52.10	8	51.50	12	51.30	14	51.60	9	52.00
19	51.90	21	51.90	15	51.60	19	51.20	21	51.60	16	51.70
26	52.10	28	52.00	22	51.40	26	51.40	28	51.80	23	52.30
NOV 2	52.30	JAN 4	52.10	MAR 1	51.30	MAY 3	51.50	JUL 5	51.70	30	52.20
9	52.00	11	52.30	8	51.30	10	51.30	12	51.90	SEP 6	52.00
16	52.20	18	52.10	15	51.10	17	51.60	19	51.80	13	52.10
23	52.10	25	51.90	22	51.30	24	51.40	26	51.90	20	51.90
30	52.00			29	51.10	31	51.50			27	52.10

MORGAN COUNTY

393043078174001. Local number, 19-5-14.

LOCATION.--Lat 39°30'43", long 78°17'40", Hydrologic Unit 02070004, on Cacapon State Park south of Berkeley Springs on U.S. Route 522.

Owner: West Virginia Department of Natural Resources.

AQUIFER.--Tonoloway Formation of Upper Silurian Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in (0.20 m), reported depth 250 ft (76.2 m), cased with steel to 33 ft (10.1 m).

DATUM.--Land-surface datum is about 875 ft (267 m) National Geodetic Vertical Datum of 1929. Measuring point:

Top of breather pipe, in cap on casing, 1.2 ft (0.37 m) above land-surface datum.

REMARKS.--No water-level record June 22 to July 26.

PERIOD OF RECORD.--July 1971 to July 1973, November 1974 to March 1975, weekly water-level measurements, July 1976 to August 1977, monthly water-level measurements, August 1977 to current year, water-level recorder.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 29.40 ft (8.96 m) below land-surface datum, Mar. 26, 1978; lowest measured, 37.80 ft (11.52 m) below land-surface datum, Sept. 8, 1971.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
NOON VALUES FROM DIGITAL RECORDER

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	35.28	33.36	33.38	33.48	33.39	33.23	32.80	33.21	33.34	*32.50	33.11	33.57
10	33.62	33.23	33.55	33.28	33.43	33.20	33.06	33.30	33.39	.....	33.40	33.75
15	34.89	33.51	32.96	33.49	33.26	31.28	33.22	32.72	33.64	*33.30	33.57	33.73
20	33.67	33.70	32.84	33.24	33.19	32.51	33.06	32.90	33.65	*33.40	33.65	33.75
25	34.54	33.52	32.83	32.74	33.36	32.76	33.35	33.12	.....	*33.40	33.74	33.77
Eom	33.98	33.23	33.45	33.22	33.27	32.82	33.46	33.30	*32.75	32.96	32.50	34.41

WTR YEAR 1978 MAX 29.40 MAR 26, 1978 MIN 35.43 OCT 6, 1977

NICHOLAS COUNTY

381301080562201. Local number, 37-5-1.

LOCATION.--Lat 38°13'01", long 80°56'22", Hydrologic Unit 05050005, on Carnifex Ferry Battlefield State Park on Secondary State Route 23.

Owner: West Virginia Department of Natural Resources.

AQUIFER.--Pottsville Group of Lower Pennsylvanian Age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in (0.15 m), depth 106 ft (32.3 m), cased with steel.

DATUM.--Land-surface datum is about 1,620 ft (494 m) National Geodetic Vertical Datum of 1929. Measuring point:

Top of concrete slab at land-surface datum.

PERIOD OF RECORD.--December 1970 to August 1976, weekly water-level measurements, April 1978 to current year, periodic water level measurements.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 52.30 ft (15.94 m) below land-surface datum, Dec. 23, 1970; lowest measured, 59.95 ft (18.27 m) below land-surface datum, Mar. 10, 1976.

NOTE.--Water-level measurement Apr. 18, 1978, 57.78 ft below land-surface datum.

