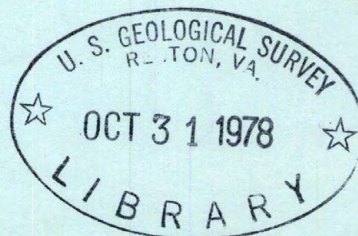


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WEST VIRGINIA
1977

Water Resources Data for West Virginia Water Year 1977



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT WV-77-1

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

CALENDAR FOR WATER YEAR 1977

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**Water Resources Data
for
West Virginia
Water Year 1977**



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT WV-77-1

**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

1978

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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[Letter after station name designates type of data: (d) discharge, (e) gage-height, (c) chemical, (sK) conductance, (pH) pH units, (t) temperature, (DO) dissolved oxygen, (U) turbidity, (s) sediment, (b) biological, (l) elevation and content]

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WATER RESOURCES DATA FOR WEST VIRGINIA, 1977

INTRODUCTION

Water resources data for the 1977 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 129 gaging stations; stage only records for 2 gaging stations; stage and contents for 7 lakes and reservoirs; contents for 1 reservoir; water quality for 43 gaging stations; and water levels for 36 observation wells. Also included are 35 crest-stage 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, 604 South Pickett Street, Alexandria, Va. 22304.

For water years 1961 through 1974, streamflow data were released by the Geological Survey in annual reports on a State-boundary basis. Water-quality records for water years 1964 through 1974 were similarly released either in separate reports or in conjunction with streamflow records. Beginning with the 1975 water year, water data for streamflow, water quality, and ground water are published 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-77-1." Water-Data reports are for sale by the National Technical Information Service, U. S. Department of Commerce, Springfield, Virginia, 22161.

COOPERATION

The U.S. Geological Survey and organizations of the State of 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, J. H. Hall, Jr., Chief.

West Virginia State Department of Highways, J. S. Jones, 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 during the year was at or below normal throughout the State and averaged about 90 percent of normal in the Potomac River basin, about 85 percent of normal in the west-central part of the State, and near normal throughout the remainder of the State. Graphical illustrations of monthly and yearly streamflow conditions during the year in comparison with previous records for three stations are shown on page 16.

Ground-water levels throughout the State at year end were generally above average in the central one-third of the State and below elsewhere. Water levels were generally below average in the southern one-third of the State throughout the year and at or above average in the northern third.

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

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

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

Ash mass is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500°C for 1 hour. The ash mass values of zooplankton and phytoplankton are expressed in grams per cubic meter (g/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: See Bed material.

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.

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.
Sand.....	.062 - 2.0	Sedimentation or sieve.
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 [mg C/(m²·time) for periphyton and macrophytes and mg C/(m³·time)] for phytoplankton are units for expressing primary productivity. They define the amount of carbon dioxide consumed as measured by radioactive carbon (carbon 14). The carbon 14 method is of greater sensitivity than the oxygen light and dark bottle method, and is preferred for use in unenriched waters. Unit time may be either the hour or day, depending on the incubation period.

Milligrams of oxygen per area or volume per unit time [mg O₂/(m²·time) for periphyton and macrophytes and mg O₂/(m³·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.

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 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.

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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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.

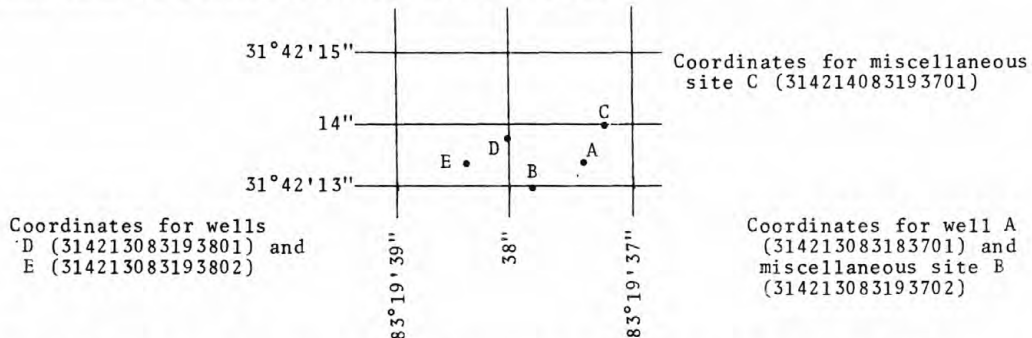


Figure 1. System for numbering wells and miscellaneous sites (latitude and longitude)

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 period 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 above mean sea level, and a condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE". In references to datum of gage, the phrase "mean sea level" denotes "Sea Level Datum of 1929" as used by the Topographic Division of the Geological Survey unless otherwise qualified.

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 cfs; to tenths between 1.0 and 10 cfs; to whole numbers between 10 and 1,000 cfs; and to 3 significant figures above 1,000 cfs. 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 usually are collected at or near gaging stations. The quality-of-water records are given immediately following the discharge records at these stations.

The descriptive heading for water-quality records 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 either mean sea level (msl) or land-surface datum (lsd). Mean sea level is the datum plane on which the national network of precise levels is based; land-surface datum is a datum plane that is approximately at land surface at each well. If known, the altitude of the land-surface datum above mean sea level 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 January 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. \$0.65.
- 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. \$0.35.
- 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. Greeson, T.A. Ehke, 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.

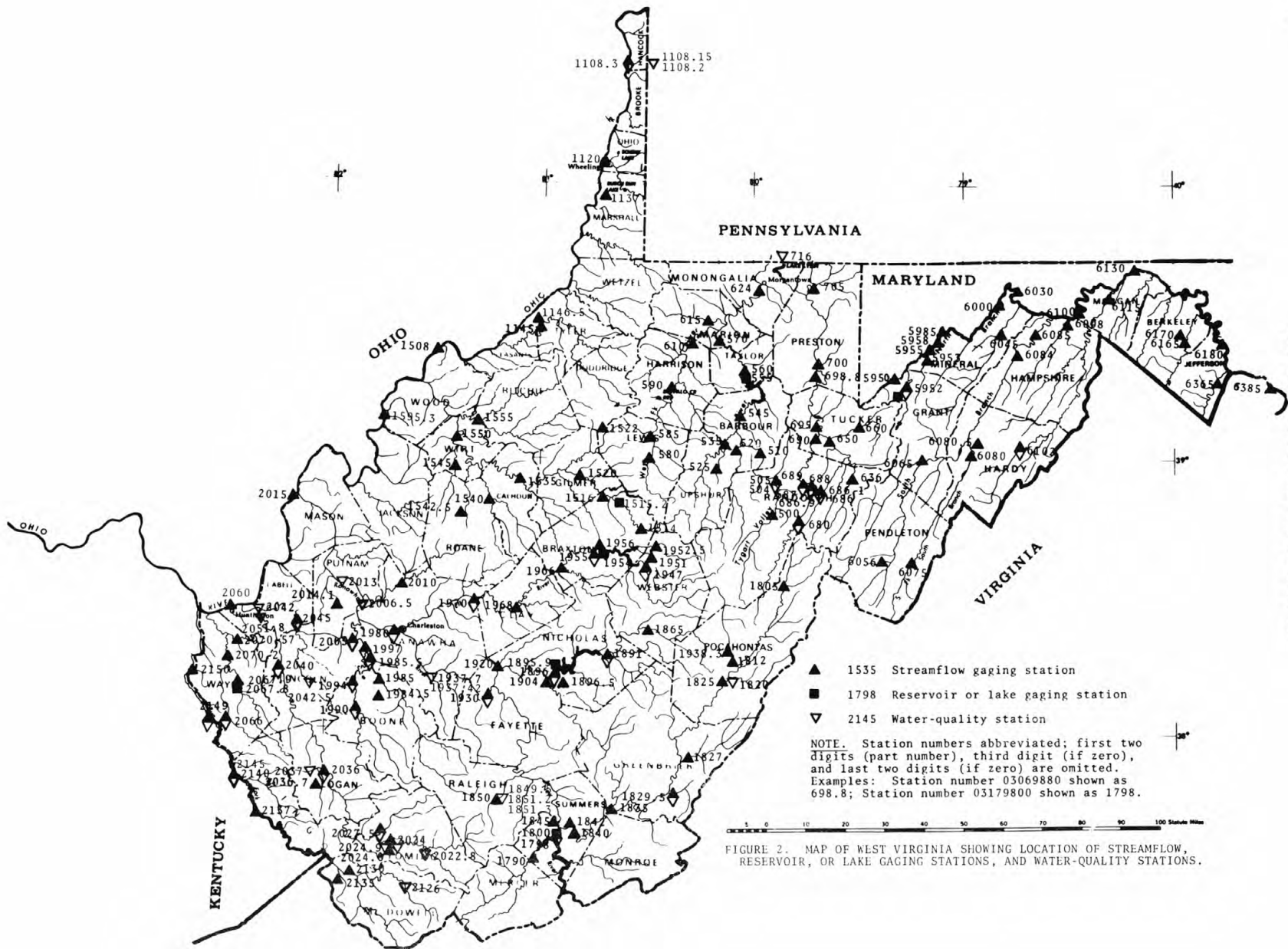


FIGURE 2. MAP OF WEST VIRGINIA SHOWING LOCATION OF STREAMFLOW, RESERVOIR, OR LAKE GAGING STATIONS, AND WATER-QUALITY STATIONS.

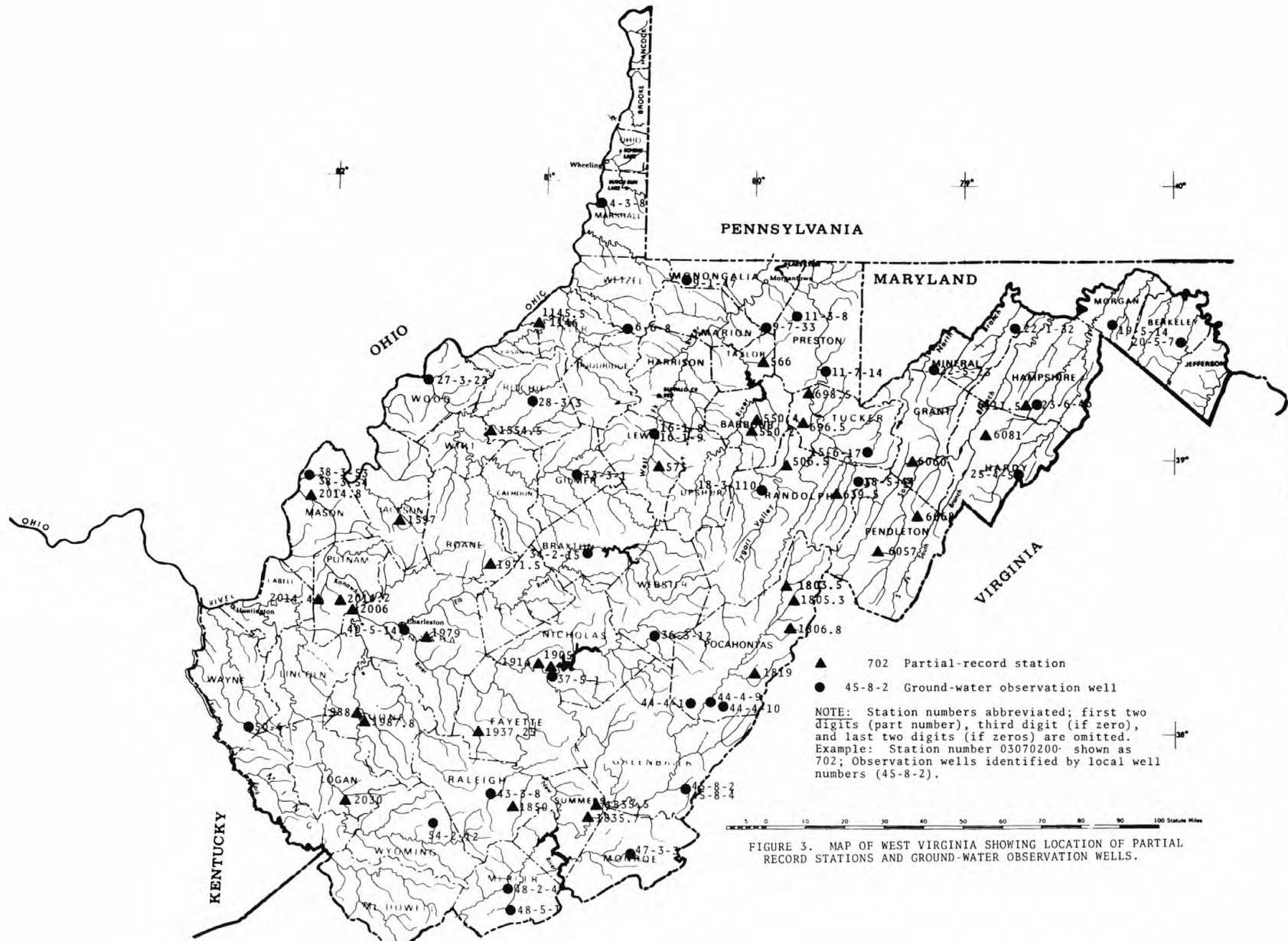


FIGURE 3. MAP OF WEST VIRGINIA SHOWING LOCATION OF PARTIAL RECORD STATIONS AND GROUND-WATER OBSERVATION WELLS.

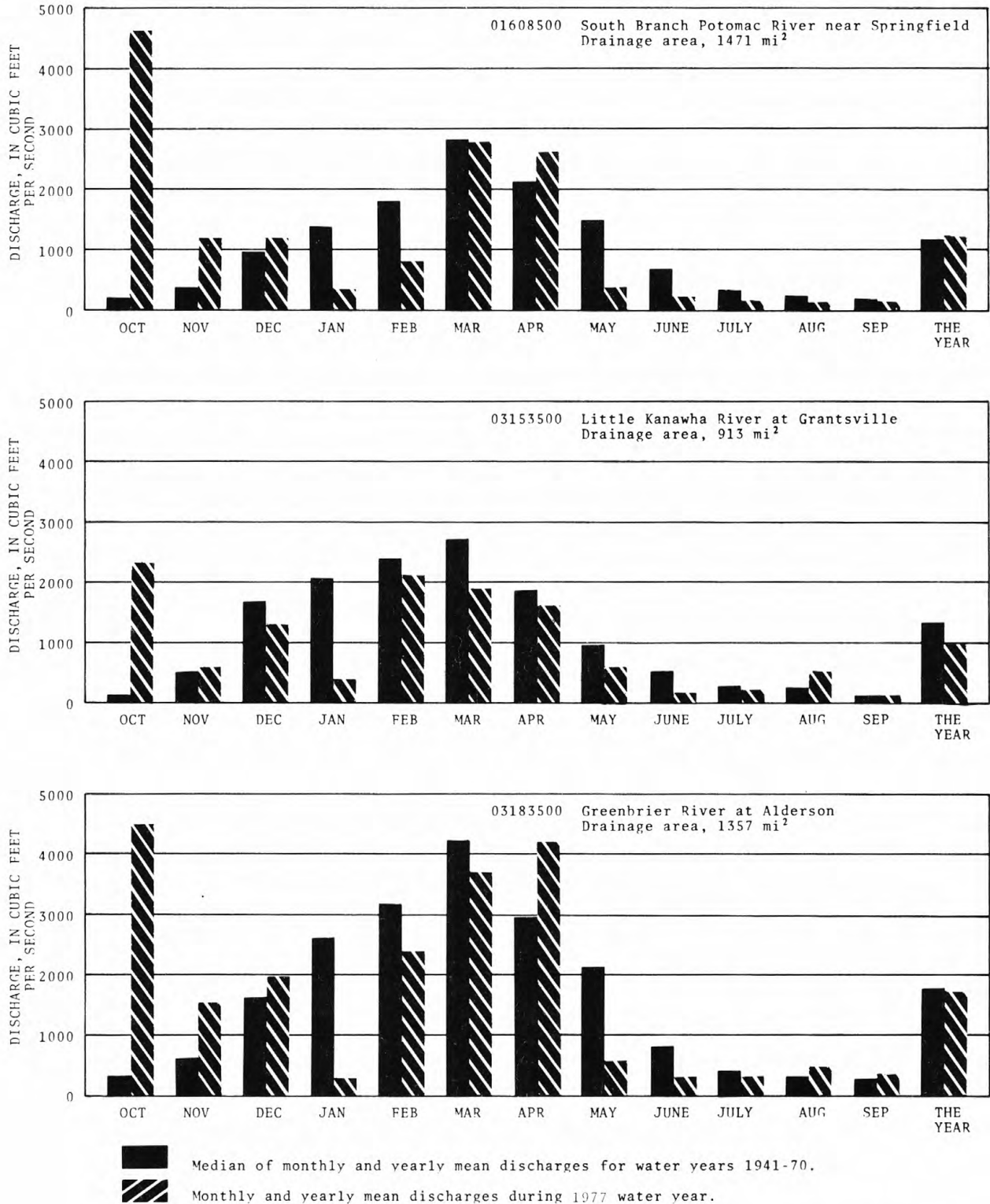


FIGURE 3.--RUNOFF DURING 1977 WATER YEAR COMPARED WITH MEDIAN RUNOFF FOR PERIOD 1941-70 FOR THREE REPRESENTATIVE GAGING STATIONS.

GAGING STATION RECORDS

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) above mean sea level.

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

AVERAGE DISCHARGE.--21 years, 169 ft³/s (4.786 m³/s), 31.44 in/yr (799 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,240 ft³/s (177 m³/s) Mar. 5, 1963, gage height, 9.13 ft (2.783 m), from rating curve extended above 3,000 ft³/s (85 m³/s); 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.--Maximum discharge, 3,220 ft³/s (91.2 m³/s) Oct. 9, gage height, 6.96 ft (2.121 m), no other peak above base of 2,200 ft³/s (62 m³/s); minimum, 14 ft³/s (0.40 m³/s) July 24, 25, Sept. 10, gage height, 2.19 ft (0.668 m).

DISCHARGE IN CURIC FEET PER SECOND WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	195	459	90	56	31	456	174	62	38	44	23	23
2	245	311	105	54	30	317	351	57	33	41	20	21
3	368	248	80	52	33	250	382	51	30	36	19	22
4	151	212	74	52	35	1180	425	49	29	32	18	20
5	106	175	78	50	37	1130	1100	70	28	31	17	17
6	85	147	78	50	35	665	650	101	32	41	17	16
7	80	127	748	50	32	451	450	151	36	32	32	16
8	225	119	408	48	30	325	421	135	29	32	134	16
9	1760	111	250	48	28	273	308	98	182	38	64	16
10	1180	161	202	46	33	266	253	83	174	37	42	15
11	481	144	215	44	46	253	213	75	80	36	52	17
12	293	123	310	44	80	255	174	66	60	41	51	17
13	210	108	268	42	140	1050	150	61	46	163	111	20
14	173	99	203	42	230	525	135	128	46	81	257	24
15	139	99	182	41	170	365	120	78	57	46	179	29
16	135	93	164	41	110	284	105	65	42	39	96	26
17	114	83	145	40	95	230	91	58	36	32	133	28
18	96	85	123	40	100	355	85	54	46	26	103	23
19	82	84	108	40	105	321	76	165	36	22	71	21
20	169	88	116	40	90	288	76	97	41	20	57	64
21	418	81	112	38	80	256	84	74	93	17	49	39
22	227	82	90	37	95	455	73	65	48	19	45	27
23	170	76	84	36	300	407	66	107	38	17	45	23
24	279	74	78	35	1300	338	69	143	36	14	55	21
25	447	82	84	34	1140	268	72	82	64	79	62	20
26	513	107	90	34	981	235	64	66	104	112	41	32
27	324	174	80	33	1030	203	72	53	58	39	35	39
28	243	164	88	33	781	289	64	49	46	29	36	54
29	198	157	78	32	---	250	84	46	60	24	36	33
30	178	110	66	32	---	211	69	44	54	24	31	27
31	498	---	60	31	---	205	---	41	---	23	31	---
TOTAL	9785	4183	4857	1295	7197	12356	6456	2475	1702	1267	1962	766
MEAN	316	139	157	41.8	257	399	215	79.8	56.7	40.9	63.3	25.5
MAX	1760	459	748	56	1300	1180	1100	165	182	163	257	64
MIN	80	74	60	31	28	203	64	41	28	14	17	15
CFSM	4.33	1.90	2.15	.57	3.52	5.47	2.95	1.09	.78	.56	.87	.35
IN.	4.99	2.13	2.48	.66	3.67	6.30	3.29	1.26	.87	.65	1.00	.39
CAL YR 1976	TOTAL	57638.4	MEAN 157	MAX 1760	MIN 9.4	CFSM 2.15	IN 29.37					
WTR YR 1977	TOTAL	54301.0	MEAN 149	MAX 1760	MIN 14	CFSM 2.04	IN 27.67					

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) above mean sea level.

REMARKS.--Water-discharge records good except those for December, 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.--16 years, 94.7 ft³/s (2.682 m³/s), 26.35 in/yr (669 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,120 ft³/s (88.4 m³/s) Mar. 19, 1963, from rating curve extended above 1,000 ft³/s (28.3 m³/s); maximum gage height, 8.41 ft (2.563 m) Mar. 5, 1963, ice jam; minimum discharge, 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, 1.82 ft (0.555 m), Sept. 11, 12, 13, 14, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,640 ft³/s (46.4 m³/s) Oct. 9, gage height, 6.46 ft (1.969 m), from rating curve extended above 1,000 ft³/s (28.3 m³/s); minimum, 7.9 ft³/s (0.22 m³/s) Sept. 11, 12, 13, 14, gage height, 1.82 ft (0.555 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	194	60	28	22	435	95	19	27	15	9.8	9.2
2	46	162	56	27	23	304	128	18	26	14	9.7	8.5
3	146	150	47	28	19	230	131	18	23	13	9.6	8.9
4	50	146	43	28	19	449	180	19	20	13	9.4	9.0
5	66	137	41	29	20	408	565	21	18	12	9.3	8.7
6	72	124	39	29	18	319	454	22	19	13	9.8	8.6
7	40	110	144	28	18	273	387	31	19	12	20	8.4
8	302	95	101	28	19	233	355	28	16	12	33	8.8
9	1040	91	76	27	18	209	294	24	51	12	17	8.7
10	1240	54	71	26	22	194	252	23	48	12	13	8.4
11	821	81	85	22	31	182	215	21	29	12	12	8.0
12	391	75	118	22	39	197	180	20	24	13	12	8.1
13	308	68	107	23	71	630	159	22	22	22	20	8.0
14	135	62	95	25	60	427	88	55	30	14	29	8.9
15	124	59	94	28	55	387	36	29	33	12	21	9.0
16	118	56	94	28	47	351	33	25	25	11	14	8.8
17	102	52	91	27	45	308	31	21	23	11	19	9.2
18	89	51	81	25	51	315	30	21	21	10	16	8.6
19	80	50	78	24	54	290	27	49	18	10	12	8.4
20	129	52	79	23	50	273	27	34	22	10	11	12
21	177	47	74	22	44	239	26	29	31	10	10	9.4
22	122	47	73	21	51	273	24	26	20	11	11	8.7
23	108	43	65	21	110	239	25	49	16	9.7	10	8.7
24	137	41	57	21	435	203	24	49	15	9.4	14	8.5
25	180	43	52	21	363	175	23	36	32	23	13	8.5
26	224	52	50	22	343	146	22	33	34	23	10	9.9
27	167	71	48	23	458	73	22	32	21	12	12	10
28	148	68	46	22	476	96	21	30	19	11	14	12
29	133	73	43	21	---	99	23	31	21	11	10	9.7
30	131	64	35	21	---	92	20	31	16	11	9.4	8.9
31	206	---	30	21	---	101	---	31	---	10	9.3	---
TOTAL	7244	2462	2178	761	2981	8150	3897	897	739	394.1	429.3	270.5
MEAN	234	82.1	70.3	24.5	106	263	130	28.9	24.6	12.7	13.8	9.02
MAX	1240	194	144	29	476	630	565	55	51	23	33	12
MIN	50	41	30	21	18	73	20	18	15	9.4	9.3	8.0
(†)	1175	1164	1175	1175	1046	1197	1180	1186	1303	1303	1283	1219
CAL YR 1976 TOTAL	31182.0			MEAN 85.2	MAX 1240	MIN 8.0	CFSM 1.75	IN 23.77				
WTR YR 1977 TOTAL	30402.9			MEAN 83.3	MAX 1240	MIN 8.0	CFSM 1.71	IN 23.18				

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

POTOMAC RIVER BASIN

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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 clock stopped Oct. 1-6 (range in temperature 12.0 to 16.0°C).

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, 24.0°C July 18, 20; minimum, 0.0°C on many days during February.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
(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	---	---	10.5	10.0	4.0	3.0	2.5	2.5	0.5	0.5	5.5	5.5
2	---	---	11.0	10.0	4.0	3.5	2.5	2.0	0.5	0.0	5.5	5.5
3	---	---	11.5	10.5	3.5	2.5	2.0	2.0	0.0	0.0	7.0	5.5
4	---	---	11.5	11.0	4.0	2.5	2.0	2.0	0.0	0.0	7.0	6.0
5	---	---	11.0	10.0	4.0	3.5	2.5	2.5	0.0	0.0	6.5	6.5
6	---	---	10.0	9.0	3.5	3.0	2.5	2.5	0.0	0.0	6.5	6.5
7	17.0	16.5	10.0	9.0	4.0	4.0	2.5	2.5	0.0	0.0	7.0	6.5
8	17.0	15.5	9.0	7.0	4.0	3.5	2.5	2.0	0.5	0.0	7.5	7.0
9	17.5	15.5	8.0	6.5	3.5	3.5	2.0	2.0	0.0	0.0	8.5	7.5
10	19.0	17.5	8.0	7.5	4.5	3.5	2.0	2.0	0.5	0.0	9.5	8.5
11	19.0	17.5	7.5	7.5	5.5	4.5	2.0	2.0	0.0	0.0	10.0	9.0
12	18.5	17.5	7.0	6.5	6.0	5.5	2.0	2.0	0.0	0.0	10.5	10.0
13	18.5	16.5	7.0	6.0	6.0	4.5	2.0	1.5	0.0	0.0	10.5	9.5
14	16.5	13.0	6.0	5.0	4.5	4.0	1.5	1.5	0.5	0.5	9.5	9.5
15	15.0	13.0	7.0	6.0	5.0	4.5	1.5	1.5	0.5	0.5	10.0	9.5
16	15.0	13.5	6.5	6.0	6.5	5.0	1.5	1.5	1.0	0.5	11.0	10.5
17	13.5	12.5	6.0	5.0	6.0	5.0	1.5	1.5	1.0	1.0	11.0	10.5
18	12.5	11.0	6.5	6.0	5.0	4.5	1.5	1.5	1.0	1.0	11.5	11.0
19	11.5	10.0	7.0	6.0	5.5	4.5	1.5	1.5	1.5	1.5	11.0	10.5
20	12.0	11.0	6.5	5.0	6.5	5.5	1.5	1.0	1.5	1.5	10.5	10.5
21	11.5	10.0	5.5	5.0	6.0	3.0	1.0	1.0	1.5	1.5	11.0	11.0
22	10.5	10.0	5.0	3.5	3.5	3.0	1.0	1.0	2.0	1.5	11.0	10.0
23	11.0	9.5	4.0	3.5	3.5	3.0	1.0	1.0	3.0	2.5	10.0	9.5
24	11.5	11.0	4.0	3.5	3.5	2.5	1.0	1.0	2.5	2.5	10.0	9.5
25	13.0	11.5	5.0	3.5	3.5	2.5	1.0	1.0	2.5	2.5	10.0	9.5
26	12.5	11.0	6.0	5.0	3.5	3.0	1.0	1.0	3.5	2.5	11.5	10.5
27	11.0	10.5	8.0	6.0	3.5	3.0	1.0	1.0	5.0	4.0	11.5	9.5
28	10.5	10.0	8.0	7.5	4.0	3.0	1.0	0.5	5.5	5.0	11.5	10.5
29	10.5	9.5	8.0	4.0	4.0	3.0	0.5	0.5	---	---	13.0	11.5
30	11.5	10.0	4.0	2.5	3.0	2.5	0.5	0.5	---	---	14.5	13.0
31	11.0	10.5	---	---	2.5	2.5	0.5	0.5	---	---	15.0	14.0
MONTH	19.0	9.5	11.5	2.5	6.5	2.5	2.5	0.5	5.5	0.0	15.0	5.5

POTOMAC RIVER BASIN

21

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.--47.3 mi² (122.5 km²).

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 December, January, and February, which are poor.

AVERAGE DISCHARGE.--21 years, 65.9 ft³/s (1.866 m³/s), 18.92 in/yr (481 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,120 ft³/s (60.0 m³/s) Mar. 5, 1963, gage height, 7.78 ft (2.371 m), from rating curve extended above 1,200 ft³/s (34.0 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 as explained above.

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)	
Oct. 9	1045	*1440	40.8	6.93	2.112	Mar. 13	0745	810	22.9	5.80	1.768
Feb. 24	1800	1140	32.3	6.44	1.963						

Minimum discharge, 1.1 ft³/s (0.031 m³/s) Sept. 12, 13, 14, gage height, 2.07 ft (0.631 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	112	119	38	29	16	149	69	32	15	8.9	3.5	2.5
2	119	88	48	28	15	115	154	30	13	8.9	2.7	1.8
3	165	77	42	27	16	94	144	30	13	7.1	2.4	1.4
4	58	70	42	26	16	292	208	32	11	6.5	2.1	1.6
5	41	62	41	27	17	262	427	39	10	6.2	1.8	1.5
6	32	56	38	27	16	175	247	48	11	6.2	1.6	1.4
7	31	52	191	28	15	137	199	72	14	6.5	5.1	1.4
8	183	50	124	26	14	108	177	55	11	5.9	17	1.6
9	770	47	71	25	15	92	137	44	30	13	10	1.9
10	305	65	71	24	17	83	115	39	28	13	7.5	1.9
11	165	61	79	23	30	76	97	37	17	10	6.5	1.4
12	112	53	100	22	115	77	82	33	14	12	4.8	1.3
13	83	48	81	21	162	439	73	31	13	29	7.4	1.0
14	69	46	60	22	115	222	67	43	18	15	13	1.3
15	55	46	58	24	76	158	60	32	40	9.2	13	2.1
16	50	46	54	22	60	127	55	28	19	7.4	8.1	3.5
17	43	42	50	20	50	102	51	27	18	6.2	7.6	3.8
18	38	43	47	19	42	144	48	25	16	5.3	11	3.3
19	33	42	45	18	46	137	46	35	13	4.4	6.7	2.5
20	88	41	48	17	35	122	43	29	12	4.1	5.0	6.2
21	153	38	44	17	31	107	41	24	21	3.8	3.7	5.9
22	76	37	40	17	35	167	38	21	14	3.8	4.0	3.8
23	59	34	37	16	156	154	49	34	11	3.8	3.8	2.7
24	77	34	35	15	602	130	53	34	10	2.5	4.7	2.3
25	127	35	38	16	443	102	43	25	13	14	7.3	2.3
26	206	44	42	17	307	88	38	21	25	28	4.7	4.7
27	124	53	45	17	267	78	38	19	13	9.7	3.6	5.9
28	94	48	47	18	204	120	37	17	11	6.3	3.0	5.6
29	81	52	41	17	---	107	42	16	13	4.9	2.7	5.0
30	74	39	36	16	---	83	35	16	10	5.0	2.6	3.5
31	148	---	31	16	---	78	---	16	---	4.2	2.7	---
TOTAL	3771	1568	1764	657	2933	4325	2913	984	477	270.8	179.6	85.1
MEAN	122	52.3	56.9	21.2	105	140	97.1	31.7	15.9	8.74	5.79	2.84
MAX	770	119	191	29	602	439	427	72	40	29	17	6.2
MIN	31	34	31	15	14	76	35	16	10	2.5	1.6	1.0
CFSM	2.58	1.11	1.20	0.45	2.22	2.96	2.05	0.67	0.34	0.19	0.12	0.06
IN.	2.97	1.23	1.39	0.52	2.31	3.40	2.29	0.77	0.38	0.21	0.14	0.07

CAL YR 1976 TOTAL 20745.4 MEAN 56.7 MAX 770 MIN 1.7 CFSM 1.20 IN 16.32
WTR YR 1977 TOTAL 19927.5 MEAN 54.6 MAX 770 MIN 1.0 CFSM 1.15 IN 15.67

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) above mean sea level. 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.--28 years, 441 ft³/s (12.49 m³/s), 26.62 in/yr (676 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)	
Oct. 9	1145	*8910	252	8.20	2.499	Mar. 13	0900	5160	146	7.38	2.249
Feb. 24	1700	5550	157	7.50	2.286	Apr. 5	0330	4210	119	7.05	2.149
Mar. 4	2200	3770	107	6.88	2.097						

Minimum discharge, 25 ft³/s (0.71 m³/s) Sept. 11, 12, gage height, 2.35 ft (0.716 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

Day	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	506	1040	255	150	78	1420	502	164	102	79	43	44
2	588	791	295	150	78	1050	913	152	89	73	37	37
3	916	661	221	145	86	828	1020	147	86	63	35	35
4	390	559	205	145	92	2350	1130	150	74	57	34	35
5	275	514	220	140	100	2500	3090	190	68	54	29	32
6	250	449	218	135	92	1630	1930	242	71	60	30	30
7	210	397	1270	130	82	1230	1520	449	85	58	42	29
8	744	367	939	125	78	969	1400	375	72	52	208	28
9	4710	334	581	125	74	831	1110	280	236	67	126	30
10	3390	439	501	120	84	774	939	245	337	78	80	28
11	2100	424	538	115	110	716	802	225	171	68	84	26
12	1310	361	721	115	190	707	675	200	124	78	68	26
13	912	370	685	110	350	2760	586	162	103	218	129	27
14	628	293	513	110	554	1670	497	294	104	159	259	31
15	490	286	479	105	411	1280	370	225	196	88	281	43
16	437	277	448	105	304	1080	324	182	120	67	153	44
17	372	251	412	100	258	995	291	159	100	56	154	46
18	315	258	358	100	261	1090	267	145	108	49	176	43
19	271	249	323	98	273	1110	245	267	91	43	112	34
20	427	261	337	94	242	970	227	236	79	38	89	67
21	1050	238	341	94	220	693	232	175	175	37	76	83
22	633	237	260	92	246	1250	208	150	114	39	68	47
23	502	210	245	90	745	1230	206	154	83	37	63	39
24	599	205	220	88	3290	1040	226	297	73	30	67	35
25	984	213	225	86	2920	836	206	185	83	69	109	34
26	1310	260	252	84	2330	722	184	154	225	277	70	46
27	897	414	230	84	2390	571	197	136	124	95	58	64
28	715	391	250	82	1980	744	184	122	93	62	68	81
29	604	390	224	82	---	718	220	112	110	51	61	62
30	536	305	188	80	---	591	184	110	102	50	53	46
31	1090	---	170	80	---	563	---	108	---	48	53	---
TOTAL	28140	11424	12124	3359	17918	35026	19885	6212	3598	2300	2921	1252
MEAN	908	381	391	108	640	1130	663	200	120	74.2	94.2	41.7
MAX	4710	1040	1270	150	3290	2760	3090	449	337	277	281	83
MIN	210	205	170	80	74	563	184	108	68	30	29	26
CAL YR 1976	TOTAL	148287	MEAN	405	MAX	4710	MIN	26	CFSM	1.80	IN.	24.51
WTR YR 1977	TOTAL	144161	MEAN	395	MAX	4710	MIN	26	CFSM	1.76	IN.	23.83

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) above mean sea level.

REMARKS.--Records good except those for period of no gage-height record, Oct. 9-12, 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.--11 years, 515 ft³/s (14.58 m³/s), 26.29 in/yr (668 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,800 ft³/s (362 m³/s) Dec. 8, 1972, gage height, 9.86 ft (3.005 m); 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)	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)
Oct. 9	Unknown	*9800	278	9.06	2.761	Mar. 13	Unknown	6380	181	7.88	2.402
Feb. 24	Unknown	6700	190	8.01	2.441	Apr. 5	Unknown	5400	153	7.45	2.271

Minimum discharge, 28 ft³/s (0.79 m³/s) Sept. 12, 13, gage height, 2.12 ft (0.646 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	599	1190	308	180	88	1600	548	196	126	93	52	49
2	651	888	354	170	86	1200	1030	185	112	84	47	40
3	987	770	264	160	92	950	1160	178	106	75	43	38
4	452	684	245	155	98	2700	1220	173	97	66	41	38
5	315	592	260	150	105	2900	3500	214	89	63	38	36
6	264	530	255	150	96	2000	2200	270	90	60	35	33
7	248	477	1340	145	92	1400	1700	540	101	73	38	31
8	768	438	1110	145	88	1070	1480	458	98	63	208	31
9	5600	384	660	140	82	903	1140	342	225	65	150	31
10	3800	497	570	135	105	835	947	295	402	93	99	34
11	2400	524	593	125	125	775	812	269	208	79	89	34
12	1550	440	755	120	220	752	685	238	147	90	83	30
13	896	392	782	120	400	3100	592	218	124	198	109	30
14	652	354	571	120	630	1850	514	317	113	204	236	35
15	510	348	552	115	470	1450	391	266	218	108	352	43
16	467	336	512	115	350	1200	349	212	148	79	181	51
17	411	306	481	115	290	951	315	187	118	68	145	55
18	336	317	417	110	300	1160	292	180	116	59	212	51
19	310	305	374	110	310	1220	271	315	111	52	129	42
20	460	310	384	110	284	1020	258	296	92	47	101	46
21	1310	293	401	105	255	950	253	213	171	43	88	106
22	749	284	300	105	264	1360	237	183	139	45	77	59
23	578	259	280	100	678	1340	238	195	98	45	76	47
24	650	245	250	98	3500	1120	266	353	83	39	68	43
25	1180	260	265	96	3100	889	243	224	93	53	106	41
26	1570	289	295	96	2700	777	220	191	228	319	83	46
27	1030	450	260	94	2800	624	224	166	144	122	65	66
28	815	453	290	92	2300	794	216	147	107	78	66	83
29	688	441	260	90	---	804	250	140	106	63	67	78
30	609	360	215	88	---	649	222	139	114	60	58	56
31	1240	---	205	88	---	611	---	134	---	58	56	---
TOTAL	32095	13416	13808	3742	19908	38954	21773	7434	4124	2644	3198	1403
MEAN	1035	447	445	121	711	1257	726	240	137	85.3	103	46.8
MAX	5600	1190	1340	180	3500	3100	3500	540	402	319	352	106
MIN	248	245	205	88	82	611	216	134	83	39	35	30
CAL YR 1976	TOTAL	166344	MEAN 454	MAX 5600	MIN 30	CFSM 1.71	IN. 23.26					
WTR YR 1977	TOTAL	162499	MEAN 445	MAX 5600	MIN 30	CFSM 1.67	IN. 22.72					

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) above mean sea level. 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.--34 years (water years 1900-05, 1950-77), 697 ft³/s (19.74 m³/s), 23.43 in/yr (595 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, 9,230 ft³/s (261 m³/s) Oct. 9, gage height, 9.21 ft (2.807 m); minimum, 90 ft³/s (2.55 m³/s) July 3, 4, gage height, 1.20 ft (0.366 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	749	1580	400	230	120	2950	714	229	138	108	104	99
2	780	1070	450	230	120	2010	1220	218	126	98	105	101
3	1150	1180	360	225	130	1500	1460	211	120	94	107	110
4	572	1290	340	220	140	2970	1740	209	109	93	104	110
5	401	1050	360	210	150	3950	4650	248	101	94	102	109
6	343	651	460	205	140	2750	3560	302	102	92	108	106
7	317	589	1670	200	125	2140	2890	569	111	105	118	104
8	874	551	1660	195	120	1780	2100	523	108	98	250	103
9	5290	503	1260	190	115	1580	1450	394	206	105	222	102
10	4310	602	1140	180	125	1320	1230	336	433	131	167	102
11	2840	638	1130	180	170	942	1070	306	232	123	146	102
12	2240	552	1290	175	260	917	920	270	162	135	146	107
13	1780	500	1070	170	450	3450	784	249	136	211	158	115
14	1550	461	669	165	750	3040	672	331	126	272	237	109
15	1230	704	650	160	600	3230	534	309	224	153	406	107
16	787	634	841	160	480	2320	473	243	167	120	205	111
17	522	406	857	155	400	1630	432	214	130	109	155	104
18	461	414	513	150	380	1600	384	334	127	102	231	102
19	413	400	464	150	420	1510	333	489	125	103	151	103
20	539	407	474	145	390	1240	314	496	107	101	124	113
21	1710	387	497	145	360	1430	308	498	169	103	117	167
22	1380	378	390	140	340	2090	288	460	161	109	111	130
23	976	351	370	140	800	2130	289	210	113	109	107	115
24	747	330	340	135	3200	1860	325	363	101	104	105	111
25	1340	349	325	135	4600	1590	296	248	113	119	135	108
26	2060	380	400	130	4540	1170	265	208	241	370	121	115
27	1720	529	360	130	4520	802	260	182	172	174	103	136
28	1460	550	350	130	4000	978	254	163	124	118	109	149
29	1310	537	550	125	---	1020	292	154	120	104	119	149
30	1210	459	445	125	---	837	263	154	130	106	108	124
31	1840	---	260	120	---	781	---	147	---	108	106	---
TOTAL	42901	18432	20345	5150	27945	57517	29770	9267	4534	3971	4587	3423
MEAN	1384	614	656	166	998	1855	992	299	151	128	148	114
MAX	5290	1580	1670	230	4600	3950	4650	569	433	370	406	167
MIN	317	330	260	120	115	781	254	147	101	92	102	99
CAL YR 1976 TOTAL	228453		MEAN 624	MAX 5290	MIN 96	CFSM 1.55	IN. 21.03					
WTR YR 1977 TOTAL	227842		MEAN 624	MAX 5290	MIN 92	CFSM 1.55	IN. 20.97					

POTOMAC RIVER BASIN

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) above mean sea level (Corps of Engineers bench mark). 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.--39 years, 873 ft³/s (24.72 m³/s), 19.89 in/yr (505 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, 12,300 ft³/s (348 m³/s) Oct. 9, gage height, 12.92 ft (3.938 m); minimum, 90 ft³/s (2.55 m³/s) July 4, Aug. 6, gage height, 1.73 ft (0.527 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	936	2120	433	300	160	3280	1070	319	178	138	116	110
2	1050	1450	484	300	160	2400	1670	299	165	116	107	101
3	1340	1380	410	295	175	1800	2400	294	153	104	109	104
4	892	1590	377	290	185	3180	2250	282	143	97	111	114
5	552	1430	408	280	190	5230	6280	314	131	102	106	112
6	462	873	473	275	185	3410	4610	376	136	103	101	116
7	420	775	1300	270	170	2630	3660	620	152	104	117	108
8	1030	710	2140	260	160	2170	2770	663	146	117	145	109
9	6850	651	1610	250	155	1900	1990	512	162	114	276	106
10	5500	686	1380	240	165	1720	1700	423	430	132	195	105
11	3180	816	1370	235	214	1210	1480	385	322	144	162	103
12	2570	704	1490	230	381	1140	1270	347	212	152	156	102
13	2040	633	1480	225	721	4920	1110	316	172	157	153	115
14	1830	582	878	220	1010	4100	950	320	158	304	211	123
15	1490	676	835	215	869	3830	798	419	208	196	384	113
16	1060	905	887	210	652	2970	689	311	239	147	270	119
17	660	514	1160	205	499	2080	618	273	170	125	186	120
18	569	496	679	200	461	2100	565	315	157	114	213	111
19	500	492	588	200	526	2220	489	505	153	106	191	106
20	625	483	581	195	497	1750	455	633	143	109	146	119
21	2010	474	631	190	433	1820	423	599	141	104	132	135
22	1750	451	475	185	395	2460	404	524	214	112	130	163
23	1350	430	430	185	667	2950	405	303	156	110	121	130
24	944	392	410	180	2860	2450	473	363	128	111	119	120
25	1720	400	392	180	5910	2070	418	334	121	115	120	118
26	2580	418	481	175	5170	1710	380	261	178	300	149	128
27	2240	534	436	175	4890	1200	353	230	237	253	123	136
28	1850	634	425	170	4420	1370	352	206	164	151	108	173
29	1630	617	552	170	---	1620	384	192	145	123	119	162
30	1480	564	677	165	---	1290	370	193	143	117	119	146
31	2150	---	325	160	---	1170	---	189	---	117	115	---
TOTAL	53260	22880	24197	6830	32280	74150	40786	11324	5357	4294	4810	3627
MEAN	1718	763	781	220	1153	2392	1360	365	179	139	155	121
MAX	6850	2120	2140	300	5910	5230	6280	663	430	304	384	173
MIN	420	392	325	160	155	1140	352	189	121	97	101	101
CAL YR 1976	TOTAL	289891	MEAN 792	MAX 6850	MIN 116	CFSM 1.33	IN. 18.09					
WTR YR 1977	TOTAL	283795	MEAN 778	MAX 6850	MIN 97	CFSM 1.30	IN. 17.71					

POTOMAC RIVER BASIN

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) above mean sea level (Corps of Engineers bench mark). 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.--48 years, 1,236 ft³/s (35.00 m³/s), 19.18 in/yr (487 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)
Oct. 9	2215	*18200	515	15.00	4.572	Mar. 13	2100	11500	326	10.95	3.338
Feb. 25	0915	10400	295	10.26	3.127	Apr. 5	1400	10400	295	10.25	3.124

Minimum discharge, 124 ft³/s (3.51 m³/s) Sept. 3, 11, 12, 13; minimum daily, 129 ft³/s (3.65 m³/s) Sept. 3, 11-13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2110	3250	567	455	235	4590	1900	569	266	180	161	141
2	2130	2370	602	450	235	3440	2530	520	248	161	152	140
3	1970	2070	564	435	240	2510	5040	505	225	147	147	129
4	1460	2330	491	419	270	4470	3860	484	208	138	147	143
5	896	2050	534	410	280	8560	8240	564	197	138	147	142
6	704	1410	513	401	270	5630	7050	640	225	138	142	143
7	655	1180	1650	400	250	4100	5480	1200	242	138	147	138
8	1980	1070	3270	390	230	3310	4150	1250	225	152	161	138
9	10800	986	2410	365	225	2810	3370	1020	248	152	310	137
10	10800	973	1990	355	240	2510	2840	848	446	166	267	134
11	5160	1100	1910	340	305	1890	2400	740	483	208	214	129
12	3870	995	2000	330	305	1670	2040	647	312	231	190	129
13	2930	899	2130	325	1010	7050	1750	581	248	254	197	129
14	2540	826	1280	320	1560	7400	1510	544	242	346	232	144
15	2070	802	1180	310	1370	5800	1310	646	260	290	426	143
16	1570	1200	1160	305	1050	4550	1130	517	344	208	394	143
17	1010	731	1550	300	811	3470	1010	454	248	166	340	154
18	862	697	1090	295	724	3540	924	421	231	152	316	147
19	760	685	885	290	809	4190	847	674	225	138	291	143
20	999	662	863	285	803	3560	789	816	225	530	203	144
21	3150	659	901	285	687	3340	746	707	202	311	170	148
22	2940	629	727	280	602	4040	712	676	254	219	175	193
23	2260	605	660	275	820	5140	688	635	231	186	166	162
24	1640	549	630	270	3290	4050	728	460	180	170	156	148
25	2560	555	557	265	9030	3290	740	527	166	180	156	149
26	3750	563	701	260	7550	2800	698	401	208	266	170	170
27	3590	644	660	255	6730	2120	651	354	350	405	166	236
28	2870	795	619	250	6070	2520	618	313	248	219	142	291
29	2420	787	676	245	---	3190	612	291	208	170	142	242
30	2110	737	896	240	---	2590	618	278	180	170	161	214
31	2950	---	500	235	---	2210	---	274	---	170	152	---
TOTAL	85516	32809	34166	10040	46226	120340	64981	18556	7575	6499	6340	4743
MEAN	2759	1094	1102	324	1651	3882	2166	599	253	210	205	158
MAX	10800	3250	3270	455	9030	8560	8240	1250	483	530	426	291
MIN	655	549	491	235	225	1670	612	274	166	138	142	129
CAL YR 1976	TOTAL	426452	MEAN	1165	MAX	10800	MIN	134	CFSM	1.33	IN.	18.13
WTR YR 1977	TOTAL	437791	MEAN	1199	MAX	10800	MIN	129	CFSM	1.37	IN.	18.61

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) above mean sea level (Corps of Engineers bench mark). 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.--39 years, 163 ft³/s (4.616 m³/s), 10.11 in/yr (257 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 (139 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, 6,760 ft³/s (191 m³/s) Oct. 9, gage height, 10.86 ft (3.310 m); minimum, 4.8 ft³/s (0.136 m³/s) Aug. 7, Sept. 15; minimum gage height 2.38 ft (0.725 m) Aug. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	300	311	52	37	23	176	223	64	23	15	6.6	14
2	423	253	50	35	24	152	544	61	20	13	6.2	9.6
3	648	219	49	34	26	130	588	60	19	11	6.1	7.6
4	378	191	47	35	27	343	701	58	17	10	5.5	8.2
5	238	161	45	40	28	703	2020	61	16	10	5.1	7.7
6	166	137	47	41	29	521	1150	60	16	9.6	5.3	6.2
7	141	119	260	40	27	429	839	62	16	8.6	4.8	6.6
8	1010	106	355	37	25	357	683	61	16	7.9	5.5	7.4
9	4970	95	247	32	23	299	575	56	22	9.3	6.9	11
10	2470	90	186	34	24	255	503	52	25	16	6.2	7.8
11	1090	86	167	35	30	220	442	48	24	15	6.8	6.4
12	700	85	155	33	60	194	384	45	21	45	6.8	5.6
13	542	83	142	30	108	1190	333	42	19	44	7.5	5.1
14	448	78	105	28	125	882	287	40	21	32	11	4.9
15	367	76	109	34	114	643	246	40	30	23	15	4.9
16	298	75	105	32	100	529	209	39	25	17	14	5.0
17	238	74	100	30	84	443	178	37	22	14	14	6.1
18	186	73	90	26	69	456	156	35	27	11	13	6.3
19	150	71	81	23	61	448	134	39	22	9.5	10	5.8
20	218	68	78	22	65	395	120	36	18	7.8	8.5	5.9
21	491	65	76	25	68	350	107	33	18	6.8	8.1	6.1
22	307	64	66	27	62	549	99	30	18	6.4	7.7	6.3
23	220	61	58	25	64	634	93	30	17	6.1	6.8	6.3
24	208	58	53	25	125	489	92	36	16	5.8	7.5	5.9
25	329	57	57	26	301	401	87	30	16	6.3	8.7	6.1
26	884	56	62	27	261	342	81	27	21	11	8.1	7.1
27	522	56	58	30	236	289	76	25	21	14	7.5	8.1
28	374	56	58	32	206	343	72	23	23	11	6.5	9.7
29	289	61	58	29	---	361	74	22	24	8.7	5.9	8.5
30	234	56	50	27	---	309	68	22	19	8.5	5.3	7.5
31	338	---	43	25	---	266	---	24	---	7.4	5.1	---
TOTAL	19177	3041	3109	956	2395	13098	11164	1298	612	420.7	242.0	213.7
MEAN	619	101	100	30.8	85.5	423	372	41.9	20.4	13.6	7.81	7.12
MAX	4970	311	355	41	301	1190	2020	64	30	45	15	14
MIN	141	56	43	22	23	130	68	22	16	5.8	4.8	4.9
CFSM	2.83	.46	.46	.14	.39	1.93	1.70	.19	.09	.06	.04	.03
IN.	3.26	.52	.53	.16	.41	2.22	1.90	.22	.10	.07	.04	.04
CAL YR 1976 TOTAL	53012.5			MEAN 145	MAX 4970	MIN 5.1	CFSM .66	IN 9.00				
WTR YR 1977 TOTAL	55726.4			MEAN 153	MAX 4970	MIN 4.8	CFSM .70	IN 9.47				

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) above mean sea level (Corps of Engineers bench mark).

REMARKS.--Records good except those for period of no gage-height record, Oct. 1 to Nov. 22 and those for January, which are poor.

AVERAGE DISCHARGE.--30 years, 160 ft³/s (4.531 m³/s), 11.94 in/yr (303 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 (181 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 (3.9).

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)
Oct. 9	Unknown	*9240	262	a8.72	2.658	Mar. 13	0815	5580	158	6.82	2.079
Oct. 31	Unknown	1840	52.1	a4.46	1.359	Apr. 5	0245	6200	176	7.16	2.182

a From floodmarks.

Minimum discharge, 17 ft³/s (0.481 m³/s) July 5, 9, minimum gage height, 1.48 ft (0.451 m) Jan. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	80	640	141	54	40	221	144	85	46	32	28	38
2	180	450	130	60	45	177	138	81	43	31	28	35
3	340	340	128	65	49	151	134	80	42	30	27	36
4	200	280	121	72	52	233	532	80	39	33	28	29
5	150	230	113	76	53	425	3760	80	39	30	27	28
6	140	190	107	72	50	328	1320	78	42	32	26	36
7	95	170	561	70	45	270	755	81	41	28	27	39
8	900	150	478	68	40	214	557	80	39	27	27	38
9	5500	140	344	67	38	182	429	71	47	25	31	35
10	2500	130	283	70	48	163	359	69	48	35	28	33
11	940	130	253	61	65	151	308	67	42	64	28	30
12	540	120	243	60	95	144	262	64	41	41	28	28
13	370	115	220	55	126	2280	230	63	40	38	29	28
14	260	110	179	52	114	1130	213	62	45	29	34	28
15	210	104	169	64	103	646	192	59	52	27	29	28
16	170	107	165	62	82	465	172	56	43	26	26	29
17	140	104	156	56	73	361	158	54	40	25	31	29
18	130	100	142	50	66	341	148	54	41	25	28	28
19	110	100	128	46	69	298	139	54	39	23	24	28
20	115	105	127	45	73	269	130	52	37	23	23	43
21	440	107	121	49	63	234	120	51	41	24	22	36
22	350	105	104	52	60	354	115	49	38	26	22	30
23	280	99	96	53	102	401	112	48	38	23	22	29
24	220	93	87	54	732	349	116	51	37	24	42	28
25	230	94	83	56	647	299	116	50	40	33	49	29
26	360	94	87	55	372	256	106	49	44	54	29	59
27	340	98	93	54	333	271	103	47	37	34	24	42
28	245	101	98	52	299	204	97	46	37	30	24	34
29	220	165	95	48	---	185	96	45	36	29	28	31
30	210	165	75	45	---	169	89	52	34	32	33	30
31	990	---	66	42	---	157	---	49	---	30	51	---
TOTAL	16915	4936	5193	1785	3934	11278	11150	1907	1228	963	903	994
MEAN	546	165	168	57.6	141	364	372	61.5	40.9	31.1	29.1	33.1
MAX	5500	640	561	76	732	2280	3760	85	52	64	51	59
MIN	80	93	66	42	38	144	89	45	34	23	22	28
CFSM	3.00	.91	.92	.32	.78	2.00	2.04	.34	.23	.17	.16	.18
IN.	3.46	1.01	1.06	.36	.80	2.31	2.28	.39	.25	.20	.18	.20

WTR YR 1977 TOTAL 61186 MEAN 168 MAX 5500 MIN 22 CFSM .92 IN 12.51

POTOMAC RIVER BASIN

29

01605600 FRIENDS RUN NEAR FRANKLIN, WV

LOCATION.--38°39'23", long 79°23'31", Pendleton County, Hydrologic Unit 02070001, on right bank 50 ft (15 m) up-stream from culvert on Secondary State Route 5/9, 300 ft (91 m) from intersection with U.S. Highway 33, 3.4 mi (5.5 km) west of Franklin, and at mile 4.5 (7.2 km).

DRAINAGE AREA.--4.55 mi² (11.78 km²).

PERIOD OF RECORD.--May 1969 to September 1977 (discontinued).

REVISED RECORDS.--WRD WV-75-1: 1971(M), 1972-74(P).

GAGE.--Water-stage and rainfall recorders and culvert control. Concrete dam since June 9, 1970. Altitude of gage is 2,200 ft (671 m), from topographic map.

REMARKS.--Records fair except those for Dec. 21 to Feb. 22, June 15 to July 27, which are poor.

AVERAGE DISCHARGE.--8 years, 3.56 ft³/s (0.101 m³/s), 10.63 in/yr (270 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 192 ft³/s (5.44 m³/s) Oct. 18, 1975, gage height, 4.52 ft (1.378 m), from rating curve extended above 51 ft³/s (1.44 m³/s) on basis of computations of flow through culvert and flow-over-road at gage height 4.52 ft (1.378 m); no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 40 ft³/s (1.1 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)
Oct. 9	0745	*143	4.05	3.68	1.122	Apr. 5	0515	87	2.46	2.48	0.756
Mar. 13	0500	68	1.93	2.29	0.698						

Minimum daily discharge, 0.01 ft³/s (<0.001 m³/s) Aug. 11; minimum gage height, 0.91 ft (0.277 m) Aug. 10, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	8.8	3.5	.14	.10	1.7	1.6	.70	.18	.05	.03	.20
2	2.5	8.2	3.0	.15	.11	.84	1.4	.70	.16	.04	.02	.11
3	5.0	8.2	2.5	.17	.12	.77	1.5	.70	.14	.04	.05	.06
4	.55	8.2	2.2	.18	.13	.84	10	.70	.12	.10	.04	.22
5	.13	7.0	1.9	.19	.13	.77	75	.63	.11	.08	.02	.16
6	.09	5.6	1.7	.18	.12	4.8	59	.56	.13	.10	.02	.08
7	1.3	5.2	8.2	.18	.11	8.2	39	.63	.13	.06	.05	.06
8	15	4.4	8.2	.17	.10	5.6	26	.63	.13	.05	.04	.06
9	102	3.6	6.0	.17	.09	3.6	20	.56	.24	.03	.04	.06
10	53	4.0	5.6	.17	.10	3.0	15	.50	.16	.07	.02	.05
11	26	3.3	5.6	.16	.13	2.2	10	.50	.11	.30	.01	.03
12	17	2.7	5.2	.15	.15	2.2	3.6	.44	.09	.08	.02	.03
13	11	2.4	4.4	.14	.19	36	3.3	.38	.07	.06	.02	.02
14	8.2	2.2	3.3	.13	.21	23	2.2	.34	.06	.05	.10	.03
15	5.6	2.2	3.0	.16	.20	17	1.9	.34	.12	.04	.06	.04
16	3.6	2.2	3.0	.15	.17	9.4	1.9	.30	.09	.04	.04	.04
17	3.6	2.2	3.0	.14	.14	10	1.9	.27	.07	.04	.10	.04
18	2.7	2.4	2.4	.13	.11	11	2.2	.27	.10	.04	.06	.02
19	2.2	2.2	2.2	.11	.13	8.2	1.6	.27	.08	.03	.03	.09
20	5.6	2.2	1.9	.12	.17	8.2	1.5	.27	.06	.03	.03	.06
21	8.2	2.0	1.8	.12	.15	6.5	1.4	.24	.09	.03	.03	.03
22	8.2	1.5	.50	.13	.13	8.2	1.3	.20	.06	.05	.02	.02
23	8.2	1.5	.40	.13	.63	7.6	1.2	.20	.06	.03	.03	.02
24	7.6	1.5	.35	.14	3.6	6.5	1.1	.20	.05	.04	.11	.02
25	7.6	1.5	.30	.14	7.6	6.0	1.0	.20	.07	.07	.06	.10
26	8.2	1.5	.31	.14	1.5	4.8	1.0	.20	.20	.20	.04	6.5
27	7.6	1.5	.33	.13	1.4	3.6	.84	.18	.10	.06	.03	.30
28	8.2	1.5	.35	.13	1.7	3.3	.84	.18	.07	.05	.02	.10
29	7.0	5.2	.33	.12	---	1.5	.84	.18	.06	.05	.02	.06
30	7.0	4.2	.20	.11	---	1.3	.70	.18	.06	.06	.14	.06
31	10	---	.16	.10	---	1.5	---	.18	---	.04	.08	---
TOTAL	353.97	109.5	81.83	4.48	19.42	208.12	288.82	11.83	3.17	2.01	1.42	8.67
MEAN	11.4	3.65	2.64	.14	.69	6.71	9.63	.38	.11	.065	.046	.29
MAX	102	8.8	8.2	.19	7.6	36	75	.70	.24	.30	.14	6.5
MIN	.09	1.5	.16	.10	.09	.77	.70	.18	.05	.03	.01	.02
CFSM	2.51	.80	.58	.03	.15	1.48	2.12	.08	.02	.01	.01	.06
IN.	2.89	.90	.67	.04	.16	1.70	2.36	.10	.03	.02	.01	.07

CAL YR 1976 TOTAL 1130.08 MEAN 3.09 MAX 102 MIN .01 CFSM .68 IN 9.24
WTR YR 1977 TOTAL 1093.24 MEAN 3.00 MAX 102 MIN .01 CFSM .66 IN 8.94

POTOMAC RIVER BASIN

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) above mean sea level, 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.--49 years, 699 ft³/s (19.80 m³/s), 14.79 in/yr (376 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 (481 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)
Oct. 9	1400	*28100	796	15.14	4.615	Mar. 13	1515	12200	346	9.96	3.036
Feb. 25	0015	6810	193	7.45	2.271	Apr. 5	0945	16200	459	11.50	3.505

Minimum discharge, 62 ft³/s (1.76 m³/s) Aug. 8, gage height, 1.13 ft (0.344 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	393	1890	678	199	140	1560	645	297	177	132	80	93
2	624	1480	600	250	160	1120	600	283	154	119	75	91
3	1030	1240	540	290	170	884	587	275	141	109	71	88
4	736	1080	490	284	180	884	884	274	132	101	70	88
5	449	912	450	271	190	2060	11500	279	125	97	68	81
6	330	779	421	252	180	1780	6330	283	127	93	68	81
7	284	678	1260	244	160	1400	3640	296	129	93	66	88
8	2170	613	1990	240	140	1130	2710	367	127	90	64	92
9	18700	549	1380	230	130	933	2060	331	159	86	64	88
10	8260	542	1120	250	160	842	1670	307	280	86	66	84
11	3490	536	980	230	190	793	1420	292	237	101	69	78
12	1930	511	940	210	280	821	1180	275	188	154	69	72
13	1320	461	860	200	421	6070	1020	258	168	132	73	68
14	588	421	800	190	504	5390	921	258	160	131	81	66
15	793	427	758	210	444	3070	852	246	169	111	106	66
16	652	438	704	220	357	2040	751	228	176	96	113	67
17	562	421	658	190	275	1470	679	213	152	87	93	70
18	523	415	581	160	240	1320	625	201	140	82	91	68
19	438	421	504	150	250	1440	578	202	130	77	88	68
20	467	432	473	150	270	1220	544	199	126	72	83	74
21	1650	438	420	170	252	1120	496	186	125	69	78	79
22	1410	427	367	180	219	1300	454	174	127	70	76	85
23	1120	399	367	190	343	1930	429	169	122	72	70	76
24	933	362	330	195	2230	1650	416	212	116	73	75	71
25	964	357	330	200	4610	1380	419	209	126	77	100	69
26	1480	362	357	200	2580	1180	394	189	373	122	130	173
27	1470	421	338	190	2640	1000	376	174	239	154	100	245
28	1210	632	328	180	2590	905	356	161	177	112	87	158
29	996	775	333	170	---	842	348	157	156	94	79	121
30	863	842	275	160	---	758	328	154	146	87	76	104
31	1530	---	220	150	---	710	---	177	---	82	87	---
TOTAL	57765	19265	19852	6405	20305	49002	43212	7326	4904	3061	2516	2752
MEAN	1863	642	640	207	725	1581	1440	236	163	98.7	81.2	91.7
MAX	18700	1890	1990	290	4610	6070	11500	367	373	154	130	245
MIN	284	357	220	150	130	710	328	116	69	69	64	66
CFSM	2.90	1.00	1.00	.32	1.13	2.46	2.24	.37	.25	.15	.13	.14
IN.	3.35	1.12	1.15	.37	1.18	2.84	2.50	.42	.28	.18	.15	.16
CAL YR 1976	TOTAL	250110	MEAN 683	MAX 18700	MIN 67	CFSM 1.06	IN 14.49					
WTR YR 1977	TOTAL	236365	MEAN 648	MAX 18700	MIN 64	CFSM 1.01	IN 13.70					

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) above mean sea level, adjustment of 1912. 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.--34 years, 97.8 ft³/s (2.770 m³/s), 13.02 in/yr (331 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, 6,980 ft³/s (198 m³/s) Oct. 9, gage height, 8.91 ft (2.716 m); minimum, 4.2 ft³/s (0.119 m³/s) Aug. 6, 7, 8, 9, gage height, 1.83 ft (0.568 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	357	86	15	8.5	58	54	31	9.8	5.4	5.2	6.8
2	168	215	86	23	8.5	53	51	29	9.4	5.2	5.0	8.9
3	621	162	69	25	8.9	50	49	28	8.9	5.2	5.4	34
4	212	132	64	27	13	58	285	28	8.5	5.0	5.0	13
5	100	108	56	27	15	118	3020	28	8.1	5.0	4.8	10
6	64	88	54	27	13	120	1040	25	8.5	4.8	4.4	12
7	52	78	621	24	8.9	108	561	27	8.1	4.6	4.2	33
8	321	70	585	17	12	94	277	27	7.7	4.6	4.2	18
9	3700	64	321	22	12	82	185	22	8.9	4.4	4.4	15
10	1390	62	200	21	14	74	142	21	8.9	4.8	4.4	14
11	794	56	155	19	15	69	116	21	8.1	12	4.6	13
12	401	58	135	19	18	66	98	19	7.7	11	4.6	13
13	114	53	118	16	22	1360	86	18	6.8	9.8	4.6	12
14	74	50	102	18	23	881	78	18	6.8	8.9	5.2	12
15	54	49	94	21	22	420	74	17	9.4	7.7	5.8	12
16	41	50	88	17	15	232	67	16	8.1	6.4	5.6	12
17	36	49	82	15	13	154	62	15	8.1	5.8	6.8	11
18	31	49	72	15	11	128	58	15	8.1	5.4	6.0	10
19	25	49	64	15	17	108	56	15	7.3	5.2	5.4	9.8
20	77	50	59	15	18	91	58	15	6.8	4.8	5.0	13
21	397	49	58	15	15	78	53	14	6.8	4.6	4.8	14
22	258	49	46	14	13	155	50	13	6.8	5.0	4.6	12
23	155	48	50	14	18	305	48	13	6.4	5.0	4.6	11
24	114	42	41	13	38	212	46	12	6.4	4.6	8.9	10
25	100	42	42	15	78	152	46	12	7.7	5.6	11	9.8
26	142	41	43	16	58	117	42	12	8.1	7.7	8.1	15
27	144	41	42	17	56	95	41	12	6.8	6.8	6.0	15
28	119	39	42	15	59	84	38	11	6.0	5.6	5.8	12
29	99	62	41	12	---	75	35	11	5.8	5.2	6.8	11
30	87	94	26	11	---	67	33	11	5.6	5.4	7.7	10
31	421	---	28	9.4	---	60	---	10	---	5.6	6.8	---
TOTAL	10377	2356	3570	549.4	622.8	5724	6849	566	230.4	187.1	175.7	402.3
MEAN	335	78.5	115	17.7	22.2	185	228	18.3	7.68	6.04	5.67	13.4
MAX	3700	357	621	27	78	1360	3020	31	9.8	12	11	34
MIN	25	39	26	9.4	8.5	50	33	10	5.6	4.4	4.2	6.8
CFSM	3.28	.77	1.13	.17	.22	1.81	2.24	.18	.08	.06	.06	.13
IN.	3.78	.86	1.30	.20	.23	2.09	2.50	.21	.08	.07	.06	.15
CAL YR 1976	TOTAL	33987.1	MEAN	92.9	MAX	3700	MIN	4.2	CFSM	.91	IN	12.40
WTR YR 1977	TOTAL	31609.7	MEAN	86.6	MAX	3700	MIN	4.2	CFSM	.85	IN	11.53

POTOMAC RIVER BASIN

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) above mean sea level (Corps of Engineers bench mark). 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 January and February, and those for periods of no gage-height record, Mar. 27 to May 4 and July 26 to Sept. 8, 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.--46 years, 213 ft³/s (6.032 m³/s), 10.22 in/yr (260 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 (198 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, 9,660 ft³/s (274 m³/s) Oct. 9, gage height, 9.02 ft (2.749 m); minimum, 7.8 ft³/s (0.221 m³/s) July 24, 25, gage height, 0.96 ft (0.293 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	237	690	146	56	28	145	200	87	34	19	12	22
2	588	530	152	64	31	136	190	84	33	16	11	22
3	1340	422	140	67	38	124	180	82	31	15	11	27
4	774	354	130	70	45	120	1100	82	30	14	13	38
5	421	294	120	72	57	138	4300	79	27	14	12	32
6	273	248	112	72	45	211	2700	76	33	14	10	27
7	202	214	301	64	30	224	2000	79	31	12	9.2	24
8	380	189	1140	50	25	212	1100	84	27	11	8.6	24
9	6100	169	726	60	26	192	650	82	37	10	8.6	41
10	4360	152	512	68	33	174	500	74	34	11	9.0	36
11	1890	142	407	50	39	161	400	71	31	17	9.0	30
12	998	136	347	47	45	149	320	67	30	34	8.8	26
13	549	126	310	45	49	1230	280	65	27	27	10	22
14	358	115	269	53	50	2060	250	67	27	30	12	22
15	272	109	242	64	52	1060	230	61	30	25	15	22
16	222	106	229	50	45	662	210	59	27	21	14	21
17	189	104	219	41	38	497	190	57	26	17	17	22
18	169	101	198	36	35	410	170	53	27	15	15	21
19	148	101	177	35	45	380	160	55	26	13	13	20
20	150	98	164	36	51	347	170	52	25	12	12	21
21	407	98	160	34	57	308	160	50	26	11	11	20
22	561	98	142	34	40	283	140	46	21	11	10	19
23	424	93	128	33	40	457	130	46	20	10	9.5	22
24	335	87	120	35	51	580	130	46	20	7.8	18	21
25	289	82	107	41	103	555	125	44	25	12	25	22
26	440	79	121	46	163	485	120	43	33	22	19	120
27	497	76	112	49	145	360	115	41	33	27	15	67
28	413	76	105	51	143	310	105	39	26	18	13	45
29	343	87	105	41	---	270	100	37	25	14	17	36
30	296	109	90	34	---	250	95	37	20	12	29	31
31	436	---	78	31	---	220	---	34	---	13	23	---
TOTAL	24061	5285	7309	1529	1549	12710	16520	1879	842	504.8	419.9	923
MEAN	776	176	236	45.3	55.3	410	551	60.6	28.1	16.3	13.5	30.8
MAX	6100	690	1140	72	163	2060	4300	87	37	34	29	120
MIN	148	76	78	31	25	120	95	34	20	7.8	8.6	19
CFSM	2.74	.62	.83	.17	.20	1.45	1.95	.21	.10	.06	.05	.11
IN.	3.16	.69	.96	.20	.20	1.67	2.17	.25	.11	.07	.06	.12
CAL YR 1976	TOTAL	77768.0	MEAN	212	MAX	6100	MIN	13	CFSM	.75	IN	10.22
WTR YR 1977	TOTAL	73531.7	MEAN	201	MAX	6100	MIN	7.8	CFSM	.71	IN	9.67

POTOMAC RIVER BASIN

33

01608050 FORT RUN NEAR MOOREFIELD, WV

LOCATION.--Lat 39°03'56", long 78°54'49", Hardy County, Hydrologic Unit 02070001, on right bank 16 ft (5 m) upstream from bridge on Secondary State Route 23/2, 3.0 mi (4.8 km) east of Moorefield, and at mile 4.6 (7.4 km).

DRAINAGE AREA.--4.92 mi² (12.74 km²).

PERIOD OF RECORD.--May 1969 to September 1977 (discontinued).

GAGE.--Water-stage and rainfall recorders and bridge control. Concrete dam since June 10, 1970. Altitude of gage is 1,050 ft (320 m), from topographic map.

REMARKS.--Records good except those for Dec. 22 to Feb. 18, which are poor.

AVERAGE DISCHARGE.--8 years, 4.70 ft³/s (0.133 m³/s), 12.97 in/yr (329 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 888 ft³/s (25.1 m³/s) June 23, 1972, gage height, 8.49 ft (2.588 m), from floodmarks, from rating curve extended above 40 ft³/s (1.13 m³/s) on basis of slope-area measurement of peak flow; no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 80 ft³/s (2.3 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	0815	*758	21.5	4.23	1.289	Apr. 5	0200	148	4.19	2.76	0.841
Mar. 13	0630	102	2.89	2.54	0.774						

No flow many days July and August.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	6.1	.73	.41	.25	1.9	2.1	.61	.29	.08	.02	.25
2	9.6	4.9	.70	.43	.24	1.5	2.1	.58	.29	.05	.00	.30
3	23	4.0	.64	.45	.23	1.2	2.3	.58	.25	.00	.00	1.2
4	7.7	3.4	.64	.47	.26	1.4	14	.58	.19	.00	.00	.70
5	4.2	2.9	.64	.50	.31	2.9	80	.55	.15	.00	.00	.38
6	2.8	2.3	.64	.52	.30	3.7	23	.55	.11	.00	.00	.23
7	2.0	1.9	.18	.54	.29	3.7	12	.55	.09	.00	.00	.19
8	12	1.6	.16	.45	.27	2.9	7.4	.55	.07	.00	.00	.17
9	254	1.4	.86	.41	.29	2.3	4.9	.52	.05	.00	.00	.17
10	40	1.3	5.7	.44	.31	1.9	3.7	.52	.11	.00	.00	.17
11	14	1.3	4.3	.46	.39	1.6	2.9	.52	.09	.80	.00	.15
12	7.0	1.2	3.4	.43	.45	1.6	2.1	.49	.07	.70	.00	.13
13	3.7	1.1	2.7	.39	.64	54	1.8	.46	.05	.29	.00	.10
14	2.3	.97	2.1	.36	.58	24	1.6	.52	.04	.21	.00	.09
15	1.5	.97	1.9	.42	.53	13	1.4	.52	.02	.17	.00	.08
16	1.3	.97	1.8	.42	.48	9.5	1.3	.55	.03	.15	.00	.08
17	1.1	.91	1.6	.40	.46	6.5	1.1	.55	.04	.11	.00	.08
18	.97	.85	1.4	.35	.43	5.7	1.0	.52	.11	.10	.00	.08
19	.91	.85	1.3	.32	.46	4.3	.97	.61	.11	.07	.00	.08
20	2.5	.85	1.2	.32	.43	3.4	.85	.58	.25	.03	.00	.10
21	7.4	.85	1.1	.34	.40	2.7	.80	.52	.27	.00	.00	.13
22	5.7	.80	.95	.34	.37	7.8	.80	.49	.27	.00	.00	.15
23	4.0	.76	.89	.33	.52	12	.76	.46	.25	.00	.00	.13
24	2.9	.73	.80	.31	1.9	9.5	.76	.52	.19	.00	.00	.11
25	6.5	.73	.74	.29	4.6	7.0	.76	.49	.19	.00	.00	.10
26	32	.73	.79	.31	3.2	4.9	.73	.46	.17	.01	.00	.17
27	16	.73	.80	.33	2.7	3.7	.70	.43	.29	.00	.00	.25
28	9.0	.73	.80	.34	2.5	3.4	.67	.40	.25	.03	.00	.21
29	5.7	.80	.70	.31	---	3.2	.67	.37	.19	.08	.64	.15
30	4.0	.76	.60	.29	---	2.7	.64	.34	.11	.07	.52	.13
31	5.7	---	.50	.27	---	2.3	---	.29	---	.05	.37	---
TOTAL	495.28	47.39	82.66	11.95	23.79	206.2	173.81	15.68	4.59	3.00	1.55	6.26
MEAN	16.0	1.58	2.67	.39	.85	6.65	5.79	.51	.15	.097	.050	.21
MAX	254	6.1	.18	.54	4.6	54	80	.61	.29	.80	.64	1.2
MIN	.91	.73	.50	.27	.23	1.2	.64	.29	.02	.00	.00	.08
CFSM	3.25	.32	.54	.08	.17	1.35	1.18	.10	.03	.02	.01	.04
IN.	3.74	.36	.62	.09	.18	1.56	1.31	.12	.03	.02	.01	.05

CAL YR 1976	TOTAL	1205.43	MEAN 3.29	MAX 254	MIN .00	CFSM .67	IN 9.11
WTR YR 1977	TOTAL	1072.16	MEAN 2.94	MAX 254	MIN .00	CFSM .69	IN 8.10

POTOMAC RIVER BASIN

01608400 BUFFALO CREEK NEAR ROMNEY, WV

LOCATION.--Lat 39°22'18", long 78°43'51", Hampshire County, Hydrologic Unit 02070001, on right bank 15 ft (5 m) upstream from culvert on Secondary State Route 28/1, 0.7 mi (1.1 km) upstream from mouth, and 2.5 mi (4.0 km) northeast of Romney.

DRAINAGE AREA.--4.37 mi², (11.32 km²).

PERIOD OF RECORD.--August 1969 to September 1977 (discontinued).

GAGE.--Water-stage and rainfall recorders and culvert control. Concrete dam since Aug. 12, 1970. Altitude of gage is 680 ft (207 m), from topographic map.

REMARKS.--Records fair except those for Dec. 30 to Feb. 23, which are poor.

AVERAGE DISCHARGE.--8 years, 3.60 ft³/s (0.102 m³/s), 11.19 in/yr (284 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 463 ft³/s (13.1 m³/s) Oct. 8, 1976, gage height, 7.43 ft (2.265 m), from rating curve extended above 190 ft³/s (5.38 m³/s) on basis of computations of flow through culvert and flow-over-road measurement at gage height 8.00 ft (2.438 m); no flow at times each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 29, 1969, reached a stage of 8.00 ft (2.438 m), from floodmark, discharge, 550 ft³/s (15.6 m³/s), from rating curve extended as explained above.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 60 ft³/s (1.7 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)	
Oct. 2	2115	94	2.66	3.24	0.988	Oct. 9	0830	448	12.7	7.27	2.216
Oct. 8	2300	*463	13.1	7.43	2.265	Apr. 5	0100	112	3.17	3.42	1.042

No flow many days May-September.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	4.0	.25	.15	.04	3.0	3.3	.33	.00	.00	.00	.00
2	33	3.1	.22	.13	.04	2.6	10	.29	.00	.00	.00	.00
3	56	2.6	.19	.10	.04	2.2	10	.25	.00	.00	.00	.00
4	14	2.1	.16	.08	.04	4.2	19	.25	.00	.00	.00	.00
5	5.8	1.8	.14	.07	.05	7.7	62	.29	.00	.00	.00	.00
6	3.4	1.5	.12	.07	.05	6.4	17	.29	.00	.00	.00	.00
7	4.6	1.2	.6.0	.09	.05	5.1	8.7	.29	.00	.00	.00	.00
8	68	1.0	7.4	.08	.04	4.0	6.2	.37	.00	.00	.00	.00
9	177	.90	5.2	.07	.05	3.2	4.6	.29	.00	.00	.00	.00
10	22	.77	3.6	.07	.05	3.0	3.7	.22	.00	.00	.00	.00
11	7.4	.67	2.9	.08	.06	2.7	2.7	.19	.00	.00	.00	.00
12	4.0	.59	2.6	.07	.10	2.6	2.3	.14	.00	.00	.00	.00
13	2.4	.52	2.2	.07	.80	24	2.1	.12	.00	.00	.00	.00
14	1.7	.46	1.4	.06	.63	13	1.9	.11	.00	.00	.00	.00
15	1.1	.41	1.1	.07	.50	7.3	1.7	.10	.00	.00	.00	.00
16	.90	.37	1.1	.07	.43	5.1	1.5	.10	.00	.00	.00	.00
17	.76	.34	1.1	.07	.39	3.7	1.3	.09	.00	.00	.00	.00
18	.58	.31	.90	.06	.30	4.0	1.2	.09	.00	.00	.00	.00
19	.52	.28	.76	.05	.31	3.7	1.1	.10	.00	.00	.00	.00
20	1.9	.26	.70	.05	.34	3.3	1.1	.09	.00	.00	.00	.00
21	4.2	.24	.76	.06	.32	3.1	.76	.07	.00	.00	.00	.00
22	2.3	.23	.58	.06	.30	12	.52	.07	.00	.00	.00	.00
23	1.7	.22	.46	.06	.60	12	.46	.05	.00	.00	.00	.00
24	2.0	.22	.36	.05	3.3	7.1	.46	.07	.00	.00	.00	.00
25	5.8	.22	.33	.05	5.1	4.9	.46	.05	.00	.00	.00	.00
26	17	.22	.33	.05	4.0	3.7	.41	.02	.00	.00	.00	.00
27	7.7	.22	.37	.05	3.9	3.0	.41	.02	.00	.00	.00	.00
28	5.6	.25	.33	.06	3.6	5.2	.41	.02	.00	.00	.00	.00
29	3.5	.64	.33	.05	---	5.7	.37	.01	.00	.00	.00	.00
30	2.4	.46	.25	.05	---	4.8	.37	.01	.00	.00	.00	.00
31	3.3	---	.20	.05	---	4.1	---	.00	---	.00	.00	---
TOTAL	484.56	26.10	42.34	2.15	25.43	176.4	166.03	4.39	.00	.00	.00	.00
MEAN	15.6	.87	1.37	.069	.91	5.69	5.53	.14	.000	.000	.000	.000
MAX	177	4.0	7.4	.15	5.1	24	62	.37	.00	.00	.00	.00
MIN	.52	.22	.12	.05	.04	2.2	.37	.00	.00	.00	.00	.00
CFSM	3.57	.20	.31	.02	.21	1.30	1.27	.03	.000	.000	.000	.000
IN.	4.12	.22	.36	.02	.22	1.50	1.41	.04	.00	.00	.00	.00

CAL YR 1976	TOTAL	1048.26	MEAN 2.86	MAX 177	MIN .00	CFSM .65	IN 8.92
WTR YR 1977	TOTAL	927.40	MEAN 2.54	MAX 177	MIN .00	CFSM .58	IN 7.89

POTOMAC RIVER BASIN

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) above mean sea level. 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 December, January, and February, which are poor. National Weather service gage-height telemeter at station.

AVERAGE DISCHARGE.--53 years (water years 1900-01, 1904-05, 1929-77), 1,273 ft³/s (36.05 m³/s), 11.75 in/yr (298 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 (793 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)	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)
Oct. 10	0915	*58300	1650	23.42	7.138	Apr. 6	0200	25500	722	16.58	5.054

Minimum discharge, 109 ft³/s (3.08 m³/s) Aug. 12, gage height, 1.33 ft (0.405 m).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	803	365	1100	430	200	2650	1210	507	235	192	136	154
2	2290	3240	981	385	256	1880	1450	469	253	181	130	145
3	5370	2610	966	460	267	1420	1520	450	237	168	126	141
4	3920	2260	840	520	260	1350	1610	438	220	159	122	219
5	1860	1910	755	500	280	2190	13100	443	208	151	118	166
6	1130	1600	740	480	288	2940	17800	440	206	145	115	151
7	835	1370	1090	480	250	2450	8120	443	202	141	115	156
8	2860	1210	4020	435	240	1990	5370	452	201	136	118	145
9	24700	1110	3580	440	240	1610	3960	491	212	136	124	145
10	42500	1010	2540	440	253	1370	3070	465	229	143	117	149
11	10300	985	2040	400	270	1240	2530	434	285	134	111	151
12	5560	960	1800	310	290	1160	2110	415	328	176	111	143
13	3490	925	1700	290	350	4230	1760	395	277	263	122	136
14	2370	853	1550	270	490	12700	1520	385	256	225	130	132
15	1780	794	1340	320	660	6810	1380	387	254	195	141	128
16	1430	783	1270	330	570	4340	1250	366	246	184	147	126
17	1190	782	1200	296	450	3100	1120	344	245	166	151	128
18	1060	756	1110	225	360	2460	1020	330	252	145	168	126
19	956	746	992	220	375	2490	945	331	241	143	145	128
20	913	739	897	210	400	2230	878	325	213	136	134	126
21	1890	736	849	256	375	1950	831	308	202	128	132	132
22	3120	733	790	260	360	2310	767	291	197	122	132	132
23	2410	711	680	250	370	3780	708	275	190	117	130	128
24	1950	672	570	253	500	3480	674	268	188	113	130	136
25	1890	628	544	253	4300	2860	654	292	185	118	126	134
26	4150	608	630	256	4000	2330	641	318	192	132	128	134
27	3770	614	623	263	3000	1920	605	292	296	154	132	149
28	2830	657	601	267	3170	1800	576	271	313	161	161	331
29	2220	891	560	267	---	1750	567	253	253	184	149	260
30	1840	1080	470	225	---	1510	542	242	209	161	138	206
31	2100	---	420	231	---	1340	---	240	---	145	136	---
TOTAL	143487	35623	37228	10222	22824	85640	78288	11360	7025	4854	4075	4637
MEAN	4629	1187	1201	330	815	2763	2610	366	234	157	131	155
MAX	42500	3650	4020	520	4300	12700	17800	507	328	263	168	331
MIN	803	608	420	210	200	1160	542	240	185	113	111	126
CFSM	3.15	.81	.82	.22	.55	1.88	1.77	.25	.16	.11	.09	.11
IN.	3.63	.90	.94	.26	.58	2.17	1.98	.29	.18	.12	.10	.12
CAL YR 1976	TOTAL	475889	MEAN	1300	MAX	42500	MIN	109	CFSM	.88	IN	12.03
WTR YR 1977	TOTAL	445263	MEAN	1220	MAX	42500	MIN	111	CFSM	.83	IN	11.26

POTOMAC RIVER BASIN

01609800 LITTLE CACAPON RIVER NEAR LEVELS, WV

LOCATION.--Lat 39°29'55", long 78°29'20", Hampshire County, Hydrologic Unit 02070003, on left bank just downstream from bridge on Secondary State Route 2, 3.2 mi (5.1 km) northeast of Levels, and at mile 2.0 (3.2 km).

DRAINAGE AREA.--108 mi² (280 km²).

PERIOD OF RECORD.--October 1966 to September 1977 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 540 ft (165 m), from topographic map.

REMARKS.--Records fair except those for Dec. 26 to Feb. 23, which are poor.