* Estimated

GROUND-WATER LEVELS

351

POCAHONTAS COUNTY

380634080164801. Local number, 44-4-1.
 LOCATION.--Lat 38°06'34", long 80°16'48", Hydrologic Unit 05050003, on Droop Mountain State Park north of Droop on U.S. Route 219.
 Owner: West Virginia Department of Natural Resources.
 AQUIFER.--Mauch Chunk Group of Upper Mississippian Age.
 WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in (0.15 m), depth 153 ft (46.6 m), cased with steel to 20 ft (6.10 m).
 DATUM.--Land-surface datum is about 2,700 ft (823 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing at land-surface datum.
 PERIOD OF RECORD.--December 1970 to January 1976, weekly water-level measurements, April 1978 to current year, periodic water-level measurements.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 66.20 ft (20.18 m) below land-surface datum, Dec. 7, 1971; lowest measured, 79.23 ft (24.15 m) below land-surface datum, Oct. 1, 1970.
 NOTE.--Water-level measurement Apr. 17, 1978, 69.43 ft below land-surface datum.

380630080074401. Local number, 44-4-10.
 LOCATION.--Lat 38°06'30", long 80°07'44", Hydrologic Unit 05050003, on Watoga State Park 7 mi (11.3 km) southwest of Huntersville on Secondary State Route 21.
 Owner: West Virginia Department of Natural Resources.
 AQUIFER.--Hampshire Formation of Upper Devonian Age.
 WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in (0.15 m), reported depth 285 ft (86.9 m), cased with steel.
 DATUM.--Land-surface datum is about 3,050 ft (930 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.85 ft (0.26 m) above land-surface datum.
 PERIOD OF RECORD.--December 1970 to November 1975, weekly water-level measurements, April 1978 to current year, periodic water-level measurements.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.35 ft (4.68 m) below land-surface datum, July 27, 1971; lowest measured, 22.87 ft (6.97 m) below land-surface datum, Oct. 30, 1973.
 NOTE.--Water-level measurement Apr. 17, 1978, 19.08 ft below land-surface datum.

PRESTON COUNTY

393306079474501. Local number, 11-3-8.
 LOCATION.--Lat 39°33'06", long 79°47'45", Hydrologic Unit 05020003, East Depot Street, Masontown.
 Owner: G. E. Lemmons.
 AQUIFER.--Sandstone of Pottsville Formation of Lower Pennsylvanian Age.
 WELL CHARACTERISTICS.--Drilled domestic artesian well, diameter 8 in (0.20 m), depth 785 ft (239 m), cased to 350 ft (107 m), perforated at or near Upper Freeport Coal.
 DATUM.--Land-surface datum is about 1,770 ft (539 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.0 ft (0.91 m) below land surface datum.
 PERIOD OF RECORD.--July 1941 to July 1946, weekly water-level measurements, July 1946 to October 1948, water-level recorder, October 1948 to October 1950, weekly water-level measurements, October 1950 to current year, monthly water-level measurements.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.15 ft (2.18 m) below land-surface datum, Jan. 20, 1947; lowest measured, 108 ft (32.9 m) below land-surface datum, Feb. 3, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	66.07	DEC 28	66.75	MAR 23	65.40	MAY 25	66.03	JUL 28	67.05	SEP 27	66.97
NOV 28	66.03	FEB 23	67.62	APR 20	66.78	JUN 26	66.79	AUG 28	66.91		

392053079400401. Local number, 11-7-14.
 LOCATION.--Lat 39°20'53", long 79°40'04", Hydrologic Unit 05020004, on left bank of Cheat River downstream from Rowlesburg Water Plant.
 Owner: U.S. Army Corps of Engineers.
 AQUIFER.--Chemung Formation of Upper Devonian Age.
 WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 8 in (0.20 m), depth 104 ft (31.7 m), cased with steel.
 DATUM.--Land-surface datum is about 1,400 ft (427 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing under recorder shelter, 1.6 ft (0.49 m) above land-surface datum.
 REMARKS.--Water level affected by stage of Cheat River. Well found plugged Aug. 28, 1978.
 PERIOD OF RECORD.--April 1971 to January 1977, water-level recorder, January 1977 to current year, monthly water-level measurements.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.64 ft (1.41 m) below land-surface datum, Dec. 9, 1972; lowest, 14.84 ft (4.52 m) below land-surface datum, Aug. 16, 1975.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	10.70	FEB 2	10.44	MAR 15	6.49	MAY 6	9.51
DEC 12	10.65	23	11.69	MAY 11	10.34	JUN 30	10.42

GROUND-WATER LEVELS

RALEIGH COUNTY

374607081122201. Local number, 43-3-8.

LOCATION.--Lat 37°46'07", long 81°12'22", Hydrologic Unit 05050004, near State Route 16, Mabscott.

Owner: Beckley Water Company.

AQUIFER.--New River Series of Lower Pennsylvanian Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in (0.20 m), depth 475 ft (145 m).

DATUM.--Land-surface datum is about 2,285 ft (696 m) National Geodetic Vertical Datum of 1929. Measuring point:

Top of casing, 1 ft (0.30 m) above land-surface datum.

PERIOD OF RECORD.--August and September 1959, weekly water-level measurements, November 1959 to July 1962, water-level recorder, December 1962 to December 1976, weekly water-level measurements, April 1978 to current year, periodic water-level measurements.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.03 ft (3.97 m) below land-surface datum, Dec. 27, 1972; lowest measured, 37.13 ft (11.32 m) below land-surface datum, Dec. 15, 1965.

NOTE.--Water-level measurement Apr. 18, 1978, 17.11 ft below land-surface.

RANDOLPH COUNTY

385341079575401. Local number, 18-3-110.

LOCATION.--Lat 38°53'41", long 79°57'54", Hydrologic Unit 05020001, 0.2 mi (0.32 km) east of Coalton High School, Coalton.

Owner: Presbyterian Church.

AQUIFER.--Homewood Sandstone of Pottsville Group of Early Pennsylvanian Age.

WELL CHARACTERISTICS.--Drilled exploratory water-table well, diameter 6 in (0.15 m), depth 155 ft (47.2 m), cased.

DATUM.--Land-surface datum is 2,173 ft (662 m) National Geodetic Vertical Datum of 1929. Measuring point: Floor of shelter box, 2.45 ft (0.75 m) above land-surface datum.

REMARKS.--Water level affected by nearby pumping.

PERIOD OF RECORD.--December 1966 to October 1967, monthly water-level measurements, July 1968 to January 1977, water-level recorder, January 1977 to current year, periodic water-level measurements.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.85 ft (3.31 m) below land-surface datum, Dec. 12, 1966; lowest, 23.35 ft (7.12 m) below land-surface datum, Oct. 28, 1971.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 23	13.20	APR 5	13.98

RITCHIE COUNTY

391226081024901. Local number, 28-3-3.

LOCATION.--Lat 39°12'26", long 81°02'49", Hydrologic Unit 05030203, at Stout and East South Street, Harrisville.

Owner: Terry Stonestreet.

AQUIFER.--Dunkard Formation of Pennsylvanian or Permian Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in (0.15 m), depth 118 ft (36.0 m), cased with steel.

DATUM.--Land-surface datum is about 840 ft (256 m) National Geodetic Vertical Datum of 1929. Measuring point:

Top of casing, 1.2 ft (0.37 m) above land-surface datum.

REMARKS.--Formerly public-supply well.

PERIOD OF RECORD.--August 1966 to October 1966, weekly water-level measurements, April 1968 to September 1975, water-level recorder, October 1975 to July 1976, monthly water-level measurements, July 1976 to current year, water-level recorder.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 17.92 ft (5.46 m) below land-surface datum, Apr. 2, 1970; lowest measured, 21.80 ft (6.64 m) below land-surface datum, Sept. 7, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
NOON VALUES FROM DIGITAL RECORDER

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	19.20	19.39	18.03	19.17	19.07	19.57	19.27	19.14	19.27	18.96	18.61	18.84
10	18.79	18.81	18.89	18.66	19.31	18.84	18.83	18.92	19.32	18.80	18.55	19.17
15	18.85	18.73	18.69	18.89	19.65	18.49	19.42	18.76	19.14	18.38	18.51	19.30
20	18.88	18.75	18.73	18.24	19.39	18.86	18.64	18.98	19.14	18.92	19.09	19.47
25	18.98	18.61	18.76	18.05	19.43	18.94	18.69	19.20	19.38	18.97	19.10	19.61
Eom	19.32	18.38	19.33	18.92	19.37	18.78	19.00	19.24	18.86	18.87	18.80	19.79

WTR YEAR 1978 MAX 17.97 JAN 26, 1978 MIN 19.80 SEP 29, 1978

TUCKER COUNTY

390135079275601. Local number, 15-6-17.

LOCATION.--Lat 39°01'35", long 79°27'56", Hydrologic Unit 05020004, at Canaan Valley State Park off W. Va. State Route 32.