AVERAGE DISCHARGE.--11 years, 89.8 ft³/s (2.543 m³/s), 11.29 in/yr (287 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,500 ft³/s (297 m³/s) June 22, 1972, gage height, 12.97 ft (3.953 m), from rating curve extended above 1,800 ft³/s (51.0 m³/s) on basis of slope-area measurement at gage height, 10.24 ft (3.121 m); minimum daily, 0.01 ft³/s (<0.001 m³/s) Sept. 1-5, Oct. 2-6, 8, 16-18, 1968; minimum gage height, 1.36 ft (0.415 m) Aug. 24, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,600 ft³/s (45 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)
Oct. 9	1530	*6940	197	11.08	3.377	Apr. 5	0530	3450	97.7	8.58	2.615
Oct. 26	0245	1680	47.6	6.68	2.036						

Minimum discharge, 0.05 ft³/s (0.001 m³/s) July 4, gage height, 1.48 ft (0.451 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	323	214	17	9.6	5.9	73	132	15	1.3	.17	.45	1.1
2	293	169	18	7.4	5.5	62	456	14	1.2	.15	.45	.65
3	934	149	13	6.8	5.1	51	488	13	1.2	.11	.40	19
4	293	151	12	6.8	5.2	118	476	12	1.1	.05	.35	2.3
5	151	127	12	7.6	7.0	291	2100	12	1.0	.08	.30	1.1
6	97	106	12	7.8	6.5	218	682	13	1.2	.12	.25	.70
7	70	94	248	8.4	5.6	165	356	14	1.4	.12	.25	26
8	360	82	356	9.0	4.9	127	245	15	1.6	.12	.25	4.5
9	4670	71	223	10	4.5	103	169	14	1.6	.12	.25	2.0
10	1060	66	173	10	4.7	90	133	11	1.6	.12	.18	1.2
11	374	60	152	10	5.6	78	113	9.3	1.7	.11	.17	.82
12	205	54	137	9.3	11	70	95	8.6	1.7	.11	.17	.55
13	138	51	123	8.6	19	780	82	7.6	1.7	.11	.17	.40
14	100	44	92	8.1	31	596	73	6.8	1.7	.11	.17	.30
15	77	41	98	9.2	18	323	65	6.3	2.0	.11	.17	.25
16	63	40	94	10	13	216	56	5.6	2.4	.11	.15	.25
17	50	35	90	9.5	10	152	48	5.1	2.6	.11	.15	.25
18	40	33	79	8.6	9.5	138	41	4.7	2.3	.11	.15	.25
19	32	30	69	8.0	9.8	140	36	4.7	2.3	.11	.15	.25
20	64	29	69	7.1	10	112	33	4.7	2.4	.16	.15	.25
21	243	28	60	7.7	9.5	109	33	4.7	2.8	.18	.15	.20
22	152	26	41	8.0	9.0	678	29	4.3	2.4	.18	.15	.20
23	107	24	28	7.6	12	652	26	3.3	1.7	.18	.15	.19
24	113	20	21	7.2	45	347	24	3.1	1.2	.18	.15	.18
25	261	18	17	6.9	140	220	24	2.6	.94	.45	.15	.17
26	1040	18	19	7.4	110	161	21	2.3	.70	3.6	.15	.16
27	428	18	20	7.7	99	127	20	2.1	.55	2.7	.15	.16
28	250	18	21	7.8	90	207	18	1.9	.40	1.2	.15	.16
29	173	20	22	7.2	---	269	18	1.7	.30	.88	.15	.16
30	130	19	16	6.7	---	207	18	1.5	.19	.70	.18	.16
31	227	---	12	6.4	---	167	---	1.4	---	.60	1.1	---
TOTAL	12518	1855	2364	252.4	706.3	7047	6110	225.3	45.18	13.16	7.36	63.86
MEAN	404	61.8	76.3	8.14	25.2	227	204	7.27	1.51	.42	.24	2.13
MAX	4670	214	356	10	140	780	2100	15	2.8	3.6	1.1	26
MIN	32	18	12	6.4	4.5	51	18	1.4	.19	.05	.15	.16
CFSM	3.74	.57	.71	.08	.23	2.10	1.89	.07	.01	.004	.002	.02
IN.	4.31	.64	.81	.09	.24	2.43	2.10	.08	.02	.00	.00	.02
CAL YR 1976	TOTAL	30745.57	MEAN	84.0	MAX	4670	MIN	.08	CFSM	.78	IN	10.59
WTR YR 1977	TOTAL	31207.56	MEAN	85.5	MAX	4670	MIN	.05	CFSM	.79	IN	10.75

POTOMAC RIVER BASIN

37

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) above mean sea level (Corps of Engineers bench mark). 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.--39 years, 3,183 ft³/s (90.14 m³/s), 13.90 in/yr (353 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)	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)
Oct. 10	1015	*71100	2010	30.52	9.302	Apr. 6	0545	39700	1120	22.03	6.715
Mar. 14	1045	28800	816	18.61	5.672						

Minimum discharge, 273 ft³/s (7.73 m³/s) Aug. 7, gage height, 3.15 ft (0.960).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4470	8270	2160	843	560	8530	4540	1580	658	491	384	310
2	7220	7320	2000	1150	560	6590	6140	1470	638	465	354	362
3	9120	6090	1950	1140	570	5030	11100	1400	628	417	327	364
4	8070	5810	1780	1120	660	5800	8310	1370	572	383	310	344
5	4530	5270	1650	1100	720	14400	24200	1400	537	355	303	424
6	3100	4440	1690	1060	690	11300	33400	1530	562	346	288	353
7	2350	3690	2960	1040	650	8640	18000	1870	569	344	279	372
8	5860	3300	8300	1020	620	6940	12300	2340	567	337	287	357
9	38800	2990	7680	980	590	5790	9180	2140	577	348	315	332
10	65500	2780	5860	960	625	5080	7400	1880	615	347	483	330
11	24200	2760	5060	940	765	4410	6340	1660	931	343	427	329
12	12500	2730	4730	920	1140	3870	5510	1520	910	580	383	314
13	8490	2540	4730	890	1890	11100	4800	1390	760	736	371	302
14	6480	2360	4010	870	3060	25800	4260	1310	659	766	395	301
15	5280	2200	3470	850	3580	16200	3840	1300	708	772	481	307
16	4360	2360	3330	830	3180	11400	3430	1290	687	580	711	303
17	3470	2300	3390	810	2290	8130	3090	1140	709	476	588	307
18	2870	2000	3180	790	1890	7070	2810	1060	641	407	717	323
19	2520	1950	2610	770	1960	8700	2590	1190	617	356	616	309
20	2510	1910	2390	760	2130	7340	2400	1400	600	453	499	304
21	7140	1870	2340	740	1560	6520	2250	1380	597	1650	402	301
22	7790	1840	2140	740	1340	7960	2110	1280	509	735	375	313
23	6230	1770	1610	720	1530	12300	1970	1180	559	504	375	368
24	5090	1680	1780	700	2740	9990	2050	908	494	400	359	329
25	6100	1590	1590	680	12600	8060	2010	1020	456	381	348	327
26	11300	1560	1750	660	13400	6720	1860	995	436	474	324	344
27	10300	1590	1430	650	10700	5470	1760	889	530	606	350	340
28	7730	1760	1700	630	10000	5520	1680	799	866	587	350	569
29	6260	2030	1690	620	---	7370	1720	726	706	467	364	767
30	5330	2230	1700	600	---	6090	1720	680	562	447	347	597
31	6010	---	1590	570	---	5210	---	663	---	412	---	---
TOTAL	300980	91010	92850	26153	42000	263330	192770	40802	18860	16005	12470	10982
MEAN	9709	3034	2995	844	2929	8495	6426	1316	629	516	402	366
MAX	65500	8270	8300	1150	13400	25800	33400	2380	931	1650	717	767
MIN	2350	1560	1590	570	560	3870	1680	663	436	337	279	301

CAL YR 1976 TOTAL 1188318 MEAN 3247 MAX 65500 MIN 324 CFSM 1.04 IN. 14.21
WTR YR 1977 TOTAL 1148212 MEAN 3146 MAX 65500 MIN 279 CFSM 1.01 IN. 13.73

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), above mean sea level. 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.--6 years, 174 ft³/s (4.928 m³/s), 15.24 in/yr (387 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 (28.3 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)
Oct. 3	0015	2120 60.0	5.83 1.777	Mar. 13	1030	4120 117	7.10 2.164
Oct. 9	1300	*12900 365	11.06 3.371	Apr. 5	0315	7660 217	8.98 2.737

Minimum discharge, 1.8 ft³/s (0.051 m³/s) July 23, 24, gage height, 0.63 ft (0.192 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	554	325	36	22	14	119	94	32	8.9	4.0	2.8	6.0
2	832	257	36	24	13	97	92	31	8.0	3.7	2.6	8.4
3	1410	217	34	24	12	81	92	32	7.2	3.1	2.4	72
4	461	184	40	26	12	94	247	34	6.4	2.8	2.6	24
5	223	148	38	28	15	150	3850	35	6.0	2.8	3.1	13
6	132	119	34	28	14	148	1050	34	6.8	2.8	2.8	8.9
7	90	104	601	29	14	138	569	36	7.2	3.1	2.4	8.0
8	213	92	605	22	14	117	407	45	6.4	2.6	2.6	12
9	7280	81	342	22	14	101	289	34	10	2.8	2.6	8.4
10	1540	79	238	24	14	91	225	30	15	2.8	2.2	7.2
11	601	71	200	24	20	83	184	29	11	2.4	2.1	6.0
12	349	69	178	22	33	79	150	26	8.4	97	2.1	4.9
13	222	64	152	20	50	1790	126	24	7.2	34	2.2	4.3
14	156	56	105	20	46	1050	114	30	7.2	14	3.7	4.0
15	114	56	109	23	38	547	102	31	7.6	8.0	4.6	3.7
16	71	55	106	23	25	360	90	24	7.6	5.6	3.7	4.0
17	79	50	101	23	24	250	80	22	7.2	4.3	3.4	4.3
18	71	49	87	22	20	225	74	19	11	3.4	3.1	4.0
19	58	49	74	21	22	195	67	22	9.4	2.8	3.1	3.7
20	164	47	74	20	24	160	67	21	7.2	2.4	2.6	4.6
21	407	45	67	18	22	142	60	17	6.8	2.2	2.2	5.6
22	214	44	49	18	19	488	53	15	6.0	2.1	2.8	4.6
23	190	40	46	17	35	645	50	14	5.2	1.9	4.9	4.3
24	178	35	43	16	136	423	51	13	4.6	1.8	4.0	4.0
25	257	37	41	16	328	295	50	12	5.6	4.6	4.3	41
26	876	36	51	17	192	220	46	12	8.4	16	3.7	419
27	565	36	46	14	166	172	42	12	7.6	8.9	2.8	91
28	353	36	50	19	150	162	39	10	6.0	4.9	2.4	44
29	290	60	48	17	---	144	44	12	5.6	3.7	2.2	26
30	192	55	25	16	---	121	36	10	4.6	3.1	11	17
31	360	---	24	15	---	109	---	9.4	---	3.1	12	---
TOTAL	18512	2596	3680	654	1486	8796	8440	727.4	226.1	301.5	109.0	867.9
MEAN	597	86.5	119	21.1	53.1	284	281	23.5	7.54	9.73	3.52	28.9
MAX	7280	325	605	29	328	1790	3850	45	15	97	12	419
MIN	58	35	24	15	12	79	36	9.4	4.6	1.8	2.1	3.7
CFSM	3.85	.56	.77	.14	.34	1.83	1.81	.15	.05	.06	.02	.19
IN.	4.44	.62	.88	.16	.36	2.11	2.03	.17	.05	.07	.03	.21
CAL YR 1976 TOTAL	47188.5		MEAN 129	MAX 7280	MIN 3.2	CFSM .83	IN 11.33					
WTR YR 1977 TOTAL	46395.9		MEAN 127	MAX 7280	MIN 1.8	CFSM .82	IN 11.13					

POTOMAC RIVER BASIN

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 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	DIS- SOLVED OXYGEN (MG/L)	SUS- PENDED SEDI- MENT (MG/L)	SUS- PENDED SEDI- MENT DIS- CHARGE (T/DAY)
OCT									
01...	1825	430	118	--	15.0	--	--	14	16
03...	1335	1070	91	--	14.0	--	--	28	81
04...	0815	510	102	--	14.0	--	--	9	12
09...	0725	10540	83	--	16.0	--	--	1180	33600
09...	1030	12700	74	--	16.0	--	--	1790	61400
09...	1100	12900	73	--	15.0	--	--	1480	51500
09...	1325	12600	74	--	15.0	--	--	993	33800
09...	1417	12000	73	--	15.0	--	--	859	27800
09...	1525	10500	78	--	15.0	--	--	563	16000
09...	1740	0800	105	--	15.0	--	--	323	5930
10...	0735	1700	91	--	12.0	--	--	50	229
10...	0805	660	92	--	10.0	--	--	7	12
10...	1530	1160	84	7.0	12.0	--	10.0	36	113
20...	1500	98	130	7.5	8.0	--	9.0	6	1.6
DEC									
01...	1400	31	140	7.2	2.0	--	15.8	1	.09
FEB									
03...	1345	22	160	8.9	2.0	1	18.3	1	.06
MAR									
10...	0925	92	95	8.2	7.0	1	11.8	1	.25
14...	0650	116	83	--	--	10	--	39	12
APR									
04...	1552	240	113	--	--	3	--	4	2.6
05...	0930	4710	76	--	--	100	--	350	4450
05...	1040	4200	97	--	--	100	--	540	6120
05...	1630	2620	85	--	--	100	--	757	5360
06...	1029	1090	81	--	--	20	--	46	135
08...	0703	360	100	--	--	90	--	1250	1220
21...	1400	61	125	8.3	19.0	3	11.4	4	.66
MAY									
26...	0855	13	168	8.1	19.5	2	7.1	3	.11
JUL									
07...	0830	3.1	185	7.8	25.0	3	5.8	6	.05
12...	0930	59	129	--	--	200	--	449	72
AUG									
17...	0930	3.7	170	6.8	24.0	4	5.7	5	.05

POTOMAC RIVER BASIN

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) above mean sea level (Corps of Engineers bench mark). 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.--54 years (water years 1924-77), 575 ft³/s (16.28 m³/s), 11.53 in/yr (293 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 (1,470 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)
Oct. 3	1900	8550	242	9.97	3.039	Mar. 14	0600	7750	219	9.47	2.886
Oct. 10	0800	*27800	787	17.52	5.340	Apr. 5	2200	14400	408	12.77	3.892
Oct. 26	1800	5810	165	8.20	2.499						

Minimum discharge, 52 ft³/s (1.47 m³/s) Aug. 5, 6, 7, 27, gage height, 0.66 ft (0.201 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	835	1430	230	210	140	457	670	270	99	71	60	64
2	1890	1180	220	230	130	406	760	249	110	68	58	81
3	5410	990	214	240	120	356	1590	235	97	65	57	88
4	4060	894	230	260	110	347	1200	225	89	62	55	79
5	1610	790	220	270	150	497	7580	224	88	60	54	66
6	948	660	252	270	140	665	7600	229	90	57	52	100
7	655	568	328	260	130	620	3060	231	104	58	54	90
8	592	508	1830	220	120	549	2030	228	95	60	54	88
9	8410	461	1590	210	120	479	1540	224	92	61	54	70
10	18800	430	1050	230	140	430	1200	221	95	61	56	64
11	3530	406	828	240	200	389	1010	203	103	77	55	60
12	2010	389	709	210	330	363	869	188	104	74	55	60
13	1350	366	642	190	389	685	744	179	101	85	57	58
14	1000	353	500	200	457	5630	655	174	103	141	61	57
15	755	331	464	220	450	2670	597	165	104	153	60	56
16	600	312	454	230	406	1700	548	157	96	121	60	56
17	500	303	442	220	331	1230	497	157	90	92	61	56
18	436	291	429	210	270	960	468	157	90	77	65	56
19	396	280	390	200	250	888	436	156	87	70	76	56
20	385	274	353	190	260	790	409	145	92	74	65	56
21	1160	266	342	170	250	665	382	138	94	76	60	58
22	1500	257	299	170	190	972	369	133	77	81	68	60
23	1030	250	291	160	197	3110	347	124	79	68	62	66
24	820	239	265	150	202	2230	332	119	74	58	57	61
25	1010	226	260	150	268	1530	323	114	72	58	57	57
26	3790	221	327	160	680	1130	317	110	72	70	56	57
27	3600	221	299	170	568	906	300	107	70	85	52	74
28	2030	224	276	180	490	840	282	108	72	68	56	342
29	1420	226	278	170	---	1120	279	103	74	68	57	198
30	1090	239	250	160	---	930	277	95	72	71	85	142
31	1090	---	230	150	---	760	---	95	---	65	71	---
TOTAL	73112	13585	14492	6300	7488	34304	36671	5263	2685	2355	1850	2476
MEAN	2358	453	467	203	267	1107	1222	170	89.5	76.0	59.7	82.5
MAX	18800	1430	1830	270	680	5630	7600	270	110	153	85	342
MIN	385	221	214	150	110	347	277	95	70	57	52	56
CFSM	3.48	.67	.69	.30	.39	1.64	1.81	.25	.13	.11	.09	.12
IN.	4.02	.75	.80	.35	.41	1.88	2.02	.29	.15	.13	.10	.14
CAL YR 1976	TOTAL	211829	MEAN 579	MAX 18800	MIN 65	CFSM .86	IN 11.64					
WTR YR 1977	TOTAL	200581	MEAN 550	MAX 18800	MIN 52	CFSM .81	IN 11.02					

POTOMAC RIVER BASIN

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) above mean sea level. 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.--45 years, 4,052 ft³/s (114.8 m³/s), 13.51 in/yr (343 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)	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)
Oct. 10	1400	*96700	2740	28.56	8.705	Apr. 6	0645	47600	1350	19.52	5.950
Mar. 14	1545	34700	983	16.43	5.008						

Minimum discharge, 340 ft³/s (9.63 m³/s) Aug. 9, gage height, 2.40 ft (0.732 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FER	MAH	APR	MAY	JUN	JUL	AUG	SEP
1	7280	9800	2510	1800	720	9980	6050	2070	750	667	503	479
2	12100	9930	2370	1100	720	7970	6240	1900	742	577	466	473
3	13500	8180	2190	1400	770	6230	14200	1780	726	534	428	510
4	15000	7410	2260	1380	810	5710	11600	1700	706	495	404	508
5	8350	6930	2050	1350	880	14200	22700	1680	648	459	383	439
6	5200	6000	1900	1310	890	14400	44700	1750	640	430	370	522
7	3780	4900	2610	1260	870	10900	25700	1920	646	410	356	520
8	4140	4260	8220	1200	850	8670	16500	2430	661	407	349	490
9	36000	3820	10800	1180	760	7170	12400	2600	667	411	342	482
10	89800	3510	8120	1150	715	6130	9610	2350	657	408	364	430
11	47100	3310	6610	1130	770	5430	8150	2110	700	711	491	408
12	17700	3300	5890	1110	1130	4610	7110	1900	1010	1040	502	399
13	11700	3130	5600	1090	1880	7230	6140	1740	995	898	474	393
14	8640	2930	5260	1070	2710	30000	5410	1610	867	947	454	383
15	6920	2730	4260	1050	3630	22900	4810	1510	827	971	467	370
16	5650	2580	4030	1020	3720	15100	4330	1510	808	933	515	375
17	4630	2860	3830	990	3120	11000	3880	1450	787	728	883	382
18	3680	2500	3990	970	2550	8650	3580	1320	875	592	893	372
19	3220	2350	3370	950	2200	9520	3250	1280	752	507	853	384
20	3030	2310	2970	930	2230	9360	3060	1410	713	1400	734	401
21	6350	2250	2800	910	2140	8060	2870	1580	784	1640	613	375
22	10200	2200	2700	890	1970	9160	2700	1520	704	1730	517	376
23	8610	2140	2520	870	1850	17000	2530	1430	614	938	473	378
24	6900	2070	2260	850	2200	14600	2450	1310	616	651	458	420
25	7210	1960	2050	830	8360	11200	2510	1060	586	561	450	424
26	13300	1870	2050	810	15400	8990	2390	1110	541	567	421	401
27	16500	1860	2250	800	12300	7480	2250	1090	510	607	405	419
28	11600	1920	2190	780	10900	6640	2130	998	564	678	396	688
29	8840	2140	2150	760	---	9250	2110	911	920	692	423	819
30	7280	2370	1980	750	---	8630	2130	827	791	573	512	953
31	7180	---	2200	730	---	7080	---	774	---	541	512	---
TOTAL	411390	113520	113990	32420	87045	323250	243490	48630	21817	22703	15411	13973
MEAN	13270	3784	3777	1046	3109	10430	8116	1569	727	732	497	466
MAX	89800	9930	10800	1800	15400	30000	44700	2600	1010	1730	893	953
MIN	3030	1860	1900	730	715	4610	2110	774	510	407	342	370
CFSM	3.26	.93	.90	.26	.76	2.56	1.99	.39	.18	.18	.12	.11
IN.	3.76	1.04	1.04	.30	.80	2.95	2.22	.44	.20	.21	.14	.13
CAL YR 1976	TOTAL	1512461	MEAN	4132	MAX	89400	MIN	425	CFSM	1.01	IN	13.81
WTR YR 1977	TOTAL	1447639	MEAN	3966	MAX	89800	MIN	342	CFSM	.97	IN	13.22

POTOMAC RIVER BASIN

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) above mean sea level. 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 except those for January and February, which are poor.

AVERAGE DISCHARGE.--30 years (water years 1947-77), 220 ft³/s (6.230 m³/s), 10.98 in/yr (279 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 (201 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)	
Oct. 3	1100	2160	61.2	8.90	2.213	Oct. 26	1100	1910	54.1	8.20	2.499
Oct. 10	0100	*10900	309	14.73	4.490	Apr. 5	1400	3910	111	11.18	3.408

Minimum discharge, 38 ft³/s (1.08 m³/s) Feb. 7, gage height, 1.61 ft (0.491 m), result of ice jam.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	505	495	158	101	95	126	215	173	100	75	59	66
2	540	396	153	131	97	119	615	167	93	70	58	60
3	1660	363	146	151	100	111	659	164	90	66	57	62
4	638	342	141	151	110	131	486	161	90	66	57	62
5	350	315	199	129	110	199	3270	164	88	66	56	57
6	259	289	138	121	100	184	1340	160	102	68	57	51
7	219	276	556	122	95	159	706	155	105	70	54	61
8	316	262	681	119	90	141	565	157	91	78	53	57
9	4660	252	344	120	90	129	466	145	104	70	53	50
10	5300	245	270	130	120	124	412	145	110	75	57	50
11	748	237	249	130	289	117	380	143	94	79	56	48
12	508	231	242	125	254	115	350	140	88	83	53	46
13	407	226	230	115	210	651	323	137	88	78	58	45
14	352	218	203	120	197	914	306	135	86	77	60	46
15	306	213	193	130	173	443	288	131	87	66	61	46
16	279	209	192	120	145	323	275	127	86	61	59	46
17	255	202	191	100	120	260	262	124	112	61	77	46
18	241	198	181	105	100	235	251	126	127	64	75	47
19	225	195	171	115	105	221	247	126	91	63	57	44
20	255	188	170	120	116	203	239	122	87	138	55	146
21	568	184	170	110	110	209	231	118	91	90	52	87
22	367	180	148	100	102	408	223	115	87	93	53	54
23	286	177	150	96	106	712	214	112	82	73	50	50
24	286	175	141	100	119	396	216	110	80	67	53	48
25	691	174	136	105	156	300	216	108	78	69	55	47
26	1540	170	151	105	150	257	200	110	79	96	51	49
27	782	170	148	105	140	228	191	105	74	84	50	56
28	536	166	141	110	136	260	184	102	79	69	48	52
29	444	175	139	105	---	335	191	100	86	64	48	47
30	388	176	122	100	---	274	181	99	78	64	66	45
31	531	---	122	95	---	243	---	99	---	63	143	---
TOTAL	24442	7099	6316	3586	3735	8527	13702	4080	2733	2306	1841	1671
MEAN	788	237	204	116	133	275	457	132	91.1	74.4	59.4	55.7
MAX	5300	495	681	151	289	914	3270	173	127	138	143	146
MIN	219	166	122	95	90	111	181	99	74	61	48	44
CFSM	2.90	.87	.75	.43	.49	1.01	1.68	.49	.34	.27	.22	.21
IN.	3.34	.97	.86	.49	.51	1.17	1.87	.56	.37	.32	.25	.23
CAL YR 1976	TOTAL	97061	MEAN 265	MAX 5300	MIN 56	CFSM .97	IN 13.27					
WTR YR 1977	TOTAL	80038	MEAN 219	MAX 5300	MIN 44	CFSM .81	IN 10.95					

POTOMAC RIVER BASIN

43

01617000 TUSCARORA CREEK ABOVE MARTINSBURG, WV

LOCATION.--Lat 39°28'10", long 77°58'18", Berkeley County, Hydrologic Unit 02070004, on left bank at Martinsburg, 20 ft (6 m) upstream from culvert on Secondary State Route 10, and at mile 3.7 (6.0 km).

DRAINAGE AREA.--11.3 mi² (29.3 km²).

PERIOD OF RECORD.--October 1948 to September 1963, October 1967 to September 1977 (discontinued).

REVISED RECORDS.--WSP 1202: 1949-50(M).

GAGE.--Water-stage and rainfall recorders. Concrete dam and culvert control since Oct. 1, 1967. Datum of gage is 445.74 ft (135.862 m) above mean sea level. Prior to Jan. 5, 1949, nonrecording gage and Jan. 5, 1949, to Sept. 30, 1963, water-stage recorder at site 120 ft (37 m) downstream at datum 5.00 ft (1.524 m) higher.

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

AVERAGE DISCHARGE.--25 years, 11.1 ft³/s (0.314 m³/s), 13.34 in/yr (339 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 610 ft³/s (17.3 m³/s) June 27, 1975, gage height, 11.92 ft (3.633 m), from rating curve extended above 78 ft³/s (2.21 m³/s) on basis of slope-area measurement at gage height 11.20 ft (3.414 m); minimum, 0.2 ft³/s (0.006 m³/s) May 27, 1954, gage height, 0.74 ft (0.226 m), site and datum then in use.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft³/s (2.8 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)
Oct. 9	1245	*500	14.2	11.45	3.490	Apr. 5	1445	214	6.06	9.79	2.984
Oct. 26	0100	160	4.53	9.35	2.850						

Minimum discharge, 2.4 ft³/s (0.068 m³/s) part or all of each day Sept. 7, 11, 17, 18, 20-26, minimum gage height, 7.17 ft (2.185 m) Aug. 16, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	21	10	6.4	5.3	6.7	16	13	6.5	4.5	4.1	2.9
2	17	20	9.7	7.2	5.3	6.5	40	13	6.2	4.3	4.0	3.1
3	29	19	9.5	7.5	5.3	6.5	29	13	5.9	4.3	4.1	2.7
4	15	18	9.3	7.6	5.3	8.0	32	12	5.9	4.1	3.8	2.6
5	11	17	9.1	7.0	5.6	9.9	115	12	6.2	4.0	3.6	2.7
6	10	16	9.0	6.6	5.6	8.4	46	12	6.7	3.8	3.6	2.7
7	9.5	16	20	6.4	5.1	8.0	37	12	6.2	4.1	3.6	2.5
8	10	15	14	6.3	4.8	7.3	33	11	5.9	4.1	3.4	2.6
9	185	14	12	6.4	4.8	7.0	30	11	7.0	3.8	3.4	2.6
10	46	14	12	6.7	5.9	7.0	28	11	6.2	3.8	3.4	2.6
11	30	14	12	6.7	7.7	7.0	27	10	5.9	4.5	3.4	2.5
12	25	14	12	6.6	7.7	6.7	25	10	5.6	4.1	3.4	2.6
13	22	14	11	6.2	7.7	24	24	9.9	5.6	4.1	3.4	2.6
14	20	14	10	6.4	7.0	19	22	10	5.9	4.0	3.4	2.7
15	18	14	10	6.6	6.7	16	21	9.9	6.2	3.8	3.4	2.7
16	17	13	10	6.2	6.5	15	20	9.5	5.9	3.8	2.9	2.7
17	16	13	10	5.7	6.2	13	19	9.2	7.0	3.6	3.6	2.8
18	15	13	10	5.8	6.5	13	18	9.5	8.0	3.6	3.2	2.5
19	14	13	9.9	6.0	6.2	13	18	9.9	6.2	3.6	3.1	2.7
20	18	12	9.3	6.2	6.2	13	17	9.5	6.2	13	3.1	2.8
21	20	11	8.7	6.0	6.2	13	17	9.2	6.2	5.6	3.2	2.4
22	16	11	8.0	5.6	6.2	33	16	8.8	5.9	5.1	3.2	2.4
23	15	11	8.0	5.4	6.2	26	16	8.8	5.6	4.5	3.1	2.4
24	18	11	7.8	5.7	6.5	21	17	7.7	5.6	4.3	3.1	2.4
25	33	11	7.4	5.9	6.7	19	16	7.3	5.3	5.9	3.1	2.4
26	69	11	7.7	5.9	6.7	17	15	7.3	5.3	5.1	3.1	2.9
27	32	11	7.7	5.9	6.7	17	15	7.0	5.1	4.3	2.9	2.8
28	28	11	7.6	5.6	6.7	23	14	7.0	5.9	4.1	2.9	2.9
29	25	11	7.3	5.9	---	20	14	7.0	5.6	4.1	3.1	2.6
30	24	11	7.0	5.6	---	19	13	6.7	4.8	4.1	3.4	2.6
31	28	---	6.8	5.6	---	17	---	7.0	---	4.0	3.1	---
TOTAL	856.5	414	302.8	193.6	173.3	440.0	770	301.2	180.5	140.0	104.1	79.4
MEAN	27.6	13.8	9.77	6.25	6.19	14.2	25.7	9.72	6.02	4.52	3.36	2.65
MAX	185	21	20	7.6	7.7	33	115	13	8.0	13	4.1	3.1
MIN	9.5	11	6.8	5.4	4.8	6.5	13	6.7	4.8	3.6	2.9	2.4
CFSM	2.44	1.22	.87	.55	.55	1.26	2.27	.86	.53	.40	.30	.24
IN.	2.82	1.36	1.00	.64	.57	1.45	2.53	.99	.59	.46	.34	.26
CAL YR 1976	TOTAL	4446.0	MEAN	12.1	MAX	185	MIN	3.1	CFSM	1.07	IN	14.64
WTR YR 1977	TOTAL	3955.4	MEAN	10.8	MAX	185	MIN	2.4	CFSM	.96	IN	13.02

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) above mean sea level.

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.--38 years (water years 1929-53, 1965-77), 5,982 ft³/s (169.4 m³/s), 13.69 in/yr (348 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)	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)
Oct. 2	0700	28100	796	9.98	3.042	Mar. 14	2330	43300	1230	13.13	4.002
Oct. 4	0900	25800	731	9.48	2.890	Mar. 23	1830	30600	867	10.53	3.210
Oct. 10	1800	*124000	3510	25.31	7.714	Apr. 3	2230	26400	748	9.60	2.926
Oct. 27	0830	29200	827	10.22	3.115	Apr. 6	1230	62100	1760	16.57	5.051
Mar. 6	0530	23500	666	8.95	2.728						

Minimum discharge, 544 ft³/s (15.4 m³/s) Sept. 14, gage height, 1.51 ft (0.460 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1												
2	8460	14300	3330	2760	1180	12600	10000	3370	1330	1250	950	1010
3	24900	15400	3380	2400	1160	11000	9330	3210	1300	1150	900	846
4	20800	13400	3200	2060	1130	8730	20800	3020	1250	1050	850	785
5	24600	11800	3000	1790	1220	7280	22300	2880	1230	1000	800	818
6	16500	10900	3100	2260	1340	13200	27500	2820	1200	900	750	850
7	10000	9820	2900	2390	1400	21900	57800	2900	1140	800	700	798
8	7080	8450	2700	2120	1350	16600	44700	3000	1200	750	650	761
9	5980	7190	8000	2040	1300	13000	27400	3200	1200	800	600	806
10	30000	6410	14000	1960	1250	10500	20000	3660	1260	800	600	792
11	113000	5900	12900	1880	1150	8860	15500	3640	1300	800	650	783
12	87100	5540	9950	1800	1100	7800	12800	3360	1320	1100	800	745
13	32200	5260	8540	1750	2140	6900	11200	3130	1330	1600	820	686
14	19500	5000	7760	1720	2770	7250	9660	2830	1650	1450	780	652
15	14500	4720	7310	1690	3710	29600	8430	2700	1550	1400	730	612
16	11400	4470	6380	1670	4310	37300	7540	2630	1450	1400	750	666
17	9360	4210	5700	1640	4640	24100	6810	2480	1450	1300	850	629
18	7810	4010	5480	1600	4160	17400	6140	2320	1400	1150	1150	630
19	6610	4180	5290	1580	3500	13300	5700	2240	1600	1050	1250	629
20	5650	3760	5210	1540	3180	12300	5200	2080	1400	1000	1150	617
21	5320	3610	4590	1500	3000	13500	4850	1960	1300	1750	1000	667
22	7390	3510	4190	1480	2830	12100	4580	2040	1400	2000	900	798
23	14200	3400	3800	1450	2820	11700	4280	2200	1250	2500	800	699
24	13500	3310	3470	1420	2700	27000	4090	2260	1100	1800	760	653
25	10900	3210	3160	1390	2720	25800	4070	2060	1100	1300	740	653
26	11100	3090	2800	1360	3250	18600	4440	1900	1050	900	720	646
27	17900	2970	2560	1330	15100	14600	4190	1770	1000	900	700	720
28	27600	2900	2830	1300	16500	12000	3830	1650	950	950	660	732
29	20600	2870	3050	1280	13600	10300	3570	1600	1050	1100	640	768
30	15200	2960	3010	1260	---	13000	3450	1550	1450	1100	700	874
31	12200	3170	2830	1230	---	14500	3460	1450	1350	1050	785	1120
	11100	---	2680	1200	---	11900	---	1400	---	1000	933	---
TOTAL	622460	179720	157100	52850	104510	464620	373620	77310	38560	37100	25068	22445
MEAN	20080	5991	5068	1705	3733	14990	12450	2494	1285	1197	809	748
MAX	113000	15400	14000	2760	16500	37300	57800	3660	1650	2500	1250	1120
MIN	5320	2870	2560	1200	1100	6900	3450	1400	950	750	600	612
CFSM	3.38	1.01	.85	.29	.63	2.53	2.10	.42	.22	.20	.14	.13
IN.	3.90	1.13	.98	.33	.65	2.91	2.34	.48	.24	.23	.16	.14
CAL YR 1976	TOTAL	2305895	MEAN	6300	MAX	113000	MIN	753	CFSM	1.06	IN	14.45
WTR YR 1977	TOTAL	2155363	MEAN	5905	MAX	113000	MIN	600	CFSM	1.00	IN	13.51

POTOMAC RIVER BASIN

45

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) above mean sea level, 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 December, January, and February, which are poor. Regulation by hydro-electric 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.--62 years (water years 1896-1908, 1929-77), 2,648 ft³/s (74.99 m³/s), 11.83 in/yr (300 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)	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)
Oct. 11	0115	*49400	1400	15.30	4.663	Apr. 6	2015	18800	532	9.45	2.880

Minimum discharge, 224 ft³/s (6.34 m³/s) Sept. 13, 16, gage height, 0.88 ft (0.268 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1110	4410	1630	1000	900	1510	2320	1410	731	591	422	487
2	1760	4870	2100	810	870	1530	2260	1400	779	487	393	481
3	4450	4580	2050	910	840	1450	2140	1410	787	439	370	544
4	6400	4130	1850	1100	870	1460	2150	1310	707	457	370	469
5	5270	3720	1780	1000	900	1470	7200	1260	670	463	365	524
6	3340	3360	1690	1000	700	1510	16600	1290	723	393	387	584
7	2420	3040	2040	1100	770	1630	14600	1340	677	463	399	544
8	2060	2800	4770	1000	760	2240	9310	1410	647	439	387	451
9	10600	2560	9970	1100	800	2220	6830	1330	677	404	387	499
10	36300	2420	7040	1200	860	2010	5580	1230	715	410	399	544
11	31200	2320	5360	1100	1000	1870	4720	1130	723	422	410	524
12	11300	2180	4550	1000	1100	1750	4070	1040	685	451	404	457
13	7240	2140	4110	1000	1500	1960	3600	1040	647	518	544	416
14	5500	2060	3780	1100	1600	5350	3220	1030	640	451	399	445
15	4430	2010	3250	1100	1350	10200	2920	1020	640	451	422	410
16	3600	1960	3080	1000	1400	7460	2690	987	640	457	422	410
17	3090	1860	2900	900	1270	5480	2530	951	633	445	451	428
18	2740	1850	2800	1000	1170	4410	2350	909	763	416	422	410
19	2500	1680	2650	1000	1080	3690	2240	934	755	416	463	387
20	2560	1690	2490	1100	1120	3170	2100	909	685	524	626	422
21	3040	1670	2360	1100	1070	2930	2010	867	670	416	499	662
22	4300	1620	2220	1000	943	2860	1950	827	647	428	410	647
23	4980	1570	2090	1000	1010	4110	1840	843	591	381	428	511
24	4340	1540	2040	1000	1050	4340	1790	795	570	365	416	481
25	3980	1510	1820	1200	1080	4470	1620	811	570	354	416	457
26	4410	1470	1850	1100	1110	4000	1660	811	557	404	393	505
27	6040	1440	1800	1200	1210	3480	1600	723	550	469	422	475
28	6770	1440	1780	1100	1520	3160	1560	755	557	463	428	463
29	5360	1480	1740	950	---	2980	1510	763	577	469	463	655
30	4510	1540	1600	1000	---	2740	1480	803	598	422	511	591
31	4170	---	1500	950	---	2500	---	763	---	410	481	---
TOTAL	199770	70920	90690	32120	29853	99940	116450	32101	19811	13678	13309	14883
MEAN	6444	2364	2925	1036	1066	3224	3882	1036	660	441	429	496
MAX	36300	4870	9970	1200	1000	10200	16600	1410	787	591	626	662
MIN	1110	1440	1500	810	700	1450	1480	723	550	354	365	387
CFSM	2.12	.78	.96	.34	.35	1.06	1.28	.34	.22	.15	.14	.16
IN.	2.44	.87	1.11	.39	.37	1.22	1.42	.39	.24	.17	.16	.18
CAL YR 1976	TOTAL	952104	MEAN	2601	MAX	36300	MIN	435	CFSM	.86	IN	11.65
WTR YR 1977	TOTAL	733525	MEAN	2010	MAX	36300	MIN	354	CFSM	.66	IN	8.98

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 200.54 ft (61.125 m) above mean sea level, adjustment of 1912. 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.--82 years, 9,273 ft³/s (262.6 m³/s), 13.05 in/yr (331 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, 1977, 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)	
Oct. 11	0200	*193000	5470	27.25	8.306	Apr. 6	1830	83100	2350	15.61	4.758
Mar. 15	0930	52300	1480	11.46	3.493						

Minimum discharge, 1,080 ft³/s (30.6 m³/s) Aug. 10, Sept. 14, 16, gage height, 0.68 ft (0.207 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4730	18900	5170	3000	3000	14300	13200	5390	2360	2070	1510	1490
2	25200	20900	5680	2600	2800	13000	13300	5190	2210	1910	1450	1570
3	25500	19400	5620	3000	2600	10800	20500	5080	2300	1670	1370	1520
4	29400	17000	5140	3400	2600	9390	27200	4830	2160	1570	1280	1410
5	24900	15600	4850	3200	2800	11700	36100	4760	2070	1520	1220	1350
6	15500	14100	4670	3200	2200	23300	73700	4810	2130	1450	1210	1460
7	10700	12500	6140	3400	2400	19600	68700	4900	2060	1400	1240	1410
8	9190	10900	11400	3200	2400	16000	41700	5000	2030	1250	1190	1320
9	46900	9800	23100	3400	2400	13500	30100	5220	2200	1400	1140	1310
10	154000	9050	21500	3600	2600	11500	23500	5270	2350	1330	1120	1340
11	158000	8460	16400	3400	3200	10200	19200	4970	2350	1350	1210	1370
12	58000	7980	13700	3000	3600	9170	16500	4560	2220	1430	1160	1260
13	32300	7740	12300	3200	5000	9890	14400	4300	2180	2070	1300	1180
14	23200	7400	11400	3600	5800	27100	12800	4080	2370	2350	1480	1110
15	17700	7080	10500	3400	6800	49000	11400	3880	2390	2080	1400	1110
16	14300	6760	9210	3000	6600	35100	10400	3730	2310	1960	1380	1100
17	12100	6420	8690	2800	6400	25400	9600	3510	2210	1910	1470	1130
18	10400	6420	8290	3200	5800	19300	8810	3540	2770	1850	1510	1110
19	8950	6120	8200	3200	5400	16300	8200	3410	2560	1680	1900	1110
20	8610	5780	7530	3400	4800	17000	7690	3400	2370	1920	2020	1100
21	10500	5650	6970	3400	4500	15700	7290	3250	2310	2300	1850	1190
22	17300	5470	6730	3200	4500	15700	6920	3320	2100	3820	1670	1510
23	19800	5280	5950	3200	4500	27500	6570	3340	2020	3110	1760	1320
24	16800	5160	5680	3200	4440	32200	6360	3170	1910	2510	1610	1200
25	15800	5020	5060	3600	4740	25100	6860	3020	1870	2040	1390	1170
26	21500	4870	4740	3600	12900	20100	6580	3030	1730	2000	1280	1240
27	32500	4750	4850	3800	18700	16700	6120	2660	1620	1820	1250	1260
28	30100	4700	5040	3600	15600	14500	5780	2650	1820	1760	1250	1280
29	22800	4860	5090	3000	---	15400	5640	2610	2570	1660	1210	1360
30	18100	5010	4810	3200	---	18000	5510	2520	2000	1590	1290	1550
31	16800	---	4400	3000	---	15600	---	2450	---	1590	1330	---
TOTAL	911580	269080	258810	101000	149080	578050	530630	121850	65550	58370	43450	38840
MEAN	29410	8969	8349	3258	5324	18650	17690	3931	2185	1883	1402	1295
MAX	158000	20900	23100	3800	18700	49000	73700	5390	2770	3820	2020	1570
MIN	4730	4700	4400	2600	2200	9170	5510	2450	1620	1250	1120	1100
CFSM	3.05	.93	.87	.34	.55	1.93	1.83	.41	.23	.20	.15	.13
IN.	3.51	1.04	1.00	.39	.57	2.23	2.05	.47	.25	.22	.17	.15

CAL YR 1976	TOTAL	3507260	MEAN	9583	MAX	158000	MIN	1260	CFSM	.99	IN	13.52
WTR YR 1977	TOTAL	3126290	MEAN	8565	MAX	158000	MIN	1100	CFSM	.89	IN	12.05

MONONGAHELA RIVER BASIN

47

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, 26.0°C July 22; minimum daily, 0.5°C Jan. 1, 14, 15, 21, 22, 29 and Feb. 5.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.5	9.0	2.0	.5	1.0	2.0	13.5	5.0	22.0	21.5	20.5	23.5
2	15.5	8.0	2.0	1.5	1.5	3.5	14.5	9.0	23.0	21.5	21.0	23.5
3	15.0	7.0	2.0	1.5	1.5	4.5	13.5	16.5	22.0	21.5	23.5	23.0
4	15.5	7.0	1.0	2.0	1.0	4.5	13.5	16.0	22.0	22.0	23.5	23.5
5	15.5	5.5	2.0	1.5	.5	5.5	13.5	16.5	22.0	22.0	24.0	23.0
6	15.5	5.5	1.5	1.5	1.0	7.0	12.0	16.5	21.0	23.0	24.0	23.0
7	15.5	5.5	2.0	1.0	1.5	6.5	9.5	17.0	20.0	23.5	23.5	22.0
8	15.5	5.5	1.0	1.0	1.5	6.5	6.5	17.0	18.5	23.5	23.5	23.5
9	14.5	4.5	1.0	1.0	1.0	8.0	7.0	16.5	16.5	23.5	24.5	23.0
10	14.0	4.0	2.0	1.0	1.5	9.0	9.0	11.5	16.5	25.0	22.0	23.0
11	14.0	5.5	4.0	1.5	1.0	9.0	9.0	12.0	14.5	25.5	25.0	20.5
12	12.0	4.5	5.5	1.0	1.0	9.0	12.0	14.0	16.0	25.0	24.5	20.5
13	13.5	4.0	5.0	1.5	2.0	11.0	15.5	14.0	18.0	25.0	24.0	20.5
14	13.5	4.0	4.5	.5	2.0	11.0	15.5	15.0	18.0	25.0	22.0	20.0
15	13.0	3.5	3.0	.5	2.0	10.5	14.5	16.0	18.0	25.5	23.0	20.0
16	11.5	4.5	4.5	1.0	2.0	11.0	15.0	16.5	18.5	25.5	24.0	19.5
17	12.0	3.5	3.0	1.0	2.0	10.5	16.0	19.0	19.5	25.0	23.0	19.5
18	11.5	4.5	3.0	1.0	1.0	9.0	16.5	20.0	20.0	25.5	22.0	19.5
19	9.5	4.0	4.5	1.0	1.5	9.0	17.0	21.0	20.5	25.5	20.5	20.5
20	9.0	4.0	4.0	1.0	3.0	9.0	18.0	19.0	22.0	25.5	20.5	20.5
21	9.5	5.0	2.0	.5	3.0	8.0	18.0	21.0	21.5	25.5	20.0	19.5
22	9.0	4.0	2.0	.5	3.5	7.0	18.0	22.0	21.5	26.0	20.0	19.5
23	8.0	4.5	1.5	1.0	4.5	8.0	16.5	22.0	20.5	25.5	21.5	19.0
24	8.0	3.0	1.0	1.0	3.5	6.0	17.0	22.0	20.0	25.5	21.5	19.0
25	9.5	3.0	1.0	1.0	3.0	6.5	16.5	22.0	20.0	24.5	21.0	19.0
26	10.0	3.5	2.0	1.0	3.5	6.5	14.0	22.0	20.5	23.5	21.0	19.5
27	9.0	4.0	1.0	1.5	3.5	9.0	13.0	21.5	21.0	23.0	20.5	19.5
28	8.0	8.0	3.5	1.0	4.5	10.5	13.5	21.5	21.5	23.5	22.0	19.0
29	7.0	6.5	1.0	.5	---	12.0	13.0	22.0	21.5	20.5	23.5	19.0
30	5.5	4.0	1.0	1.0	---	14.5	12.0	22.0	22.0	22.0	24.0	18.0
31	8.0	---	1.0	1.5	---	15.0	---	22.0	---	22.0	23.0	---
MEAN	11.5	5.0	2.5	1.0	2.0	8.5	14.0	17.5	20.0	24.0	22.5	21.0
WTR YR 1977	MEAN	12.5	MAX	26.0	MIN	.5						

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) above mean sea level, 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.--33 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); 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)	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)
Oct. 10	1115	*7540	214	13.62	4.151	Apr. 6	0145	5290	150	11.49	3.502
Feb. 25	1430	7480	212	13.57	4.136						

Minimum discharge, 12 ft³/s (0.340 m³/s) May 30, gage height, 1.25 ft (0.381 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	477	1290	377	190	135	1140	297	335	31	235	117	321
2	536	1060	340	180	130	702	272	268	32	199	25	250
3	477	748	294	180	125	480	290	227	29	155	43	285
4	377	504	271	190	130	612	397	196	28	126	29	213
5	229	392	254	200	140	1480	3930	227	27	89	42	145
6	159	308	218	189	150	1160	3720	266	26	81	55	100
7	142	249	1430	181	150	803	1400	829	23	144	52	99
8	346	223	2310	160	140	563	1120	1650	22	124	46	55
9	4090	195	1080	150	140	436	926	932	74	87	112	71
10	6800	201	668	160	150	375	688	575	295	80	79	64
11	2020	261	533	180	160	354	529	392	180	679	31	58
12	827	268	684	180	240	372	392	290	129	616	190	43
13	497	243	984	170	1100	1960	326	231	92	449	224	19
14	321	210	780	180	1970	2570	286	201	64	406	592	39
15	191	210	602	190	1420	1080	256	169	65	220	1000	57
16	197	225	477	210	930	714	218	136	79	175	372	43
17	175	214	389	200	540	499	191	113	98	100	258	37
18	157	220	305	190	482	525	171	129	79	104	315	26
19	142	229	240	180	460	1100	155	98	59	90	305	49
20	135	234	229	170	440	798	249	65	47	57	167	132
21	348	243	234	180	427	610	800	58	52	34	134	113
22	591	245	153	170	406	738	316	62	142	123	104	84
23	407	214	159	160	1200	1480	243	62	107	80	132	71
24	354	165	175	150	3800	1190	223	81	77	75	79	53
25	908	175	180	155	6720	858	214	97	115	97	255	36
26	2490	254	205	160	3350	609	205	69	225	1120	253	38
27	1680	939	214	170	2590	468	247	77	189	550	132	40
28	858	1180	205	160	2300	427	294	47	287	243	169	38
29	543	913	225	160	---	387	413	34	370	161	199	39
30	417	708	210	150	---	336	448	14	508	134	233	40
31	772	---	200	140	---	339	---	21	---	108	780	---
TOTAL	27663	12520	14625	5385	29925	25165	19216	7951	3551	6941	6524	2658
MEAN	892	417	472	174	1069	812	641	256	118	224	210	88.6
MAX	6800	1290	2310	210	6720	2570	3930	1650	508	1120	1000	321
MIN	135	165	153	140	125	336	155	14	22	34	25	19
CFSM	3.28	1.53	1.74	.64	3.93	2.99	2.36	.94	.43	.82	.77	.33
IN.	3.78	1.71	2.00	.74	4.09	3.44	2.63	1.09	.49	.95	.89	.36
CAL YR 1976 TOTAL	160575.0			MEAN 439	MAX 6800	MIN 5.6	CFSM 1.61	IN 21.96				
WTR YR 1977 TOTAL	162124.0			MEAN 444	MAX 6800	MIN 14	CFSM 1.63	IN 22.17				

MONONGAHELA RIVER BASIN

49

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) above mean sea level, 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.--70 years, 802 ft³/s (22.71 m³/s), 26.69 in/yr (678 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)	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)
Oct. 10	1200	*10600	300	14.25	4.343	Apr. 6	0300	7290	206	11.74	3.578
Oct. 25	1900	10100	286	13.84	4.218						

Minimum discharge, 39 ft³/s (1.10 m³/s) Sept. 14, minimum gage height, 2.39 ft (0.728 m) June 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1070	2350	675	270	190	2000	544	603	52	444	151	475
2	1590	1930	554	260	180	1200	485	470	61	277	147	253
3	905	1330	480	250	180	849	508	405	60	217	62	365
4	676	950	410	270	190	1150	559	330	57	175	72	335
5	420	724	375	280	200	2660	5410	345	55	151	57	229
6	288	576	335	270	210	2050	5740	390	55	190	73	142
7	222	480	2100	250	210	1390	2370	1140	51	178	103	145
8	381	425	4020	230	200	1000	1880	2900	48	175	101	133
9	6260	375	1920	220	200	759	1540	1730	160	146	165	136
10	10300	375	1160	230	210	636	1140	1040	452	105	206	98
11	4110	445	921	250	220	576	884	729	322	432	103	84
12	1490	470	1190	260	350	557	664	534	203	821	180	74
13	980	445	1840	240	1700	2420	537	423	157	727	835	58
14	620	385	1420	250	3000	3990	465	365	112	887	1990	41
15	470	385	1050	270	2000	1830	420	309	132	458	2740	74
16	340	405	822	290	1400	1190	355	255	122	265	889	80
17	340	395	668	280	760	865	301	209	129	164	470	74
18	296	395	523	270	700	785	265	193	122	143	450	69
19	265	410	416	250	660	1570	241	190	101	133	445	55
20	257	405	390	240	640	1320	225	157	90	110	292	265
21	526	410	423	250	620	1050	962	113	99	77	200	310
22	1020	410	265	240	590	1220	543	116	133	145	166	169
23	741	380	257	230	1800	2350	385	114	165	189	139	127
24	631	310	257	210	6540	2010	330	179	111	115	211	107
25	1470	305	288	220	9580	1470	360	163	189	272	229	80
26	3540	395	345	230	6160	1060	345	134	529	1940	350	80
27	2820	1050	460	240	4010	812	435	131	320	1050	214	100
28	1490	1650	410	230	3630	757	526	102	480	456	160	139
29	974	1390	400	220	---	780	680	86	615	301	207	122
30	730	1150	370	210	---	677	774	71	759	209	221	100
31	1330	---	310	200	---	618	---	49	---	195	801	---
TOTAL	46552	21105	25054	7610	46330	41601	29873	13975	5941	11147	12429	4519
MEAN	1502	704	808	245	1655	1342	996	451	198	360	401	151
MAX	10300	2350	4020	290	9580	3990	5740	2900	759	1940	2740	475
MIN	222	305	257	200	180	557	225	49	48	77	57	41
CFSM	3.68	1.73	1.98	.60	4.06	3.29	2.44	1.11	.49	.88	.98	.37
IN.	4.24	1.92	2.28	.69	4.22	3.79	2.72	1.27	.54	1.02	1.13	.41
CAL YR 1976	TOTAL	267179	MEAN 730	MAX 10300	MIN 15	CFSM 1.79	IN 24.36					
WTR YR 1977	TOTAL	266136	MEAN 729	MAX 10300	MIN 41	CFSM 1.79	IN 24.27					

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 July, which are fair, and those for Dec. 21 to Feb. 22, which are poor.

AVERAGE DISCHARGE.--35 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 (193 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)	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)
Oct. 9	1745	*6650	188	9.96	3.036	Feb. 24	2230	5180	147	8.83	2.691

Minimum discharge, 9.6 ft³/s (0.27 m³/s) June 8, gage height, 1.65 ft (0.503 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	336	800	282	110	84	856	222	341	22	119	40	104
2	310	710	240	100	80	570	205	289	19	99	31	72
3	223	530	210	100	74	421	233	250	15	73	24	303
4	178	405	190	110	72	620	264	212	13	57	19	160
5	136	317	180	105	74	1210	2120	198	12	49	15	101
6	108	257	179	100	77	886	1410	208	12	112	13	86
7	94	215	976	92	74	655	832	470	10	108	44	71
8	152	188	1330	87	70	480	735	765	9.9	71	32	61
9	3560	157	735	81	74	377	585	555	58	53	41	54
10	3490	166	510	91	80	324	461	401	175	47	51	40
11	1180	188	417	100	92	292	377	310	90	95	39	32
12	620	169	550	95	130	275	303	247	57	202	65	27
13	377	155	725	90	440	952	257	198	41	215	324	23
14	289	133	590	94	910	952	229	166	34	157	1020	22
15	215	143	461	100	625	665	202	138	65	110	780	35
16	182	138	373	110	434	495	172	115	66	86	299	44
17	146	126	303	105	280	377	149	93	41	66	182	33
18	129	133	247	100	240	369	136	81	30	53	208	37
19	110	136	202	96	260	525	124	76	24	39	143	32
20	106	136	192	90	250	448	126	75	22	27	110	146
21	219	131	180	95	230	405	310	60	53	21	90	138
22	264	133	130	98	220	485	268	49	90	73	72	92
23	219	121	110	91	520	685	219	41	59	76	60	69
24	215	90	100	84	3190	650	198	152	50	40	75	54
25	377	126	92	88	3210	545	205	99	61	93	115	43
26	868	149	110	95	2020	438	185	72	146	327	86	65
27	740	334	130	100	2040	357	233	57	101	155	61	78
28	515	438	140	100	1580	338	254	42	86	97	47	93
29	361	434	140	96	---	310	401	37	146	71	108	78
30	310	377	130	92	---	272	405	32	169	60	90	57
31	515	---	120	89	---	258	---	27	---	52	149	---
TOTAL	16584	7535	10274	2984	17430	16492	11820	5856	1776.9	2903	4433	2250
MEAN	535	251	331	96.3	623	532	394	189	59.2	93.6	143	75.0
MAX	3560	800	1330	110	3210	1210	2120	765	175	327	1020	303
MIN	94	90	92	81	70	258	124	27	9.9	21	13	22
CFSM	3.59	1.69	2.22	.65	4.18	3.57	2.64	1.27	.40	.63	.96	.50
IN.	4.14	1.88	2.57	.74	4.35	4.12	2.95	1.46	.44	.72	1.11	.56

CAL YR 1976 TOTAL 120199.5 MEAN 328 MAX 3620 MIN 3.6 CFSM 2.20 IN 30.01
WTR YR 1977 TOTAL 100337.9 MEAN 275 MAX 3560 MIN 9.9 CFSM 1.85 IN 25.05

MONONGAHELA RIVER BASIN

51

03052500 SAND RUN NEAR BUCKHANNON, WV

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).

DRAINAGE AREA.--14.5 mi² (37.6 km²).

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

REVISED 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. 21 to Feb. 22, which are poor.

AVERAGE DISCHARGE.--31 years, 26.3 ft³/s (0.745 m³/s), 24.63 in/yr (626 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 (17.0 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.--Peak discharges above base of 400 ft³/s (11 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)
Oct. 9	1400	676	19.1	4.84	1.475	Apr. 5	0500	521	14.8	4.28	1.305
Feb. 24	1800	449	12.7	4.02	1.225	Aug. 14	1330	*715	20.2	4.98	1.518

Minimum discharge, 0.48 ft³/s (0.014 m³/s) June 4, 5, 8; minimum gage height, 0.43 ft (0.131 m) Sept. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	148	25	10	8.6	34	13	20	.92	9.0	4.0	7.5
2	39	89	20	9.5	8.1	23	13	16	.68	5.9	3.1	6.8
3	16	50	17	9.1	7.5	18	16	13	.64	3.8	2.6	7.2
4	8.4	32	14	9.8	7.2	99	44	11	.57	2.9	2.1	7.2
5	5.6	21	13	11	7.4	135	393	12	.51	9.0	1.7	5.9
6	4.2	16	13	10	7.6	75	161	11	.57	17	10	5.8
7	5.3	13	291	9.5	7.3	44	99	69	.64	6.8	12	5.8
8	83	11	225	8.9	7.0	28	87	87	.57	4.4	5.4	5.2
9	494	10	92	8.2	7.2	21	58	42	30	3.0	5.9	4.9
10	306	12	50	8.7	7.9	17	41	25	9.0	26	3.9	4.6
11	89	9.6	44	9.7	9.0	14	28	17	4.0	16	5.4	4.4
12	31	9.3	101	9.2	13	13	21	13	3.0	89	36	4.2
13	17	8.4	116	8.5	41	247	16	10	2.3	112	193	3.9
14	12	8.4	67	9.0	89	129	16	8.7	2.7	37	442	4.2
15	8.7	9.3	43	9.7	56	62	13	6.8	8.7	13	259	4.4
16	11	9.3	30	11	39	37	11	5.3	3.7	7.3	97	4.3
17	7.7	8.7	21	11	28	25	5.3	4.3	2.5	4.9	59	5.4
18	6.1	9.6	16	10	23	39	8.4	3.9	1.9	3.6	38	4.2
19	5.4	9.3	13	9.5	22	31	7.5	3.9	1.6	2.8	26	5.2
20	9.3	8.4	16	8.7	23	30	7.3	3.2	1.7	2.1	20	18
21	33	7.9	13	9.2	21	23	7.3	2.7	2.5	12	16	7.5
22	24	7.9	11	9.5	20	50	5.9	2.1	1.5	24	14	5.6
23	16	6.8	10	8.9	26	64	5.8	4.7	1.3	6.1	12	4.6
24	22	6.6	9.3	8.1	183	58	7.0	8.4	1.1	3.8	87	4.3
25	80	7.9	8.9	8.6	264	42	7.5	4.2	13	108	51	4.2
26	200	12	10	9.3	161	30	8.4	3.2	16	161	29	8.2
27	87	16	11	10	112	23	16	2.3	5.8	34	20	10
28	40	25	12	10	58	26	16	1.8	4.2	14	16	15
29	25	51	13	9.7	---	19	37	1.5	19	8.7	13	9.3
30	24	40	12	9.4	---	17	28	1.3	9.3	7.5	11	7.2
31	125	---	11	9.0	---	15	---	1.1	---	5.3	8.4	---
TOTAL	1869.7	673.4	1348.2	292.7	1263.8	1488	1201.4	415.4	149.90	759.9	1503.5	195.0
MEAN	60.3	22.4	43.5	9.44	45.1	48.0	40.0	13.4	5.00	24.5	48.5	6.50
MAX	494	148	291	11	264	247	393	87	30	161	442	18
MIN	4.2	6.6	8.9	8.1	7.0	13	5.8	1.1	.51	2.1	1.7	3.9
CFSM	4.16	1.55	3.00	.65	3.11	3.31	2.76	.92	.35	1.69	3.35	.45
IN.	4.80	1.73	3.46	.75	3.24	3.82	3.08	1.07	.38	1.95	3.86	.50

CAL YR 1976	TOTAL	9744.44	MEAN	26.6	MAX	595	MIN	.21	CFSM	1.83	IN	25.00
WTR YR 1977	TOTAL	11160.90	MEAN	30.6	MAX	494	MIN	.51	CFSM	2.11	IN	28.63

MONONGAHELA RIVER BASIN

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) above mean sea level, 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.--62 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 (258 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)	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)
Oct. 10	0430	*8910	252	12.18	3.712	Apr. 5	1845	4710	133	9.18	2.798
Feb. 25	0600	5400	153	9.67	2.947						

Minimum discharge, 12 ft³/s (0.340 m³/s) June 8, gage height, 3.73 ft (1.137 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	756	1500	470	190	130	1260	308	365	25	334	96	161
2	926	1280	400	180	125	813	274	323	22	260	76	115
3	639	922	350	170	120	595	299	293	20	188	60	205
4	457	701	310	190	125	934	370	251	18	134	50	330
5	320	537	280	190	130	2180	3650	233	16	113	42	184
6	235	413	250	180	145	1610	3340	254	15	321	37	128
7	185	333	1300	170	140	1060	1680	495	13	365	51	102
8	394	283	2760	160	130	766	1250	1210	12	197	57	85
9	4200	245	1580	150	140	595	977	902	41	132	82	118
10	8080	229	937	160	150	488	761	633	199	158	109	95
11	3270	240	729	180	170	430	616	471	141	283	120	74
12	1170	226	870	170	250	403	481	360	80	343	217	63
13	695	209	1320	160	1000	1610	388	283	57	517	639	55
14	482	184	1090	170	2100	2140	331	234	49	410	1790	52
15	351	173	820	190	1400	1180	292	191	67	245	2500	55
16	284	183	650	200	900	804	251	156	58	157	982	78
17	243	173	523	190	520	609	214	128	48	114	550	102
18	195	165	404	185	470	568	189	109	46	88	520	85
19	166	172	320	175	450	795	170	105	40	68	415	84
20	152	168	290	160	430	704	155	104	36	55	290	257
21	288	164	338	175	420	635	156	93	53	46	213	335
22	491	165	220	170	400	666	191	73	204	129	164	190
23	390	150	200	160	1000	1090	159	61	119	201	130	131
24	358	130	210	140	3430	990	159	63	89	107	205	102
25	757	131	220	150	4850	831	179	72	132	228	380	85
26	1940	181	230	160	2860	679	185	61	353	1110	269	93
27	1640	291	240	170	2280	557	209	50	261	644	164	123
28	989	640	250	160	2140	505	211	43	153	308	120	201
29	683	756	260	155	---	469	320	38	199	188	113	189
30	528	600	230	145	---	385	436	33	473	142	104	141
31	974	---	210	135	---	347	---	29	---	117	104	---
TOTAL	32238	11544	18261	5240	26405	26698	18201	7716	3039	7702	10649	4018
MEAN	1040	385	589	169	943	861	607	249	101	248	344	134
MAX	8080	1500	2760	200	4850	2180	3650	1210	473	1110	2500	335
MIN	152	130	200	135	120	347	155	29	12	46	37	52
CFSM	3.76	1.39	2.13	.61	3.40	3.11	2.19	.90	.37	.90	1.24	.48
IN.	4.33	1.55	2.45	.70	3.55	3.59	2.44	1.04	.41	1.03	1.43	.54

CAL YR 1976	TOTAL	200525.5	MEAN 548	MAX 8080	MIN 8.3	CFSM 1.98	IN 26.93
WTR YR 1977	TOTAL	171711.0	MEAN 470	MAX 8080	MIN 12	CFSM 1.70	IN 23.06

MONONGAHELA RIVER BASIN

53

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) above mean sea level. Prior to May 23, 1940, nonrecording gage at same site and datum.

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

AVERAGE DISCHARGE.--37 years, 1,832 ft³/s (51.88 m³/s), 27.16 in/yr (690 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 (1,050 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)	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)
Oct. 10	0100	*23300	660	18.60	5.669	Apr. 5	2300	13400	379	13.29	4.051
Feb. 25	0300	18400	521	16.25	4.953						

Minimum discharge, 76 ft³/s (2.152 m³/s) June 8, gage height, 1.64 ft (0.500 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2040	4810	1850	620	430	4660	1230	1610	112	1120	306	960
2	3060	4340	1480	590	410	2910	1080	1330	107	715	269	548
3	2190	3110	1300	580	420	2130	1130	1180	114	549	196	734
4	1600	2370	1140	620	430	2700	1250	996	103	399	147	1020
5	1090	1800	1060	640	440	6220	9860	914	95	321	141	627
6	754	1440	950	630	470	5230	11300	1010	93	538	118	428
7	573	1170	3500	600	480	3570	5690	1870	87	740	157	327
8	843	998	8890	530	460	2600	4300	5150	79	519	199	300
9	11400	871	5230	500	450	2010	3560	3750	123	369	250	301
10	21300	823	3110	510	460	1670	2750	2440	701	307	317	273
11	10400	909	2410	580	510	1470	2240	1790	728	604	327	219
12	3880	945	2680	580	810	1360	1790	1360	401	1490	332	190
13	2400	891	4080	560	4000	4160	1450	1060	288	1710	1720	171
14	1630	783	3600	560	7000	7960	1250	877	237	1670	4240	152
15	1200	740	2720	600	5000	4350	1130	737	258	1050	7100	139
16	898	772	2190	650	3500	2870	561	595	281	588	3010	216
17	815	754	1800	640	1800	2150	826	478	217	419	1530	232
18	673	730	1450	610	1600	1930	733	400	223	278	1340	217
19	578	759	1150	580	1500	2910	659	397	187	244	1190	202
20	530	754	1010	560	1500	2780	610	353	159	205	858	468
21	893	743	1120	570	1500	2370	1310	314	162	177	569	1030
22	1890	752	901	570	1400	2370	1290	247	356	212	444	593
23	1580	725	816	530	6300	4210	918	233	368	479	353	403
24	1340	599	798	490	12500	3950	817	310	282	310	405	314
25	2400	572	700	500	17100	3160	870	368	250	300	744	265
26	6270	716	692	520	11600	2450	843	311	1010	3210	812	256
27	5920	1400	756	540	8290	1970	958	241	867	2480	548	327
28	3410	2740	852	540	7650	1780	1130	227	684	1100	354	471
29	2320	2770	834	510	---	1770	1490	178	920	618	392	471
30	1790	2560	798	490	---	1520	1870	160	1520	455	461	376
31	2790	---	700	460	---	1360	---	134	---	369	888	---
TOTAL	98457	43346	60567	17460	98010	92550	65295	31020	11012	23545	29717	12230
MEAN	3176	1445	1954	563	3500	2985	2177	1001	367	760	959	408
MAX	21300	4810	8890	650	17100	7960	11300	5150	1520	3210	7100	1030
MIN	530	572	692	460	410	1360	610	134	79	177	118	139
CFSM	3.47	1.58	2.13	.62	3.82	3.26	2.38	1.09	.40	.83	1.05	.45
IN.	4.00	1.76	2.46	.71	3.98	3.76	2.65	1.26	.45	.96	1.21	.50

CAL YR 1976	TOTAL	630457	MEAN	1723	MAX	21300	MIN	39	CFSM	1.88	IN	25.60
WTR YR 1977	TOTAL	583209	MEAN	1598	MAX	21300	MIN	79	CFSM	1.75	IN	23.68

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 at mean sea level.

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, above mean sea level. 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, 157,900 acre-ft (195 hm³) Oct. 11, elevation 1,118.23 ft (340.836 m); minimum, 19,780 acre-ft (24.4 hm³) Dec. 28, elevation, 1,021.64 ft (311.400 m).

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)	Change in contents (equivalent in cfs)
Sept. 30.....	1081.65	90900	-	-
Oct. 31.....	1067.70	70320	-20580	-335
Nov. 30.....	1050.13	47850	-22470	-378
Dec. 31.....	1024.59	22250	-25600	-416
CAL YR 1976	-	-	-11980	-222
Jan. 31.....	1029.05	26140	+3890	+63
Feb. 28.....	1103.00	127700	+101500	+1828
Mar. 31.....	1053.00	51220	-76440	-1243
Apr. 30.....	1090.15	104700	+53480	+899
May 31.....	1095.16	113300	+8580	+140
June 30.....	1097.84	118100	+4800	+81
July 31.....	1095.77	114400	-3720	-61
Aug. 31.....	1094.13	111500	-2890	-47
Sept. 30.....	1087.08	99630	-11850	-199
WTR YR 1977	-	-	+8700	+332

MONONGAHELA RIVER BASIN

55

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.--39 years, 2,315 ft³/s (65.56 m³/s), 26.55 in/yr (674 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, 11,900 ft³/s (337 m³/s) Oct. 11; minimum daily, 170 ft³/s (4.81 m³/s) June 8-13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	403	3840	1580	770	623	10900	1180	610	330	1310	460	590		
2	789	4540	2100	770	596	10400	1190	613	330	1500	330	590		
3	2100	5160	2090	770	650	9910	1200	1030	330	1050	330	590		
4	2770	4350	2080	770	596	6070	1210	1440	330	610	330	720		
5	2750	3750	2070	775	640	4460	1280	1440	330	610	327	850		
6	2730	3670	2050	780	560	6310	3640	1160	330	610	320	850		
7	2630	3570	2040	780	480	8580	6580	885	250	610	320	848		
8	2630	3480	3340	775	480	9300	7180	1750	170	755	320	840		
9	2680	2860	5910	765	480	8700	6360	2990	170	900	320	700		
10	4610	2240	7120	760	480	7950	5070	3000	170	755	465	560		
11	9090	2200	6800	680	482	6180	3420	2990	170	610	1080	560		
12	11500	2150	6450	600	681	4340	2050	2240	170	1100	1540	560		
13	11000	1540	6250	600	1480	2620	1400	1500	170	1590	2300	560		
14	10400	1000	3490	605	3270	2710	1120	1500	250	2330	3070	558		
15	8640	1000	866	610	5770	4490	840	1480	330	3010	4450	550		
16	6140	998	1210	610	6950	5700	840	1060	330	2000	6190	548		
17	4580	950	3410	714	6550	5450	840	578	330	755	6160	540		
18	2680	950	4180	815	6040	3590	840	551	330	610	3830	540		
19	1230	988	3980	822	4710	2750	840	630	330	470	1540	540		
20	1220	980	3800	832	3460	3300	840	630	330	330	1530	540		
21	1220	980	3150	840	2880	3300	710	630	330	330	1510	540		
22	1220	975	2140	840	1990	2760	580	630	330	330	928	680		
23	1240	970	1690	840	1700	2820	580	480	330	330	590	820		
24	1240	967	1650	750	2100	3450	582	330	330	330	590	820		
25	1260	960	1590	660	2650	3520	590	330	330	330	590	820		
26	2480	952	1530	660	3040	3530	590	330	330	899	590	820		
27	5280	952	1480	660	5410	3480	590	330	480	2280	590	820		
28	6770	974	1080	660	9640	2880	595	330	630	2990	590	820		
29	6600	1010	728	660	---	2340	600	330	765	2200	590	820		
30	5290	1040	753	660	---	1760	604	330	1010	1020	590	820		
31	3800	---	767	658	---	1180	---	330	---	590	590	---		
TOTAL	127032	60076	87414	22491	74388	154730	53941	32457	10345	33144	42960	20414		
MEAN	4058	2002	2820	726	2657	4991	1798	1047	345	1069	1386	680		
MAX	11500	5160	7120	840	9640	10900	7180	3000	1010	3010	6190	850		
MIN	403	952	728	600	460	1180	580	330	170	330	320	540		
CAL YR 1976	TOTAL	753786	MEAN	2060	MAX	11500	MIN	140	MEAN	1838	CFSM	1.55	IN	21.04
WTR YR 1977	TOTAL	715392	MEAN	1971	MAX	11500	MIN	170	MEAN	2303	CFSM	1.95	IN	26.47

‡ 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) above mean sea level, supplementary adjustment of 1944. Formerly published as 855.49 ft (260.753 m) above mean sea level, 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) above mean sea level.

REMARKS.--Records good except those for January and February, which are poor. Flow regulated by Tygart Lake (station 03055500). Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--38 years, 2,602 ft³/s (73.69 m³/s), 25.87 in/yr (657 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, 15,500 ft³/s (439 m³/s) Feb. 19; gage height, 13.34 ft (4.066 m); minimum, 176 ft³/s (4.984 m³/s) June 8, gage height, 3.28 ft (1.000 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1040	4560	1440	900	720	10900	1350	790	390	1400	643	619
2	898	4660	2340	900	680	10400	1470	760	390	1630	378	628
3	2000	5510	2290	900	740	9860	2020	920	390	1430	354	668
4	2990	5020	2280	918	770	8540	1830	1650	386	670	344	681
5	2940	3900	2250	1050	840	5960	2800	1710	381	666	339	906
6	2890	3700	2200	891	700	6600	3500	1670	386	733	336	902
7	2880	3560	4280	897	600	8250	6670	2240	350	696	356	898
8	3110	3470	4420	910	560	9400	7490	2460	202	788	501	893
9	5940	3250	6130	870	560	8780	6870	3530	243	1080	475	846
10	6630	2360	7620	980	560	8120	5540	3300	344	1100	530	600
11	8690	2280	7220	830	610	6840	3960	3230	283	752	1530	593
12	11800	2230	6850	720	2060	4850	2610	2840	220	956	2020	591
13	11200	1950	6580	690	4440	4470	1560	1690	200	2040	2430	591
14	10700	1140	4890	740	5940	3410	1440	1640	197	2390	3480	595
15	8420	1210	1230	800	9220	4470	981	1630	374	3180	4250	600
16	6670	1120	1000	720	10900	6010	950	1400	397	2670	6390	609
17	5080	1110	3120	810	9800	5720	939	703	382	950	6410	617
18	3290	1110	4420	920	8730	4640	932	668	427	665	5140	612
19	1360	1100	4180	950	10100	2940	923	801	416	621	1760	600
20	1340	1090	3970	970	8690	3550	917	794	418	373	1650	647
21	1440	1090	3530	1000	4880	3460	876	703	488	362	1600	631
22	1490	1090	2500	990	2740	3310	636	668	433	373	1330	645
23	1440	1070	1810	1000	2520	3020	638	568	394	362	670	874
24	1580	1060	1740	890	4310	3730	696	405	382	347	690	873
25	2400	1060	1670	760	5030	3680	701	390	623	458	711	867
26	3810	1070	1680	780	4310	3610	687	410	1220	1080	660	873
27	5480	1080	1620	800	5230	3530	712	405	668	2030	643	924
28	7170	1100	1470	800	9210	3280	734	400	785	3070	631	934
29	6880	1160	850	780	---	2560	812	390	837	2670	624	913
30	6100	1200	840	780	---	2260	835	390	1100	1390	619	892
31	4570	---	880	760	---	1390	---	390	---	634	623	---
TOTAL	142228	65310	97300	26706	115450	167540	62079	39545	13706	37566	48117	22122
MEAN	4588	2177	3139	861	4123	5405	2069	1276	457	1212	1552	737
MAX	11800	5510	7620	1050	10900	10900	7490	3530	1220	3180	6410	934
MIN	898	1060	840	690	560	1390	636	390	197	347	336	591

CAL YR 1976 TOTAL 841156 MEAN 2298 MAX 11800 MIN 173 MEAN‡ 2076 CFSM‡ 1.52 IN‡ 20.69
WTR YR 1977 TOTAL 837669 MEAN 2295 MAX 11800 MIN 197 MEAN‡ 2627 CFSM‡ 1.92 IN‡ 26.06

‡ Adjusted for change in contents in Tygart Lake.

MONONGAHELA RIVER BASIN

57

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) above mean sea level (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 those for periods of no gage-height record, Feb. 13-25, Feb. 28 to Mar. 24, which are poor.

AVERAGE DISCHARGE.--31 years, 161 ft³/s (4.560 m³/s), 21.44 in/yr (545 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 (96.3 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)
Oct. 9	1800	*3010	85.2	11.69	3.563	Apr. 5	0800	2820	79.9	11.36	3.463
Feb. 13	Unknown	a2600	73.6	Unknown							

a Estimated.

Minimum discharge, 0.82 ft³/s (0.023 m³/s) June 7, 8, gage height, 4.96 ft (1.512 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	243	499	133	70	41	100	60	124	2.1	51	13	3.6
2	205	254	104	60	40	77	58	102	1.7	42	11	3.6
3	110	153	81	56	38	61	74	92	1.7	33	8.7	3.6
4	63	108	64	53	35	600	158	105	1.6	22	6.3	5.6
5	44	79	57	52	41	920	2480	89	1.7	15	5.6	3.6
6	32	61	49	49	45	350	996	92	1.5	13	5.6	2.9
7	29	50	965	48	43	170	425	400	.95	13	7.1	2.9
8	271	44	986	40	41	110	306	508	.83	13	8.7	2.4
9	1960	37	347	43	39	85	211	212	22	12	22	2.0
10	1930	37	173	49	40	73	160	117	35	8.8	20	2.0
11	417	33	137	58	57	64	132	80	23	6.9	46	1.7
12	139	31	214	63	623	58	113	63	9.2	6.4	126	1.4
13	80	30	341	57	1500	1000	95	51	5.6	12	253	1.4
14	56	28	214	54	800	500	89	44	4.5	31	973	2.0
15	43	27	147	56	500	200	84	38	4.2	20	716	2.4
16	40	28	121	60	300	130	77	29	4.1	9.0	146	3.6
17	38	27	95	63	190	100	69	21	3.1	5.2	67	5.6
18	29	26	72	58	140	130	65	16	2.7	3.3	41	5.6
19	24	26	56	54	120	140	69	30	2.3	2.4	26	15
20	26	26	56	50	130	110	65	32	2.4	2.0	13	48
21	40	24	69	54	110	92	62	23	4.9	6.6	8.0	37
22	50	25	60	51	130	150	60	14	5.9	89	5.6	26
23	43	23	51	48	700	250	53	9.9	9.5	59	3.6	11
24	50	21	44	44	1000	202	67	8.0	5.8	23	22	5.6
25	211	19	42	42	620	146	89	6.5	39	144	46	4.5
26	640	26	58	40	265	113	87	6.6	74	368	35	4.5
27	300	59	85	42	184	91	95	5.4	26	101	18	9.5
28	136	114	100	44	150	92	97	3.8	27	45	9.5	33
29	86	202	130	47	---	88	217	3.1	51	26	6.7	30
30	70	200	100	45	---	75	178	2.9	69	19	6.7	20
31	438	---	80	43	---	71	---	2.5	---	15	4.5	---
TOTAL	7843	2317	5231	1593	7922	6348	6791	2330.7	442.28	1216.6	2680.6	300.0
MEAN	253	77.2	169	51.4	283	205	226	75.2	14.7	39.2	86.5	10.0
MAX	1960	499	986	70	1500	1000	2480	508	74	368	973	48
MIN	24	19	42	40	35	58	53	2.5	.83	2.0	3.6	1.4
CFSM	2.48	.76	1.66	.50	2.78	2.01	2.22	.74	.14	.38	.85	.10
IN.	2.86	.85	1.91	.58	2.89	2.32	2.48	.85	.16	.44	.98	.11

CAL YR 1976 TOTAL 49688.20 MEAN 136 MAX 2240 MIN 1.7 CFSM 1.33 IN 18.12
WTR YR 1977 TOTAL 45015.18 MEAN 123 MAX 2480 MIN .83 CFSM 1.21 IN 16.42

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) above mean sea level (Department of Highways bench mark). 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 fair except 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.--62 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 (212 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, 4,870 ft³/s (138 m³/s) Oct. 9, gage height, 8.47 ft (2.582 m); minimum, 5.6 ft³/s (0.159 m³/s) June 5, 6, 7, gage height, 0.58 ft (0.177 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	467	752	179	120	78	224	98	170	8.0	126	83	27
2	348	406	154	105	77	135	94	147	7.1	99	66	27
3	177	248	121	98	76	113	145	124	6.5	78	51	76
4	98	172	103	95	78	931	316	136	5.9	65	46	54
5	65	125	92	92	83	1590	3420	118	5.6	66	43	49
6	48	97	82	89	86	630	1710	115	5.9	59	40	46
7	52	78	1720	89	83	324	728	633	7.1	54	48	44
8	542	67	1620	74	80	216	520	860	28	52	58	43
9	3250	58	662	78	77	163	361	373	95	52	73	41
10	2860	59	359	87	80	133	268	209	97	50	99	39
11	727	56	285	105	304	115	210	145	80	48	187	38
12	251	54	395	110	1090	105	165	111	62	56	438	37
13	138	52	559	100	2370	1810	136	89	54	58	556	38
14	95	47	391	94	1620	1170	121	73	56	75	1760	45
15	70	46	279	100	953	419	109	62	60	67	1260	47
16	67	45	220	110	606	256	96	51	52	56	354	51
17	58	43	177	110	355	179	85	41	50	51	206	57
18	47	42	138	100	230	228	77	35	50	48	133	52
19	38	41	113	95	210	245	82	47	50	46	82	94
20	40	40	113	90	230	202	73	51	50	46	55	326
21	58	38	130	94	200	164	67	38	54	70	41	137
22	65	40	111	90	230	235	63	28	54	198	33	97
23	60	37	93	85	1160	416	60	23	56	131	27	71
24	76	34	83	80	1790	305	92	28	54	74	105	60
25	334	34	77	73	1200	223	108	20	152	587	136	54
26	1040	41	108	77	583	173	104	18	225	807	84	63
27	479	68	143	85	405	140	108	16	91	246	52	86
28	223	127	177	83	308	148	109	14	107	115	37	168
29	138	260	226	91	---	142	286	12	146	76	29	112
30	114	275	196	84	---	122	245	10	124	70	45	83
31	696	---	150	80	---	114	---	9.6	---	61	47	---
TOTAL	12721	3482	9256	2863	14642	11370	10056	3806.6	1893.1	3687	6274	2162
MEAN	410	116	299	92.4	523	367	335	123	63.1	119	202	72.1
MAX	3250	752	1720	120	2370	1810	3420	860	225	807	1760	326
MIN	38	34	77	73	76	105	60	9.6	5.6	46	27	27
CFSM	2.27	.64	1.65	.51	2.89	2.03	1.85	.68	.35	.66	1.12	.40
IN.	2.61	.72	1.90	.59	3.01	2.34	2.07	.78	.39	.76	1.29	.44
CAL YR 1976 TOTAL		91793.0		MEAN 251	MAX 3820	MIN 12	CFSM 1.39	IN 18.87				
WTR YR 1977 TOTAL		82212.7		MEAN 225	MAX 3420	MIN 5.6	CFSM 1.24	IN 16.90				

MONONGAHELA RIVER BASIN

59

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) downstream from dam at Clarksburg 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) above mean sea level. 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 period of no gage-height record, July 24 to Aug. 30, which are fair and 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 km²) 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.--54 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, 9,550 ft³/s (270 m³/s) Oct. 10, gage height, 14.06 ft (4.285 m), no other peak above base of 6,700 ft³/s (190 m³/s); minimum, 9.6 ft³/s (0.272 m³/s) June 3, 4, gage height, 2.61 ft (0.796 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	723	1710	309	310	180	392	301	343	14	169	99	82
2	694	928	261	280	180	280	285	280	13	158	130	50
3	317	527	221	240	180	221	378	261	11	112	86	71
4	193	370	193	220	180	1220	487	239	10	88	67	100
5	121	276	171	210	190	3500	4370	261	12	93	57	85
6	87	221	162	210	190	1630	3940	304	13	279	54	123
7	99	180	2850	207	190	699	1600	865	13	182	108	67
8	1080	157	3970	184	180	428	1080	2100	11	81	130	58
9	5470	135	1710	180	170	313	711	449	73	61	192	56
10	7490	128	817	190	180	254	523	487	210	60	180	46
11	2150	128	610	228	200	217	419	338	123	56	370	41
12	615	121	677	240	250	197	334	265	90	68	690	38
13	334	110	1010	230	334	2580	280	214	67	185	1610	36
14	242	101	804	210	4240	3150	250	180	64	138	1570	38
15	180	96	585	220	2150	1250	235	154	66	91	3480	43
16	160	90	482	240	1250	720	203	128	86	70	847	53
17	145	87	410	240	921	518	184	101	59	55	380	67
18	103	88	334	230	424	526	168	88	55	46	248	75
19	92	80	273	210	400	785	160	87	49	41	128	63
20	87	75	269	200	424	598	165	94	50	38	68	484
21	101	73	325	210	379	499	135	94	52	43	39	411
22	123	78	280	200	406	595	135	73	50	151	21	188
23	121	77	240	190	1790	987	130	59	48	250	14	125
24	143	70	217	180	3430	824	235	55	48	117	102	90
25	541	67	197	170	3180	602	261	60	53	146	255	73
26	2420	77	246	174	1400	486	232	48	249	2020	133	72
27	1260	96	329	187	797	409	235	38	211	560	107	90
28	536	128	379	187	541	414	221	33	127	199	76	191
29	317	257	451	200	---	442	356	30	223	117	54	227
30	254	392	420	190	---	377	460	23	215	86	44	146
31	1140	---	380	180	---	340	---	19	---	83	82	---
TOTAL	27338	6923	19582	6547	24336	25453	18473	8270	2365	5843	11421	3289
MEAN	882	231	632	211	869	821	616	267	78.8	188	368	110
MAX	7490	1710	3970	310	4240	3500	4370	2100	249	2020	3480	484
MIN	67	67	162	170	170	197	130	19	10	38	14	36
MEAN‡	893	240	641	221	879	830	624	275	87.3	197	377	120
CFSM‡	2.33	0.62	1.67	0.58	2.29	2.16	1.62	0.72	0.23	0.51	0.98	0.31
IN.‡	2.69	0.69	1.92	0.67	2.38	2.49	1.81	0.83	0.26	0.59	1.13	0.35

CAL YR 1976 TOTAL 184192 MEAN 503 MAX 7490 MIN 16 MEAN‡ 512 CFSM‡ 1.33 IN‡ 18.05
WTR YR 1977 TOTAL 155840 MEAN 438 MAX 7490 MIN 10 MEAN‡ 447 CFSM‡ 1.16 IN‡ 15.75

‡ 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), above mean sea level, 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.--53 years (water years 1908-1916, 1934-77), 1,139 ft³/s (32.26 m³/s), 20.38 in/yr (518 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 (595 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.--Maximum discharge, 18,100 ft³/s (513 m³/s) Oct. 9, gage height, 17.67 ft (5.386 m), no other peak above base of 12,000 ft³/s (340 m³/s); minimum, 56 ft³/s (1.59 m³/s) June 5, gage height 1.41 ft (0.430 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1350	3230	604	534	271	1130	638	658	101	257	313	146
2	1400	2000	553	478	278	906	612	509	83	231	258	130
3	653	1300	442	416	268	713	1160	532	84	200	199	175
4	392	995	416	395	282	3030	1240	695	81	161	140	165
5	259	763	371	375	312	6620	5620	877	77	177	113	153
6	193	584	335	379	316	3430	6370	825	84	312	100	156
7	227	482	4750	367	320	1920	3150	2070	83	371	165	145
8	2000	416	6730	320	300	1320	2210	3520	83	206	434	115
9	10000	359	2970	312	270	1020	1630	2090	257	145	397	107
10	13200	339	1600	331	297	834	1250	1170	416	128	374	101
11	4320	331	1200	568	433	708	1040	818	282	174	916	91
12	1570	312	1190	412	2140	636	833	636	200	257	956	84
13	870	286	1570	383	6820	3900	685	510	169	408	2130	78
14	599	261	1370	395	6620	5320	603	433	150	482	1650	79
15	438	251	1060	383	3960	2410	561	375	166	222	4010	87
16	421	244	876	425	2560	1460	490	316	174	160	1730	101
17	347	228	752	416	1600	1020	433	268	155	130	1250	135
18	289	212	642	391	1160	1170	398	244	155	107	955	137
19	225	205	501	363	1070	1760	371	367	136	94	500	125
20	221	200	491	355	1020	1320	362	304	136	84	308	307
21	278	151	653	363	918	1060	339	254	155	91	223	676
22	324	191	548	347	900	1360	292	215	124	341	174	304
23	301	194	510	335	2930	2060	291	186	115	350	147	200
24	375	183	416	308	6280	1720	718	174	107	230	232	155
25	1390	183	387	312	6200	1250	679	172	172	379	587	132
26	4700	186	473	331	3200	972	522	180	200	2100	410	120
27	2750	221	558	339	2070	796	516	150	355	1140	251	164
28	1300	268	642	347	1500	793	480	136	212	436	187	228
29	852	395	724	335	---	1000	606	122	251	255	143	334
30	604	691	746	312	---	874	832	118	324	198	119	241
31	2440	---	653	290	---	733	---	111	---	165	126	---
TOTAL	54608	15705	34733	11577	54295	53245	34931	19035	5087	9991	19497	5171
MEAN	1702	524	1120	373	1939	1718	1164	614	170	322	629	172
MAX	13200	3230	6730	568	6820	6620	6370	3520	416	2100	4010	676
MIN	153	183	335	290	268	636	291	111	77	84	100	78
CFSM	2.32	.69	1.48	.49	2.56	2.26	1.53	.81	.22	.42	.83	.23
IN.	2.08	.77	1.70	.57	2.66	2.61	1.71	.93	.25	.49	.96	.25
CAL YR 1976	TOTAL	350792	MEAN	958	MAX	13200	MIN	74	CFSM	1.26	IN	17.19
WTR YR 1977	TOTAL	317879	MEAN	871	MAX	13200	MIN	77	CFSM	1.15	IN	15.58

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) above mean sea level, 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, which are poor.