Owner: West Virginia Department of Natural Resources.

AQUIFER.--Pocono Formation of Lower Mississippian Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in (0.20 m) depth 281 ft (85.6 m), cased with steel.

DATUM.--Land-surface datum is about 3,275 ft (998 m) National Geodetic Vertical Datum of 1929. Measuring point:

Top of casing, 1.55 ft (0.47 m) above land-surface datum.

PERIOD OF RECORD.--June 1971 to December 1975, weekly water-level measurements, April 1978 to current year, periodic water-level measurements.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.05 ft (2.45 m) below land-surface datum, Dec. 11, 1972; lowest measured, 11.54 ft (3.52 m) below land-surface datum, July 19, 1971.

NOTE.--Water-level measurement Apr. 12, 1978, 9.62 ft below land-surface datum.

GROUND-WATER LEVELS

353

WAYNE COUNTY

375827082211501. Local number, 50-6-5.

LOCATION.--Lat 37°58'27", long 82°21'15", Hydrologic Unit 05090102, on Cabwaylingo State Forest on Secondary State Route 35.

Owner: West Virginia Department of Natural Resources.

AQUIFER.--Pottsville Group of Lower Pennsylvanian Age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in (0.15 m), depth 119 ft (36.3 m), cased with steel.

DATUM.--Land-surface datum is about 740 ft (226 m) National Geodetic Vertical Datum of 1929. Measuring point:

Top of casing, 1.3 ft (0.40 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 27.70 ft (8.44 m) below land-surface datum, Jan. 5 and Mar. 1, 1972; lowest measured, 30.62 ft (9.33 m) below land-surface datum, June 16, 1971.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	29.60	DEC 7	28.90	FEB 1	28.90	APR 5	29.20	JUN 7	29.80	AUG 2	30.00
12	29.50	14	28.90	8	28.90	12	29.30	14	30.00	9	29.70
19	29.40	21	29.00	15	29.00	20	29.50	21	30.10	16	29.30
25	29.10	JAN 4	29.00	22	29.00	MAY 3	29.50	28	30.10	23	29.20
NOV 2	29.10	11	29.00	MAR 1	29.00	10	29.40	JUL 5	30.10	30	29.20
9	29.00	18	28.90	8	29.00	17	29.40	12	30.20	SEP 6	29.10
16	29.00	25	28.90	15	29.00	24	29.30	19	30.30	13	29.10
23	28.90			22	28.95	31	29.70	24	30.30	20	29.05

WEBSTER COUNTY

382254080271501. Local number, 36-3-12.

LOCATION.--Lat 38°22'54", long 80°27'15", Hydrologic Unit 05050005, on Secondary State Route 46/2 near Dyer.

Owner: Glen Dodrill.

AQUIFER.--Mauch Chunk Group of Upper Mississippian Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in (0.15 m), depth 40 ft (12.2 m), cased with steel.

DATUM.--Land-surface datum is about 2,230 ft (680 m) National Geodetic Vertical Datum of 1929. Measuring point:

Top of casing, 1.5 ft (0.46 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.70 ft (1.43 m) below land-surface datum, July 5, 1972; lowest measured, 7.80 ft (2.38 m) below land-surface datum, June 16, 1976.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	7.50	DEC 7	6.10	FEB 1	6.40	APR 5	6.80	JUN 7	6.50	AUG 2	6.50
12	7.30	14	6.20	8	6.80	12	6.85	14	6.95	9	6.40
19	7.50	21	6.30	15	6.95	19	6.90	21	6.60	16	6.90
26	6.40	28	6.40	22	6.85	26	7.00	28	7.10	23	7.00
NOV 2	6.60	JAN 4	6.80	MAR 1	6.80	MAY 3	7.20	JUL 5	6.90	30	6.60
9	6.80	11	6.90	8	7.20	10	6.90	12	6.60	SEP 6	6.80
16	6.40	18	6.00	15	6.00	17	7.10	19	6.80	13	7.00
23	6.00	25	6.00	22	6.20	24	6.90	26	6.40	20	7.10
30	6.00			29	6.60	31	6.30			27	7.40

WETZEL COUNTY

392858080373401. Local number, 6-6-8.

LOCATION.--Lat 39°28'58", long 80°37'34", Hydrologic Unit 05030201, on Secondary State Route 82 in Lewis Wetzel Public Hunting Area near Jacksonburg.

Owner: West Virginia Department of Natural Resources.

AQUIFER.--Dunkard Group of Permian Age.

WELL CHARACTERISTICS.--Drilled unused water-table, diameter 6 in (0.15 m) depth 76 ft (23.2 m), cased with steel.

DATUM.--Land-surface datum is about 890 ft (271 m) National Geodetic Vertical Datum of 1929. Measuring point:

Top of casing, 1.1 ft (0.34 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.10 ft (1.86 m) below land-surface datum, Nov. 28, 1973; lowest measured, 20.90 ft (6.37 m) below land-surface datum, Oct. 5, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	20.90	DEC 7	10.80	FEB 4	11.10	APR 5	10.40	JUN 7	14.90	AUG 2	18.90
12	14.40	14	18.70	8	14.80	12	11.00	14	14.80	9	17.70
19	13.20	21	10.40	15	16.60	19	11.40	21	15.90	16	14.40
26	17.10	27	14.90	22	15.10	26	14.50	28	16.90	23	18.90
NOV 2	19.70	JAN 4	10.80	MAR 1	16.70	MAY 3	11.90	JUL 5	17.70	30	19.90
9	19.30	18	10.40	8	14.40	10	10.50	12	9.90	SEP 6	19.80
16	15.50	25	16.40	15	18.90	17	14.50	19	11.50	13	12.20
23	13.70			22	17.70	24	17.90	26	17.50	20	12.20
30	14.30			29	15.70	31	17.70			27	11.30

GROUND-WATER LEVELS

WOOD COUNTY

391712081333201. Local number, 27-3-22.

LOCATION.--Lat 39°17'12", long 81°33'32", Hydrologic Unit 05030202, near collector well at City of Parkersburg Water Works.

Owner: City of Parkersburg.

AQUIFER.--Gravel.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 5 in (0.13 m), depth 55 ft (16.8 m), cased with steel to 55 ft (16.8 m).

DATUM.--Land-surface datum is about 601 ft (183 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.94 ft (0.90 m) above land-surface datum.

REMARKS.--Water level affected by local pumping and by stage of the Ohio River.

PERIOD OF RECORD.--April 1943 to April 1945, various intermittent water-level measurements, January 1946 to current year, water-level recorder.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, *16.06 ft (4.90 m) below land-surface datum, Feb. 23, 1971; lowest, 37.75 ft (11.51 m) below land-surface datum, Feb. 12, 1948.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
NOON VALUES FROM GRAPHIC RECORDER

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	26.64	26.83	26.00	26.40	25.90	27.94	25.25	27.28	27.04	26.73	26.61	26.52
10	26.59	26.71	25.92	26.09	25.87	28.01	24.85	27.38	27.03	26.59	26.53	26.40
15	26.34	26.78	26.48	26.21	26.55	26.73	25.67	27.37	27.23	26.26	26.52	26.35
20	26.45	26.58	25.77	26.13	26.97	25.87	26.15	25.98	27.34	26.30	26.70	26.26
25	26.72	26.55	25.49	26.23	27.34	25.51	26.37	26.32	27.44	26.53	26.93	26.21
Eom	26.79	26.62	25.97	25.15	27.55	25.05	26.84	26.76	27.24	26.53	26.76	26.50

WTR YEAR 1978 MAX 24.07 JAN 28, 1978 MIN 28.02 MAR 11, 1978

WYOMING COUNTY

373839081255201. Local number, 54-2-12.

LOCATION.--Lat 37°38'39", long 81°25'52", Hydrologic Unit 05070101, at Twin Falls State Park.