AVERAGE DISCHARGE.--54 years (water years 1908, 1916-23, 1933-77), 177 ft³/s (5.013 m³/s), 19.60 in/yr (498 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 (329 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,500 ft³/s (99.1 m³/s) Oct. 9, gage height, 10.38 ft (3.164 m), no other peak above base of 3,500 ft³/s (99 m³/s); minimum, 11 ft³/s (0.312 m³/s) June 8, 24, gage height, 1.99 ft (0.607 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	137	571	38	65	20	212	164	223	18	37	26	27
2	112	307	35	60	19	162	835	165	15	29	22	218
3	54	208	33	56	19	130	1460	167	15	24	18	212
4	31	154	37	57	19	1050	625	521	14	22	17	74
5	25	115	37	55	20	904	1380	1150	15	34	15	48
6	18	92	35	51	22	419	664	802	14	468	14	37
7	42	78	1580	48	21	275	476	1740	13	108	20	35
8	360	68	798	44	20	198	367	1000	12	345	331	29
9	2140	60	325	41	19	158	251	457	32	152	125	23
10	1000	59	204	44	20	133	201	288	31	91	70	21
11	315	55	178	40	25	112	166	208	23	62	55	18
12	166	48	168	37	464	101	134	153	19	399	268	16
13	106	41	150	34	1080	837	116	116	15	296	189	15
14	76	38	109	37	606	546	103	99	16	204	223	15
15	59	37	107	39	382	302	93	83	21	106	289	17
16	64	35	103	35	280	212	82	68	19	64	142	18
17	60	31	94	33	200	163	76	59	17	46	983	18
18	48	29	80	30	176	581	69	53	51	37	597	18
19	39	29	68	27	150	677	66	105	61	32	197	15
20	40	28	75	25	135	369	65	96	37	26	111	90
21	84	30	80	27	113	247	60	62	24	27	80	55
22	103	28	65	25	144	416	55	49	18	42	138	29
23	74	27	57	23	623	437	54	41	15	34	101	21
24	99	25	51	22	1660	300	553	37	13	23	75	21
25	464	26	59	22	1210	216	270	36	298	82	82	22
26	644	27	67	22	714	174	170	30	410	257	60	25
27	312	31	76	23	479	143	134	27	98	81	48	52
28	180	31	83	23	310	257	132	26	59	47	39	57
29	126	40	96	23	---	376	782	23	48	35	31	47
30	103	42	80	22	---	258	366	22	42	29	28	33
31	916	---	70	21	---	208	---	19	---	25	27	---
TOTAL	7997	2390	5038	1111	8950	10573	9969	7925	1483	3264	4421	1326
MEAN	258	79.7	163	35.8	320	341	332	256	49.4	105	143	44.2
MAX	2140	571	1580	65	1660	1050	1460	1740	410	468	983	218
MIN	18	25	33	21	19	101	54	19	12	22	14	15
CFSM	2.24	.69	1.42	.31	2.78	2.97	2.89	2.23	.43	.91	1.24	.38
IN.	2.59	.77	1.63	.36	2.90	3.42	3.22	2.56	.48	1.06	1.43	.43
CAL YR 1976	TOTAL	54809.3	MEAN 150	MAX 2140	MIN 5.4	CFSM 1.30	IN 17.73					
WTR YR 1977	TOTAL	64447.0	MEAN 177	MAX 2140	MIN 12	CFSM 1.54	IN 20.85					

MONONGAHELA RIVER BASIN

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 Dec. 21 to Feb. 23, which are poor.

AVERAGE DISCHARGE.--12 years, 15.7 ft³/s (0.445 m³/s), 19.56 in/yr (497 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 (22.7 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 (7.08 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)
Oct. 9	1830	*290	8.21	4.80	1.463	Feb. 24	1715	250	7.08	4.16	1.268
Minimum discharge, 0.13 ft ³ /s (0.004 m ³ /s) July 24, 25, gage height, 0.44 ft (0.134 m).											

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	36	4.1	8.0	3.4	25	15	25	1.1	1.0	1.3	1.5
2	8.7	25	4.0	7.4	3.3	18	63	20	.89	.96	.95	1.3
3	5.6	19	3.9	7.0	3.7	15	71	17	.82	.61	.68	1.5
4	3.7	15	3.8	7.2	3.9	121	51	15	.71	.45	.50	1.3
5	2.8	12	3.7	7.4	4.1	96	70	72	.80	6.7	.37	1.1
6	2.1	11	5.3	7.8	3.9	48	47	93	1.2	5.8	.48	.90
7	9.6	9.4	131	7.5	3.8	30	33	136	.98	2.3	3.5	.82
8	30	8.7	63	6.9	3.6	22	28	79	.80	2.4	9.3	.74
9	188	7.7	30	5.9	3.5	18	22	39	4.2	2.2	9.7	.59
10	92	8.0	22	6.0	3.8	15	19	25	4.0	3.5	5.9	.47
11	34	7.2	19	5.6	6.4	13	15	18	2.0	3.2	4.4	.35
12	15	6.4	20	5.1	15	12	13	14	1.3	4.4	12	.44
13	13	5.9	17	4.5	45	62	11	12	1.0	3.5	8.6	.24
14	9.8	5.5	15	4.7	30	41	11	12	1.4	3.0	26	.34
15	8.5	5.5	13	5.1	21	28	9.5	9.0	2.1	2.0	16	.70
16	9.3	4.9	12	4.8	14	21	8.5	7.0	1.3	1.4	10	.90
17	7.3	4.6	11	4.6	12	17	7.5	6.0	1.1	1.0	55	1.2
18	6.3	4.5	9.1	4.3	10	35	7.0	5.5	5.4	.99	28	.95
19	5.8	4.1	8.2	4.1	8.9	31	6.5	7.0	2.4	.78	14	.63
20	6.8	3.9	11	3.9	10	25	6.5	5.1	1.4	.54	9.0	.99
21	12	3.7	10	3.7	8.5	19	6.0	4.0	1.2	.41	6.5	.89
22	10	3.8	9.2	3.5	12	43	5.5	3.5	1.0	.38	12	.64
23	8.8	3.4	8.4	3.4	70	35	5.5	6.0	.74	.28	7.2	.49
24	17	3.0	7.6	3.3	170	27	33	7.5	.58	.19	7.9	.40
25	43	3.4	8.6	3.6	115	21	34	4.5	4.5	13	7.3	.48
26	58	3.7	9.6	3.9	72	17	25	3.5	5.1	12	5.2	1.4
27	31	3.9	8.9	4.3	58	14	21	2.8	2.6	4.9	3.8	2.2
28	20	3.9	10	4.7	38	28	36	2.4	1.6	2.9	3.0	1.3
29	16	5.2	9.2	4.4	---	26	66	2.0	1.4	1.9	2.5	.94
30	15	4.3	9.3	4.0	---	21	38	1.7	1.0	2.5	2.0	.71
31	58	---	8.8	3.6	---	18	---	1.4	---	1.7	1.9	---
TOTAL	771.1	242.6	505.7	160.2	752.8	962	784.5	655.9	54.62	86.89	274.98	26.41
MEAN	24.9	8.09	16.3	5.17	26.9	31.0	26.2	21.2	1.82	2.80	8.87	.88
MAX	188	36	131	8.0	170	121	71	136	5.4	13	55	2.2
MIN	2.1	3.0	3.7	3.3	3.3	12	5.5	1.4	.58	.19	.37	.24
CFSM	2.28	.74	1.50	.47	2.47	2.84	2.40	1.95	.17	.26	.81	.08
IN.	2.63	.83	1.73	.55	2.57	3.28	2.68	2.24	.19	.30	.94	.09
CAL YR 1976	TOTAL	4967.53	MEAN 13.6	MAX 188	MIN .05	CFSM 1.25	IN 16.95					
WTR YR 1977	TOTAL	5277.70	MEAN 14.5	MAX 188	MIN .19	CFSM 1.33	IN 18.01					

MONONGAHELA RIVER BASIN

63

03063600 HORSECAMP RUN AT HARMAN, WV

LOCATION.--Lat 38°54'51", long 79°30'32", Randolph County, Hydrologic Unit 05020001, on right bank 1.0 mi (1.6 km) southeast of Harman, and at mile 1.1 (1.8 km).

DRAINAGE AREA.--6.57 mi² (17.02 km²).

PERIOD OF RECORD.--July 1969 to September 1977 (discontinued).

GAGE.--Water-stage and rainfall recorders. Datum of gage is 2,510.93 ft (765.331 m) above mean sea level.

REMARKS.--Records fair except those for Dec. 21 to Feb. 22, which are poor. Rainfall records collected at site since July 1969 are contained in files of U.S. Geological Survey with only monthly totals published in this report.

AVERAGE DISCHARGE.--8 years, 9.99 ft³/s (0.283 m³/s), 20.65 in/yr (525 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 760 ft³/s (21.5 m³/s) Dec. 26, 1973, gage height, 5.60 ft (1.707 m), from floodmark, from rating curve extended above 120 ft³/s (3.40 m³/s) on basis of step-backwater method; no flow July 31, Aug. 1, 3-6, 9-11, 1973.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 160 ft³/s (4.5 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	0745	*304	8.61	4.02	1.225	Mar. 13	0515	217	6.15	3.44	1.049
Feb. 24	1230	184	5.21	3.22	0.981						

Minimum daily discharge, 0.13 ft³/s (0.004 m³/s) Sept. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	13	5.0	1.6	1.2	16	4.7	1.4	1.1	2.6	.52	.27
2	13	10	4.0	1.5	1.2	10	4.3	1.3	.54	1.9	.45	.25
3	19	8.4	3.2	1.4	1.1	8.4	4.0	1.3	.48	1.5	.35	.22
4	8.9	6.7	2.5	1.4	1.1	23	28	1.3	.48	1.2	.31	.21
5	5.3	5.0	2.0	1.5	1.2	30	81	1.8	.48	1.0	.34	.20
6	3.5	3.8	1.7	1.6	1.3	20	39	1.7	.79	1.2	.33	.28
7	5.0	2.9	22	1.7	1.2	13	27	4.0	.86	.86	.34	.30
8	51	2.5	16	1.5	1.1	9.5	25	4.5	.60	.86	.38	.24
9	168	2.2	9.5	1.4	1.1	8.8	16	3.6	8.8	.72	.42	.20
10	64	3.6	7.2	1.3	1.2	9.1	12	3.2	7.5	.86	.50	.17
11	28	3.7	7.5	1.4	2.5	9.5	9.5	2.9	4.3	1.1	.54	.15
12	16	3.2	13	1.5	5.0	15	7.2	2.6	2.8	1.2	1.4	.13
13	11	2.6	14	1.4	12	93	5.9	2.5	1.9	1.0	.94	.30
14	7.7	2.4	9.5	1.4	10	38	5.1	2.6	1.7	.72	4.5	.26
15	5.5	2.3	7.8	1.6	6.5	23	4.5	2.2	1.9	.54	2.7	.24
16	4.3	2.4	6.2	1.5	4.5	15	3.6	1.9	1.3	.42	1.1	.32
17	3.8	2.2	4.7	1.4	3.5	11	3.2	1.7	1.0	.37	1.8	.25
18	3.2	3.0	3.4	1.4	3.0	14	2.8	1.6	.86	.37	1.5	.32
19	2.7	3.2	2.9	1.3	2.6	16	2.6	1.6	.79	.37	.90	.80
20	6.6	4.2	3.2	1.2	3.2	13	2.4	1.4	.86	.37	.69	1.7
21	20	3.2	2.7	1.1	2.9	11	2.1	1.2	.86	.48	.54	.60
22	13	2.5	2.4	1.2	2.7	24	1.8	1.1	.66	1.4	.47	.54
23	9.0	2.0	2.3	1.2	30	24	1.8	1.2	.60	.48	.42	.48
24	12	1.6	2.2	1.1	109	18	1.7	1.6	.54	.37	1.7	.48
25	32	2.1	2.4	1.0	60	13	1.7	1.1	33	4.6	1.3	.48
26	46	4.7	2.8	1.2	39	10	1.5	.92	30	5.1	.70	.60
27	23	11	2.5	1.3	45	8.4	1.7	.80	11	1.9	.56	.60
28	12	10	2.2	1.5	30	8.4	1.8	.70	6.9	1.1	.45	.54
29	8.1	8.0	2.0	1.4	---	7.8	1.9	.60	5.3	.80	.42	.48
30	6.2	6.0	1.9	1.3	---	6.5	1.5	.54	3.4	.78	.35	.48
31	11	---	1.7	1.3	---	5.9	---	.60	---	.65	.31	---
TOTAL	630.8	138.4	170.4	42.6	383.1	532.3	305.3	55.46	131.30	36.82	27.23	12.09
MEAN	20.3	4.61	5.50	1.37	13.7	17.2	10.2	1.79	4.38	1.19	.88	.40
MAX	168	13	22	1.7	109	93	81	4.5	33	5.1	4.5	1.7
MIN	2.7	1.6	1.7	1.0	1.1	5.9	1.5	.54	.48	.37	.31	.13
CFSM	3.09	.70	.84	.21	2.09	2.62	1.55	.27	.67	.18	.13	.06
IN.†	3.57	.78	.96	.24	2.17	3.01	1.73	.31	.74	.21	.15	.07
IN.‡	8.89	.92	1.21	.13	1.15	3.43	2.82	1.90	5.91	3.39	4.01	1.73
CAL YR 1976	TOTAL	2435.01	MEAN 6.65	MAX 168	MIN .06	CFSM 1.01	IN† 13.79					
WTR YR 1977	TOTAL	2465.80	MEAN 6.76	MAX 168	MIN .13	CFSM 1.03	IN† 13.96					

† Runoff.
‡ Rainfall.

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) above mean sea level, 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.--37 years, 750 ft³/s (21.24 m³/s), 29.52 in/yr (750 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 (425 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)	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)
Oct. 9	1300	20700	586	10.46	3.188	Mar. 13	0900	10100	286	7.81	2.380
Feb. 24	Unknown	9650	273	7.65	2.332						

a From floodmark.

Minimum discharge, 36 ft³/s (1.02 m³/s) Sept. 14, gage height, 1.28 ft (0.390 m).

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1310	1870	680	210	155	1710	574	348	143	271	121	131
2	1780	1410	570	190	150	1240	518	321	117	219	101	99
3	1740	1070	490	180	145	905	588	300	83	166	85	88
4	896	852	430	180	140	2000	1060	270	67	132	74	86
5	518	675	390	200	150	3830	5900	305	57	117	67	77
6	359	560	370	210	160	2560	3280	419	55	137	73	71
7	290	477	1700	220	150	1680	1930	896	66	125	95	66
8	2130	431	1850	200	140	1160	1800	1330	66	111	106	87
9	13300	354	1140	190	140	941	1440	905	790	111	194	66
10	6480	457	860	180	150	1000	1120	672	1160	96	138	57
11	2570	490	860	190	170	1060	923	529	499	236	127	51
12	1430	444	1490	200	600	1420	740	424	299	861	162	44
13	960	377	1620	180	1600	6180	630	354	214	845	411	39
14	708	315	1140	170	1400	3260	560	330	179	636	927	40
15	553	359	932	200	870	1830	518	291	211	351	1010	59
16	470	310	764	190	590	1330	425	237	178	232	476	59
17	401	300	637	180	470	980	371	203	137	170	395	64
18	371	343	511	170	390	1050	332	179	114	139	413	62
19	310	326	419	160	350	1370	300	191	104	112	290	54
20	383	457	444	150	420	1080	290	186	119	93	215	198
21	1740	400	477	140	380	970	602	150	229	83	171	190
22	1240	330	305	150	350	1340	470	127	141	169	141	119
23	887	260	300	140	500	1620	383	131	111	144	122	88
24	914	210	290	120	3500	1360	371	205	90	101	132	70
25	1840	310	337	120	5900	1060	371	155	537	587	237	60
26	3040	419	371	125	3800	852	316	128	1350	1300	178	85
27	1890	878	326	140	4300	740	360	107	537	500	126	171
28	1230	1290	300	190	4800	878	383	92	406	284	118	228
29	896	1210	270	180	---	869	444	81	513	199	136	150
30	764	896	250	170	---	724	401	73	389	179	144	106
31	1470	---	230	160	---	679	---	75	---	151	202	---
TOTAL	52830	18084	20753	5385	31870	47678	27400	10014	8961	8857	7187	2765
MEAN	1704	603	669	174	1138	1538	913	323	299	286	232	92.2
MAX	13300	1870	1850	220	5900	6180	5900	1330	1350	1300	1010	228
MIN	290	210	230	120	140	679	290	73	55	83	67	39
CFSM	4.94	1.75	1.94	.50	3.30	4.46	2.65	.94	.87	.83	.67	.27
IN.	5.70	1.95	2.24	.58	3.44	5.14	2.95	1.08	.97	.96	.77	.30
CAL YR 1976	TOTAL	243494	MEAN 665	MAX 13300	MIN 13	CFSM 1.93	IN 26.25					
WTR YR 1977	TOTAL	241784	MEAN 662	MAX 13300	MIN 39	CFSM 1.92	IN 26.07					

MONONGAHELA RIVER BASIN

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) above mean sea level, 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, and February, which are poor.

AVERAGE DISCHARGE.--56 years, 195 ft³/s (5.522 m³/s), 30.72 in/yr (780 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)	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)
Oct. 9	2400	*3550	101	9.12	2.780	Mar. 4	2200	1800	51.0	6.66	2.030
Feb. 25	1700	2550	72.2	7.79	2.374	Mar. 13	1900	1850	52.4	6.75	2.057

Minimum discharge, 12 ft³/s (0.34 m³/s) Sept. 13, 14, gage height, 1.39 ft (0.424 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	610	530	130	52	39	707	165	51	41	59	25	24
2	728	329	120	48	38	411	166	46	40	48	24	24
3	800	229	110	45	37	292	226	46	31	45	20	30
4	401	191	100	44	38	1030	306	53	25	31	18	25
5	196	159	96	50	40	1520	1110	74	21	30	18	29
6	130	138	92	53	42	932	768	97	23	45	21	17
7	117	124	507	56	39	525	459	179	32	34	33	16
8	597	111	478	50	37	340	455	202	30	31	115	16
9	2330	100	234	47	35	273	302	125	347	32	115	16
10	2800	128	189	45	38	275	228	87	515	54	74	15
11	1150	144	212	47	40	279	191	77	242	59	76	14
12	441	116	419	49	150	317	156	68	119	180	90	13
13	265	100	372	45	410	1450	130	61	88	226	204	12
14	193	85	223	44	350	1270	116	86	78	152	422	15
15	150	80	192	52	240	531	101	80	98	96	365	18
16	141	78	157	48	150	324	91	59	82	66	163	18
17	123	75	149	46	120	239	82	49	64	45	189	22
18	106	82	127	43	97	336	76	44	54	37	175	20
19	88	96	114	40	88	421	70	117	50	31	93	18
20	157	132	127	38	100	306	67	103	48	26	65	65
21	572	106	130	37	96	274	67	62	70	25	51	47
22	342	87	90	38	88	402	59	48	54	31	45	31
23	203	67	80	37	120	427	56	87	40	33	44	23
24	274	53	75	34	794	330	64	142	34	28	58	18
25	594	80	79	35	1460	232	71	78	61	90	87	16
26	720	129	91	38	1000	199	61	63	144	251	52	26
27	449	309	87	44	1200	175	67	53	84	160	37	41
28	273	308	80	48	1200	251	67	44	57	68	43	61
29	207	200	72	45	---	272	75	38	95	45	32	47
30	180	140	62	43	---	187	62	35	84	38	26	33
31	478	---	56	40	---	207	---	33	---	30	25	---
TOTAL	15815	4506	5050	1381	8086	14734	5914	2387	2751	2126	2805	770
MEAN	510	150	163	44.5	289	475	197	77.0	91.7	68.6	90.5	25.7
MAX	2800	530	507	56	1460	1520	1110	202	515	251	422	65
MIN	88	53	56	34	35	175	56	33	21	25	18	12
CFSM	5.92	1.74	1.89	.52	3.35	5.51	2.29	.89	1.06	.80	1.05	.30
IN.	6.82	1.94	2.18	.60	3.49	6.36	2.55	1.03	1.19	.92	1.21	.33

CAL YR 1976	TOTAL	65331.3	MEAN	179	MAX	2800	MIN	5.8	CFSM	2.08	IN	28.19
WTR YR 1977	TOTAL	66325.0	MEAN	182	MAX	2800	MIN	12	CFSM	2.11	IN	28.62

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) above mean sea level. 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 December, January, and February, which are poor.

AVERAGE DISCHARGE.--7 years, 330 ft³/s (9.346 m³/s), 38.97 in/yr (990 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 (173 m³/s); maximum gage height, 9.67 ft (2.947 m) Mar. 13, 1977; 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 (3.99 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)	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)
Oct. 9	1200	9070	257	8.69	2.649	Apr. 5	0645	4020	114	6.21	1.893
Feb. 25	0115	3310	93.7	5.69	1.734	July 25	2345	3820	108	6.08	1.853
Mar. 13	0915	*12500	354	9.67	2.947						

Minimum discharge, 26 ft³/s (0.74 m³/s) June 6, gage height, 1.33 ft (0.405 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	746	666	270	70	53	660	350	195	41	215	116	125
2	636	475	250	64	51	465	290	167	39	157	96	248
3	690	405	190	58	48	380	310	154	34	111	80	178
4	495	360	160	60	50	1010	912	154	31	92	98	118
5	365	310	150	66	54	2050	2960	211	29	92	76	96
6	290	257	140	70	54	1110	1060	310	27	148	61	136
7	271	223	1020	76	52	678	648	540	36	111	69	145
8	1750	199	660	68	49	520	625	654	43	79	80	113
9	6120	181	370	64	47	475	555	440	295	167	130	92
10	2090	211	300	60	49	565	475	360	545	227	105	78
11	894	177	375	65	54	662	440	305	244	732	100	66
12	565	151	648	65	160	1240	380	253	128	305	150	58
13	465	123	840	60	540	5750	325	215	106	380	200	53
14	380	104	455	60	480	1500	285	199	83	262	690	54
15	311	105	395	70	330	849	257	167	219	160	590	74
16	262	100	345	64	220	732	219	136	211	118	300	94
17	227	97	280	65	160	590	191	116	111	92	250	92
18	219	111	207	59	135	660	167	100	83	74	460	92
19	174	96	195	54	120	753	145	96	69	61	315	81
20	219	128	223	52	140	525	139	86	71	52	219	510
21	894	120	215	50	125	480	133	71	345	51	167	248
22	465	154	130	52	115	732	118	59	199	203	133	151
23	350	100	110	50	270	711	111	55	120	108	113	116
24	330	80	100	48	984	510	111	76	96	58	330	98
25	620	110	110	51	1890	425	120	62	130	630	480	86
26	1250	223	120	55	948	385	113	52	420	1480	248	130
27	642	425	120	60	1760	370	133	45	199	435	178	203
28	480	840	110	65	1580	405	194	40	248	280	142	145
29	390	816	98	60	---	435	355	38	470	195	130	123
30	340	465	85	59	---	420	276	38	350	181	154	98
31	764	---	79	55	---	450	---	39	---	167	244	---
TOTAL	23733	7812	8750	1875	10518	26497	12397	5433	5022	7423	6504	3901
MEAN	766	260	282	60.5	376	855	413	175	167	239	210	130
MAX	6120	840	1020	76	1890	5750	2960	654	545	1480	690	510
MIN	174	80	79	48	47	370	111	38	27	51	61	53
CFSM	6.66	2.26	2.45	.53	3.27	7.44	3.59	1.52	1.45	2.08	1.83	1.13
IN.	7.68	2.53	2.83	.61	3.40	8.57	4.01	1.76	1.62	2.40	2.10	1.26
CAL YR 1976	TOTAL	117219	MEAN 320	MAX 6120	MIN 11	CFSM 2.78	IN 37.92					
WTR YR 1977	TOTAL	119865	MEAN 328	MAX 6120	MIN 27	CFSM 2.85	IN 38.77					

MONONGAHELA RIVER BASIN

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 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICHO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	DIS- SOLVED OXYGEN (MG/L)	SUS- PENDE SEDI- MENT (MG/L)	SUS- PENDE MENT DIS- CHARGE (T/DAY)
OCT									
09...	1345	8860	33	--	--	50	--	246	5890
09...	1500	8740	34	--	--	45	--	209	4930
09...	1600	7220	40	--	--	40	--	389	7580
09...	1700	6540	32	--	--	30	--	168	2970
09...	1915	4990	32	--	--	20	--	109	1470
09...	2020	4490	31	--	--	20	--	70	849
09...	2130	4030	32	--	--	10	--	47	511
09...	2230	3670	32	--	--	10	--	47	466
09...	2330	3460	31	--	--	10	--	41	383
10...	0025	3280	31	--	--	10	--	39	345
27...	1340	630	30	5.2	6.0	2	--	4	6.8
DEC									
09...	1125	380	34	6.6	.5	1	--	8	8.2
16...	1350	346	28	6.5	6.5	1	7.6	4	3.7
FEB									
25...	1055	1610	45	--	--	10	--	30	130
25...	1100	1600	45	--	--	15	--	25	108
MAR									
13...	1530	4580	33	6.2	6.0	80	--	296	3660
13...	1725	3700	32	6.2	5.5	60	--	194	1940
13...	1730	3670	33	6.2	5.5	60	--	158	1570
13...	1800	3540	33	6.2	5.5	50	--	132	1260
APR									
06...	1500	952	30	5.1	3.0	3	10.0	4	10
28...	1110	175	26	7.0	11.0	3	9.3	4	1.9
JUN									
02...	1530	36	43	7.6	20.0	1	6.0	2	.19
30...	1440	334	32	6.7	20.0	3	--	4	3.6
AUG									
03...	1420	75	34	--	22.0	1	7.6	5	1.0
18...	1430	485	30	6.6	20.0	10	--	10	13
SEP									
01...	1240	123	31	7.0	21.5	4	--	3	1.0
29...	1155	117	34	7.1	13.5	8	--	4	1.3

MONONGAHELA RIVER BASIN

03068600 SHAVERS FORK ABOVE BOWDEN, WV

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).

DRAINAGE AREA.--138 mi² (357 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1973 to June 1975 (partial record station), July 1975 to current year.

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; minimum daily, 18 ft³/s (0.510 m³/s) Sept. 9, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 7,130 ft³/s (202 m³/s) Oct. 9; minimum daily, 31 ft³/s (0.878 m³/s), June 6, 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	825	831	329	81	61	822	362	223	44	247	156	147
2	715	542	297	74	60	519	316	186	44	186	130	180
3	763	439	230	68	57	412	304	175	38	153	106	177
4	537	386	192	70	60	698	650	158	34	125	109	130
5	378	339	174	76	63	2240	3260	182	33	112	99	103
6	308	301	164	81	63	1390	1390	257	31	132	102	112
7	269	269	1300	87	59	857	792	524	31	137	88	138
8	1450	250	880	79	56	603	714	790	42	102	114	120
9	7130	209	459	75	54	497	613	458	95	132	186	97
10	2390	234	364	69	58	554	486	335	486	140	158	84
11	1090	232	378	76	63	667	434	274	197	678	148	73
12	666	207	679	76	194	1240	367	219	117	280	200	66
13	489	176	995	69	661	5590	314	183	95	310	210	56
14	391	153	534	68	594	1840	279	172	79	297	721	54
15	327	145	436	81	381	971	252	155	90	175	885	65
16	294	136	380	74	255	773	230	134	162	139	358	74
17	264	131	325	74	196	631	201	118	100	116	290	84
18	251	144	266	68	156	611	182	107	80	96	549	82
19	221	145	233	63	147	882	169	100	70	84	311	72
20	215	169	251	61	166	560	297	96	63	71	212	377
21	917	181	279	60	148	504	325	86	164	61	170	263
22	522	153	189	60	137	667	227	79	160	131	146	157
23	381	108	135	58	306	902	186	69	111	142	131	123
24	333	91	117	56	1240	580	172	79	94	86	167	102
25	628	137	127	60	2120	462	177	76	113	282	521	88
26	1440	179	144	63	1170	401	168	73	393	1770	230	80
27	797	342	135	69	1820	373	177	63	206	455	170	191
28	533	870	126	49	1810	373	223	56	203	295	147	147
29	424	861	108	68	---	413	332	50	487	229	130	131
30	358	537	99	70	---	399	306	46	424	203	118	106
31	745	---	90	63	---	431	---	43	---	193	224	---
TOTAL	26051	8897	10415	2146	12155	27862	13905	5566	4286	7559	7286	3679
MEAN	840	297	336	69.2	434	899	464	180	143	244	235	123
MAX	7130	870	1300	87	2120	5590	3260	790	487	1770	885	377
MIN	215	91	90	49	54	373	168	43	31	61	88	54
CFSM	6.09	2.15	2.44	.50	3.15	6.51	3.36	1.30	1.04	1.77	1.70	.89
IN.	7.02	2.40	2.81	.58	3.28	7.51	3.75	1.50	1.16	2.04	1.96	.99

CAL YR 1976 TOTAL 125635 MEAN 343 MAX 7130 CFSM 2.49 IN 33.87
WTR YR 1977 TOTAL 129807 MEAN 356 MAX 7130 CFSM 2.58 IN 34.99

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, 55 JTU Sept. 23, 1975; minimum daily, 1 JTU on many days.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 271 mg/L Oct. 9, 1976; 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, 88 micromhos Jan. 19; minimum daily, 29 micromhos Oct. 17, 18, 31, Nov. 5, 6, 20, 21, and Dec. 5, 17-20.

WATER TEMPERATURES: Maximum daily, 24.0°C June 4; minimum daily, 0.0°C on many days.

TURBIDITY: Maximum daily, 40 JTU Oct. 9, Mar. 13, and July 26; minimum daily, 1 JTU on many days.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 271 mg/L Oct. 9; minimum daily mean, 0 mg/L on many days.

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

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	33	35	39	49	36	35	35	38	41	40	35
2	35	32	30	38	51	37	34	37	43	38	39	38
3	33	31	31	47	52	35	34	35	42	38	39	---
4	33	30	30	39	51	36	33	34	43	38	39	---
5	33	29	29	34	50	38	31	34	42	40	38	36
6	32	29	31	36	50	36	34	39	42	43	---	36
7	32	53	32	38	52	34	34	36	44	40	---	36
8	33	30	32	37	57	34	35	36	44	41	40	38
9	34	31	33	41	50	34	32	38	43	40	38	38
10	32	30	---	38	52	32	34	35	44	42	40	---
11	32	30	---	39	47	---	32	35	---	39	42	---
12	30	---	31	44	55	---	35	35	44	41	38	40
13	31	---	31	41	47	33	34	34	46	40	41	39
14	30	35	31	58	51	34	33	34	44	41	36	41
15	32	31	30	56	48	33	32	34	45	37	39	42
16	30	30	30	54	48	32	31	36	42	37	39	39
17	29	32	29	67	47	32	31	37	46	38	37	38
18	29	31	29	58	47	33	32	37	---	39	34	37
19	31	30	29	88	45	32	32	38	---	40	---	40
20	31	29	29	62	46	32	34	36	---	39	---	40
21	31	29	30	65	46	32	39	37	---	40	---	43
22	32	34	37	63	47	33	38	38	---	40	---	42
23	31	35	35	57	47	32	36	37	44	39	---	40
24	31	45	34	61	48	37	35	38	44	41	---	40
25	31	32	35	51	45	35	35	37	43	45	39	39
26	31	32	35	50	42	34	37	39	37	40	37	38
27	32	30	31	48	38	34	38	37	43	39	38	36
28	31	32	37	47	40	40	37	35	44	39	37	39
29	31	30	---	49	---	35	34	37	39	37	38	40
30	30	30	35	47	---	34	34	---	40	40	36	41
31	29	---	36	51	---	34	---	37	---	37	36	---
MEAN	32	32	32	50	48	34	34	36	43	40	38	39
WTR YR 1977	MEAN	38	MAX	88	MIN	29						

MONONGAHELA RIVER BASIN

03068600 SHAVERS FORK ABOVE BOWDEN, WV--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.0	7.0	1.0	.0	.0	2.0	9.0	10.0	18.0	18.0	19.0	19.0
2	12.0	5.0	2.0	.0	.0	1.0	10.0	12.0	17.0	17.0	18.0	19.0
3	13.0	7.0	2.0	.0	2.0	1.0	11.0	12.0	19.0	17.0	19.0	---
4	15.0	6.0	2.0	1.0	3.0	5.0	10.5	14.0	24.0	17.0	19.5	---
5	11.0	5.0	2.0	1.0	3.0	4.0	9.0	14.0	16.0	18.0	20.0	22.0
6	12.0	4.0	2.0	1.0	2.0	4.0	5.0	14.0	16.0	19.0	---	19.0
7	14.5	4.0	2.0	1.0	1.0	4.0	3.0	14.0	14.0	22.0	---	20.0
8	14.0	4.0	2.0	.0	.0	3.0	5.0	11.0	11.0	21.0	21.0	19.0
9	13.0	3.0	2.0	.0	.0	4.0	3.0	9.0	11.5	22.0	20.0	17.0
10	10.0	5.0	---	2.0	3.0	5.0	6.0	9.0	10.0	21.0	20.0	---
11	9.0	5.0	---	.0	3.0	---	7.0	8.0	---	18.0	20.0	---
12	8.0	---	3.0	.0	4.0	---	5.0	9.0	14.0	19.0	20.0	14.0
13	---	---	3.0	.0	3.0	5.0	10.0	12.0	16.0	20.0	18.0	16.0
14	10.0	5.0	2.0	2.0	3.0	6.5	11.0	14.0	17.0	19.0	18.0	17.0
15	8.0	4.0	2.0	.0	3.0	5.0	11.0	14.0	17.0	18.0	17.0	16.0
16	10.0	3.0	4.0	.0	2.0	7.0	11.0	13.0	17.0	19.0	19.0	17.0
17	9.0	2.0	3.0	.0	1.0	6.0	12.0	14.0	17.0	23.0	20.0	17.0
18	9.0	3.0	3.0	.0	1.0	8.0	12.0	15.0	---	21.0	17.0	19.0
19	6.0	4.0	3.0	.0	2.0	5.0	13.0	16.0	---	21.0	---	18.0
20	7.0	4.0	5.0	.0	2.0	5.0	13.0	16.0	---	22.0	---	18.0
21	7.0	4.0	2.0	1.0	1.0	4.0	11.0	19.0	---	23.0	---	16.0
22	6.0	2.0	1.0	1.0	1.0	7.0	17.0	18.0	---	21.0	---	14.0
23	5.0	2.0	1.0	.0	3.0	3.0	14.0	17.0	14.0	19.0	---	14.0
24	8.0	2.0	1.0	3.0	6.5	3.0	12.0	17.0	---	19.0	---	15.0
25	8.0	4.0	1.0	3.0	2.0	3.0	11.0	16.0	17.0	20.0	16.0	17.0
26	8.0	3.0	1.0	3.0	4.0	3.0	10.0	17.0	16.0	15.0	16.0	18.0
27	6.0	5.0	1.0	3.0	4.0	8.0	8.0	16.0	17.0	15.0	18.0	15.0
28	5.0	5.0	3.0	2.0	3.0	8.0	10.5	17.0	18.0	---	20.0	15.0
29	4.0	4.0	---	.0	---	9.0	8.0	17.0	18.0	17.0	19.0	13.0
30	5.0	1.0	1.0	.0	---	11.0	7.0	---	16.0	18.0	19.0	13.0
31	8.0	---	.0	.0	---	11.0	---	17.0	---	18.0	19.0	---
MEAN	9.0	4.0	2.0	1.0	2.0	5.0	9.5	14.0	16.0	19.0	19.0	17.0
WTR YR 1977	MEAN	9.5	MAX	24.0	MIN	.0						

TURBIDITY (JTU), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6	2	2	1	1	3	4	3	2	3	1	10
2	2	1	2	1	1	2	2	2	1	2	1	4
3	2	1	2	1	1	2	2	1	1	2	1	---
4	2	1	1	1	1	2	9	1	2	2	1	---
5	1	1	2	1	1	30	25	2	1	1	1	3
6	1	1	1	1	1	5	6	2	1	2	---	3
7	1	1	5	1	1	3	4	9	1	2	---	3
8	10	1	3	1	1	2	2	7	1	2	1	5
9	40	1	1	1	1	2	2	2	5	2	4	2
10	7	1	---	1	1	2	2	2	6	2	3	---
11	3	1	---	1	2	---	2	1	---	15	2	---
12	2	---	3	1	2	---	2	1	2	8	2	2
13	2	---	3	1	1	40	2	2	1	3	3	2
14	2	1	1	1	1	8	2	1	1	7	15	1
15	1	1	1	1	1	4	2	2	1	2	20	2
16	1	1	1	1	1	2	1	1	2	2	5	3
17	1	1	1	1	1	2	1	2	3	2	3	4
18	1	1	1	1	1	2	2	2	---	1	7	3
19	1	1	1	1	1	20	2	1	---	2	---	3
20	1	1	1	1	1	2	2	1	---	2	---	4
21	4	1	1	1	1	2	4	1	---	2	---	30
22	2	2	2	1	1	2	2	1	---	1	---	6
23	1	1	2	1	1	9	2	1	3	3	---	8
24	2	1	2	1	30	2	2	1	2	2	---	4
25	2	1	1	1	35	2	2	1	15	2	10	3
26	4	1	1	1	4	2	3	1	10	40	4	3
27	2	2	1	1	7	2	1	8	6	2	2	5
28	2	4	1	1	20	2	3	1	5	4	2	8
29	1	3	---	1	---	2	3	1	9	3	2	4
30	1	2	1	1	---	2	8	---	10	2	2	2
31	2	---	1	1	---	3	---	1	---	1	8	---
MEAN	4	1	2	1	4	6	4	2	4	4	4	5
WTR YR 1977	MEAN	3	MAX	40	MIN	1						

03068600 SHAVERS FORK ABOVE BOWDEN, WV--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

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	11	25	1	2.2	2	1.8	3	.66	0	.00	2	4.4								
2	4	7.7	0	.00	1	.80	2	.40	0	.00	1	1.4								
3	6	12	0	.00	2	1.2	1	.18	0	.00	1	1.1								
4	5	7.2	1	1.0	2	1.0	1	.19	0	.00	30	57								
5	2	2.0	1	.92	1	.47	1	.21	0	.00	54	327								
6	2	1.7	0	.00	2	.89	1	.22	0	.00	11	41								
7	5	3.6	0	.00	13	46	1	.23	0	.00	5	12								
8	102	399	0	.00	8	19	1	.21	0	.00	2	3.3								
9	271	5220	0	.00	1	1.2	1	.20	0	.00	2	2.7								
10	23	148	0	.00	2	2.0	0	.00	0	.00	2	3.0								
11	5	15	0	.00	3	3.1	1	.21	2	.34	2	3.6								
12	1	1.8	1	.56	13	24	4	.82	2	1.0	3	10								
13	1	1.3	1	.48	10	27	2	.37	1	1.8	146	2200								
14	2	2.1	2	.83	1	1.4	0	.00	1	1.6	28	139								
15	3	2.6	0	.00	0	.00	1	.22	0	.00	5	13								
16	5	4.0	0	.00	0	.00	0	.00	1	.69	3	6.3								
17	5	3.6	0	.00	1	.88	0	.00	0	.00	2	3.4								
18	3	2.0	1	.39	1	.72	0	.00	0	.00	2	3.3								
19	2	1.2	2	.78	2	1.3	1	.17	0	.00	19	45								
20	5	2.9	2	.91	2	1.4	1	.16	0	.00	2	3.0								
21	14	35	1	.49	1	.75	0	.00	0	.00	2	2.7								
22	2	2.8	1	.41	2	1.0	1	.16	0	.00	3	5.4								
23	2	2.1	1	.29	3	1.1	2	.31	1	.83	17	41								
24	3	2.7	0	.00	2	.63	1	.15	79	264	3	4.7								
25	9	15	0	.00	0	.00	1	.16	67	384	2	2.5								
26	19	74	0	.00	1	.39	0	.00	5	16	1	1.1								
27	4	8.6	1	.92	1	.36	1	.19	30	147	2	2.0								
28	2	2.9	3	7.0	1	.34	0	.00	25	122	2	2.0								
29	0	.00	2	4.6	1	.29	0	.00	---	---	3	3.3								
30	3	2.9	2	2.9	1	.27	0	.00	---	---	3	3.2								
31	14	28	---	---	5	1.2	0	.00	---	---	3	3.5								
TOTAL	---	6036.70	---	24.68	---	140.49	---	5.42	---	939.26	---	2950.9								

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)	
	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER										
1	2	2.0	3	1.8	0	.00	3	2.0	1	.42	6	2.4				
2	3	2.6	6	3.0	0	.00	3	1.5	0	.00	5	2.4				
3	3	2.5	4	1.9	2	.21	2	.83	1	.29	9	4.3				
4	38	67	4	1.7	1	.09	3	1.0	2	.59	7	2.5				
5	80	704	3	1.5	0	.00	2	.60	1	.27	3	.83				
6	9	34	7	4.9	0	.00	2	.71	2	.55	3	.91				
7	3	6.4	19	27	0	.00	3	1.1	2	.48	4	1.5				
8	4	7.7	16	34	1	.11	3	.83	2	.62	3	.97				
9	4	6.6	5	6.2	4	1.0	1	.36	2	1.0	1	.26				
10	10	13	8	7.2	16	21	2	.76	1	.43	2	.45				
11	10	12	6	4.4	10	5.3	26	48	2	.80	2	.39				
12	6	5.9	4	2.4	5	1.6	6	4.5	1	.54	4	.71				
13	4	3.4	3	1.5	2	.51	4	3.3	3	1.7	1	.15				
14	3	2.3	3	1.4	1	.21	5	4.0	25	49	1	.15				
15	2	1.4	3	1.3	1	.24	3	1.4	20	48	1	.18				
16	1	.62	5	1.8	5	2.2	2	.75	3	2.9	4	.80				
17	1	.54	4	1.3	4	1.1	4	1.3	2	1.6	3	.68				
18	2	.98	3	.87	3	.65	3	.78	18	27	1	.22				
19	2	.91	3	.81	2	.38	4	.91	21	18	1	.19				
20	3	2.4	2	.52	2	.34	4	.77	13	7.4	27	27				
21	10	8.8	1	.23	13	5.8	5	.82	9	4.1	24	17				
22	8	4.9	1	.21	7	3.0	4	1.4	6	2.4	12	5.1				
23	4	2.0	1	.19	2	.60	3	1.2	6	2.1	8	2.7				
24	2	.93	1	.21	2	.51	3	.70	9	4.1	5	1.4				
25	3	1.4	1	.21	11	3.4	8	6.1	13	18	4	.95				
26	2	.91	2	.39	11	12	36	172	5	3.1	5	1.1				
27	3	1.4	1	.17	7	3.9	9	11	4	1.8	7	3.6				
28	9	5.4	1	.15	6	3.3	5	4.0	4	1.6	7	2.8				
29	6	5.4	1	.14	17	22	2	1.2	3	1.1	6	2.1				
30	4	3.3	2	.25	8	9.2	1	.55	5	1.6	5	1.4				
31	---	---	2	.23	---	---	1	.52	8	4.8	---	---				
TOTAL	---	910.69	---	107.88	---	98.65	---	274.89	---	206.29	---	85.14				

TOTAL LOAD FOR YEAR: 11780.99 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 Dec. 22 to Feb. 11, which are poor.

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 (4.25 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)	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)
Oct. 9	0815	*232	6.57	6.10	1.859	Mar. 13	0500	165	4.67	5.68	1.731
Feb. 24	1615	158	4.47	5.63	1.716	July 25	1745	160	4.53	5.65	1.722

Minimum discharge, 1.2 ft³/s (0.03 m³/s) June 4, 5, 8, gage height, 4.02 ft (1.225 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	40	8.3	3.5	2.6	33	11	11	2.7	11	3.8	4.5
2	25	25	8.9	3.2	2.5	22	10	11	1.7	8.0	3.1	3.4
3	33	18	7.8	2.9	2.4	18	11	9.6	1.6	6.0	2.7	4.8
4	15	14	6.9	3.0	2.5	49	33	9.2	1.3	4.8	2.3	3.8
5	10	11	6.4	3.3	2.7	58	77	11	1.2	4.9	3.1	3.1
6	7.4	8.7	6.2	3.5	2.7	41	45	10	1.6	4.2	2.9	2.9
7	10	7.0	34	3.8	2.6	30	31	32	1.6	3.4	2.9	4.2
8	44	6.7	21	3.5	2.5	22	28	32	1.3	3.3	5.0	4.2
9	160	5.9	14	3.2	2.4	19	21	22	30	3.0	5.0	3.1
10	98	6.7	12	3.0	2.5	18	17	17	17	3.4	3.1	2.7
11	47	5.9	15	3.2	2.7	19	14	13	9.2	9.4	3.1	2.3
12	25	5.6	36	3.2	6.2	21	11	11	6.7	15	19	2.1
13	16	5.0	33	3.0	15	79	9.6	9.2	5.0	19	16	1.9
14	12	4.8	21	2.9	10	41	9.2	8.3	5.3	18	53	4.2
15	9.2	5.8	15	3.5	7.4	27	7.4	6.7	5.9	11	33	3.1
16	8.3	5.6	13	3.2	5.9	19	6.7	5.9	4.0	7.8	18	2.7
17	7.4	4.5	10	3.2	5.3	15	6.2	5.0	3.3	5.7	19	3.3
18	6.2	4.8	8.3	2.9	5.4	17	5.6	4.5	3.1	4.8	13	2.5
19	5.3	5.3	7.0	2.7	5.0	14	5.0	4.2	2.9	3.6	9.2	3.6
20	14	5.0	9.2	2.6	5.4	14	18	3.6	4.0	3.2	7.4	21
21	40	4.8	8.3	2.5	4.8	12	21	3.3	4.2	6.9	6.2	9.2
22	21	4.5	8.0	2.6	5.0	24	14	2.9	2.9	11	5.0	7.0
23	14	4.5	6.0	2.5	17	22	12	4.0	2.3	4.3	4.5	5.6
24	29	3.5	5.0	2.4	100	19	12	3.4	2.2	3.3	7.4	4.8
25	45	5.0	5.2	2.5	83	16	10	2.9	35	36	5.6	4.0
26	47	8.3	6.2	2.7	73	14	9.6	2.5	24	34	3.6	5.0
27	29	13	5.8	3.0	86	12	13	2.2	16	14	3.6	4.8
28	19	11	5.4	3.2	57	17	14	1.9	14	9.2	3.4	4.5
29	14	11	4.8	3.0	---	15	15	1.8	23	7.0	2.9	3.6
30	13	8.3	4.2	2.9	---	13	13	1.7	14	6.4	11	3.3
31	34	---	4.0	2.7	---	14	---	2.1	---	4.8	7.4	---
TOTAL	882.8	269.2	355.9	93.3	519.5	754	510.3	264.9	247.0	286.4	285.2	135.2
MEAN	28.5	8.97	11.5	3.01	18.6	24.3	17.0	8.55	8.23	9.24	9.20	4.51
MAX	160	40	36	3.8	100	79	77	32	35	36	53	21
MIN	5.3	3.5	4.0	2.4	2.4	12	5.0	1.7	1.2	3.0	2.3	1.9
CFSM	5.63	1.77	2.27	.60	3.68	4.80	3.36	1.69	1.63	1.83	1.82	.89
IN.	6.49	1.98	2.62	.69	3.82	5.54	3.75	1.95	1.82	2.11	2.10	.99
CAL YR 1976	TOTAL	4314.66	MEAN	11.8	MAX	160	MIN	.50	CFSM	2.33	IN	31.72
WTR YR 1977	TOTAL	4603.70	MEAN	12.6	MAX	160	MIN	1.2	CFSM	2.49	IN	33.84

MONONGAHELA RIVER BASIN

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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, 32 micromhos Oct. 10, 1976.

WATER TEMPERATURES: Maximum daily, 21.0°C June 24, 1975, July 18, Aug. 7, 1977; 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, 293 mg/L June 27, 1975; minimum daily mean, 0 mg/L on many days.

SEDIMENT LOADS: Maximum daily, 59 tons (54 tonnes) Oct. 9, 1976; 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, 113 micromhos June 7; minimum daily, 32 micromhos Oct. 10.

WATER TEMPERATURES: Maximum daily, 21.0°C July 18, Aug. 7; minimum daily, 0.0°C Jan. 1, 8, 9, 11-13, 15, 16, 29, 31.

TURBIDITY: Maximum daily, 60 JTU Feb. 24; minimum daily, 1 JTU on many days.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 125 mg/L Oct. 9; minimum daily mean, 0 mg/L on many days.

SEDIMENT LOADS: Maximum daily, 59 tons (54 tonnes) Oct. 9; minimum daily, 0 tons (0 tonnes) on many days.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	68	51	65	74	83	52	64	58	85	65	77	83
2	60	44	60	72	82	56	64	62	100	65	80	85
3	58	50	64	60	83	58	68	62	111	68	84	---
4	56	51	59	72	82	68	75	66	110	74	84	86
5	58	50	61	71	71	48	55	67	112	76	88	88
6	63	51	64	74	84	50	55	72	111	68	---	90
7	66	42	92	72	82	51	58	66	113	81	87	91
8	61	58	62	76	65	51	59	62	112	83	92	89
9	56	60	56	74	64	54	55	58	77	90	82	90
10	32	72	76	73	82	54	56	58	65	91	87	---
11	34	66	78	75	89	52	59	60	62	104	88	94
12	33	---	70	75	102	50	62	108	68	72	77	94
13	33	---	55	74	84	55	62	64	67	69	81	98
14	47	66	52	80	86	48	66	66	72	64	63	91
15	58	68	53	80	84	49	66	67	72	60	56	86
16	61	68	54	81	83	50	66	68	75	62	63	93
17	61	66	58	80	82	50	68	72	78	69	62	92
18	63	68	58	81	80	55	70	74	84	72	64	94
19	62	66	72	79	77	53	73	75	---	75	64	95
20	64	65	74	80	82	54	91	75	100	79	65	68
21	53	64	78	78	82	60	68	83	---	84	---	65
22	50	62	68	79	86	55	64	87	87	74	76	68
23	50	66	64	78	89	58	64	86	90	77	---	65
24	55	95	67	78	72	54	66	85	90	79	72	67
25	49	97	66	78	63	63	68	88	70	80	72	69
26	48	97	65	88	58	62	67	91	59	55	77	74
27	47	86	71	87	53	64	72	85	62	54	79	74
28	46	73	68	81	53	77	67	84	64	57	84	73
29	51	72	---	82	---	74	63	88	68	61	86	74
30	52	66	74	83	---	66	60	95	65	73	86	71
31	54	---	74	83	---	68	---	96	---	72	80	---
MEAN	53	66	66	77	78	57	65	75	83	73	77	82
WTR YR 1977	MEAN	71	MAX	113	MIN	32						

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.5	6.5	2.0	.0	.5	3.5	8.0	11.5	15.0	15.0	17.5	17.0
2	12.0	6.0	2.0	1.0	1.0	2.5	9.0	12.0	15.0	15.0	16.5	18.0
3	12.5	6.5	2.0	1.5	1.0	2.0	10.0	11.5	14.5	15.0	18.0	---
4	13.0	6.0	2.0	1.0	1.5	3.0	10.0	12.0	16.5	15.0	20.0	20.0
5	12.5	5.0	2.0	1.0	1.5	2.5	8.0	12.5	14.5	16.0	19.5	19.0
6	13.0	3.0	1.5	1.0	1.0	4.0	5.5	11.5	14.0	16.0	---	17.5
7	13.5	5.5	3.0	1.0	1.0	3.5	4.0	11.0	14.0	18.0	21.0	18.0
8	13.0	4.0	2.0	.0	1.0	4.0	4.5	10.5	12.0	18.0	18.5	18.5
9	12.0	2.0	3.0	.0	.5	4.0	4.0	9.0	11.5	18.0	18.5	17.0
10	9.0	5.0	4.0	2.0	2.0	4.0	5.0	8.5	10.0	17.0	18.0	18.0
11	9.5	4.5	5.0	.0	2.5	4.5	8.0	10.0	12.0	18.5	18.0	15.5
12	9.0	---	4.5	.0	3.0	5.5	9.5	10.0	12.0	17.0	16.5	16.0
13	8.5	---	3.0	.0	2.5	7.0	12.0	11.5	13.5	17.5	17.5	15.5
14	9.5	4.0	3.0	2.0	2.5	6.0	10.5	12.5	13.5	17.0	15.5	15.0
15	8.0	4.5	3.0	.0	2.0	5.0	10.0	13.0	14.0	17.5	17.5	15.5
16	9.0	3.5	3.0	.0	1.5	6.0	10.0	12.5	14.0	16.0	17.5	15.0
17	9.0	2.5	3.5	1.0	1.0	5.5	10.5	13.5	15.0	18.5	16.5	17.0
18	8.0	4.0	3.0	.5	1.0	6.5	11.5	14.0	---	21.0	18.0	16.0
19	6.0	6.0	3.5	.5	2.0	5.0	13.5	15.0	---	18.0	19.0	16.0
20	7.0	4.5	2.5	.5	2.0	5.5	11.0	14.0	15.0	18.0	17.0	14.5
21	6.5	5.0	2.0	1.0	1.0	5.0	10.0	16.0	---	19.0	---	14.5
22	6.0	3.0	1.5	1.0	1.0	5.0	15.0	15.5	16.0	17.0	16.0	14.0
23	5.0	2.0	1.0	1.0	3.0	4.0	11.0	16.0	13.5	16.0	---	13.5
24	7.5	5.0	2.0	2.0	4.5	4.0	11.0	16.0	15.0	16.0	16.0	14.0
25	7.0	4.5	2.0	2.0	3.5	2.5	11.5	15.0	14.5	17.0	15.5	15.0
26	7.5	4.0	1.0	2.0	4.0	3.5	7.5	15.5	13.5	14.0	16.0	15.5
27	6.0	5.0	.5	2.0	3.5	7.0	8.0	15.0	13.5	13.0	16.0	15.0
28	6.0	5.0	3.0	1.0	3.5	7.0	9.0	15.0	14.0	13.0	19.0	13.5
29	5.0	4.0	---	.0	---	7.0	9.0	15.0	15.5	16.5	19.0	13.5
30	5.0	2.0	1.0	1.0	---	8.0	9.5	16.0	14.5	17.0	16.0	12.0
31	7.0	---	1.0	.0	---	8.0	---	16.0	---	17.5	18.0	---
MEAN	9.0	4.5	2.5	1.0	2.0	5.0	9.0	13.0	14.0	16.5	17.5	16.0
WTR YR 1977	MEAN	9.0	MAX	21.0	MIN	.0						

TURBIDITY (JTU), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5	1	1	1	1	2	1	2	2	3	2	2
2	4	1	1	1	1	2	2	2	2	2	2	2
3	3	1	2	1	1	2	2	2	1	2	2	---
4	2	1	2	1	1	4	15	2	1	2	2	1
5	1	1	1	1	1	4	7	4	1	2	1	1
6	1	1	1	1	1	2	2	7	2	2	---	1
7	2	2	8	1	2	2	3	10	1	2	2	20
8	4	1	1	1	1	1	2	3	2	2	30	2
9	40	1	1	1	1	1	1	2	20	2	3	2
10	6	1	1	1	1	2	1	1	4	4	2	---
11	3	1	1	1	2	2	2	2	2	50	2	1
12	2	---	6	1	4	2	2	1	2	10	6	1
13	2	---	2	1	2	6	2	1	2	7	3	1
14	1	1	1	1	1	4	2	1	2	4	30	2
15	1	2	1	1	1	2	1	1	2	4	6	2
16	1	1	1	1	1	2	1	1	2	3	4	1
17	1	1	1	1	1	1	2	1	1	2	4	1
18	1	1	1	1	1	4	2	1	2	2	3	1
19	1	1	1	1	1	1	2	1	---	2	2	1
20	2	1	1	2	1	1	50	1	2	2	2	10
21	2	1	1	1	1	1	6	1	---	2	---	2
22	1	1	1	1	1	4	3	1	1	5	1	3
23	1	1	1	1	8	2	2	2	2	---	---	1
24	6	1	1	1	60	2	2	1	1	2	3	1
25	2	1	1	1	7	1	2	1	6	4	2	1
26	2	1	1	1	4	1	6	2	5	6	2	2
27	1	2	1	1	6	2	4	3	10	3	2	1
28	1	1	1	1	3	1	3	1	4	3	2	1
29	1	1	---	1	---	2	2	1	7	1	2	1
30	1	1	2	1	---	2	2	1	3	2	1	1
31	2	---	1	1	---	2	---	1	---	2	3	---
MEAN	3	1	1	1	4	2	4	1	3	4	4	2
WTR YR 1977	MEAN	2	MAX	60	MIN	1						

03068610 TAYLOR RUN AT BOWDEN, WV--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

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	48	4.8	8	1.0	0	.00	6	.06	4	.03	10	.89
2	19	1.5	2	.14	1	.02	5	.04	3	.02	3	.18
3	29	3.5	2	.10	0	.00	5	.04	2	.01	2	.10
4	2	.08	2	.08	1	.02	7	.06	3	.02	6	.79
5	4	.11	2	.06	2	.03	6	.05	2	.01	5	.78
6	2	.04	2	.05	1	.02	4	.04	0	.00	2	.22
7	23	1.0	2	.04	18	2.0	3	.03	5	.04	0	.00
8	27	2.8	3	.05	2	.11	4	.04	1	.01	1	.06
9	125	59	2	.03	2	.08	2	.02	0	.00	1	.05
10	22	5.8	3	.05	2	.06	0	.00	0	.00	1	.05
11	7	.89	2	.03	2	.08	1	.01	0	.00	1	.05
12	2	.14	2	.03	15	1.5	1	.01	3	.05	3	.17
13	1	.04	3	.04	1	.09	2	.02	0	.00	40	10
14	0	.00	2	.03	1	.06	2	.02	0	.00	11	1.2
15	0	.00	1	.02	1	.04	1	.01	0	.00	6	.44
16	0	.00	1	.02	1	.04	2	.02	0	.00	6	.31
17	2	.04	1	.01	0	.00	1	.01	0	.00	7	.28
18	3	.05	3	.04	1	.02	1	.01	1	.01	9	.41
19	3	.04	1	.01	3	.06	4	.03	5	.07	4	.15
20	6	.37	0	.00	5	.13	2	.01	7	.10	5	.19
21	11	1.4	0	.00	2	.04	1	.01	0	.00	5	.16
22	3	.17	0	.00	2	.04	0	.00	2	.03	13	.96
23	3	.11	0	.00	2	.03	2	.01	21	1.8	4	.24
24	14	1.7	2	.02	1	.01	2	.01	117	37	4	.21
25	6	.73	0	.00	0	.00	1	.01	23	5.2	3	.13
26	5	.63	0	.00	3	.05	2	.01	19	3.8	3	.11
27	3	.23	0	.00	5	.08	1	.01	16	3.7	3	.10
28	2	.10	1	.03	6	.09	2	.02	11	1.7	6	.26
29	1	.04	1	.03	2	.03	0	.00	---	---	3	.12
30	7	.40	0	.00	8	.09	0	.00	---	---	5	.18
31	13	1.2	---	---	6	.06	1	.01	---	---	6	.23
TOTAL	---	86.91	---	1.91	---	4.88	---	0.62	---	53.60	---	19.02

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	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	3	.09	3	.09	6	.04	5	.15	4	.04	4	.05
2	4	.11	3	.09	6	.03	4	.09	4	.03	4	.04
3	5	.15	4	.10	4	.02	3	.05	3	.02	4	.05
4	36	4.5	6	.15	3	.01	3	.04	3	.02	4	.04
5	20	4.2	9	.27	3	.01	4	.05	4	.03	3	.03
6	6	.73	6	.16	5	.02	3	.03	4	.03	2	.02
7	4	.33	30	2.9	8	.03	3	.03	3	.02	3	.03
8	2	.15	8	.69	7	.02	3	.03	31	.92	3	.03
9	1	.06	5	.30	65	5.5	3	.02	7	.09	2	.02
10	1	.05	2	.09	16	.73	5	.05	2	.02	2	.01
11	2	.08	1	.04	10	.25	33	2.4	3	.03	1	.01
12	3	.09	2	.06	5	.09	36	1.5	20	1.3	0	.00
13	2	.05	3	.07	4	.05	10	.51	12	.52	0	.00
14	3	.07	3	.07	4	.06	6	.29	93	20	3	.03
15	3	.06	2	.04	4	.06	4	.18	11	.98	1	.01
16	3	.05	3	.05	4	.04	6	.13	7	.34	0	.00
17	3	.05	2	.03	5	.04	6	.09	7	.36	0	.00
18	3	.05	4	.05	6	.05	4	.05	7	.19	1	.01
19	3	.04	5	.06	5	.04	3	.03	9	.22	4	.06
20	72	8.6	8	.08	7	.08	2	.02	6	.12	24	1.9
21	10	.57	6	.05	6	.07	9	.28	5	.08	6	.15
22	3	.11	8	.06	4	.03	9	.27	4	.05	5	.09
23	2	.06	8	.09	2	.01	4	.05	4	.05	3	.05
24	2	.06	6	.06	2	.01	3	.03	6	.12	3	.04
25	4	.11	3	.02	33	6.3	24	3.0	6	.09	3	.03
26	3	.08	5	.03	12	.78	11	1.0	4	.04	2	.03
27	3	.11	9	.05	18	.76	7	.26	4	.04	3	.04
28	4	.15	14	.07	9	.34	3	.07	4	.04	3	.04
29	4	.16	8	.04	18	1.1	5	.09	6	.05	2	.02
30	4	.14	5	.02	10	.38	6	.10	14	.82	3	.03
31	---	---	5	.03	---	---	5	.06	9	.18	---	---
TOTAL	---	21.06	---	5.91	---	16.95	---	10.95	---	26.84	---	2.86

TOTAL LOAD FOR YEAR: 251.51 TONS.

MONONGAHELA RIVER BASIN

03068690 NORTH SPRING AT BOWDEN, WV

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

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

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) above mean sea level. 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) above mean sea level, 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) above mean sea level.

REMARKS.--Water-discharge records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 6.7 ft³/s (0.19 m³/s) Oct. 9, 1976; maximum 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, 6.7 ft³/s (0.19 m³/s) Oct. 9; maximum gage height, 9.00 ft (2.743 m), from floodmark, backwater from Shavers Fork over springbox; minimum daily discharge, 1.8 ft³/s (0.051 m³/s) Jan. 7-11; minimum gage height, 2.44 ft (0.744 m) Feb. 4, 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	3.6	2.6	2.0	1.9	4.1	3.6	3.3	2.8	3.7	3.2	3.1
2	3.4	3.5	2.6	2.0	1.9	4.0	3.6	3.3	2.8	3.6	3.2	3.1
3	3.6	3.3	2.5	1.9	1.9	3.9	3.5	3.2	2.8	3.5	3.1	3.1
4	3.4	3.2	2.5	1.9	1.9	3.9	3.6	3.2	2.7	3.4	3.0	3.0
5	3.2	3.1	2.4	1.9	1.9	4.1	5.0	3.1	2.8	3.4	3.0	3.0
6	3.1	3.0	2.4	1.9	1.9	4.0	4.4	3.1	2.7	3.3	3.0	3.0
7	3.1	2.9	2.9	1.8	2.0	3.9	4.0	3.5	2.7	3.3	2.9	3.0
8	3.5	2.9	3.2	1.8	2.0	3.9	4.0	3.9	2.7	3.2	3.0	3.0
9	6.7	2.8	3.0	1.8	1.9	3.8	3.9	3.6	3.0	3.2	3.0	3.0
10	5.3	2.7	2.8	1.8	1.9	3.8	3.8	3.6	3.6	3.3	3.1	3.0
11	4.1	2.6	2.8	1.8	2.0	3.8	3.7	3.6	3.7	3.3	3.0	2.9
12	3.5	2.6	3.1	1.9	2.3	3.8	3.7	3.4	3.5	3.5	3.3	2.9
13	3.4	2.5	3.3	1.9	2.9	4.8	3.6	3.2	3.3	3.5	3.5	3.0
14	3.5	2.4	3.1	1.9	2.8	4.3	3.6	3.2	3.3	3.5	3.9	2.9
15	3.4	2.3	3.0	1.9	2.6	4.1	3.7	3.2	3.2	3.4	4.0	2.9
16	3.3	2.2	2.8	1.9	2.5	4.0	3.7	3.1	3.2	3.4	3.8	2.9
17	3.2	2.2	2.7	1.9	2.4	3.9	3.7	3.1	3.2	3.3	3.7	2.9
18	3.1	2.1	2.6	1.9	2.3	3.9	3.7	3.0	3.2	3.2	3.7	2.9
19	3.1	2.1	2.5	1.9	2.2	3.9	3.7	3.0	3.2	3.2	3.6	2.9
20	3.0	2.1	2.4	2.0	2.2	3.8	3.7	2.9	3.2	3.1	3.5	3.0
21	3.5	2.2	2.4	2.0	2.2	3.8	3.8	2.9	3.2	3.1	3.5	3.1
22	3.3	2.2	2.4	2.0	2.2	4.0	3.6	2.9	3.2	3.1	3.3	3.1
23	3.3	2.1	2.3	2.0	2.7	4.1	3.4	2.9	3.2	3.1	3.2	2.9
24	3.4	2.1	2.3	1.9	4.7	4.1	3.3	2.9	3.2	3.1	3.2	2.9
25	3.6	2.0	2.2	2.0	5.2	3.9	3.3	2.9	3.3	3.2	3.3	2.9
26	3.9	2.1	2.2	2.0	4.7	3.9	3.3	2.8	3.7	3.8	3.2	2.8
27	3.6	2.2	2.2	1.9	4.5	3.7	3.2	2.8	3.7	3.8	3.1	2.9
28	3.4	2.4	2.2	1.9	4.3	3.6	3.3	2.8	3.6	3.6	3.1	2.9
29	3.2	2.6	2.2	1.9	---	3.7	3.3	2.8	3.5	3.5	3.1	2.9
30	3.2	2.6	2.1	1.9	---	3.7	3.4	2.8	3.7	3.3	3.1	2.9
31	3.3	---	2.1	1.9	---	3.7	---	2.9	---	3.3	3.1	---
TOTAL	109.8	76.6	79.8	59.2	73.9	121.9	110.1	96.9	95.9	104.1	101.8	88.8
MEAN	3.54	2.55	2.57	1.91	2.64	3.93	3.67	3.13	3.20	3.36	3.28	2.96
MAX	6.7	3.6	3.3	2.0	5.2	4.8	5.0	3.9	3.7	3.8	4.0	3.1
MIN	3.0	2.0	2.1	1.8	1.9	3.6	3.2	2.8	2.7	3.1	2.9	2.8
CAL YR 1976 TOTAL	1148.4		MEAN 3.14	MAX 6.7	MIN 2.0							
WTR YR 1977 TOTAL	1118.8		MEAN 3.07	MAX 6.7	MIN 1.8							

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 September 1977.

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.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 11.5°C Sept. 2-20, 1977; minimum, 8.0°C Feb. 23-28, 1977.

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

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 11.5°C Sept. 2-20; minimum, 8.0°C Feb. 23-28.

TURBIDITY: Maximum, 85 JTU Oct. 10; minimum, 1 JTU on many days.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

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

MONONGAHELA RIVER BASIN

03068690 NORTH SPRING AT BOWDEN, WV--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

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

TURBIDITY (JTU), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	5	1	1	1	1	1	1	1	1	1	1	1
2	3	2	1	1	1	1	1	1	1	1	1	1
3	2	1	1	1	1	1	1	1	1	1	1	1
4	1	1	1	1	1	1	1	1	1	1	3	1
5	1	1	1	1	1	1	1	1	1	1	1	1
6	1	1	1	1	1	1	1	1	1	1	1	1
7	1	1	1	1	5	1	1	1	1	1	1	1
8	3	1	1	1	2	1	1	1	1	1	1	1
9	40	3	1	1	2	1	1	1	1	1	1	1
10	85	2	1	1	1	1	1	1	2	1	1	1
11	2	1	3	1	1	1	1	1	5	1	1	1
12	1	1	2	1	1	1	1	1	2	1	1	1
13	2	1	4	1	1	1	1	1	3	1	10	1
14	1	1	5	1	1	1	1	1	2	1	2	1
15	1	1	1	1	1	1	1	1	2	1	1	1
16	1	1	7	1	1	1	1	1	1	1	1	1
17	1	1	1	1	1	1	1	1	1	1	1	1
18	1	1	1	1	1	1	1	1	1	1	2	1
19	1	1	1	1	1	1	1	1	1	1	1	1
20	2	1	1	1	1	1	1	1	1	1	1	1
21	2	1	1	1	2	1	1	1	1	1	1	1
22	1	1	1	1	1	1	1	1	1	1	2	1
23	1	1	1	1	1	1	1	1	8	1	1	1
24	2	1	1	1	1	1	1	1	8	3	1	1
25	2	1	1	1	1	1	1	1	4	2	1	1
26	1	1	1	1	1	1	1	1	2	1	1	1
27	1	1	1	1	4	1	1	1	1	1	1	1
28	1	1	1	1	1	1	1	1	1	1	1	1
29	1	1	1	1	1	1	1	1	---	---	1	1
30	1	1	1	1	1	1	1	1	---	---	1	1
31	1	1	---	---	1	1	1	1	---	---	1	1
MONTH	85	1	7	1	5	1	1	1	8	1	10	1

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) above mean sea level.

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, gage height, 1.77 ft (0.539 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 21.3 ft³/s (0.603 m³/s) Oct. 9, gage height, 3.18 ft (0.969 m); minimum, 0.72 ft³/s (0.020 m³/s) Feb. 10, gage height, 1.77 ft (0.539 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.9	3.2	1.6	1.2	.88	3.2	2.0	2.0	1.2	2.8	1.9	2.2
2	4.7	2.7	1.5	1.1	.88	2.2	1.9	1.9	1.1	2.6	1.7	2.3
3	4.6	2.1	1.4	1.0	.88	2.0	1.9	1.8	1.1	2.3	1.7	2.6
4	3.8	1.9	1.3	1.0	.77	2.9	2.5	1.8	1.1	2.2	1.7	2.3
5	3.2	1.7	1.2	.99	.82	5.3	8.4	1.9	1.1	2.0	1.6	2.1
6	2.8	1.5	1.2	.99	.88	3.6	4.7	2.0	1.1	2.2	1.7	2.2
7	2.8	1.4	3.4	.99	.77	2.8	3.1	3.2	1.0	2.2	1.6	2.5
8	4.2	1.3	3.7	.94	.77	2.2	2.8	4.6	1.1	2.0	1.9	2.6
9	12	1.2	2.4	.88	.77	2.0	2.4	3.2	2.8	2.2	2.4	2.3
10	8.3	1.2	2.0	.88	.77	2.0	2.1	2.5	3.5	2.4	2.1	2.1
11	3.8	1.2	2.0	.88	.82	2.0	1.9	2.2	2.5	2.9	2.0	2.0
12	2.7	1.2	3.3	.88	.99	2.3	1.8	1.5	2.0	3.0	3.1	1.9
13	2.2	1.0	3.8	.88	1.7	5.0	1.7	1.8	1.8	3.0	3.3	1.9
14	2.0	1.0	2.8	.94	1.7	4.2	1.6	1.8	1.7	3.3	4.3	2.0
15	1.7	.99	2.3	.99	1.5	2.8	1.5	1.7	1.8	2.8	4.8	2.2
16	1.7	.99	2.1	.99	1.4	2.2	1.5	1.6	2.2	2.5	3.2	2.2
17	1.6	.94	1.9	1.0	1.4	2.0	1.4	1.5	1.8	2.3	2.7	2.3
18	1.5	.99	1.7	1.0	1.4	2.1	1.4	1.5	1.8	2.2	2.9	2.3
19	1.4	.99	1.5	.99	1.2	2.5	1.4	1.5	1.7	2.0	2.6	2.3
20	1.6	1.0	1.6	.99	1.2	2.2	2.3	1.4	1.7	2.0	2.2	3.4
21	3.7	1.0	1.7	.94	1.1	2.0	4.3	1.4	2.2	2.1	2.1	3.3
22	2.8	1.0	1.5	.94	1.2	2.7	2.7	1.4	2.2	2.7	2.0	3.0
23	2.1	.94	1.4	.88	1.7	3.1	2.1	1.4	1.9	2.8	1.9	2.7
24	2.4	.88	1.4	.88	7.7	2.4	2.0	1.5	1.9	2.4	2.1	2.7
25	3.6	.94	1.4	.82	8.4	2.0	2.0	1.4	3.0	3.2	2.6	2.5
26	4.0	1.2	1.4	.82	5.3	1.8	1.9	1.4	4.4	5.2	2.2	2.5
27	3.3	1.9	1.4	.82	6.6	1.7	2.1	1.3	3.2	2.8	2.1	2.9
28	2.3	2.2	1.3	.88	5.0	2.0	2.2	1.2	2.8	2.2	2.0	2.9
29	2.0	2.2	1.2	1.1	---	2.1	2.5	1.2	3.3	2.0	2.0	2.7
30	1.8	1.8	1.2	.94	---	2.0	2.2	1.2	3.2	2.0	2.2	2.6
31	2.9	---	1.1	.88	---	2.1	---	1.2	---	2.0	2.7	---
TOTAL	101.4	42.56	57.7	29.41	58.50	79.4	72.3	56.0	62.2	78.3	73.3	73.5
MEAN	3.27	1.42	1.86	.95	2.09	2.56	2.41	1.81	2.07	2.53	2.36	2.45
MAX	12	3.2	3.8	1.2	8.4	5.3	8.4	4.6	4.4	5.2	4.8	3.4
MIN	1.4	.88	1.1	.82	.77	1.7	1.4	1.2	1.0	2.0	1.6	1.9
IN*	8.54	.99	2.61	.56	1.07	3.70	4.67	2.72	5.78	5.55	6.11	3.01
CAL YR 1976	TOTAL 745.75	MEAN 2.04	MAX 12	MIN .88								
WTR YR 1977	TOTAL 784.57	MEAN 2.15	MAX 12	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 September 1977.

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, 18.0°C July 22-24; minimum, 5.5°C Feb. 24, 25.

TURBIDITY: Maximum, 550 JTU Apr. 20; minimum, 2 JTU on many days.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	9.5	5.5	8.5	8.5	7.5	7.5	7.0	7.0	6.5	6.5
2	---	---	9.5	5.5	8.5	8.5	7.5	7.5	7.0	7.0	7.0	6.5
3	---	---	9.5	5.5	8.5	8.5	7.5	7.5	7.0	7.0	7.0	7.0
4	---	---	9.5	5.5	8.5	8.5	7.5	7.5	7.5	7.0	7.5	6.0
5	---	---	9.5	5.5	8.5	8.5	7.5	7.5	7.5	7.0	7.0	6.0
6	---	---	9.5	5.5	8.5	8.5	8.0	7.5	7.0	7.0	7.0	7.0
7	---	---	9.5	5.5	8.5	7.5	8.0	8.0	7.0	7.0	7.0	7.0
8	---	---	9.5	5.5	7.5	7.5	8.0	7.0	7.0	7.0	7.5	7.0
9	---	---	9.5	5.5	7.5	7.5	8.0	7.5	7.0	7.0	7.5	7.5
10	---	---	9.5	5.5	8.0	7.5	8.0	8.0	7.5	7.0	7.5	7.5
11	---	---	9.5	5.5	8.0	8.0	8.0	7.5	7.5	7.5	7.5	7.5
12	---	---	9.5	5.5	8.0	7.5	7.5	7.5	7.5	7.5	7.5	7.5
13	---	---	9.5	5.5	7.5	7.5	7.5	7.0	7.5	7.5	7.5	7.0
14	---	---	9.5	5.5	7.5	7.5	8.0	7.5	8.0	8.0	7.0	7.0
15	---	---	9.5	5.5	7.5	7.5	8.0	8.0	8.0	7.5	7.5	7.0
16	---	---	9.5	5.5	8.0	7.5	8.0	7.5	7.5	7.5	8.0	7.5
17	---	---	9.5	5.5	8.0	8.0	7.5	7.5	7.5	7.5	8.0	8.0
18	---	---	9.5	5.5	8.0	8.0	7.5	7.5	7.5	7.5	8.0	8.0
19	---	---	9.5	5.5	8.0	8.0	7.5	7.5	7.5	7.5	8.0	8.0
20	---	---	9.5	5.5	8.0	8.0	7.5	7.5	7.5	7.5	8.0	8.0
21	---	---	9.5	5.5	8.0	8.0	7.5	7.5	7.5	7.5	8.0	8.0
22	---	---	9.5	5.5	8.0	8.0	7.5	7.5	8.0	7.5	8.0	7.5
23	---	---	9.5	5.5	8.0	8.0	7.5	7.0	8.0	7.5	7.5	7.5
24	---	---	9.5	5.0	8.0	8.0	7.5	7.5	7.5	5.5	7.5	7.5
25	---	---	9.0	5.0	8.0	8.0	7.5	7.5	6.5	5.5	7.5	7.5
26	---	---	9.0	5.0	8.0	8.0	7.5	7.5	6.5	6.5	8.0	7.5
27	---	---	9.0	5.0	8.0	8.0	7.5	7.5	6.5	6.5	8.0	8.0
28	10.0	10.0	9.0	5.0	8.0	8.0	7.5	7.5	6.5	6.5	8.0	8.0
29	10.0	10.0	9.0	5.5	8.0	8.0	7.5	6.5	---	---	8.0	8.0
30	10.0	10.0	8.5	5.5	8.0	7.5	7.0	6.5	---	---	8.5	8.0
31	10.0	9.5	---	---	8.0	7.5	7.0	7.0	---	---	8.5	8.5
MONTH	10.0	9.5	9.5	5.5	8.5	7.5	8.0	6.5	8.0	5.5	8.5	6.0

MONONGAHELA RIVER BASIN
03068710 SOUTH SPRING AT BOWDEN, WV--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX		MIN		MAX		MIN		MAX		MIN	
	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER						
1	8.5	8.5	10.0	9.5	14.0	14.0	14.0	14.0	15.5	15.0	16.5	16.0
2	8.5	8.5	10.0	10.0	14.0	14.0	14.0	14.0	15.5	15.5	17.0	16.5
3	9.0	8.5	10.0	10.0	14.0	14.0	14.0	14.0	15.5	15.5	17.0	17.0
4	9.0	8.0	10.5	10.0	14.0	14.0	14.0	14.0	15.5	15.5	17.0	17.0
5	8.0	8.0	10.5	10.5	14.0	14.0	14.0	14.0	16.0	15.5	17.0	17.0
6	8.0	8.0	11.0	10.5	14.0	14.0	15.5	14.0	16.0	16.0	17.0	17.0
7	8.0	8.0	11.0	10.0	14.0	13.5	16.0	15.5	16.0	16.0	17.5	17.0
8	8.0	8.0	10.5	10.0	13.5	13.0	16.0	16.0	16.0	16.0	17.0	17.0
9	8.0	8.0	10.5	10.0	13.0	12.0	16.5	16.0	16.0	16.0	17.0	17.0
10	8.0	8.0	10.0	10.0	12.0	12.0	16.5	16.5	16.5	16.0	17.0	16.5
11	8.5	8.0	10.0	10.0	12.0	12.0	16.5	15.0	16.5	16.5	16.5	16.0
12	9.0	8.5	10.0	10.0	12.5	12.0	15.0	15.0	16.5	15.0	16.0	15.0
13	9.0	8.5	10.0	10.0	13.0	12.5	15.0	15.0	15.0	15.0	15.0	15.0
14	9.0	9.0	10.5	10.0	13.5	13.0	15.0	15.0	15.0	15.0	15.0	15.0
15	9.5	9.0	11.0	10.5	13.5	13.5	15.0	15.0	15.0	15.0	15.0	15.0
16	9.5	9.5	11.0	11.0	14.5	13.5	16.5	16.0	15.0	15.0	15.0	15.0
17	9.5	9.5	11.0	11.0	13.5	13.5	17.0	16.5	15.0	15.0	15.0	14.5
18	10.0	9.5	11.5	11.0	14.0	13.5	17.0	17.0	15.5	15.0	15.0	15.0
19	10.0	10.0	11.5	11.5	14.0	14.0	17.5	17.0	15.5	15.5	15.0	15.0
20	10.0	9.0	13.0	12.5	14.0	14.0	17.5	17.5	15.5	15.0	15.0	15.0
21	9.5	9.0	13.0	13.0	14.0	14.0	17.5	17.5	15.0	15.0	15.0	15.0
22	10.0	9.5	13.0	13.0	14.0	14.0	18.0	17.5	15.0	15.0	15.0	14.5
23	10.0	10.0	13.0	13.0	14.0	13.5	18.0	18.0	15.0	15.0	14.5	14.5
24	10.0	10.0	13.0	13.0	13.5	13.5	18.0	17.5	15.0	15.0	14.5	14.5
25	10.0	10.0	13.0	13.0	13.5	11.0	17.5	14.5	15.0	15.0	14.5	14.5
26	10.0	10.0	13.0	13.0	13.0	11.5	15.5	14.5	15.0	15.0	15.0	14.5
27	10.0	10.0	13.5	13.0	13.5	13.0	15.5	15.0	15.5	15.0	15.0	15.0
28	10.0	9.5	13.5	13.5	13.5	13.5	15.0	15.0	16.0	15.5	15.0	14.5
29	9.5	9.5	13.5	13.5	14.0	13.5	15.0	15.0	16.0	16.0	14.5	14.0
30	9.5	9.5	13.5	13.5	14.0	14.0	15.0	15.0	16.5	16.0	14.0	14.0
31	---	---	14.0	14.0	---	---	15.0	15.0	16.0	16.0	---	---
MONTH	10.0	8.0	14.0	9.5	14.5	11.0	18.0	14.0	16.5	15.0	17.5	14.0
YEAR	10.0	5.6										

TURBIDITY (JTU), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX		MIN		MAX		MIN		MAX		MIN	
	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH						
1	20	5	7	3	3	2	2	2	4	2	5	4
2	20	5	3	2	3	2	2	2	3	2	4	3
3	7	4	3	2	3	2	3	2	3	2	4	3
4	7	3	3	2	3	2	3	2	3	2	65	3
5	7	2	5	2	2	2	3	2	3	2	55	7
6	3	3	3	2	3	2	4	2	3	2	7	4
7	7	3	3	2	90	2	4	2	3	2	4	3
8	20	4	3	2	6	4	2	2	3	2	3	2
9	200	20	3	2	4	3	3	2	3	2	4	2
10	20	7	3	2	3	2	3	2	2	2	4	2
11	8	4	2	2	7	2	3	2	3	2	4	2
12	7	3	3	2	9	4	3	2	4	2	7	3
13	4	2	2	2	7	3	3	2	20	4	270	2
14	3	3	5	2	4	3	2	2	15	8	35	6
15	3	2	2	2	3	2	5	2	10	6	7	3
16	3	2	3	2	3	2	4	3	9	5	4	3
17	3	2	2	2	2	2	4	3	5	3	4	3
18	3	2	2	2	2	2	4	3	4	3	35	3
19	3	2	3	2	3	2	4	3	4	3	9	4
20	25	2	2	2	9	2	3	3	5	4	7	3
21	20	2	3	2	6	3	4	3	5	3	4	2
22	4	2	3	2	5	3	4	2	20	2	50	3
23	4	2	3	2	3	2	4	2	50	4	7	4
24	20	2	2	2	3	2	3	2	140	20	4	3
25	7	3	2	2	3	2	4	2	35	10	4	2
26	7	3	3	2	2	2	3	2	25	7	3	2
27	7	2	3	2	2	2	4	2	35	9	3	2
28	3	2	7	2	3	2	4	2	10	5	5	2
29	5	2	7	3	2	2	3	2	---	---	3	2
30	3	2	3	2	3	2	3	2	---	---	10	2
31	10	3	---	---	2	2	3	2	---	---	15	3
MONTH	200	2	7	2	90	2	5	2	140	2	270	2

MONONGAHELA RIVER BASIN

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 2,115 ft (644.7 m), from topographic map.