Owner: U. S. Geological Survey.

AQUIFER.--Pottsville Formation of Lower Pennsylvanian Age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in (0.15 m), depth 80 ft (24.4 m), cased with steel to 28 ft (8.53 m).

DATUM.--Land-surface datum is about 2,015 ft (615 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder shelter floor, 2.62 ft (0.80 m) above land-surface datum.

REMARKS.--Aquifer test data available. No water-level record Apr. 9 to May 3. Float hung at times Aug. 31 to Sept. 30.

PERIOD OF RECORD.--December 1976 to February 1977, periodic water-level measurements, February 1977 to current year, water-level recorder.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 19.84 ft (6.05 m) below land-surface datum, Mar 14, Apr. 2, 1978; lowest, 39.95 ft (12.18 m) below land-surface datum, July 24, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
NOON VALUES FROM DIGITAL RECORDER

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	23.92	21.36	19.92	20.98	20.83	20.86	20.71	*23.01	23.52	31.79	33.92	.....
10	22.64	20.72	20.72	20.68	21.00	20.29	*20.20	22.32	23.76	30.00	32.55	.....
15	22.31	21.24	20.38	20.98	20.69	19.99	.....	20.94	23.97	31.35	31.90	.....
20	22.15	20.98	20.20	22.40	20.25	20.11	.....	22.63	25.66	30.92	33.80	.....
25	21.79	20.31	20.20	21.65	20.49	20.61	.....	23.31	29.08	34.13	36.64	.....
Eom	21.25	20.81	20.59	22.06	20.36	20.60	*23.00	23.33	34.01	33.66	.....	.....

WTR YEAR 1978 MAX 19.84 MAR 14, APR 2, 1978 MIN 36.71 SEP 27, 1978

‡ Manual water-level measurement.

* Estimated.