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

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 (116 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)	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)
Oct. 9	1315	11800	334	10.90	3.322	Mar. 13	1115	*12400	351	11.04	3.365
Feb. 24	2245	4000	113	8.59	2.618	Apr. 5	1045	4700	133	8.68	2.646
Mar. 5	0300	3720	105	8.19	2.496	July 26	0130	4140	117	8.40	2.560

Minimum discharge, 35 ft³/s (0.99 m³/s) June 6, 7, 8, gage height, 3.92 ft (1.195 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	889	934	350	90	68	907	390	251	51	275	166	159
2	779	606	320	82	66	576	342	214	48	207	138	189
3	848	485	250	75	63	458	332	200	42	168	113	189
4	576	422	210	78	66	824	735	182	37	137	115	140
5	404	367	190	84	70	2390	3460	210	36	125	107	111
6	327	323	180	90	70	1500	1510	283	35	143	109	119
7	295	287	1400	97	66	934	872	606	35	146	96	149
8	1560	267	934	88	62	660	786	872	45	111	127	131
9	7540	224	495	83	60	546	667	515	172	140	199	105
10	2640	251	395	77	64	600	530	379	530	149	166	91
11	1210	247	417	84	70	716	470	307	221	702	156	79
12	730	221	772	84	210	1290	395	247	134	319	249	71
13	530	189	1080	77	700	5790	339	207	108	359	251	61
14	422	165	588	76	620	1950	303	193	93	343	857	65
15	351	160	475	90	400	1040	271	172	105	203	970	73
16	315	150	413	82	270	822	247	149	172	159	404	81
17	283	143	351	82	210	670	217	131	108	131	339	93
18	267	156	287	75	170	655	196	119	88	108	582	88
19	235	159	251	70	160	918	182	111	77	93	335	81
20	251	182	275	68	180	596	343	105	73	79	231	431
21	1020	193	300	66	160	535	379	95	175	79	186	287
22	576	165	210	67	150	729	263	86	168	159	159	175
23	417	120	150	64	350	959	217	79	117	153	143	137
24	408	100	130	62	1500	629	203	88	100	95	186	114
25	744	150	140	66	2330	503	203	83	203	375	535	98
26	1560	200	160	70	1360	437	193	79	455	1860	239	93
27	872	375	150	77	2040	404	210	69	247	491	179	203
28	582	898	140	84	1960	417	259	61	239	319	156	159
29	460	889	120	76	---	452	371	55	546	247	137	140
30	391	558	110	77	---	432	339	50	460	219	146	114
31	832	---	100	70	---	467	---	48	---	205	243	---
TOTAL	28314	9586	11343	2411	13495	29806	15224	6246	4920	8299	8019	4026
MEAN	913	320	366	77.8	482	961	507	201	164	268	259	134
MAX	7540	934	1400	97	2330	5790	3460	872	546	1860	970	431
MIN	235	100	100	62	60	404	182	48	35	79	96	61
CFSM	6.05	2.12	2.42	.52	3.19	6.36	3.36	1.33	1.09	1.78	1.72	.89
IN.	6.98	2.36	2.79	.59	3.32	7.34	3.75	1.54	1.21	2.04	1.98	.99

CAL YR 1976	TOTAL	136742	MEAN	374	MAX	7540	MIN	19	CFSM	2.48	IN	33.69
WTR YR 1977	TOTAL	141689	MEAN	388	MAX	7540	MIN	35	CFSM	2.57	IN	34.91

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, 30 micromhos Mar. 28, 1976.
 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, 102 micromhos June 7, minimum daily, 33 micromhos Nov. 29.
 WATER TEMPERATURES: Maximum daily, 25.0°C Aug. 7; minimum daily 0.0°C Jan. 1, 8, 9, 11-13, 15, 23, 29, 30, and Feb. 9.
 TURBIDITY: Maximum daily, 80 JTU Mar. 13; minimum daily, 1 JTU on many days.
 SEDIMENT CONCENTRATIONS: Maximum daily mean, 721 mg/L Mar. 13; minimum daily mean, 0 mg/L on many days.
 SEDIMENT LOADS: Maximum daily, 16,300 tons (14,800 tonnes) Mar. 13; minimum daily, 0 tons (0 tonnes) on many days.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
 ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	45	36	48	58	44	43	46	72	54	55	45
2	50	42	35	50	61	44	43	46	72	50	57	46
3	44	51	35	54	60	43	44	46	79	49	55	---
4	40	40	39	45	59	44	43	47	85	51	61	---
5	41	39	38	44	66	44	37	46	79	54	54	48
6	40	37	40	44	62	39	40	48	74	54	---	50
7	40	39	51	46	60	38	44	60	102	49	59	45
8	42	39	41	48	72	38	44	47	94	59	55	50
9	40	40	41	46	59	39	40	46	79	53	53	51
10	40	43	45	46	58	36	40	45	59	52	49	---
11	43	44	44	48	85	36	39	44	55	46	84	46
12	40	---	40	50	99	35	39	99	60	57	79	48
13	43	---	36	50	92	35	41	47	60	54	70	62
14	44	46	40	62	76	37	41	47	61	56	50	50
15	41	45	38	50	60	36	46	47	61	56	45	51
16	40	48	36	50	60	36	42	47	52	51	76	54
17	41	52	38	52	60	36	42	50	100	51	48	55
18	40	47	39	51	69	38	44	51	61	54	40	50
19	42	42	39	45	60	36	44	50	---	59	46	52
20	42	42	41	43	65	37	47	56	95	56	46	70
21	38	38	43	50	64	39	56	52	54	58	---	51
22	38	38	56	53	65	42	57	55	52	74	47	52
23	38	42	50	55	78	38	53	55	55	48	49	52
24	47	47	46	55	91	41	52	56	54	55	54	54
25	42	42	45	56	53	43	54	55	68	60	40	52
26	38	44	42	54	54	46	52	57	49	42	43	56
27	39	42	42	54	44	42	55	60	49	46	45	47
28	42	34	43	53	42	45	50	57	54	47	46	50
29	39	33	---	53	---	42	46	60	49	53	45	48
30	39	35	45	52	---	42	44	72	49	53	46	50
31	40	---	46	56	---	42	---	---	---	50	43	---
MEAN	41	42	42	50	65	40	45	53	67	53	53	51
WTR YR 1977	MEAN	50	MAX	102	MIN	33						

MONONGAHELA RIVER BASIN

03068800 SHAVERS FORK BELOW BOWDEN, WV--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.5	7.0	2.5	.0	.5	3.0	8.0	12.5	16.0	18.0	18.5	19.5
2	12.0	6.0	1.5	1.0	.5	2.0	8.0	13.0	---	17.0	17.5	19.5
3	14.0	7.0	1.5	1.5	1.5	2.5	9.0	15.0	---	17.0	21.5	---
4	14.5	6.5	1.5	1.0	2.5	3.5	9.5	13.0	14.0	17.0	22.0	---
5	13.0	5.0	1.5	1.0	2.0	3.0	9.0	13.5	18.0	---	20.0	22.0
6	15.0	4.0	1.5	1.0	1.5	3.5	5.5	12.5	15.0	18.5	---	19.0
7	14.5	5.5	2.5	1.0	1.0	3.0	3.5	14.0	14.5	22.0	25.0	19.5
8	15.0	4.5	2.0	.0	.5	3.0	4.5	11.5	12.5	20.5	22.0	20.0
9	13.0	3.0	2.5	.0	.0	4.0	3.0	9.5	12.0	21.0	21.5	18.5
10	10.0	5.0	2.0	2.0	3.0	4.0	6.0	9.0	10.0	19.0	20.0	---
11	10.0	5.5	4.0	.0	2.5	4.5	8.5	10.0	12.0	19.0	19.5	19.0
12	10.0	---	4.0	.0	3.0	7.0	10.0	10.5	13.5	18.0	18.5	16.5
13	13.5	---	3.0	.0	2.5	5.5	11.5	12.5	15.0	19.5	18.5	17.0
14	11.0	---	2.5	2.0	2.5	5.0	11.5	14.0	15.0	18.5	18.0	17.0
15	8.0	5.0	2.5	.0	2.0	5.0	12.0	14.0	15.0	18.5	17.5	16.0
16	10.0	4.0	4.0	.5	1.5	6.5	11.0	13.5	15.5	19.0	18.5	17.0
17	9.0	3.0	3.5	.5	1.0	5.5	11.0	14.5	16.0	23.0	19.0	16.0
18	9.0	3.5	3.0	.5	1.0	7.0	12.0	15.0	20.0	23.0	17.0	17.5
19	7.5	5.0	3.5	.5	2.0	5.0	14.0	16.0	---	21.0	16.0	18.0
20	8.0	4.0	3.0	.5	2.0	5.0	11.5	16.0	16.0	22.0	18.0	17.0
21	7.0	4.5	2.0	1.0	1.0	4.5	10.0	15.0	15.0	---	---	15.5
22	6.0	2.5	1.0	1.0	1.0	5.5	8.0	17.0	16.0	21.0	17.0	15.5
23	5.0	3.5	1.0	.0	3.0	3.5	11.5	16.5	15.0	19.0	17.0	15.0
24	8.0	3.5	2.5	2.5	4.0	4.0	12.0	17.0	17.0	19.0	18.0	15.0
25	8.5	4.5	2.0	2.5	2.5	3.0	11.5	16.0	17.0	20.0	17.0	16.0
26	8.0	3.0	1.0	2.5	4.0	3.5	8.5	16.5	14.5	15.0	17.5	18.0
27	6.0	5.0	.5	2.5	3.5	8.0	8.5	16.0	15.0	15.0	20.0	15.5
28	6.5	5.0	3.0	3.0	3.0	7.5	10.0	16.0	15.5	15.0	19.0	15.0
29	5.5	3.5	---	.0	---	7.5	9.5	16.0	15.0	18.0	19.5	13.5
30	5.5	2.0	1.0	.0	---	8.5	9.5	16.5	15.0	18.0	19.0	13.0
31	8.0	---	1.0	.5	---	8.5	---	---	---	18.5	20.0	---
MEAN	10.0	4.5	2.0	1.0	2.0	5.0	9.5	14.0	15.0	19.0	19.0	17.0
WTR YR 1977	MEAN	9.5	MAX	25.0	MIN	.0						

TURBIDITY (JTU), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7	2	2	1	1	4	3	2	4	3	2	4
2	4	2	1	1	1	2	2	2	2	2	1	3
3	2	2	2	1	1	2	2	2	2	1	1	---
4	2	1	1	1	1	2	8	2	1	2	1	---
5	2	1	1	1	1	15	25	2	2	2	1	4
6	1	1	1	1	1	3	6	2	1	2	---	2
7	1	1	10	1	1	2	5	15	2	1	2	2
8	10	1	4	1	1	2	2	9	3	2	4	4
9	70	1	1	1	1	2	2	2	15	2	2	2
10	8	2	2	1	1	2	3	1	4	2	2	2
11	4	2	1	1	2	2	1	1	4	20	2	2
12	2	1	4	1	4	4	1	2	2	6	2	2
13	2	1	3	1	2	80	1	1	2	3	5	2
14	1	1	2	1	2	15	2	1	2	6	20	2
15	1	2	2	1	2	4	1	1	2	2	15	2
16	1	2	1	1	1	3	1	1	2	2	4	3
17	1	1	1	1	2	2	1	2	2	1	3	2
18	2	1	1	1	1	4	1	1	1	1	8	3
19	3	1	1	1	1	9	1	1	---	2	3	2
20	6	1	2	1	1	2	1	1	2	1	2	35
21	6	1	1	1	1	2	5	1	2	1	---	25
22	2	1	1	1	1	3	4	1	10	4	1	6
23	1	1	2	1	2	9	2	1	2	2	1	4
24	6	1	2	1	55	2	2	2	2	2	3	4
25	2	1	1	1	20	2	2	1	30	1	9	5
26	5	1	1	1	4	2	2	1	7	50	4	3
27	2	1	1	1	6	2	2	2	2	6	2	8
28	2	4	1	1	9	2	3	1	4	3	2	7
29	2	2	1	1	---	2	3	1	9	4	2	5
30	2	2	1	1	---	2	3	1	8	2	1	3
31	3	---	---	---	---	3	---	1	---	2	45	---
MEAN	5	1	2	1	5	6	3	2	5	5	5	5
WTR YR 1977	MEAN	4	MAX	80	MIN	1						

03068800 SHAVERS FORK BELOW BOWDEN, WV--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

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	.23	55	4	10	1	.94	2	.49	3	.55	4	9.8								
2	18	38	4	6.5	0	.00	2	.44	2	.36	2	3.1								
3	21	48	4	5.2	29	20	2	.41	2	.34	3	3.7								
4	2	3.1	3	3.4	3	1.7	3	.63	3	.53	65	255								
5	5	5.5	3	3.0	5	2.6	2	.45	3	.57	63	493								
6	1	.88	2	1.7	2	.97	1	.24	2	.38	6	24								
7	7	5.6	1	.77	19	72	3	.79	2	.36	3	7.6								
8	36	207	1	.72	9	23	2	.48	3	.50	2	3.6								
9	287	6620	1	.60	4	5.3	0	.00	4	.65	0	.00								
10	29	207	0	.00	3	3.2	0	.00	3	.52	2	3.2								
11	19	62	2	1.3	3	3.4	1	.23	2	.38	6	12								
12	5	9.9	2	1.2	14	38	1	.23	3	1.7	19	77								
13	4	5.7	2	1.0	15	49	2	.42	2	3.8	721	16300								
14	3	3.4	1	.45	2	3.2	1	.21	1	1.7	32	205								
15	1	.95	1	.43	2	2.6	2	.49	2	2.2	5	14								
16	0	.00	0	.00	1	1.1	6	1.3	3	2.2	2	4.4								
17	0	.00	1	.39	0	.00	6	1.3	4	2.3	1	1.8								
18	0	.00	1	.42	0	.00	2	.41	2	.92	18	44								
19	3	1.9	1	.43	1	.68	1	.19	0	.00	7	17								
20	3	2.0	6	2.9	4	3.0	4	.73	0	.00	1	1.6								
21	18	47	1	.52	4	3.2	3	.53	0	.00	1	1.4								
22	1	1.6	0	.00	3	1.7	2	.36	1	.41	24	76								
23	0	.00	0	.00	3	1.2	1	.17	10	9.5	9	23								
24	9	11	0	.00	3	1.1	1	.17	113	540	2	3.4								
25	55	119	2	.81	2	.76	1	.18	73	459	1	1.4								
26	.23	97	3	1.6	2	.86	1	.19	11	40	4	4.7								
27	7	16	18	24	2	.81	1	.21	29	178	4	4.4								
28	4	6.3	11	27	2	.76	0	.00	24	127	3	3.4								
29	2	2.5	9	22	2	.65	0	.00	---	---	3	3.7								
30	4	4.2	4	6.0	3	.89	0	.00	---	---	4	4.7								
31	10	30	---	---	2	.54	2	.38	---	---	6	7.6								
TOTAL	---	7610.53	---	122.34	---	243.16	---	11.63	---	1373.87	---	17613.50								

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	0	.00	3	2.0	9	1.2	4	3.0	2	.90	6	2.6								
2	0	.00	3	1.7	9	1.2	3	1.7	4	1.5	9	4.6								
3	0	.00	3	1.6	3	.34	2	.91	4	1.2	7	3.6								
4	.23	102	2	.98	3	.30	2	.74	2	.62	6	2.3								
5	174	1730	2	1.1	3	.29	2	.68	3	.87	5	1.5								
6	9	37	1	.76	4	.38	2	.77	2	.59	3	.96								
7	7	16	18	44	5	.47	2	.79	2	.52	3	1.2								
8	4	8.5	13	31	3	.36	2	.60	7	2.4	4	1.4								
9	5	9.0	3	4.2	29	18	5	2.1	3	1.6	2	.57								
10	3	4.3	0	.00	18	26	2	.80	2	.90	3	.74								
11	3	3.8	0	.00	7	4.2	28	58	2	.84	3	.64								
12	2	2.1	1	.67	4	1.4	9	7.8	4	2.7	3	.58								
13	3	2.7	1	.56	4	1.2	7	8.3	7	4.7	3	.49								
14	2	1.6	0	.00	4	1.0	11	11	36	102	2	.35								
15	2	1.5	1	.46	4	1.1	4	2.2	19	50	2	.39								
16	2	1.3	1	.40	6	2.8	3	1.3	3	3.3	5	1.1								
17	2	1.2	2	.71	3	.87	3	1.1	2	1.8	4	1.0								
18	4	2.1	1	.32	3	.71	3	.87	10	16	2	.48								
19	2	.98	2	.60	3	.62	4	1.0	5	4.5	2	.44								
20	19	30	4	1.1	4	.79	2	.43	4	2.5	34	48								
21	10	10	4	1.0	12	5.7	3	.64	3	1.5	21	16								
22	3	2.1	1	.23	8	3.6	11	6.1	3	1.3	5	2.4								
23	4	2.3	1	.21	3	.95	4	1.7	4	1.5	5	1.8								
24	6	3.3	2	.48	2	.54	2	.51	14	13	8	2.5								
25	2	1.1	2	.45	75	60	45	151	17	25	8	2.1								
26	1	.52	3	.64	67	84	115	763	5	3.2	8	2.0								
27	2	1.1	4	.75	6	4.0	9	12	3	1.4	14	7.7								
28	1	.70	7	1.2	7	5.2	4	3.4	3	1.3	9	3.9								
29	5	5.0	9	1.3	29	46	3	2.0	3	1.1	6	2.3								
30	4	3.7	6	.81	11	14	3	1.8	12	4.7	4	1.2								
31	---	---	5	.65	---	---	---	---	10	6.6	---	---								
TOTAL	---	1983.90	---	99.88	---	287.22	---	1046.24	---	260.04	---	114.84								

TOTAL LOAD FOR YEAR: 30767.15 TONS.

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 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	SUS- PENDE SEDI- MENT (MG/L)	SUS- PENDE SEDI- MENT DIS- CHARGE (T/DAY)
OCT								
07...	1600	315	40	7.0	16.0	1	2	1.7
09...	2200	6180	36	6.9	11.0	40	160	2670
09...	2250	5800	39	--	--	35	166	2600
10...	1045	2760	40	--	--	9	41	306
15...	0935	418	42	7.0	11.0	1	4	4.5
22...	1335	654	42	6.7	6.0	2	3	5.3
27...	1630	892	41	6.7	6.5	2	5	12
NOV								
04...	1305	497	42	6.7	6.5	1	3	4.0
18...	1405	759	48	6.8	5.0	1	5	10
DEC								
08...	1545	900	43	6.8	--	4	6	15
FEB								
11...	1500	E25	70	6.9	.0	1	0	--
18...	1600	E182	69	6.7	.0	1	0	--
24...	1345	1370	85	--	--	60	199	736
24...	1405	1440	88	--	--	65	254	988
MAR								
11...	1000	812	36	6.8	6.5	3	1	2.2
13...	1730	6800	37	4.8	--	100	574	10500
13...	1745	6800	35	4.8	--	100	529	9710
13...	2140	3730	32	4.8	6.0	70	289	2910
APR								
07...	1245	900	37	7.8	4.0	3	6	15
28...	1600	310	43	7.6	12.0	4	17	14
MAY								
19...	1105	141	53	--	--	1	1	.38
26...	1020	85	48	7.4	18.0	1	1	.23
JUN								
03...	1730	31	60	8.6	25.0	2	2	.17
30...	0815	634	40	7.0	17.5	10	13	22
JUL								
07...	1320	191	42	7.0	26.0	2	2	1.0
AUG								
04...	1200	127	55	7.0	24.0	1	4	1.4
31...	1320	276	43	7.0	23.0	80	62	46
SEP								
08...	1300	163	50	7.1	22.0	5	4	1.8
22...	1530	217	50	7.0	19.5	6	3	1.8
28...	1300	195	44	7.0	15.5	6	5	2.6

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) above mean sea level. 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. 21 to Feb. 24, which are poor.

AVERAGE DISCHARGE.--53 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 (312 m³/s) on basis of slope-conveyance study; minimum observed, 1 ft³/s (0.028 m³/s) Oct. 7, 1914, gage height, 2.0 ft (0.61 m), site and datum then in use. Minimum stage and discharge both very doubtful.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 10, 1888, and July 17, 1907, reached a stage of approximately 12.5 ft (3.81 m) at site and datum of former gage, discharge, 25,000 ft³/s (708 m³/s), from rating curve extended above 8,000 ft³/s (227 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)	
Oct. 9	1715	*11800	334	10.18	3.103	Apr. 5	1300	5550	157	6.64	2.024
Mar. 13	1645	11400	323	9.94	3.030						

Minimum discharge, 40 ft³/s (1.13 m³/s) June 8, gage height, 0.63 ft (0.192 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1070	1490	420	130	98	1290	466	365	66	405	195	240
2	1180	946	405	120	95	810	400	312	64	304	157	175
3	1040	666	332	110	91	587	380	284	59	244	133	272
4	794	532	284	110	95	954	478	256	50	198	115	206
5	496	445	256	120	100	2920	4420	264	45	175	124	160
6	380	375	237	130	100	1870	2220	340	46	178	119	133
7	320	328	1190	140	97	1190	1220	786	46	203	124	181
8	826	304	1620	130	92	834	1080	1380	42	168	121	195
9	7840	268	770	120	88	650	938	738	150	138	184	157
10	4750	276	508	110	92	674	706	490	532	198	203	128
11	1740	304	490	120	100	778	594	385	336	545	160	110
12	1010	284	898	120	300	1110	490	324	192	460	240	98
13	682	248	1520	110	1000	5980	420	276	138	425	430	85
14	520	209	930	110	900	2680	375	248	117	650	1270	83
15	410	203	643	130	600	1390	344	220	117	340	1610	95
16	356	198	526	120	400	1030	308	189	157	248	629	104
17	312	181	440	120	300	850	276	165	152	200	450	126
18	284	192	356	110	250	746	252	150	115	162	643	117
19	268	209	300	100	220	1160	233	140	106	133	466	115
20	248	203	304	96	260	810	226	130	95	110	332	348
21	1010	230	296	94	240	674	526	115	115	98	268	435
22	834	216	220	96	220	858	348	98	240	150	226	252
23	526	165	178	92	450	1430	292	98	155	223	195	189
24	538	124	178	90	2300	954	272	147	119	142	200	155
25	1100	173	181	95	3730	698	272	119	184	381	514	133
26	2050	237	230	100	2150	550	264	115	650	2200	344	128
27	1310	380	220	110	2650	472	288	110	395	740	244	184
28	810	970	200	120	2670	526	344	98	316	395	203	233
29	580	1040	180	110	---	594	420	85	496	296	181	186
30	478	754	160	110	---	556	472	72	682	248	173	157
31	986	---	150	100	---	550	---	64	---	226	264	---
TOTAL	34748	12150	14622	3473	19688	36175	19324	8563	5977	10583	10517	5180
MEAN	1121	405	472	112	703	1167	644	276	199	341	339	173
MAX	7840	1490	1620	140	3730	5980	4420	1380	682	2200	1610	435
MIN	248	124	150	90	88	472	226	64	42	98	115	83
CFSM	5.24	1.89	2.21	.52	3.29	5.45	3.01	1.29	.93	1.59	1.58	.81
IN.	6.04	2.11	2.54	.60	3.42	6.29	3.36	1.49	1.04	1.84	1.83	.90

CAL YR 1976 TOTAL 171153 MEAN 468 MAX 7840 MIN 19 CFSM 2.19 IN 29.75
WTR YR 1977 TOTAL 181000 MEAN 496 MAX 7840 MIN 42 CFSM 2.32 IN 31.46

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) above mean sea level, 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 period of no gage-height record, Oct. 1-19, which are fair, and those for January and February, which are poor. Monongahela Power Company gage-height telemeter at station.

AVERAGE DISCHARGE.--64 years, 1,676 ft³/s (47.46 m³/s), 31.70 in/yr (805 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 (736 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)	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)
Oct. 9	Unknown	*36700	1040	14.56	4.438	Mar. 13	1600	22700	643	11.36	3.463
Feb. 24	2300	17800	504	10.21	3.112						

a From floodmark.

Minimum discharge, 128 ft³/s (3.62 m³/s) June 5, 6, gage height, 2.15 ft (0.665 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4720	4490	1390	400	330	4280	1390	797	230	797	343	408
2	5550	3040	1200	387	320	2650	1210	685	245	597	283	301
3	4550	2240	1010	380	310	2010	1370	647	187	470	237	382
4	2870	1810	874	380	330	4510	1770	584	151	367	204	324
5	1540	1450	800	420	360	9480	12900	632	134	319	200	266
6	1090	1180	740	450	340	5990	7040	865	131	343	204	226
7	806	1010	3720	452	320	3820	3930	1900	145	353	241	249
8	3790	910	4550	408	310	2620	3580	3280	148	310	382	305
9	26300	764	2410	400	300	2100	2900	2080	1250	283	584	237
10	16400	910	1800	380	310	2220	2260	1460	2760	328	447	200
11	6000	1010	1730	400	340	2370	1890	1140	1310	805	430	176
12	3210	910	3090	410	1000	3040	1510	928	700	1670	604	154
13	2230	772	3950	390	2850	15300	1250	780	481	1700	1490	139
14	1630	655	2500	370	3010	8060	1090	740	408	1670	3690	139
15	1230	620	1980	440	2000	4140	983	670	470	865	3890	180
16	1060	600	1630	410	1300	2920	848	550	476	563	1620	183
17	937	584	1360	380	1000	2270	748	470	387	414	1380	215
18	806	632	1080	360	820	2290	670	414	305	338	1590	207
19	700	640	883	340	730	3280	618	518	266	274	1060	190
20	756	822	928	320	900	2430	590	524	241	226	724	647
21	3710	788	1020	310	820	2200	1160	387	435	204	563	788
22	2730	708	685	320	740	2850	883	324	476	343	458	430
23	1850	560	660	290	950	3890	724	292	333	398	403	310
24	1900	470	610	280	9540	2950	685	563	258	274	408	249
25	4050	570	620	290	12700	2260	724	403	604	1210	919	211
26	6560	780	708	300	8000	1850	647	333	2640	4530	655	215
27	4120	1720	618	330	9570	1580	724	274	1170	1620	441	408
28	2610	2790	625	390	8770	1860	848	234	831	839	367	563
29	1920	2680	590	380	---	2030	983	204	1250	563	367	414
30	1550	2030	464	360	---	1700	983	183	1310	481	328	319
31	3180	---	440	340	---	1620	---	173	---	414	531	---
TOTAL	120355	38145	44665	11467	68270	110570	56908	23034	19732	23568	25043	9035
MEAN	3882	1272	1441	370	2438	3567	1897	743	658	760	808	301
MAX	26300	4490	4550	452	12700	15300	12900	3280	2760	4530	3890	788
MIN	700	470	440	280	300	1580	590	173	131	204	200	139
CFSM	5.41	1.77	2.01	.52	3.40	4.97	2.64	1.04	.92	1.06	1.13	.42
IN.	6.24	1.98	2.31	.59	3.54	5.73	2.95	1.19	1.02	1.22	1.30	.47
CAL YR 1976	TOTAL	543712	MEAN	1486	MAX	26300	MIN	61	CFSM	2.07	IN	28.17
WTR YR 1977	TOTAL	550792	MEAN	1509	MAX	26300	MIN	131	CFSM	2.10	IN	28.54

MONONGAHELA RIVER BASIN

91

03069880 BUFFALO CREEK NEAR ROWLESBURG, WV

LOCATION.--Lat 39°17'19", long 79°42'16", Preston County, Hydrologic Unit 05020004, on left bank 150 ft (46 m) upstream from secondary highway bridge, 4.5 mi (7.2 km) southwest of Rowlesburg, and at mile 2.8 (4.5 km).

DRAINAGE AREA.--12.2 mi² (31.6 km²).

PERIOD OF RECORD.--August 1967 to September 1977 (discontinued).

GAGE.--Water-stage and rainfall recorders. Altitude of gage is 1,640 ft (499.9 m), from topographic map.

REMARKS.--Records fair except those for period of no gage-height record, Mar. 21 to Apr. 27, and those for December, January, and February, which are poor. Rainfall records collected at site since August 1967 are contained in files of U.S. Geological Survey with only monthly totals published in this report.

AVERAGE DISCHARGE.--10 years, 30.0 ft³/s (0.850 m³/s), 33.39 in/yr (848 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,690 ft³/s (76.2 m³/s) Sept. 13, 1971, gage height, 5.66 ft (1.725 m), from rating curve extended above 1,500 ft³/s (42.5 m³/s) on basis of step-backwater method; minimum, 0.06 ft³/s (0.002 m³/s) July 17, 18, 1971, gage height, 0.77 ft (0.235 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft³/s (14 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)
Feb. 24	1630	*702	19.9	3.42	1.042	Apr. 5	Unknown	678	19.2	a3.38	1.030

a From floodmark.

Minimum discharge, 0.58 ft³/s (0.016 m³/s) June 5; minimum gage height, 0.91 (0.277 m) Sept. 12, 13, 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEH	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	115	15	9.0	6.9	40	25	25	1.6	11	2.9	3.3
2	19	55	13	8.5	6.2	27	100	20	1.3	8.1	2.4	2.6
3	13	35	11	8.0	6.3	22	120	16	1.3	4.7	2.0	2.9
4	8.6	26	10	8.6	6.9	129	79	14	1.0	3.9	1.6	2.6
5	6.4	19	9.3	8.9	7.2	111	140	13	.85	9.3	1.3	2.2
6	4.9	15	8.9	8.6	6.9	52	67	13	1.4	16	1.3	2.2
7	4.6	13	274	8.5	6.6	38	49	40	1.8	8.7	9.3	2.0
8	14	12	98	8.3	6.3	26	40	66	1.3	9.8	15	2.9
9	273	12	38	7.9	6.1	21	33	40	18	8.1	9.3	2.0
10	196	14	27	7.6	7.0	19	27	25	13	6.9	63	1.6
11	45	12	26	8.2	10	18	22	18	5.2	5.8	80	1.3
12	23	11	85	8.9	110	17	12	14	3.6	50	63	1.1
13	16	9.3	78	8.0	151	139	16	12	2.6	108	66	1.0
14	12	8.7	40	7.4	63	60	14	10	2.4	46	156	5.2
15	9.0	8.1	28	10	37	38	13	8.7	2.6	21	73	4.3
16	9.3	7.5	22	15	29	27	12	6.4	1.8	13	35	9.3
17	7.5	6.9	17	14	23	20	11	5.8	1.6	8.7	28	11
18	6.9	6.9	12	13	19	29	9.7	5.8	6.4	6.4	24	8.1
19	6.4	6.4	11	13	15	31	9.1	14	3.3	4.7	17	6.4
20	23	6.4	14	12	16	30	8.7	8.7	9.3	3.6	12	26
21	103	5.8	14	11	15	25	14	6.4	15	3.3	9.8	17
22	43	5.8	13	9.9	20	70	11	5.2	6.4	4.7	9.8	10
23	26	5.2	12	8.5	108	54	9.1	4.7	4.3	2.6	7.5	8.1
24	40	4.7	11	8.2	370	44	50	3.9	3.3	2.0	10	6.4
25	130	5.2	13	8.6	215	34	35	3.6	10	20	9.8	5.8
26	172	16	15	9.0	156	27	27	3.3	14	24	7.5	26
27	58	38	14	9.4	154	25	34	2.6	8.7	10	6.4	35
28	32	32	13	10	80	59	35	2.4	18	6.4	5.2	52
29	23	29	11	9.0	---	45	36	2.2	34	4.7	4.3	29
30	21	20	10	8.4	---	36	32	1.8	15	5.2	4.7	17
31	128	---	9.7	7.7	---	29	---	1.6	---	3.9	4.7	---
TOTAL	1513.6	560.9	972.9	293.1	1657.4	1342	1096.6	413.1	209.05	440.5	741.8	304.3
MEAN	48.8	18.7	31.4	9.45	59.2	43.3	36.6	13.3	6.97	14.2	23.9	10.1
MAX	273	115	274	15	370	139	140	66	34	108	156	52
MIN	4.6	4.7	8.9	7.4	6.1	17	8.7	1.6	.85	2.0	1.3	1.0
CFSM	4.00	1.53	2.57	.78	4.85	3.55	3.00	1.09	.57	1.16	1.96	.83
IN.†	4.61	1.71	2.97	.89	5.05	4.09	3.34	1.26	.64	1.34	2.26	.93
IN.‡	7.78	.86	2.76	.70	1.20	4.51	3.95	1.93	5.72	---	6.61	3.71
CAL YR 1976	TOTAL	8356.02	MEAN	22.8	MAX	274	MIN	.20	CFSM	1.87	IN†	25.48
WTR YR 1977	TOTAL	9545.25	MEAN	26.2	MAX	370	MIN	.85	CFSM	2.15	IN†	29.10

† Runoff.
‡ Rainfall.

MONONGAHELA RIVER BASIN

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) above mean sea level, Baltimore & Ohio RR bench mark. 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 Dec. 21 to Feb. 23, which are poor.

AVERAGE DISCHARGE.--54 years, 2,250 ft³/s (63.72 m³/s), 31.43 in/yr (789 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 (1,190 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 (1,270 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 (1,270 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)
Oct. 9	2300	*49900 1410	12.87 3.923	Mar. 13	2000	22500 637	8.79 2.679
Feb. 25	0200	22200 629	8.73 2.661	Apr. 5	1200	21800 617	8.65 2.637

Minimum discharge observed, 178 ft³/s (5.04 m³/s) June 7, gage height, 0.82 ft (0.250 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3430	6800	2000	600	440	6540	2190	1330	235	1320	533	660
2	5260	4940	1700	550	430	3990	2020	1100	235	929	438	506
3	4700	3450	1480	520	440	2940	2450	981	296	726	348	430
4	3660	2700	1130	520	470	5230	2640	878	255	580	290	479
5	2160	2170	1080	560	500	13000	17200	866	220	470	255	390
6	1500	1780	994	600	480	8960	11200	1150	206	497	266	334
7	1170	1490	5680	610	450	5750	6070	2530	183	479	334	302
8	2200	1320	8160	580	420	4140	4920	5190	192	497	590	376
9	26000	1160	4160	540	400	3260	4340	3540	447	454	782	369
10	26300	1300	2770	520	420	2980	3350	2410	3260	454	1130	290
11	9210	1500	2390	570	450	3110	2680	1840	2100	479	1500	255
12	4770	1300	3580	560	1500	3220	2180	1460	1160	2010	1160	220
13	3110	1100	5780	530	4750	11100	1750	1230	770	2640	2240	201
14	2330	930	4060	500	3950	12900	1470	1130	600	2720	5250	210
15	1800	900	3020	580	2570	6450	1320	1050	580	1600	7070	220
16	1520	860	2440	560	1800	4510	1150	878	610	1020	3060	296
17	1290	840	2050	520	1400	3380	1010	737	590	737	1950	320
18	1110	880	1660	490	1100	2830	890	650	488	570	2260	320
19	988	910	1340	460	1000	4320	818	759	383	454	1840	320
20	936	1200	1260	440	1200	3510	770	878	362	390	1240	542
21	3960	1100	1440	430	1100	3150	1130	704	515	314	942	1350
22	4360	1000	1050	440	1000	3680	1330	560	630	348	782	866
23	2840	820	1010	420	1400	6110	1020	470	551	488	650	560
24	2420	730	968	410	11400	4640	942	551	390	470	600	430
25	5970	810	929	430	17500	3510	968	660	422	479	806	341
26	9160	1200	1020	470	12400	2770	955	515	2670	5330	1130	446
27	6430	2700	981	510	12800	2310	1060	430	1920	2750	726	610
28	3940	4000	955	530	12500	2370	1290	355	1230	1420	560	1130
29	2840	3500	916	520	---	3050	1420	320	1340	929	506	994
30	2260	2700	704	490	---	2630	1560	272	1880	737	497	671
31	3980	---	671	460	---	2340	---	245	---	630	570	---
TOTAL	151604	56090	67348	15920	94270	148680	82093	35669	24770	32921	40305	14438
MEAN	4890	1870	2173	514	3367	4796	2736	1151	826	1062	1300	481
MAX	26300	6800	8160	610	17500	13000	17200	5190	3260	5330	7070	1350
MIN	936	730	671	410	400	2310	770	245	183	314	255	201
CFSM	5.03	1.92	2.24	.53	3.46	4.93	2.82	1.18	.85	1.09	1.34	.50
IN.	5.80	2.15	2.58	.61	3.61	5.69	3.14	1.37	.95	1.26	1.54	.55
CAL YR 1976	TOTAL 745871	MEAN 2038	MAX 26300	MIN 81	CFSM 2.10	IN 28.55						
WTR YR 1977	TOTAL 764108	MEAN 2093	MAX 26300	MIN 183	CFSM 2.15	IN 29.24						

MONONGAHELA RIVER BASIN

93

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.--64 years (water years 1910-17, 1922-77), 420 ft³/s (11.89 m³/s), 28.52 in/yr (724 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 (283 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		Gage height		Date	Time	Discharge		Gage height	
		(ft ³ /s)	(m ³ /s)	(ft)	(m)			(ft ³ /s)	(m ³ /s)	(ft)	(m)
Oct. 9	1800	5740	163	10.98	3.347	Mar. 4	2100	5600	159	10.90	3.322
Feb. 24	2000	*6420	182	11.37	3.466	May 6	2400	5520	156	10.85	3.307

Minimum discharge, 18 ft³/s (0.51 m³/s) Aug. 6, minimum gage height, 3.27 ft (0.997 m) Sept. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	753	1540	100	95	71	1010	502	460	57	46	51	64
2	335	1010	96	89	69	696	1190	384	51	41	40	51
3	184	717	92	83	68	542	2480	354	48	34	30	49
4	126	553	87	82	73	2970	1390	301	44	29	24	46
5	94	436	84	90	80	3360	1670	875	44	36	20	43
6	79	349	81	97	76	1520	1350	1500	106	65	18	39
7	96	285	1780	100	71	981	989	3140	111	62	85	36
8	509	260	1470	93	67	714	820	1270	63	67	197	36
9	3780	227	769	87	64	564	669	804	156	62	99	33
10	3080	252	548	83	71	487	556	580	450	69	66	31
11	1200	237	508	87	140	420	469	446	198	48	62	27
12	709	204	546	91	300	378	389	346	128	168	170	26
13	509	182	527	83	1120	1240	329	289	99	548	187	24
14	382	164	400	77	853	1050	287	295	87	282	225	27
15	281	162	370	94	618	729	252	230	105	139	235	44
16	312	146	341	87	453	574	218	192	80	91	164	59
17	233	129	303	83	336	453	186	162	62	70	2020	105
18	188	142	244	77	300	1180	170	147	289	71	1270	66
19	158	131	199	73	250	1420	157	409	202	58	559	47
20	184	123	237	69	283	942	145	330	122	46	344	46
21	740	115	292	66	240	742	304	230	101	37	232	44
22	559	110	180	68	293	1220	192	184	81	62	260	38
23	413	97	160	66	972	1330	165	155	65	42	186	32
24	653	85	140	65	3700	941	323	142	56	30	155	29
25	1240	108	150	70	4440	703	426	125	73	39	146	31
26	1360	116	170	74	2900	560	332	111	96	103	105	129
27	884	139	150	80	2330	455	334	94	68	58	85	202
28	625	131	140	84	1670	1000	333	83	64	35	73	327
29	489	140	130	82	---	1260	843	74	59	26	63	174
30	409	113	114	77	---	818	614	66	50	143	56	115
31	1340	---	105	73	---	648	---	60	---	75	68	---
TOTAL	21904	8407	10513	2525	21908	30907	18084	13838	3215	2682	7295	2020
MEAN	707	280	339	81.5	782	997	603	446	107	86.5	235	67.3
MAX	3780	1540	1780	100	4440	3360	2480	3140	450	548	2020	327
MIN	79	85	81	65	64	378	145	60	44	26	18	24
CFSM	3.54	1.40	1.70	.41	3.91	4.99	3.02	2.23	.54	.43	1.18	.34
IN.	4.07	1.56	1.96	.47	4.07	5.75	3.36	2.57	.60	.50	1.36	.38
CAL YR 1976	TOTAL	141364	MEAN 386	MAX 3780	MIN 15	CFSM 1.93	IN 26.29					
WTR YR 1977	TOTAL	143298	MEAN 393	MAX 4440	MIN 18	CFSM 1.97	IN 26.65					

MONONGAHELA RIVER BASIN

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 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.0	6.5	4.0	---	.0	1.0	9.5	---	23.5	24.5	26.5	28.5
2	---	6.0	3.5	---	.0	1.0	---	18.0	24.5	---	27.0	28.5
3	---	6.0	3.0	---	.0	.5	---	18.5	24.0	---	28.0	---
4	18.0	5.5	---	1.0	.0	1.0	8.0	18.5	---	---	28.0	---
5	18.0	5.5	---	.0	---	---	6.5	19.0	---	26.0	27.0	---
6	18.0	---	3.5	.5	---	---	5.5	19.5	23.0	26.5	---	26.5
7	17.0	---	3.0	.5	.0	1.5	4.0	---	21.5	27.0	---	25.5
8	13.5	4.5	1.5	---	.0	2.0	---	---	21.0	27.0	26.5	25.5
9	---	4.5	.5	---	.0	3.5	---	16.0	20.5	---	26.5	25.5
10	---	4.0	.0	.0	.0	4.5	---	16.0	20.0	---	26.5	---
11	10.5	4.5	---	.0	.0	4.5	9.0	16.5	---	28.0	26.5	---
12	13.5	4.5	---	.0	---	5.0	8.0	17.0	---	28.0	26.5	24.5
13	13.5	---	1.0	---	---	5.5	10.5	18.0	19.5	28.5	---	24.5
14	10.0	---	---	.0	.0	7.0	12.0	---	20.0	27.0	---	24.5
15	11.5	4.0	1.0	---	.0	8.0	13.5	---	20.5	29.0	26.0	24.0
16	---	4.0	1.0	---	.0	5.5	---	19.5	22.0	---	27.0	24.0
17	---	4.0	.0	.0	.0	3.5	---	21.5	23.5	---	25.5	---
18	9.5	4.0	---	.0	.0	4.0	18.0	21.5	---	29.0	24.5	---
19	10.0	4.5	---	.0	---	---	20.0	20.0	---	29.0	---	24.0
20	9.5	---	1.0	.0	---	---	19.0	21.0	23.5	29.0	---	24.0
21	9.5	---	---	.0	.0	2.0	19.0	---	23.0	---	---	23.5
22	9.5	4.0	.0	---	.0	1.5	19.5	---	---	---	24.5	23.0
23	---	4.0	---	---	.5	1.0	---	23.5	24.5	---	24.0	23.5
24	---	4.5	---	.0	.5	3.5	---	24.5	---	---	24.5	---
25	9.5	5.0	---	.0	.5	3.5	18.0	23.5	---	28.0	24.5	---
26	8.5	5.5	---	.0	---	---	---	23.5	25.5	26.0	25.5	20.0
27	8.0	---	---	.0	---	---	---	23.5	25.0	26.0	---	20.0
28	8.0	---	.0	.0	1.0	6.5	---	---	---	25.5	---	20.0
29	7.0	4.5	---	---	---	9.0	16.5	---	---	26.0	28.5	20.0
30	---	4.0	.0	---	---	9.0	---	---	24.5	---	28.5	20.0
31	---	---	---	.0	---	8.0	---	23.5	---	---	29.0	---
MEAN	12.0	4.5	.5	.0	.0	4.0	12.5	20.0	22.5	27.0	26.5	24.0
WTR YR 1977	MEAN	12.5		MAX	29.0		MIN	0.0				

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

KINGS CREEK BASIN

95

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 1977.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM PER 100 ML	FECAL COLIFORM (COL./100 ML)	FECAL STREPTOCOCCI KF AGAR (COL. PER 100 ML)
OCT 28...	1130	5.8	320	7.9	2.5	10.6	103	9	35
NOV 17...	1030	3.3	460	8.3	.5	14.6	309	17	14
DEC 15...	1105	11	440	--	.5	12.2	78	24	43
JAN 28...	0930	1.4	400	8.0	.0	10.2	130	20	10
MAR 03...	1115	17	340	--	1.5	12.4	230	120	13
MAR 29...	1220	32	310	8.0	11.5	10.6	88	37	15
APR 27...	1050	5.6	450	8.4	9.5	10.0	450	27	68
MAY 25...	1125	4.2	450	8.0	20.0	8.2	2600	1500	1800
JUN 22...	1205	2.9	470	9.1	17.0	9.6	290	220	140
JUL 20...	0900	1.6	540	8.0	23.5	8.0	260	500	800
AUG 24...	1150	1.4	380	8.8	19.5	--	2700	330	6500
SEP 21...	1210	2.4	370	9.1	18.0	8.7	260	130	310

KINGS CREEK BASIN

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 (61.0 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 1977.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTAN- TANEOUS DIS- CHARGE (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	DIS- SOLVED OXYGEN (MG/L)	IMME- DIATE COLI- FORM (COL. PER 100 ML)	FECAL COLI- FORM .7UM-MF (COL./ 100 ML)	FECAL STREP- TOCOCCI KF AGAR (COL. PER 100 ML)
OCT									
28...	1115	8.4	270	7.6	2.5	11.0	74	56	25
NOV									
17...	1115	5.3	460	7.9	.5	14.2	39	13	22
DEC									
15...	1030	16	430	--	.5	12.0	140	51	17
JAN									
28...	0900	2.0	400	8.0	.0	10.2	40	30	0
MAR									
03...	1025	24	335	--	1.5	12.8	97	44	14
29...	1110	52	350	7.6	11.5	11.8	66	87	38
APR									
27...	1000	8.3	600	8.0	7.5	10.1	100	82	69
MAY									
25...	1030	6.0	520	8.1	21.0	8.3	430	350	170
JUN									
22...	1115	2.6	650	7.9	17.0	9.3	260	300	130
JUL									
20...	0900	3.6	640	8.0	23.5	7.8	950	2700	840
AUG									
24...	1055	1.0	460	8.6	20.5	--	3100	2600	2900
SEP									
21...	1130	7.4	380	9.4	18.0	8.9	870	390	710

KINGS CREEK BASIN

97

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 current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 698.34 ft (212.854 m) above mean sea level.

REMARKS.--Records good except those for periods of doubtful-or-no gage-height record, Oct. 1-14, Oct. 31-Dec. 6, and Dec. 29 to Feb.11, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,460 ft³/s (41.3 m³/s) Apr. 2, 1977, gage height, 4.49 ft (1.369 m); 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)	
Feb. 24	1630	595	16.9	3.21	0.978	Mar. 18	1430	880	24.9	3.70	1.128
Mar. 13	0630	500	14.2	3.02	0.920	Apr. 2	2130	*1460	41.3	4.49	1.369

Minimum discharge, 2.0 ft³/s (0.057 m³/s) Sept. 11-13, gage height, 1.12 ft (0.341 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	54	5.0	13	5.1	72	72	40	9.8	19	8.5	3.6
2	19	42	4.5	12	5.2	59	653	44	9.0	11	6.2	3.6
3	10	31	4.1	11	5.4	53	620	46	8.3	7.2	4.4	4.0
4	6.6	26	4.0	10	5.8	110	283	100	7.6	6.8	3.7	3.9
5	5.4	23	5.0	11	6.1	115	275	140	12	11	3.8	3.2
6	4.6	19	23	11	5.9	89	176	120	20	20	6.0	3.2
7	7.0	17	206	11	5.6	75	135	135	13	10	22	2.9
8	35	15	105	10	5.3	64	117	100	11	32	30	2.5
9	200	14	67	9.1	5.0	56	92	79	58	16	26	2.4
10	100	12	54	9.5	5.7	51	81	66	27	11	16	2.3
11	47	11	47	8.6	10	45	72	54	16	9.0	16	2.1
12	30	10	42	8.0	60	51	63	46	12	15	11	2.0
13	19	8.5	32	7.5	250	312	54	41	12	13	9.0	2.1
14	16	7.5	27	7.4	200	181	50	38	11	8.3	11	4.9
15	15	7.1	25	8.8	110	125	43	30	9.8	6.9	11	5.7
16	14	6.7	23	9.4	52	99	38	26	9.0	6.2	8.1	3.8
17	12	6.1	21	8.4	35	78	35	22	8.3	6.2	11	4.0
18	11	5.9	20	7.6	27	443	32	75	59	16	8.6	1.4
19	10	6.6	24	7.0	23	297	34	96	23	11	5.8	5.8
20	12	5.8	28	6.6	20	202	30	46	15	11	4.8	2.4
21	18	5.2	25	6.8	17	141	27	32	13	15	4.3	1.3
22	13	5.2	22	6.6	16	178	24	26	10	37	4.7	1.0
23	12	4.7	19	6.2	351	142	29	21	9.0	12	5.1	8.2
24	23	4.0	17	6.0	422	115	36	19	8.2	8.1	4.3	7.6
25	53	4.5	16	6.2	335	92	29	22	8.3	23	4.1	1.2
26	46	5.0	17	6.4	185	77	30	17	8.5	17	3.4	1.1
27	35	5.4	18	6.7	132	67	27	16	6.8	9.4	3.2	8.3
28	29	5.2	19	7.0	94	133	41	14	12	7.0	3.2	6.6
29	27	7.0	20	6.5	---	121	63	12	13	6.2	3.0	6.8
30	23	6.0	16	6.0	---	100	44	11	8.6	6.2	3.3	7.4
31	68	---	14	5.6	---	89	---	11	---	5.5	3.8	---
TOTAL	934.6	380.4	969.6	256.9	2394.1	3832	3305	1545	448.2	393.0	265.3	313.3
MEAN	30.1	12.7	31.3	8.29	85.5	124	110	49.8	14.9	12.7	8.56	10.4
MAX	200	54	206	13	422	443	653	140	59	37	30	5.8
MIN	4.6	4.0	4.0	5.6	5.0	45	24	11	6.8	5.5	3.0	2.0
CFSM	.61	.26	.64	.17	1.75	2.53	2.25	1.02	.30	.26	.18	.21
IN.	.71	.29	.74	.20	1.82	2.91	2.51	1.17	.34	.30	.20	.24

WTR YR 1977 TOTAL 15037.4 MEAN 41.2 MAX 653 MIN 2.0 CFSM .84 IN 11.42

KINGS CREEK BASIN

03110830 KINGS CREEK AT WEIRTON, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1976 to September 1977.

REMARKS.--Suspended sediment samples taken once monthly and more frequently on rises.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DIS-CHARGE (CFS)	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM (COL./100 ML)	FECAL STREPTOCOCCI KF AGAR (COL. PER 100 ML)	HARDNESS (CA+MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)
OCT												
28...	1040	28	390	8.6	3.0	1	13.0	7300	3200	400	200	110
NOV												
17...	0945	6.1	440	8.0	.5	2	13.6	5270	2940	50	210	110
DEC												
15...	0915	26	410	--	.5	2	12.6	35200	24400	13400	190	120
JAN												
19...	1000	50	540	7.8	.0	3	10.1	6200	700	100	240	140
FEB												
23...	0915	335	--	--	--	--	--	--	--	--	--	--
24...	1045	450	--	--	--	--	--	--	--	--	--	--
24...	1355	615	--	--	--	--	--	--	--	--	--	--
24...	2320	575	--	--	--	--	--	--	--	--	--	--
25...	1045	400	--	--	--	--	--	--	--	--	--	--
MAR												
03...	0920	38	315	7.8	.0	4	13.0	1800	380	40	150	89
16...	0700	110	--	--	--	--	--	--	--	--	--	--
18...	1215	730	--	--	--	--	--	--	--	--	--	--
18...	1840	760	--	--	--	--	--	--	--	--	--	--
20...	1345	224	--	--	--	--	--	--	--	--	--	--
29...	0935	129	300	7.9	9.5	5	10.8	2400	600	170	150	100
APR												
02...	1130	515	--	--	--	--	--	--	--	--	--	--
02...	2330	1270	--	--	--	--	--	--	--	--	--	--
03...	1200	515	--	--	--	--	--	--	--	--	--	--
03...	2315	335	--	--	--	--	--	--	--	--	--	--
27...	0830	34	460	8.0	7.5	1	9.8	530000	100000	16000	210	130
MAY												
18...	1920	72	--	--	--	--	--	--	--	--	--	--
19...	0925	94	--	--	--	--	--	--	--	--	--	--
25...	0900	26	450	8.2	21.0	150	7.3	11000	7200	5900	210	120
25...	0930	27	450	7.3	21.0	--	8.2	--	--	--	--	--
25...	1058	24	--	--	--	--	--	--	--	--	--	--
JUN												
06...	1434	21	--	--	--	--	--	--	--	--	--	--
17...	2200	9.8	--	--	--	--	--	--	--	--	--	--
18...	1005	72	--	--	--	--	--	--	--	--	--	--
22...	0930	9.1	500	8.0	17.0	2	9.0	9500	32000	2700	250	150
23...	0930	9.8	500	--	17.0	--	--	--	--	--	--	--
JUL												
18...	1300	17	--	--	--	--	--	--	--	--	--	--
19...	0714	13	--	--	--	--	--	--	--	--	--	--
20...	0830	11	565	7.9	25.0	--	7.3	--	--	--	--	--
20...	0900	11	565	7.9	25.0	20	7.3	12000	6000	2000	270	170
21...	1530	6.9	--	--	--	--	--	--	--	--	--	--
21...	1945	15	--	--	--	--	--	--	--	--	--	--
25...	1520	48	--	--	--	--	--	--	--	--	--	--
25...	1915	35	--	--	--	--	--	--	--	--	--	--
AUG												
01...	0715	11	--	--	--	--	--	--	--	--	--	--
07...	0630	26	--	--	--	--	--	--	--	--	--	--
08...	2310	50	--	--	--	--	--	--	--	--	--	--
09...	1015	2.4	--	--	--	--	--	--	--	--	--	--
24...	0930	4.3	639	8.1	20.0	6	--	4300	500	6300	270	160
SEP												
16...	0600	13	--	--	--	--	--	--	--	--	--	--
16...	1645	50	--	--	--	--	--	--	--	--	--	--
19...	0600	94	--	--	--	--	--	--	--	--	--	--
19...	1500	68	--	--	--	--	--	--	--	--	--	--
21...	1010	14	545	8.7	18.0	15	8.6	7200	2500	1100	250	160

03110830 KINGS CREEK AT WEI: N, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED CALCIUM (CA) (MG/L)	DIS-SOLVED MAGNESIUM (MG)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CaCO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLORIDE (CL) (MG/L)	DIS-SOLVED FLUORIDE (F) (MG/L)	DIS-SOLVED SILICA (SiO2) (MG/L)
OCT 28...	56	15	10	2.2	106	0	87	.4	120	16	.1	6.5
NOV 17...	58	16	13	2.0	118	0	97	1.9	120	20	.1	2.0
DEC 15...	52	14	11	2.0	88	--	72	--	96	17	.2	7.6
JAN 19...	65	19	16	3.6	122	0	100	3.1	140	25	.2	7.3
FEB 23...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 03...	42	10	8.7	1.8	70	0	57	1.8	90	15	.1	7.6
16...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
29...	43	11	7.0	1.7	62	0	51	1.2	95	14	.1	7.4
APR 02...	--	--	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--
27...	58	16	12	2.0	100	0	82	1.6	120	18	.1	3.3
MAY 18...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
25...	59	14	11	3.1	100	0	82	1.0	99	17	.2	2.9
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 06...	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
22...	69	19	16	2.8	120	0	98	1.9	140	22	.1	3.7
23...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 18...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	72	21	17	3.4	120	0	98	2.4	160	25	.2	6.3
21...	--	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 01...	--	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--	--
24...	74	21	24	3.7	140	0	110	1.8	160	36	.2	2.6
SEP 16...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
21...	67	19	14	4.0	110	0	90	.4	150	20	.2	7.5

KINGS CREEK BASIN

03110830 KINGS CREEK AT WEIRTON, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	DIS-SOLVED NITRITE (N) (MG/L)	DIS-SOLVED ORTHO-PHOSPHORUS (P) (MG/L)	DIS-SOLVED ORTHO-PHOSPHATE (PO4) (MG/L)	TOTAL ALUMINUM (AL) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	DIS-SOLVED CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	HEXA-VALENT CHROMIUM (CR6) (UG/L)	TOTAL IRON (FE) (UG/L)
OCT												
28...	286	279	.27	.01	.01	.03	--	--	--	--	--	--
NOV												
17...	296	290	.03	.01	.01	.03	--	--	--	--	--	--
DEC												
15...	277	247	.74	.01	.05	.15	--	--	--	--	--	--
JAN												
19...	351	340	.80	.01	.03	.09	--	--	--	--	--	--
FEB												
23...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
03...	220	215	1.2	.01	.01	.03	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
29...	220	214	.92	.00	.03	.09	--	--	--	--	--	--
APR												
02...	--	--	--	--	--	--	--	--	--	--	--	--
02...	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--
27...	306	280	.30	.02	.08	.25	--	--	--	--	--	--
MAY												
18...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
25...	329	264	.89	.02	.04	.12	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
06...	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
22...	354	333	.19	.01	.01	.03	30	0	0	10	0	220
23...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
18...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
20...	431	366	.36	.01	.03	.09	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
01...	--	--	--	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--	--
24...	404	391	.05	.00	.03	.09	--	--	--	--	--	--
SEP												
16...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--
21...	357	338	.37	.00	.02	.06	--	--	--	--	--	--

KINGS CREEK BASIN

101

03110830 KINGS CREEK AT WEIRTON, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DIS-SOLVED MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)	SUS-PENDED SEDIMENT (MG/L)	SUS-PENDED SEDIMENT DIS-CHARGE (T/DAY)
OCT											
28...	70	--	--	--	40	--	--	--	--	--	--
NOV											
17...	30	--	--	--	60	--	--	--	--	--	--
DEC											
15...	30	--	--	--	50	--	--	--	--	--	--
JAN											
19...	10	--	--	--	40	--	--	--	--	0	.00
FEB											
23...	--	--	--	--	--	--	--	--	--	32	29
24...	--	--	--	--	--	--	--	--	--	554	673
24...	--	--	--	--	--	--	--	--	--	1490	2470
24...	--	--	--	--	--	--	--	--	--	184	286
25...	--	--	--	--	--	--	--	--	--	149	161
MAR											
03...	20	--	--	--	30	--	--	--	--	2	.21
16...	--	--	--	--	--	--	--	--	--	25	7.4
18...	--	--	--	--	--	--	--	--	--	1510	2980
18...	--	--	--	--	--	--	--	--	--	590	1210
20...	--	--	--	--	--	--	--	--	--	55	33
29...	30	--	--	--	30	--	--	--	--	10	3.5
APR											
02...	--	--	--	--	--	--	--	--	--	1620	2250
02...	--	--	--	--	--	--	--	--	--	1120	3840
03...	--	--	--	--	--	--	--	--	--	304	423
03...	--	--	--	--	--	--	--	--	--	208	188
27...	10	--	--	--	20	--	--	--	--	--	--
MAY											
18...	--	--	--	--	--	--	--	--	--	274	53
19...	--	--	--	--	--	--	--	--	--	273	69
25...	2100	--	--	--	200	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	322	23
25...	--	--	--	--	--	--	--	--	--	300	19
JUN											
06...	--	--	--	--	--	--	--	--	--	94	5.3
17...	--	--	--	--	--	--	--	--	--	377	10
18...	--	--	--	--	--	--	--	--	--	441	86
22...	20	0	0	20	10	.0	.0	30	10	--	--
23...	--	--	--	--	--	--	--	--	--	6	.16
JUL											
18...	--	--	--	--	--	--	--	--	--	352	16
19...	--	--	--	--	--	--	--	--	--	56	2.0
20...	--	--	--	--	--	--	--	--	--	40	1.2
20...	10	--	--	--	50	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	395	7.4
21...	--	--	--	--	--	--	--	--	--	522	21
25...	--	--	--	--	--	--	--	--	--	1510	196
25...	--	--	--	--	--	--	--	--	--	1280	121
AUG											
01...	--	--	--	--	--	--	--	--	--	112	3.3
07...	--	--	--	--	--	--	--	--	--	491	34
08...	--	--	--	--	--	--	--	--	--	301	41
09...	--	--	--	--	--	--	--	--	--	317	2.1
24...	50	--	--	--	30	--	--	--	--	32	.37
SEP											
16...	--	--	--	--	--	--	--	--	--	2130	75
16...	--	--	--	--	--	--	--	--	--	882	119
19...	--	--	--	--	--	--	--	--	--	1170	297
19...	--	--	--	--	--	--	--	--	--	415	76
21...	50	--	--	--	30	--	--	--	--	11	.42

WHEELING CREEK BASIN

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) above mean sea level.

REMARKS.--Records fair except those for period of no gage-height record, Jan. 10 to Mar. 1, which are poor. Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--37 years, 327 ft³/s (9.261 m³/s), 15.75 in/yr (400 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 (425 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.--Maximum discharge, 6,870 ft³/s (195 m³/s) Apr. 3, gage height, 6.67 ft (2.033 m), no other peak above base of 6,000 ft³/s (170 m³/s); minimum, 16 ft³/s (0.45 m³/s) Aug. 29, 30; minimum gage height, 1.40 ft (0.427 m) Sept. 13-15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	95	850	35	78	45	438	445	447	116	68	40	25
2	116	466	31	75	43	308	2150	373	105	59	37	37
3	92	332	28	74	46	250	4770	342	96	51	33	120
4	59	240	28	74	48	980	2280	348	89	44	31	109
5	42	186	35	80	50	1410	3690	516	109	49	25	76
6	33	158	51	82	49	820	2160	470	200	68	19	57
7	31	139	1940	82	47	560	1360	1180	240	82	35	40
8	65	123	1540	78	45	380	1000	747	210	76	150	33
9	890	105	738	73	42	290	720	528	215	120	79	25
10	1360	102	404	80	49	235	560	410	265	285	79	25
11	480	92	431	74	90	200	417	356	265	99	73	22
12	225	82	417	69	404	190	302	308	230	112	79	19
13	154	73	332	65	2310	1560	245	275	186	174	109	19
14	120	65	186	70	1210	1180	205	260	162	182	71	22
15	95	62	225	87	600	747	170	240	139	92	65	19
16	86	57	174	77	308	536	146	215	123	68	57	49
17	71	49	174	71	180	356	123	195	112	54	51	33
18	59	54	135	65	160	2370	112	186	302	49	51	33
19	51	51	102	61	160	2250	131	320	280	42	57	44
20	51	49	146	57	140	1340	280	270	162	35	49	71
21	86	44	166	58	127	1010	186	205	82	33	40	79
22	95	44	105	55	112	1000	162	178	59	127	37	62
23	73	40	96	51	1060	840	158	190	46	158	31	57
24	116	33	90	49	2430	648	158	466	37	37	31	44
25	290	37	87	49	2250	488	162	398	40	57	29	46
26	552	44	100	50	1310	398	146	255	49	116	25	116
27	344	46	110	51	880	338	146	190	49	95	25	131
28	210	46	120	53	608	680	190	166	49	68	22	95
29	166	54	95	51	---	870	930	150	62	51	16	92
30	142	42	90	49	---	632	655	135	71	49	21	92
31	510	---	83	47	---	584	---	127	---	44	22	---
TOTAL	7159	3765	8294	2035	14803	23888	24159	10446	4150	2644	1489	1692
MEAN	231	126	268	65.6	529	771	805	337	138	85.3	48.0	56.4
MAX	1360	850	1940	87	2430	2370	4770	1180	302	285	150	131
MIN	31	33	28	47	42	190	112	127	37	33	16	19
CFSM	.82	.45	.95	.23	1.88	2.73	2.86	1.20	.49	.30	.17	.20
IN.	.94	.50	1.09	.27	1.95	3.15	3.19	1.38	.55	.35	.20	.22
CAL YR 1976 TOTAL	111915.9		MEAN 306	MAX 3490	MIN 6.1	CFSM 1.09	IN 14.76					
WTR YR 1977 TOTAL	104524.0		MEAN 286	MAX 4770	MIN 16	CFSM 1.01	IN 13.79					

LITTLE GRAVE CREEK BASIN

103

03113700 LITTLE GRAVE CREEK NEAR GLENDALE, WV

LOCATION.--Lat 39°57'50", long 80°42'04", Marshall County, Hydrologic Unit 05030106, on right bank 0.1 mi (0.2 km) downstream from Brandau Hollow, 2.9 mi (4.7 km) northeast of Glendale, and at mile 6.1 (9.8 km).

DRAINAGE AREA.--4.97 mi² (12.87 km²).

PERIOD OF RECORD.--October 1969 to September 1977 (discontinued).

GAGE.--Water-stage and rainfall recorders. Concrete control since July 23, 1970. Datum of gage is 822 91 ft (250.823 m), from levels by U.S. Soil Conservation Service.

REMARKS.--Records poor.

AVERAGE DISCHARGE.--8 years, 6.50 ft³/s (0.184 m³/s), 17.76 in/yr (451 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,400 ft³/s (39.6 m³/s) July 11, 1976, gage height, 7.00 ft (2.134 m), from rating curve extended above 30 ft³/s (0.85 m³/s) on basis of slope-area measurements at gage-heights of 6.43 ft (1.960 m) and 7.00 ft (2.134 m); no flow July 30, 31, Aug. 3, 4-14, Sept. 4, 5, 8-10, 28, 29, 1973, Aug. 23-27, 1974, July 28, 30, 31, Aug. 2-6, Sept. 8-12, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 193 ft³/s (5.47 m³/s) Apr. 2, gage height, 3.38 ft (1.030 m), no other peak above base of 140 ft³/s (4.0 m³/s); no flow July 28, 30, 31, Aug. 2-6, Sept. 8-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	9.5	.96	1.4	.71	6.0	5.5	8.0	.23	.34	.06	.04
2	2.6	6.0	.87	1.4	.69	4.7	52	6.0	.28	.08	.00	6.0
3	1.8	4.3	.80	1.3	.71	4.0	42	5.0	.28	.02	.00	2.6
4	1.3	3.2	.76	1.3	.76	20	35	5.0	.28	1.2	.00	.34
5	.98	2.8	1.0	1.5	.83	16	46	9.4	1.3	.34	.00	.11
6	.98	2.4	2.4	1.5	.82	11	24	8.0	.98	.18	.00	.04
7	1.5	2.2	40	1.5	.78	8.5	17	20	.42	.08	6.0	.04
8	3.0	1.8	15	1.4	.72	7.0	13	12	.42	.18	1.2	.00
9	38	1.7	8.0	1.3	.69	6.0	11	8.3	2.8	8.5	.70	.00
10	17	1.7	6.5	1.4	.90	5.0	9.5	6.0	.98	1.3	1.0	.00
11	9.0	1.3	7.5	1.3	2.5	4.3	8.0	4.5	.42	.34	.70	.00
12	5.0	1.2	6.0	1.3	9.0	4.7	6.0	3.6	.34	.98	.95	.00
13	3.5	.98	4.3	1.2	30	35	5.5	3.0	.34	.52	.62	.11
14	2.8	.81	4.0	1.2	26	17	4.7	2.7	.28	.18	1.8	.14
15	2.4	1.2	3.8	1.3	8.0	12	4.0	2.5	.28	.11	1.0	.02
16	2.4	1.7	3.7	1.3	4.4	10	3.2	2.2	.18	.08	.70	.28
17	1.7	1.7	3.5	1.2	3.4	8.5	2.8	2.1	.14	.06	.53	.11
18	1.5	1.8	2.8	1.2	3.0	48	2.8	2.0	1.7	.11	.45	.04
19	1.3	1.7	2.8	1.1	3.1	25	2.4	3.7	.14	.18	.38	1.8
20	2.0	1.5	3.7	1.0	2.7	18	1.7	2.0	.34	.23	.35	1.3
21	2.8	1.5	2.8	1.0	2.5	14	1.5	1.1	.64	2.0	.40	.98
22	1.8	1.5	2.5	.97	2.3	16	1.2	.81	.52	2.0	.56	.64
23	1.3	1.2	2.2	.90	12	13	1.3	.92	.42	.34	.47	.52
24	5.5	1.3	1.9	.87	39	11	1.3	1.0	.34	.14	.64	.64
25	9.5	1.5	1.8	.85	20	9.0	1.2	.81	1.2	.81	.64	.64
26	8.0	1.5	1.9	.86	13	7.5	2.3	.52	.42	.18	.52	.81
27	5.0	1.3	2.0	.88	10	6.5	2.0	.34	.42	.11	.52	.28
28	3.7	1.5	2.1	.90	8.0	16	3.0	.34	.98	.00	.52	.14
29	3.0	1.5	1.9	.87	---	12	17	.28	.98	.06	.42	.23
30	2.8	1.2	1.7	.82	---	9.0	11	.23	.34	.00	4.0	.23
31	17	---	1.5	.77	---	7.5	---	.18	---	.00	.18	---
TOTAL	162.36	63.49	140.69	35.79	206.51	392.2	337.9	122.53	18.39	20.65	25.31	18.08
MEAN	5.24	2.12	4.54	1.15	7.38	12.7	11.3	3.95	.61	.67	.82	.60
MAX	38	9.5	40	1.5	39	48	52	20	2.8	8.5	6.0	6.0
MIN	.98	.81	.76	.77	.69	4.0	1.2	.18	.14	.00	.00	.00
CFSM	1.05	.43	.91	.23	1.49	2.56	2.27	.80	.12	.14	.17	.12
IN.	1.22	.48	1.05	.27	1.55	2.93	2.53	.92	.14	.15	.19	.14
CAL YR 1976	TOTAL	2178.63	MEAN	5.95	MAX	69	MIN	.14	CFSM	1.20	IN	16.30
WTR YR 1977	TOTAL	1543.90	MEAN	4.23	MAX	52	MIN	.00	CFSM	.85	IN	11.55

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) above mean sea level, adjustment of 1912. Prior to July 11, 1947, nonrecording gage at same site and datum.

REMARKS.--Records good except those for Dec. 22 to Mar. 1, which are poor.

AVERAGE DISCHARGE.--50 years (water years 1916, 1929-77), 629 ft³/s (17.81 m³/s), 18.65 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)	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)
Oct. 10	0900	*14300	405	16.85	5.136	Dec. 7	2300	9180	260	12.57	3.831

Minimum discharge, 9.2 ft³/s (0.261 m³/s) Sept. 20, 21, 22, gage height, 2.08 ft (0.634 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	272	2950	115	150	68	604	420	459	29	38	48	47
2	1240	1390	132	120	66	481	1450	350	24	35	40	43
3	492	817	117	110	68	398	4020	355	22	33	80	46
4	268	542	100	120	70	2820	1600	1110	17	26	68	65
5	176	398	90	122	73	5660	6180	2190	15	25	56	68
6	113	302	120	124	74	1630	2900	1500	15	34	51	65
7	99	249	5500	124	72	893	1500	5670	12	28	137	38
8	364	217	5360	120	68	616	1120	3900	12	23	1030	30
9	5140	185	1420	111	66	475	765	1460	23	18	350	24
10	11900	156	732	109	70	382	569	772	24	15	238	19
11	1850	142	580	100	100	315	470	486	24	14	156	15
12	670	132	563	94	1100	278	376	330	52	18	376	14
13	393	119	622	87	2700	5640	306	256	65	70	700	12
14	263	102	525	83	2000	3390	270	207	53	150	1010	12
15	203	91	415	78	1300	1180	259	176	43	167	1220	10
16	167	83	355	89	900	758	231	148	38	92	676	15
17	150	78	320	88	700	541	203	122	34	64	2100	12
18	129	75	266	86	580	1620	188	102	30	44	1200	12
19	109	72	217	82	500	2230	170	153	23	33	475	15
20	102	68	200	80	430	1050	214	232	15	24	245	15
21	145	65	266	76	400	732	365	148	14	23	150	9.2
22	249	65	250	79	450	610	266	104	10	315	113	13
23	217	64	280	77	2200	1420	221	83	9.8	360	100	20
24	298	64	220	75	3500	991	459	70	8.7	156	82	20
25	1720	60	200	74	2900	664	921	60	9.2	89	89	24
26	3500	57	210	76	1600	503	547	53	25	475	245	34
27	1710	59	230	78	1000	398	393	47	28	552	176	29
28	732	62	263	80	800	492	325	43	28	214	109	28
29	459	72	270	78	---	851	569	42	47	115	80	24
30	371	89	240	75	---	622	586	68	46	78	67	23
31	4130	---	200	71	---	519	---	48	---	57	50	---
TOTAL	37631	8825	20358	2916	23855	38763	27863	20744	795.7	3385	11517	801.2
MEAN	1214	294	657	94.1	852	1250	929	669	26.5	109	372	26.7
MAX	11900	2950	5500	150	3500	5660	6180	5670	65	552	2100	68
MIN	99	57	90	71	66	278	170	42	8.7	14	40	9.2
CFSM	2.65	.64	1.43	.21	1.86	2.73	2.03	1.46	.06	.24	.81	.06
IN.	3.06	.72	1.65	.24	1.94	3.15	2.26	1.68	.06	.27	.94	.07

CAL YR 1976	TOTAL	235570.0	MEAN 644	MAX 12100	MIN 10	CFSM 1.41	IN 19.13
WTR YR 1977	TOTAL	197453.9	MEAN 541	MAX 11900	MIN 8.7	CFSM 1.18	IN 16.04

03114650 BUFFALO RUN NEAR LITTLE, WV

LOCATION.--Lat 39°29'13", long 81°00'27", Tyler County, Hydrologic Unit 05030201, on left bank 1.0 mi (1.6 km) northwest of Little, and at mile 1.2 (1.9 km).

DRAINAGE AREA.--4.21 mi² (10.90 km²).

PERIOD OF RECORD.--January 1969 to September 1977 (discontinued).

REVISED RECORDS.--WRD WV, 1972: 1971(P). WRD WV, 1974: 1971-73(P).

GAGE.--Water-stage and rainfall recorders. Altitude of gage is 660 ft (201 m), from topographic map.

REMARKS.--Records good except those for Dec. 22 to Feb. 21, Mar. 13 to Apr. 5, and Aug. 17-25, which are poor. Rainfall records collected at site since January 1969 are contained in files of U.S. Geological Survey with only monthly totals published in this report.

AVERAGE DISCHARGE.--8 years, 5.86 ft³/s (0.166 m³/s), 18.91 in/yr (480 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,280 ft³/s (64.6 m³/s) June 23, 1974, gage height, 12.31 ft (3.752 m), from floodmark, from rating curve extended above 150 ft³/s (4.25 m³/s) on basis of computations of flow through culvert and flow-over-road measurement of peak flow; minimum daily discharge, 0.01 ft³/s (<0.001 m³/s) Sept. 5-19, 22-30, Oct. 1-31, 1969.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 200 ft³/s (5.7 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)
Oct. 31	0230	546	15.5	7.34	2.237	May 7	1000	*902	25.5	9.91	3.021
Mar. 13	---	a220	6.23	---	---	Aug. 7	1845	453	12.8	6.62	2.018
Apr. 3	---	a500	8.50	---	---	Aug. 17	0845	204	5.78	4.79	1.460

a Estimated.

Minimum discharge, 0.02 ft³/s (<0.001 m³/s) Aug. 1, 5, 6; minimum gage height, 2.77 ft (0.844 m) Oct. 5, 6, 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	4.2	.43	1.1	.58	.50	1.8	1.7	.25	.40	.10	.25
2	.70	1.4	.40	1.0	.52	.45	2.5	1.4	.20	.25	.08	.20
3	.61	.87	.38	.94	.53	.45	5.2	2.1	.20	.18	.06	.30
4	.54	.65	.36	.92	.56	36	88	4.7	.20	.20	.04	.25
5	.48	.55	.40	1.0	.62	4.2	35	13	.18	.25	.04	.20
6	.42	.55	1.2	1.1	.67	1.2	17	31	.18	.20	.10	.18
7	.80	.55	81	1.2	.65	.60	11	136	.18	.18	28	.18
8	2.8	.55	15	1.1	.58	.50	7.0	15	.18	.16	4.7	.18
9	47	.55	8.1	1.1	.54	.50	4.7	3.3	.40	.16	.55	.18
10	7.6	.55	5.2	1.0	.60	.35	4.2	1.9	.35	.16	.25	.16
11	2.2	.55	5.2	.97	1.1	.30	3.3	1.2	.25	.16	.20	.14
12	1.0	.55	5.2	.92	7.5	.45	2.4	.87	.25	.40	6.5	.16
13	.70	.50	3.8	.88	25	60	2.2	.70	.25	.70	.60	.16
14	.87	.50	2.9	.82	18	16	2.1	.70	.25	.20	18	.16
15	1.0	.45	2.4	.85	12	6.5	1.9	.65	.25	.12	.87	.25
16	.87	.35	2.2	.89	9.0	4.6	1.7	.55	.25	.10	.35	.55
17	.87	.30	2.1	.89	6.3	3.2	1.6	.45	.25	.08	20	.40
18	.70	.35	1.9	.86	5.2	5.1	1.6	.45	.25	.06	4.0	.25
19	.70	.35	1.7	.80	4.4	3.6	1.4	.45	.20	.04	.60	.20
20	1.0	.35	2.2	.76	3.8	2.9	1.2	.40	.20	.06	.37	.40
21	2.4	.35	2.9	.74	3.3	2.2	1.2	.40	.20	.16	.28	.25
22	2.1	.35	2.6	.74	4.7	7.5	1.0	.30	.20	.30	.22	.20
23	1.7	.30	2.3	.77	45	5.6	1.0	.25	.18	.12	.16	.18
24	13	.25	2.0	.75	48	4.0	1.7	.25	.16	.10	5.9	.20
25	9.8	.25	2.2	.72	10	3.0	1.4	.25	.20	.16	.34	.25
26	7.6	.30	2.2	.72	2.4	2.4	1.2	.25	.25	.16	.30	.45
27	2.4	.30	2.1	.74	1.6	2.0	1.0	.25	.20	.10	.25	.55
28	1.7	.30	2.2	.76	.65	3.2	2.1	.25	.65	.08	.20	.55
29	1.2	.55	2.4	.78	---	2.7	4.7	.45	.45	.06	.18	.50
30	1.6	.50	1.9	.70	---	2.2	2.1	.50	.25	.06	.18	.40
31	88	---	1.4	.64	---	2.0	---	.30	---	.06	.40	---
TOTAL	203.96	18.12	166.27	27.16	213.80	184.20	213.2	219.97	7.46	5.44	93.82	8.28
MEAN	6.58	.60	5.36	.88	7.64	5.94	7.11	7.10	.25	.18	3.03	.28
MAX	88	4.2	81	1.2	48	60	88	136	.65	.70	28	.55
MIN	.42	.25	.36	.64	.52	.30	1.0	.25	.16	.04	.04	.14
CFSM	1.56	.14	1.27	.21	1.82	1.41	1.69	1.69	.06	.04	.72	.07
IN.†	1.80	.16	1.47	.24	1.89	1.63	1.88	1.94	.07	.05	.83	.07
IN.‡	6.48	.26	1.83	---	---	3.84	3.97	---	3.11	5.35	---	---

CAL YR 1976 TOTAL 1610.90 MEAN 4.40 MAX 132 MIN .10 CFSM 1.05 IN† 14.23
WTR YR 1977 TOTAL 1361.68 MEAN 3.73 MAX 136 MIN .04 CFSM .89 IN‡ 12.03

† Runoff.

‡ Rainfall.

OHIO RIVER MAIN STEM

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) above mean sea level, Sandy Hook datum.

REMARKS.--Records published as a stage control station. Corps of Engineers gage-height telemeter at station.

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 gage height, 29.18 ft (8.894 m) Apr. 4; minimum, 14.80 ft (4.511 m) Sept. 7.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.05	18.53	16.23	16.04	15.56	22.62	18.80	16.58	15.42	15.42	15.75	15.48
2	16.00	16.55	16.16	15.92	15.47	22.62	19.00	16.44	15.65	15.83	15.83	15.66
3	15.98	16.10	16.11	15.53	15.63	20.97	26.23	16.21	15.74	15.43	15.60	15.86
4	15.87	17.27	15.95	15.66	15.63	21.78	28.93	16.26	15.55	15.38	15.79	15.16
5	15.68	16.55	15.79	15.95	15.96	22.85	27.68	17.20	15.76	15.85	15.61	15.25
6	16.15	16.46	15.81	15.85	15.45	22.95	26.02	17.41	16.25	16.32	15.22	16.03
7	15.72	16.15	17.34	15.82	15.56	22.72	23.97	19.29	15.92	16.31	15.79	15.57
8	16.18	16.33	18.95	15.94	15.24	21.15	23.27	19.92	16.16	16.45	16.30	15.10
9	17.13	16.56	18.08	15.75	15.34	20.25	22.50	18.08	15.96	15.74	16.89	15.78
10	20.36	16.39	16.94	15.66	15.40	19.72	21.61	17.15	16.25	15.71	16.79	16.14
11	21.91	16.30	16.73	16.19	15.45	19.09	20.96	16.58	16.11	15.77	16.46	15.51
12	16.53	15.91	17.03	15.94	15.94	19.18	20.25	16.19	15.44	15.37	16.23	15.48
13	17.23	15.77	16.74	15.45	17.26	21.53	19.72	16.10	15.12	16.10	16.32	15.43
14	17.01	15.93	16.80	16.28	18.85	23.60	18.36	15.61	15.79	16.92	17.17	15.45
15	16.53	15.74	16.52	15.87	17.85	24.37	17.98	15.45	15.86	16.75	17.64	16.35
16	16.56	15.64	16.44	16.16	16.77	22.20	17.14	15.22	15.70	15.88	17.38	16.36
17	16.26	15.91	16.52	16.10	16.55	21.00	16.25	15.67	15.45	15.68	17.13	15.80
18	15.94	15.67	16.25	16.35	16.22	21.37	15.70	15.29	16.15	15.63	17.32	15.93
19	15.55	15.83	16.09	16.41	16.01	24.94	16.14	15.58	16.40	16.18	16.96	16.55
20	15.72	15.64	16.10	16.41	15.83	24.53	15.76	15.58	15.47	16.44	15.90	16.66
21	16.18	15.54	16.35	16.32	15.61	21.67	15.98	15.44	15.30	17.16	15.91	17.14
22	15.92	16.05	16.39	16.08	15.89	21.08	15.74	15.29	15.96	17.03	15.69	17.44
23	16.22	15.92	16.24	15.95	16.55	21.60	15.99	15.42	15.99	17.22	15.36	16.82
24	16.03	16.14	16.14	16.06	19.52	22.13	15.80	15.21	15.77	16.89	16.51	16.35
25	16.47	15.75	15.85	16.24	23.95	21.54	16.57	15.38	15.75	16.70	16.15	16.49
26	17.57	16.22	15.93	16.34	25.87	20.72	17.12	15.41	16.12	16.97	15.51	16.98
27	16.33	15.82	16.02	16.34	25.32	19.64	16.86	14.94	15.35	16.72	15.43	17.17
28	17.09	15.89	16.15	16.08	23.43	18.87	16.70	15.25	15.87	16.27	15.47	17.24
29	17.31	16.06	16.06	16.03	---	19.72	17.21	15.47	15.30	15.70	15.64	17.18
30	15.87	16.34	15.97	16.00	---	19.86	17.32	15.36	15.22	15.68	15.60	16.71
31	17.89	---	15.87	16.03	---	19.41	---	15.27	---	15.31	15.53	---
MEAN	16.59	16.30	16.43	16.04	17.43	21.46	19.39	16.14	15.76	16.16	16.16	16.17
MAX	21.91	18.55	18.95	16.41	25.87	24.94	28.93	19.92	16.40	17.22	17.64	17.44
MIN	15.67	15.58	15.67	15.53	15.24	18.87	15.70	14.94	15.12	15.31	15.22	15.10

WTR YR 1977 MEAN 17.02 MAX 28.93 MIN 14.94

NOTE.--Add 567.12 ft to obtain elevation above mean sea level.

LITTLE KANAWHA RIVER BASIN

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03151400 LITTLE KANAWHA RIVER NEAR WILDCAT, WV

LOCATION.--Lat 38°44'00", long 80°31'23", 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) above mean sea level.

REMARKS.--Records good except those for Dec. 22 to Feb. 21, which are poor. Corps of Engineers gage-height tele-meter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,530 ft³/s (157 m³/s) Oct. 9, 1976, gage height, 11.56 ft (2.523 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)	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)
Oct. 9	1445	*5530	157	11.56	3.523	Apr. 5	0500	3310	93.7	9.61	2.929
Feb. 24	1915	2310	65.4	8.53	2.600						

Minimum discharge, 2.6 ft³/s (0.074 m³/s) June 5, gage height, 3.88 ft (1.183 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	564	646	200	100	50	280	95	99	5.5	54	12	18
2	367	479	170	91	48	201	90	86	4.6	43	9.5	13
3	255	318	140	95	45	162	119	76	3.9	28	7.9	115
4	192	234	130	93	48	342	266	69	3.3	19	7.1	71
5	132	174	120	92	54	625	2580	71	2.9	15	5.5	34
6	91	137	108	85	58	437	1140	76	3.9	92	5.2	21
7	79	115	814	83	55	314	597	258	3.9	66	10	16
8	744	99	1190	64	52	234	431	398	3.6	38	18	14
9	3760	86	538	61	50	189	318	262	26	26	24	13
10	2400	84	322	72	60	153	251	177	51	19	23	10
11	842	77	269	67	250	124	198	129	23	20	16	8.3
12	334	71	449	62	600	110	156	101	15	25	16	6.7
13	207	63	681	65	1200	1270	132	82	12	36	92	5.5
14	145	54	431	74	900	912	115	71	9.5	27	538	5.5
15	106	55	307	80	500	443	101	58	8.3	18	367	5.9
16	88	57	234	85	350	288	88	47	7.5	14	119	9.5
17	71	52	183	82	273	204	77	38	6.7	11	72	16
18	57	55	140	80	251	230	69	34	5.5	9.1	71	16
19	47	58	115	77	224	280	63	40	4.9	7.5	46	14
20	46	57	115	77	210	258	58	34	7.9	6.3	33	57
21	99	55	132	80	198	217	52	24	80	5.5	24	52
22	108	58	93	77	227	295	47	19	44	56	18	29
23	93	52	85	74	877	398	44	16	24	37	15	19
24	91	44	69	68	2030	376	47	15	18	18	31	15
25	153	51	60	67	1580	303	57	13	18	15	69	13
26	660	76	75	66	912	237	50	13	51	95	37	11
27	437	162	100	63	744	189	58	11	53	57	24	12
28	269	198	130	62	473	171	52	10	33	32	17	24
29	195	284	140	62	---	145	115	8.7	110	19	14	29
30	162	250	160	55	---	122	112	7.5	93	16	12	20
31	403	---	140	52	---	112	---	6.7	---	14	12	---
TOTAL	13197	4201	7840	2311	12319	9621	7578	2349.9	732.9	938.4	1765.2	693.4
MEAN	426	140	253	74.5	440	310	253	75.8	24.4	30.3	56.9	23.1
MAX	3760	646	1190	100	2030	1270	2580	398	110	95	538	115
MIN	46	44	60	52	45	110	44	6.7	2.9	5.5	5.2	5.5
CFSM	3.80	1.25	2.26	.67	3.93	2.77	2.26	.68	.22	.27	.51	.21
IN.	4.38	1.40	2.60	.77	4.09	3.20	2.52	.78	.24	.31	.59	.23
CAL YR 1976 TOTAL	75244.6			MEAN 206	MAX 3760	MIN 3.6	CFSM 1.84	IN 24.99				
WTR YR 1977 TOTAL	63546.8			MEAN 174	MAX 3760	MIN 2.9	CFSM 1.55	IN 21.11				

LITTLE KANAWHA RIVER BASIN

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 at mean sea level.

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 CURRENT PERIOD.--July to September 1976: Maximum contents, 2,916 acre-ft (3.60 hm³) July 25, elevation, 773.35 ft (235.717 m); minimum, no storage, pool not filled.

Water year 1977: Maximum contents, 9,941 acre-ft (12.3 hm³) Oct. 10, elevation, 784.11 ft (238.997 m); minimum, no storage, pool not filled.

LITTLE KANAWHA RIVER BASIN

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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) above mean sea level.

REMARKS.--Records good above 30 ft³/s (0.85 m³/s) and fair below except those for Dec. 23 to Jan. 22, which are poor. Some regulation by Burnsville Reservoir 0.5 mi (0.8 km) upstream.

EXTREMES FOR CURRENT PERIOD.--July to September 1976: Maximum discharge during period, 1,690 ft³/s (47.9 m³/s) July 24, gage height, 55.48 ft (16.910 m); minimum daily, 4.0 ft³/s (0.11 m³/s) Aug. 26, 27.

Water year 1977: Maximum discharge, 2,530 ft³/s (71.6 m³/s) Oct. 9, gage height, 58.81 ft (17.925 m); minimum, 3.6 ft³/s (0.10 m³/s) May 26, gage height, 50.62 ft (15.429 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										---	72	5.9
2										---	60	15
3										---	46	61
4										---	38	47
5										---	32	30
6										---	30	22
7										---	48	18
8										---	78	14
9										---	61	11
10										---	44	14
11										---	35	42
12										---	29	46
13										---	25	31
14										---	22	23
15										100	28	19
16										112	30	17
17										770	31	16
18										579	24	16
19										259	22	17
20										136	19	16
21										87	14	15
22										71	9.8	12
23										434	6.5	11
24										1440	6.6	12
25										1600	5.2	10
26										1170	4.0	7.3
27										539	4.0	18
28										218	5.0	255
29										133	7.5	235
30										97	6.7	172
31										83	6.1	---
TOTAL										---	851.4	1228.2
MEAN										---	27.5	40.9
MAX										---	78	255
MIN										---	4.0	5.9
CFSM										---	.17	.25
IN.										---	.19	.28

LITTLE KANAWHA RIVER BASIN

03151520 LITTLE KANAWHA RIVER BELOW BURNSVILLE DAM, WV--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	568	672	302	127	93	413	127	135	8.9	87	28	20
2	530	617	250	118	88	293	112	115	65	67	25	24
3	352	463	210	110	84	216	131	100	91	53	22	32
4	258	342	158	120	85	538	254	94	25	38	18	92
5	169	247	130	136	100	853	1160	90	13	29	17	58
6	109	177	116	123	101	638	1800	101	8.5	31	16	41
7	85	136	704	116	95	464	1850	397	4.8	79	17	33
8	483	114	1250	92	88	343	1450	592	4.3	58	19	29
9	1770	99	853	87	83	274	656	441	14	40	35	26
10	1740	92	503	117	96	217	388	293	44	30	43	24
11	2060	91	376	100	262	179	304	206	51	26	44	22
12	2040	85	464	90	642	154	239	151	34	26	43	19
13	1740	80	687	90	893	969	192	117	24	25	81	17
14	638	74	587	110	275	1250	164	99	19	21	311	16
15	171	70	442	120	549	767	141	87	17	21	616	15
16	106	72	338	120	718	465	119	76	14	17	243	16
17	88	71	264	120	848	324	103	66	13	17	99	22
18	75	69	205	115	886	275	94	59	11	13	72	30
19	66	73	159	110	884	358	88	31	8.7	7.3	62	33
20	61	73	146	100	772	336	81	4.0	7.8	6.9	48	41
21	69	72	177	105	379	307	77	4.0	41	29	37	68
22	105	73	135	110	327	338	72	3.9	72	37	31	57
23	97	73	130	114	742	507	68	3.9	49	62	27	43
24	91	68	100	108	1350	494	73	3.7	33	45	28	37
25	124	66	86	108	1700	428	82	3.6	28	33	56	32
26	514	73	110	107	1330	347	79	9.4	39	51	59	29
27	604	122	150	105	825	278	79	29	62	102	41	27
28	410	229	200	102	611	237	83	18	52	68	32	30
29	276	345	210	98	---	215	143	10	105	50	26	41
30	203	393	200	96	---	173	166	9.2	145	39	23	43
31	505	---	150	98	---	150	---	9.0	---	32	20	---
TOTAL	16107	5231	9792	3372	14906	12800	10375	3357.7	1104.0	1240.2	2239	1017
MEAN	520	174	316	109	532	413	346	108	36.8	40.0	72.2	33.9
MAX	2060	672	1250	136	1700	1250	1850	592	145	102	616	92
MIN	61	66	86	87	83	150	68	3.6	4.3	6.9	16	15
CFSM	3.19	1.07	1.94	.67	3.26	2.53	2.12	.66	.23	.25	.44	.21
IN.	3.68	1.19	2.23	.77	3.40	2.92	2.37	.77	.25	.28	.51	.23
WTR YR 1977 TOTAL	81540.9			MEAN 223		MAX 2060	MIN 3.6	CFSM 1.37	IN 18.61			

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 current year.

GAGE.--Water-stage recorder. Altitude of gage is 740 ft (226 m), from topographic map.

REMARKS.--Records good except those for Dec. 27 to Feb. 18, July 14 to Sept. 30, 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 daily, 2.4 ft³/s (0.068 m³/s) May 24, 1977.

EXTREMES FOR CURRENT YEAR.-- Maximum discharge, 5,630 ft³/s (159 m³/s) Oct. 10, gage height, 13.97 ft (4.258 m); minimum daily, 2.4 ft³/s (0.068 m³/s) May 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	912	940	353	170	88	450	176	202	9.4	155	41	29
2	704	740	300	150	83	335	158	167	64	111	36	30
3	440	524	251	170	80	263	188	140	143	72	29	89
4	311	380	195	182	85	1250	470	140	37	41	25	140
5	223	279	170	176	120	1490	3200	134	20	32	22	81
6	161	216	152	161	130	863	2430	146	11	38	21	57
7	137	173	1820	155	110	562	2260	997	7.3	117	23	46
8	947	152	1820	120	95	405	1770	926	5.9	89	28	38
9	4040	131	1130	100	90	319	822	540	41	61	46	33
10	2750	117	602	150	100	271	450	344	77	41	64	30
11	2560	114	445	130	500	230	348	251	86	27	64	27
12	2370	103	650	120	900	206	283	188	59	29	77	24
13	1530	94	905	120	1500	2140	234	146	37	59	188	22
14	734	80	710	140	500	1720	206	117	32	32	722	21
15	216	72	513	150	700	1000	182	94	27	28	863	20
16	149	72	385	160	800	546	158	77	22	24	315	20
17	122	69	303	150	930	380	137	69	18	20	158	21
18	97	64	234	150	1000	335	119	61	17	16	111	23
19	75	69	185	140	1050	420	117	53	15	12	89	38
20	64	69	173	130	975	385	103	14	14	11	63	69
21	77	66	216	130	480	353	91	7.4	75	46	56	110
22	134	66	176	140	524	455	83	5.9	131	94	49	91
23	125	66	158	143	1400	674	80	4.3	80	77	44	63
24	125	59	137	134	2050	584	117	2.4	51	61	70	53
25	234	51	100	137	2070	485	140	4.0	51	50	89	44
26	884	72	209	137	1600	400	119	5.9	108	119	91	38
27	746	149	260	131	1010	327	125	43	108	149	53	36
28	465	295	290	125	692	291	128	32	97	83	45	60
29	311	480	310	111	---	267	259	17	238	70	38	65
30	255	485	280	100	---	227	248	12	224	53	34	68
31	1040	---	220	94	---	202	---	11	---	45	30	---
TOTAL	23338	6247	13652	4306	19662	17835	15201	4950.9	1905.6	1862	3584	1486
MEAN	753	208	440	139	702	575	507	160	63.5	60.1	116	49.5
MAX	4040	940	1820	182	2070	2140	3200	997	238	155	863	140
MIN	64	51	100	94	80	202	80	2.4	5.9	11	21	20
CFSM	3.04	.84	1.77	.56	2.83	2.32	2.04	.65	.26	.24	.47	.20
IN.	3.50	.94	2.05	.65	2.95	2.68	2.28	.74	.29	.28	.54	.22
CAL YR 1976	TOTAL	139417.2	MEAN 381	MAX 4040	MIN 6.2	CFSM 1.54	IN 20.91					
WTR YR 1977	TOTAL	114029.5	MEAN 312	MAX 4040	MIN 2.4	CFSM 1.26	IN 17.10					

LITTLE KANAWHA RIVER BASIN

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) above mean sea level, 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) above mean sea level. Prior to May 25, 1971, auxiliary nonrecording gage at same site and datum.

REMARKS.--Records good except those for January and February, 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.--49 years, 595 ft³/s (16.85 m³/s), 20.93 in/yr (532 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, 9,760 ft³/s (276 m³/s) Oct. 9; maximum gage height, 26.13 ft (7.964 m) Oct 10, backwater; minimum, 7.4 ft³/s (0.21 m³/s) May 25, gage height, 1.57 ft (0.479 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1250	1510	512	290	120	674	246	351	20	276	62	43
2	533	1080	420	260	120	500	218	319	18	195	59	35
3	545	794	370	237	115	390	314	280	81	129	35	34
4	360	605	319	231	119	1820	690	262	74	91	29	66
5	260	452	278	229	130	3230	5650	233	30	69	24	122
6	192	348	231	209	145	1410	3240	231	22	52	24	80
7	166	264	2840	201	140	903	2780	1750	18	59	28	53
8	1460	213	3330	180	130	647	2300	1910	15	109	25	40
9	6530	183	1720	167	120	503	1300	941	54	75	32	33
10	7230	163	931	180	130	416	697	596	78	54	43	33
11	3190	153	662	160	350	348	539	414	71	45	60	28
12	2580	146	871	150	1200	297	433	300	62	38	222	25
13	2280	133	1240	160	3000	3520	356	226	42	43	438	23
14	1230	122	1020	190	2500	2730	307	181	32	53	1830	22
15	398	110	749	200	1820	1490	276	149	27	38	1780	22
16	237	107	572	210	1210	854	235	120	24	35	626	21
17	187	105	452	200	930	593	207	99	22	28	461	24
18	147	102	354	200	830	515	187	83	20	21	283	24
19	122	99	266	190	730	593	191	80	19	20	171	31
20	109	102	231	190	670	554	193	71	18	19	133	68
21	112	101	288	200	610	500	157	38	26	17	99	128
22	151	99	250	190	570	539	137	29	101	138	74	120
23	175	99	230	180	1500	882	133	26	91	81	57	81
24	169	94	210	165	3220	794	193	23	56	74	112	52
25	408	86	180	165	2970	668	253	17	77	304	201	39
26	1600	89	220	165	2110	554	222	19	157	678	155	35
27	1140	137	260	163	1380	455	224	21	119	191	126	35
28	728	297	320	157	948	416	220	32	107	138	91	102
29	506	572	380	140	---	395	485	28	207	93	66	89
30	400	674	390	130	---	333	458	22	390	66	52	68
31	1580	---	360	125	---	288	---	20	---	49	52	---
TOTAL	36375	9039	20456	5814	27817	27811	22841	8871	2078	3278	7450	1576
MEAN	1173	301	660	188	993	897	761	286	69.3	106	240	52.5
MAX	7230	1510	3330	290	3220	3520	5650	1910	390	678	1830	128
MIN	109	86	180	125	115	288	133	17	15	17	24	21
CFSM	3.04	.78	1.71	.49	2.57	2.32	1.97	.74	.18	.28	.62	.14
IN.	3.51	.87	1.97	.56	2.68	2.68	2.20	.85	.20	.32	.72	.15
CAL YR 1976	TOTAL	205414	MEAN	561	MAX	7230	MIN	15	CFSM	1.45	IN	19.80
WTR YR 1977	TOTAL	173406	MEAN	475	MAX	7230	MIN	15	CFSM	1.23	IN	16.71

LITTLE KANAWHA RIVER BASIN

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03152200 BUCK RUN NEAR LEOPOLD, WV

LOCATION.--Lat. 39°07'26", long 80°41'26", Doddridge County, Hydrologic Unit 05030203, on right bank 12 ft (4 m) upstream from culvert on Secondary State Route 66, 0.3 mi (0.5 km) upstream from mouth, and 2.6 mi (4.2 km) east of Leopold.

DRAINAGE AREA.--2.91 mi² (7.54 km²).

PERIOD OF RECORD.--October 1969 to September 1977 (discontinued).

GAGE.--Water-stage and rainfall recorders and culvert control. Altitude of gage is 840 ft (256 m), from topographic map.

REMARKS.--Records good except those for Dec. 22 to Feb. 22, Mar. 12 to Apr. 9, which are poor. Rainfall records collected at site from December 1969 to July 1973, April 1975, and since October 1975 are contained in files of U.S. Geological Survey with only monthly totals published in this report.

AVERAGE DISCHARGE.--8 years, 4.25 ft³/s (0.120 m³/s), 19.83 in/yr (504 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 493 ft³/s (14.0 m³/s) June 1, 1974, gage height, 5.24 ft (1.597 m), from rating curve extended above 50 ft³/s (1.42 m³/s) on basis of culvert rating computation; minimum, no flow part of each day Aug. 24, 25, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 110 ft³/s (3.1 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)
Oct. 9	0700	*272	7.70	3.95	1.204	Apr. 4	Unknown	141	3.99	a3.05	0.930
Dec. 7	0400	112	3.17	2.83	0.863						

a From floodmark.

Minimum discharge, 0.02 ft³/s (<0.001 m³/s) July 11, 12, 20, 21, gage height, 0.89 ft (0.271 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	4.0	1.7	.75	.50	2.7	1.1	2.5	.04	.10	5.2	.23
2	4.0	2.9	1.4	.66	.47	2.4	2.0	2.2	.07	.58	1.1	.46
3	1.4	2.2	1.2	.62	.45	1.7	3.5	1.9	.07	.16	.34	.46
4	.91	1.9	1.1	.63	.47	47	70	1.7	.04	.07	.23	.23
5	.64	1.6	1.0	.66	.50	14	30	1.9	.04	.04	.16	.16
6	.57	1.4	3.3	.70	.48	5.7	17	2.2	.04	.10	.10	.16
7	7.2	1.3	56	.82	.45	3.6	9.0	11	.04	.04	.16	.16
8	31	1.1	12	.76	.42	2.9	6.0	7.0	.04	.04	.58	.16
9	127	1.1	5.2	.70	.40	2.4	4.2	3.6	2.9	.03	.46	.10
10	16	1.4	3.4	.80	.45	2.0	3.4	2.5	.58	.03	.58	.10
11	4.9	1.1	3.1	.76	1.0	1.7	2.5	1.9	.16	.03	.70	.07
12	2.7	.96	5.2	.70	10	3.0	1.9	1.6	.16	.07	8.5	.07
13	2.0	.70	4.9	.70	16	35	1.7	1.3	.10	2.9	3.4	.07
14	1.9	.70	3.4	.80	14	8.0	1.4	1.1	.10	.70	10	.07
15	1.6	.70	2.7	.85	11	4.5	1.1	.82	.07	.10	3.6	.10
16	2.2	.58	2.0	.80	7.6	3.0	.96	.70	.07	.07	2.2	.10
17	1.6	.58	1.6	.73	3.5	2.2	.82	.58	.04	.04	2.5	.46
18	1.6	.58	.96	.67	3.0	3.5	4.7	.46	.04	.03	1.6	.23
19	1.7	.70	.70	.63	2.5	2.5	4.9	1.7	.04	.03	.70	.16
20	2.2	.70	1.7	.59	2.6	2.0	4.0	.58	.04	.03	.46	3.4
21	3.1	.70	2.2	.54	2.3	1.5	2.7	.46	.07	2.2	.34	.46
22	2.9	.70	1.5	.50	3.5	4.4	2.0	.34	.04	3.1	.23	.23
23	2.4	.70	1.3	.46	23	3.5	1.9	.23	.04	.23	.16	.16
24	12	.58	1.1	.46	32	2.5	3.6	.23	.03	.10	5.2	.16
25	7.3	.70	1.2	.52	13	2.0	2.9	.23	.03	2.2	2.2	.16
26	4.4	.82	1.4	.70	7.3	1.6	2.4	.23	.04	1.7	.82	.23
27	3.1	1.1	1.6	.82	5.4	1.4	2.2	.16	.04	.34	.46	1.3
28	2.5	1.3	2.0	.70	3.4	2.1	2.9	.10	.03	.16	.34	1.4
29	27	3.1	2.0	.62	---	1.7	5.2	.07	.11	.10	.34	.58
30	11	2.4	1.4	.57	---	1.5	3.4	.07	.23	.10	.34	.46
31	5.7	---	.90	.52	---	1.3	---	.04	---	.10	.46	---
TOTAL	315.52	38.30	129.16	20.74	165.69	173.3	199.38	49.40	5.31	15.52	53.46	12.09
MEAN	10.2	1.28	4.17	.67	5.92	5.59	6.65	1.59	.18	.50	1.72	.40
MAX	127	4.0	56	.85	32	47	70	11	2.9	3.1	10	3.4
MIN	.57	.58	.70	.46	.40	1.3	.82	.04	.03	.03	.10	.07
CFSM	3.51	.44	1.43	.23	2.03	1.92	2.29	.55	.06	.17	.59	.14
IN.†	4.03	.49	1.65	.27	2.12	2.21	2.55	.63	.07	.20	.68	.15
IN.‡	---	---	2.16	.16	1.20	3.71	2.97	1.61	3.02	5.06	4.70	2.50
CAL YR 1976	TOTAL	1489.30	MEAN	4.07	MAX	127	MIN	.01	CFSM	1.40	IN†	19.03
WTR YR 1977	TOTAL	1177.87	MEAN	3.23	MAX	127	MIN	.03	CFSM	1.11	IN†	15.05

† Runoff.
‡ Rainfall.

LITTLE KANAWHA RIVER BASIN

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 current year. 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) above mean sea level, adjustment of 1912. Prior to Nov. 21, 1934, nonrecording gage at same site and datum.

REMARKS.--Records good except those for January and February, 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.--49 years, 1,327 ft³/s (37.58 m³/s), 19.74 in/yr (501 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, 20,200 ft³/s (572 m³/s) Oct. 10, gage height, 31.77 ft (9.683 m); minimum, 28 ft³/s (0.79 m³/s) July 21, gage height, 6.23 ft (1.899 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3180	3510	840	600	260	1280	585	783	44	644	97	292
2	2680	2050	700	530	250	965	529	622	38	629	129	194
3	1240	1490	600	500	240	771	731	531	34	416	206	138
4	753	1110	536	467	240	3010	1300	747	57	263	136	120
5	528	840	480	458	270	7770	12900	550	117	183	86	134
6	392	655	462	448	300	3420	8400	488	73	139	65	182
7	316	523	4650	432	280	1990	4440	1760	48	108	62	156
8	2160	444	8490	380	260	1410	3650	4370	37	90	70	118
9	11200	385	3410	350	250	1060	2530	2060	74	126	126	98
10	18700	341	1910	370	270	871	1550	1200	191	110	128	87
11	7250	311	1370	330	700	743	1140	835	214	84	165	78
12	3100	293	1480	320	2500	645	916	656	160	77	268	68
13	2610	270	2160	340	7000	6110	767	537	130	88	923	60
14	1910	246	1860	390	6400	7080	671	436	98	91	2230	53
15	868	226	1450	410	3500	3030	612	367	79	90	4550	52
16	472	210	1140	405	2500	1870	567	310	68	75	1560	50
17	384	200	915	420	1900	1270	520	258	59	63	902	59
18	317	194	741	400	1700	1070	469	211	55	56	741	78
19	254	189	583	390	1500	1370	398	184	51	45	484	81
20	218	184	513	380	1400	1190	530	178	46	36	340	106
21	215	184	595	400	1300	1010	450	162	85	29	248	194
22	234	182	540	390	1200	956	360	124	118	33	192	255
23	271	181	480	380	4140	1710	310	94	159	122	158	222
24	281	178	430	360	6910	1680	450	80	167	182	202	166
25	782	171	380	340	5970	1360	550	70	145	135	540	128
26	3880	165	429	330	3550	1110	510	63	646	714	551	104
27	2480	182	520	330	2490	919	489	53	443	729	376	88
28	1420	281	660	320	1750	822	448	52	305	338	268	102
29	932	626	780	300	---	838	581	54	654	233	196	168
30	719	1020	800	270	---	754	933	63	834	160	168	202
31	2800	---	750	280	---	668	---	56	---	116	310	---
TOTAL	72546	16841	40654	12020	59030	58752	48286	17954	5229	6204	16477	3833
MEAN	2340	561	1311	388	2108	1895	1610	579	174	200	532	128
MAX	18700	3510	8490	600	7000	7770	12900	4370	834	729	4550	292
MIN	215	165	380	270	240	645	310	52	34	29	62	50
CFSM	2.56	.61	1.44	.43	2.31	2.08	1.76	.63	.19	.22	.58	.14
IN.	2.96	.69	1.66	.49	2.41	2.39	1.97	.73	.21	.25	.67	.16
CAL YR 1976	TOTAL	417337	MEAN	1140	MAX	18700	MIN	32	CFSM	1.25	IN	17.00
WTR YR 1977	TOTAL	357826	MEAN	980	MAX	18700	MIN	29	CFSM	1.07	IN	14.58

LITTLE KANAWHA RIVER BASIN

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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 Rocksedale, 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) above mean sea level, 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 (368 m³/s); no flow at times during 1930, 1931, 1954, 1957, 1959, 1960.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 20.82 ft (6.346 m) Apr. 5; minimum gage height, 3.63 ft (1.106 m) June 7.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	7.05	4.82	5.05	4.54	5.60	4.85	4.78	3.75	6.61	4.36	4.38
2	7.13	6.14	4.86	4.94	4.53	5.40	4.82	4.69	3.78	6.40	5.02	4.19
3	5.60	5.72	4.77	4.84	4.53	5.24	5.81	4.62	3.78	5.43	4.50	4.08
4	5.03	5.43	4.73	4.84	4.62	9.09	7.50	4.85	3.71	4.91	4.19	4.06
5	4.70	4.16	4.65	4.85	4.81	10.34	17.36	4.71	3.68	4.61	4.04	4.07
6	4.47	4.96	4.60	4.81	5.07	7.39	9.20	4.69	3.69	4.42	3.94	4.07
7	4.48	4.82	10.21	4.81	5.00	6.48	8.05	7.93	3.67	4.27	3.92	4.16
8	6.57	4.71	9.40	4.69	4.83	6.00	7.14	7.52	3.68	4.16	4.01	4.08
9	14.90	4.62	6.73	4.70	4.82	5.70	6.40	5.95	4.69	4.07	4.56	4.00
10	11.01	4.56	6.03	4.75	5.09	5.51	6.02	5.37	5.02	4.23	4.54	3.94
11	6.60	4.54	5.85	4.99	8.74	5.34	5.76	5.07	4.33	4.16	5.81	3.89
12	5.70	4.48	6.62	4.88	12.37	5.21	5.51	4.86	4.08	4.25	5.54	3.84
13	5.22	4.42	7.05	4.73	15.02	13.05	5.33	4.71	3.95	4.68	6.62	3.81
14	4.96	4.38	6.24	4.74	10.86	8.66	5.22	4.54	3.87	5.14	11.40	3.80
15	4.75	4.34	5.91	5.04	8.32	6.91	5.14	4.50	3.82	4.54	9.08	3.81
16	4.61	4.31	5.67	5.31	7.12	6.30	5.00	4.39	3.78	4.23	6.36	3.84
17	4.52	4.28	5.43	5.18	6.19	5.86	4.88	4.29	3.75	4.07	7.30	3.99
18	4.39	4.24	5.18	5.00	6.05	5.84	4.81	4.21	3.72	3.97	6.82	4.24
19	4.28	4.23	4.98	4.94	5.90	5.83	4.75	4.17	3.73	3.90	5.66	4.15
20	4.26	4.22	4.98	4.94	6.45	5.57	4.70	4.12	3.80	3.84	5.08	4.06
21	4.31	4.20	5.27	4.87	6.22	5.42	4.63	4.06	3.93	3.90	4.72	4.16
22	4.34	4.20	4.96	4.78	6.56	5.54	4.57	4.00	3.93	4.12	4.48	4.14
23	4.27	4.19	4.96	4.68	9.72	6.10	4.54	3.95	3.98	4.19	4.33	4.02
24	4.29	4.17	4.86	4.65	10.76	5.88	4.80	3.95	3.94	4.09	5.94	3.93
25	5.78	4.15	4.77	4.73	8.25	5.65	4.84	3.96	5.39	4.31	6.25	3.88
26	8.56	4.16	4.97	4.74	6.78	5.46	4.73	3.99	8.46	5.97	5.18	3.84
27	6.32	4.22	5.28	4.74	6.30	5.31	4.70	3.93	5.93	5.03	4.74	3.83
28	5.59	4.29	5.37	4.70	5.91	5.31	4.69	3.88	5.43	4.46	4.47	3.89
29	5.22	4.66	5.57	4.64	---	5.25	5.06	3.83	10.10	4.21	4.31	3.91
30	5.13	5.08	5.33	4.57	---	5.08	5.01	3.79	6.77	4.13	4.33	3.87
31	8.52	---	5.41	4.55	---	5.00	---	3.81	---	4.08	4.80	---
MEAN	---	4.67	5.66	4.83	6.98	6.30	5.86	4.62	4.54	4.53	5.36	4.00
MAX	---	7.09	10.21	5.31	15.02	13.05	17.36	7.93	10.10	6.61	11.40	4.38
MIN	---	4.15	4.60	4.55	4.53	5.00	4.54	3.79	3.67	3.84	3.92	3.80

LITTLE KANAWHA RIVER BASIN

03154250 TANNER RUN AT SPENCER, WV

LOCATION.--Lat 38°48'11", long 81°21'58", Roane County, Hydrologic Unit 05030203, on left bank 300 ft (91 m) upstream from Miletree Run, and 0.8 mi (1.3 km) west of Spencer.

DRAINAGE AREA.--2.82 mi² (7.30 km²).

PERIOD OF RECORD.--April 1969 to September 1977 (discontinued).

GAGE.--Water-stage and rainfall recorders. Concrete control since May 26, 1970. Altitude of gage is 740 ft (226 m), from topographic map.

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

Rainfall records collected at site since April 1969 are contained in files of U.S. Geological Survey with only monthly totals published in this report.

AVERAGE DISCHARGE.--8 years, 3.96 ft³/s (0.112 m³/s), 19.07 in/yr (484 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,080 ft³/s (30.6 m³/s) Aug. 17, 1972, gage height, 5.96 ft (1.817 m), from rating curve extended above 260 ft³/s (7.36 m³/s) on basis of step-backwater method; no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 180 ft³/s (5.1 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)
Oct. 9	1000	308	8.72	4.29	1.308	Apr. 4	2000	358	10.1	4.49	1.369
Mar. 13	0200	265	7.50	4.12	1.256	Aug. 14	0830	*478	13.5	4.88	1.487

No flow part of or all of each day June 1, 2, 4-8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	20	.78	.70	.37	1.5	1.2	.94	.01	2.9	.25	.10
2	6.5	9.5	.90	.65	.34	1.4	1.9	.75	.01	1.2	.06	.08
3	2.4	4.2	.70	.60	.35	1.4	3.6	2.1	.01	.60	.05	.08
4	1.4	1.8	.66	.62	.37	35	54	1.8	.00	.34	.04	.07
5	.72	1.4	1.2	.66	.41	12	26	1.6	.01	.27	.04	.35
6	.55	1.1	5.6	.70	.46	5.0	8.5	9.3	.01	.17	.03	.21
7	3.4	.91	36	.80	.41	3.2	6.8	28	.00	.12	.04	.13
8	6.8	.91	10	.80	.37	2.2	4.2	7.8	.01	.08	1.9	.09
9	104	.72	5.3	.70	.35	1.9	3.0	3.0	3.5	.91	.38	.07
10	13	.72	3.4	.80	.41	1.6	2.4	1.8	.17	.51	5.0	.07
11	4.4	.63	3.4	.72	.70	1.4	1.6	1.1	.08	.19	1.1	.05
12	2.4	.55	6.5	.68	5.0	2.2	1.5	.81	.07	1.2	4.0	.05
13	1.6	.55	4.4	.64	15	45	1.4	.55	.06	.60	2.8	.05
14	1.1	.55	3.0	.70	10	7.8	1.4	.47	.05	.27	48	.06
15	.81	.55	2.4	.80	7.1	4.4	1.2	.40	.05	.12	3.8	.08
16	.72	.47	2.1	.75	4.7	3.0	1.2	.26	.05	.08	1.2	.22
17	.55	.40	1.6	.70	3.7	2.2	1.1	.22	.04	.07	.91	.34
18	.34	.40	1.2	.66	3.2	3.4	.91	.19	.04	.06	.55	.08
19	.30	.40	1.0	.65	3.0	2.4	.72	.13	.08	.05	.34	.08
20	1.0	.40	1.5	.72	2.7	2.0	.63	.11	.08	.05	.22	.13
21	1.0	.34	1.3	.65	2.3	1.5	.55	.07	.10	.21	.19	.06
22	.47	.34	1.2	.63	2.5	3.6	.47	.06	.06	.17	.16	.05
23	.34	.30	1.1	.64	15	3.0	1.4	.09	.07	.06	.11	.05
24	3.2	.30	1.0	.74	15	2.2	3.4	.11	2.2	.06	4.0	.04
25	15	.30	.90	.72	6.5	1.9	1.3	.07	7.1	1.9	1.0	.04
26	12	.30	1.1	.67	3.8	1.5	1.0	.06	18	.43	.44	.06
27	4.0	.47	1.3	.56	3.0	1.4	.84	.04	7.8	.07	.27	.05
28	2.2	.63	1.5	.60	1.9	1.9	2.1	.04	13	.07	.18	.04
29	1.6	1.5	1.7	.56	---	1.5	2.2	.02	20	.13	.13	.04
30	5.6	1.0	1.4	.47	---	1.4	1.2	.02	2.6	.09	.25	.04
31	53	---	.90	.40	---	1.2	---	.02	---	.06	.17	---
TOTAL	280.40	51.64	105.04	20.69	108.94	160.1	137.72	61.93	75.26	13.07	77.61	2.86
MEAN	9.05	1.72	3.39	.67	3.89	5.16	4.59	2.00	2.51	.42	2.50	.095
MAX	104	20	36	.80	15	45	54	28	20	2.9	48	.35
MIN	.30	.30	.66	.40	.34	1.2	.47	.02	.00	.05	.03	.04
CFSM	3.21	.61	1.20	.24	1.38	1.83	1.63	.71	.89	.15	.89	.03
IN.†	3.70	.68	1.39	.27	1.44	2.11	1.82	.82	.99	.17	1.02	.04
IN.‡	---	---	1.56	.71	.68	2.97	---	2.11	6.17	3.28	6.34	1.44
CAL YR 1976	TOTAL	1382.27	MEAN 3.78	MAX 128	MIN .05	CFSM 1.34	IN†18.23					
WTR YR 1977	TOTAL	1095.26	MEAN 3.00	MAX 104	MIN .00	CFSM 1.06	IN†14.44					

† Runoff.

‡ Rainfall.

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 current year.

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 January, February, and March 1-8, which are poor.

AVERAGE DISCHARGE.--26 years, 94.6 ft³/s (2.679 m³/s), 16.18 in/yr (411 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 (105 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)	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)
Oct. 9	1800	*4180	118	12.80	3.901	Apr. 5	0800	2780	78.7	10.26	3.127

Minimum discharge, 0.46 ft³/s (0.013 m³/s) June 8, gage height, 1.99 ft (0.607 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	510	267	22	20	11	52	27	38	6.0	100	2.1	4.8
2	217	131	19	18	10	43	27	29	2.3	82	2.0	4.2
3	65	90	18	17	10	38	104	25	1.2	32	2.0	3.8
4	32	66	17	17	11	1300	312	38	.82	19	1.6	2.6
5	20	44	18	19	12	510	1730	31	.66	15	1.1	2.3
6	14	36	44	20	12	180	312	29	.82	12	.98	2.1
7	222	25	1290	20	11	109	250	504	.58	9.4	7.5	3.3
8	616	25	396	20	10	72	154	242	.46	7.2	7.5	3.1
9	2840	23	138	19	10	59	94	90	53	5.4	28	3.1
10	1100	23	88	20	11	47	70	52	36	8.1	18	2.6
11	180	21	84	18	20	40	53	37	11	20	17	1.9
12	92	19	133	17	150	38	41	28	6.0	11	49	1.3
13	59	17	124	16	590	1240	36	23	3.5	9.1	90	1.1
14	41	15	72	17	300	267	32	19	2.4	7.5	775	.98
15	31	15	63	20	200	136	30	17	1.9	5.1	210	.98
16	28	14	52	19	130	90	25	14	1.4	3.5	64	7.2
17	23	13	43	18	100	61	23	11	1.2	2.6	94	109
18	19	13	33	17	80	102	20	9.7	.90	2.0	66	18
19	16	13	27	16	70	94	19	8.4	.98	1.4	26	36
20	17	12	37	17	60	66	17	6.9	2.1	1.1	16	52
21	41	11	61	17	54	50	16	5.7	4.2	1.2	11	16
22	32	11	33	16	60	96	15	4.2	2.7	5.1	8.4	9.1
23	23	11	30	16	400	104	16	3.3	2.9	9.4	6.6	5.7
24	70	10	25	16	500	72	136	27	2.4	4.0	44	4.2
25	863	10	22	17	258	52	61	10	5.7	15	76	3.3
26	807	11	32	16	138	43	38	6.6	1270	66	23	3.3
27	166	12	40	15	109	38	31	4.4	124	16	13	4.0
28	86	13	40	16	68	47	31	2.9	765	7.8	9.1	11
29	57	27	49	14	---	46	122	2.1	614	4.0	6.6	6.0
30	70	34	35	13	---	37	57	1.6	163	2.9	8.4	3.5
31	989	---	25	12	---	33	---	23	---	2.3	7.2	---
TOTAL	9346	1036	3110	533	3395	5162	3899	1342.8	3087.12	487.1	1691.08	326.46
MEAN	301	34.5	100	17.2	121	167	130	43.3	103	15.7	54.6	10.9
MAX	2840	267	1290	20	590	1300	1730	504	1270	100	775	109
MIN	14	10	17	12	10	33	15	1.6	.46	1.1	.98	.98
CFSM	3.79	.44	1.26	.22	1.52	2.10	1.64	.55	1.30	.20	.69	.14
IN.	4.38	.49	1.46	.25	1.59	2.42	1.83	.63	1.45	.23	.79	.15
CAL YR 1976 TOTAL	39511.90		MEAN	108	MAX	2840	MIN	1.6	CFSM	1.36	IN	18.51
WTR YR 1977 TOTAL	33415.56		MEAN	91.5	MAX	2840	MIN	.46	CFSM	1.15	IN	15.66

LITTLE KANAWHA RIVER BASIN

03155000 LITTLE KANAWHA RIVER AT PALESTINE, WV

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).

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) above mean sea level. 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) above mean sea level.

REMARKS.--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 123.9 (199.4 km). Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--38 years, 2,083 ft³/s (58.99 m³/s), 18.67 in/yr (474 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 (0.017 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 floodmarks at old lock 4, discharge about 53,000 ft³/s (1,500 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 29,500 ft³/s (835 m³/s) Oct. 10, gage height, 28.28 ft (8.620 m); minimum, 60 ft³/s (1.70 m³/s) June 5, 6, gage height, 13.69 ft (4.173 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2860	6150	1210	935	413	2200	957	1190	104	1480	223	340
2	5770	4300	1020	790	391	1730	850	902	101	1350	194	391
3	2920	2660	913	780	375	1410	1020	756	83	1020	223	320
4	1590	1980	800	748	365	4540	1770	724	68	692	248	235
5	1000	1550	716	708	380	11100	14400	935	62	490	257	345
6	740	1200	652	692	420	8480	18000	724	62	355	187	435
7	756	924	5440	668	415	4170	8390	2270	83	266	143	219
8	2350	772	11800	550	400	2660	5930	6100	110	210	125	223
9	13300	676	8020	544	390	1950	4590	4650	146	175	136	248
10	28100	595	3880	571	496	1580	3120	2320	257	150	172	190
11	18300	544	2440	520	1060	1330	2090	1580	310	198	244	150
12	6280	496	2110	508	4480	1140	1650	1140	325	219	578	125
13	3520	451	2800	550	9860	7670	1350	870	295	258	748	113
14	2840	413	3040	628	15100	12800	1120	716	235	310	3220	104
15	1970	380	2430	606	11400	6830	976	613	194	325	7340	101
16	1130	355	1950	644	7340	3790	860	520	164	223	4010	98
17	724	325	1590	660	4520	2440	764	440	132	157	1880	175
18	578	300	1310	644	3020	2160	684	370	113	122	1520	202
19	484	285	1030	628	2720	2140	660	325	107	98	1140	153
20	418	271	880	620	2550	2040	585	285	98	80	764	295
21	451	262	924	628	2430	1750	620	248	98	77	564	280
22	418	257	880	613	2350	1630	636	231	104	92	418	214
23	375	253	820	600	4670	1950	544	223	122	77	320	239
24	479	248	564	570	14400	2550	880	244	168	80	538	290
25	1840	244	585	520	10300	2170	780	179	262	262	1050	253
26	6390	239	740	496	6810	1800	790	143	4040	599	946	210
27	5490	235	748	502	4500	1550	772	125	1920	1200	764	183
28	2920	239	957	500	3120	1380	708	110	2110	870	550	172
29	1850	295	1260	468	---	1310	935	98	1820	520	413	168
30	1360	692	1260	427	---	1260	1060	89	2530	370	335	153
31	4720	---	1240	440	---	1090	---	83	---	271	320	---
TOTAL	121933	27595	64009	18758	114675	100600	77491	29203	16223	12596	29570	6624
MEAN	3533	920	2065	605	4096	3245	2583	942	541	406	954	221
MAX	28100	6150	11800	935	15100	12800	18000	6100	4040	1480	7340	435
MIN	375	235	564	427	365	1090	544	83	62	77	125	98
CFSM	2.60	.61	1.36	.40	2.70	2.14	1.71	.62	.36	.27	.63	.15
IN.	2.59	.68	1.57	.46	2.82	2.47	1.90	.72	.40	.31	.73	.16
CAL YR 1976	TOTAL	701706	MEAN	1917	MAX	28100	MIN	51	CFSM	1.27	IN	17.23
WTR YR 1977	TOTAL	619277	MEAN	1697	MAX	28100	MIN	62	CFSM	1.12	IN	15.21

LITTLE KANAWHA RIVER BASIN

119

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 Cisco."

REVISED RECORDS.--WSP 893: 1939. WSP 1113: 1947.

GAGE.--Water-stage recorder. Datum of gage is 607.92 ft (185.294 m) above mean sea level, 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 January and February, which are poor.

AVERAGE DISCHARGE.--42 years, 457 ft³/s (12.94 m³/s), 17.25 in/yr (438 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, 16,700 ft³/s (473 m³/s) Oct. 10, gage height, 25.33 ft (7.721 m) no other peak above base of 9,500 ft³/s (269 m³/s); minimum, 5.5 ft³/s (0.16 m³/s) June 6,7, gage height, 2.10 ft (0.640 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1810	2300	162	145	65	446	310	363	20	186	455	132
2	1630	999	153	125	62	372	277	277	15	150	542	76
3	450	619	143	105	64	319	542	266	13	96	219	49
4	246	465	140	98	67	2530	828	575	11	62	117	34
5	159	363	140	105	71	4430	4400	724	9.1	45	70	24
6	113	289	162	110	69	1460	2340	608	7.1	33	44	23
7	223	243	3060	108	68	812	1420	2750	5.8	23	34	54
8	1570	212	3930	110	65	586	1090	2500	5.8	16	42	44
9	7790	186	1210	113	62	465	696	949	42	12	68	34
10	12500	168	608	113	64	399	505	531	70	9.7	60	23
11	1730	159	475	103	90	350	408	385	85	8.3	87	17
12	653	147	485	96	890	323	331	298	74	9.1	293	12
13	399	135	614	87	2700	5100	274	240	54	243	625	9.1
14	293	120	451	82	1800	3020	243	199	36	281	1070	7.7
15	236	110	363	87	1100	1080	215	171	24	156	1210	7.1
16	219	102	323	100	800	680	193	145	20	82	408	6.4
17	222	98	281	100	650	490	168	122	14	51	314	6.4
18	196	93	240	93	520	872	150	105	11	30	436	6.4
19	159	89	193	87	450	1650	153	96	9.7	19	289	6.1
20	137	85	196	80	370	828	174	122	9.1	13	168	14
21	206	82	258	76	350	603	202	100	8.6	30	110	19
22	285	82	247	76	400	581	168	93	8.3	117	76	16
23	255	80	251	74	2070	982	142	74	8.0	100	54	16
24	319	78	216	74	3540	696	817	70	8.0	47	258	16
25	1680	76	186	70	2800	515	751	56	89	66	636	13
26	3100	74	190	71	1270	417	412	49	349	510	281	11
27	1610	76	196	73	834	354	314	42	102	233	147	13
28	685	82	215	76	597	349	270	37	285	137	93	40
29	451	110	212	74	---	431	485	31	168	82	64	51
30	376	153	180	71	---	403	515	27	117	54	64	49
31	2020	---	165	68	---	354	---	23	---	36	177	---
TOTAL	41722	7875	15645	2850	21888	31897	18793	12028	1678.5	2937.1	8511	829.2
MEAN	1346	263	505	91.9	782	1029	626	388	56.0	94.7	275	27.6
MAX	12500	2300	3930	145	3540	5100	4400	2750	349	510	1210	132
MIN	113	74	140	68	62	319	142	23	5.8	8.3	34	6.1
CFSM	2.98	.58	1.12	.20	1.73	2.28	1.39	.86	.12	.21	.61	.06
IN.	3.43	.65	1.29	.23	1.80	2.63	1.55	.99	.14	.24	.70	.07
CAL YR 1976 TOTAL	207874.4			MEAN 568	MAX 12500	MIN 8.0	CFSM 1.26	IN 17.11				
WTR YR 1977 TOTAL	166653.8			MEAN 457	MAX 12500	MIN 5.8	CFSM 1.01	IN 13.72				

OHIO RIVER MAIN STEM

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) above mean sea level, Ohio River datum. Tailwater reference gage 0.5 mi (0.8 km) downstream at datum 22.00 ft (6.706 m) lower.

REMARKS.--Records good. 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, 334,000 ft³/s (9,460 m³/s) Feb. 26, 1975; minimum daily, 5,100 ft³/s (144 m³/s) Sept. 7, 8, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 333,000 ft³/s (9,430 m³/s) Apr. 6; minimum daily, 6,120 ft³/s (173 m³/s) June 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24800	107000	29500	16000	18000	141000	87000	59000	8930	19300	25500	15700
2	35900	106000	26800	16200	12200	137000	93900	54000	11600	25700	27500	16000
3	32800	86000	30500	16200	10600	116000	152000	46500	11600	20500	22200	28900
4	24600	75000	22500	12000	10600	125000	248000	46900	6120	12800	22700	18700
5	22700	55000	18800	21500	11300	153000	329000	66300	9300	14300	23000	12400
6	20600	52000	18900	21500	11000	153000	333000	82000	13800	19000	15200	14800
7	20100	47000	97000	17500	13100	141000	251000	100000	7060	20600	32500	10900
8	25500	37000	140000	19100	13000	118000	171000	108000	16400	38400	51000	11300
9	65900	44000	110000	21000	10800	100000	158000	90500	19600	32200	56400	13300
10	137000	38000	74000	16000	12500	169000	95100	143000	69700	21500	28000	12400
11	147000	37000	63500	16000	12700	89500	128000	58400	19600	25500	48200	10100
12	90000	28000	54100	13800	24500	87600	117000	45500	9700	19900	47300	8850
13	63600	24500	48500	12000	57900	140000	105000	39400	14400	26800	46400	10200
14	58000	30500	61500	12700	79100	169000	97500	31100	12600	45000	52600	34600
15	52400	24000	59000	12000	80400	172000	72300	26400	12600	51000	66400	40700
16	51100	21800	44200	12900	65200	135000	59700	23600	10200	40600	63500	34100
17	48000	21700	43000	10900	60600	119000	45500	24800	10300	32500	56700	32800
18	38100	18200	41000	15900	52600	125000	31700	19900	18800	23400	66800	41900
19	32500	24500	37000	13800	45300	187000	44900	28000	24100	25000	54400	48900
20	23500	22500	30100	12600	40300	178000	34900	26100	14900	28700	37600	53700
21	28500	15000	33500	13700	31900	132000	35300	23200	11200	60000	31100	61700
22	26800	16000	42500	13700	34900	119000	33000	18100	12300	67300	28200	59000
23	39700	17200	37000	11900	55200	129000	33600	18100	12200	64000	27000	53100
24	33200	23000	30000	10900	107000	137000	35400	15200	11100	66000	33700	42100
25	44300	15000	28100	10800	183000	127000	56000	15900	11200	59500	30600	43600
26	69500	20500	27900	10800	215000	115000	60000	24000	30900	74900	25000	55600
27	80600	27000	27700	15500	201000	98400	59000	11800	19500	58000	23000	59900
28	71500	18800	31000	15500	162000	87300	54000	11100	23600	46900	19900	60000
29	62800	23500	34000	11000	---	99600	60000	13200	23400	34800	18800	58700
30	54600	30500	31800	11000	---	100000	69000	8800	21500	27800	18900	50200
31	74400	---	19500	13400	---	93000	---	8600	---	16700	18600	---
TOTAL	1608800	1110200	1392900	447800	1631700	3918500	3198100	1214100	450010	1125100	1143100	1014150
MEAN	51900	37010	44930	14450	58280	126400	106600	39160	15000	36290	36870	33810
MAX	147000	107000	140000	21500	215000	187000	333000	108000	30900	74900	66800	61700
MIN	20100	15000	18800	10800	10600	87300	31700	8600	6120	12800	15200	8850

CAL YR 1976 TOTAL 18881770 MEAN 51590 MAX 301000 MIN 5100 CFSM 1.31 IN 17.83
WTR YR 1977 TOTAL 18254460 MEAN 50010 MAX 333000 MIN 6120 CFSM 1.27 IN 17.24

KANAWHA RIVER BASIN

121

03169000 CLAYTOR LAKE NEAR RADFORD, VA

LOCATION.--Lat 37°04'28", long 80°35'05", Pulaski County, Hydrologic Unit 05050001, at Claytor Dam on New River, 0.5 mi (0.8 km) upstream from Little River, and 5.5 mi (8.8 km) upstream from Radford.

DRAINAGE AREA.--2,382 mi² (6,169 km²).

PERIOD OF RECORD.--May 1939 to current year (monthend contents only).

GAGE.--Water-stage recorder. Datum of gage is at approximately mean sea level (levels by Appalachian Power Co.). Prior to Sept. 11, 1943, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by gravity overflow concrete dam. Spillway with crest at elevation 1,818.5 ft (554.28 m) is equipped with 9 lift gates 30 ft (9.1 m) high by 50 ft (15.2 m) wide. Dam completed and storage began May 22, 1939; water in reservoir reached minimum pool elevation in January 1940. Total level-pool capacity at elevation 1,847.0 ft (562.97 m), 1.5 ft (0.46 m) below top of gates, is 230,100 acre-ft (284 hm³) of which about 100,000 acre-ft (123 hm³) is controlled storage above elevation 1,820.0 ft (554.74 m), minimum pool. Reservoir is used for power.

COOPERATION.--Records were furnished by Appalachian Power Co.

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

Date	Elevation (feet)	Contents (acre-feet)	Change in Contents (acre-feet) (equivalent in cfs)	
Sept. 30.....	1844.96	221100	-	-
Oct. 31.....	1844.40	218700	-2400	-59
Nov. 30.....	1840.30	201100	-17600	-295
Dec. 31.....	1844.89	220800	+19700	+320
CAL YR 1976	-	-	+900	+1
Jan. 31.....	1845.37	222800	+2000	+33
Feb. 28.....	1845.38	222900	+100	+1
Mar. 31.....	1844.30	218200	-4700	-75
Apr. 30.....	1844.70	219900	+1700	+29
May 31.....	1845.02	221300	+1400	+22
June 30.....	1844.90	220800	-500	-9
July 31.....	1845.30	222500	+1700	+28
Aug. 31.....	1845.50	223400	+900	+14
Sept. 30.....	1843.28	213900	-9500	-160
WTR YR 1977	-	-	-7200	-10

KANAWHA RIVER BASIN

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) above mean sea level (Corps of Engineers bench mark).

REMARKS.--Records good except those for the period Dec. 21 to Feb. 21, which are poor.

AVERAGE DISCHARGE.--27 years, 464 ft³/s (13.14 m³/s), 17.36 in/yr (441 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)	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)
Oct. 9	1400	5550	157	9.78	2.981	Apr. 5	0500	*19300	547	15.82	4.822
Feb. 24	2200	5630	159	9.83	2.996						

Minimum discharge, 45 ft³/s (1.27 m³/s) July 21, gage height, 2.12 ft (0.646 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	548	676	316	230	100	995	294	598	504	244	101	80
2	567	545	344	210	100	763	266	640	224	193	79	84
3	349	456	288	200	100	632	433	751	142	157	70	90
4	213	388	243	190	100	582	8670	919	111	131	67	92
5	154	323	222	180	95	625	15900	925	95	115	109	174
6	121	271	202	170	90	558	6730	1660	93	103	93	148
7	118	240	1470	160	90	498	2770	1060	152	94	89	92
8	1310	219	2420	150	90	437	1740	754	154	87	80	111
9	4260	195	1320	140	90	384	1160	568	137	82	79	142
10	4000	194	807	130	90	348	889	451	171	82	77	255
11	1410	195	637	120	100	321	729	371	134	143	239	145
12	687	189	620	120	180	305	607	314	107	181	170	100
13	445	186	845	110	350	993	525	275	95	127	242	81
14	328	169	853	110	600	1430	469	247	164	104	541	70
15	258	168	712	110	800	933	416	225	380	105	312	69
16	213	181	620	100	700	703	375	202	230	79	217	67
17	201	205	530	100	600	565	334	184	248	66	173	124
18	210	233	434	95	538	532	306	173	575	59	357	193
19	180	257	358	90	524	691	289	169	307	55	275	152
20	164	268	343	90	500	792	311	156	224	50	164	143
21	187	257	320	95	500	801	281	142	173	47	122	130
22	192	248	290	95	618	803	255	130	137	51	108	98
23	172	219	270	100	1220	817	241	123	331	76	110	83
24	168	194	250	100	3210	714	284	119	853	70	117	71
25	687	185	230	100	4580	611	295	122	1090	78	184	63
26	3080	185	220	100	2420	523	259	131	855	130	158	68
27	1800	197	200	100	1790	453	236	126	568	120	115	87
28	912	212	240	95	1390	407	220	112	382	87	93	86
29	603	295	260	95	---	372	1230	104	400	69	80	70
30	476	376	270	100	---	350	881	98	335	101	71	61
31	658	---	250	100	---	346	---	136	---	124	65	---
TOTAL	24671	7926	16384	3885	21565	19284	47395	11985	9371	3210	4757	3229
MEAN	796	264	529	125	770	622	1580	387	312	104	153	108
MAX	4260	676	2420	230	4580	1430	15900	1660	1090	244	541	255
MIN	118	168	200	90	90	305	220	98	93	47	65	61
CFSM	2.19	.73	1.46	.34	2.12	1.71	4.35	1.07	.86	.29	.42	.30
IN.	2.53	.81	1.68	.40	2.21	1.98	4.86	1.23	.96	.33	.49	.33

CAL YR 1976	TOTAL	152890	MEAN 418	MAX 6800	MIN 24	CFSM 1.15	IN 15.67
WTR YR 1977	TOTAL	173662	MEAN 476	MAX 15900	MIN 47	CFSM 1.31	IN 17.80

KANAWHA RIVER BASIN

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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 at mean sea level.

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, 351,200 acre-ft (433 hm³) Apr. 7, elevation, 1,483.82 ft (452.268 m); minimum, 28,260 acre-ft (34.8 hm³) Mar. 30, elevation, 1,404.53 ft (428.101 m).

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

Date	Elevation (feet)	Contents (acre-feet)	Change in Contents (acre-feet) (equivalent in cfs)	
Sept. 30.....	1410.53	39330	-	-
Oct. 31.....	1410.66	39570	+240	+4
Nov. 30.....	1406.31	31510	-8060	-135
Dec. 31.....	1406.88	32560	+1050	+17
CAL YR 1976	-	-	-1450	-2
Jan. 31.....	1406.31	31510	-1050	-17
Feb. 28.....	1406.15	31220	-290	-5
Mar. 31.....	1406.89	32580	+1360	+22
Apr. 30.....	1410.61	39480	+6900	+116
May 31.....	1410.97	40160	+680	+11
June 30.....	1410.73	39710	-450	-8
July 31.....	1410.06	38460	-1250	-20
Aug. 31.....	1410.08	38490	+30	0
Sept. 30.....	1410.83	39900	+1410	+24
WTR YR 1977	-	-	+570	+1

KANAWHA RIVER BASIN

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) above mean sea level (Corps of Engineers bench mark). 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.--48 years, 5,496 ft³/s (155.6 m³/s), 16.21 in/yr (412 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, 49,500 ft³/s (1,400 m³/s) Apr. 9, gage height, 13.49 ft (4.112 m); minimum discharge, 1,390 ft³/s (39.4 m³/s) Sept. 6, 7, 19, 20, gage height, 7.52 ft (2.292 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5810	7040	6500	4150	2550	10100	6440	6980	5150	4060	1470	1470
2	6450	7280	4900	2800	2800	8960	6620	4750	3840	3460	1440	1500
3	4530	6680	5200	2400	3300	8240	5550	5600	3580	2550	1660	2240
4	2670	6320	4750	4060	4240	7400	18000	5960	3540	2170	1660	2480
5	3240	5840	3930	4650	2840	7700	17300	6740	2870	3180	1440	2140
6	2720	5450	3580	4900	2660	6380	15400	8480	2620	3840	1440	1570
7	2450	4550	9800	5500	2760	9320	41400	8600	2590	3260	1440	1420
8	12800	4190	21000	5660	3220	8300	46000	7160	3300	2760	1440	4100
9	25100	5200	17900	3970	3540	8180	48200	5450	3880	2380	1440	6380
10	18800	5100	12600	2550	3460	7580	44800	6980	3260	1980	1940	6500
11	41500	3750	8840	4800	4150	5720	38200	5600	4020	2240	3100	5500
12	37800	5250	7880	3580	4750	4950	26400	5200	2730	3220	2070	3300
13	23800	5200	7820	3880	4800	9560	8900	4150	1770	3260	2690	2520
14	8840	4190	8360	4510	5840	24000	7280	3020	2660	3620	3140	2550
15	7280	3790	6380	4240	7220	26300	7580	2730	3580	4460	2940	2240
16	5720	4150	7040	3420	8240	17700	7220	3220	2980	4100	3260	1980
17	3540	4330	7100	2980	8060	13700	5350	4550	3220	2200	4020	2520
18	2870	5350	7340	4380	7100	12400	4950	3420	4150	1440	3620	2380
19	4950	4750	4750	4700	5550	7220	6920	3300	3700	2100	3790	1660
20	7580	3970	3840	4200	3970	8960	5780	3380	4420	2800	3660	2140
21	8120	3750	6740	4100	4150	8480	4500	3340	3790	1980	2940	2550
22	5780	4420	5150	3380	4700	11200	5550	2690	3700	1500	2070	2550
23	4750	5450	4240	2690	4750	10100	5900	3140	3750	1880	1910	2830
24	3340	3790	5100	2340	12500	7820	5660	3380	5300	1910	2200	2940
25	3790	4550	3300	3140	21900	7220	5780	4020	6260	1570	2200	1940
26	20300	2830	2520	3660	21800	6500	6260	4020	6260	1440	2200	1440
27	20100	3700	3220	3420	18100	7220	6680	4510	3750	1770	2200	1910
28	12300	3340	4280	4200	12000	4700	6020	3840	3380	1940	1740	2200
29	8420	4020	6140	4020	---	6140	5400	2520	4420	1660	1470	2760
30	8000	7220	6080	2240	---	6140	6560	2170	4190	1680	1440	3020
31	8000	---	4600	1740	---	6140	---	3140	---	1570	1470	---
TOTAL	331390	145450	210880	116340	190950	294330	427000	142040	112660	77630	70650	80630
MEAN	10690	4848	6803	3753	6820	9495	14230	4582	3755	2504	2279	2688
MAX	41500	7280	21080	5660	21900	26300	48200	8600	6260	4460	4020	6500
MIN	2450	2830	2520	1740	2550	4700	4900	2170	1770	1440	1440	1420
CAL YR 1976 TOTAL		2207550	MEAN 6032	MAX 41500	MIN 1310	MEAN† 6031	CFSM† 1.31	IN† 17.83				
WTR YR 1977 TOTAL		2199950	MEAN 6027	MAX 48200	MIN 1420	MEAN† 6018	CFSM† 1.31	IN† 17.78				

† Adjusted for change in contents in Claytor (Virginia) and Bluestone Lakes.

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) above mean sea level.

REMARKS.--Records good except those for the period Dec. 22 to Feb. 25, which are poor.

AVERAGE DISCHARGE.--34 years, 252 ft³/s (7.137 m³/s), 25.54 in/yr (649 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)	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)
Oct. 9	1500	*9160	259	8.06	2.457	Apr. 5	0600	5030	142	6.24	1.902
Mar. 13	1000	3240	91.8	5.34	1.628						

Minimum discharge, 22 ft³/s (0.62 m³/s) June 5, gage height, 0.88 ft (0.268 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	162	790	255	100	44	848	264	90	34	83	46	63
2	160	574	220	95	45	530	255	90	29	68	40	58
3	167	434	190	90	45	376	240	88	29	50	53	48
4	135	342	170	85	44	732	864	123	26	42	50	43
5	98	262	160	80	43	1410	3790	136	22	43	35	39
6	77	213	140	75	41	1090	1560	157	30	75	31	44
7	79	182	800	70	40	726	822	282	31	43	37	66
8	1340	167	950	65	39	510	636	372	25	39	42	54
9	6680	147	600	60	39	392	520	328	147	34	81	42
10	2430	167	450	55	40	364	445	267	201	160	48	36
11	886	162	390	55	45	376	352	222	108	273	43	31
12	510	152	370	55	70	485	288	182	87	162	38	26
13	350	133	426	50	130	2240	255	157	68	167	49	24
14	252	119	377	49	250	1370	234	150	68	127	204	24
15	198	136	346	47	320	750	207	127	75	96	249	30
16	165	124	282	45	280	520	180	108	54	75	150	34
17	150	111	231	43	250	420	162	94	46	57	134	32
18	135	125	185	42	230	420	155	85	40	47	157	29
19	115	122	156	41	210	460	145	81	37	39	108	29
20	249	142	157	39	200	445	127	72	43	34	89	134
21	700	138	126	40	190	384	134	60	98	36	70	63
22	556	140	120	41	190	636	115	45	60	48	60	46
23	398	128	110	43	500	780	108	40	53	36	53	37
24	354	123	110	44	1500	636	106	34	43	26	127	33
25	490	158	100	45	1600	490	102	36	61	237	165	35
26	938	144	95	45	1300	372	92	40	104	285	106	267
27	742	286	90	45	1710	306	100	37	66	138	91	175
28	495	457	100	44	1600	279	102	33	73	98	75	136
29	358	533	110	44	---	252	115	29	123	75	123	108
30	302	418	120	44	---	255	94	29	106	75	85	87
31	931	---	110	44	---	276	---	38	---	57	87	---
TOTAL	20622	7131	8046	1720	10995	19130	12569	3632	1987	2825	2726	1873
MEAN	665	238	260	55.5	393	617	419	117	66.2	91.1	87.9	62.4
MAX	6680	790	950	100	1710	2240	3790	372	201	285	249	267
MIN	77	111	90	39	39	252	92	29	22	26	31	24
CFSM	4.96	1.78	1.94	.41	2.93	4.60	3.13	.87	.49	.68	.66	.47
IN.	5.72	1.98	2.23	.48	3.05	5.31	3.49	1.01	.55	.78	.76	.52

CAL YR 1976 TOTAL 85904.0 MEAN 235 MAX 6680 MIN 5.0 CFSM 1.75 IN 23.85
WTR YR 1977 TOTAL 93256.0 MEAN 255 MAX 6680 MIN 22 CFSM 1.90 IN 25.89

KANAWHA RIVER BASIN

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03181200 INDIAN DRAFT NEAR MARLINTON, WV

LOCATION.--Lat 38°16'48", long 80°04'31", Pocahontas County, Hydrologic Unit 05050003, on left bank at highway bridge, and 4.2 mi (6.8 km) northeast of Marlinton.

DRAINAGE AREA.--3.06 mi² (7.93 km²).

PERIOD OF RECORD.--June 1968 to September 1977 (discontinued).

REVISED RECORDS.--WDR WV-72: 1971(P).

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 2,440 ft (744 m), from topographic map.

REMARKS.--Records good except those for the period Dec. 21 to Feb. 22, which are poor.

AVERAGE DISCHARGE.--9 years, 5.37 ft³/s (0.152 m³/s), 23.83 in/yr (605 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,350 ft³/s (38.2 m³/s) Oct. 8, 1976, gage height, 6.59 ft (2.009 m), from rating curve extended above 230 ft³/s (6.5 m³/s) on basis of theoretical weir formula; minimum daily, 0.02 ft³/s (0.001 m³/s) Sept. 30, 1968, Aug. 7, 8, 1970.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 80 ft³/s (2.3 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. 8	2130	*1,350	38.2	6.59	2.009	Mar. 12	2315	262	7.42	5.57	1.698
Feb. 24	1145	165	4.67	5.40	1.646	Apr. 5	0030	428	12.1	5.81	1.771

Minimum discharge, 0.08 ft³/s (0.002 m³/s) Jan. 23-25, Aug. 6-8, gage height, 4.04 ft (1.231 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.9	14	4.1	1.0	.30	7.9	3.7	1.0	.26	.45	.26	.66
2	4.3	9.1	3.9	.90	.30	5.6	3.5	1.0	.26	.31	.21	2.3
3	3.0	6.6	3.0	.80	.30	4.6	3.5	.93	.16	.26	.16	3.7
4	1.0	5.4	2.3	.80	.35	13	96	1.3	.16	.21	.16	1.4
5	1.0	4.1	2.0	.75	.30	13	156	1.5	.11	.16	.11	1.8
6	.07	3.2	1.8	.75	.30	8.7	23	2.2	.38	.26	.09	4.4
7	4.0	2.8	37	.70	.25	6.6	13	2.3	.26	.16	.08	6.9
8	230	2.5	14	.65	.25	5.1	9.4	2.5	.21	.59	.16	9.8
9	170	2.2	7.1	.60	.25	4.9	7.1	2.2	.72	.38	.21	4.9
10	23	3.2	5.6	.60	.30	4.4	6.4	1.8	.45	3.2	.11	3.0
11	8.7	3.7	4.9	.55	.30	4.1	5.4	1.5	.26	3.5	.11	1.8
12	5.1	3.2	5.4	.55	.35	14	4.9	1.3	.45	2.3	.11	1.3
13	3.0	2.8	6.4	.50	.40	55	4.1	1.1	.31	1.4	.79	1.0
14	2.3	2.5	5.4	.50	.40	13	3.9	1.0	1.7	.79	2.3	.93
15	1.0	2.5	4.6	.50	.45	7.9	3.5	.93	2.3	.59	1.3	.79
16	1.4	3.0	4.1	.50	.45	6.4	2.8	.79	.86	.45	.86	.66
17	1.4	3.0	3.5	.45	.40	5.1	2.5	.72	.59	.31	2.8	.66
18	1.5	3.5	2.8	.45	.50	6.1	2.0	.66	.52	.26	3.7	.59
19	1.3	3.5	2.3	.45	.60	5.4	2.0	.59	.38	.16	1.4	.52
20	7.9	3.5	2.2	.45	.90	6.1	2.3	.59	.59	.11	.86	1.0
21	1.0	3.2	2.0	.40	1.5	4.4	4.1	.52	1.7	.11	.66	.72
22	6.9	2.8	1.8	.40	2.1	16	3.0	.45	.79	.16	.52	.59
23	4.9	2.2	1.6	.40	13	19	2.2	.45	.66	.09	.45	.52
24	5.0	1.5	1.5	.40	75	13	2.0	.45	.52	.08	23	.52
25	17	1.5	1.4	.40	33	9.8	1.9	.45	.66	4.4	9.4	.93
26	21	2.3	1.4	.40	26	7.9	1.8	.45	1.0	2.5	3.9	9.8
27	9.4	9.1	1.3	.40	23	6.9	1.7	.38	.72	.86	2.3	5.6
28	6.1	7.5	1.3	.40	13	6.4	1.4	.31	.59	.52	1.5	3.2
29	4.9	6.6	1.2	.40	---	5.4	1.4	.31	.79	.45	1.1	1.8
30	6.4	5.4	1.2	.35	---	4.6	1.3	.31	.66	.72	1.0	1.4
31	4.3	---	1.1	.35	---	4.4	---	.31	---	.45	.93	---
TOTAL	618.37	127.2	139.2	16.75	194.25	294.7	375.8	30.30	19.02	26.19	60.54	73.19
MEAN	19.9	4.24	4.46	.54	6.94	9.51	12.5	.98	.63	.84	1.95	2.44
MAX	230	14	37	1.0	75	55	156	2.5	2.3	4.4	23	9.8
MIN	.07	1.9	1.1	.35	.25	4.1	1.3	.31	.11	.08	.08	.52
CFSM	6.50	1.35	1.46	.18	2.27	3.11	4.09	.32	.21	.28	.64	.80
IN.	7.51	1.55	1.68	.20	2.36	3.58	4.57	.37	.23	.32	.74	.89
CAL YR 1976 TOTAL	1841.09			MEAN 5.03	MAX 230	MIN .07	CFSM 1.64	IN 22.38				
WTR YR 1977 TOTAL	1974.51			MEAN 5.41	MAX 230	MIN .08	CFSM 1.77	IN 24.00				

KANAWHA RIVER BASIN

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, 25.5°C July 19, 20; minimum daily, -1.0°C several days during winter periods.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.5	4.5	-1.0	-1.0	0.5	0.5	13.0	13.5	20.0	21.0	22.0	23.5
2	15.5	4.5	0.0	0.0	0.5	1.0	12.0	14.5	19.0	20.5	22.0	23.5
3	14.5	5.5	-1.0	0.0	1.0	1.5	11.5	15.5	19.5	20.0	21.0	23.5
4	14.5	4.5	-1.0	0.0	1.0	2.0	10.0	15.5	18.5	21.0	20.5	22.0
5	15.5	4.5	0.0	0.5	0.0	3.5	7.0	15.5	18.5	22.0	21.0	21.0
6	15.5	5.5	0.0	0.5	-1.0	4.5	8.0	15.0	18.0	23.5	22.0	21.0
7	14.5	4.5	1.0	-1.0	-1.0	3.5	5.5	14.5	17.0	23.5	23.5	21.0
8	15.5	3.5	0.5	0.0	-1.0	3.5	6.0	15.0	15.5	23.5	23.5	20.0
9	15.5	2.0	0.5	0.0	-0.5	2.0	5.5	13.0	14.5	24.0	22.0	20.0
10	11.0	3.0	1.0	0.5	0.5	4.5	7.0	12.0	13.5	23.5	24.0	21.0
11	11.0	1.5	2.0	-1.0	0.0	4.5	9.0	11.0	14.5	23.0	23.5	15.5
12	10.0	1.5	3.0	0.0	0.0	4.5	10.0	11.5	16.5	23.5	23.5	16.5
13	11.0	1.0	1.0	-1.0	0.5	4.5	11.0	13.5	18.5	22.0	22.0	16.0
14	12.0	0.0	0.0	0.0	1.0	3.5	12.0	13.5	18.0	23.5	22.0	16.5
15	10.0	0.5	0.5	0.0	0.0	4.5	12.0	15.5	18.0	23.0	23.0	15.5
16	10.0	1.5	1.0	0.0	0.0	4.0	13.0	16.5	18.5	24.0	23.5	16.5
17	11.0	1.0	2.0	-1.0	0.0	4.5	13.5	17.0	20.0	24.5	23.0	16.5
18	5.0	2.0	2.0	0.0	0.0	3.5	13.5	18.0	21.0	25.0	22.0	18.5
19	8.0	2.0	2.0	0.0	0.0	3.5	13.0	19.0	20.5	25.5	22.0	18.0
20	9.0	2.0	1.5	0.0	0.5	4.5	13.0	20.0	21.5	25.5	21.0	18.0
21	8.0	1.5	0.0	0.0	0.0	4.5	13.5	19.0	20.5	24.5	19.5	18.5
22	7.0	1.0	0.0	0.0	0.5	3.5	13.5	18.0	19.5	24.5	19.0	18.0
23	5.5	0.5	1.0	-1.0	1.0	2.0	14.5	18.5	20.0	24.5	19.0	18.0
24	6.5	0.0	0.5	0.0	1.5	2.0	13.5	19.0	19.5	24.0	19.5	18.0
25	8.0	0.5	0.0	0.0	1.0	2.0	13.0	18.5	18.5	23.0	18.5	18.5
26	6.5	1.5	0.5	0.0	1.0	3.5	11.5	19.5	19.0	22.0	18.5	19.5
27	5.5	3.5	0.0	0.5	1.0	3.5	10.0	19.0	21.0	21.0	19.0	18.0
28	4.5	4.5	1.0	0.5	0.0	6.5	10.0	20.0	21.5	21.0	20.0	16.5
29	4.5	2.0	0.5	0.0	---	9.0	11.0	20.0	21.0	20.5	21.0	15.5
30	4.5	0.0	0.0	0.0	---	11.0	12.0	19.5	21.0	21.0	22.0	15.5
31	5.5	---	0.0	0.5	---	10.0	---	20.0	---	21.0	22.0	---
MONTH	10.0	2.5	0.5	0.0	0.5	4.0	11.0	16.5	19.0	23.0	21.5	18.5
YEAR	MAX	25.5	MIN	-1.0	MEAN	10.5						

KANAWHA RIVER BASIN

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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) above mean sea level. Prior to Feb. 27, 1939, nonrecording gage at same site and datum.

REMARKS.--Records good except those for the period Dec. 21 to Feb. 22, which are poor. Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--48 years, 864 ft³/s (24.47 m³/s), 21.73 in/yr (552 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)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 9	1500	*34800	986	Mar. 13	1300	15100	428
Feb. 24	2400	12900	365	Apr. 5	0800	25800	731
			16.54				11.29
			5.041				3.441
			10.52				14.48
			3.206				4.414

Minimum discharge, 64 ft³/s (1.81 m³/s) July 22, gage height, 1.82 ft (0.555 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	767	3460	958	322	140	2600	596	259	134	180	128	156
2	590	2100	910	302	140	1580	559	248	107	140	104	143
3	501	1490	724	290	140	1120	568	247	90	120	178	165
4	511	1170	550	270	140	1140	3570	268	80	100	112	120
5	370	919	511	260	130	3250	19600	435	73	90	102	127
6	77	732	455	240	130	2750	6560	555	82	90	89	212
7	58	614	2890	220	130	1960	3110	566	85	109	73	195
8	61.0	540	3810	200	120	1390	2090	744	82	109	70	263
9	27900	478	2040	190	120	1080	1550	749	104	107	74	216
10	9760	475	1370	180	120	941	1250	644	221	125	87	155
11	3230	503	1120	180	140	874	1070	536	273	808	110	124
12	1680	483	1060	170	230	919	870	455	189	546	96	103
13	1080	438	1220	160	420	9140	734	392	154	390	121	89
14	804	382	1060	160	800	5390	658	349	210	320	169	82
15	617	385	1030	150	1070	2680	603	382	261	231	395	79
16	506	418	906	140	900	1740	527	278	224	174	373	81
17	462	402	770	140	800	1240	468	240	168	138	292	97
18	440	409	626	130	700	1100	429	215	144	113	382	98
19	373	433	510	130	650	1280	397	201	128	94	320	102
20	633	443	485	130	630	1180	369	189	116	80	217	125
21	3180	473	450	130	600	1200	367	174	122	72	171	197
22	2160	471	420	130	600	2100	352	154	161	67	141	158
23	1370	425	390	140	911	3330	316	140	144	73	121	120
24	1120	356	360	140	5060	2340	324	129	122	81	417	106
25	1900	368	340	140	8280	1660	321	133	110	124	776	109
26	3990	408	310	140	4400	1250	293	142	140	565	418	269
27	2830	571	290	140	4520	999	281	123	180	431	283	438
28	1750	1110	330	140	4460	858	277	110	140	244	219	305
29	1210	1300	360	140	---	777	283	101	170	179	174	239
30	973	1240	400	140	---	664	302	100	240	164	191	200
31	4030	---	360	140	---	640	---	113	---	150	176	---
TOTAL	81392	22996	27015	5484	36481	59172	48694	9371	4454	6214	6579	4873
MEAN	2626	767	871	177	1303	1909	1623	302	148	200	212	162
MAX	27900	3460	3810	322	8280	9140	19600	749	273	808	776	438
MIN	258	356	290	130	120	640	277	100	73	67	70	79
CFSM	4.86	1.42	1.61	.33	2.41	3.54	3.01	.56	.27	.37	.39	.30
IN.	5.61	1.58	1.86	.38	2.51	4.08	3.35	.65	.31	.43	.45	.34
CAL YR 1976	TOTAL	306861	MEAN 838	MAX 27900	MIN 26	CFSM 1.55	IN 21.14					
WTR YR 1977	TOTAL	312725	MEAN 857	MAX 27900	MIN 67	CFSM 1.59	IN 21.54					

KANAWHA RIVER BASIN

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 the period Dec. 22 to Feb. 18, which are poor.

AVERAGE DISCHARGE.--6 years, 216 ft³/s (6.117 m³/s), 20.37 in/yr (517 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 at 3,200 ft³/s (91 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)
Oct. 9	1230	6020	170	13.70	4.176	Apr. 5	0545	*15100	428	17.74	5.407
Mar. 13	1145	5040	143	13.09	3.990						

Minimum discharge, 9.1 ft³/s (0.26 m³/s) July 17-19, 23-25, Aug. 8, 9, 10, 12, 13, gage height, 6.16 ft (1.878 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	349	170	75	33	337	101	51	20	19	11	12
2	60	255	140	70	32	239	93	48	19	17	11	11
3	54	202	130	70	31	188	103	47	18	14	10	11
4	48	169	110	65	29	178	3150	53	16	12	11	11
5	38	139	94	65	28	208	8580	78	16	13	9.7	10
6	32	117	84	60	26	202	1210	105	19	13	9.6	10
7	30	102	1120	55	24	190	576	103	18	13	9.6	14
8	438	93	870	50	23	168	404	92	19	12	9.4	41
9	3400	83	444	50	22	146	298	82	22	11	9.3	47
10	874	79	301	48	21	134	242	75	21	11	9.4	50
11	295	74	249	45	23	122	205	67	19	11	9.4	50
12	176	72	276	43	40	114	172	60	18	11	9.1	50
13	118	67	358	41	65	2530	148	55	17	13	11	47
14	92	58	289	40	120	977	136	51	17	11	14	45
15	76	59	241	39	200	471	124	47	19	11	14	43
16	65	59	207	37	170	323	112	44	16	10	13	43
17	61	60	175	36	130	234	99	38	14	9.6	16	47
18	60	67	144	35	120	225	92	36	13	9.1	28	46
19	51	71	121	34	110	240	87	35	12	9.3	20	46
20	148	77	118	33	107	259	83	33	14	9.6	16	55
21	591	80	115	33	86	280	80	31	20	9.4	13	47
22	320	83	100	34	78	652	73	28	16	9.4	12	43
23	195	76	95	35	119	755	70	26	14	9.3	11	40
24	156	66	80	36	1280	453	70	25	13	9.1	20	36
25	495	66	75	36	1360	318	72	25	17	11	45	37
26	1720	67	65	35	692	239	67	27	22	11	30	59
27	560	75	60	35	589	192	64	26	18	10	23	52
28	315	87	65	35	490	168	57	22	21	10	19	44
29	217	143	75	35	---	148	59	23	25	10	16	39
30	173	200	80	34	---	129	55	25	22	12	14	37
31	330	---	80	34	---	116	---	22	---	11	13	---
TOTAL	11243	3195	6531	1373	6048	10935	16682	1480	535	351.8	466.5	1123
MEAN	363	107	211	44.3	216	353	556	47.7	17.8	11.3	15.0	37.4
MAX	3400	349	1120	75	1360	2530	8580	105	25	19	45	59
MIN	30	58	60	33	21	114	55	22	12	9.1	9.1	10
CFSM	2.52	.74	1.47	.31	1.50	2.45	3.86	.33	.12	.08	.10	.26
IN.	2.90	.83	1.69	.35	1.56	2.82	4.31	.38	.14	.09	.12	.29

CAL YR 1976 TOTAL 54096.2 MEAN 148 MAX 3400 MIN 6.9 CFSM 1.03 IN 13.97
WTR YR 1977 TOTAL 59963.3 MEAN 164 MAX 8580 MIN 9.1 CFSM 1.14 IN 15.49

KANAWHA RIVER BASIN

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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).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1960, 1962, 1964-66, 1968-71. October 1971 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,681.01 ft (512.372 m) above mean sea level.

REMARKS.--Water-discharge records good except those for the periods Dec. 22 to Feb. 20 and May 28 to June 30, which are poor.

AVERAGE DISCHARGE.--6 years, 118 ft³/s (3.342 m³/s), 18.99 in/yr (482 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)	
Oct. 9	1200	2140	60.6	8.55	2.606	Mar. 13	0830	1270	36.0	7.46	2.274
Oct. 26	0115	2060	58.3	8.45	2.576	Apr. 5	0315	*7280	206	13.89	4.234

Minimum discharge, 4.8 ft³/s (0.14 m³/s) Sept. 7, gage height, 3.27 ft (0.997 m).

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	134	95	31	17	163	52	44	14	17	10	11
2	29	111	84	28	17	125	46	42	13	14	9.6	9.9
3	26	93	68	26	16	101	59	40	12	11	8.5	9.9
4	23	78	56	25	16	93	1700	40	12	10	7.6	8.9
5	19	65	47	23	16	92	3400	54	12	9.9	7.0	8.9
6	18	54	42	21	16	86	753	58	14	9.2	7.0	11
7	18	45	395	20	16	83	402	66	13	8.5	6.7	8.5
8	111	39	405	19	16	77	286	64	14	7.6	8.5	10
9	1200	36	223	18	15	69	220	58	15	6.7	9.9	13
10	300	35	152	17	15	63	176	54	14	100	8.5	12
11	135	32	129	16	16	59	146	49	13	68	8.2	9.9
12	02	33	153	15	20	56	127	43	13	85	9.2	9.6
13	01	30	211	15	30	845	112	39	11	52	25	9.2
14	44	27	163	14	55	492	104	34	12	42	45	9.2
15	35	26	141	14	40	258	93	31	13	28	38	8.9
16	28	27	119	13	75	170	81	28	11	21	26	8.9
17	27	28	99	13	65	123	72	25	10	14	21	11
18	25	32	82	13	60	117	68	20	9.0	12	52	9.6
19	23	36	68	12	55	111	64	49	7.5	10	37	32
20	22	43	64	12	50	160	62	37	9.0	8.5	25	277
21	232	47	61	13	46	193	58	25	14	8.9	19	87
22	143	47	50	15	42	255	54	19	11	8.9	15	45
23	94	41	45	16	52	302	50	16	9.5	8.9	13	28
24	75	36	40	17	404	216	49	15	8.0	8.9	27	21
25	310	35	35	17	528	157	54	18	13	14	46	17
26	1110	33	31	17	308	123	51	20	15	14	33	24
27	307	36	28	17	248	100	49	17	12	11	24	28
28	160	35	31	17	213	88	45	14	16	10	17	25
29	109	79	33	17	---	77	48	15	22	9.9	14	19
30	07	111	36	17	---	69	48	18	20	12	13	16
31	125	---	34	17	---	61	---	16	---	10	11	---
TOTAL	5196	1508	3220	545	2507	4984	8529	1068	382.0	650.9	601.7	798.4
MEAN	168	50.3	104	17.6	89.5	161	284	34.5	12.7	21.0	19.4	26.6
MAX	1200	134	405	31	528	845	3400	66	22	100	52	277
MIN	18	26	28	12	15	56	45	14	7.5	6.7	6.7	8.5
CFSM	1.99	.60	1.23	.21	1.06	1.91	3.37	.41	.15	.25	.23	.32
IN.	2.29	.66	1.42	.24	1.10	2.20	3.76	.47	.17	.29	.27	.35

CAL YR 1976 TOTAL 26100.3 MEAN 71.3 MAX 1280 MIN 5.0 CFSM .85 IN 11.50
WTR YR 1977 TOTAL 29990.0 MEAN 82.2 MAX 3400 MIN 6.7 CFSM .97 IN 13.22

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL STREPTOCOCCI KF AGAR (COL. PER 100 ML)	HARDNESS (CA, MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)
OCT											
07...	0910	20	515	7.7	15.0	1	8.0	700	--	220	120
NOV											
08...	1300	48	210	7.8	4.0	--	13.4	--	--	86	34
DEC											
14...	1010	185	110	6.9	1.0	2	13.2	--	--	37	21
JAN											
11...	1145	48	270	7.4	.0	2	14.4	--	--	130	68
FEB											
23...	0955	51	178	8.1	3.0	2	--	--	--	66	30
MAR											
16...	1205	--	124	--	--	--	--	--	--	--	--
24...	0840	238	80	6.5	5.0	2	12.3	--	--	26	18
MAY											
06...	0930	31	213	8.0	15.0	1	--	--	--	92	33
26...	0750	2.8	320	7.4	17.0	1	8.8	--	--	140	56
JUN											
30...	0935	2.8	360	7.7	20.0	1	9.2	--	--	170	86
AUG											
10...	0955	8.6	462	8.1	24.0	1	8.7	--	--	200	86
SEP											
01...	0955	--	510	8.0	22.0	1	9.0	--	2000	190	79
DATE	DIS-SOLVED CALCIUM (CA) (MG/L)	DIS-SOLVED MAGNESIUM (MG)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CaCO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLORIDE (CL) (MG/L)	DIS-SOLVED FLUORIDE (F) (MG/L)
OCT											
07...	65	15	13	2.6	121	0	99	3.9	130	17	.2
NOV											
08...	25	5.7	5.4	1.4	63	0	52	1.6	40	6.5	.1
DEC											
14...	10	3.0	2.7	1.0	20	0	16	4.0	17	5.1	.1
JAN											
11...	37	8.8	9.5	1.6	74	0	61	4.7	63	14	.1
FEB											
23...	21	3.2	5.1	1.0	44	0	36	.6	37	8.2	.1
MAR											
16...	--	--	--	--	--	--	--	--	--	--	--
24...	7.1	2.1	2.2	1.0	10	0	8	5.1	17	1.9	.1
MAY											
06...	26	6.5	5.6	1.9	71	0	58	1.1	46	6.9	.1
26...	40	9.3	9.8	2.2	100	0	82	6.4	58	12	.1
JUN											
30...	48	11	11	2.2	97	0	80	3.1	77	14	.1
AUG											
10...	59	13	17	2.9	140	0	110	1.8	94	20	.1
SEP											
01...	53	13	14	2.8	130	0	110	2.1	89	17	.2
DATE	DIS-SOLVED SILICA (SiO2) (MG/L)	DIS-SOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	DIS-SOLVED NITRITE (N) (MG/L)	DIS-SOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOSPHATE (PO4) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED MANGANESE (MN) (UG/L)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
OCT											
07...	6.1	321	313	.69	.02	.42	1.3	220	10	0	.00
NOV											
08...	6.4	115	124	.58	.01	.06	.18	80	10	0	.00
DEC											
14...	6.7	62	57	.37	.00	.01	.03	70	0	0	.00
JAN											
11...	4.9	178	179	.64	.02	.08	.25	70	20	0	.00
FEB											
23...	3.9	109	103	.38	.01	.05	.15	40	0	0	.00
MAR											
16...	--	--	--	--	--	--	--	--	--	5	--
24...	5.7	58	44	.32	.00	.01	.03	50	10	4	2.6
MAY											
06...	3.5	159	133	.27	.01	.07	.21	170	10	3	.25
26...	4.2	194	189	.68	.02	.19	.58	170	30	4	.03
JUN											
30...	4.6	226	218	.28	.01	.19	.58	100	0	2	.02
AUG											
10...	7.5	317	285	.12	.00	.44	1.4	70	10	4	.09
SEP											
01...	4.9	293	261	.45	.02	.33	1.0	20	10	1	--

KANAWHA RIVER BASIN

133

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) above mean sea level. Prior to Oct. 15, 1929, nonrecording gage at bridge 400 ft (122 m) downstream at same datum.

REMARKS.--Records good except those for the period Dec. 21 to Feb. 21, which are poor. Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--82 years, 1,983 ft³/s (56.16 m³/s), 19.84 in/yr (504 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)
Oct. 10	0400	43200	1220	16.70	5.090	Mar. 14	0200	23000	651	10.94	3.335
Feb. 25	1300	22200	629	10.71	3.264	Apr. 5	1500	*54100	1530	19.82	6.041

Minimum discharge, 122 ft³/s (3.46 m³/s) July 25, gage height, 2.04 ft (0.622 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	800	7690	2090	640	260	6000	1100	588	235	374	282	380
2	1750	4910	1770	580	250	3710	1030	564	231	398	243	398
3	1250	3300	1590	540	250	2580	1040	519	239	374	219	330
4	950	2570	1510	520	240	2050	6390	556	235	295	790	386
5	829	2040	1070	520	230	2810	47000	660	203	251	505	330
6	685	1600	882	480	230	4640	26900	830	195	223	310	310
7	543	1310	3580	440	220	3680	10600	1110	199	199	235	282
8	2470	1130	10600	420	220	2800	5700	1110	203	179	211	345
9	26200	1000	6140	400	210	2170	3850	1150	207	164	203	588
10	33200	918	3570	390	210	1760	2890	1130	223	179	171	526
11	9090	899	2730	370	240	1550	2370	997	259	340	175	410
12	3970	994	2480	370	400	1430	1970	870	277	540	179	320
13	2470	922	2890	360	700	8500	1610	760	392	997	251	268
14	1740	828	2910	340	1200	16300	1390	670	374	720	470	239
15	1310	754	2440	330	1830	6910	1240	612	392	498	660	215
16	1050	753	2210	320	1600	4150	1130	564	505	404	588	199
17	907	817	1920	310	1300	2910	1010	519	470	320	770	211
18	842	832	1590	300	1100	2360	910	470	398	264	860	223
19	787	848	1300	290	1000	2470	830	446	374	223	1080	223
20	740	899	1120	290	950	2700	790	410	300	207	800	890
21	2750	923	950	320	900	2790	750	380	264	171	526	452
22	5020	949	800	330	847	3160	700	350	247	161	398	335
23	3100	912	694	350	1150	7170	660	330	273	143	325	305
24	2200	834	640	370	4420	5540	650	310	315	125	315	310
25	2610	728	576	370	19300	3880	660	305	392	134	380	255
26	10900	691	550	360	11100	2860	660	320	470	175	1480	243
27	7900	778	500	360	8130	2260	612	305	519	410	920	268
28	4560	1060	580	360	8030	1850	564	295	398	800	580	404
29	2960	1920	640	320	---	1610	580	268	434	464	440	533
30	2230	2440	700	300	---	1420	604	247	392	362	356	416
31	3080	---	680	280	---	1240	---	243	---	320	340	---
TOTAL	138893	46249	61702	11930	66517	115260	126190	17888	9615	10414	15062	10594
MEAN	4480	1542	1990	385	2376	3718	4206	577	321	336	486	353
MAX	33200	7690	10600	640	19300	16300	47000	1150	519	997	1480	890
MIN	543	691	500	280	210	1240	564	243	195	125	171	199
CFSM	3.30	1.14	1.47	.28	1.75	2.74	3.10	.43	.24	.25	.36	.26
IN.	3.81	1.27	1.69	.33	1.82	3.16	3.46	.49	.26	.29	.41	.29
CAL YR 1976	TOTAL	631887	MEAN	1726	MAX	33200	MIN	71	CFSM	1.27	IN	17.32
WTR YR 1977	TOTAL	630314	MEAN	1727	MAX	47000	MIN	125	CFSM	1.27	IN	17.28

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) above mean sea level (levels by Corps of Engineers).

REMARKS.--Records good except those for the period Dec. 26 to Mar. 15, which are poor.

AVERAGE DISCHARGE.--41 years, 2,213 ft³/s (62.67 m³/s), 18.49 in/yr (470 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)	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)
Oct. 10	1000	43900	1240	19.15	5.837	Mar. 14	---	Unknown		Unknown	
Feb. 25	---	Unknown		Unknown		Apr. 5	1900	*56800	1610	22.79	6.946

Minimum discharge, 134 ft³/s (3.79 m³/s) July 24, gage height, 0.78 ft (0.238 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	821	8400	2900	800	320	8000	1560	866	255	440	318	365
2	1520	6590	2400	750	290	5500	1460	821	240	424	270	408
3	1560	4490	2090	700	310	3700	1480	749	235	448	235	372
4	1100	3480	1850	660	300	2900	7270	767	245	372	365	351
5	884	2810	1440	660	290	4500	46200	884	235	306	740	372
6	821	2230	1240	620	290	6200	35800	1030	215	265	408	318
7	676	1830	4320	580	290	4800	13800	1430	202	235	276	318
8	1470	1560	12500	540	280	3800	7940	1470	197	206	225	386
9	21200	1370	8150	520	280	2800	5600	1390	215	175	202	432
10	39000	1230	5070	490	280	2500	4370	1450	220	193	188	677
11	12700	1170	3820	480	300	2000	3640	1310	235	282	175	496
12	5700	1300	3440	460	500	3500	3080	1140	276	324	171	386
13	3670	1260	3860	450	1000	12000	2630	983	318	911	202	306
14	2620	1130	4010	430	1900	22000	2280	857	440	857	400	260
15	2000	1020	3400	420	2500	9000	2030	767	448	605	740	230
16	1590	1010	3010	400	2100	5800	1840	695	448	464	731	211
17	1330	1080	2680	390	1700	4200	1640	632	569	379	731	220
18	1180	1140	2240	380	1400	3350	1440	560	569	294	794	220
19	1090	1160	1860	370	1300	3320	1310	504	432	245	1120	225
20	947	1200	1590	360	1200	3730	1230	488	424	215	947	900
21	1730	1250	1500	390	1200	3950	1100	432	330	193	695	450
22	6020	1270	1300	410	1100	3950	965	393	276	168	488	350
23	4150	1250	999	440	1700	7470	920	372	276	154	372	320
24	2520	1140	854	470	8000	7360	911	344	318	140	330	310
25	3030	1010	749	470	17000	5390	911	330	393	140	351	270
26	11700	920	700	450	13000	4090	893	337	587	147	929	250
27	10100	975	650	450	11000	3210	839	337	731	184	1120	300
28	6160	1180	700	460	10000	2630	794	312	605	677	749	450
29	4170	2130	800	420	---	2280	884	300	488	614	536	660
30	3100	3040	850	380	---	2030	929	270	520	440	432	504
31	3520	---	850	360	---	1800	---	255	---	344	351	---
TOTAL	158479	59625	81822	15160	79830	157760	155746	22475	10942	10841	15591	11317
MEAN	5112	1988	2639	489	2851	5089	5192	725	365	350	503	377
MAX	39000	8400	12500	800	17000	22000	46200	1470	731	911	1120	900
MIN	676	920	650	360	280	1800	794	255	197	140	171	211
CFSM	3.15	1.22	1.62	.30	1.75	3.13	3.20	.45	.22	.22	.31	.23
IN.	3.63	1.36	1.87	.35	1.83	3.61	3.57	.51	.25	.25	.36	.26

CAL YR 1976 TOTAL 778990 MEAN 2128 MAX 39000 MIN 86 CFSM 1.31 IN 17.83
WTR YR 1977 TOTAL 779588 MEAN 2136 MAX 46200 MIN 140 CFSM 1.31 IN 17.85

KANAWHA RIVER BASIN

135

03184200 BIG CREEK NEAR BELLEPOINT, WV

LOCATION.--Lat 37°40'28", long 80°48'52", Summers County, Hydrologic Unit 05050003, on left bank 10 ft (3 m) downstream from bridge on Secondary State Route 10, 4.0 mi (6.4 km) northeast of Bellepoint, and at mile 2.0 (3.2 km).