Abram Creek at Oakmont.....	21,295	Collection and examination of water	
Accuracy of field data.....	10	quality data.....	11
Acre-foot, definition of.....	2	Collection of ground water data.....	12
Alderson, Greenbrier River at.....	157,305	Collison Creek near Nallen.....	305
Algae, definition of.....	2	Color unit, definition of.....	3
Algal growth potential, definition of.....	2	Contents, definition of.....	3
Allen Creek at Allen Junction.....	225-232,308	Control, definition of.....	3
Alum Creek, Big Coal River near.....	190-193,307	Control structure, definition of.....	3
Coal River at.....	202-205,307	Cooperation.....	1
Anthony Creek near Anthony.....	155,305	Cranberry Creek at Beckley.....	163
Aquifer, definition of.....	2	Craigsville, Gauley River near.....	165,305
Artesian, definition of.....	2	Crown, Indian Creek at.....	62,299,317
Artificial substrate, definition of.....	6	Stewart Run at.....	61,299,317
Ash mass, definition of.....	2	Cubic feet per second per square mile	
Ashford, Big Coal River at.....	189,307	definition of.....	3
Audra, Middle Fork River at.....	46,297	Cubic foot per second, definition of.....	3
Aunt Clara Fork near Paris, Pa.....	95	Cumberland, Md., North Branch Potomac	
Bacteria, definition of.....	2	River near.....	26
Baileysville, Guyandotte River near.....	257-260,309	Curtisville, Laurel Run at.....	57,298,315
Baker, Lost River at McCauley near.....	34-36,296	Danville, Little Coal River at.....	194-197,307
Barnum, North Branch Potomac River at.....	23	Davis, Blackwater River at.....	65,299
Barrackville, Buffalo Creek at.....	60,298,316	Davy Run at Katy.....	59,298,316
Bearhole Fork at Pineville.....	249-256,308	Definition of terms.....	2
Beckley, Cranberry Creek at.....	163	Diatoms, definition of.....	5
Little Whitestick Creek at.....	162	Discharge, definition of.....	3
Bed material, definition of.....	2	Dissolved, definition of.....	3
Beech Fork below Beech Fork dam.....	286,310	Diversity index, definition of.....	3
Beech Fork Lake near Lavalette.....	285	Downstream order and station number.....	7
Belington, Tygart Valley River at.....	45,297	Drainage area, definition of.....	3
Bellepoint, Big Creek near.....	305	Drainage basin, definition of.....	3
Belleville Dam, Ohio River at.....	145	Draway Creek near Peytona.....	307
Belva, Gauley River above.....	169,306	Dry Fork at Hendricks.....	64,299
Bemis, Shavers Fork at.....	66,67,300	Dry mass, definition of.....	2
Benwood, Ohio River at, near Wheeling.....	104-107,302	Dunlow, East Fork Twelvepole Creek near...	281,310
Berkeley County, ground-water levels in....	345	Durbin, Greenbrier River at.....	152,304
Big Clear Creek near Rupert.....	312	Dyer, Williams River at.....	164,305
Big Coal River at Ashford.....	189,307	East Fork Twelvepole Creek below	
near Alum Creek.....	190-193,307	East Lynn Dam.....	283,310
Big Creek near Bellepoint.....	305	near Dunlow.....	281,310
Big Sandy Creek at Rockville.....	92,301	East Lynn Dam, East Fork Twelvepole	
Biochemical oxygen demand, definition of....	2	Creek below.....	283,310
Biomass, definition of.....	2	East Lynn Lake near East Lynn.....	282
Blackwater River at Davis.....	65,299	Elk River at Clay.....	184,307
Blue-green algae, definition of.....	5	at Queen Shoals.....	185,307
Bluestone Dam, New River at.....	149-151,304	at Sutton.....	180-182,306
Bluestone Lake near Hinton.....	148	below Webster Springs.....	174-176,306
Bluestone River near Pipestem.....	147,304	near Frametown.....	183,306
Bottom material, definition of.....	2	Elkins, Shavers Fork near.....	88,300
Bowden, North Spring at.....	76-79	Tygart Valley River at.....	43
Shavers Fork above.....	68-71,300	Tygart Valley River near.....	44,296
Shavers Fork below.....	84-87,300	Elm Grove, Wheeling Creek at.....	103,301
South Spring at.....	80-83	Enterprise, West Fork River at.....	56,298
Taylor Run at.....	72-75,300	Fanrock, Brier Creek at.....	309
Branchland, Guyandotte River at.....	274-278,309	Indian Creek at.....	261-264,309
Brandywine, South Fork South Branch		Fecal coliform bacteria, definition of....	2
Potomac River at.....	30,295	Fecal streptococcal bacteria, definition of	2
Braxton County, ground-water levels in.....	345	Fort Run near Moorefield.....	296
Brier Creek at Fanrock.....	309	Frametown, Elk River near.....	183,306
Brownsville, West Fork River at.....	53,297	Franklin, Friends Run near.....	295
Buck Run near Leopold.....	303	Franklin, South Branch Potomac River at...	28,295
Buckeye, Greenbrier River at.....	154,304	Friends Run near Franklin.....	295
Buckhannon River at Hall.....	48,297	Gage height, definition of.....	3
Buckhannon, Sand Run near.....	47,297	Gaging station, definition of.....	3
Buffalo Creek at Barrackville.....	60,298,316	Gauley River above Belva.....	169,306
near Rowlesburg.....	301	below Summersville Dam.....	167,305
Buffalo Run near Little.....	303	near Craigsville.....	165,305
Burnsville Dam, Little Kanawha River below...	134,303	Gilmer County, ground-water levels in....	345
Burnsville Lake near Burnsville.....	133	Gilmer Run near Marlinton.....	306
Burnsville, Little Kanawha River at.....	135,303	Glasgow, Kanawha River at.....	173
Butcherville, West Fork River at.....	54,297	Glendale, Little Grave Creek near.....	302
Cabins, North Fork South Branch Potomac		Glenhayes, Tug Fork at.....	291,294,311
River at.....	295,313	Glen Lyn, Va., New River at.....	146
Cacapon River near Great Cacapon.....	37,296	Glenville, Little Kanawha River at.....	136,303
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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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