DRAINAGE AREA.--8.27 mi² (21.42 km²).

PERIOD OF RECORD.--May 1969 to September 1977 (discontinued).

GAGE.--Water-stage recorder. Concrete control since Aug. 6, 1970. Altitude of gage is 1,670 ft (509 m), from topographic map.

REMARKS.--Records good except those for the period Dec. 25 to Feb. 19, which are poor.

AVERAGE DISCHARGE.--8 years, 11.2 ft³/s (0.317 m³/s), 18.39 in/yr (467 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,670 ft³/s (104 m³/s) June 21, 1973, gage height, 6.7 ft (2.04 m), from flood profile, from rating curve extended above 80 ft³/s (2.3 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 0.01 ft³/s (<0.001 m³/s) Aug. 6-8, 1970, Sept. 2-5, 1973, Aug. 23-27, Sept. 1, 6, 7, 9, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 180 ft³/s (5.1 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)
Oct. 9	0945	237	6.71	2.94	0.896	Feb. 24	1100	364	10.3	3.31	1.009
Dec. 7	0230	252	7.14	2.99	0.911	Apr. 4	2400	*861	24.4	4.23	1.289
Feb. 14	0945	294	8.33	3.11	0.948						

Minimum discharge, 0.02 ft³/s (0.001 m³/s) Aug. 8-10; minimum gage height, 1.13 ft (0.344 m) Aug. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.4	17	7.3	3.1	1.1	12	4.2	5.7	.76	2.1	.14	.60
2	4.3	12	6.5	2.9	1.1	8.6	4.0	4.8	.36	1.2	.08	.36
3	2.4	9.3	4.9	2.7	1.1	6.8	14	4.0	.24	.76	.07	.18
4	1.4	7.3	4.5	2.7	1.1	6.6	465	11	.14	.54	.07	.18
5	.88	5.5	3.8	2.5	1.1	6.8	328	14	.10	.42	.06	.30
6	.67	4.2	5.0	2.4	1.0	5.9	78	13	.54	.30	.05	.18
7	7.0	3.6	140	2.3	1.0	5.2	41	8.6	.48	.18	.04	.36
8	66	3.1	39	2.2	1.0	4.6	26	6.3	.18	.12	.03	.92
9	131	2.7	18	2.1	1.1	4.0	17	5.0	.76	.10	.02	.84
10	34	3.1	12	2.0	1.4	3.8	12	4.2	.54	7.8	.07	.76
11	14	2.7	9.4	1.9	6.0	3.6	9.0	3.6	.24	3.8	.60	.42
12	7.3	2.9	14	1.9	35	3.4	7.0	3.3	.18	1.1	1.8	.18
13	4.7	2.7	15	1.8	05	4.2	6.1	3.0	.14	.60	15	.12
14	3.3	2.5	11	1.7	137	24	5.7	2.8	2.7	.60	25	.10
15	2.5	2.7	9.4	1.6	25	14	5.2	2.5	1.0	.36	18	.10
16	2.0	4.0	8.2	1.5	15	10	4.6	2.2	.48	.12	5.0	.24
17	2.4	4.3	6.6	1.5	12	7.8	4.0	2.0	3.2	.10	1.9	1.6
18	2.1	5.1	5.5	1.4	10	18	3.8	1.8	2.7	.07	2.1	.76
19	1.4	5.2	4.6	1.4	8.5	17	3.4	2.0	.84	.06	2.8	1.1
20	2.7	5.2	5.0	1.4	7.5	29	3.2	1.9	.54	.05	1.5	4.0
21	5.4	5.0	4.4	1.4	6.3	22	3.0	1.7	.36	.03	.90	1.3
22	4.0	4.6	4.0	1.4	15	38	2.7	1.7	.30	.03	.55	.76
23	3.0	3.7	3.8	1.4	38	29	2.8	1.6	1.9	.04	.50	.54
24	3.0	3.1	3.4	1.4	162	20	4.0	1.6	4.4	.04	.50	.42
25	44	3.1	3.2	1.4	70	13	3.4	1.8	20	.84	1.9	.36
26	52	3.5	3.1	1.3	38	9.4	2.8	2.0	7.8	.68	1.2	.84
27	21	4.3	3.0	1.3	30	7.4	2.7	1.5	3.4	.18	.35	1.0
28	12	4.7	3.2	1.3	21	6.6	4.8	1.2	3.4	.07	.65	.60
29	7.9	10	3.5	1.2	---	5.9	14	.95	5.9	.18	4.0	.42
30	8.9	8.0	3.4	1.2	---	5.7	7.0	.60	3.4	1.8	2.2	.30
31	21	---	3.2	1.1	---	5.0	---	.48	---	.36	1.1	---
TOTAL	481.25	155.1	367.9	55.4	712.3	395.1	1088.4	116.83	66.98	24.63	86.56	19.84
MEAN	15.5	5.17	11.9	1.79	25.4	12.7	36.3	3.77	2.23	.79	2.79	.66
MAX	131	17	140	3.1	162	42	465	14	20	7.8	25	4.0
MIN	.67	2.5	3.0	1.1	1.0	3.4	2.7	.48	.10	.03	.02	.10
CFSM	1.87	.63	1.44	.22	3.07	1.54	4.39	.46	.27	.10	.34	.08
IN.	2.16	.70	1.65	.25	3.20	1.78	4.90	.53	.30	.11	.39	.09

CAL YR 1976 TOTAL 2687.88 MEAN 7.34 MAX 140 MIN .01 CFSM .89 IN 12.09
WTR YR 1977 TOTAL 3570.29 MEAN 9.78 MAX 465 MIN .02 CFSM 1.18 IN 16.06

KANAWHA RIVER BASIN

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) above mean sea level. Prior to June 5, 1949, water-stage recorder at site 400 ft (122 m) upstream at same datum.

REMARKS.--Records good except those for the period Dec. 23 to Feb. 15, which are poor. 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.--41 years, 7,794 ft³/s (220.7 m³/s), 16.92 in/yr (430 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, 59,300 ft³/s (1,680 m³/s) Oct. 9, gage height, 8.56 ft (2.609 m); minimum, 1,440 ft³/s (40.8 m³/s) Sept. 19, gage height, 1.63 ft (0.497 m).

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5770	14300	9020	4200	2600	18100	7820	7940	5100	4150	1670	1650
2	6820	13100	6980	3000	2840	14200	7940	5600	3800	3500	1620	1700
3	5440	10500	6860	2600	3200	11900	7100	6560	3500	2670	1720	2240
4	3070	9200	6320	4100	3650	10200	19000	6800	3500	2300	1720	2390
5	3340	8120	5100	5150	3040	10500	42400	7580	2920	3160	1970	2180
6	2920	7160	4550	5400	2800	11500	46700	9500	2580	3700	1720	1670
7	2490	5950	11500	5800	2900	13900	52400	10300	2510	3120	1620	1570
8	12700	5300	31700	5800	3350	12100	53100	8780	3200	2610	1570	3950
9	41400	6100	26700	4000	3400	11100	53800	6980	3800	2270	1520	6000
10	56100	5900	18200	2600	3300	9870	49700	8240	3200	2000	1880	6320
11	50500	4450	12500	4850	4200	7760	42200	7100	3800	2240	2800	5300
12	41300	6100	10900	3600	5000	6740	29700	6200	3080	2840	2880	3200
13	26800	6000	11200	4400	5500	13200	11600	5200	1940	3600	4580	2390
14	10700	4900	11800	4600	7000	39400	9440	3800	2800	4050	3040	2360
15	8600	4450	9620	4400	9400	35100	9500	3300	3800	4650	3120	2120
16	6740	4750	9620	3500	10800	24000	8960	3700	3120	4200	3450	1830
17	4400	5000	9320	3000	10300	18200	6920	5050	3400	2610	4150	2300
18	3550	6000	9200	4800	8840	15900	6200	4000	4300	1670	3850	2210
19	5400	5650	6380	4800	6980	10600	8180	3550	3900	2030	4250	1650
20	7820	4850	5100	4300	5200	12500	6980	3700	4550	2610	4050	2210
21	9140	4650	7880	4200	5300	12400	5950	3500	3850	2030	3160	2770
22	10900	5250	6200	3500	5850	15100	6440	2960	3650	1570	2240	2480
23	8300	6260	4800	2800	6150	17700	6800	3200	3700	1830	2030	2640
24	5700	4750	5200	2390	16400	15200	6500	3650	5050	1850	2210	2700
25	5850	5000	3850	3080	38400	12500	6620	4150	6200	1620	2210	1910
26	29900	3750	2920	3700	36600	10400	7160	4100	6500	1490	2540	1520
27	29500	4200	3700	3500	27500	10200	7580	4550	4150	1750	2770	1850
28	18100	4250	4500	4400	21500	7160	6860	3900	3600	2210	2150	2090
29	12000	5400	6400	4200	---	8180	6320	2640	4550	2060	1800	2700
30	10400	9680	6600	2900	---	8060	7580	2270	4400	1940	1700	2920
31	10600	---	5200	1800	---	7760	---	3160	---	1780	1650	---
TOTAL	456250	190970	279820	121370	262000	431430	547450	161960	114450	80110	75640	78820
MEAN	14720	6366	9026	3915	9357	13920	18250	5225	3815	2584	2440	2627
MAX	56100	14300	31700	5800	38400	39400	53800	10300	6500	4650	4250	6320
MIN	2490	3750	2920	1800	2600	6740	5950	2270	1940	1490	1520	1520
CAL YR 1976 TOTAL	2794200		MEAN 7634	MAX 56100	MIN 1530	MEAN† 7633	CFSM† 1.22	IN† 16.61				
WTR YR 1977 TOTAL	2800270		MEAN 7672	MAX 56100	MIN 1490	MEAN† 7663	CFSM† 1.22	IN† 16.56				

† Adjusted for change in contents in Claytor (Virginia) and Bluestone Lakes.

KANAWHA RIVER BASIN

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03184950 SOAK CREEK NEAR SOPHIA, WV

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.

Drainage Area.--3.96 mi² (10.26 km²).

PERIOD OF RECORD.--October 1976 to September 1977.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM (COL./100 ML)	FECAL STREPTOCOCCI (COL. PER 100 ML)	HARDNESS (CA+MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)
OCT 28...	1310	5.5	140	7.5	7.0	6	9.6	--	5400	280	39	9
JAN 12...	1030	1.0	245	7.4	.0	8	7.2	--	--	1700	72	34
FEB 28...	1230	7.5	155	6.6	4.0	10	9.6	23000	1000	350	33	14
MAR 30...	1230	4.1	210	7.6	12.0	100	--	55000	3200	700	68	0
APR 04...	1810	232	97	--	--	--	--	--	--	--	--	--
05...	1145	219	93	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--	--
27...	1245	1.3	190	--	10.0	25	10.4	58000	2300	150	74	37
MAY 18...	1200	1.3	200	7.0	15.5	10	8.9	16000	5500	2000	71	22
JUN 20...	1100	.19	350	7.2	18.5	20	6.4	120000	3300	4000	83	26
JUL 19...	0930	.08	270	6.7	22.0	8	4.9	30000	7600	2700	86	17
AUG 25...	0945	13	110	6.7	17.0	10	6.8	40000	19000	22000	37	15
SEP 13...	0945	.34	218	7.3	17.0	9	8.7	100000	52000	6000	74	24
DATE	DIS-SOLVED CALCIUM (CA) (MG/L)	DIS-SOLVED MAGNESIUM (MG)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CaCO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLORIDE (CL) (MG/L)	DIS-SOLVED FLUORIDE (F) (MG/L)	DIS-SOLVED SILICA (SiO2) (MG/L)
OCT 28...	10	3.5	6.2	1.8	37	0	30	1.9	24	6.5	.1	6.6
JAN 12...	18	6.6	14	2.0	47	0	39	3.0	34	19	.1	8.8
FEB 28...	9.2	2.4	8.5	2.2	23	0	19	9.2	22	11	.1	6.6
MAR 30...	20	4.4	12	1.7	83	0	68	3.3	25	14	.1	4.8
APR 04...	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--	--
27...	20	5.9	12	2.2	46	--	38	--	27	13	.1	7.4
MAY 18...	18	6.3	11	1.8	60	0	49	9.6	32	10	.1	7.3
JUN 20...	23	6.3	16	3.3	70	0	57	7.1	27	21	.1	8.5
JUL 19...	24	6.3	15	2.6	84	0	69	27	24	19	.2	7.6
AUG 25...	10	2.9	5.2	1.9	27	0	22	8.6	15	5.5	.0	7.0
SEP 13...	19	6.4	14	2.3	61	0	50	4.9	29	13	.1	9.5

KANAWHA RIVER BASIN

03184950 SOAK CREEK NEAR SOPHIA, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER*1977

DATE	DIS-SOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	DIS-SOLVED NITRITE (N) (MG/L)	DIS-SOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOSPHATE (P04) (MG/L)	TOTAL ALUMINUM (AL) (UG/L)	TOTAL CADMIUM (CB) (UG/L)	DIS-SOLVED CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	HEXAVALENT CHROMIUM (CR6) (UG/L)	TOTAL IRON (FE) (UG/L)
OCT 28...	84	81	.71	.05	.01	.03	--	--	--	--	--	--
JAN 12...	131	130	.42	.01	.01	.03	60	1	1	<10	0	1800
FEB 28...	80	77	.74	.01	.03	.09	--	--	--	--	--	--
MAR 30...	131	125	.38	.01	.01	.03	--	--	--	--	--	--
APR 04...	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--	--
27...	122	113	.35	.01	.01	.03	--	0	0	10	0	3200
MAY 18...	131	118	.19	.01	.04	.12	--	--	--	--	--	--
JUN 20...	161	142	.39	.02	.04	.12	--	--	--	--	--	--
JUL 19...	144	142	.15	.01	.03	.09	170	2	2	<10	0	1000
AUG 25...	72	64	.61	.01	.01	.03	--	--	--	--	--	--
SEP 13...	130	125	.27	.01	.00	.00	--	--	--	--	--	--

DATE	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DIS-SOLVED MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
OCT 28...	440	--	--	--	10	--	--	--	--	9	.13
JAN 12...	1400	12	12	710	710	<.5	<.5	40	30	3	.01
FEB 28...	490	--	--	--	190	--	--	--	--	53	1.1
MAR 30...	260	--	--	--	230	--	--	--	--	416	4.6
APR 04...	--	--	--	--	--	--	--	--	--	570	357
05...	--	--	--	--	--	--	--	--	--	264	156
27...	--	--	--	--	560	--	--	--	--	--	--
27...	310	7	0	560	560	.0	.0	30	20	40	.14
MAY 18...	170	--	--	--	480	--	--	--	--	10	.04
JUN 20...	30	--	--	--	720	--	--	--	--	22	.01
JUL 19...	230	30	27	410	400	.0	.0	20	20	15	.00
AUG 25...	150	--	--	--	150	--	--	--	--	37	1.3
SEP 13...	260	--	--	--	600	--	--	--	--	14	.01

KANAWHA RIVER BASIN

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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) above mean sea level.

REMARKS.--Records good except those for the period Dec. 21 to Feb. 22, which are poor.

AVERAGE DISCHARGE.--26 years, 61.1 ft³/s (1.730 m³/s), 15.90 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)	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)
Oct. 9	1600	910	25.8	3.89	1.186	Apr. 5	0600	*2840	80.4	6.45	1.966

Minimum discharge, 4.0 ft³/s (0.11 m³/s) July 18, 20, gage height, 1.28 ft (0.390 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	89	120	41	31	18	126	55	98	16	20	27	28
2	74	96	31	29	18	94	53	89	15	16	19	26
3	47	79	32	28	18	77	65	72	13	12	17	25
4	32	65	36	26	18	72	854	70	11	9.5	22	24
5	25	55	35	25	17	72	2090	77	10	8.5	13	28
6	22	47	27	23	16	65	547	86	11	7.6	9.6	25
7	35	44	131	22	16	58	258	85	11	7.4	8.7	22
8	282	39	179	21	16	53	177	72	10	6.8	13	22
9	740	36	121	20	16	47	132	58	20	6.3	14	21
10	398	36	82	19	16	46	111	51	16	8.1	12	20
11	180	35	70	18	19	44	94	44	12	13	25	18
12	94	35	81	18	35	44	79	39	9.5	11	32	17
13	70	32	99	17	50	84	70	37	8.5	7.7	184	15
14	55	28	98	17	70	103	60	35	25	6.7	296	14
15	44	28	87	16	100	84	55	32	26	12	222	15
16	39	31	76	15	80	70	51	29	15	7.7	101	18
17	38	29	59	15	70	58	46	26	16	5.9	111	28
18	36	29	50	14	60	82	44	25	15	5.1	187	24
19	32	31	44	15	58	101	42	26	13	4.8	117	24
20	32	29	45	15	55	106	41	23	12	5.6	65	42
21	35	31	42	16	58	114	36	21	9.9	5.7	42	29
22	32	31	39	17	80	154	35	21	9.9	6.7	55	23
23	35	28	37	17	126	167	36	20	15	8.0	62	20
24	35	27	34	18	414	141	56	19	22	8.7	173	18
25	79	27	32	18	493	111	55	20	34	36	233	17
26	184	26	30	18	264	94	49	22	28	36	126	20
27	154	28	28	18	212	82	46	20	20	22	72	24
28	98	28	30	17	180	72	55	18	23	14	51	20
29	72	34	33	17	---	67	205	17	31	24	41	17
30	120	32	37	17	---	67	151	17	28	82	35	15
31	140	---	34	18	---	62	---	18	---	42	31	---
TOTAL	3348	1216	1800	595	2593	2617	5648	1287	505.8	466.8	2416.3	659
MEAN	108	40.5	58.1	19.2	92.6	84.4	188	41.5	16.9	15.1	77.9	22.0
MAX	740	120	179	31	493	167	2090	98	34	82	296	42
MIN	22	26	27	14	16	44	35	17	8.5	4.8	8.7	14
CFSM	2.07	.78	1.11	.37	1.77	1.62	3.60	.80	.32	.29	1.49	.42
IN.	2.39	.87	1.28	.42	1.85	1.86	4.02	.92	.36	.33	1.72	.47

CAL YR 1976	TOTAL	20684.9	MEAN	56.5	MAX	750	MIN	4.5	CFSM	1.08	IN	14.74
WTR YR 1977	TOTAL	23151.9	MEAN	63.4	MAX	2090	MIN	4.8	CFSM	1.22	IN	16.50

KANAWHA RIVER BASIN

03185120 LITTLE WHITESTICK CREEK AT BECKLEY, WV

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 September 1977.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM (COL. / 100 ML)	FECAL STREPTOCOCCI KF AGAR (COL. PER 100 ML)	HARDNESS (CA+MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)
OCT 28...	1100	7.5	380	7.8	6.0	6	9.8	--	1500	500	83	55
DEC 13...	1200	3.4	438	--	3.0	--	--	--	--	--	--	--
JAN 11...	1115	1.4	756	7.2	4.5	8	7.7	--	--	160	170	110
FEB 28...	1100	8.2	430	6.3	2.5	10	11.2	14000	1300	110	74	62
MAR 30...	1115	1.1	410	7.1	10.0	6	--	12000	140	180	89	44
APR 04...	0815	215	329	--	--	--	--	--	--	--	--	--
05...	1035	157	353	--	--	--	--	--	--	--	--	--
27...	1115	1.8	650	--	11.0	5	8.2	--	16000	--	130	63
MAY 18...	1040	.99	475	7.1	18.0	7	6.2	14000	1600	300	130	33
JUN 20...	1400	2.7	920	7.2	20.0	7	4.7	--	18000	7100	130	62
JUL 19...	1045	5.0	525	7.4	23.0	9	5.3	59000	36000	3200	130	38
AUG 25...	1130	9.6	425	6.8	19.0	20	7.5	--	120000	82000	81	38
SEP 13...	1105	.27	590	7.8	18.0	10	7.6	20000	1200	2300	120	34
DATE	DIS-SOLVED CALCIUM (CA) (MG/L)	DIS-SOLVED MAGNESIUM (MG)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CAC03 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLORIDE (CL) (MG/L)	DIS-SOLVED FLUORIDE (F) (MG/L)	DIS-SOLVED SILICA (SiO2) (MG/L)
OCT 28...	25	5.0	40	3.6	34	0	28	.9	30	70	.2	10
DEC 13...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 11...	54	8.7	67	5.3	76	0	62	7.7	90	120	.6	7.4
FEB 28...	20	5.8	44	3.8	15	0	12	12	39	85	.1	5.6
MAR 30...	26	5.9	45	3.4	55	0	45	7.0	35	77	.3	4.2
APR 04...	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--
27...	39	7.7	80	5.5	80	--	66	--	47	130	.3	7.3
MAY 18...	38	8.9	41	6.0	120	0	98	15	39	59	.3	8.1
JUN 20...	38	8.3	100	7.2	82	0	67	8.3	48	160	.4	7.5
JUL 19...	36	9.2	44	6.0	110	0	90	7.0	47	66	.3	9.3
AUG 25...	24	5.0	43	3.9	52	0	43	13	28	68	.1	7.2
SEP 13...	--	8.4	41	3.7	110	0	90	2.8	38	57	.2	8.8

KANAWHA RIVER BASIN

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03185120 LITTLE WHITESTICK CREEK AT BECKLEY, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	DIS-SOLVED NITRITE (N) (MG/L)	DIS-SOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOSPHATE (P04) (MG/L)	TOTAL ALUMINUM (AL) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	DIS-SOLVED CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	HEXA-VALENT CHROMIUM (CR6) (UG/L)	TOTAL IRON (FE) (UG/L)
OCT 28...	208	205	.90	.08	.03	.09	--	--	--	--	--	--
DEC 13...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 11...	429	395	.60	.14	.01	.03	290	8	4	10	0	790
FEB 28...	239	216	1.1	.02	.01	.03	--	--	--	--	--	--
MAR 30...	259	228	.67	.07	.01	.03	--	--	--	--	--	--
APR 04...	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--
27...	366	359	.37	.05	.11	.34	--	0	0	10	0	1400
MAY 18...	238	262	.02	.01	.48	1.5	--	--	--	--	--	--
JUN 20...	431	411	.07	.02	.22	.67	--	--	--	--	--	--
JUL 19...	291	275	.12	.01	.46	1.4	350	2	0	10	0	1400
AUG 25...	245	209	.79	.07	.09	.28	--	--	--	--	--	--
SEP 13...	260	251	.67	.10	.02	.06	--	--	--	--	--	--

DATE	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DIS-SOLVED MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
OCT 28...	160	--	--	--	240	--	--	--	--	12	.24
DEC 13...	--	--	--	--	--	--	--	--	--	18	.17
JAN 11...	130	45	6	510	510	<.5	<.5	190	170	8	.03
FEB 28...	110	--	--	--	460	--	--	--	--	15	.33
MAR 30...	110	--	--	--	300	--	--	--	--	17	.05
APR 04...	--	--	--	--	--	--	--	--	--	298	173
05...	--	--	--	--	--	--	--	--	--	306	130
27...	40	26	0	570	570	.0	.0	50	30	51	.25
MAY 18...	70	--	--	--	700	--	--	--	--	48	.13
JUN 20...	50	--	--	--	440	--	--	--	--	16	.12
JUL 19...	210	87	10	440	430	.0	.0	30	0	10	--
AUG 25...	150	--	--	--	220	--	--	--	--	45	1.2
SEP 13...	110	--	--	--	80	--	--	--	--	14	.01

KANAWHA RIVER BASIN

03185130 CRANBERRY CREEK AT BECKLEY, WV

LOCATION.--Lat 37°47'42", long 81°10'22", Raleigh County, Hydrologic Unit 05050004, at Beckley at bridge on Route 41 about 800 ft (244 m) north of the intersection of Route 19 and 41, 0.4 mi (0.6 km) upstream from Little Whitestick Creek, and 1.9 mi (3.1 km) upstream from Piney Creek.

DRAINAGE AREA.--6.58 mi² (17.04 km²).

PERIOD OF RECORD.--October 1976 to September 1977.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM PER 100 ML	FECAL COLIFORM FORM (COL./100 ML)	FECAL STREPTOCOCCI KF AGAR (COL./100 ML)	HARDNESS (CA+MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	
OCT													
28...	1000	2.7	520	7.4	5.0	8	10.6	--	0	10	150	150	
DEC													
13...	1030	4.6	670	8.2	3.0	7	10.2	--	--	--	160	140	
JAN													
11...	1315	1.9	1700	7.4	.0	3	8.5	190	--	10	260	110	
FEB													
28...	1000	15	330	4.8	3.0	8	14.0	0	0	4	71	71	
MAR													
30...	1015	3.2	540	4.8	11.0	2	--	0	0	--	150	150	
APR													
04...	1700	--	158	--	--	--	--	--	--	--	--	--	
05...	0900	262	222	--	--	--	--	--	--	--	--	--	
27...	0945	1.6	1100	--	10.0	3	9.8	480	--	4	290	240	
MAY													
18...	0945	.27	1100	6.9	18.0	2	9.6	10	0	0	290	270	
JUN													
20...	1300	.61	1400	7.4	21.0	5	8.0	--	88	140	280	170	
JUL													
19...	1200	.79	790	7.2	25.0	4	6.9	50000	5100	5000	120	100	
AUG													
25...	1245	9.7	480	6.3	18.0	15	7.6	0	0	0	120	120	
SEP													
13...	1215	.11	800	7.7	19.0	1	10.0	3000	20	160	180	93	
DATE		DIS-SOLVED CALCIUM (CA) (MG/L)	DIS-SOLVED MAGNESIUM (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CaCO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLORIDE (CL) (MG/L)	DIS-SOLVED FLUORIDE (F) (MG/L)	DIS-SOLVED SILICA (SiO2) (MG/L)
OCT													
28...	26	21	24	3.2	0	0	0	.0	220	28	.2	10	
DEC													
13...	35	17	67	4.5	17	0	14	.2	230	53	.1	8.5	
JAN													
11...	58	27	260	3.4	174	0	143	11	540	130	.2	8.9	
FEB													
28...	12	10	13	1.9	0	0	0	.0	110	23	.1	6.8	
MAR													
30...	24	22	22	3.3	0	0	0	.0	230	32	.2	8.8	
APR													
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--	--
27...	66	31	140	4.2	60	--	49	--	470	39	.1	9.1	
MAY													
18...	58	36	120	4.2	26	0	21	5.2	470	46	.2	9.6	
JUN													
20...	73	23	150	4.0	130	0	110	8.3	400	58	.2	7.5	
JUL													
19...	33	10	70	3.1	28	0	23	2.8	170	29	.7	7.3	
AUG													
25...	23	14	18	3.0	0	0	0	.0	140	24	.1	9.2	
SEP													
13...	42	19	140	3.4	110	0	90	3.5	290	44	.4	5.1	

KANAWHA RIVER BASIN

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03185130 CRANBERRY CREEK AT BECKLEY, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	DIS-SOLVED NITRITE (N) (MG/L)	DIS-SOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOSPHATE (P04) (MG/L)	TOTAL ALUMINUM (AL) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	DIS-SOLVED CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	HEXAVALENT CHROMIUM (CR6) (UG/L)	TOTAL IRON (FE) (UG/L)
OCT 28...	371	353	1.1	.01	.01	.03	--	--	--	--	--	--
DEC 13...	436	431	1.3	.01	.01	.03	--	--	--	--	--	--
JAN 11...	1080	1120	.81	.01	.01	.03	1300	3	2	20	0	810
FEB 28...	197	187	.74	.01	.01	.03	--	--	--	--	--	--
MAR 30...	378	363	.98	.00	.01	.03	--	--	--	--	--	--
APR 04...	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--
27...	852	797	1.1	.01	.00	.00	--	0	0	10	0	780
MAY 18...	842	766	1.3	.11	.07	.21	--	--	--	--	--	--
JUN 20...	805	785	.97	.02	.02	.06	--	--	--	--	--	--
JUL 19...	400	360	4.4	.66	.05	.15	350	0	0	<10	0	1000
AUG 25...	277	242	.79	.03	.00	.00	--	--	--	--	--	--
SEP 13...	667	609	2.0	.14	.01	.03	--	--	--	--	--	--

DATE	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DIS-SOLVED MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
OCT 28...	950	--	--	--	2000	--	--	--	--	8	.06
DEC 13...	350	--	--	--	1100	--	--	--	--	11	.14
JAN 11...	200	22	10	1700	1700	<.5	<.5	110	100	9	.05
FEB 28...	450	--	--	--	940	--	--	--	--	15	.61
MAR 30...	1700	--	--	--	2300	--	--	--	--	7	.06
APR 04...	--	--	--	--	--	--	--	--	--	593	--
05...	--	--	--	--	--	--	--	--	--	112	79
27...	320	18	3	2300	2300	.0	.0	170	150	10	.04
MAY 18...	130	--	--	--	2700	--	--	--	--	3	.00
JUN 20...	30	--	--	--	690	--	--	--	--	3	.00
JUL 19...	110	50	10	300	290	.0	.0	40	20	9	.02
AUG 25...	660	--	--	--	120	--	--	--	--	24	.63
SEP 13...	10	--	--	--	1100	--	--	--	--	2	.00

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) above mean sea level, adjustment of 1912. Prior to June 11, 1930, nonrecording gage at same site and datum.

REMARKS.--Records good except those for the period December to July, which are poor.

AVERAGE DISCHARGE.--48 years, 326 ft³/s (9.232 m³/s), 34.59 in/yr (879 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)	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)
Oct. 9	1045	*10300	292	11.54	3.517	Mar. 13	0800	8920	253	10.70	3.261
Feb. 24	1900	5850	166	8.41	2.563	Apr. 5	Unknown	6390	181	a8.90	2.713

a From floodmarks.

Minimum daily discharge, 18 ft³/s (0.51 m³/s) June 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	992	945	293	100	100	843	210	220	33	230	81	237
2	553	617	230	85	95	535	190	134	28	190	68	285
3	401	455	205	80	90	409	300	131	23	150	95	222
4	297	359	192	90	85	913	800	360	20	130	97	148
5	219	284	165	95	85	1630	4500	500	18	110	66	153
6	178	228	153	85	85	1050	2000	600	25	95	55	118
7	185	196	1460	80	85	678	1300	700	35	82	59	96
8	2390	179	988	75	90	483	850	800	30	75	91	109
9	7450	153	542	80	95	409	600	600	70	100	80	92
10	2410	188	403	85	100	449	500	450	130	200	62	75
11	1010	203	380	80	150	501	400	350	70	500	76	65
12	578	183	729	80	250	787	340	280	50	300	83	55
13	401	156	938	90	350	3960	270	230	50	150	230	47
14	299	134	548	100	300	1260	240	190	80	140	820	45
15	230	145	426	130	270	720	220	150	300	110	670	57
16	191	132	343	130	230	585	190	130	250	90	332	55
17	182	119	274	120	200	497	170	110	140	75	522	63
18	177	126	216	120	170	450	150	90	100	60	800	68
19	145	125	185	120	180	580	140	75	90	55	397	54
20	141	156	184	110	180	500	140	60	80	45	264	166
21	606	147	177	110	200	450	130	50	110	39	187	103
22	372	139	140	110	220	732	110	45	100	39	148	72
23	281	122	130	100	565	585	110	40	110	35	125	58
24	315	114	120	110	3090	520	120	55	100	33	749	50
25	1040	127	120	110	2500	460	130	45	150	900	736	45
26	1530	148	110	120	1500	390	130	40	320	350	388	49
27	796	500	110	120	2500	330	140	35	210	250	267	69
28	510	687	110	120	1800	280	200	31	260	120	205	60
29	376	601	120	110	---	250	280	28	350	110	168	51
30	329	392	120	110	---	240	270	25	290	100	276	44
31	1150	---	110	100	---	230	---	30	---	90	452	---
TOTAL	25734	8060	10221	3155	15565	21706	15130	6584	3622	4953	8649	2811
MEAN	830	269	330	102	556	700	504	212	121	160	279	93.7
MAX	7450	945	1460	130	3090	3960	4500	800	350	900	820	285
MIN	141	114	110	75	85	230	110	25	18	33	55	44
CFSM	6.48	2.10	2.58	.80	4.34	5.47	3.94	1.66	.95	1.25	2.18	.73
IN.	7.48	2.34	2.97	.92	4.52	6.31	4.40	1.91	1.05	1.44	2.51	.82

CAL YR 1976 TOTAL 117242.5 MEAN 320 MAX 7450 MIN 7.7 CFSM 2.50 IN 34.07
WTR YR 1977 TOTAL 126190.0 MEAN 346 MAX 7450 MIN 18 CFSM 2.70 IN 36.67

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 Craigs ville, and at mile 60.0 (96.5 km).

DRAINAGE AREA.--528 mi² (1,368 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,870.00 ft (569.976 m) above mean sea level.

REMARKS.--Water-discharge records good except those for the period Dec. 23 to Feb. 23, which are poor. Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--13 years, 1,444 ft³/s (40.89 m³/s), 37.14 in/yr (943 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)	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)
Oct. 9	0945	*38100	1080	22.08	6.730	Mar. 13	1230	19300	547	17.36	5.291
Feb. 24	2045	22000	623	18.06	5.505	Apr. 5	0815	20400	578	17.64	5.377

Minimum discharge, 88 ft³/s (2.49 m³/s) June 5, gage height, 9.20 ft (2.804 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4320	4250	1330	486	450	3890	818	823	182	980	429	854
2	2900	3040	1100	400	430	2530	738	744	159	769	346	817
3	1940	2240	997	370	420	1920	787	688	123	558	375	671
4	1460	1770	894	400	400	2660	3930	1180	103	422	436	545
5	1050	1400	785	420	390	6170	15900	1680	92	328	324	485
6	860	1130	714	390	390	4370	6620	2190	119	300	266	443
7	841	954	4370	360	390	3020	3620	2750	195	280	269	381
8	7610	845	4700	350	420	2230	2820	2940	159	245	299	372
9	29800	725	2740	370	460	1830	2130	2110	245	328	413	376
10	11600	807	2000	380	520	1830	1690	1560	640	664	366	305
11	4850	954	1730	400	700	1930	1380	1200	356	2100	460	268
12	2850	885	2590	370	1100	2530	1140	960	250	860	424	239
13	1940	778	4150	420	1600	11600	966	796	240	608	955	213
14	1450	677	2770	460	1400	5340	848	680	295	608	3550	202
15	1130	699	2120	580	1200	3180	760	579	1390	410	3650	224
16	932	666	1680	580	1100	2480	664	482	940	295	1800	241
17	836	601	1350	560	900	1940	579	404	608	231	2390	268
18	822	611	1080	540	800	1910	518	356	494	195	4820	283
19	696	613	890	520	820	2510	482	350	410	164	2370	259
20	651	675	846	500	840	1980	494	300	386	146	1490	407
21	1720	704	877	490	900	1740	434	285	537	128	1010	477
22	1640	681	663	480	1000	2430	398	231	506	128	769	331
23	1280	606	580	480	2500	3060	368	209	506	119	631	272
24	1210	518	540	490	11800	2450	386	285	464	106	2500	237
25	3650	587	560	520	11600	2000	446	245	640	1780	3860	215
26	6960	663	520	540	6600	1650	440	213	1350	4930	1970	220
27	3580	1520	490	560	9250	1440	494	186	940	1570	1300	259
28	2580	2510	500	540	7870	1300	500	164	1270	873	957	267
29	1870	2390	520	500	---	1180	960	150	1550	607	796	237
30	1550	1790	540	480	---	1020	990	137	1400	618	699	214
31	4430	---	527	460	---	964	---	141	---	557	1460	---
TOTAL	109448	36289	45153	14396	66250	85084	52300	25018	16549	21907	41384	10582
MEAN	3531	1210	1457	464	2366	2745	1743	807	552	707	1335	353
MAX	29800	4250	4700	580	11800	11600	15900	2940	1550	4930	4820	854
MIN	651	518	490	350	390	964	368	137	92	106	266	202
CFSM	6.69	2.29	2.76	.88	4.48	5.20	3.30	1.53	1.05	1.34	2.53	.67
IN.	7.71	2.56	3.18	1.01	4.67	5.99	3.68	1.76	1.17	1.54	2.92	.75

CAL YR 1976 TOTAL 501830 MEAN 1371 MAX 29800 MIN 60 CFSM 2.60 IN 35.36
WTR YR 1977 TOTAL 524360 MEAN 1437 MAX 29800 MIN 92 CFSM 2.72 IN 36.94

KANAWHA RIVER BASIN

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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 at mean sea level.

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, 267,700 acre-ft (330 hm³) Oct. 10, elevation, 1,675.8 ft (510.78 m); minimum, 57,640 acre-ft (71.1 hm³) Dec. 10, elevation, 1,574.7 ft (479.79 m).

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

Date	Elevation (feet)	Contents (acre-feet)	Change in Contents (acre-feet) (equivalent in cfs)	
Sept. 30.....	1640.95	162700	-	-
Oct. 31.....	1618.8	116200	-46500	-756
Nov. 30.....	1581.7	64480	-51720	-869
Dec. 31.....	1575.7	58570	-5910	-96
CAL YR 1976	-	-	-1700	-2
Jan. 31.....	1575.2	58110	-460	-7
Feb. 28.....	1622.5	123100	+64990	+1170
Mar. 31.....	1607.6	97590	-25510	-415
Apr. 30.....	1653.2	194900	+97310	+1640
May 31.....	1652.8	193800	-1100	-18
June 30.....	1652.5	192900	-900	-15
July 31.....	1652.8	193800	+900	+15
Aug. 31.....	1652.8	193800	0	0
Sept. 30.....	1644.9	172600	-21200	-356
WTR YR 1977	-	-	+9900	+14

KANAWHA RIVER BASIN

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).

WATER-DISCHARGE RECORDS

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) above mean sea level (levels by Corps of Engineers).

REMARKS.--Water-discharge records good above 1,000 ft³/s (28.3 m³/s) and fair below. Flow regulated by Summersville Lake (station 03189590).

AVERAGE DISCHARGE.--11 years, 2,158 ft³/s (61.11 m³/s), 36.45 in/yr (926 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, 15,300 ft³/s (433 m³/s) Oct. 11, gage height, 18.30 ft (5.578 m); minimum daily, 84 ft³/s (2.38 m³/s) Aug. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2400	6310	3160	630	464	10700	104	1350	118	1340	620	1140
2	1720	6280	2470	392	408	8950	104	1380	118	885	320	835
3	2340	6250	1950	276	404	6340	104	1190	118	575	224	705
4	2540	6190	1520	580	384	6260	106	1810	118	575	720	655
5	2540	5530	1120	745	500	8060	108	2630	118	348	1110	512
6	2540	4110	1010	745	376	6470	110	3270	118	236	1230	512
7	2530	3020	2520	745	304	5480	110	3770	118	236	1230	512
8	1350	2210	6770	480	372	2980	110	4180	118	272	1230	512
9	4580	1060	5600	368	456	2320	655	2470	184	328	1230	512
10	10700	328	3710	464	452	2010	1440	2130	785	416	1060	344
11	14300	615	2250	472	452	1810	2140	1830	496	3270	550	244
12	15100	890	3090	472	452	2830	1830	1420	392	1330	100	244
13	15000	1180	5180	464	392	8530	1110	1040	320	795	100	244
14	12900	1140	4560	464	192	10000	1060	805	685	545	1280	236
15	8650	1350	3130	464	570	5170	1060	630	905	605	6580	236
16	7510	1740	2140	885	575	3710	1060	488	1380	448	2470	144
17	7520	2230	1970	1010	810	2570	895	550	905	216	2220	1740
18	7480	2510	1500	850	1060	2100	725	550	710	150	6730	1870
19	7130	2490	1200	850	1060	3020	725	555	545	150	3170	945
20	4470	2470	1200	850	1060	3010	725	424	252	735	2280	945
21	890	1970	990	845	1070	2490	725	360	725	1190	1700	945
22	1200	1350	830	755	1510	2280	675	352	840	1190	1110	945
23	2430	1490	815	580	2020	3030	528	352	635	1180	595	945
24	2430	1740	815	575	2680	3180	585	352	575	1180	2340	945
25	2430	1430	815	575	6730	2530	655	352	765	1000	6320	945
26	5580	1090	880	575	9470	1380	655	352	1600	2540	2970	945
27	8570	1150	970	575	9910	780	655	352	1380	2070	1980	945
28	8510	1900	930	472	10400	565	695	252	1360	1110	1460	945
29	5450	2280	780	340	---	184	975	150	1900	805	1410	945
30	2170	2750	424	428	---	104	1100	120	2210	680	925	945
31	3480	---	605	565	---	104	---	120	---	785	1080	---
TOTAL	176840	75053	64904	18491	54533	120947	21529	36086	20493	27185	56344	22537
MEAN	5705	2502	2094	596	1948	3902	718	1164	683	877	1818	751
MAX	15100	6310	6770	1010	10400	10700	2140	4180	2210	3270	6730	1870
MIN	890	328	424	276	192	104	104	120	118	150	100	144

CAL YR 1976 TOTAL 690768 MEAN 1887 MAX 15100 MIN 80 MEAN† 1885 CFSM† 2.34 IN† 31.85
WTR YR 1977 TOTAL 694942 MEAN 1904 MAX 15100 MIN 100 MEAN† 1918 CFSM† 2.39 IN† 32.44

† Adjusted for change in contents in Summersville Lake.

KANAWHA RIVER BASIN

03189650 COLLISON CREEK NEAR NALLEN, WV

LOCATION.--Lat 38°10'35", long 80°52'07", Nicholas County, Hydrologic Unit 05050005, on right bank 10 ft (3 m) upstream from culvert on U.S. Highway 19, 80 ft (24 m) upstream from unnamed tributary, 4.5 mi (7.2 km) north of Nallen, and at mile 3.2 (5.1 km).

DRAINAGE AREA.--2.78 mi² (7.20 km²).

PERIOD OF RECORD.--Annual maximum, water year 1966. October 1966 to September 1977 (discontinued).

GAGE.--Water-stage recorder and culvert control. Metal weir since Oct. 7, 1966. Altitude of gage is 1,830 ft (558 m), from topographic map. Prior to Oct. 7, 1966, SR recorder at same site and datum.

REMARKS.--Records poor. No gage height record May 28 to June 29. Recording rain gage at station. Rainfall records collected at site since October 1966 are contained in files of U.S. Geological Survey with only monthly totals published in this report.

AVERAGE DISCHARGE.--11 years, 4.71 ft³/s (0.133 m³/s), 23.01 in/yr (584 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 342 ft³/s (9.69 m³/s) June 2, 1974, gage height, 9.81 ft (2.990 m), from rating curve extended above 120 ft³/s (3.4 m³/s) on basis of culvert rating computation; no flow Sept. 15-27, 1967.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 70 ft³/s (2.0 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)
Oct. 9	0115	*227	6.43	8.59	2.618	Aug. 14	1245	93	2.63	5.62	1.713
Feb. 24	1330	90	2.55	5.66	1.725	Aug. 24	1530	82	2.32	5.30	1.615
Apr. 5	0230	94	2.66	5.77	1.759						

Minimum daily discharge, 0.01 ft³/s (<0.001 m³/s) June 3, 4, 8, 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	17	.20	.04	.08	6.7	.38	1.4	.02	.15	.38	.48
2	11	12	.12	.04	.07	3.4	.38	1.6	.02	.08	.26	.32
3	5.0	8.4	.08	.04	.07	2.5	.48	1.1	.01	.06	.10	.26
4	2.5	5.0	.06	.03	.11	6.4	27	3.4	.01	.06	.10	.26
5	1.4	2.5	.05	.04	.20	7.6	66	3.6	.02	.05	.08	.20
6	.58	1.1	.03	.04	.19	4.4	27	4.1	.03	.05	.06	.15
7	6.4	.38	16	.04	.18	3.0	14	4.7	.02	.05	.26	.10
8	63	.15	18	.04	.17	1.9	7.3	7.3	.01	.04	2.5	.08
9	136	.06	9.9	.04	.17	1.4	3.0	4.7	.05	.03	8.4	.08
10	39	.06	6.1	.04	1.4	.95	1.1	3.2	.03	6.4	2.3	.06
11	18	.05	4.7	.05	2.0	.95	.32	2.5	.02	5.5	7.3	.06
12	8.7	.04	9.3	.05	18	.48	.08	2.1	.01	.95	3.0	.06
13	3.6	.03	15	.05	43	16	.05	1.9	.04	.48	21	.06
14	1.7	.02	9.6	.06	38	11	.04	1.7	.18	.32	49	.06
15	.32	.02	5.8	1.0	23	6.4	.06	1.6	.10	.20	21	.06
16	.06	.03	3.0	3.0	20	3.8	.38	1.4	.04	.10	8.7	.06
17	.06	.02	1.1	2.6	16	2.1	.58	1.3	.23	.08	17	.15
18	.05	.04	.20	2.4	14	4.7	.95	1.1	.20	.06	28	.08
19	.03	.04	.06	1.0	13	5.0	1.4	.80	.10	.06	13	.20
20	.05	.05	.06	.30	17	4.1	1.4	.38	.04	.06	7.6	.38
21	1.6	.05	.08	.16	17	2.8	1.1	.32	.03	.06	4.7	.32
22	1.6	.04	.04	.09	21	4.4	.95	.26	.05	.06	3.2	.20
23	1.1	.02	.02	.07	36	3.8	.95	.15	.13	.06	2.1	.10
24	1.9	.02	.02	.07	71	3.6	1.1	2.8	.60	.15	37	.08
25	16	.02	.02	.08	48	3.0	1.3	1.9	2.0	7.0	29	.08
26	34	.02	.02	.08	27	1.9	.95	.06	1.4	4.4	12	.08
27	18	.03	.02	.07	24	1.6	1.4	.04	.40	.95	5.5	.10
28	11	.04	.02	.07	13	1.1	.95	.03	.70	.38	3.0	.08
29	6.4	.20	.04	.10	---	.95	2.3	.03	1.1	.38	1.6	.08
30	5.0	.26	.04	.09	---	.69	1.6	.03	.38	.95	1.3	.08
31	17	---	.05	.08	---	.48	---	.04	---	.69	.80	---
TOTAL	436.05	47.65	99.73	11.86	447.64	117.10	164.50	55.54	7.97	29.86	290.24	4.36
MEAN	14.1	1.59	3.22	.38	16.0	3.78	5.48	1.79	.27	.96	9.36	.15
MAX	136	17	18	3.0	71	16	66	7.3	2.0	7.0	49	.48
MIN	.03	.02	.02	.03	.07	.48	.04	.03	.01	.03	.06	.06
CFSM	5.07	.57	1.16	.14	5.76	1.36	1.97	.64	.10	.35	3.37	.05
IN.†	5.83	.64	1.33	.16	5.99	1.57	2.20	.74	.11	.40	3.88	.06
IN.‡	---	1.28	3.10	1.55	1.93	3.49	4.35	---	---	5.54	8.54	1.99

CAL YR 1976 TOTAL 1512.15 MEAN 4.13 MAX 136 MIN .01 CFSM 1.49 IN†20.23
WTR YR 1977 TOTAL 1712.54 MEAN 4.69 MAX 136 MIN .01 CFSM 1.69 IN†22.91

† Runoff.

‡ Rainfall.

KANAWHA RIVER BASIN

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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 the period Dec. 21 to Feb. 22, which are poor. Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--11 years, 764 ft³/s (21.64 m³/s), 28.42 in/yr (722 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).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,000 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)
Oct. 9	1000	12100	343	11.53	3.514	Apr. 5	0700	*12300	348	11.60	3.536
Feb. 24	2000	8720	247	10.29	3.136						

Minimum discharge, 26 ft³/s (0.74 m³/s) July 20-22; minimum gage height, 2.84 ft (0.866 m), July 21, 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1460	1890	480	220	100	2420	369	772	81	336	89	163
2	1230	1600	560	200	100	1630	340	651	85	267	69	134
3	733	1250	450	180	95	1160	349	533	76	207	56	141
4	506	982	380	170	95	1060	2290	988	62	159	99	130
5	359	747	350	160	90	1930	11100	1130	55	130	94	175
6	271	596	330	160	85	1780	7490	1460	53	112	61	406
7	278	498	1280	150	80	1390	4140	1200	61	97	60	327
8	3000	429	2560	150	75	1030	2210	1020	73	85	73	230
9	10700	377	1920	140	75	810	1560	790	87	72	98	183
10	6500	368	1470	140	80	700	1160	623	153	72	114	142
11	3680	418	1210	140	110	640	877	506	162	103	154	117
12	2140	427	1170	130	190	615	676	417	104	66	168	96
13	1310	392	1770	130	350	1710	564	357	81	59	247	80
14	877	351	1590	130	700	2750	490	313	103	51	1570	70
15	583	336	1240	120	850	2080	445	278	184	43	1320	71
16	439	346	1010	120	750	1500	390	242	277	39	730	72
17	370	339	821	120	690	1060	345	207	186	34	766	92
18	352	350	661	120	620	870	311	181	133	31	1510	102
19	316	366	543	110	620	1010	287	163	114	28	911	99
20	285	371	489	110	620	950	301	148	97	27	605	91
21	370	376	488	120	600	892	284	139	97	26	422	110
22	555	369	320	130	620	975	262	119	91	28	293	109
23	517	341	290	140	728	1450	245	105	119	30	224	85
24	485	290	260	150	3800	1380	258	104	175	28	493	73
25	951	280	230	140	6660	1170	327	112	296	35	1110	65
26	2870	310	210	140	5410	945	333	99	997	99	670	60
27	2320	415	200	140	4550	752	339	98	743	167	436	56
28	1640	598	220	140	3790	634	343	91	516	89	313	54
29	1190	679	250	120	---	553	695	78	468	59	240	53
30	937	672	260	110	---	477	927	70	430	62	192	50
31	1580	---	260	110	---	420	---	75	---	76	202	---
TOTAL	48804	16763	23272	4340	32533	36743	39707	13069	6159	2717	13389	3636
MEAN	1574	559	751	140	1162	1185	1324	422	205	87.6	432	121
MAX	10700	1890	2560	220	6650	2750	11100	1460	997	336	1570	406
MIN	271	280	200	110	75	420	245	70	53	26	56	50
CFSM	4.31	1.53	2.06	.38	3.18	3.25	3.63	1.16	.56	.24	1.18	.33
IN.	4.97	1.71	2.37	.44	3.32	3.74	4.05	1.33	.63	.28	1.36	.37

CAL YR 1976 TOTAL 243177 MEAN 664 MAX 10700 MIN 28 CFSM 1.82 IN 24.78
WTR YR 1977 TOTAL 241132 MEAN 661 MAX 11100 MIN 26 CFSM 1.81 IN 24.58

KANAWHA RIVER BASIN

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) above mean sea level, adjustment of 1912.

REMARKS.--Records good except those for the period Dec. 27 to Feb. 21, which are poor. Flow regulated since 1965 by Summersville Lake (station 03189590). Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--49 years, 2,690 ft³/s (76.18 m³/s), 27.78 in/yr (706 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, 27,300 ft³/s (773 m³/s) Oct. 9, gage height, 13.35 ft (4.069 m); minimum, 184 ft³/s (5.21 m³/s) June 5, gage height, 1.31 ft (0.399 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	4280	8540	3680	900	680	13100	569	2070	221	1890	772	1370	
2	3520	8050	3340	700	600	10800	528	2130	215	1220	530	1020	
3	3090	7550	2420	500	560	7350	537	1720	216	812	329	773	
4	3040	7120	2170	549	540	7170	2240	2360	203	684	301	756	
5	2830	6510	1470	1010	640	9480	15200	3590	190	639	1020	623	
6	2710	5090	1430	985	560	10300	9600	4650	200	393	1200	762	
7	2740	3830	2530	985	420	7460	5570	4940	192	361	1190	852	
8	6010	2790	10100	700	470	4250	3030	5660	196	346	1230	711	
9	20200	1960	7820	580	580	3320	2170	4340	246	376	1220	654	
10	18000	914	6090	660	600	2830	2560	2930	638	407	1220	608	
11	17900	651	3750	660	650	2470	3020	2350	659	2550	977	402	
12	17000	1260	4100	640	750	3040	2910	2030	574	1860	381	365	
13	15800	1420	7090	640	850	9620	1790	1490	446	1020	347	346	
14	14100	1570	6960	640	1000	13800	1600	1190	460	572	1770	333	
15	9370	1400	5120	700	1600	7720	1530	954	808	569	8230	326	
16	7590	2020	3550	1000	1500	5680	1460	718	1510	567	3870	327	
17	7500	2260	2950	1200	1600	3970	1370	716	1260	401	2320	807	
18	7430	2760	2550	1100	1800	3150	1030	702	800	252	8060	2340	
19	7400	2760	1820	1100	1800	3920	995	682	737	195	4690	1000	
20	5300	2750	1750	1100	1800	4300	1020	658	484	190	3050	987	
21	1770	2500	1720	1000	1900	3480	994	514	435	988	2250	962	
22	1460	1850	1230	1000	2080	3460	959	490	870	1100	1620	971	
23	2610	1590	1170	800	3640	4230	804	480	835	1090	887	944	
24	2830	1970	1150	780	8550	4890	790	476	600	1100	1510	928	
25	3350	1810	1120	780	14400	4080	927	481	854	1250	8260	917	
26	8710	1460	1150	780	15400	2870	963	470	2020	2030	4050	914	
27	11300	1370	1200	780	14700	1750	970	458	2410	2530	2870	907	
28	10200	2120	1200	700	14100	1430	972	452	1610	1380	1470	901	
29	8120	2900	1000	520	---	996	1400	331	2190	903	1920	898	
30	3400	3170	750	560	---	741	1960	242	2640	656	1090	900	
31	4400	---	639	720	---	638	---	209	---	752	1040	---	
TOTAL	233960	91945	93019	24769	93770	162295	69468	50483	24719	29083	69674	24604	
MEAN	7547	3065	3001	799	3349	5235	2316	1628	824	938	2248	820	
MAX	20200	8540	10100	1200	15400	13800	15200	5660	2640	2550	8260	2340	
MIN	1460	651	639	500	420	638	528	209	190	190	301	326	
CAL YR 1976 TOTAL	971140	MEAN	2653	MAX	21700	MIN	173	MEAN†	2651	CFSM†	2.02	IN†	27.50
WTR YR 1977 TOTAL	967789	MEAN	2651	MAX	20200	MIN	190	MEAN†	2665	CFSM†	2.03	IN†	27.56

† Adjusted for change in contents in Summersville Lake.

KANAWHA RIVER BASIN

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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) above mean sea level. 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 except those for January, which are poor. Flow regulated by Claytor Lake (station 03169000) since 1939, by Bluestone Lake (station 03179800) since 1949, and by Summersville Lake (station 03189590) since 1965. Corps of Engineers gage-height telemeter and Appalachian Power Co. remote sender at station.

AVERAGE DISCHARGE.--100 years, 12,500 ft³/s (354.0 m³/s), 20.29 in/yr (515 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, 120,000 ft³/s (3,400 m³/s) Apr. 5, gage height, 19.41 ft (5.916 m); minimum, 1,690 ft³/s (47.9 m³/s) July 19, gage height, 2.04 ft (0.622 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11700	24500	13800	6000	3800	35100	9230	11400	4220	6910	3400	3430
2	11400	25400	12700	4500	4200	29000	8980	11400	5530	5980	2400	3380
3	11700	21800	9610	3600	4400	22300	9670	8430	4270	4930	2060	3130
4	7880	19200	9970	4430	4910	20800	23700	11300	4160	3660	2690	3430
5	6810	17100	7880	6930	5600	21400	106000	12800	4090	3310	3080	3890
6	6970	14200	6960	6970	4000	24300	77200	15000	3460	4450	3670	3720
7	6530	11800	10700	7440	3600	21200	61200	17300	3060	4480	3080	3360
8	9590	9160	41300	7000	4070	20600	61600	17700	3250	3750	3120	2760
9	69200	8280	41800	5600	4500	15700	60200	14000	4120	3360	3130	6160
10	86100	8280	30100	4800	5000	15200	58100	11400	4910	3040	3110	7100
11	76900	7030	20600	4360	5530	12600	50800	11300	4280	4680	3730	7720
12	67200	7060	17500	5400	7780	10900	41500	9410	5190	5010	3900	5910
13	53500	8260	21500	4590	10600	18400	22600	8490	3390	4980	4490	3530
14	31100	8100	21400	6070	11500	52300	13200	6350	2710	4760	7590	3310
15	21200	6740	19100	5800	13700	49900	13000	5250	5020	5250	14400	3470
16	16200	7130	14400	5500	14600	37000	12300	4940	5690	5670	8970	2760
17	14400	7910	14200	5200	14500	25100	11700	5430	5120	4450	7250	2890
18	12200	8690	13000	5990	13200	21300	7930	6540	5060	3060	14800	5450
19	12100	10000	11500	6600	11700	20800	8570	4730	5730	1770	10600	4140
20	13000	8860	7910	6200	9740	14600	10200	4800	4970	2560	8530	3320
21	12300	8210	8650	5800	8760	20000	8870	4770	5190	3890	7040	4220
22	11800	7050	9700	5200	8690	21300	7370	4490	5040	3410	5340	4390
23	13900	8300	7580	4600	12400	24400	8580	4100	5170	2890	4130	4360
24	10500	8870	6870	3900	26200	24200	8500	4290	5410	3310	4770	4270
25	9490	6520	7710	4500	58600	19700	8350	4900	7080	3800	12900	4380
26	28400	7890	5480	5190	63800	16500	8960	5320	10300	4170	7810	3400
27	49100	4870	5260	5740	49700	13200	9050	4880	9260	4730	6740	2930
28	34800	8560	6410	5230	41800	12100	9300	5710	6070	3440	5220	3390
29	25400	7480	7850	6200	---	9300	10600	4310	6890	3690	4870	3600
30	15800	11700	8790	4600	---	10200	11200	3460	7880	3610	3860	4400
31	16900	---	7880	3500	---	9360	---	2860	---	3320	3380	---
TOTAL	774470	318950	428110	167440	426880	668760	758460	247060	156520	126320	180060	122200
MEAN	24980	10630	13810	5401	15250	21570	25280	7970	5217	4075	5808	4073
MAX	86100	25400	41800	7440	63800	52300	106000	17700	10300	6910	14800	7720
MIN	6530	4870	5260	3500	3600	9300	7370	2860	2710	1770	2060	2760
CAL YR 1976 TOTAL		4306330	MEAN 11770	MAX 86100	MIN 2280	CFSM 1.41	IN 19.14					
WTR YR 1977 TOTAL		4375230	MEAN 11990	MAX 106000	MIN 1770	CFSM 1.43	IN 19.45					

KANAWHA RIVER BASIN

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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 to September 1977.

COOPERATION.--Records were furnished by Appalachian Electric Power Company.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum daily during period July to September, 29.5°C July 20, 21; minimum daily, 21.5°C Aug. 21, Sept. 30.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										22.0	24.0	24.0
2										22.0	23.5	24.5
3										22.0	25.5	26.0
4										22.0	25.5	26.5
5										23.5	26.0	28.0
6										25.5	26.5	27.0
7										26.0	26.5	26.5
8										26.5	26.5	25.0
9										27.0	28.0	26.5
10										26.5	26.5	25.5
11										25.0	25.5	24.5
12										25.5	26.0	24.0
13										26.0	25.0	22.0
14										25.5	24.0	24.5
15										28.0	24.5	24.5
16										28.0	24.0	23.0
17										27.0	22.0	23.5
18										28.0	---	23.0
19										29.0	---	23.5
20										29.5	22.0	23.0
21										29.5	21.5	23.0
22										29.0	23.0	---
23										28.5	23.0	22.0
24										28.0	23.0	22.0
25										28.0	23.0	23.0
26										25.5	22.0	22.0
27										23.5	22.0	22.0
28										24.0	22.0	22.0
29										23.5	22.0	22.0
30										23.5	25.0	21.5
31										24.0	25.0	---
MONTH										26.0	24.0	24.0

KANAWHA RIVER BASIN

03193770 KANAWHA RIVER AT CABIN CREEK, WV

LOCATION.--Lat 38°11'58", long 81°28'41", Kanawha County, Hydrologic Unit 05050006, at the Appalachian Electric Power Company, Cabin Creek steam electric cooling water intakes, at Cabin Creek.

DRAINAGE AREA.--8,661 mi² (22,432 km²).

PERIOD OF RECORD.--Water years 1951 to June 1977 (discontinued).

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1950 to September 1972.

COOPERATION.--Records were furnished by the Appalachian Electric Power Company.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum daily, 33.0°C on several days in August 1955 and 1959; minimum daily, -0.5°C Jan. 6, 1977.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	9.0	5.0	---	0.5	4.5	14.0	---	25.5			
2	---	16.5	3.5	---	0.5	---	---	15.5	25.5			
3	---	8.5	3.5	1.0	1.0	4.5	---	16.0	---			
4	17.0	8.5	4.0	1.0	---	4.5	15.5	17.0	---			
5	18.5	8.5	---	---	1.0	---	13.5	18.0	---			
6	17.0	8.0	3.5	-0.5	---	---	11.0	17.0	---			
7	18.5	---	3.5	0.5	1.0	---	9.5	---	---			
8	18.0	7.0	3.5	1.0	1.0	---	---	---	---			
9	---	7.0	3.5	---	1.0	5.5	---	17.0	---			
10	---	6.5	---	1.0	1.0	8.0	---	---	---			
11	14.5	6.5	3.5	0.0	---	---	---	16.0	---			
12	20.5	---	---	0.5	---	---	---	15.5	---			
13	15.0	6.5	4.5	0.0	---	---	13.0	---	---			
14	15.0	---	4.0	0.0	---	---	---	---	---			
15	14.5	5.5	4.0	---	3.0	---	---	---	---			
16	14.5	---	4.0	---	0.0	---	---	18.5	---			
17	---	5.0	4.5	---	---	10.0	---	20.0	24.0			
18	14.5	5.5	---	0.0	0.0	---	15.5	---	---			
19	14.0	5.5	---	---	---	---	18.0	---	---			
20	---	6.0	4.0	0.0	---	---	18.5	22.0	24.0			
21	13.5	---	4.0	0.5	0.5	---	18.5	---	24.0			
22	13.0	5.5	3.5	0.0	0.5	---	18.5	---	24.0			
23	---	5.5	3.5	---	---	8.5	---	24.0	25.0			
24	---	5.5	3.0	---	---	8.5	---	24.0	---			
25	---	---	3.5	0.0	5.0	8.5	19.0	24.0	---			
26	11.0	---	---	0.0	---	8.0	18.5	24.5	---			
27	---	---	---	1.0	---	---	17.0	25.0	---			
28	10.0	---	---	0.5	---	9.0	16.5	---	23.5			
29	9.5	---	---	0.0	---	10.5	16.0	---	23.5			
30	---	5.0	---	0.5	---	---	---	---	23.5			
31	---	---	---	0.5	---	13.5	---	25.5	---			
MONTH	---	---	---	---	---	---	---	---	---			

KANAWHA RIVER BASIN

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03193830 GILMER RUN NEAR MARLINTON, WV

LOCATION.--Lat 38°19'12", long 80°05'52", Pocahontas County, Hydrologic Unit 05050007, on left bank 8.0 ft (2.4 m) upstream from culvert on Forest Service Road 251, and 6.8 mi (10.9 km) north of Marlinton.

DRAINAGE AREA.--1.80 mi² (4.66 km²).

PERIOD OF RECORD.--June 1968 to September 1977 (discontinued).

REVISED RECORDS.--WDR WV-72: 1969-71(P).

GAGE.--Water-stage recorder and concrete dam and culvert control. Altitude of gage is 3,120 ft (951 m), from topographic map.

REMARKS.--Records fair except those for the period Dec. 22 to Feb. 22, which are poor.

AVERAGE DISCHARGE.--9 years, 3.96 ft³/s (0.112 m³/s), 29.88 in/yr (759 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 780 ft³/s (22.1 m³/s) Oct. 8, 1976, gage height, 9.05 ft (2.758 m), from floodmarks, from rating curve extended above 120 ft³/s (3.4 m³/s) on basis of culvert rating computation; minimum daily, 0.01 ft³/s (<0.001 m³/s) July 12, Sept. 30, Oct. 1, 1968, July 4, 1969, Aug. 8, 1970, Sept. 21-26, 1972, Aug. 3, 23-30, 1975, Sept. 9, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 80 ft³/s (2.3 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)
Oct. 8	2130	*780	22.1	9.05	2.758	Apr. 4	2245	151	4.28	5.52	1.682
Feb. 24	1445	97	2.75	5.11	1.558	Apr. 20	1700	155	4.39	5.55	1.692
Mar. 13	0300	315	8.92	6.59	2.009	Sept. 7	1630	101	2.86	5.14	1.567

a From floodmarks.

Minimum discharge, 0.03 ft³/s (0.001 m³/s) July 23-25, gage height, 3.63 ft (1.106 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.0	5.8	2.4	.30	.15	5.1	1.3	1.4	.13	.55	.23	.55
2	3.0	3.1	2.1	.30	.15	3.3	1.2	1.4	.10	.35	.16	4.1
3	3.0	2.3	1.7	.30	.15	2.6	1.6	1.4	.08	.23	.16	2.9
4	1.7	1.7	1.3	.25	.15	18	59	1.8	.06	.19	.13	1.3
5	.99	1.5	1.2	.25	.15	13	52	2.4	.06	.16	.10	1.0
6	.67	1.4	.91	.25	.10	7.2	10	2.6	.31	.19	.08	.83
7	7.0	1.2	33	.25	.10	4.6	6.5	2.9	.16	.13	.08	10
8	153	1.1	7.5	.25	.10	3.1	5.8	2.4	.10	.69	.19	8.5
9	86	1.0	4.8	.25	.10	2.9	4.3	1.8	1.1	.23	.23	3.8
10	9.2	1.5	3.6	.25	.10	3.1	3.1	1.6	.45	2.8	.13	2.1
11	4.1	2.1	3.8	.20	.15	3.3	2.6	1.3	.23	2.0	.23	1.3
12	2.4	1.6	6.5	.20	.15	5.3	2.1	1.0	.62	1.2	.23	1.0
13	1.0	1.3	5.3	.20	.15	51	1.8	.83	.27	.69	2.8	.90
14	1.4	1.2	4.1	.20	.20	8.5	1.7	.76	1.8	.40	5.3	.75
15	.91	1.1	3.1	.20	.20	5.6	1.4	.62	2.0	.23	2.6	.65
16	.69	1.0	2.4	.20	.20	4.6	1.2	.50	.83	.13	1.2	.65
17	.91	1.0	1.8	.20	.20	3.6	1.1	.40	.50	.10	3.3	.60
18	.91	1.1	1.3	.20	.20	4.8	1.0	.31	.40	.08	3.6	.50
19	.76	2.0	1.3	.15	.30	4.6	.91	.31	.31	.06	1.6	.45
20	9.6	2.1	1.3	.15	.35	4.1	11	.27	.55	.04	.83	.90
21	9.6	1.6	1.2	.15	.40	3.6	8.9	.27	1.8	.04	.55	.70
22	3.0	1.4	.80	.15	.55	11	4.6	.19	.83	.04	.40	.55
23	2.1	1.1	.70	.15	7.0	6.8	3.1	.19	.76	.04	.35	.45
24	3.0	1.1	.60	.15	49	4.6	2.8	.19	.55	.03	11	.45
25	10	1.1	.55	.15	19	3.3	2.4	.16	.91	7.8	5.1	.65
26	12	2.3	.50	.15	17	2.8	2.1	.16	1.1	2.8	2.3	10
27	4.1	10	.50	.15	20	2.3	1.8	.16	.62	.83	1.4	4.5
28	2.3	5.6	.45	.15	10	2.1	1.7	.13	.55	.45	.83	2.0
29	1.7	4.8	.45	.15	---	2.0	2.0	.16	1.3	.50	.62	1.5
30	15	3.1	.40	.15	---	1.7	1.6	.31	.83	.76	1.1	1.2
31	20	---	.35	.15	---	1.6	---	.23	---	.35	.91	---
TOTAL	380.04	67.2	95.91	6.20	127.10	200.1	200.61	28.15	19.31	24.09	47.74	64.78
MEAN	12.5	2.24	3.09	.20	4.54	6.45	6.69	.91	.64	.78	1.54	2.16
MAX	153	10	33	.30	49	51	59	2.9	2.0	7.8	11	10
MIN	.67	1.0	.35	.15	.10	1.6	.91	.13	.06	.03	.08	.45
CFSM	6.94	1.24	1.72	.11	2.52	3.58	3.72	.51	.36	.43	.86	1.20
IN.	8.02	1.35	1.98	.13	2.63	4.13	4.14	.58	.40	.50	.99	1.34

CAL YR 1976 TOTAL 1263.51 MEAN 3.45 MAX 153 MIN .01 CFSM 1.92 IN 26.11
WTR YR 1977 TOTAL 1269.23 MEAN 3.48 MAX 153 MIN .03 CFSM 1.93 IN 26.22

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 Salisburg 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 recorder. Altitude of gage is 1,020 ft (311 m), by barometer.

REMARKS.--Water-discharge records good except those for the period Dec. 21 to Feb. 22, which are poor. Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--18 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)	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)
Oct. 9	1330	*15700	445	11.73	3.575	Mar. 13	0700	9720	275	9.70	2.957
Feb. 24	2030	10600	300	10.02	3.054						

Minimum discharge, 52 ft³/s (1.47 m³/s) June 5, 6, gage height, 3.15 ft (0.960 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	940	1760	691	200	190	1840	420	503	78	494	131	357
2	802	1360	520	180	190	1150	384	416	76	365	113	280
3	592	995	484	160	180	818	388	357	65	276	100	242
4	450	764	413	170	180	962	887	359	59	215	93	196
5	345	596	369	190	170	2910	6240	377	54	178	88	164
6	268	476	319	170	170	2010	3140	440	54	172	80	140
7	244	399	1610	160	160	1360	1780	701	67	178	93	139
8	1100	355	2400	150	160	972	1360	1170	80	148	109	131
9	11000	308	1390	150	190	759	1050	901	143	178	138	132
10	5760	308	946	180	250	716	820	670	330	410	138	118
11	2500	375	751	170	350	747	661	515	222	1560	172	102
12	1360	363	863	160	500	937	534	415	163	850	219	93
13	842	319	1530	170	700	4650	444	350	143	634	199	87
14	611	275	1170	200	600	2670	391	304	133	536	762	71
15	458	271	891	250	500	1530	350	272	133	365	1170	71
16	380	273	716	250	430	1060	308	233	190	272	700	95
17	325	259	580	240	370	794	275	202	154	212	967	115
18	307	263	458	230	330	800	251	178	121	172	1640	148
19	271	272	375	230	340	1080	238	163	107	143	912	129
20	247	285	353	220	350	855	228	151	100	117	599	149
21	887	316	310	210	370	760	226	148	121	103	403	260
22	967	311	270	210	390	1020	253	123	184	98	295	201
23	700	280	260	200	886	1530	214	113	157	119	246	138
24	586	236	230	210	5590	1230	205	205	135	97	478	115
25	1490	249	240	220	5560	983	222	151	151	252	908	102
26	3260	310	230	230	3380	785	221	121	400	1770	592	97
27	2020	957	210	240	4250	663	238	105	340	714	422	98
28	1220	1480	230	250	3540	598	260	93	335	400	335	125
29	835	1260	230	230	---	544	623	85	868	248	281	130
30	646	946	240	220	---	475	641	74	746	196	232	110
31	1230	---	230	200	---	490	---	65	---	169	357	---
TOTAL	42643	16621	19499	6250	30276	37698	23252	9960	5909	11641	12972	4335
MEAN	1376	554	629	202	1081	1216	775	321	197	376	418	145
MAX	11000	1760	2400	250	5590	4650	6240	1170	868	1770	1640	357
MIN	244	236	210	150	160	475	205	65	54	97	80	71
CFSM	5.13	2.07	2.35	.75	4.03	4.54	2.89	1.20	.74	1.40	1.56	.54
IN.	5.92	2.31	2.71	.87	4.20	5.23	3.23	1.38	.82	1.62	1.80	.60

CAL YR 1976	TOTAL	226967	MEAN	620	MAX	11000	MIN	26	CFSM	2.31	IN	31.50
WTR YR 1977	TOTAL	221056	MEAN	606	MAX	11000	MIN	54	CFSM	2.26	IN	30.68

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.

TURBIDITY: January 1974 to March 1975.

INSTRUMENTATION.--Temperature recorder since Feb. 13, 1974.

REMARKS.--No temperature record for Dec. 14, 1976 to Jan. 13, 1977 and June 16 to Sept. 30, 1977.

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.

REVISIONS.--Temperature records for the period July to September 1976 have been revised as shown below, superseding values previously published in WV-76-1.

TEMPERATURE (DEG. C) OF WATER, JULY TO SEPTEMBER 1976

JULY		AUGUST		SEPTEMBER	
MAX	MIN	MAX	MIN	MAX	MIN
24.0	21.5	21.5	20.0	23.0	20.0
22.5	20.5	21.0	19.5	23.0	20.5
21.5	20.0	21.0	18.5	23.5	21.0
22.5	20.5	22.0	19.5	24.0	21.0
24.0	20.0	22.0	20.5	24.5	21.0
22.0	21.5	23.0	21.5	24.5	20.0
22.0	21.0	23.5	22.5	24.5	19.0
22.0	21.0	22.5	20.5	25.0	20.0
25.5	21.0	21.5	20.0	25.0	20.5
23.0	23.0	23.0	20.5	23.5	20.5
25.0	23.0	24.5	20.5	20.5	18.5
24.5	22.0	25.5	21.5	20.5	18.0
22.5	21.0	26.0	23.0	22.0	18.5
23.0	20.0	24.5	23.0	22.0	20.0
25.0	22.0	24.0	22.0	21.0	20.0
24.5	23.0	25.5	22.0	20.5	19.5
23.0	20.0	25.5	21.0	20.5	19.5
21.5	19.0	25.5	21.0	20.5	19.5
22.0	19.5	26.0	21.5	23.0	19.5
22.0	21.0	26.5	21.0	20.5	19.5
25.5	23.0	25.5	21.0	22.5	19.5
25.0	24.5	27.0	21.0	21.0	18.0
25.5	22.0	26.5	21.5	20.0	16.5
24.5	13.0	27.0	22.0	20.0	17.5
19.0	18.0	28.5	23.5	22.0	19.0
20.0	18.0	28.5	24.0	20.5	19.0
21.0	19.0	26.0	24.5	20.0	19.5
21.5	20.0	25.0	23.5	19.5	18.0
---	---	26.5	23.0	18.0	17.5
---	---	25.0	21.0	18.0	16.0
20.5	19.5	24.5	20.0	---	---
25.5	18.0	26.5	18.5	25.0	16.0

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 current year.

GAGE.--Water-stage recorder. Datum of gage is 1,078.00 ft (328.574 m) above mean sea level.

REMARKS.--Records good except those for the period Dec. 21 to Feb. 22, 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)	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)
Oct. 9	1230	*2940	83.3	10.62	3.237	Apr. 5	0515	1370	38.8	7.93	2.417
Feb. 24	1730	1310	37.1	7.82	2.384						

Minimum discharge, 2.5 ft³/s (0.071 m³/s) Aug. 6, 7; minimum gage height, 2.86 ft (0.872 m) July 21, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	258	242	111	31	28	127	52	72	7.7	4.9	6.5	14
2	148	215	96	26	27	92	52	59	6.7	34	5.0	11
3	92	151	74	23	26	75	62	50	6.9	24	4.1	12
4	70	109	71	25	25	99	202	64	7.0	18	3.3	9.8
5	51	83	57	26	25	131	1010	62	5.8	15	2.8	8.1
6	39	66	52	24	24	128	412	59	6.3	14	2.6	7.4
7	39	56	303	23	23	110	221	111	8.3	12	3.0	7.0
8	369	49	402	22	23	91	159	198	7.0	10	6.0	9.5
9	2260	42	214	22	23	77	121	146	35	10	9.8	8.5
10	974	43	139	25	30	66	101	99	30	10	7.8	6.0
11	309	39	110	24	40	56	84	75	17	21	29	5.4
12	152	38	116	23	80	50	70	58	14	21	17	4.6
13	93	34	158	26	100	266	60	47	14	18	14	4.5
14	67	30	155	28	90	248	54	40	10	18	123	7.0
15	50	33	124	29	70	163	49	34	11	12	98	8.0
16	44	33	101	32	60	115	43	28	9.6	8.8	46	7.2
17	36	31	82	34	55	89	39	23	7.8	7.0	177	10
18	31	35	64	33	50	121	36	20	6.7	5.9	206	9.5
19	26	36	53	33	50	146	34	19	6.5	5.0	80	20
20	27	37	55	32	52	132	36	17	6.7	4.4	45	27
21	81	37	46	31	55	104	33	30	19	4.1	31	20
22	93	39	40	30	60	113	29	19	17	4.3	23	15
23	77	35	35	29	371	116	28	16	12	4.0	19	14
24	74	30	34	30	1040	133	29	34	11	4.5	31	11
25	107	36	34	31	641	126	31	31	32	39	39	9.4
26	420	61	33	32	381	104	29	23	60	70	25	9.0
27	271	150	31	32	338	87	35	18	40	26	20	9.3
28	157	137	33	32	208	78	32	15	34	16	17	12
29	107	142	33	31	---	66	80	12	112	11	14	12
30	89	127	34	30	---	60	84	10	81	11	12	8.8
31	153	---	33	29	---	59	---	9.1	---	9.4	18	---
TOTAL	6764	2196	2923	878	3995	3428	3307	1498.1	642.0	516.4	1134.9	317.0
MEAN	218	73.2	94.3	28.3	143	111	110	48.3	21.4	16.7	36.6	10.6
MAX	2260	242	402	34	1040	266	1010	198	112	70	206	27
MIN	26	30	31	22	23	50	28	9.1	5.8	4.0	2.6	4.5
CFSM	4.27	1.43	1.85	.55	2.80	2.17	2.15	.95	.42	.33	.72	.21
IN.	4.92	1.60	2.13	.64	2.91	2.50	2.41	1.09	.47	.38	.83	.23

CAL YR 1976 TOTAL 33749.3 MEAN 92.2 MAX 2260 MIN 1.8 CFSM 1.80 IN 24.57
WTR YR 1977 TOTAL 27599.4 MEAN 75.6 MAX 2260 MIN 2.6 CFSM 1.48 IN 20.09

KANAWHA RIVER BASIN

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 current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,190 ft (363 m), from topographic map.

REMARKS.--Records good except those for the period Dec. 21 to Feb. 22, which are poor. Corps of Engineers gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,800 ft³/s (79.3 m³/s) Oct. 9, 1976, gage height, 11.22 ft (3.420 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)	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)
Oct. 9	1145	*2800	79.3	11.22	3.420	Apr. 5	0430	1210	34.3	8.97	2.734
Feb. 24	1745	1380	39.1	9.30	2.835						

Minimum discharge, 3.8 ft³/s (0.108 m³/s) June 5, gage height, 4.33 ft (1.320 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	321	273	114	34	30	227	57	71	5.2	56	14	17
2	216	233	97	30	29	135	55	65	4.6	39	12	15
3	146	158	75	26	28	103	66	55	4.6	27	9.7	18
4	109	115	72	24	27	190	236	52	4.9	20	8.1	15
5	80	86	60	28	26	320	995	51	4.1	17	7.1	12
6	63	71	55	26	25	236	530	49	5.8	19	6.1	11
7	60	61	364	25	25	163	302	192	9.4	15	12	10
8	386	54	436	24	25	120	242	308	6.3	12	15	14
9	2040	47	234	24	25	96	185	192	32	11	32	10
10	1060	49	151	26	31	84	141	123	24	12	19	8.6
11	355	44	121	27	45	74	108	91	13	40	52	7.5
12	170	43	152	25	80	69	86	69	11	29	45	6.7
13	105	38	214	27	110	406	73	57	9.9	22	44	6.1
14	77	34	182	28	95	327	65	48	8.1	17	362	6.3
15	60	37	138	32	80	203	57	39	8.1	13	275	11
16	53	36	107	36	68	141	50	31	7.5	11	107	9.9
17	44	33	85	38	58	104	44	26	6.1	8.8	153	14
18	37	36	69	36	54	139	40	22	5.3	7.5	206	13
19	32	37	60	35	56	165	36	21	4.9	6.1	107	13
20	32	37	61	35	58	153	34	19	12	5.3	64	32
21	80	38	54	34	60	120	33	17	54	5.3	43	21
22	83	40	44	33	66	147	32	15	23	16	31	15
23	74	36	39	32	300	167	31	12	16	11	24	13
24	79	31	37	32	1080	180	34	12	13	7.1	29	11
25	151	38	37	33	830	159	38	15	31	47	32	10
26	422	65	35	35	590	126	35	12	65	151	21	9.9
27	284	180	34	35	638	103	42	11	46	61	17	13
28	166	175	36	34	438	92	40	8.8	42	35	15	16
29	113	169	37	33	---	78	73	7.7	118	24	16	15
30	91	140	37	32	---	71	75	6.7	87	22	15	12
31	152	---	36	31	---	65	---	6.0	---	17	24	---
TOTAL	7141	2434	3273	950	4977	4763	3835	1704.2	681.8	784.1	1817.0	386.0
MEAN	230	81.1	106	30.6	178	154	128	55.0	22.7	25.3	58.6	12.9
MAX	2040	273	436	38	1080	406	995	308	118	151	362	32
MIN	32	31	34	24	25	65	31	6.0	4.1	5.3	6.1	6.1
CFSM	4.78	1.69	2.20	.64	3.70	3.20	2.66	1.14	.47	.53	1.22	.27
IN.	5.52	1.88	2.53	.73	3.85	3.68	2.97	1.32	.53	.61	1.41	.30
CAL YR 1976 TOTAL	37369.1			102	2040	2.1	2.12	28.90				
WTR YR 1977 TOTAL	32746.1			89.7	2040	4.1	1.87	25.32				

KANAWHA RIVER BASIN

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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 at mean sea level.

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, 101,800 acre-ft (126 hm³) Oct. 10, elevation, 945.75 ft (288.265 m); minimum, 3,890 acre-ft (4.80 hm³) Feb. 4, elevation 849.40 ft (258.897 m).

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

Date	Elevation (feet)	Contents (acre-feet)	Change in Contents (acre-feet)	Change in Contents (equivalent in cfs)
Sept. 30.....	916.52	52180	-	-
Oct. 31.....	889.20	24340	-27840	-453
Nov. 30.....	853.78	5170	-19170	-322
Dec. 31.....	853.65	5130	-40	-1
CAL YR 1976	-	-	-4310	-6
Jan. 31.....	849.84	4000	-1130	-18
Feb. 28.....	906.58	40370	+36370	+655
Mar. 31.....	907.94	41860	+1490	+24
Apr. 30.....	924.58	63510	+21650	+364
May 31.....	922.18	59960	-3550	-58
June 30.....	923.35	61670	+1710	+29
July 31.....	922.19	59980	-1690	-27
Aug. 31.....	922.72	60750	+770	+13
Sept. 30.....	914.19	49210	-11540	-194
WTR YR 1977	-	-	-2970	-4

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) above mean sea level. 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 except those for the period Jan. 7 to Feb. 13, which are poor. Flow regulated since 1960 by Sutton Lake (station 03195400).

AVERAGE DISCHARGE.--39 years, 1,123 ft³/s (31.80 m³/s), 28.09 in/yr (713 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, 8,090 ft³/s (229 m³/s) Oct. 11, gage height, 20.09 ft (6.123 m); minimum, 75 ft³/s (2.12 m³/s) June 5, 6, 8, 9-22, Aug. 7, 8, 9, 10, gage height, 10.71 ft (3.264 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2300	2600	1590	490	260	6330	465	456	85	1290	187	493
2	2630	2590	1160	333	260	4510	466	738	81	565	189	494
3	2280	2180	1010	333	260	2330	469	737	80	413	142	442
4	1770	1720	692	377	260	1670	546	735	78	290	113	321
5	1460	1500	576	509	260	2500	621	733	76	230	90	257
6	1440	1080	581	557	260	3770	1520	612	78	163	84	205
7	1160	1050	907	370	260	3800	3650	611	78	110	81	140
8	994	1030	2810	230	260	3270	3620	1860	76	111	79	142
9	565	889	3990	179	240	2610	3570	2160	79	113	76	142
10	2690	796	2740	270	220	1820	3380	1460	75	114	78	139
11	8040	788	1700	340	240	1130	2080	1080	75	1380	136	135
12	7730	785	1570	340	260	1080	1380	880	75	1160	374	114
13	6660	777	1830	330	250	2730	883	680	75	899	430	102
14	4860	770	1980	277	287	5260	672	534	75	703	848	98
15	4270	762	1940	367	557	4240	672	456	75	419	2110	94
16	4160	753	1580	420	567	2390	563	397	75	316	1400	324
17	3580	746	1150	450	708	733	389	326	75	235	931	457
18	3190	735	872	450	847	313	316	264	75	142	1960	512
19	2480	724	649	450	850	324	316	265	75	115	1870	774
20	2410	717	575	450	858	336	315	202	75	117	1130	905
21	2030	759	582	450	855	336	315	157	75	113	641	957
22	1560	854	535	450	1090	354	315	173	204	100	412	872
23	1320	877	477	400	1620	362	315	172	314	100	299	642
24	1320	853	428	370	2210	368	318	176	312	100	204	466
25	1330	868	387	350	4700	568	318	179	320	105	670	315
26	2330	945	498	350	6800	713	317	183	454	1520	692	322
27	3190	1360	573	350	6700	718	317	189	548	1310	390	376
28	3150	2110	575	350	6880	720	318	158	550	666	458	375
29	2910	2290	577	350	---	720	320	124	996	409	493	375
30	2650	2190	573	320	---	680	320	96	1620	294	497	375
31	2650	---	572	270	---	494	---	91	---	228	495	---
TOTAL	89509	36098	35679	11532	38819	57179	29066	16884	6929	13830	17559	11365
MEAN	2887	1203	1151	372	1386	1844	969	545	231	446	566	379
MAX	8040	2600	3990	557	6880	6330	3650	2160	1620	1520	2110	957
MIN	565	717	387	179	220	313	315	91	75	100	76	94

CAL YR 1976 TOTAL 393490 MEAN 1075 MAX 8040 MIN 75 MEAN† 1069 CFSM† 1.97 IN† 26.81
WTR YR 1977 TOTAL 364449 MEAN 998 MAX 8040 MIN 75 MEAN† 994 CFSM† 1.83 IN† 24.84

† Adjusted for change in contents in Sutton Lake.

KANAWHA RIVER BASIN

03195600 GRANNY CREEK AT SUTTON, WV

LOCATION.--Lat 38°40'36", long 80°42'47", Braxton County, Hydrologic Unit 05050007, on right bank 10 ft (3 m) upstream from culvert on U.S. Highway 19, 0.7 mi (1.1 km) upstream from mouth, and 1.0 mi (1.6 km) northwest of Sutton.

DRAINAGE AREA.--6.98 mi² (18.08 km²).

PERIOD OF RECORD.--Annual maximum, water years 1966-67. June 1967 to September 1977 (discontinued).

GAGE.--Water-stage recorder and concrete dam and culvert control. Altitude of gage is 840 ft (256 m), from topographic map. Prior to June 23, 1967, SR recorder at same site and datum.

REMARKS.--Records good except those for the period Dec. 22 to Feb. 20, which are poor. Recording rain gage at station. Rainfall records collected at site since June 1967 are contained in files of U.S. Geological Survey with only monthly totals published in this report.

AVERAGE DISCHARGE.--10 years, 9.61 ft³/s (0.272 m³/s), 18.70 in/yr (475 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,510 ft³/s (42.8 m³/s) June 16, 1975, gage height, 14.03 ft (4.276 m), from rating curve extended above 320 ft³/s (9.1 m³/s) on basis of culvert rating computation; minimum, 0.02 ft³/s (0.001 m³/s) Oct. 1, 2, 1968, gage height, 2.64 ft (0.805 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 300 ft³/s (8.5 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)
Oct. 9	0730	430	12.2	6.83	2.082	Apr. 4	2315	*840	23.8	9.57	2.917

Minimum discharge, 0.07 ft³/s (0.002 m³/s) Aug. 6, 7, gage height, 2.71 ft (0.826 m).

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	17	8.7	4.5	2.7	5.2	1.9	2.1	.19	4.3	.31	.32
2	15	9.8	6.7	4.0	2.6	4.4	1.9	1.8	.15	2.7	.21	.26
3	7.6	7.3	5.6	3.6	2.9	3.7	4.1	2.1	.15	1.4	.19	.20
4	4.5	5.7	4.8	3.3	3.6	5.3	118	2.3	.12	.92	.18	.20
5	2.9	4.5	3.6	3.1	6.5	28	130	1.9	.09	.76	.11	.19
6	2.1	3.6	4.8	3.3	6.0	13	19	16	.20	.60	.09	.15
7	6.6	3.0	8.7	3.7	5.5	8.4	13	9.6	.15	.45	.09	.19
8	7.9	2.5	2.3	3.5	5.0	6.3	9.7	4.9	.15	.50	.15	.20
9	235	2.2	1.2	3.5	4.9	4.9	6.6	3.3	4.8	.50	.49	.20
10	37	2.3	8.4	4.5	6.0	4.0	5.3	2.5	.88	1.1	.22	.15
11	13	2.0	9.7	6.3	8.0	3.0	4.3	2.0	.42	.95	.60	.09
12	7.0	2.1	2.7	5.6	9.5	2.8	3.4	1.6	.36	1.4	1.4	.12
13	4.9	2.0	1.7	5.0	1.5	6.0	2.7	1.4	.34	1.0	1.8	.15
14	3.7	1.8	1.0	4.5	1.2	3.5	2.5	1.3	.26	.52	.39	.12
15	2.7	1.8	7.8	5.0	9.5	1.5	2.2	1.0	.30	.31	1.4	.18
16	2.5	1.7	6.6	4.8	8.5	7.2	1.9	.83	.29	.24	3.3	.42
17	1.9	1.4	5.2	4.5	7.5	5.2	1.7	.73	.20	.20	1.9	.42
18	1.5	1.5	4.0	4.3	6.5	8.8	1.5	.83	.20	.14	2.4	1.7
19	1.4	1.5	3.4	4.0	7.5	6.7	1.4	.86	.20	.11	1.1	.46
20	1.4	1.4	5.6	3.7	9.0	5.6	1.3	.65	.66	.25	.73	.32
21	2.1	1.4	7.6	3.5	1.0	4.6	1.1	.58	5.5	.49	.55	1.2
22	1.4	1.6	6.2	3.2	2.4	1.6	1.0	.51	.70	.92	.43	3.1
23	1.1	1.5	5.4	3.0	3.2	1.3	1.0	.48	.52	.32	.33	1.2
24	2.2	1.5	4.7	2.9	3.2	8.5	1.1	.48	4.4	.18	.33	.69
25	31	3.1	4.4	2.8	1.8	6.2	1.2	.48	1.7	4.4	7.5	.46
26	2.7	7.2	5.0	2.7	1.1	4.9	1.8	.45	5.7	3.4	1.7	.42
27	9.7	6.7	5.6	2.8	8.8	4.3	3.0	.38	2.0	.71	.98	.39
28	6.0	1.5	6.2	2.9	6.6	4.2	6.5	.34	1.9	.40	.66	.43
29	4.5	1.8	6.8	3.0	---	3.6	3.5	.25	3.0	.31	.48	1.9
30	1.3	1.1	5.8	3.0	---	3.0	2.6	.25	4.6	.39	.38	1.2
31	5.1	---	5.0	2.8	---	2.5	---	.24	---	.29	.31	---
TOTAL	612.7	142.1	323.6	117.3	281.1	351.0	355.2	62.14	82.43	30.00	81.92	27.83
MEAN	19.8	4.74	10.4	3.78	10.0	11.3	11.8	2.00	2.75	.97	2.64	.93
MAX	235	18	87	6.3	32	60	130	16	30	4.4	3.9	1.2
MIN	1.1	1.4	3.4	2.7	2.6	2.5	1.0	.24	.09	.11	.09	.09
CFSM	2.84	.68	1.49	.54	1.43	1.62	1.69	.29	.39	.14	.38	.13
IN.†	3.26	.76	1.72	.63	1.50	1.87	1.89	.33	.44	.16	.44	.15
IN.‡	6.34	1.21	1.62	1.93	1.22	---	---	1.19	5.94	3.48	5.65	2.90
CAL YR 1976 TOTAL	3110.65		MEAN 8.50	MAX 235	MIN .15	CFSM 1.22	IN†16.58					
WTR YR 1977 TOTAL	2467.32		MEAN 6.76	MAX 235	MIN .09	CFSM .97	IN†13.15					

† Runoff.

‡ Rainfall.

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) above mean sea level. Prior to Mar. 25, 1959, nonrecording gage at same site and datum.

REMARKS.--Records good except those for the period Dec. 22 to Feb. 18, which are poor. Flow regulated since 1960 by Sutton Lake (station 03195400). Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--19 years, 1,541 ft³/s (43.64 m³/s), 27.83 in/yr (707 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, 14,000 ft³/s (396 m³/s) Oct. 9, gage height, 12.22 ft (3.725 m); minimum, 73 ft³/s (2.07 m³/s) June 4, 5, gage height, 1.79 ft (0.546 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3690	3580	2180	540	340	6970	639	501	89	1740	255	566
2	3520	3310	1460	440	340	5320	630	891	80	900	224	536
3	2880	2920	1340	450	340	3090	702	909	75	590	212	536
4	2220	2140	1020	508	350	2590	1880	927	73	404	144	404
5	1670	1980	783	606	370	3090	6410	927	75	308	120	290
6	1610	1330	774	729	360	4310	2230	882	84	240	91	265
7	1500	1220	2180	540	350	4290	4390	1110	96	179	82	172
8	2850	1190	3430	330	340	3860	4200	2150	96	151	93	168
9	9720	1110	4800	250	360	3080	3990	2820	204	161	140	175
10	4240	963	3750	300	400	2460	3830	2010	208	182	144	154
11	8630	945	2280	450	700	1400	2750	1400	130	1120	147	144
12	8340	936	2220	440	1300	1290	1830	1180	111	1420	350	140
13	7280	918	2430	420	3000	3860	1240	909	104	1090	582	114
14	5410	900	2570	390	3500	6350	909	774	101	927	1710	111
15	4340	891	2450	470	1800	5250	882	582	98	582	2660	111
16	4280	882	2150	540	1200	3400	819	536	117	410	1840	154
17	4100	873	1510	580	1100	1450	566	445	108	308	1720	515
18	3610	855	1220	600	960	783	459	344	101	245	2450	515
19	2630	846	909	600	1220	909	438	332	98	161	2290	882
20	2560	846	801	600	1340	846	459	308	101	151	1580	1170
21	2330	855	828	600	1270	747	452	220	120	151	945	1100
22	1900	954	700	600	1510	882	438	200	120	147	582	1040
23	1490	999	600	540	2750	945	438	208	344	124	431	783
24	1490	972	540	490	4600	873	494	240	398	120	320	675
25	1700	963	470	460	5580	891	480	232	550	151	614	368
26	2960	1050	600	450	7740	1070	445	220	606	1090	810	350
27	3970	1290	828	450	7460	1030	445	212	693	1800	684	386
28	3650	2310	846	450	7260	1010	438	200	675	891	356	424
29	3380	2750	909	450	---	972	550	158	1360	558	522	410
30	3010	2610	837	420	---	945	522	124	1960	392	522	404
31	3800	---	660	360	---	765	---	98	---	296	582	---
TOTAL	114760	43388	48075	15053	57840	74728	43955	22049	8975	16989	23202	13062
MEAN	3702	1446	1551	486	2066	2411	1465	711	299	548	748	435
MAX	9720	3580	4800	729	7740	6970	6410	2820	1960	1800	2660	1170
MIN	1490	846	470	250	340	747	438	98	73	120	82	111

CAL YR 1976 TOTAL 525863 MEAN 1437 MAX 9720 MIN 91 MEAN‡ 1431 CFSM‡ 1.90 IN‡ 25.86
WTR YR 1977 TOTAL 482076 MEAN 1321 MAX 9720 MIN 73 MEAN‡ 1317 CFSM‡ 1.75 IN‡ 23.76

‡ 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 current year. 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) above mean sea level. Prior to Mar. 27 1959, nonrecording gage at same site and datum.

REMARKS.--Records fair except those below 800 ft³/s (22.7 m³/s) and those for the period Dec. 23 to Feb. 19, which are poor. Flow regulated since 1960 by Sutton Lake (station 03195400). Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--19 years, 1,919 ft³/s (54.35 m³/s), 26.22 in/yr (666 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, 28,200 ft³/s (799 m³/s) Oct. 9, gage height, 17.13 ft (5.221 m); minimum, 74 ft³/s (2.10 m³/s) June 5, gage height, 0.56 ft (0.171 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	5450	4660	3020	640	410	7610	1180	696	129	2210	353	525	
2	4650	4140	2170	520	390	6160	841	912	103	1500	341	480	
3	3720	3760	1830	520	380	4080	842	1180	86	713	258	461	
4	2790	2730	1580	580	390	3480	1810	1220	81	510	219	430	
5	2040	2370	1320	680	400	4240	12600	996	76	389	164	331	
6	1830	1820	1150	780	400	4960	4080	940	98	317	148	250	
7	1880	1430	3380	740	380	5180	4710	1310	111	254	138	233	
8	5150	1330	4560	500	380	4800	3840	2350	106	194	126	177	
9	18900	1320	5800	300	400	3870	4760	3600	164	170	144	164	
10	8270	1180	5140	340	500	3360	4620	3000	251	258	164	184	
11	8890	1150	3320	440	1500	2070	3950	2060	184	570	233	144	
12	9180	1040	3100	500	2500	1710	2260	1610	117	1720	250	138	
13	8240	940	3510	460	4300	5660	1660	1230	98	1270	752	129	
14	6580	933	3700	440	4000	7450	1270	1060	88	982	2890	117	
15	4820	1000	3510	520	3000	6700	1190	758	86	713	3310	108	
16	4820	1090	3270	580	2000	4890	1190	550	83	452	2420	108	
17	4540	1130	2420	620	1600	2430	866	475	88	357	2150	222	
18	4240	905	1900	650	1400	1420	636	430	88	278	3100	457	
19	3100	842	1490	660	1700	1540	586	389	86	226	2770	466	
20	2890	870	1390	660	1990	1390	593	403	81	164	2160	1160	
21	2870	884	1390	660	1970	1110	685	361	91	160	1290	1100	
22	2270	1030	1100	640	1910	1300	729	233	101	177	770	1030	
23	1720	1110	850	620	3970	1720	756	229	111	160	505	926	
24	1650	1130	660	580	6330	1540	466	240	328	129	416	657	
25	1830	954	580	540	6510	1510	500	271	426	187	443	555	
26	3440	1040	700	520	8240	1780	466	258	849	591	696	361	
27	4690	1230	840	520	8060	1810	485	240	652	1990	713	285	
28	4290	2350	980	520	7640	1440	495	226	663	1270	530	317	
29	4000	3330	1000	500	---	1230	619	209	1350	740	385	327	
30	3550	3280	900	470	---	1260	696	164	1990	480	480	320	
31	4820	---	780	440	---	1300	---	144	---	345	470	---	
TOTAL	147310	50978	67340	17140	72650	99000	59381	27744	8765	19476	28788	12162	
MEAN	4752	1699	2172	553	2595	3194	1979	895	292	628	929	405	
MAX	18900	4660	5800	780	8240	7610	12600	3600	1990	2210	3310	1160	
MIN	1650	842	580	300	380	1110	466	144	76	129	126	108	
CAL YR 1976 TOTAL	664258	MEAN	1815	MAX	18900	MIN	95	MEAN	1809	CFSM	1.82	IN	24.77
WTR YR 1977 TOTAL	610734	MEAN	1673	MAX	18900	MIN	76	MEAN	1669	CFSM	1.68	IN	22.80

‡ Adjusted for change in contents in Sutton Lake.

KANAWHA RIVER BASIN

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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) above mean sea level. 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 the period Dec. 22 to Feb. 21, which are poor. Flow regulated since 1960 by Sutton Lake (station 03195400). Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--49 years, 2,006 ft³/s (56.81 m³/s), 23.79 in/yr (604 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, 27,500 ft³/s (779 m³/s) Oct. 9, gage height, 17.24 ft (5.255 m); minimum, 65 ft³/s (1.84 m³/s) June 5, gage height, 3.88 ft (1.183 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5640	5330	3030	680	430	7880	974	731	137	2240	494	563
2	5490	4660	2340	560	420	6790	861	695	106	1810	521	563
3	4300	4210	1810	560	430	4940	951	1070	91	960	356	528
4	3260	3340	1570	660	440	4140	2370	1070	79	650	284	521
5	2410	2680	1180	750	450	5130	15600	1140	69	482	235	446
6	1920	2220	945	844	420	5280	6020	1160	79	386	169	356
7	1870	1640	3260	680	420	5630	4920	1350	81	332	169	290
8	4830	1520	5560	400	430	5210	5620	2320	79	255	153	314
9	17300	1440	5800	320	460	4400	5160	3540	137	196	153	205
10	13300	1280	5620	380	510	3690	4870	3230	260	220	201	187
11	7840	1100	4020	540	969	2700	4370	2240	308	528	272	178
12	9190	1070	3350	540	2610	1830	2940	1680	210	1400	332	153
13	8350	1030	3820	500	4270	5740	2130	1380	149	1470	586	141
14	6930	986	3820	520	5220	7950	1560	1090	122	1140	2890	141
15	5270	958	3630	600	4030	7410	1260	930	112	940	4320	129
16	4920	945	3300	650	3370	5660	1170	713	106	626	3010	133
17	4730	923	2640	700	2350	3620	1050	642	99	452	2150	272
18	4480	907	1970	720	1800	2210	800	542	103	368	3400	464
19	3540	900	1540	730	1600	1930	731	464	112	296	3070	570
20	2980	893	1210	740	2200	1750	780	422	103	220	2440	1180
21	2900	874	1140	720	2310	1540	722	404	106	169	1530	1250
22	2440	898	980	680	2180	1470	668	326	109	192	990	1130
23	1940	1000	760	630	4010	2050	642	266	125	187	659	1060
24	1600	1030	640	610	7070	1900	677	255	183	153	542	790
25	1840	1000	600	590	7450	1660	731	260	410	250	528	686
26	3540	1010	680	580	8050	1530	686	296	731	880	650	446
27	4820	1170	900	560	8450	1640	650	266	780	1560	830	392
28	4690	1930	1100	540	8000	1520	642	245	740	1630	731	404
29	4300	3160	1100	500	---	1440	634	230	1020	930	410	440
30	3880	3340	940	470	---	1330	800	215	1920	659	521	434
31	4580	---	810	450	---	1320	---	169	---	482	528	---
TOTAL	159540	53444	70065	18404	80349	111290	70989	29341	8666	22063	33124	14366
MEAN	5017	1781	2260	594	2870	3590	2366	946	289	712	1069	479
MAX	17300	5330	5800	844	8450	7950	15600	3540	1920	2240	4320	1250
MIN	1600	874	600	320	420	1320	634	169	69	153	153	129
CAL YR 1976 TOTAL	728184											
WTR YR 1977 TOTAL	667641											
MEAN 1990												
MEAN 1825												
MEAN† 1984												
MEAN† 1825												
CFSM† 1.73												
CFSM† 1.59												
IN† 23.55												
IN† 21.58												

† 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-stage recorder. Datum of gage is 548.00 ft (167.030 m) above mean sea level (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) above mean sea level (Corps of Engineers bench mark). 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.--38 years, 14,700 ft³/s (416.3 m³/s), 19.16 in/yr (487 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 1,050 ft³/s (29.2 m³/s) during period Oct. 1-5, 1953; minimum gage height, 17.27 ft (5.264 m) July 1, 1963.

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, 142,000 ft³/s (4,020 m³/s) Apr. 5, gage height, 35.66 ft (10.869 m); minimum gage height, 17.55 ft (5.349 m) Jun. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18700	29000	17300	8670	4660	43000	11600	12500	5840	9920	5700	5490
2	18300	31300	16400	5910	4990	37600	10000	12800	6350	8550	4900	5050
3	15900	26900	11500	7050	5190	27900	11400	9680	5680	6630	4850	5830
4	10500	23900	12300	6410	5750	26800	19600	11900	5620	5440	4730	4620
5	8690	20600	10200	8410	6540	29400	130000	13800	5010	5380	4920	6980
6	8800	17300	8820	8730	4910	30800	100000	15300	5880	5930	5570	6920
7	8810	15600	13900	10100	4450	28200	67900	17900	5040	5440	5210	3710
8	18200	13100	45300	8930	4900	27400	69800	19800	5000	5400	5500	4620
9	80900	11100	48500	8870	5360	21400	65300	17500	6580	5150	4730	7120
10	111000	9370	36900	7770	5960	20300	63900	15100	6310	4900	5110	8720
11	87600	9800	26200	7460	7840	16400	56600	13600	5500	6150	6000	9120
12	80100	7630	21800	6340	11500	14000	46100	12000	6280	6060	5850	7070
13	64900	9050	27400	5520	18600	26000	27200	10400	5070	6900	7190	5250
14	42300	9640	26500	7120	20300	55500	15100	8540	4370	5890	15000	5450
15	26500	7510	24800	6990	20300	61400	14000	6860	6220	6440	19900	4610
16	22500	8390	18900	6830	19800	46100	13800	6410	6460	6550	12800	3890
17	19500	9250	18600	6510	18300	29900	13300	6450	6120	5460	9970	5180
18	16700	10200	16200	7230	16500	26600	9700	7620	5300	4280	16200	6660
19	15100	11100	14700	8020	15500	25000	10000	6180	6580	4960	16900	6220
20	15700	10600	11400	7560	14900	18400	10800	5530	5810	4510	11300	5560
21	15700	10100	11500	7240	12500	22800	10300	5520	6790	5360	9680	6200
22	14400	9310	12000	6520	13200	19900	8820	5200	5550	5410	7460	6340
23	15100	9630	10700	5720	18500	27300	9770	5470	5680	4800	6080	5920
24	13500	10200	8830	5070	32900	27800	9740	5430	6340	4470	7560	6170
25	10300	7610	9310	5650	64100	22600	10100	5460	8100	5870	13200	6110
26	23700	9100	8190	6300	73900	19600	9780	6150	10900	5560	9430	5270
27	55200	6650	7470	6800	62000	15900	10200	6170	11100	5640	8120	4980
28	41400	9910	8630	6220	51800	15400	10300	6210	7520	5980	7440	4940
29	31100	11500	10800	7120	---	12200	11400	5400	9350	4560	6220	5570
30	20300	14100	10700	5490	---	12600	12200	4070	10000	5710	5700	5670
31	22700	---	10700	4400	---	12100	---	5010	---	4960	5340	---
TOTAL	954100	389450	536450	216960	545150	820300	868710	289960	196350	178260	258560	175240
MEAN	30780	12980	17300	6999	19470	26460	28960	9354	6545	5750	8341	5841
MAX	111000	31300	48500	10100	73900	61400	130000	19800	11100	9920	19900	9120
MIN	8690	6650	7470	4400	4450	12100	8820	4070	4370	4280	4730	3710

CAL YR 1976 TOTAL 5237200 MEAN 14310 MAX 111000 MIN 2330 CFSM 1.37 IN 18.65
WTR YR 1977 TOTAL 5429490 MEAN 14880 MAX 130000 MIN 3710 CFSM 1.43 IN 19.39

KANAWHA RIVER BASIN

03198450 DRAWDY CREEK NEAR PEYTONA, WV

LOCATION.--Lat 38°07'29", long 81°41'33", Boone County, Hydrologic Unit 05050009, on right bank 75 ft (23 m) upstream from bridge at entrance to Drawdy Cemetery, 1.0 mi (1.6 km) southwest of Peytona, and at mile 1.3 (2.1 km).

DRAINAGE AREA.--7.75 mi² (20.07 km²).

PERIOD OF RECORD.--Annual maximum, water years 1965-68. October 1968 to September 1977 (discontinued).

REVISED RECORDS.--WDR WV-69: 1965-68(M).

GAGE.--Water-stage recorder. Altitude of gage is 770 ft (235 m), from topographic map. Prior to Sept. 21, 1968, SR recorder 100 ft (30 m) downstream at same datum.

REMARKS.--Records fair except those for period Dec. 22 to Mar. 23, which are poor. Recording rain gage at station. Rainfall records collected at site since September 1968 are contained in files of U.S. Geological Survey with only monthly totals published in this report.

AVERAGE DISCHARGE.--9 years, 9.74 ft³/s (0.276 m³/s), 17.07 in/yr (434 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,400 ft³/s (39.6 m³/s) Nov. 27, 1973, gage height, 12.93 ft (3.941 m); minimum daily, 0.02 ft³/s (0.001 m³/s) Aug. 5, 26, 31, Sept. 1, 24, 25, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 282 ft³/s (7.99 m³/s) Apr. 4, gage height, 6.97 ft (2.124 m), no other peak above base of 150 ft³/s (4.2 m³/s); minimum, 0.06 ft³/s (0.002 m³/s) July 20, 21, gage height, 2.69 ft (0.820 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	6.0	1.5	3.5	2.3	11	5.2	5.6	.70	2.6	4.8	.35
2	10	5.0	1.6	3.1	2.3	9.5	5.2	5.2	.70	1.7	1.3	.30
3	3.5	4.5	1.5	3.0	2.2	8.5	5.6	4.5	.62	1.4	.86	.30
4	1.6	3.7	1.5	2.9	2.2	10	81	4.1	.54	1.1	.62	.25
5	.94	3.1	1.5	2.8	2.2	13	118	5.6	.47	.94	.54	3.4
6	.62	2.4	1.8	2.7	2.2	12	44	4.3	.86	.78	.40	1.3
7	2.0	2.0	19	2.7	2.2	10	27	5.0	.47	.70	.35	11
8	6.0	1.7	22	4.7	2.3	9.0	20	4.3	.47	.62	.40	8.0
9	72	1.5	14	2.7	2.3	8.0	16	3.7	2.3	.54	.40	2.9
10	25	1.5	11	2.7	2.7	7.0	13	3.4	.94	1.2	.94	1.8
11	8.8	1.3	10	2.7	3.5	6.5	11	3.1	.70	.86	1.0	1.3
12	4.3	1.4	21	2.7	6.0	10	9.8	2.7	.70	.62	.54	1.0
13	2.9	1.2	28	2.7	17	45	8.8	2.4	.54	.78	4.1	.78
14	2.1	1.0	18	2.8	16	30	8.2	2.3	.54	.40	17	1.2
15	1.6	1.4	14	3.0	14	23	7.5	2.1	.54	.35	3.5	.94
16	1.3	1.0	11	3.5	13	13	7.0	2.0	.40	.30	2.1	2.6
17	1.1	.86	8.9	3.3	12	11	6.3	2.0	.35	.25	14	2.3
18	.94	.86	7.3	3.2	11	12	5.8	1.7	.35	.20	5.4	1.6
19	.86	.78	6.4	3.1	12	12	5.4	1.5	.70	.12	2.3	1.7
20	1.0	.78	7.5	3.0	13	11	5.2	1.4	.47	.08	1.4	2.0
21	.94	.78	6.7	2.9	12	10	4.8	1.3	1.1	.20	.94	1.6
22	.62	.78	3.5	2.8	15	11	4.5	1.2	.54	.78	.70	1.4
23	.54	.78	3.5	2.7	25	10	5.0	1.3	.70	.30	.70	1.1
24	.54	.62	3.5	2.6	34	9.5	5.4	1.3	2.0	.70	7.0	1.1
25	2.6	.62	3.5	2.6	25	9.2	4.8	1.2	6.0	1.3	2.9	1.0
26	5.0	.62	3.7	2.5	20	8.5	4.5	1.1	2.4	1.1	1.8	1.2
27	3.7	.78	4.0	2.5	16	7.7	4.1	.94	1.6	.47	1.2	1.1
28	3.4	1.4	4.2	2.4	13	7.2	7.0	.86	3.5	.30	.86	1.1
29	3.4	1.7	4.5	2.4	---	6.8	8.5	.86	3.2	1.1	.62	.94
30	3.9	1.3	4.0	2.4	---	6.3	6.5	.86	2.1	.86	.47	.94
31	6.8	---	4.3	2.3	---	5.6	---	.86	---	.54	.40	---
TOTAL	210.00	51.36	252.9	86.9	300.4	363.3	465.1	78.68	36.50	23.19	79.54	56.50
MEAN	6.77	1.71	8.16	2.80	10.7	11.7	15.5	2.54	1.22	.75	2.57	1.88
MAX	72	6.0	28	3.5	34	45	118	5.6	6.0	2.6	17	11
MIN	.54	.62	1.5	2.3	2.2	5.6	4.1	.86	.35	.08	.35	.25
CFSM	.87	.22	1.05	.36	1.38	1.51	2.00	.33	.16	.10	.33	.24
IN.†	1.01	.25	1.21	.42	1.44	1.74	2.23	.38	.18	.11	.38	.27
IN.‡	5.40	.94	2.51	3.36	1.12	3.05	3.80	.56	4.08	1.74	4.93	2.97
CAL YR 1976 TOTAL	2500.20		MEAN 6.83	MAX 105	MIN .02	CFSM .88	IN†12.00					
WTR YR 1977 TOTAL	2004.37		MEAN 5.49	MAX 118	MIN .08	CFSM .71	IN† 9.62					

† Runoff.

‡ Rainfall.

KANAWHA RIVER BASIN

173

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) above mean sea level. 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 periods Dec. 22 to Feb. 17 and June 14 to July 19, which are poor.

AVERAGE DISCHARGE.--55 years, 509 ft³/s (14.41 m³/s), 17.59 in/yr (447 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)	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)
Oct. 9	1830	12700	360	17.80	5.425	Aug. 14	1800	6280	178	11.48	3.499
Apr. 5	1100	*22900	649	24.67	7.519						

Minimum discharge, 30 ft³/s (0.85 m³/s) July 21, gage height, 1.73 ft (0.527 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1250	1070	130	200	120	670	245	608	70	170	181	130
2	957	823	160	180	110	530	234	492	67	120	166	110
3	448	645	174	170	120	429	251	415	64	100	108	103
4	266	517	175	150	130	590	2160	331	60	90	84	103
5	195	420	169	160	160	745	17800	312	56	84	71	103
6	151	400	167	170	150	640	4300	420	60	76	64	114
7	150	352	584	180	140	544	1880	417	63	70	60	128
8	1480	318	1720	170	120	456	1280	430	59	64	81	128
9	8290	292	1020	160	130	393	913	344	78	60	84	80
10	4450	283	671	170	150	347	722	285	94	58	76	72
11	1370	283	569	160	200	313	587	249	81	56	297	67
12	759	268	689	150	400	293	481	222	70	78	199	63
13	520	201	1050	140	900	1430	409	198	59	66	662	62
14	375	174	1050	140	800	1290	362	180	58	58	4380	60
15	291	168	822	170	700	891	325	164	56	52	2520	62
16	246	166	649	190	650	679	294	148	52	45	810	64
17	213	175	510	180	600	527	269	136	50	40	726	128
18	188	193	403	170	550	538	249	127	49	37	2220	110
19	167	193	329	160	510	650	235	119	50	36	968	89
20	153	190	315	150	617	619	230	112	52	33	534	132
21	153	184	318	140	610	545	222	107	50	37	318	158
22	144	182	180	120	585	552	204	100	48	55	230	110
23	132	178	190	120	980	656	196	99	47	66	208	80
24	128	165	200	120	2360	602	209	109	60	52	570	72
25	168	158	210	130	2850	504	233	97	220	70	1280	65
26	514	152	220	140	1570	422	220	95	300	168	678	67
27	670	159	240	150	1180	368	207	89	170	127	405	65
28	467	164	250	140	901	333	203	83	140	84	259	68
29	352	178	270	150	---	307	1070	78	200	71	233	67
30	307	160	250	140	---	286	1070	75	260	174	170	59
31	693	---	260	130	---	270	---	72	---	208	148	---
TOTAL	25647	8811	13944	4800	18293	17419	37060	6713	2743	2505	18790	2719
MEAN	827	294	450	155	653	562	1235	217	91.4	80.8	606	90.6
MAX	8290	1070	1720	200	2850	1430	17800	608	300	208	4380	158
MIN	128	152	130	120	110	270	196	72	47	33	60	59
CFSM	2.10	.75	1.15	.39	1.66	1.43	3.14	.55	.23	.21	1.54	.23
IN.	2.43	.83	1.32	.45	1.73	1.65	3.51	.64	.26	.24	1.78	.26

CAL YR 1976	TOTAL	152640	MEAN 417	MAX 8290	MIN 29	CFSM 1.06	IN 14.45
WTR YR 1977	TOTAL	159444	MEAN 437	MAX 17800	MIN 33	CFSM 1.11	IN 15.09

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) above mean sea level. 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 period Dec. 22 to Feb. 22, which are poor. No gage-height record for part of day Apr. 5.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,200 ft³/s (657 m³/s) Apr. 5, 1977, gage height, 30.15 ft (9.190 m), from floodmarks, from rating curve extended above 3,100 ft³/s (88 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)	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)
Oct. 9	2130	11500	326	20.41	6.221	Aug. 14	2230	7300	207	16.12	4.913
Apr. 5	1500	*23200	657	30.15	9.190						

a From floodmarks.

Minimum daily discharge, 37 ft³/s (1.05 m³/s) July 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1420	1050	140	220	130	902	392	826	74	241	247	178
2	1140	938	160	200	120	745	370	665	70	163	298	153
3	543	725	180	180	130	630	403	609	68	119	160	138
4	346	592	183	170	150	848	1890	511	64	100	108	135
5	244	518	188	180	170	1110	19200	487	60	88	80	145
6	185	466	185	190	160	938	6400	592	55	82	70	175
7	173	420	665	200	150	799	2190	681	70	78	68	126
8	1290	370	2010	190	140	697	1580	697	80	74	90	223
9	7340	346	1310	180	150	620	1220	564	90	68	108	123
10	5780	337	862	190	170	564	983	459	95	64	86	97
11	1600	331	737	180	240	515	821	389	82	62	370	82
12	862	325	893	170	600	476	701	337	74	76	358	76
13	588	268	1400	160	950	1940	616	295	70	78	518	68
14	452	205	1280	150	850	1760	560	259	62	65	4610	68
15	358	193	983	180	800	1280	511	229	55	60	3400	66
16	301	185	794	200	700	992	459	200	52	54	911	72
17	256	183	655	190	650	790	417	180	50	50	627	148
18	220	163	550	180	600	794	379	160	48	45	2060	155
19	195	168	469	170	600	920	355	150	50	42	1080	135
20	175	180	438	160	700	884	337	130	52	37	588	155
21	173	175	459	150	650	790	325	120	48	50	396	203
22	165	173	200	140	800	785	295	110	48	60	298	160
23	150	170	210	130	1350	884	277	110	46	66	256	106
24	140	158	240	130	2690	844	295	120	46	56	525	84
25	193	153	230	140	3180	741	328	100	97	57	1300	82
26	539	140	250	150	1890	648	322	99	389	220	781	84
27	737	143	260	160	1500	581	295	99	244	203	480	82
28	564	160	270	150	1200	539	286	88	195	115	337	78
29	438	180	290	170	---	497	1190	86	253	86	298	78
30	379	203	270	150	---	462	1360	80	331	178	232	66
31	613	---	280	140	---	445	---	78	---	367	198	---
TOTAL	27559	9618	17021	5250	21420	25420	44757	9510	3018	3104	20938	3541
MEAN	889	321	549	169	765	820	1492	307	101	100	675	118
MAX	7340	1050	2010	220	3180	1940	19200	826	389	367	4610	223
MIN	140	140	140	130	120	445	277	78	46	37	68	66
CF5M	2.01	.73	1.24	.38	1.73	1.86	3.38	.70	.23	.23	1.53	.27
IN.	2.32	.81	1.43	.44	1.80	2.14	3.77	.80	.25	.26	1.76	.30
CAL YR 1976	TOTAL	179408	MEAN 490	MAX 7340	MIN 33	CF5M 1.11	IN 15.10					
WTR YR 1977	TOTAL	191156	MEAN 524	MAX 19200	MIN 37	CF5M 1.19	IN 16.09					

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, 118 micromhos Jan. 2, 1976.

WATER TEMPERATURES: Maximum daily, 30.0°C June 26, July 31, 1975, July 13, 23, 1977; minimum daily, 0.0°C

many days during winter periods.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,960 mg/L Apr. 5, 1977; minimum daily mean, 1 mg/L Apr. 30,

May 8, 1976.

SEDIMENT LOADS: Maximum daily, 49,800 tons (45,200 tonnes) Apr. 5, 1977; minimum daily, 0.27 ton (0.24 tonne)

June 19, 1977.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 607 micromhos June 23; minimum daily, 123 micromhos Apr. 5.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,960 mg/L Apr. 5; minimum daily mean, 2 mg/L Nov. 2, June 19.

SEDIMENT LOADS: Maximum daily, 49,800 tons (45,200 tonnes) Apr. 5; minimum daily, 0.27 ton (0.24 tonne) June 19.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR (OCTOBER 1976 TO SEPTEMBER 1977 ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	195	200	332	276	---	270	307	210	542	377	381	331
2	208	179	---	277	---	286	316	241	553	387	312	344
3	226	190	317	273	---	297	319	263	558	402	312	357
4	248	206	171	277	---	289	291	278	569	423	339	375
5	269	---	327	164	---	257	123	294	568	424	361	367
6	291	241	312	288	---	253	161	306	556	446	375	355
7	309	255	245	---	---	262	---	279	586	---	406	373
8	290	233	156	251	---	---	---	265	586	---	---	317
9	130	250	152	269	---	292	256	260	554	---	448	---
10	124	252	168	278	---	317	274	279	551	---	468	412
11	169	260	---	289	---	322	293	299	541	501	459	433
12	202	251	183	---	---	306	306	313	---	534	240	444
13	227	---	181	---	---	226	314	333	559	550	253	454
14	260	262	176	282	---	210	330	---	573	535	153	458
15	---	293	178	266	---	---	---	359	574	513	162	467
16	312	308	189	---	192	225	351	378	573	513	203	457
17	331	333	199	---	200	239	350	389	559	575	229	435
18	355	353	214	---	217	246	360	402	---	572	185	387
19	377	365	223	---	227	---	367	419	572	575	196	429
20	382	354	237	---	233	246	378	434	583	583	226	426
21	407	353	255	---	238	239	396	443	576	560	---	438
22	411	349	266	---	235	242	395	451	587	560	280	422
23	417	356	263	---	229	245	394	472	607	567	309	420
24	---	---	271	---	183	227	---	484	594	541	298	425
25	401	347	271	---	164	232	404	502	482	479	234	---
26	324	347	279	---	198	241	407	511	416	471	202	430
27	293	347	282	---	212	253	397	---	425	457	224	435
28	215	343	271	---	247	265	---	520	422	450	---	442
29	222	---	272	---	---	279	324	530	417	446	280	447
30	236	331	269	---	---	291	201	531	353	473	299	447
31	229	---	260	---	---	294	---	541	---	391	316	---
MONTH	277	291	239	---	---	263	321	379	537	493	291	412
YEAR	MAX	607	MIN	123	MEAN	341						

03198550 BIG COAL RIVER NEAR ALUM CREEK, WV--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.0	11.0	5.0	0.0	---	10.0	13.0	17.0	25.0	24.0	25.0	28.0
2	17.0	12.0	---	0.0	---	7.0	12.0	17.0	24.0	22.0	26.0	28.0
3	20.0	10.0	6.0	2.0	---	8.0	15.0	19.0	24.0	23.0	26.0	25.0
4	19.0	10.0	4.0	2.0	---	7.5	18.0	19.0	24.0	23.0	26.0	29.0
5	18.0	---	4.0	3.0	---	---	12.5	19.0	23.0	23.0	27.0	25.0
6	20.0	7.0	4.0	2.0	---	13.0	13.0	18.0	22.0	21.0	26.0	25.0
7	18.0	6.0	5.0	---	---	9.0	---	18.0	20.0	---	26.0	25.0
8	16.0	5.0	4.0	2.0	---	---	---	18.0	22.0	---	---	25.0
9	15.0	7.0	5.0	1.0	---	11.0	12.0	16.5	20.0	---	27.0	---
10	13.0	7.0	4.0	0.0	---	10.0	13.0	17.0	20.0	---	27.0	26.0
11	13.0	7.0	---	1.0	---	12.0	10.0	18.0	20.0	28.0	26.0	23.0
12	15.0	6.0	6.0	---	---	11.0	15.0	17.0	---	28.0	25.0	23.0
13	---	---	5.0	---	---	9.0	16.0	18.0	21.0	30.0	23.0	22.0
14	19.0	8.0	5.0	3.0	---	12.0	15.0	---	20.0	27.0	20.0	21.0
15	---	7.0	5.0	2.0	---	---	---	19.0	21.0	25.0	20.0	23.0
16	19.0	7.0	7.0	---	5.0	10.0	---	20.0	23.0	25.0	24.0	24.0
17	---	8.0	6.0	---	5.0	12.0	15.0	20.0	24.0	28.0	25.0	23.0
18	---	8.0	6.0	---	5.0	11.0	16.0	20.0	---	28.0	21.0	23.0
19	---	8.0	6.0	---	5.0	---	17.0	22.0	25.0	29.0	20.0	21.0
20	---	8.0	5.0	---	4.0	12.0	20.0	22.0	26.0	29.0	23.0	21.0
21	---	7.0	4.0	---	7.0	11.0	22.0	25.0	24.0	28.0	---	22.0
22	---	7.0	2.0	---	7.0	10.0	22.0	25.0	25.0	28.0	24.0	24.0
23	---	8.0	3.0	---	5.0	9.0	18.0	23.0	24.0	30.0	23.0	---
24	---	---	2.0	---	6.0	10.0	---	22.0	23.0	27.0	22.0	22.0
25	13.0	8.0	2.0	---	6.0	---	18.0	23.0	23.0	27.0	20.0	---
26	13.0	8.0	4.0	---	10.0	10.0	13.0	24.0	22.0	26.0	23.0	23.0
27	14.0	9.0	2.0	---	10.0	13.0	18.0	---	23.0	25.0	24.0	23.0
28	12.0	8.0	4.0	---	8.0	13.0	---	23.0	24.0	25.0	---	22.0
29	10.0	---	4.0	---	---	10.0	17.0	23.0	25.0	23.0	23.0	20.0
30	9.0	6.0	3.0	---	---	18.0	16.0	25.0	24.0	25.0	25.0	20.0
31	10.0	---	0.0	---	---	14.0	---	24.0	---	25.0	27.0	---
MONTH	---	8.0	4.0	---	---	11.0	15.5	20.5	23.0	26.0	24.0	23.5

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

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)	
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	779	3020	246	698	13	4.9	29	17	24	8.4	97	236
2	520	1600	72	182	11	4.8	9	4.9	22	7.1	47	95
3	160	234	43	84	7	3.4	4	1.9	24	8.4	37	63
4	95	89	30	48	6	3.0	36	17	27	11	161	414
5	80	53	23	32	12	6.1	45	22	29	13	207	620
6	50	25	29	36	8	4.0	15	7.7	28	12	113	286
7	50	23	30	34	150	386	3	1.6	27	11	48	103
8	835	3930	12	12	197	1070	22	11	26	9.8	47	88
9	1600	31700	10	9.3	117	412	49	24	27	11	52	87
10	700	10900	7	6.4	60	140	27	14	29	13	41	62
11	200	864	8	7.1	45	90	10	4.9	50	32	26	36
12	100	233	7	6.1	63	152	9	4.1	170	275	17	22
13	75	119	5	3.6	145	546	10	4.3	300	769	650	3400
14	55	67	9	5.0	97	334	11	4.5	260	597	360	1710
15	40	39	4	2.1	59	157	73	35	225	486	213	733
16	26	21	2	1.0	61	131	31	17	150	283	147	394
17	14	9.7	8	3.9	37	65	31	16	66	116	75	160
18	8	4.8	7	3.1	12	18	31	15	62	100	103	221
19	6	3.2	6	2.7	9	11	30	14	53	86	141	350
20	9	4.3	6	2.9	8	9.5	30	13	70	132	116	277
21	15	7.0	9	4.3	28	35	27	11	65	114	55	117
22	12	5.3	16	7.5	33	18	26	9.8	150	324	67	142
23	9	3.6	13	6.0	30	17	24	8.4	340	1230	83	198
24	11	4.2	5	2.1	45	27	24	8.4	1450	11100	64	146
25	16	8.3	5	2.1	31	19	26	9.8	910	7810	42	84
26	151	220	6	2.3	14	9.5	27	11	260	1320	34	59
27	117	233	5	1.9	9	6.3	28	12	530	2140	27	42
28	61	93	11	4.8	11	8.0	27	11	260	842	18	26
29	28	33	13	6.3	19	15	29	13	---	---	25	34
30	13	13	13	7.1	18	13	27	11	---	---	23	29
31	120	198	---	---	20	15	26	9.8	---	---	13	16
TOTAL	---	53757.4	---	1223.6	---	3730.5	---	364.1	---	27860.7	---	10250

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) above mean sea level. 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 period Dec. 22 to Feb. 18, which are poor.

AVERAGE DISCHARGE.--47 years, 349 ft³/s (9.884 m³/s), 17.55 in/yr (446 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)	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)
Oct. 9	1530	6980	198	14.48	4.414	Aug. 14	1715	*15500	439	22.30	6.797
Apr. 5	0600	15200	430	22.15	6.751						

Minimum discharge, 15 ft³/s (0.42 m³/s) July 20, 21, gage height, 1.77 ft (0.539 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1140	614	70	160	100	523	232	508	77	151	942	121
2	730	501	110	150	90	445	226	422	58	112	420	114
3	347	412	95	130	95	393	263	342	52	87	180	109
4	210	338	95	120	110	508	2380	301	49	70	112	95
5	145	277	97	130	130	632	8780	319	49	60	77	95
6	111	231	97	140	120	569	1760	407	51	58	59	111
7	121	201	460	150	110	506	1070	371	50	53	59	91
8	762	179	900	140	100	440	800	349	49	49	104	82
9	3910	158	596	130	100	388	646	297	86	49	90	71
10	1700	157	476	140	120	351	563	267	80	49	84	63
11	699	141	452	130	200	321	493	233	53	52	171	60
12	456	138	588	120	350	302	431	204	53	39	119	57
13	319	124	977	120	700	1640	386	183	51	35	1390	51
14	250	113	768	110	650	1080	359	165	73	29	7330	52
15	199	110	605	130	600	740	327	152	69	26	1780	52
16	167	112	504	150	555	590	297	134	53	22	713	55
17	141	112	412	140	450	490	274	122	46	20	778	258
18	122	108	334	140	430	542	251	112	45	19	1020	116
19	104	112	288	130	409	567	226	103	49	18	584	94
20	98	102	288	120	529	539	211	98	51	15	394	303
21	105	99	300	110	496	473	194	92	44	17	284	186
22	93	106	150	100	521	510	181	80	45	49	230	122
23	82	103	150	95	827	476	184	103	50	34	199	95
24	85	95	160	95	1760	457	206	82	62	27	525	82
25	124	92	170	100	1390	427	192	81	199	60	697	77
26	392	93	180	110	909	391	172	73	168	186	457	72
27	327	95	190	120	753	355	168	66	77	64	311	68
28	259	96	200	110	613	332	190	63	80	39	229	68
29	213	117	220	130	---	310	1180	59	515	39	193	60
30	204	90	200	120	---	282	706	57	210	278	153	54
31	536	---	210	110	---	260	---	56	---	105	150	---
TOTAL	14151	5226	10342	3880	13217	15839	23348	5901	2594	1911	19834	2934
MEAN	456	174	334	125	472	511	778	190	86.5	61.6	640	97.8
MAX	3910	614	977	160	1760	1640	8780	508	515	278	7330	303
MIN	82	90	70	95	90	260	168	56	44	15	59	51
CFSM	1.69	.64	1.24	.46	1.75	1.89	2.88	.70	.32	.23	2.37	.36
IN.	1.95	.72	1.42	.53	1.82	2.18	3.22	.81	.36	.26	2.73	.40
CAL YR 1976	TOTAL	106158	MEAN 290	MAX 3910	MIN 23	CFSM 1.07	IN 14.63					
WTR YR 1977	TOTAL	119177	MEAN 327	MAX 8780	MIN 15	CFSM 1.21	IN 16.42					

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, 44,400 tons (40,300 tonnes) Nov. 27, 1973; minimum daily, 0 ton (0 tonne) Oct. 2, 3, 5-9, 1974.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,140 micromhos June 20; minimum daily, 132 micromhos Aug. 14.

WATER TEMPERATURES: Maximum, 34.5°C July 18, 19, minimum, 0.5°C Feb. 10, 11.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,800 mg/L Oct. 9; minimum daily mean, 1 mg/L June 13.

SEDIMENT LOADS: Maximum daily, 39,000 tons (35,400 tonnes) Apr. 5; minimum daily, 0.14 ton (0.13 tonne) June 13.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	237	224	678	421	---	393	455	344	882	493	379	503
2	208	226	683	---	---	415	475	381	827	610	249	521
3	289	249	678	---	---	450	465	418	831	619	356	616
4	364	284	690	432	---	447	381	474	968	758	435	582
5	420	322	688	411	---	368	148	520	1060	858	505	589
6	482	346	642	432	---	337	222	520	1070	926	559	548
7	500	377	517	---	---	353	263	462	1070	990	598	556
8	355	392	226	---	---	384	299	441	1100	1020	607	559
9	144	411	228	415	---	416	314	469	975	1040	522	600
10	158	429	250	461	---	425	331	489	1030	1060	495	619
11	249	435	274	481	---	446	343	560	917	1080	505	652
12	354	437	300	---	---	475	368	600	961	1030	441	666
13	410	456	221	---	---	261	384	634	1090	1030	434	673
14	422	485	216	500	232	219	395	676	1090	1040	132	693
15	441	508	237	448	262	263	407	707	1050	988	181	707
16	427	504	260	---	272	319	427	729	921	982	262	691
17	426	503	281	---	---	365	437	769	979	988	330	543
18	506	574	311	---	344	399	456	829	1060	1000	252	441
19	526	624	338	---	361	326	467	863	1130	1040	282	531
20	525	653	362	---	383	348	468	893	1140	1070	331	491
21	531	643	363	---	---	358	489	917	1090	1060	382	371
22	529	578	384	---	357	323	509	934	1110	1040	424	434
23	560	676	399	---	300	305	521	909	991	850	479	468
24	564	709	347	---	212	359	521	795	1050	769	461	488
25	569	753	353	---	206	333	529	846	1070	795	286	512
26	457	752	---	---	286	345	524	856	510	695	322	555
27	310	739	---	---	335	356	627	853	617	511	324	585
28	313	722	350	---	333	367	585	873	699	548	373	594
29	350	680	363	---	---	377	364	899	357	634	447	610
30	327	684	364	---	---	400	280	920	397	487	448	618
31	361	---	355	---	---	423	---	920	---	439	495	---
MONTH	462	513	392	---	---	366	415	694	935	853	397	567
YEAR	MAX	1140	MIN	132	MEAN	541						

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) above mean sea level. Prior to Apr. 21, 1976, nonrecording gage at same site and datum.

REMARKS.--Water-discharge records good except those for period Dec. 22 to Feb. 18, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,300 ft³/s (433 m³/s) Apr. 5, 1977, gage height, 25.30 ft (7.711 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)
Oct. 9	1730	8200 232	17.25 5.258	Aug. 14	2230	13100 371	22.90 6.980
Apr. 5	0900	*15300 433	25.30 7.711				

Minimum daily discharge, 16 ft³/s (0.45 m³/s) July 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1770	912	85	190	120	690	259	634	69	164	1050	152
2	1310	669	130	170	100	554	249	479	60	134	564	125
3	467	522	120	150	110	471	298	379	54	104	221	117
4	208	423	120	140	120	736	2240	318	48	81	153	107
5	190	334	121	150	150	1140	11500	301	49	69	110	152
6	147	268	118	160	130	924	3160	446	50	61	84	147
7	142	236	617	170	120	739	1830	412	49	55	72	104
8	892	208	1490	170	120	592	1300	390	44	48	118	109
9	5170	185	908	150	120	498	964	321	69	48	112	84
10	3030	177	631	160	140	446	768	271	97	52	112	69
11	1200	167	561	150	210	398	638	242	55	53	167	60
12	648	158	828	140	350	365	526	215	50	37	155	54
13	440	149	1590	130	800	2680	462	192	50	31	1040	48
14	329	134	1240	130	750	2010	423	174	55	28	7660	47
15	253	128	908	150	700	1290	379	158	76	24	3460	47
16	215	128	652	170	650	932	337	144	54	22	1070	53
17	181	125	498	160	600	680	301	128	46	19	1000	212
18	162	123	404	150	550	722	268	118	45	18	1580	134
19	144	123	337	140	515	852	244	109	46	17	753	104
20	131	121	326	130	708	760	228	102	47	16	465	255
21	136	110	359	120	659	638	206	97	48	25	326	208
22	126	118	170	110	676	683	192	84	42	40	253	139
23	113	117	180	100	1330	641	188	104	42	46	230	109
24	109	109	180	110	2650	599	213	91	69	28	599	90
25	157	104	190	120	2340	543	203	84	145	54	972	79
26	542	104	200	120	1500	490	179	79	219	174	533	75
27	476	105	210	130	1180	440	174	70	96	109	362	72
28	359	113	230	130	896	409	172	66	107	54	257	69
29	276	131	250	150	---	376	1550	60	479	39	219	60
30	249	120	230	130	---	332	1030	57	236	222	185	50
31	655	---	240	120	---	304	---	55	---	137	176	---
TOTAL	20347	6425	14123	4400	18294	22934	30481	6380	2596	2009	24058	3131
MEAN	656	214	456	142	653	740	1016	206	86.5	64.8	776	104
MAX	5170	912	1590	190	2650	2680	11500	634	479	222	7660	255
MIN	109	104	85	100	100	304	172	55	42	16	72	47
CFSM	2.06	.67	1.43	.45	2.05	2.32	3.19	.65	.27	.20	2.43	.33
IN.	2.37	.75	1.65	.51	2.13	2.67	3.55	.74	.30	.23	2.81	.37
CAL YR 1976	TOTAL	148885	MEAN 407	MAX	5170	MIN 24	CFSM 1.28	IN 17.36				
WTR YR 1977	TOTAL	155178	MEAN 425	MAX	11500	MIN 16	CFSM 1.33	IN 18.10				

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, 120 micromhos Dec. 3, 1974, 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, 2,130 mg/L Apr. 5, 1977; minimum daily mean, 0 mg/L Aug. 28, 29, Sept. 2-5, 9, 10, 1975.
 SEDIMENT LOADS: Maximum daily, 70,600 tons (64,000 tonnes) Apr. 5, 1977; minimum daily, 0 ton (0 tonne) Aug. 28, 29, Sept. 2-5, 9, 10, 1975.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,080 micromhos June 7, 14, 20; minimum daily, 120 micromhos Oct. 10.
 WATER TEMPERATURES: Maximum daily, 33.0°C July 18; minimum daily, -1.0°C Dec. 31, Jan. 1, 10.
 SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,130 mg/L Apr. 5; minimum daily mean, 4 mg/L Oct. 23, Nov. 12, 13, Apr. 27.
 SEDIMENT LOADS: Maximum daily, 70,600 tons (64,000 tonnes) Apr. 5; minimum daily, 0.22 ton (0.20 tonne) July 20.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
 ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	197	202	625	341	---	347	---	334	898	463	255	501
2	208	209	639	---	---	368	502	384	852	581	258	496
3	272	236	635	---	---	396	502	413	831	600	362	508
4	332	266	630	---	---	384	334	474	960	691	429	519
5	382	295	626	408	---	288	139	498	1020	820	489	282
6	417	317	608	421	---	282	234	463	1050	891	538	460
7	417	341	395	421	---	306	301	450	1080	959	561	483
8	232	358	214	412	---	328	336	444	1070	---	621	461
9	135	378	222	402	---	361	364	454	---	1010	517	545
10	120	393	251	425	---	370	388	471	---	995	476	576
11	240	404	273	---	---	385	414	540	---	1020	496	592
12	302	400	250	---	---	412	436	579	---	1040	459	609
13	358	413	206	---	---	221	454	614	---	1010	350	606
14	383	442	209	---	212	200	---	660	1080	1020	156	590
15	390	448	227	---	229	239	481	690	1030	1020	194	615
16	419	---	256	---	236	282	510	709	880	965	286	530
17	430	452	277	---	263	318	523	744	954	960	301	512
18	456	521	308	---	291	336	543	799	972	960	237	440
19	475	573	---	---	313	282	551	830	988	940	293	478
20	468	---	---	---	329	306	561	860	1080	960	337	440
21	475	582	---	---	303	317	582	890	1020	983	380	356
22	---	541	355	---	312	331	603	885	1000	918	419	411
23	504	614	388	---	287	313	613	863	980	894	461	---
24	519	638	366	---	194	342	605	695	964	796	357	467
25	480	671	395	---	206	351	628	805	964	835	261	503
26	334	677	410	---	---	369	625	824	500	588	304	534
27	260	673	350	---	301	380	671	828	568	491	330	569
28	270	634	330	---	308	397	667	836	559	526	378	580
29	287	600	346	---	---	411	242	863	305	547	446	591
30	326	654	333	---	---	432	284	878	393	443	---	608
31	299	---	344	---	---	460	---	893	---	421	498	---
MONTH	346	462	374	---	---	339	468	667	880	805	382	512
YEAR	MAX	1080	MIN	120	MEAN	505						

KANAWHA RIVER BASIN

03199400 LITTLE COAL RIVER AT JULIAN, WV--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.0	8.0	1.0	-1.0	---	5.0	---	15.0	25.0	25.0	22.0	28.0
2	15.0	7.0	1.0	---	---	4.0	16.0	18.0	23.0	25.0	25.0	26.5
3	17.0	8.0	1.0	---	---	7.0	15.0	19.0	25.0	26.0	25.0	25.0
4	18.0	7.0	2.0	---	---	9.0	13.0	19.0	24.0	27.0	27.0	25.0
5	18.0	6.0	1.0	0.0	---	9.0	9.0	19.0	24.0	28.0	27.0	22.0
6	17.0	6.0	2.0	1.0	---	9.0	7.0	20.0	22.0	30.0	28.0	25.0
7	15.0	6.0	3.0	1.0	---	7.0	10.0	20.0	24.0	30.0	27.0	24.0
8	14.0	4.0	2.0	0.0	---	7.0	11.0	19.0	17.0	---	26.0	26.0
9	---	5.0	1.0	0.0	---	10.0	11.0	19.0	---	29.0	27.0	25.0
10	11.0	6.0	4.0	-1.0	---	10.0	14.0	14.0	---	28.0	26.0	26.0
11	13.0	6.0	6.0	---	---	12.0	16.0	19.0	---	28.0	27.0	22.0
12	15.0	5.0	7.0	---	---	8.0	17.0	17.0	---	30.0	31.0	22.0
13	16.0	4.0	5.0	---	---	10.0	18.0	19.0	---	30.0	23.0	23.0
14	14.0	3.0	4.0	---	3.0	11.0	---	20.0	24.0	30.0	20.0	21.0
15	10.0	4.0	5.0	---	---	11.0	18.0	22.0	26.0	29.0	20.5	22.0
16	13.0	---	6.0	---	1.0	11.0	18.0	22.0	26.0	30.0	26.0	22.0
17	11.0	4.0	6.0	---	2.0	10.0	18.0	23.0	26.0	30.0	23.0	24.0
18	10.0	5.0	5.0	---	1.0	11.0	19.0	24.0	26.0	33.0	21.0	24.0
19	10.0	7.0	---	---	4.0	10.0	20.0	24.0	26.0	32.0	22.0	24.0
20	10.0	---	---	---	2.0	11.0	20.0	25.0	---	32.0	21.0	23.0
21	9.0	4.0	---	---	1.0	10.0	21.0	26.0	26.0	28.0	23.0	21.0
22	---	3.0	0.0	---	3.0	8.0	20.0	25.0	27.0	29.0	23.0	21.0
23	7.0	2.0	1.0	---	4.0	7.0	19.0	23.0	22.0	29.0	23.0	---
24	9.0	2.0	0.0	---	7.0	8.0	16.0	---	22.0	26.0	22.0	22.0
25	10.0	4.0	1.0	---	7.0	9.0	14.0	---	22.0	25.0	22.0	22.0
26	10.0	7.0	1.0	---	---	10.0	13.0	---	24.0	20.0	24.0	22.0
27	8.0	9.0	1.0	---	7.0	12.0	16.0	26.0	25.0	25.0	26.0	21.0
28	7.0	8.0	3.0	---	5.0	14.0	15.5	25.0	25.0	26.0	27.0	19.0
29	4.0	2.0	0.0	---	---	17.0	13.0	26.0	24.0	29.0	27.0	19.0
30	7.0	0.0	0.0	---	---	19.0	14.0	25.0	25.0	24.0	---	20.0
31	8.0	---	-1.0	---	---	16.0	---	26.0	---	26.0	27.0	---
MONTH	12.0	5.0	2.5	---	---	10.0	15.5	21.0	24.0	28.0	24.5	23.0
YEAR	MAX	33.0	MIN	-1.0	MEAN	15.5						

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

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	629	3080	97	239	7	1.6	15	7.7	25	8.1	67	125
2	220	777	73	132	12	4.2	15	6.9	22	5.9	73	109
3	110	145	43	61	19	6.2	13	5.3	24	7.1	53	67
4	23	17	44	50	12	3.9	20	7.6	25	8.1	223	493
5	21	11	55	50	9	3.0	47	19	30	12	269	828
6	17	6.7	32	23	26	8.9	59	25	26	9.1	112	279
7	47	18	12	7.6	318	538	40	18	25	8.1	62	124
8	475	1140	9	5.1	234	943	23	11	25	8.1	50	80
9	1700	23700	12	6.0	105	257	34	14	25	8.1	38	51
10	820	6710	18	8.6	57	97	35	15	26	9.8	33	40
11	450	1460	9	4.1	47	71	13	5.3	32	18	32	34
12	100	175	4	1.7	143	393	13	4.9	53	50	33	33
13	53	63	4	1.6	267	1150	12	4.2	116	251	962	8280
14	63	56	8	2.9	100	335	12	4.2	247	500	435	2350
15	26	18	10	3.5	57	140	13	5.2	220	416	144	500
16	16	9.3	8	2.8	47	83	16	7.3	87	153	91	229
17	8	3.6	7	2.4	77	104	16	6.9	50	81	92	169
18	7	3.1	6	2.0	50	55	15	6.1	40	59	168	327
19	6	2.3	15	5.0	20	18	13	4.9	36	50	207	476
20	6	2.1	9	3.0	37	33	12	4.2	286	546	90	185
21	6	2.2	5	1.5	50	49	12	3.9	62	110	47	81
22	5	1.7	6	1.9	30	14	10	3.0	86	157	52	96
23	4	1.2	7	2.2	62	30	9	2.4	254	901	55	95
24	6	1.8	11	3.2	19	9.2	9	2.7	642	4710	42	68
25	63	27	8	2.2	27	14	10	3.2	410	2590	40	59
26	203	315	6	1.7	25	13	12	3.9	258	1040	42	56
27	69	89	11	3.1	20	11	12	4.2	140	445	30	36
28	22	21	14	4.3	16	9.9	12	4.2	75	181	37	41
29	18	13	13	4.6	29	20	13	5.2	---	---	31	31
30	18	12	9	2.9	37	23	12	4.2	---	---	24	21
31	117	253	---	---	53	34	10	3.2	---	---	19	16
TOTAL	---	38138.3	---	638.9	---	4471.9	---	222.8	---	12342.4	---	15379

KANAWHA RIVER BASIN

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03199400 LITTLE COAL RIVER AT JULIAN, WV--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

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)					
	CONCENTRATION	LOADS	CONCENTRATION	LOADS	CONCENTRATION	LOADS	CONCENTRATION	LOADS	CONCENTRATION	LOADS	CONCENTRATION	LOADS	CONCENTRATION	LOADS	CONCENTRATION	LOADS	CONCENTRATION	LOADS	CONCENTRATION	LOADS				
	APRIL				MAY				JUNE				JULY				AUGUST				SEPTEMBER			
1	19	13	83	142	13	2.4	252	111	481	2050	9	3.7												
2	22	15	44	57	6	.97	122	44	346	527	9	3.0												
3	35	28	25	26	8	1.2	123	34	133	79	7	2.2												
4	911	11200	21	18	5	.65	83	18	58	24	6	1.7												
5	2130	70600	39	32	7	.93	45	8.3	28	8.3	209	131												
6	640	5450	185	223	9	1.2	46	7.6	14	3.2	147	58												
7	212	1050	75	83	8	1.1	33	4.9	7	1.4	77	22												
8	116	407	93	98	7	.83	15	1.9	28	8.9	122	36												
9	80	208	47	41	18	3.4	9	1.2	28	8.5	36	8.1												
10	68	141	28	20	22	5.8	12	1.7	69	21	14	2.6												
11	54	93	25	16	12	1.8	9	1.3	165	83	8	1.3												
12	44	62	18	10	9	1.2	10	1.0	51	21	7	1.0												
13	35	44	33	17	8	1.1	16	1.3	235	977	9	1.2												
14	30	34	28	13	13	1.9	15	1.1	1820	47200	8	1.0												
15	25	26	17	7.3	16	3.3	9	.58	1000	9340	8	1.0												
16	19	17	14	5.4	12	1.7	5	.30	435	1250	55	9.8												
17	16	13	10	3.5	13	1.6	6	.31	693	2680	110	63												
18	21	15	5	1.6	10	1.2	8	.39	653	3180	65	24												
19	20	13	5	1.5	14	1.7	6	.28	103	209	50	14												
20	13	8.0	5	1.4	27	3.4	5	.22	43	54	115	79												
21	7	3.9	6	1.6	21	2.7	6	.41	34	30	70	39												
22	7	3.6	6	1.4	10	1.1	10	1.1	24	16	47	18												
23	5	2.5	12	3.4	13	1.5	9	1.1	18	11	27	7.9												
24	6	3.5	7	1.7	29	5.4	26	2.0	245	684	20	4.8												
25	8	4.4	6	1.4	194	76	38	5.5	273	716	19	4.1												
26	5	2.4	7	1.5	416	246	114	57	73	105	19	3.8												
27	4	1.9	7	1.3	189	49	49	14	32	31	16	3.1												
28	26	16	6	1.1	103	30	25	3.6	17	12	13	2.4												
29	593	2590	8	1.3	490	634	21	2.2	22	13	12	1.9												
30	241	672	7	1.1	385	245	175	118	18	9.0	8	1.1												
31	---	---	7	1.0	---	---	64	24	10	4.7	---	---												
TOTAL	---	92737.2	---	833.5	---	1328.08	---	468.29	---	69357.0	---	549.7												
TOTAL LOAD FOR YEAR:	236467.07		TONS.																					

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 good except those for period Dec. 22 to Feb. 19, which are poor. No gage-height record Apr. 4-6.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,400 ft³/s (889 m³/s) Apr. 5, 1977, gage height, 31.95 ft (9.738 m), from floodmarks, 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)	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)
Oct. 9	2330	16500	467	21.72	6.620	Aug. 15	0130	16000	453	21.31	6.495
Apr. 5	1600	*31400	889	31.95	9.738						

a From floodmarks.

Minimum daily discharge, 32 ft³/s (0.91 m³/s) July 21.

DISCHARGE IN CUBIC FEET PER SECOND WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2830	2230	309	500	290	1670	734	1640	135	438	630	342
2	3040	1830	348	440	270	1400	698	1240	135	336	1190	300
3	1170	1390	354	400	300	1200	758	1070	130	258	491	276
4	694	1120	348	370	330	1700	2630	873	116	210	315	273
5	487	918	336	400	380	2640	25900	822	104	173	218	291
6	384	806	330	420	360	2140	12300	1070	110	155	163	408
7	357	722	1020	450	320	1640	5010	1480	112	143	145	309
8	1550	655	3780	420	310	1390	3350	1390	116	130	163	384
9	10000	585	2590	400	340	1210	2450	1040	190	110	253	243
10	10500	543	1650	430	380	1080	1950	826	215	116	250	210
11	3480	533	1420	390	500	976	1560	698	170	143	467	190
12	1740	505	1680	370	1000	895	1330	606	135	133	571	170
13	1120	453	2920	340	2100	4850	1160	522	123	125	616	165
14	842	378	2720	350	1900	4480	1040	480	116	108	9240	153
15	673	351	2070	400	1800	3380	958	417	148	89	9150	155
16	568	339	1560	440	1600	2110	855	384	153	75	2300	170
17	484	333	1270	420	1500	1520	774	339	120	61	1340	303
18	429	321	1050	390	1400	1530	710	303	108	54	3850	384
19	375	270	882	370	1400	1950	659	282	108	51	2120	282
20	342	291	810	340	1680	1690	620	258	128	45	1130	366
21	306	297	886	320	1620	1520	592	238	123	44	758	494
22	315	291	440	300	1680	1520	536	220	108	58	589	363
23	303	285	450	280	2580	1630	508	220	98	78	515	270
24	285	270	480	290	5260	1560	547	250	106	98	876	220
25	357	258	500	300	6600	1400	575	228	195	133	2390	200
26	1000	243	540	330	3880	1240	543	208	617	309	1450	190
27	1360	253	560	350	2870	1100	505	190	426	411	900	193
28	1010	285	600	340	2260	1020	474	173	354	417	645	188
29	798	327	640	380	---	945	2280	163	536	417	554	183
30	687	351	600	340	---	842	2810	148	687	429	459	158
31	1220	---	620	320	---	798	---	138	---	543	384	---
TOTAL	48706	17433	33763	11590	44910	53026	74816	17916	5922	5890	44122	7833
MEAN	1571	581	1089	374	1604	1711	2494	578	197	190	1423	261
MAX	10500	2230	3780	500	6600	4850	25900	1640	687	543	9240	494
MIN	285	243	309	280	270	798	474	138	98	44	145	153
CFSM	1.88	.70	1.30	.45	1.92	2.05	2.99	.69	.24	.23	1.70	.31
IN.	2.17	.78	1.50	.52	2.00	2.36	3.33	.80	.26	.26	1.97	.35
CAL YR 1976	TOTAL	340221	MEAN	930	MAX	10500	MIN	45	CFSM	1.11	IN	15.16
WTR YR 1977	TOTAL	365927	MEAN	1003	MAX	25900	MIN	44	CFSM	1.20	IN	16.30

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, 110 micromhos Mar. 14, 1975.
WATER TEMPERATURES: Maximum daily, 31.0°C July 17, 1977; minimum daily, 0.0°C on many days during winter periods.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,200 mg/L Aug. 14, 1977; minimum daily mean, 0 mg/L Nov. 22, 1976, June 23, 1977.

SEDIMENT LOADS: Maximum daily, 134,000 tons (122,000 tonnes) Apr. 5, 1977; minimum daily, 0 ton (0 tonne) Nov. 22, June 23.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,200 mg/L Aug 14; minimum daily mean, 0 mg/L Nov. 22, June 23.

SEDIMENT LOADS: Maximum daily, 134,000 tons (122,000 tonnes) Apr. 5; minimum daily, 0 ton (0 tonne)

Nov. 22, June 23.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C); WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	205	265	420	340	---	281	341	233	612	381	381	379
2	194	220	400	---	---	306	349	251	650	394	268	389
3	226	220	390	---	---	318	358	304	662	432	293	413
4	261	245	390	---	---	308	352	309	646	455	336	421
5	266	280	390	---	---	262	130	329	646	462	354	430
6	315	280	430	---	---	254	177	350	668	487	424	420
7	330	300	320	---	---	269	205	307	678	534	431	393
8	297	290	190	---	---	280	256	288	710	---	453	378
9	126	300	170	---	---	301	279	285	595	640	466	411
10	115	300	200	---	---	326	298	307	655	600	494	453
11	166	310	230	---	---	335	303	327	636	572	439	475
12	205	310	230	---	---	---	323	354	675	664	268	488
13	226	325	225	---	---	222	338	376	685	602	289	518
14	276	325	200	---	---	192	357	391	685	645	158	518
15	293	360	200	---	---	203	375	410	691	689	131	519
16	320	370	215	---	---	234	373	422	744	661	182	509
17	339	390	225	---	262	256	379	448	711	706	237	544
18	357	400	240	---	249	271	389	466	713	704	182	479
19	383	430	240	---	249	279	399	496	691	724	190	474
20	387	430	225	---	264	261	406	501	688	723	---	434
21	405	430	235	---	260	259	414	546	748	723	---	443
22	403	430	245	---	256	263	423	557	769	---	---	435
23	419	435	240	---	246	260	430	580	774	---	312	434
24	420	430	250	---	203	249	434	550	759	660	316	431
25	339	450	480	---	172	251	434	569	642	560	242	347
26	304	440	310	---	217	274	444	567	503	574	219	345
27	346	440	315	---	242	280	434	553	484	534	234	361
28	217	440	341	---	261	292	442	554	447	459	257	367
29	270	410	325	---	---	310	335	578	476	469	277	376
30	285	420	337	---	---	325	214	598	371	484	318	383
31	270	---	335	---	---	327	---	598	---	406	343	---
MEAN	290	356	288	---	240	275	346	432	647	569	303	432
WTR YR 1977	MEAN	387	MAX	774	MIN	115						

KANAWHA RIVER BASIN

03199700 COAL RIVER AT ALUM CREEK, WV--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.0	8.0	0.0	0.0	---	4.0	---	15.0	15.0	24.0	25.0	27.0
2	14.0	12.0	0.0	---	---	4.0	---	15.0	14.0	25.0	21.0	28.0
3	16.0	10.0	0.0	---	---	5.0	---	18.5	14.0	25.0	23.0	26.0
4	18.0	6.0	0.0	---	---	7.0	---	19.5	15.0	26.0	27.0	27.0
5	18.0	7.0	1.0	---	---	8.0	10.0	19.5	14.0	24.0	24.0	25.0
6	18.0	7.0	1.0	---	---	8.0	10.5	20.0	18.0	25.0	26.0	23.0
7	15.0	7.0	3.0	---	---	8.0	10.5	17.5	20.0	26.0	26.0	24.0
8	14.0	4.0	0.0	---	---	7.0	10.5	18.5	21.0	---	24.0	24.0
9	13.0	5.0	0.0	---	---	8.0	10.5	14.5	15.0	27.0	25.0	---
10	13.0	5.0	4.0	---	---	9.0	13.0	16.0	18.0	28.0	25.0	24.0
11	13.0	5.0	5.0	---	---	11.0	10.5	15.5	19.0	24.0	26.0	23.0
12	14.0	5.0	---	---	---	---	12.5	16.5	22.0	25.0	25.0	20.0
13	11.0	4.0	5.5	---	---	---	13.5	17.5	20.0	26.0	23.0	23.0
14	12.0	3.0	4.0	---	---	8.0	15.0	20.5	23.0	27.0	19.5	21.0
15	14.0	3.0	3.0	---	---	---	15.0	21.0	25.0	25.0	20.0	22.0
16	14.0	3.0	4.0	---	---	---	17.0	18.5	26.0	29.0	20.0	---
17	12.0	3.0	5.0	---	0.0	---	18.0	19.5	27.0	31.0	22.0	22.0
18	11.0	---	5.0	---	0.0	---	18.0	19.5	25.0	26.0	20.0	23.0
19	10.0	5.0	5.0	---	4.0	---	19.0	19.5	26.0	26.0	20.0	22.0
20	10.0	5.0	5.0	---	2.0	---	20.0	20.0	23.0	26.0	---	22.0
21	10.0	4.0	1.0	---	1.0	9.5	20.0	---	25.0	26.0	---	21.0
22	8.0	---	0.0	---	4.0	---	20.0	21.5	21.0	---	---	19.0
23	7.0	5.0	0.0	---	3.5	---	18.0	---	23.0	---	23.0	22.0
24	10.0	2.0	0.0	---	5.0	---	15.0	11.0	23.0	26.0	21.0	22.0
25	---	4.0	---	---	5.0	---	15.0	13.0	22.0	25.0	20.0	22.0
26	10.0	5.0	0.0	---	6.0	---	13.0	15.0	23.0	22.0	21.0	23.0
27	7.0	8.0	0.0	---	7.0	---	10.5	15.0	22.0	22.0	25.0	23.0
28	8.0	7.0	---	---	5.0	---	15.0	12.0	24.0	25.0	26.0	19.0
29	7.0	3.0	0.0	---	---	---	12.5	12.0	23.0	23.0	23.0	20.0
30	---	0.0	---	---	---	---	14.0	15.0	25.0	25.0	25.0	20.0
31	7.0	---	---	---	---	---	---	15.0	---	25.0	25.0	---
MEAN	12.0	5.0	2.0	---	3.5	7.5	14.5	17.0	21.0	25.5	23.0	23.0
WTR YR 1977	MEAN	15.0	MAX	31.0	MIN	0.0						

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)	
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	561	5110	185	1110	5	4.2	5	6.8	17	13	150	676
2	890	7310	70	346	5	4.7	7	8.3	15	11	60	227
3	260	821	12	45	5	4.8	4	4.3	20	16	72	232
4	83	156	26	78	5	4.7	5	5.0	21	19	185	898
5	51	67	30	74	3	2.7	7	7.6	32	33	247	1700
6	38	39	34	74	2	1.8	8	9.1	30	29	153	884
7	39	38	21	41	95	262	17	21	18	16	87	385
8	520	2180	6	11	310	3160	10	11	15	13	53	198
9	1590	46300	3	4.7	200	1400	16	17	32	29	59	192
10	749	25400	3	4.4	60	267	18	21	38	39	44	128
11	200	1880	5	7.2	35	134	17	18	45	61	32	84
12	133	625	6	8.2	86	390	10	10	47	127	34	82
13	121	366	5	6.1	200	1580	17	16	145	822	624	8740
14	70	159	5	5.1	100	734	20	19	136	698	447	5410
15	27	49	3	2.8	63	352	25	27	130	632	232	2120
16	22	34	3	2.7	43	181	30	36	100	432	124	706
17	14	18	7	6.3	33	113	30	34	123	498	152	624
18	7	8.1	7	6.1	27	76	27	28	78	295	290	1250
19	4	4.1	5	3.6	16	38	46	46	55	208	298	1570
20	13	12	5	3.9	14	31	29	27	97	440	130	593
21	17	14	2	1.6	25	60	32	28	125	547	77	316
22	7	6.0	0	.00	35	42	20	16	115	522	98	402
23	5	4.1	2	1.5	41	50	19	14	230	1600	112	493
24	6	4.6	2	1.5	43	56	19	15	696	10900	64	270
25	43	41	3	2.1	63	85	17	14	865	16300	95	358
26	100	271	2	1.3	30	44	22	20	290	3040	47	157
27	256	951	3	2.0	28	42	21	20	257	1990	23	68
28	76	207	6	4.6	21	34	21	19	216	1320	24	66
29	17	37	4	3.5	14	24	32	33	---	---	56	143
30	12	22	5	4.7	12	19	20	18	---	---	28	64
31	99	416	---	---	7	12	17	15	---	---	19	41
TOTAL	---	92549.9	---	1862.90	---	9208.9	---	584.1	---	40650	---	29077

KANAWHA RIVER BASIN

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) above mean sea level. 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 for period Dec. 22 to Feb. 21, which are poor. Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--21 years (water years, 1909-11, 1930-31, 1962-77), 1,229 ft³/s (34.81 m³/s), 19.38 in/yr (492 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)	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)
Oct. 10	0100	16700	473	19.54	5.956	Apr. 5	1900	*31100	881	27.85	8.489

Minimum discharge, 28 ft³/s (0.79 m³/s) July 21, gage height, 10.23 ft (3.118 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2630	2210	356	540	300	1730	698	1640	136	460	502	320
2	2980	1850	392	460	290	1380	650	1220	152	344	1160	267
3	1310	1450	410	400	290	1120	716	1040	129	245	418	243
4	757	1180	392	380	320	1840	2390	860	113	185	245	237
5	511	958	376	400	340	2700	26100	788	113	152	167	234
6	378	852	366	420	360	2140	13000	1040	121	129	129	371
7	331	748	1250	440	340	1730	4450	1480	113	113	106	241
8	1260	668	3500	420	330	1400	3180	1420	113	98	106	315
9	8550	600	2530	400	320	1180	2380	1060	175	88	205	207
10	10500	567	1730	420	380	1020	1930	860	225	93	225	165
11	3280	567	1470	400	600	896	1630	734	195	129	432	146
12	1700	537	1800	380	1100	806	1370	620	152	121	575	128
13	1150	469	2810	370	2100	4410	1200	545	121	113	404	120
14	860	385	2630	350	1800	4250	1070	474	113	93	7290	114
15	668	357	2060	380	1700	2800	978	432	153	63	8360	122
16	559	350	1650	420	1600	2060	879	385	152	48	2190	125
17	468	344	1340	400	1500	1550	789	341	125	42	1280	236
18	398	341	1100	390	1400	1590	714	307	103	34	3470	359
19	352	339	911	370	1300	1880	650	281	101	31	2090	238
20	324	344	844	340	1500	1730	614	258	114	28	1170	304
21	318	329	925	320	1800	1530	582	238	113	28	782	474
22	309	322	460	300	2490	1480	525	217	104	48	575	324
23	274	321	460	280	3280	1660	497	203	98	98	471	230
24	257	309	480	280	4750	1550	545	251	108	93	809	180
25	384	291	490	300	5730	1340	574	218	201	93	2260	156
26	1090	285	520	320	3780	1200	544	201	678	275	1570	144
27	1410	298	560	330	2870	1040	503	195	430	390	931	145
28	1050	344	600	320	2250	968	473	175	324	185	642	141
29	812	390	620	360	---	878	1900	160	523	121	526	144
30	706	418	600	330	---	824	2680	152	770	225	428	121
31	1420	---	620	310	---	788	---	144	---	545	355	---
TOTAL	46996	18423	34252	11530	44820	51470	74211	17939	6068	4710	39873	6551
MEAN	1516	614	1105	372	1601	1660	2474	579	202	152	1286	218
MAX	10500	2210	3500	540	5730	4410	26100	1640	770	545	8360	474
MIN	257	285	356	280	290	788	473	144	98	28	106	114
CFSM	1.76	.71	1.28	.43	1.86	1.93	2.87	.67	.24	.18	1.49	.25
IN.	2.03	.80	1.48	.50	1.94	2.22	3.21	.78	.26	.20	1.72	.28
CAL YR 1976	TOTAL	338971	MEAN 926	MAX 10500	MIN 45	CFSM 1.08	IN 14.65					
WTR YR 1977	TOTAL	356843	MEAN 978	MAX 26100	MIN 28	CFSM 1.14	IN 15.42					

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.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 4,000 mg/L Mar. 17, 1973; minimum daily mean, 1 mg/L on several days during 1974, Nov. 1, 1976, Apr. 5, 1977, Sept. 1, 1977.

SEDIMENT LOADS: Maximum daily, 124,000 tons (112,000 tonnes) Apr. 5, 1977; minimum daily, 0.38 ton (0.34 tonne) July 20, 1977.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 790 micromhos June 24; minimum daily, 126 micromhos Oct. 10.

TEMPERATURE: Maximum, 31.5°C July 8, 19, 20; minimum, 0.5°C Dec. 26 to Feb. 20.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,600 mg/L Aug. 14; minimum daily mean, 1 mg/L Nov. 9, Mar. 28, Sept. 11.

SEDIMENT LOADS: Maximum daily, 124,000 tons (112,000 tonnes) Apr. 5; minimum daily, 0.38 tons (0.34 tonnes) July 20.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	205	229	403		---	276	356	242	658	393	415	332
2	190	187	488		---	303	369	270	678	385	258	440
3	220	189	375		---	314	372	307	692	419	270	412
4	257	209	392		---	286	---	---	706	457	288	436
5	269	227	384		---	237	---	336	709	598	328	436
6	309	247	376		---	241	165	344	690	597	356	421
7	329	260	286		---	266	231	309	654	596	391	362
8	324	262	181		---	267	264	287	664	597	411	423
9	148	280	150		---	286	---	312	717	599	483	428
10	126	287	166		---	328	302	313	679	646	427	431
11	172	289	180		---	333	341	331	729	681	427	404
12	215	295	184		---	332	345	369	717	676	426	501
13	264	296	190		---	217	358	392	708	673	213	500
14	292	304	170		---	589	369	410	728	667	204	502
15	313	312	175		---	213	377	438	732	673	165	513
16	334	326	179		---	225	392	458	711	703	276	503
17	347	343	203		---	249	410	478	774	703	254	480
18	367	367	206		---	244	411	498	782	710	206	494
19	384	375	215		---	269	431	514	743	700	244	494
20	403	408	224		---	256	437	564	731	709	254	494
21	410	418	---		245	264	437	573	724	717	285	436
22	440	422	231		254	274	---	590	727	717	307	434
23	426	416	225		233	278	461	---	788	689	334	412
24	440	412	---		204	266	461	610	790	672	324	410
25	422	417	228		164	202	473	642	774	706	291	423
26	332	436	233		194	278	474	---	643	607	222	477
27	345	454	---		229	294	474	612	542	570	249	484
28	238	447	220		259	---	482	620	494	563	267	480
29	234	442	---		---	315	426	620	394	474	442	480
30	251	421	227		---	327	236	631	398	466	312	483
31	231	---	236		---	344	---	658	---	485	355	---
MEAN	299	333	246		223	286	379	455	683	608	312	451
WTR YR 1977	MEAN	402		MAX	790		MIN	126				

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; minimum daily, 0.0°C Jan. 18, 1977.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum daily, 34.5°C July 7-9, 19, 21; minimum daily, 0.0°C Jan. 18.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.0	16.5	15.0	12.0	16.5	---	19.5	21.0	29.5	30.5	30.0	31.5
2	21.0	15.5	19.5	15.5	15.0	18.0	27.0	25.5	22.0	27.0	30.5	31.0
3	21.0	21.5	11.5	17.0	20.0	15.5	22.0	28.5	23.5	25.5	28.0	29.0
4	24.5	20.0	18.0	19.5	18.0	24.0	---	28.0	22.0	28.0	29.5	29.5
5	24.5	20.0	13.5	20.5	15.5	23.0	23.5	29.0	24.5	33.0	33.5	30.0
6	22.0	20.5	13.5	16.5	9.5	17.0	---	23.5	25.0	33.5	32.0	28.0
7	23.5	23.0	19.0	21.0	9.0	20.5	15.5	23.0	25.5	34.5	33.5	31.0
8	22.0	20.5	13.5	6.5	6.0	---	16.5	24.0	20.0	34.5	33.5	30.0
9	21.5	20.5	14.5	13.5	15.5	20.0	14.5	18.0	26.0	34.5	34.0	27.0
10	20.0	21.5	17.0	---	22.0	19.5	15.5	16.5	22.0	31.0	32.0	29.0
11	19.0	20.5	21.0	6.0	21.5	21.0	16.0	19.5	23.0	32.0	31.5	28.0
12	19.0	---	20.0	11.0	23.5	25.5	24.5	---	21.5	32.0	31.0	26.0
13	23.0	16.5	14.5	5.5	21.5	18.0	25.0	21.0	26.5	31.0	31.5	28.5
14	20.5	10.0	14.0	18.0	20.0	19.5	20.0	22.0	26.5	31.0	31.5	30.0
15	19.5	16.5	18.5	14.0	14.5	19.0	24.0	24.5	26.0	30.0	31.0	29.0
16	20.5	15.5	19.5	10.0	14.5	19.5	24.0	24.0	26.5	29.0	31.0	31.0
17	20.0	12.0	19.5	4.0	11.0	17.0	24.5	24.5	---	30.0	32.0	31.5
18	15.0	22.0	16.0	0.0	15.5	27.0	---	26.0	30.0	30.0	27.0	28.5
19	17.0	24.0	18.0	8.0	14.5	26.5	25.0	28.0	30.0	34.5	25.5	31.0
20	23.0	19.5	19.5	12.0	15.0	26.0	25.5	29.0	29.0	32.0	26.0	30.5
21	20.5	16.5	15.0	12.0	15.5	26.5	27.0	27.0	30.0	34.5	26.0	26.5
22	24.5	18.5	14.0	12.0	15.5	25.5	28.0	28.0	24.0	31.5	30.0	---
23	23.5	18.0	18.5	15.5	23.5	14.5	26.5	30.0	28.5	25.5	---	25.5
24	23.5	18.5	17.0	16.5	26.5	26.5	23.5	29.0	30.0	28.0	30.0	26.0
25	26.0	15.5	16.0	---	26.5	16.5	20.0	30.0	31.5	32.0	29.0	25.5
26	20.5	22.0	15.0	18.5	22.0	17.0	21.0	27.0	30.5	26.5	30.0	31.0
27	16.5	23.0	9.5	16.5	28.0	21.5	20.5	30.0	30.5	26.5	29.5	28.5
28	11.0	---	11.0	23.0	20.0	24.5	25.5	28.0	30.5	27.0	32.0	26.5
29	14.5	16.5	10.5	9.5	---	27.0	19.5	28.5	30.5	26.0	31.0	25.5
30	15.0	11.5	11.0	15.5	---	29.0	21.0	30.0	29.5	27.0	29.5	24.0
31	15.5	---	12.0	14.0	---	24.5	---	31.5	---	29.0	30.0	---
MONTH	20.5	18.5	15.5	13.0	17.5	21.5	22.0	26.0	26.5	30.0	30.5	28.5
YEAR	MAX	34.5	MIN	0.0	MEAN	22.5						

KANAWHA RIVER BASIN

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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 Pocatalico 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 current year.

REVISED RECORDS.--WSP 1335: 1908-10, 1912-13, 1915-16.

GAGE.--Water-stage recorder. Datum of gage is 594.56 ft (181.222 m) above mean sea level, 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 period Dec. 22 to Feb. 11, which are poor.

AVERAGE DISCHARGE.--49 years, 295 ft³/s (8.354 m³/s), 16.83 in/yr (427 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) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Oct. 9	1930	6430	182	22.66	6.907	Aug. 14	1530	3700	105	16.43	5.008
Apr. 5	0400	*6790	192	23.38	7.126						

Minimum discharge, 2.3 ft³/s (0.07 m³/s) July 20, gage height, 1.88 ft (0.573 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1780	1360	70	100	75	202	89	72	6.9	750	27	110
2	1990	532	79	92	70	164	88	59	6.4	518	23	57
3	510	358	82	90	66	140	306	52	5.8	167	21	39
4	240	266	80	88	75	1340	1320	48	5.2	84	24	31
5	140	193	79	86	85	2080	6190	48	4.7	53	14	25
6	92	145	81	94	90	725	2180	53	4.4	38	12	23
7	94	90	1660	100	84	412	707	224	5.2	31	11	23
8	558	85	1950	110	76	286	510	567	6.6	26	15	23
9	4160	80	600	100	72	217	342	192	45	20	53	22
10	5190	75	348	92	120	182	264	-111	85	93	42	18
11	1180	70	308	98	500	154	220	80	52	98	129	15
12	374	65	623	90	2550	139	180	63	27	48	118	13
13	228	60	855	84	3440	2470	153	54	18	42	166	12
14	161	55	462	80	2800	1950	138	46	13	81	2110	11
15	114	50	304	85	1480	546	126	42	11	44	1950	10
16	96	45	217	110	810	380	112	37	9.6	30	284	9.6
17	80	41	146	100	480	266	99	32	8.2	21	640	43
18	63	38	115	95	372	346	88	29	6.9	15	748	45
19	50	40	155	90	294	382	82	26	8.2	12	256	125
20	47	39	179	85	494	276	75	23	7.7	6.1	129	118
21	57	37	136	80	462	220	69	21	11	15	77	68
22	57	36	100	75	488	232	63	19	14	41	54	43
23	51	34	100	72	1380	298	62	16	31	31	42	30
24	54	33	103	68	1450	250	73	15	23	25	172	23
25	298	33	131	74	985	203	87	15	20	304	502	18
26	1750	31	155	76	500	172	75	14	41	822	186	15
27	807	34	205	80	370	149	68	12	191	200	93	13
28	346	39	252	80	274	142	61	12	78	76	60	12
29	218	72	217	85	---	137	66	11	915	47	44	11
30	202	70	140	90	---	122	95	9.6	837	39	130	11
31	1770	---	123	80	---	105	---	8.2	---	32	176	---
TOTAL	22757	4106	10055	2729	19942	14687	13988	2010.8	2502.8	3809.1	8308	1016.6
MEAN	734	137	324	88.0	712	474	466	64.9	83.4	123	268	33.9
MAX	5190	1360	1950	110	3440	2470	6190	567	915	822	2110	125
MIN	47	31	70	68	66	105	61	8.2	4.4	6.1	11	9.6
CFSM	3.08	.58	1.36	.37	2.99	1.99	1.96	.27	.35	.52	1.13	.14
IN.	3.56	.64	1.57	.43	3.12	2.30	2.19	.31	.39	.60	1.30	.16

CAL YR 1976 TOTAL 112480.7 MEAN 307 MAX 5190 MIN 8.3 CFSM 1.29 IN 17.58
WTR YR 1977 TOTAL 105911.3 MEAN 290 MAX 6190 MIN 4.4 CFSM 1.22 IN 16.55

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.--No discharge records available.

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 daily, 77 micromhos Jan. 31, 1957.

pH: Maximum daily, 8.6 units May 14, 1977; minimum daily, 6.3 units July 19, 20, 1976, Sept. 2, 1977.

WATER TEMPERATURES: Maximum daily, 31.0°C July 24, 1964; minimum daily, 0.0°C Feb. 14, 1958, Mar. 12, 1960.

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 daily, 437 micromhos Aug. 7; minimum daily, 86 micromhos Apr. 6.

pH: Maximum daily, 8.6 units May 14; minimum daily, 6.3 units Sept. 2.

WATER TEMPERATURES: Maximum daily, 31.0°C July 18; minimum daily, 0.5°C Jan. 13-28, Feb. 1-6.

DISSOLVED OXYGEN: Maximum daily, 16.0 mg/L Feb. 19, 20; minimum daily, 3.1 mg/L July 28.

WATER QUALITY DATA: WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	FECAL COLIFORM MF (COL./100 ML)	FECAL STREPTOCOCCI KF AGAR (COL./100 ML)	HARDNESS (CA+MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)
OCT												
21...	0930	15900	110	8.1	12.5	8	9.8	20	120	38	12	10
NOV												
16...	0830	8880	210	8.2	10.0	5	9.8	20	4	55	17	15
JAN												
10...	0930	6170	255	7.4	.0	2	10.5	4	8	72	34	18
FEB												
22...	1600	17400	195	7.2	7.5	6	--	54	16	56	22	15
APR												
14...	0845	17200	155	7.2	13.0	18	--	250	60	56	22	15
MAY												
03...	0930	12100	260	--	18.0	5	8.8	110	24	70	34	18
23...	1000	4830	290	7.5	23.0	2	8.8	14	2	70	34	18
JUN												
21...	1030	5560	440	7.5	24.0	1	7.4	92	4	85	33	22
JUL												
20...	0915	2860	310	7.5	30.0	1	6.8	450	44	79	35	22
AUG												
17...	0945	12300	250	7.2	25.0	5	7.7	330	310	61	25	15
SEP												
12...	0930	6360	225	7.3	24.0	7	7.7	40	66	64	31	17
DATE	DIS-SOLVED MAGNESIUM (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CaCO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLORIDE (CL) (MG/L)	DIS-SOLVED FLUORIDE (F) (MG/L)	DIS-SOLVED SILICA (SI02) (MG/L)	DIS-SOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)
OCT												
21...	3.2	7.7	1.6	32	0	26	.4	21	11	.1	5.1	78
NOV												
16...	4.2	16	1.6	46	0	38	.5	33	19	.1	6.2	115
JAN												
10...	6.6	19	1.6	46	0	38	2.9	34	23	.1	5.4	140
FEB												
22...	4.5	15	1.6	41	0	34	4.1	37	20	.1	5.4	122
APR												
14...	4.5	7.1	1.6	42	0	34	4.2	23	8.9	.1	5.9	116
MAY												
03...	6.1	14	2.3	44	--	36	--	34	17	.0	5.3	134
23...	6.2	25	2.2	45	0	37	2.3	45	28	.1	3.0	139
JUN												
21...	7.2	29	2.3	63	0	52	3.2	48	30	.1	3.1	183
JUL												
20...	5.8	25	2.1	53	0	43	2.7	39	32	.1	2.5	177
AUG												
17...	5.7	12	2.6	44	0	36	4.4	37	15	.1	3.2	125
SEP												
12...	5.3	30	2.4	41	0	34	3.3	48	35	.1	3.1	169

KANAWHA RIVER BASIN

03201300 KANAWHA RIVER AT WINFIELD DAM, AT WINFIELD, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED ZINC (ZN) (UG/L)	DIS-SOLVED GROSS ALPHA AS U-NAT. (UG/L)	SUS-PENDED GROSS ALPHA AS U-NAT. (UG/L)	DIS-SOLVED GROSS BETA AS CS-137 (PC/L)	SUS-PENDED GROSS BETA AS CS-137 (PC/L)	DIS-SOLVED GROSS BETA AS SR90 /Y90 (PC/L)	SUS-PENDED GROSS BETA AS SR90 /Y90 (PC/L)	DIS-SOLVED URANIUM (U) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)	TOTAL ALDRIN (UG/L)	TOTAL CHLOR-DANE (UG/L)	TOTAL ODD (UG/L)
OCT 21...	--	--	--	--	--	--	--	--	5.0	--	--	--
NOV 16...	110	<2.4	.6	2.2	.5	1.9	.4	.20	5.0	ND	ND	ND
JAN 10...	--	--	--	--	--	--	--	--	4.5	--	--	--
FEB 22...	10	--	--	--	--	--	--	--	4.2	ND	ND	ND
APR 14...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 03...	--	--	--	--	--	--	--	--	--	--	--	--
23...	30	<2.4	<.4	2.3	<.4	1.8	<.4	.05	5.6	ND	ND	ND
JUN 21...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 20...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 17...	10	--	--	--	--	--	--	--	5.9	ND	ND	ND
SEP 12...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	TOTAL DDE (UG/L)	TOTAL DDT (UG/L)	TOTAL DI-AZINON (UG/L)	TOTAL DI-ELDRIN (UG/L)	TOTAL ENDRIN (UG/L)	TOTAL ETHION (UG/L)	TOTAL HEPTA-CHLOR (UG/L)	TOTAL HEPTA-CHLOR EPOXIDE (UG/L)	TOTAL LINDANE (UG/L)	TOTAL MALA-THION (UG/L)	TOTAL METH-OXY-CHLOR (UG/L)
OCT 21...	--	--	--	--	--	--	--	--	--	--	--
NOV 16...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
JAN 10...	--	--	--	--	--	--	--	--	--	--	--
FEB 22...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
APR 14...	--	--	--	--	--	--	--	--	--	--	--
MAY 03...	--	--	--	--	--	--	--	--	--	--	--
23...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
JUN 21...	--	--	--	--	--	--	--	--	--	--	--
JUL 20...	--	--	--	--	--	--	--	--	--	--	--
AUG 17...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SEP 12...	--	--	--	--	--	--	--	--	--	--	--

DATE	TOTAL METHYL PARA-THION (UG/L)	TOTAL METHYL TRI-THION (UG/L)	TOTAL PARA-THION (UG/L)	TOTAL TOX-APHENE (UG/L)	TOTAL TRI-THION (UG/L)	TOTAL 2,4-D (UG/L)	TOTAL 2,4,5-T (UG/L)	TOTAL SILVEX (UG/L)	TOTAL PHYTO-PLANKTON (CELLS PER ML)	SUS-PENDED SEDIMENT DIS-CHARGE (T/DAY)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM
OCT 21...	--	--	--	--	--	--	--	--	3000	944	74
NOV 16...	ND	ND	ND	ND	.66	ND	ND	ND	140	192	45
JAN 10...	--	--	--	--	--	--	--	--	2000	317	31
FEB 22...	ND	ND	ND	ND	ND	ND	ND	ND	570	846	70
APR 14...	--	--	--	--	--	--	--	--	--	1250	85
MAY 03...	--	--	--	--	--	--	--	--	5900	359	70
23...	ND	ND	ND	ND	ND	ND	ND	ND	7700	91	43
JUN 21...	--	--	--	--	--	--	--	--	7800	120	40
JUL 20...	--	--	--	--	--	--	--	--	9600	46	57
AUG 17...	ND	ND	ND	ND	ND	ND	ND	ND	35000	1490	90
SEP 12...	--	--	--	--	--	--	--	--	7100	258	75

ND Not detected.

KANAWHA RIVER BASIN

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03201300 KANAWHA RIVER AT WINFIELD DAM, AT WINFIELD, WV--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	244	136	210	218	243	107	179	218	---	281	294	234
2	197	138	191	219	243	110	187	186	---	238	---	235
3	176	127	183	221	250	120	195	184	---	228	273	---
4	167	133	189	229	272	125	206	181	---	215	276	---
5	168	137	200	238	264	145	129	182	---	212	---	---
6	172	138	199	267	267	139	86	176	---	216	---	---
7	179	146	208	264	256	135	88	170	342	220	437	---
8	187	154	185	277	277	133	98	160	---	---	417	---
9	177	163	197	254	266	135	111	145	---	---	410	---
10	---	176	134	236	272	144	106	143	336	397	390	---
11	---	186	128	232	275	154	107	145	---	297	363	---
12	98	193	137	233	267	158	114	153	---	298	366	---
13	103	198	147	246	228	171	128	157	---	314	387	257
14	106	208	144	260	190	136	148	181	376	302	381	250
15	112	203	140	259	160	106	165	177	370	272	318	247
16	113	204	132	254	157	102	184	182	352	268	---	248
17	118	214	132	254	159	103	187	207	358	272	---	264
18	127	224	139	252	161	114	189	219	360	281	---	275
19	128	228	150	254	175	129	194	228	345	288	166	307
20	133	220	155	247	182	135	207	227	331	281	161	316
21	135	207	168	251	193	142	220	221	318	278	172	308
22	136	197	184	210	197	137	220	237	321	289	186	306
23	144	203	190	208	199	138	224	242	336	309	183	292
24	152	211	190	201	170	137	231	265	317	316	197	286
25	169	229	200	204	137	138	226	267	---	359	240	253
26	201	213	205	205	110	137	227	277	---	334	218	236
27	139	215	207	205	105	137	220	290	---	316	201	229
28	131	227	227	215	106	141	216	310	---	304	216	233
29	133	243	244	227	---	147	218	314	---	295	221	232
30	125	233	243	230	---	163	221	309	294	287	233	229
31	134	---	223	244	---	174	---	291	---	286	235	---
MONTH	148	190	178	236	206	135	174	214	---	285	278	---
YEAR	MAX	437	MIN	86	MEAN	212						

PH (UNITS), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.8	6.9	7.4	7.3	7.2	7.3	6.9	7.1	---	7.0	6.5	6.5
2	6.8	7.0	7.4	7.3	7.2	7.0	6.9	7.0	---	6.8	7.0	6.3
3	6.7	6.9	7.3	7.2	7.3	7.1	6.8	7.2	---	6.8	6.6	---
4	7.0	6.9	7.3	7.3	7.4	7.2	6.9	7.1	---	6.8	6.9	---
5	6.8	6.8	7.2	7.3	7.1	7.1	6.6	7.0	---	6.8	---	---
6	6.9	6.8	7.2	7.5	7.1	7.1	6.5	7.0	---	6.9	---	---
7	6.8	6.9	7.2	7.4	7.2	7.1	6.6	7.0	7.0	7.2	6.8	---
8	6.8	6.8	7.1	7.4	7.5	7.1	6.8	6.9	---	---	6.7	---
9	6.8	6.8	7.1	7.4	7.3	7.2	6.9	6.9	---	---	6.6	---
10	---	7.0	7.2	7.3	7.4	7.1	6.9	6.9	7.0	6.6	6.5	---
11	---	6.9	7.0	7.4	7.1	7.3	7.0	6.9	---	6.7	6.4	---
12	6.8	6.9	7.0	7.4	7.1	7.3	7.0	7.0	---	7.0	6.6	---
13	7.0	7.0	7.0	7.3	7.1	7.2	7.1	7.2	---	6.9	6.5	6.9
14	7.0	7.0	7.1	7.5	7.1	6.9	7.1	8.6	6.8	7.4	6.5	6.8
15	7.0	7.0	7.2	7.4	7.0	6.9	7.0	7.3	6.8	7.3	---	6.8
16	6.9	7.1	7.0	7.4	6.9	7.0	7.1	7.1	7.2	7.2	---	6.8
17	6.9	7.2	7.1	7.5	6.8	7.0	7.1	7.2	7.2	7.2	6.8	7.1
18	6.9	7.4	7.2	7.3	6.9	7.0	7.0	7.1	7.3	6.9	---	6.7
19	6.9	7.3	7.4	7.2	7.0	7.0	6.9	7.1	7.2	6.6	6.5	6.7
20	7.1	7.4	7.3	7.2	7.3	7.0	6.8	7.2	7.1	6.7	6.5	6.6
21	7.1	7.1	7.4	7.2	7.4	7.0	6.8	7.4	7.3	6.8	6.6	6.6
22	7.0	7.2	7.2	7.2	7.2	7.0	6.8	7.2	7.2	6.6	6.6	6.8
23	7.0	7.2	7.4	7.2	7.2	6.9	6.8	7.0	7.3	6.5	6.5	6.7
24	7.0	7.3	7.5	7.2	7.1	6.9	6.8	7.5	7.1	6.5	---	6.6
25	7.1	7.2	7.3	7.3	6.9	7.0	6.8	7.2	---	6.5	6.5	6.4
26	7.2	7.0	7.3	7.1	6.7	7.0	6.9	7.0	---	6.6	6.5	6.4
27	7.1	7.0	7.2	7.0	6.9	7.0	6.8	6.9	---	6.6	6.7	6.4
28	7.1	7.0	7.3	7.0	7.2	6.9	6.9	7.0	---	6.7	6.7	6.6
29	7.2	7.1	7.3	7.1	---	6.9	7.1	6.9	---	6.6	6.6	6.7
30	7.1	7.0	7.3	7.2	---	6.9	7.1	6.9	6.9	6.6	6.6	6.6
31	7.0	---	7.3	7.2	---	6.8	---	6.9	---	6.5	6.5	---
MONTH	7.0	7.0	7.2	7.3	7.1	7.0	6.9	7.1	---	6.8	---	---
YEAR	MAX	8.6	MIN	6.3	MEAN	7.0						

KANAWHA RIVER BASIN

03201300 KANAWHA RIVER AT WINFIELD DAM, AT WINFIELD, WV--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.5	10.0	5.5	1.5	0.5	5.5	14.0	17.0	---	25.0	28.5	26.5
2	18.0	9.5	5.5	1.0	0.5	5.0	15.0	18.0	---	25.5	---	26.5
3	18.0	10.0	5.5	1.0	0.5	5.0	15.5	18.0	---	25.5	27.0	---
4	18.0	9.5	4.5	1.0	0.5	5.5	15.5	18.0	---	26.0	28.0	---
5	18.0	9.5	4.5	1.0	0.5	6.5	13.5	18.0	---	25.5	---	---
6	18.5	9.0	4.5	1.5	0.5	7.0	10.5	19.0	---	26.0	---	---
7	18.5	9.0	4.5	1.5	1.0	8.0	9.5	19.5	25.5	26.5	28.5	---
8	18.5	9.0	4.0	1.5	1.0	7.0	9.5	19.0	---	---	28.0	---
9	18.0	8.5	4.0	1.5	1.0	8.0	10.5	18.5	---	---	28.0	---
10	---	8.5	4.0	1.0	1.0	8.5	10.5	18.0	24.0	28.5	28.0	---
11	---	8.5	4.0	1.0	1.5	9.0	11.5	18.0	---	28.5	28.0	---
12	15.0	8.0	4.5	1.0	2.0	9.5	12.0	17.0	---	29.0	28.5	---
13	15.5	8.5	5.0	0.5	3.0	10.0	13.5	17.0	---	29.5	28.0	27.0
14	15.5	8.0	5.0	0.5	1.5	10.5	14.5	18.0	23.5	30.0	27.0	26.5
15	15.5	8.0	5.0	0.5	1.0	10.0	15.0	18.5	24.0	30.0	24.0	26.5
16	15.5	7.0	4.5	0.5	1.5	10.5	15.5	19.0	25.5	30.5	---	26.0
17	15.5	6.5	4.5	0.5	1.5	11.0	16.5	19.5	25.5	30.5	---	26.0
18	15.0	7.0	5.0	0.5	1.5	11.0	17.0	20.5	26.0	31.0	---	26.0
19	15.0	7.0	5.5	0.5	1.5	11.0	18.5	21.0	26.0	30.5	24.0	26.0
20	14.5	6.5	5.5	0.5	2.0	11.0	19.0	22.0	25.5	30.5	24.0	25.5
21	14.5	6.5	5.0	0.5	2.0	11.5	19.5	23.0	25.5	30.5	24.5	25.5
22	14.0	6.5	4.5	0.5	2.0	11.0	20.0	23.5	25.5	30.5	24.5	25.5
23	13.5	6.5	4.0	0.5	3.0	10.5	20.0	23.5	25.5	30.5	24.5	25.0
24	13.5	6.5	3.5	0.5	4.0	10.0	20.0	24.0	25.5	30.0	24.5	25.0
25	13.0	6.5	3.5	0.5	5.0	10.0	20.0	24.0	---	30.0	24.5	24.5
26	12.0	7.0	3.5	0.5	5.0	9.5	19.5	24.5	---	29.5	24.5	24.5
27	11.5	7.0	3.5	0.5	5.5	10.0	19.0	25.0	---	28.5	25.0	24.5
28	11.0	7.0	3.5	0.5	6.0	10.0	18.5	25.5	---	28.5	25.0	24.0
29	10.5	6.5	3.0	1.0	---	11.0	18.0	25.5	---	28.0	25.0	24.0
30	10.5	6.5	2.0	1.0	---	11.5	18.0	25.5	25.5	27.0	26.0	24.0
31	10.0	---	2.0	1.0	---	13.0	---	26.0	---	28.0	26.0	---
MONTH	15.0	8.0	4.5	1.0	2.0	9.5	15.5	21.0	---	28.5	26.0	---
YEAR	MAX	31.0	MIN	0.5	MEAN	14.0						

DISSOLVED OXYGEN (DO), MG/L, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.8	10.1	12.2	9.7	13.7	13.1	8.8	9.5	---	---	---	6.1
2	7.4	10.2	12.1	10.0	13.4	13.9	8.4	9.9	---	---	---	5.7
3	7.3	11.0	12.7	11.9	13.3	14.0	---	9.9	---	---	---	---
4	7.8	11.6	12.7	11.6	13.4	13.2	10.5	8.8	---	---	---	---
5	7.5	11.5	12.4	10.9	13.4	13.1	11.1	8.4	---	---	---	---
6	7.3	11.6	12.4	12.3	13.4	12.7	11.7	8.9	---	---	---	---
7	7.1	11.5	12.2	13.8	13.2	12.2	12.3	8.7	5.2	---	---	---
8	6.7	11.5	12.4	14.6	13.2	12.5	11.6	8.8	---	---	---	---
9	6.7	11.3	12.8	13.9	13.0	12.4	11.7	9.8	---	---	---	---
10	---	11.2	13.6	13.4	12.8	11.7	10.6	10.1	5.0	---	---	---
11	---	11.0	14.6	12.4	12.8	10.9	11.8	8.9	---	---	---	---
12	10.9	10.8	15.4	12.4	12.9	11.1	11.6	8.5	---	---	---	5.9
13	11.8	10.5	14.7	12.4	12.9	10.8	11.6	7.7	---	---	---	6.0
14	12.0	10.3	14.9	12.3	13.1	10.0	12.9	7.1	5.3	---	---	5.6
15	14.9	10.5	14.8	12.5	13.5	11.1	11.5	6.9	5.1	---	---	5.6
16	9.4	10.5	14.0	12.3	13.6	11.6	11.4	7.3	5.2	5.5	---	5.9
17	7.1	11.3	13.9	13.6	13.6	11.9	11.0	8.5	5.2	4.8	---	6.1
18	---	11.7	13.0	14.1	14.5	10.9	9.6	9.0	5.1	5.8	---	5.6
19	---	11.5	12.4	14.4	16.0	10.4	9.0	9.3	5.3	4.4	5.8	5.2
20	---	11.4	12.2	14.6	16.0	10.2	8.5	10.0	5.9	3.9	5.6	5.3
21	9.8	11.5	11.9	14.6	15.8	10.7	7.7	10.1	6.9	4.1	5.2	5.5
22	9.7	11.8	12.5	14.4	15.3	10.9	7.7	9.3	6.2	---	---	5.7
23	9.8	11.7	12.2	14.4	14.1	10.6	8.0	8.9	6.4	---	---	---
24	9.6	11.8	11.8	14.3	13.9	10.4	7.5	8.6	5.5	---	---	---
25	9.5	11.4	11.0	14.2	13.8	10.9	8.4	7.5	---	---	6.3	---
26	9.5	11.2	10.5	14.1	13.5	11.5	9.9	6.5	---	3.9	6.3	---
27	10.1	11.2	10.0	14.0	12.9	10.5	9.5	5.6	---	3.2	6.7	---
28	10.5	11.0	10.2	13.8	12.6	10.4	8.4	---	---	3.1	6.1	6.4
29	10.6	10.8	9.3	14.0	---	10.6	8.8	---	---	3.3	5.8	6.3
30	10.6	10.7	---	13.9	---	10.3	9.4	---	---	3.3	5.7	6.2
31	10.5	---	---	13.8	---	9.4	---	---	---	3.3	5.7	---
MONTH	9.3	11.1	12.6	13.2	13.7	11.4	10.0	8.6	---	---	---	---

KANAWHA RIVER BASIN

03201300 KANAWHA RIVER AT WINFIELD DAM, AT WINFIELD, WV--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1976 TO SEPTEMBER 1977

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DATE TIME	OCT 21,76 0930		NOV 16,76 0830		JAN 10,77 0930		FEB 22,77 1600		MAY 3,77 0930		MAY 23,77 1000		JUN 21,77 1030		JUL 20,77 0915		AUG 17,77 0945		SEP 12,77 0930		
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	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	
CHLOROPHYTA (GREEN ALGAE)																					
..CHLOROPHYCEAE																					
..CHLOROCOCCALES																					
...CHAKACIACEAE																					
...SCHROEDERIA	--	--	--	--	* 0	--	--	--	--	--	--	--	--	--	* 0	--	--	--	--	* 0	
...HYDRODICTYACEAE																					
...PEUASTRUM	--	--	--	--	--	--	--	--	--	--	--	--	* 0	51	1	--	--	--	--	330	5
...MICRACTINIACEAE																					
...GOLENKINIA	--	--	--	--	--	--	--	--	--	--	--	--	97	1	--	--	--	--	--	* 0	
...MICRACTINIUM	--	--	--	--	--	--	--	--	700	12	--	--	130	2	--	--	--	--	--	* 0	
...OOCYSTACEAE																					
...ANKISTRODESMUS	--	--	3	2	25	1	--	--	88	1	--	--	--	--	51	1	--	--	--	50	1
...DICTYOSPHAERIUM	--	--	--	--	--	--	--	--	350	6	--	--	130	2	--	--	* 0	--	--	--	--
...KIMCHNERIELLA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	* 0	--	--	140	2
...OOCYSTIS	--	--	--	--	--	--	--	--	120	2	--	--	--	--	--	--	* 0	--	--	60	1
...SELENASTRUM	--	--	--	--	--	--	5	1	--	--	--	--	--	--	--	--	--	--	--	--	--
...TETRAEDRON	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
...SCENEDESMACEAE																					
...ACTINASTRUM	--	--	--	--	--	--	--	--	--	--	--	--	930	12	200	2	230	1	--	--	--
...CRUCIGENIA	--	--	--	--	--	--	--	--	--	--	--	--	130	2	--	--	--	--	--	--	--
...SCENEDESMUS	* 0	--	--	--	--	--	--	--	120	2	500	6	260	3	660	7	350	1	120	2	--
...TETRASTRUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	* 0	--	--	--	--
..TETRASPORALES																					
..PALMELLACEAE																					
..SPHAEROCYSTIS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	120	2
..VOLVOCLES																					
..CHLAMYDOMONADACEAE																					
..CHLAMYDOMONAS	--	--	--	--	--	--	--	--	* 0	--	--	--	--	--	76	1	--	--	--	--	--
..VOLVUCACEAE																					
..PANDORINA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1300	14	--	--	--	--	--
..ZYGNEMATALES																					
..DESMIDIACEAE																					
..COSMARIUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	* 0	--	--	--	--	--	--
..STAURASTRUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	* 0	--	--	--	--	* 0	
CHRYSOPHYTA																					
..BACILLARIOPHYCEAE																					
..CENTRALES																					
..COSCINODISCACEAE																					
...CYCLOTELLA	* 0		3	2	570#	28	--	--	1900#	32	120	2	1800#	24	630	7	840	2	110	2	
...MELOSIRA	--	--	12	8	560#	27	5	1	--	--	--	--	3300#	43	150	2	2100	6	1500#	21	
...PENNALES																					
...ACHNANTHACEAE																					
...ACHNANTHES	--	--	--	--	* 0	26	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--
...CYMBELLACEAE																					
...CYMBELLA	--	--	--	--	* 0	15	3	--	--	620	8	--	--	--	--	--	--	--	--	--	--
...DIATOMACEAE																					
...DIATOMA	--	--	--	--	--	61	11	--	--	--	--	--	--	--	--	--	--	--	--	110	2
...FRAGILARIACEAE																					
...ASTERIONELLA	--	--	--	--	--	31	5	230	4	--	--	97	1	--	--	--	--	--	--	--	--
...FRAGILARIA	--	--	--	--	51	2	5	1	200	3	--	--	--	--	--	--	--	--	--	290	4
...SYNEDRA	22	1	3	2	--	--	36	6	* 0	--	750	10	610	8	150	2	* 0	--	80	1	

KANAWHA RIVER BASIN

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 current year.

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 period Dec. 23 to Feb. 11, which are poor.

AVERAGE DISCHARGE.--10 years, 12.0 ft³/s (0.340 m³/s), 18.71 in/yr (475 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. 9	0915	1080	30.6	12.72	3.877	Aug. 14	1030	613	17.4	10.74	3.274
Apr. 4	2200	*1790	50.7	15.29	4.660						

Minimum discharge, 0.08 ft³/s (0.002 m³/s) June 4-6, July 16, 17, 19, 20, 21, gage height, 6.88 ft (2.097 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	1e	1.0	2.3	1.8	9.0	4.4	1.4	.12	2.4	.39	2.6
2	12	11	1.3	2.2	1.6	7.7	7.3	1.3	.10	.57	.25	1.8
3	6.1	8.1	1.1	2.1	1.6	7.7	22	2.0	.09	.24	.23	1.7
4	3.6	6.3	1.1	2.0	1.8	134	444	1.3	.09	.16	.21	1.4
5	2.7	4.7	.94	2.1	2.1	35	301	6.6	.08	.16	.17	47
6	1.8	4.1	8.2	2.3	2.0	20	42	4.2	.14	.14	.33	13
7	70	3.8	205	2.4	1.9	14	22	23	.11	.11	.68	5.5
8	34	3.2	29	2.5	1.8	11	16	12	.11	.09	3.9	3.3
9	4.4	3.0	12	2.3	1.7	8.2	12	4.6	3.8	.09	4.0	2.1
10	33	3.0	6.3	2.2	5.0	7.3	10	3.0	.49	2.1	14	1.1
11	13	2.7	6.8	2.2	70	5.4	7.8	2.4	.25	.71	7.9	.87
12	6.9	2.5	22	2.1	178	7.3	5.3	1.8	.22	.23	4.1	.69
13	4.8	2.4	16	2.0	194	167	4.0	1.5	.20	.16	30	.51
14	4.0	2.1	4.0	1.4	32	26	3.4	1.1	.19	.14	149	.66
15	3.1	2.1	7.3	2.1	23	18	3.2	.99	.18	.11	17	.91
16	2.9	1.9	5.4	2.5	16	13	2.8	.74	1.4	.09	7.0	.85
17	2.3	1.6	4.4	2.4	14	9.9	2.5	.68	3.2	.15	4.0	1.6
18	1.6	1.6	3.3	2.2	7.7	37	2.3	.53	.39	.13	10	.78
19	1.3	1.6	3.0	2.1	8.2	21	2.3	.44	.50	.09	3.0	4.7
20	2.7	1.3	4.0	2.0	12	16	2.3	.39	.24	.09	1.5	5.6
21	4.0	1.0	4.4	1.4	11	13	2.2	.27	.20	.36	1.1	2.5
22	2.3	.44	3.3	1.2	31	16	2.1	.23	.18	1.5	.80	1.4
23	1.6	.86	2.4	1.7	33	13	2.2	.21	.21	.18	.70	.96
24	3.5	.86	2.5	1.6	40	10	2.8	.22	.20	.13	20	.81
25	50	.78	2.8	1.7	25	8.4	2.1	.22	.25	104	8.2	.75
26	40	.78	3.5	1.8	18	7.3	1.8	.21	.25	14	3.9	.70
27	13	.94	3.5	1.4	14	6.6	1.7	.18	.18	3.0	2.4	.70
28	7.8	1.1	4.0	1.8	9.4	6.3	2.3	.17	1.2	1.1	1.2	.77
29	6.0	3.0	3.5	1.4	---	6.2	3.6	.12	2.0	1.9	.90	.69
30	15	1.6	3.2	2.0	---	5.7	1.9	.16	.39	1.8	10	.57
31	70	---	2.8	1.4	---	5.2	---	.13	---	.68	9.0	---
TOTAL	920.0	56.86	343.54	63.9	758.0	672.7	939.3	72.11	16.96	136.61	316.86	106.52
MEAN	29.7	3.23	12.4	2.06	27.1	21.7	31.3	2.33	.57	4.41	10.2	3.55
MAX	464	18	205	2.5	194	167	444	23	3.8	104	149	47
MIN	1.3	.78	.44	1.6	1.6	5.2	1.7	.12	.08	.09	.17	.51
CFSM	3.41	.37	1.42	.24	3.11	2.44	3.59	.27	.07	.51	1.17	.41
IN.	3.43	.41	1.64	.27	3.24	2.87	4.01	.31	.07	.58	1.35	.45

CAL YR 1976 TOTAL 3705.52 MEAN 10.1 MAX 464 MIN .12 CFSM 1.16 IN 15.82
WTR YR 1977 TOTAL 4423.36 MEAN 12.3 MAX 464 MIN .08 CFSM 1.41 IN 19.15

OHIO RIVER MAIN STEM

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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. Records include flow of Kanawha River.

DRAINAGE AREA.--52,760 mi² (136,650 km²), approximately, includes that of Kanawha River.

PERIOD OF RECORD.--March 1940 to current year (since October 1952, no low-flow records). 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) above mean sea level, Sandy Hook datum. Prior to Oct. 1, 1951, water-stage recorder at site 0.3 mi (0.5 km) upstream at same datum. Auxiliary water-stage recorder 13.1 mi (21.1 km) downstream from base gage at datum 505.22 ft (153.991 m) above mean sea level, Sandy Hook datum.

REMARKS.--Records fair. 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 telemeters at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 522,000 ft³/s (14,800 m³/s) Jan. 1, 1943; maximum gage height, 55.00 ft (16.764 m) Apr. 16, 1948; minimum daily discharge, not determined; 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 daily discharge, 291,000 ft³/s (8,240 m³/s) Feb. 26; maximum gage height, 34.14 ft (10.406 m) Feb. 27; minimum gage height, 23.31 ft (7.105 m) Jun. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50200	120000	---	---	---	202000	105000	74800	---	---	---	---
2	71700	123000	---	---	---	190000	101000	68500	---	---	---	---
3	53500	105000	---	---	---	160000	167000	62600	---	---	---	---
4	50500	96900	---	---	---	160000	265000	64300	---	---	---	---
5	---	80000	---	---	---	201000	384000	82700	---	---	---	---
6	---	65000	---	---	---	203000	389000	90000	---	---	---	---
7	---	56000	86500	---	---	190000	290000	117000	---	---	---	---
8	---	---	146000	---	---	160000	250000	139000	---	---	52300	---
9	136000	---	151000	---	---	137000	237000	113000	---	---	62800	---
10	269000	---	108000	---	---	122000	217000	89400	---	---	61100	---
11	275000	---	93800	---	---	112000	190000	78400	---	---	55400	---
12	215000	---	83600	---	55100	108000	164000	54000	---	---	52900	---
13	137000	---	85800	---	91500	163000	139000	---	---	---	58300	---
14	112000	---	91000	---	112000	237000	104000	---	---	---	82900	---
15	87400	---	86000	---	112000	261000	92100	---	---	---	102000	---
16	79600	---	63000	---	99500	227000	84700	---	---	---	89000	---
17	77100	---	60000	---	88000	163000	71800	---	---	---	68500	---
18	57000	---	54000	---	79800	148000	---	---	---	---	80200	---
19	---	---	---	---	68000	197000	---	---	---	---	84200	54600
20	---	---	---	---	61000	213000	---	---	---	---	59000	55500
21	---	---	---	---	58300	171000	---	---	64900	---	---	58600
22	---	---	54000	---	58700	143000	---	---	70000	---	---	70200
23	---	---	---	---	85500	151000	---	---	66000	---	---	63800
24	---	---	---	---	132000	165000	---	---	67000	---	---	52400
25	52000	---	---	---	235000	157000	67500	---	62000	---	---	---
26	96400	---	---	---	291000	140000	66000	---	71400	---	---	58100
27	133000	---	---	---	285000	121000	70000	---	55000	---	---	61000
28	125000	---	---	---	244000	110000	64000	---	51000	---	---	62000
29	102000	---	---	---	---	108000	69000	---	---	---	---	65900
30	89500	---	---	---	---	116000	84000	---	---	---	---	52000
31	106000	---	---	---	---	109000	---	---	---	---	---	---
TOTAL	---	---	---	---	---	5045000	---	---	---	---	---	---
MEAN	---	---	---	---	---	162700	---	---	---	---	---	---
MAX	---	---	---	---	---	261000	---	---	---	---	---	---
MIN	---	---	---	---	---	108000	---	---	---	---	---	---

GUYANDOTTE RIVER BASIN

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) above mean sea level. Prior to Sept. 10, 1969, at site 25 ft (8 m) upstream at same datum.

REMARKS.--Water-discharge records good except those for period Dec. 22 to Feb. 12, which are poor. Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--9 years, 444 ft³/s (12.57 m³/s), 19.58 in/yr (497 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)
Oct. 9	1500	5990 170	10.84 3.304	Aug. 13	1815	5610 159	10.46 3.188
Apr. 5	0130	*36700 1040	26.89 8.196				

Minimum discharge, 68 ft³/s (1.93 m³/s) July 21, gage height, 2.97 ft (0.905 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	390	592	160	170	140	730	298	832	235	334	217	187
2	411	513	217	160	135	595	286	680	166	247	166	178
3	238	440	199	150	140	505	406	560	147	196	130	160
4	165	380	181	150	145	465	11100	510	127	160	125	160
5	125	310	171	160	155	460	17900	630	115	145	106	152
6	100	263	157	160	150	410	3480	1200	127	140	110	138
7	116	233	655	150	135	378	1840	820	137	132	117	125
8	1900	211	1240	150	130	350	1380	645	117	120	132	128
9	4950	197	759	150	130	318	1090	530	135	104	127	125
10	1970	196	535	150	140	306	904	455	166	102	117	120
11	790	199	467	150	170	290	760	422	122	150	298	118
12	466	195	534	150	250	282	655	362	106	125	274	106
13	326	172	827	150	600	545	580	314	102	106	3300	100
14	258	156	798	150	957	670	520	294	214	94	3020	98
15	216	150	648	160	779	550	475	266	286	102	1560	115
16	187	161	545	200	645	465	430	247	163	96	718	125
17	173	158	445	170	502	394	382	232	135	86	640	199
18	165	155	370	160	426	410	354	217	520	79	1540	155
19	142	158	313	150	396	480	342	214	302	76	766	132
20	127	162	306	150	398	635	358	202	226	72	455	229
21	143	168	337	150	348	772	318	190	190	70	318	196
22	138	169	190	150	319	838	290	172	155	110	330	142
23	133	169	200	150	511	892	294	172	247	106	390	122
24	141	155	200	150	2230	778	450	166	442	90	1210	112
25	332	154	210	150	2490	625	465	163	946	258	1620	104
26	1450	147	210	140	1400	525	418	169	675	485	736	106
27	945	157	220	140	1210	450	378	155	430	226	455	150
28	560	160	230	140	988	418	374	147	386	135	350	125
29	399	181	290	140	---	382	1770	137	500	145	274	104
30	335	170	180	140	---	358	1230	140	422	495	232	96
31	490	---	190	140	---	358	---	238	---	326	208	---
TOTAL	18281	6631	11924	4730	16019	15634	49527	11481	8041	5112	29041	4107
MEAN	590	221	385	153	572	504	1651	370	268	165	646	137
MAX	4950	592	1240	200	2490	892	17900	1200	946	495	3300	229
MIN	100	147	157	140	130	282	286	137	102	70	106	96
CFSM	1.92	.72	1.25	.50	1.86	1.64	5.36	1.20	.87	.54	2.10	.45
IN.	2.21	.80	1.44	.57	1.93	1.89	5.98	1.39	.97	.62	2.42	.50

CAL YR 1976	TOTAL	126660	MEAN 346	MAX 4950	MIN 39	CFSM 1.12	IN 15.30
WTR YR 1977	TOTAL	171528	MEAN 470	MAX 17900	MIN 70	CFSM 1.53	IN 20.72

GUYANDOTTE RIVER BASIN

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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, 30.0°C July 20, 21, 1977; minimum, 0.0°C many days during winter periods.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,180 mg/L May 13, 1974; minimum daily mean, 0 mg/L Nov. 12, 23, 1976.

SEDIMENT LOADS.--Maximum daily, 54,800 tons (49,700 tonnes) Apr. 5, 1977; minimum daily, 0 ton (0 tonne) Nov. 12, 23, 1976.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum 30.0°C July 20, 21; minimum, 0.0°C many days in December, January, and February.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,430 mg/L Apr. 5; minimum daily mean, 0 mg/L Nov. 12, 23.

SEDIMENT LOADS: Maximum daily, 54,800 tons (49,700 tonnes) Apr. 5; minimum daily, 0 ton (0 tonne) Nov. 12, 23.

WATER QUALITY DATA

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SUSPENDED SEDI-MENT (MG/L)	SUSPENDED SEDI-MENT DISCHARGE (T/DAY)	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .008 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM
MAY , 1974								
13...	1315	2060	--	395	2200	18	25	31
MAR , 1975								
14...	1500	10100	9.0	1550	42300	19	27	37
APR , 1977								
05...	1500	11300	--	2710	82700	26	38	51

DATE	SUS. SED. FALL DIAM. % FINER THAN .031 MM	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM	SUS. SED. SIEVE DIAM. % FINER THAN .125 MM	SUS. SED. SIEVE DIAM. % FINER THAN .250 MM	SUS. SED. SIEVE DIAM. % FINER THAN .500 MM	SUS. SED. SIEVE DIAM. % FINER THAN 1.00 MM	SUS. SED. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM
MAY , 1974									
13...	33	40	43	51	89	92	100	0	2
MAR , 1975									
14...	46	53	63	84	95	98	100	0	3
APR , 1977									
05...	62	79	84	92	96	98	99	2	8

DATE	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM
MAY , 1974								
13...	10	70	78	84	90	95	100	--
MAR , 1975								
14...	16	48	59	68	82	100	--	--
APR , 1977								
05...	18	25	30	38	48	84	94	100

03202400 GUYANDOTTE RIVER NEAR BAILEYSVILLE, WV--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	440	240	396	237	500	303	310	402
2	---	228	---	440	440	270	---	---	422	317	---	415
3	---	---	---	---	466	310	---	302	492	---	397	438
4	249	---	370	400	440	320	142	319	553	384	432	---
5	---	---	---	400	430	310	126	324	---	435	477	439
6	332	---	---	---	430	---	206	211	558	---	499	479
7	350	327	---	400	440	320	269	242	600	493	---	431
8	158	342	---	---	450	330	329	---	597	---	---	489
9	104	358	190	400	450	375	360	315	581	522	523	497
10	---	372	---	381	453	398	391	347	577	535	---	---
11	177	390	---	420	430	418	400	385	561	549	---	536
12	---	385	260	420	405	416	422	405	---	507	357	548
13	280	387	220	---	295	384	433	---	558	512	169	---
14	312	407	---	470	151	250	442	---	570	510	117	560
15	353	422	220	420	200	269	452	464	403	537	156	---
16	377	---	---	---	---	279	462	480	370	544	---	568
17	---	420	270	280	235	298	471	492	420	---	196	522
18	410	427	---	290	270	314	480	510	227	541	---	---
19	423	---	340	320	280	319	---	---	230	488	---	494
20	414	418	350	320	---	292	483	531	318	574	---	---
21	---	---	360	340	320	---	472	540	363	565	---	469
22	448	395	---	340	310	229	483	554	384	566	---	430
23	429	387	---	370	315	212	483	---	415	599	330	443
24	405	394	---	400	147	224	474	563	370	596	245	494
25	387	422	---	390	130	247	373	550	230	466	151	492
26	135	---	---	400	190	---	367	555	213	313	199	---
27	149	---	---	---	180	---	387	556	---	323	---	---
28	183	---	400	---	210	320	405	550	263	329	301	522
29	---	---	440	410	---	338	171	---	277	---	356	502
30	237	---	---	420	---	378	185	578	---	365	---	498
31	253	---	420	450	---	385	---	592	---	281	357	---
MEAN	298	381	320	386	327	313	373	442	425	467	310	485
WTR YR 1977	MEAN	381	MAX	600	MIN	104						

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	17.0	15.5	9.5	8.5	2.0	1.0	0.5	0.0	0.5	0.0	4.5	2.5
2	15.5	15.5	9.0	7.5	1.5	1.0	0.5	0.0	0.5	0.0	4.0	1.5
3	16.5	15.5	8.0	7.0	1.5	1.0	0.5	0.0	0.5	0.0	6.0	3.5
4	17.5	16.0	8.5	7.0	2.0	1.0	0.5	0.0	0.5	0.0	8.0	5.5
5	18.0	17.0	7.5	6.0	2.5	1.5	0.5	0.0	0.5	0.0	10.0	7.5
6	18.0	17.0	6.0	4.5	2.5	1.5	0.5	0.0	0.5	0.0	9.5	8.0
7	18.0	17.5	6.5	5.0	5.0	2.5	0.5	0.0	0.5	0.0	8.5	7.0
8	17.5	15.0	5.5	4.0	5.0	4.0	1.0	0.0	0.5	0.0	8.0	5.5
9	15.0	13.5	5.0	3.5	3.5	2.0	1.0	0.0	0.5	0.0	7.5	5.5
10	13.5	12.5	6.0	4.0	3.0	1.5	0.5	0.0	1.0	0.0	8.5	7.5
11	13.5	12.5	6.0	5.0	5.5	3.0	0.5	0.0	0.5	0.0	11.0	8.0
12	13.5	12.0	5.5	5.0	7.0	5.5	0.5	0.0	0.5	0.0	11.5	10.0
13	14.5	12.0	5.0	4.0	7.0	5.0	0.5	0.0	0.5	0.0	12.0	10.5
14	14.5	13.0	4.0	3.5	5.0	3.5	0.5	0.0	0.5	0.0	11.0	9.5
15	14.0	12.5	4.5	3.5	5.0	3.5	0.5	0.0	0.5	0.0	11.5	8.5
16	14.0	13.0	5.0	4.0	6.5	5.0	0.0	0.0	0.5	0.0	12.0	10.0
17	13.5	12.5	5.0	4.0	6.0	5.5	0.5	0.0	1.0	0.0	11.0	9.0
18	12.5	11.0	5.5	4.0	5.5	4.5	0.5	0.0	0.5	0.0	11.0	9.0
19	11.0	9.5	6.0	4.5	5.0	4.0	0.0	0.0	2.5	0.5	11.0	9.5
20	10.5	10.0	6.0	5.0	5.5	5.0	0.0	0.0	3.0	2.5	11.0	9.0
21	10.5	9.5	5.5	4.5	5.0	2.0	0.0	0.0	2.5	2.0	9.5	7.5
22	10.0	8.5	4.5	4.0	2.0	1.0	0.0	0.0	3.0	0.5	8.0	6.0
23	9.0	7.5	4.0	3.0	1.0	0.5	0.0	0.0	4.5	2.0	6.5	4.5
24	8.5	8.0	3.5	2.5	0.5	0.0	0.0	0.0	5.0	4.0	8.0	5.5
25	11.0	8.5	4.0	2.5	0.5	0.0	0.0	0.0	5.0	3.5	9.0	7.0
26	11.5	10.0	4.5	3.5	1.0	0.0	0.5	0.0	6.5	4.5	9.5	6.5
27	10.0	8.5	6.5	4.5	0.5	0.0	0.5	0.0	7.0	5.5	10.5	8.0
28	8.5	7.5	8.0	6.5	1.0	0.0	0.5	0.0	6.0	4.5	12.0	10.0
29	7.5	6.0	8.0	5.0	1.5	0.5	0.5	0.0	---	---	14.0	11.0
30	7.0	6.5	5.0	2.0	0.5	0.0	0.5	0.0	---	---	15.5	13.5
31	8.5	7.0	---	---	0.5	0.0	0.5	0.0	---	---	16.5	14.0
MONTH	18.0	6.0	9.5	2.0	7.0	0.0	1.0	0.0	7.0	0.0	16.5	1.5

03202400 GUYANDOTTE RIVER NEAR BAILEYSVILLE, WV--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER																																																																																																																																																																																																																																																																																																																																																																																																																																	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN																																																																																																																																																																																																																																																																																																																																																																																																																																
	1	15.5	12.5	15.0	12.5	24.5	22.0	21.5	21.0	24.5	23.5	27.5	25.5	2	15.5	13.5	17.0	13.5	24.0	20.5	22.5	21.0	25.5	24.0	27.5	26.0	3	16.5	14.5	17.5	16.0	24.5	20.5	23.0	21.0	25.5	24.5	27.5	26.0	4	15.5	9.5	17.5	16.5	24.5	19.5	23.5	21.5	26.0	24.5	28.0	26.0	5	9.5	8.5	17.0	16.0	23.5	19.5	24.5	22.5	26.0	25.0	27.5	26.0	6	9.0	7.0	16.5	14.0	23.5	21.0	26.0	23.5	27.0	25.5	27.5	25.5	7	9.0	6.5	17.5	16.0	22.0	19.0	27.0	24.5	27.5	26.0	27.0	25.5	8	11.5	8.5	18.0	15.5	20.5	17.0	27.0	25.5	28.0	26.5	26.0	24.5	9	10.5	9.0	17.5	15.0	17.0	15.5	27.0	25.5	28.0	26.0	26.0	24.0	10	12.0	9.0	15.0	12.5	19.0	14.5	27.0	26.0	27.5	26.0	25.5	24.0	11	14.5	11.0	15.0	11.5	18.5	15.5	27.5	24.5	27.5	25.5	24.5	22.0	12	16.0	12.5	16.5	12.5	22.0	17.0	28.0	27.0	26.0	25.0	23.0	20.5	13	16.5	13.5	17.5	14.0	24.5	19.5	28.0	26.5	25.5	20.0	22.5	20.5	14	17.0	14.0	19.0	16.0	24.5	21.5	28.5	27.5	20.5	19.5	22.5	21.0	15	17.0	14.5	21.0	17.5	23.5	21.5	28.5	27.0	22.0	20.0	23.5	21.5	16	17.5	14.5	21.5	18.5	24.5	21.0	28.5	27.0	23.5	21.5	24.0	22.0	17	17.5	15.0	22.5	19.5	25.5	21.5	28.5	27.0	23.0	22.0	24.0	22.5	18	18.0	15.5	23.0	20.0	24.5	20.5	29.0	28.0	22.5	20.5	24.5	22.5	19	18.5	16.0	23.5	20.5	21.0	19.5	29.5	28.0	21.5	20.0	24.5	22.5	20	18.5	16.5	24.5	21.0	22.0	20.5	30.0	28.5	22.0	20.0	24.0	22.5	21	19.0	17.0	24.0	20.5	23.0	20.5	30.0	29.0	22.5	20.5	23.5	21.0	22	19.5	17.5	24.0	20.5	22.5	21.0	29.5	28.0	23.0	22.0	21.5	20.0	23	19.0	17.5	23.5	21.0	21.5	19.5	28.5	26.5	23.0	22.0	22.0	20.0	24	18.0	15.5	22.5	21.0	20.5	19.0	28.0	26.0	23.0	21.0	22.0	20.5	25	15.5	14.0	22.0	20.0	19.0	17.5	26.0	24.5	21.0	19.0	22.0	20.5	26	14.0	12.0	23.5	20.0	19.0	17.5	24.5	23.5	22.0	20.0	22.0	21.0	27	14.0	10.5	25.0	20.5	20.0	18.5	24.0	23.0	23.0	21.0	21.5	20.5	28	13.5	12.5	26.0	21.0	21.0	19.5	24.5	23.0	24.5	22.5	21.0	19.0	29	13.0	11.5	26.0	22.0	21.0	20.0	24.5	23.0	25.5	24.0	19.5	17.5	30	13.5	11.5	25.5	22.5	21.0	20.0	23.0	22.0	26.0	24.0	19.0	17.0	31	---	---	25.5	22.0	---	---	23.5	22.5	27.0	25.0	---	---	MONTH	19.5	6.5	26.0	11.5	25.5	14.5	30.0	21.0	28.0	19.0	28.0	17.0	YEAR	30.0	0.0									
2	15.5	13.5	17.0	13.5	24.0	20.5	22.5	21.0	25.5	24.0	27.5	26.0	3	16.5	14.5	17.5	16.0	24.5	20.5	23.0	21.0	25.5	24.5	27.5	26.0	4	15.5	9.5	17.5	16.5	24.5	19.5	23.5	21.5	26.0	24.5	28.0	26.0	5	9.5	8.5	17.0	16.0	23.5	19.5	24.5	22.5	26.0	25.0	27.5	26.0	6	9.0	7.0	16.5	14.0	23.5	21.0	26.0	23.5	27.0	25.5	27.5	25.5	7	9.0	6.5	17.5	16.0	22.0	19.0	27.0	24.5	27.5	26.0	27.0	25.5	8	11.5	8.5	18.0	15.5	20.5	17.0	27.0	25.5	28.0	26.5	26.0	24.5	9	10.5	9.0	17.5	15.0	17.0	15.5	27.0	25.5	28.0	26.0	26.0	24.0	10	12.0	9.0	15.0	12.5	19.0	14.5	27.0	26.0	27.5	26.0	25.5	24.0	11	14.5	11.0	15.0	11.5	18.5	15.5	27.5	24.5	27.5	25.5	24.5	22.0	12	16.0	12.5	16.5	12.5	22.0	17.0	28.0	27.0	26.0	25.0	23.0	20.5	13	16.5	13.5	17.5	14.0	24.5	19.5	28.0	26.5	25.5	20.0	22.5	20.5	14	17.0	14.0	19.0	16.0	24.5	21.5	28.5	27.5	20.5	19.5	22.5	21.0	15	17.0	14.5	21.0	17.5	23.5	21.5	28.5	27.0	22.0	20.0	23.5	21.5	16	17.5	14.5	21.5	18.5	24.5	21.0	28.5	27.0	23.5	21.5	24.0	22.0	17	17.5	15.0	22.5	19.5	25.5	21.5	28.5	27.0	23.0	22.0	24.0	22.5	18	18.0	15.5	23.0	20.0	24.5	20.5	29.0	28.0	22.5	20.5	24.5	22.5	19	18.5	16.0	23.5	20.5	21.0	19.5	29.5	28.0	21.5	20.0	24.5	22.5	20	18.5	16.5	24.5	21.0	22.0	20.5	30.0	28.5	22.0	20.0	24.0	22.5	21	19.0	17.0	24.0	20.5	23.0	20.5	30.0	29.0	22.5	20.5	23.5	21.0	22	19.5	17.5	24.0	20.5	22.5	21.0	29.5	28.0	23.0	22.0	21.5	20.0	23	19.0	17.5	23.5	21.0	21.5	19.5	28.5	26.5	23.0	22.0	22.0	20.0	24	18.0	15.5	22.5	21.0	20.5	19.0	28.0	26.0	23.0	21.0	22.0	20.5	25	15.5	14.0	22.0	20.0	19.0	17.5	26.0	24.5	21.0	19.0	22.0	20.5	26	14.0	12.0	23.5	20.0	19.0	17.5	24.5	23.5	22.0	20.0	22.0	21.0	27	14.0	10.5	25.0	20.5	20.0	18.5	24.0	23.0	23.0	21.0	21.5	20.5	28	13.5	12.5	26.0	21.0	21.0	19.5	24.5	23.0	24.5	22.5	21.0	19.0	29	13.0	11.5	26.0	22.0	21.0	20.0	24.5	23.0	25.5	24.0	19.5	17.5	30	13.5	11.5	25.5	22.5	21.0	20.0	23.0	22.0	26.0	24.0	19.0	17.0	31	---	---	25.5	22.0	---	---	23.5	22.5	27.0	25.0	---	---	MONTH	19.5	6.5	26.0	11.5	25.5	14.5	30.0	21.0	28.0	19.0	28.0	17.0	YEAR	30.0	0.0																							
3	16.5	14.5	17.5	16.0	24.5	20.5	23.0	21.0	25.5	24.5	27.5	26.0	4	15.5	9.5	17.5	16.5	24.5	19.5	23.5	21.5	26.0	24.5	28.0	26.0	5	9.5	8.5	17.0	16.0	23.5	19.5	24.5	22.5	26.0	25.0	27.5	26.0	6	9.0	7.0	16.5	14.0	23.5	21.0	26.0	23.5	27.0	25.5	27.5	25.5	7	9.0	6.5	17.5	16.0	22.0	19.0	27.0	24.5	27.5	26.0	27.0	25.5	8	11.5	8.5	18.0	15.5	20.5	17.0	27.0	25.5	28.0	26.5	26.0	24.5	9	10.5	9.0	17.5	15.0	17.0	15.5	27.0	25.5	28.0	26.0	26.0	24.0	10	12.0	9.0	15.0	12.5	19.0	14.5	27.0	26.0	27.5	26.0	25.5	24.0	11	14.5	11.0	15.0	11.5	18.5	15.5	27.5	24.5	27.5	25.5	24.5	22.0	12	16.0	12.5	16.5	12.5	22.0	17.0	28.0	27.0	26.0	25.0	23.0	20.5	13	16.5	13.5	17.5	14.0	24.5	19.5	28.0	26.5	25.5	20.0	22.5	20.5	14	17.0	14.0	19.0	16.0	24.5	21.5	28.5	27.5	20.5	19.5	22.5	21.0	15	17.0	14.5	21.0	17.5	23.5	21.5	28.5	27.0	22.0	20.0	23.5	21.5	16	17.5	14.5	21.5	18.5	24.5	21.0	28.5	27.0	23.5	21.5	24.0	22.0	17	17.5	15.0	22.5	19.5	25.5	21.5	28.5	27.0	23.0	22.0	24.0	22.5	18	18.0	15.5	23.0	20.0	24.5	20.5	29.0	28.0	22.5	20.5	24.5	22.5	19	18.5	16.0	23.5	20.5	21.0	19.5	29.5	28.0	21.5	20.0	24.5	22.5	20	18.5	16.5	24.5	21.0	22.0	20.5	30.0	28.5	22.0	20.0	24.0	22.5	21	19.0	17.0	24.0	20.5	23.0	20.5	30.0	29.0	22.5	20.5	23.5	21.0	22	19.5	17.5	24.0	20.5	22.5	21.0	29.5	28.0	23.0	22.0	21.5	20.0	23	19.0	17.5	23.5	21.0	21.5	19.5	28.5	26.5	23.0	22.0	22.0	20.0	24	18.0	15.5	22.5	21.0	20.5	19.0	28.0	26.0	23.0	21.0	22.0	20.5	25	15.5	14.0	22.0	20.0	19.0	17.5	26.0	24.5	21.0	19.0	22.0	20.5	26	14.0	12.0	23.5	20.0	19.0	17.5	24.5	23.5	22.0	20.0	22.0	21.0	27	14.0	10.5	25.0	20.5	20.0	18.5	24.0	23.0	23.0	21.0	21.5	20.5	28	13.5	12.5	26.0	21.0	21.0	19.5	24.5	23.0	24.5	22.5	21.0	19.0	29	13.0	11.5	26.0	22.0	21.0	20.0	24.5	23.0	25.5	24.0	19.5	17.5	30	13.5	11.5	25.5	22.5	21.0	20.0	23.0	22.0	26.0	24.0	19.0	17.0	31	---	---	25.5	22.0	---	---	23.5	22.5	27.0	25.0	---	---	MONTH	19.5	6.5	26.0	11.5	25.5	14.5	30.0	21.0	28.0	19.0	28.0	17.0	YEAR	30.0	0.0																																				
4	15.5	9.5	17.5	16.5	24.5	19.5	23.5	21.5	26.0	24.5	28.0	26.0	5	9.5	8.5	17.0	16.0	23.5	19.5	24.5	22.5	26.0	25.0	27.5	26.0	6	9.0	7.0	16.5	14.0	23.5	21.0	26.0	23.5	27.0	25.5	27.5	25.5	7	9.0	6.5	17.5	16.0	22.0	19.0	27.0	24.5	27.5	26.0	27.0	25.5	8	11.5	8.5	18.0	15.5	20.5	17.0	27.0	25.5	28.0	26.5	26.0	24.5	9	10.5	9.0	17.5	15.0	17.0	15.5	27.0	25.5	28.0	26.0	26.0	24.0	10	12.0	9.0	15.0	12.5	19.0	14.5	27.0	26.0	27.5	26.0	25.5	24.0	11	14.5	11.0	15.0	11.5	18.5	15.5	27.5	24.5	27.5	25.5	24.5	22.0	12	16.0	12.5	16.5	12.5	22.0	17.0	28.0	27.0	26.0	25.0	23.0	20.5	13	16.5	13.5	17.5	14.0	24.5	19.5	28.0	26.5	25.5	20.0	22.5	20.5	14	17.0	14.0	19.0	16.0	24.5	21.5	28.5	27.5	20.5	19.5	22.5	21.0	15	17.0	14.5	21.0	17.5	23.5	21.5	28.5	27.0	22.0	20.0	23.5	21.5	16	17.5	14.5	21.5	18.5	24.5	21.0	28.5	27.0	23.5	21.5	24.0	22.0	17	17.5	15.0	22.5	19.5	25.5	21.5	28.5	27.0	23.0	22.0	24.0	22.5	18	18.0	15.5	23.0	20.0	24.5	20.5	29.0	28.0	22.5	20.5	24.5	22.5	19	18.5	16.0	23.5	20.5	21.0	19.5	29.5	28.0	21.5	20.0	24.5	22.5	20	18.5	16.5	24.5	21.0	22.0	20.5	30.0	28.5	22.0	20.0	24.0	22.5	21	19.0	17.0	24.0	20.5	23.0	20.5	30.0	29.0	22.5	20.5	23.5	21.0	22	19.5	17.5	24.0	20.5	22.5	21.0	29.5	28.0	23.0	22.0	21.5	20.0	23	19.0	17.5	23.5	21.0	21.5	19.5	28.5	26.5	23.0	22.0	22.0	20.0	24	18.0	15.5	22.5	21.0	20.5	19.0	28.0	26.0	23.0	21.0	22.0	20.5	25	15.5	14.0	22.0	20.0	19.0	17.5	26.0	24.5	21.0	19.0	22.0	20.5	26	14.0	12.0	23.5	20.0	19.0	17.5	24.5	23.5	22.0	20.0	22.0	21.0	27	14.0	10.5	25.0	20.5	20.0	18.5	24.0	23.0	23.0	21.0	21.5	20.5	28	13.5	12.5	26.0	21.0	21.0	19.5	24.5	23.0	24.5	22.5	21.0	19.0	29	13.0	11.5	26.0	22.0	21.0	20.0	24.5	23.0	25.5	24.0	19.5	17.5	30	13.5	11.5	25.5	22.5	21.0	20.0	23.0	22.0	26.0	24.0	19.0	17.0	31	---	---	25.5	22.0	---	---	23.5	22.5	27.0	25.0	---	---	MONTH	19.5	6.5	26.0	11.5	25.5	14.5	30.0	21.0	28.0	19.0	28.0	17.0	YEAR	30.0	0.0																																																	
5	9.5	8.5	17.0	16.0	23.5	19.5	24.5	22.5	26.0	25.0	27.5	26.0	6	9.0	7.0	16.5	14.0	23.5	21.0	26.0	23.5	27.0	25.5	27.5	25.5	7	9.0	6.5	17.5	16.0	22.0	19.0	27.0	24.5	27.5	26.0	27.0	25.5	8	11.5	8.5	18.0	15.5	20.5	17.0	27.0	25.5	28.0	26.5	26.0	24.5	9	10.5	9.0	17.5	15.0	17.0	15.5	27.0	25.5	28.0	26.0	26.0	24.0	10	12.0	9.0	15.0	12.5	19.0	14.5	27.0	26.0	27.5	26.0	25.5	24.0	11	14.5	11.0	15.0	11.5	18.5	15.5	27.5	24.5	27.5	25.5	24.5	22.0	12	16.0	12.5	16.5	12.5	22.0	17.0	28.0	27.0	26.0	25.0	23.0	20.5	13	16.5	13.5	17.5	14.0	24.5	19.5	28.0	26.5	25.5	20.0	22.5	20.5	14	17.0	14.0	19.0	16.0	24.5	21.5	28.5	27.5	20.5	19.5	22.5	21.0	15	17.0	14.5	21.0	17.5	23.5	21.5	28.5	27.0	22.0	20.0	23.5	21.5	16	17.5	14.5	21.5	18.5	24.5	21.0	28.5	27.0	23.5	21.5	24.0	22.0	17	17.5	15.0	22.5	19.5	25.5	21.5	28.5	27.0	23.0	22.0	24.0	22.5	18	18.0	15.5	23.0	20.0	24.5	20.5	29.0	28.0	22.5	20.5	24.5	22.5	19	18.5	16.0	23.5	20.5	21.0	19.5	29.5	28.0	21.5	20.0	24.5	22.5	20	18.5	16.5	24.5	21.0	22.0	20.5	30.0	28.5	22.0	20.0	24.0	22.5	21	19.0	17.0	24.0	20.5	23.0	20.5	30.0	29.0	22.5	20.5	23.5	21.0	22	19.5	17.5	24.0	20.5	22.5	21.0	29.5	28.0	23.0	22.0	21.5	20.0	23	19.0	17.5	23.5	21.0	21.5	19.5	28.5	26.5	23.0	22.0	22.0	20.0	24	18.0	15.5	22.5	21.0	20.5	19.0	28.0	26.0	23.0	21.0	22.0	20.5	25	15.5	14.0	22.0	20.0	19.0	17.5	26.0	24.5	21.0	19.0	22.0	20.5	26	14.0	12.0	23.5	20.0	19.0	17.5	24.5	23.5	22.0	20.0	22.0	21.0	27	14.0	10.5	25.0	20.5	20.0	18.5	24.0	23.0	23.0	21.0	21.5	20.5	28	13.5	12.5	26.0	21.0	21.0	19.5	24.5	23.0	24.5	22.5	21.0	19.0	29	13.0	11.5	26.0	22.0	21.0	20.0	24.5	23.0	25.5	24.0	19.5	17.5	30	13.5	11.5	25.5	22.5	21.0	20.0	23.0	22.0	26.0	24.0	19.0	17.0	31	---	---	25.5	22.0	---	---	23.5	22.5	27.0	25.0	---	---	MONTH	19.5	6.5	26.0	11.5	25.5	14.5	30.0	21.0	28.0	19.0	28.0	17.0	YEAR	30.0	0.0																																																														
6	9.0	7.0	16.5	14.0	23.5	21.0	26.0	23.5	27.0	25.5	27.5	25.5	7	9.0	6.5	17.5	16.0	22.0	19.0	27.0	24.5	27.5	26.0	27.0	25.5	8	11.5	8.5	18.0	15.5	20.5	17.0	27.0	25.5	28.0	26.5	26.0	24.5	9	10.5	9.0	17.5	15.0	17.0	15.5	27.0	25.5	28.0	26.0	26.0	24.0	10	12.0	9.0	15.0	12.5	19.0	14.5	27.0	26.0	27.5	26.0	25.5	24.0	11	14.5	11.0	15.0	11.5	18.5	15.5	27.5	24.5	27.5	25.5	24.5	22.0	12	16.0	12.5	16.5	12.5	22.0	17.0	28.0	27.0	26.0	25.0	23.0	20.5	13	16.5	13.5	17.5	14.0	24.5	19.5	28.0	26.5	25.5	20.0	22.5	20.5	14	17.0	14.0	19.0	16.0	24.5	21.5	28.5	27.5	20.5	19.5	22.5	21.0	15	17.0	14.5	21.0	17.5	23.5	21.5	28.5	27.0	22.0	20.0	23.5	21.5	16	17.5	14.5	21.5	18.5	24.5	21.0	28.5	27.0	23.5	21.5	24.0	22.0	17	17.5	15.0	22.5	19.5	25.5	21.5	28.5	27.0	23.0	22.0	24.0	22.5	18	18.0	15.5	23.0	20.0	24.5	20.5	29.0	28.0	22.5	20.5	24.5	22.5	19	18.5	16.0	23.5	20.5	21.0	19.5	29.5	28.0	21.5	20.0	24.5	22.5	20	18.5	16.5	24.5	21.0	22.0	20.5	30.0	28.5	22.0	20.0	24.0	22.5	21	19.0	17.0	24.0	20.5	23.0	20.5	30.0	29.0	22.5	20.5	23.5	21.0	22	19.5	17.5	24.0	20.5	22.5	21.0	29.5	28.0	23.0	22.0	21.5	20.0	23	19.0	17.5	23.5	21.0	21.5	19.5	28.5	26.5	23.0	22.0	22.0	20.0	24	18.0	15.5	22.5	21.0	20.5	19.0	28.0	26.0	23.0	21.0	22.0	20.5	25	15.5	14.0	22.0	20.0	19.0	17.5	26.0	24.5	21.0	19.0	22.0	20.5	26	14.0	12.0	23.5	20.0	19.0	17.5	24.5	23.5	22.0	20.0	22.0	21.0	27	14.0	10.5	25.0	20.5	20.0	18.5	24.0	23.0	23.0	21.0	21.5	20.5	28	13.5	12.5	26.0	21.0	21.0	19.5	24.5	23.0	24.5	22.5	21.0	19.0	29	13.0	11.5	26.0	22.0	21.0	20.0	24.5	23.0	25.5	24.0	19.5	17.5	30	13.5	11.5	25.5	22.5	21.0	20.0	23.0	22.0	26.0	24.0	19.0	17.0	31	---	---	25.5	22.0	---	---	23.5	22.5	27.0	25.0	---	---	MONTH	19.5	6.5	26.0	11.5	25.5	14.5	30.0	21.0	28.0	19.0	28.0	17.0	YEAR	30.0	0.0																																																																											
7	9.0	6.5	17.5	16.0	22.0	19.0	27.0	24.5	27.5	26.0	27.0	25.5	8	11.5	8.5	18.0	15.5	20.5	17.0	27.0	25.5	28.0	26.5	26.0	24.5	9	10.5	9.0	17.5	15.0	17.0	15.5	27.0	25.5	28.0	26.0	26.0	24.0	10	12.0	9.0	15.0	12.5	19.0	14.5	27.0	26.0	27.5	26.0	25.5	24.0	11	14.5	11.0	15.0	11.5	18.5	15.5	27.5	24.5	27.5	25.5	24.5	22.0	12	16.0	12.5	16.5	12.5	22.0	17.0	28.0	27.0	26.0	25.0	23.0	20.5	13	16.5	13.5	17.5	14.0	24.5	19.5	28.0	26.5	25.5	20.0	22.5	20.5	14	17.0	14.0	19.0	16.0	24.5	21.5	28.5	27.5	20.5	19.5	22.5	21.0	15	17.0	14.5	21.0	17.5	23.5	21.5	28.5	27.0	22.0	20.0	23.5	21.5	16	17.5	14.5	21.5	18.5	24.5	21.0	28.5	27.0	23.5	21.5	24.0	22.0	17	17.5	15.0	22.5	19.5	25.5	21.5	28.5	27.0	23.0	22.0	24.0	22.5	18	18.0	15.5	23.0	20.0	24.5	20.5	29.0	28.0	22.5	20.5	24.5	22.5	19	18.5	16.0	23.5	20.5	21.0	19.5	29.5	28.0	21.5	20.0	24.5	22.5	20	18.5	16.5	24.5	21.0	22.0	20.5	30.0	28.5	22.0	20.0	24.0	22.5	21	19.0	17.0	24.0	20.5	23.0	20.5	30.0	29.0	22.5	20.5	23.5	21.0	22	19.5	17.5	24.0	20.5	22.5	21.0	29.5	28.0	23.0	22.0	21.5	20.0	23	19.0	17.5	23.5	21.0	21.5	19.5	28.5	26.5	23.0	22.0	22.0	20.0	24	18.0	15.5	22.5	21.0	20.5	19.0	28.0	26.0	23.0	21.0	22.0	20.5	25	15.5	14.0	22.0	20.0	19.0	17.5	26.0	24.5	21.0	19.0	22.0	20.5	26	14.0	12.0	23.5	20.0	19.0	17.5	24.5	23.5	22.0	20.0	22.0	21.0	27	14.0	10.5	25.0	20.5	20.0	18.5	24.0	23.0	23.0	21.0	21.5	20.5	28	13.5	12.5	26.0	21.0	21.0	19.5	24.5	23.0	24.5	22.5	21.0	19.0	29	13.0	11.5	26.0	22.0	21.0	20.0	24.5	23.0	25.5	24.0	19.5	17.5	30	13.5	11.5	25.5	22.5	21.0	20.0	23.0	22.0	26.0	24.0	19.0	17.0	31	---	---	25.5	22.0	---	---	23.5	22.5	27.0	25.0	---	---	MONTH	19.5	6.5	26.0	11.5	25.5	14.5	30.0	21.0	28.0	19.0	28.0	17.0	YEAR	30.0	0.0																																																																																								
8	11.5	8.5	18.0	15.5	20.5	17.0	27.0	25.5	28.0	26.5	26.0	24.5	9	10.5	9.0	17.5	15.0	17.0	15.5	27.0	25.5	28.0	26.0	26.0	24.0	10	12.0	9.0	15.0	12.5	19.0	14.5	27.0	26.0	27.5	26.0	25.5	24.0	11	14.5	11.0	15.0	11.5	18.5	15.5	27.5	24.5	27.5	25.5	24.5	22.0	12	16.0	12.5	16.5	12.5	22.0	17.0	28.0	27.0	26.0	25.0	23.0	20.5	13	16.5	13.5	17.5	14.0	24.5	19.5	28.0	26.5	25.5	20.0	22.5	20.5	14	17.0	14.0	19.0	16.0	24.5	21.5	28.5	27.5	20.5	19.5	22.5	21.0	15	17.0	14.5	21.0	17.5	23.5	21.5	28.5	27.0	22.0	20.0	23.5	21.5	16	17.5	14.5	21.5	18.5	24.5	21.0	28.5	27.0	23.5	21.5	24.0	22.0	17	17.5	15.0	22.5	19.5	25.5	21.5	28.5	27.0	23.0	22.0	24.0	22.5	18	18.0	15.5	23.0	20.0	24.5	20.5	29.0	28.0	22.5	20.5	24.5	22.5	19	18.5	16.0	23.5	20.5	21.0	19.5	29.5	28.0	21.5	20.0	24.5	22.5	20	18.5	16.5	24.5	21.0	22.0	20.5	30.0	28.5	22.0	20.0	24.0	22.5	21	19.0	17.0	24.0	20.5	23.0	20.5	30.0	29.0	22.5	20.5	23.5	21.0	22	19.5	17.5	24.0	20.5	22.5	21.0	29.5	28.0	23.0	22.0	21.5	20.0	23	19.0	17.5	23.5	21.0	21.5	19.5	28.5	26.5	23.0	22.0	22.0	20.0	24	18.0	15.5	22.5	21.0	20.5	19.0	28.0	26.0	23.0	21.0	22.0	20.5	25	15.5	14.0	22.0	20.0	19.0	17.5	26.0	24.5	21.0	19.0	22.0	20.5	26	14.0	12.0	23.5	20.0	19.0	17.5	24.5	23.5	22.0	20.0	22.0	21.0	27	14.0	10.5	25.0	20.5	20.0	18.5	24.0	23.0	23.0	21.0	21.5	20.5	28	13.5	12.5	26.0	21.0	21.0	19.5	24.5	23.0	24.5	22.5	21.0	19.0	29	13.0	11.5	26.0	22.0	21.0	20.0	24.5	23.0	25.5	24.0	19.5	17.5	30	13.5	11.5	25.5	22.5	21.0	20.0	23.0	22.0	26.0	24.0	19.0	17.0	31	---	---	25.5	22.0	---	---	23.5	22.5	27.0	25.0	---	---	MONTH	19.5	6.5	26.0	11.5	25.5	14.5	30.0	21.0	28.0	19.0	28.0	17.0	YEAR	30.0	0.0																																																																																																					
9	10.5	9.0	17.5	15.0	17.0	15.5	27.0	25.5	28.0	26.0	26.0	24.0	10	12.0	9.0	15.0	12.5	19.0	14.5	27.0	26.0	27.5	26.0	25.5	24.0	11	14.5	11.0	15.0	11.5	18.5	15.5	27.5	24.5	27.5	25.5	24.5	22.0	12	16.0	12.5	16.5	12.5	22.0	17.0	28.0	27.0	26.0	25.0	23.0	20.5	13	16.5	13.5	17.5	14.0	24.5	19.5	28.0	26.5	25.5	20.0	22.5	20.5	14	17.0	14.0	19.0	16.0	24.5	21.5	28.5	27.5	20.5	19.5	22.5	21.0	15	17.0	14.5	21.0	17.5	23.5	21.5	28.5	27.0	22.0	20.0	23.5	21.5	16	17.5	14.5	21.5	18.5	24.5	21.0	28.5	27.0	23.5	21.5	24.0	22.0	17	17.5	15.0	22.5	19.5	25.5	21.5	28.5	27.0	23.0	22.0	24.0	22.5	18	18.0	15.5	23.0	20.0	24.5	20.5	29.0	28.0	22.5	20.5	24.5	22.5	19	18.5	16.0	23.5	20.5	21.0	19.5	29.5	28.0	21.5	20.0	24.5	22.5	20	18.5	16.5	24.5	21.0	22.0	20.5	30.0	28.5	22.0	20.0	24.0	22.5	21	19.0	17.0	24.0	20.5	23.0	20.5	30.0	29.0	22.5	20.5	23.5	21.0	22	19.5	17.5	24.0	20.5	22.5	21.0	29.5	28.0	23.0	22.0	21.5	20.0	23	19.0	17.5	23.5	21.0	21.5	19.5	28.5	26.5	23.0	22.0	22.0	20.0	24	18.0	15.5	22.5	21.0	20.5	19.0	28.0	26.0	23.0	21.0	22.0	20.5	25	15.5	14.0	22.0	20.0	19.0	17.5	26.0	24.5	21.0	19.0	22.0	20.5	26	14.0	12.0	23.5	20.0	19.0	17.5	24.5	23.5	22.0	20.0	22.0	21.0	27	14.0	10.5	25.0	20.5	20.0	18.5	24.0	23.0	23.0	21.0	21.5	20.5	28	13.5	12.5	26.0	21.0	21.0	19.5	24.5	23.0	24.5	22.5	21.0	19.0	29	13.0	11.5	26.0	22.0	21.0	20.0	24.5	23.0	25.5	24.0	19.5	17.5	30	13.5	11.5	25.5	22.5	21.0	20.0	23.0	22.0	26.0	24.0	19.0	17.0	31	---	---	25.5	22.0	---	---	23.5	22.5	27.0	25.0	---	---	MONTH	19.5	6.5	26.0	11.5	25.5	14.5	30.0	21.0	28.0	19.0	28.0	17.0	YEAR	30.0	0.0																																																																																																																		
10	12.0	9.0	15.0	12.5	19.0	14.5	27.0	26.0	27.5	26.0	25.5	24.0	11	14.5	11.0	15.0	11.5	18.5	15.5	27.5	24.5	27.5	25.5	24.5	22.0	12	16.0	12.5	16.5	12.5	22.0	17.0	28.0	27.0	26.0	25.0	23.0	20.5	13	16.5	13.5	17.5	14.0	24.5	19.5	28.0	26.5	25.5	20.0	22.5	20.5	14	17.0	14.0	19.0	16.0	24.5	21.5	28.5	27.5	20.5	19.5	22.5	21.0	15	17.0	14.5	21.0	17.5	23.5	21.5	28.5	27.0	22.0	20.0	23.5	21.5	16	17.5	14.5	21.5	18.5	24.5	21.0	28.5	27.0	23.5	21.5	24.0	22.0	17	17.5	15.0	22.5	19.5	25.5	21.5	28.5	27.0	23.0	22.0	24.0	22.5	18	18.0	15.5	23.0	20.0	24.5	20.5	29.0	28.0	22.5	20.5	24.5	22.5	19	18.5	16.0	23.5	20.5	21.0	19.5	29.5	28.0	21.5	20.0	24.5	22.5	20	18.5	16.5	24.5	21.0	22.0	20.5	30.0	28.5	22.0	20.0	24.0	22.5	21	19.0	17.0	24.0	20.5	23.0	20.5	30.0	29.0	22.5	20.5	23.5	21.0	22	19.5	17.5	24.0	20.5	22.5	21.0	29.5	28.0	23.0	22.0	21.5	20.0	23	19.0	17.5	23.5	21.0	21.5	19.5	28.5	26.5	23.0	22.0	22.0	20.0	24	18.0	15.5	22.5	21.0	20.5	19.0	28.0	26.0	23.0	21.0	22.0	20.5	25	15.5	14.0	22.0	20.0	19.0	17.5	26.0	24.5	21.0	19.0	22.0	20.5	26	14.0	12.0	23.5	20.0	19.0	17.5	24.5	23.5	22.0	20.0	22.0	21.0	27	14.0	10.5	25.0	20.5	20.0	18.5	24.0	23.0	23.0	21.0	21.5	20.5	28	13.5	12.5	26.0	21.0	21.0	19.5	24.5	23.0	24.5	22.5	21.0	19.0	29	13.0	11.5	26.0	22.0	21.0	20.0	24.5	23.0	25.5	24.0	19.5	17.5	30	13.5	11.5	25.5	22.5	21.0	20.0	23.0	22.0	26.0	24.0	19.0	17.0	31	---	---	25.5	22.0	---	---	23.5	22.5	27.0	25.0	---	---	MONTH	19.5	6.5	26.0	11.5	25.5	14.5	30.0	21.0	28.0	19.0	28.0	17.0	YEAR	30.0	0.0																																																																																																																															
11	14.5	11.0	15.0	11.5	18.5	15.5	27.5	24.5	27.5	25.5	24.5	22.0	12	16.0	12.5	16.5	12.5	22.0	17.0	28.0	27.0	26.0	25.0	23.0	20.5	13	16.5	13.5	17.5	14.0	24.5	19.5	28.0	26.5	25.5	20.0	22.5	20.5	14	17.0	14.0	19.0	16.0	24.5	21.5	28.5	27.5	20.5	19.5	22.5	21.0	15	17.0	14.5	21.0	17.5	23.5	21.5	28.5	27.0	22.0	20.0	23.5	21.5	16	17.5	14.5	21.5	18.5	24.5	21.0	28.5	27.0	23.5	21.5	24.0	22.0	17	17.5	15.0	22.5	19.5	25.5	21.5	28.5	27.0	23.0	22.0	24.0	22.5	18	18.0	15.5	23.0	20.0	24.5	20.5	29.0	28.0	22.5	20.5	24.5	22.5	19	18.5	16.0	23.5	20.5	21.0	19.5	29.5	28.0	21.5	20.0	24.5	22.5	20	18.5	16.5	24.5	21.0	22.0	20.5	30.0	28.5	22.0	20.0	24.0	22.5	21	19.0	17.0	24.0	20.5	23.0	20.5	30.0	29.0	22.5	20.5	23.5	21.0	22	19.5	17.5	24.0	20.5	22.5	21.0	29.5	28.0	23.0	22.0	21.5	20.0	23	19.0	17.5	23.5	21.0	21.5	19.5	28.5	26.5	23.0	22.0	22.0	20.0	24	18.0	15.5	22.5	21.0	20.5	19.0	28.0	26.0	23.0	21.0	22.0	20.5	25	15.5	14.0	22.0	20.0	19.0	17.5	26.0	24.5	21.0	19.0	22.0	20.5	26	14.0	12.0	23.5	20.0	19.0	17.5	24.5	23.5	22.0	20.0	22.0	21.0	27	14.0	10.5	25.0	20.5	20.0	18.5	24.0	23.0	23.0	21.0	21.5	20.5	28	13.5	12.5	26.0	21.0	21.0	19.5	24.5	23.0	24.5	22.5	21.0	19.0	29	13.0	11.5	26.0	22.0	21.0	20.0	24.5	23.0	25.5	24.0	19.5	17.5	30	13.5	11.5	25.5	22.5	21.0	20.0	23.0	22.0	26.0	24.0	19.0	17.0	31	---	---	25.5	22.0	---	---	23.5	22.5	27.0	25.0	---	---	MONTH	19.5	6.5	26.0	11.5	25.5	14.5	30.0	21.0	28.0	19.0	28.0	17.0	YEAR	30.0	0.0																																																																																																																																												
12	16.0	12.5	16.5	12.5	22.0	17.0	28.0	27.0	26.0	25.0	23.0	20.5	13	16.5	13.5	17.5	14.0	24.5	19.5	28.0	26.5	25.5	20.0	22.5	20.5	14	17.0	14.0	19.0	16.0	24.5	21.5	28.5	27.5	20.5	19.5	22.5	21.0	15	17.0	14.5	21.0	17.5	23.5	21.5	28.5	27.0	22.0	20.0	23.5	21.5	16	17.5	14.5	21.5	18.5	24.5	21.0	28.5	27.0	23.5	21.5	24.0	22.0	17	17.5	15.0	22.5	19.5	25.5	21.5	28.5	27.0	23.0	22.0	24.0	22.5	18	18.0	15.5	23.0	20.0	24.5	20.5	29.0	28.0	22.5	20.5	24.5	22.5	19	18.5	16.0	23.5	20.5	21.0	19.5	29.5	28.0	21.5	20.0	24.5	22.5	20	18.5	16.5	24.5	21.0	22.0	20.5	30.0	28.5	22.0	20.0	24.0	22.5	21	19.0	17.0	24.0	20.5	23.0	20.5	30.0	29.0	22.5	20.5	23.5	21.0	22	19.5	17.5	24.0	20.5	22.5	21.0	29.5	28.0	23.0	22.0	21.5	20.0	23	19.0	17.5	23.5	21.0	21.5	19.5	28.5	26.5	23.0	22.0	22.0	20.0	24	18.0	15.5	22.5	21.0	20.5	19.0	28.0	26.0	23.0	21.0	22.0	20.5	25	15.5	14.0	22.0	20.0	19.0	17.5	26.0	24.5	21.0	19.0	22.0	20.5	26	14.0	12.0	23.5	20.0	19.0	17.5	24.5	23.5	22.0	20.0	22.0	21.0	27	14.0	10.5	25.0	20.5	20.0	18.5	24.0	23.0	23.0	21.0	21.5	20.5	28	13.5	12.5	26.0	21.0	21.0	19.5	24.5	23.0	24.5	22.5	21.0	19.0	29	13.0	11.5	26.0	22.0	21.0	20.0	24.5	23.0	25.5	24.0	19.5	17.5	30	13.5	11.5	25.5	22.5	21.0	20.0	23.0	22.0	26.0	24.0	19.0	17.0	31	---	---	25.5	22.0	---	---	23.5	22.5	27.0	25.0	---	---	MONTH	19.5	6.5	26.0	11.5	25.5	14.5	30.0	21.0	28.0	19.0	28.0	17.0	YEAR	30.0	0.0																																																																																																																																																									
13	16.5	13.5	17.5	14.0	24.5	19.5	28.0	26.5	25.5	20.0	22.5	20.5	14	17.0	14.0	19.0	16.0	24.5	21.5	28.5	27.5	20.5	19.5	22.5	21.0	15	17.0	14.5	21.0	17.5	23.5	21.5	28.5	27.0	22.0	20.0	23.5	21.5	16	17.5	14.5	21.5	18.5	24.5	21.0	28.5	27.0	23.5	21.5	24.0	22.0	17	17.5	15.0	22.5	19.5	25.5	21.5	28.5	27.0	23.0	22.0	24.0	22.5	18	18.0	15.5	23.0	20.0	24.5	20.5	29.0	28.0	22.5	20.5	24.5	22.5	19	18.5	16.0	23.5	20.5	21.0	19.5	29.5	28.0	21.5	20.0	24.5	22.5	20	18.5	16.5	24.5	21.0	22.0	20.5	30.0	28.5	22.0	20.0	24.0	22.5	21	19.0	17.0	24.0	20.5	23.0	20.5	30.0	29.0	22.5	20.5	23.5	21.0	22	19.5	17.5	24.0	20.5	22.5	21.0	29.5	28.0	23.0	22.0	21.5	20.0	23	19.0	17.5	23.5	21.0	21.5	19.5	28.5	26.5	23.0	22.0	22.0	20.0	24	18.0	15.5	22.5	21.0	20.5	19.0	28.0	26.0	23.0	21.0	22.0	20.5	25	15.5	14.0	22.0	20.0	19.0	17.5	26.0	24.5	21.0	19.0	22.0	20.5	26	14.0	12.0	23.5	20.0	19.0	17.5	24.5	23.5	22.0	20.0	22.0	21.0	27	14.0	10.5	25.0	20.5	20.0	18.5	24.0	23.0	23.0	21.0	21.5	20.5	28	13.5	12.5	26.0	21.0	21.0	19.5	24.5	23.0	24.5	22.5	21.0	19.0	29	13.0	11.5	26.0	22.0	21.0	20.0	24.5	23.0	25.5	24.0	19.5	17.5	30	13.5	11.5	25.5	22.5	21.0	20.0	23.0	22.0	26.0	24.0	19.0	17.0	31	---	---	25.5	22.0	---	---	23.5	22.5	27.0	25.0	---	---	MONTH	19.5	6.5	26.0	11.5	25.5	14.5	30.0	21.0	28.0	19.0	28.0	17.0	YEAR	30.0	0.0																																																																																																																																																																						
14	17.0	14.0	19.0	16.0	24.5	21.5	28.5	27.5	20.5	19.5	22.5	21.0	15	17.0	14.5	21.0	17.5	23.5	21.5	28.5	27.0	22.0	20.0	23.5	21.5	16	17.5	14.5	21.5	18.5	24.5	21.0	28.5	27.0	23.5	21.5	24.0	22.0	17	17.5	15.0	22.5	19.5	25.5	21.5	28.5	27.0	23.0	22.0	24.0	22.5	18	18.0	15.5	23.0	20.0	24.5	20.5	29.0	28.0	22.5	20.5	24.5	22.5	19	18.5	16.0	23.5	20.5	21.0	19.5	29.5	28.0	21.5	20.0	24.5	22.5	20	18.5	16.5	24.5	21.0	22.0	20.5	30.0	28.5	22.0	20.0	24.0	22.5	21	19.0	17.0	24.0	20.5	23.0	20.5	30.0	29.0	22.5	20.5	23.5	21.0	22	19.5	17.5	24.0	20.5	22.5	21.0	29.5	28.0	23.0	22.0	21.5	20.0	23	19.0	17.5	23.5	21.0	21.5	19.5	28.5	26.5	23.0	22.0	22.0	20.0	24	18.0	15.5	22.5	21.0	20.5	19.0	28.0	26.0	23.0	21.0	22.0	20.5	25	15.5	14.0	22.0	20.0	19.0	17.5	26.0	24.5	21.0	19.0	22.0	20.5	26	14.0	12.0	23.5	20.0	19.0	17.5	24.5	23.5	22.0	20.0	22.0	21.0	27	14.0	10.5	25.0	20.5	20.0	18.5	24.0	23.0	23.0	21.0	21.5	20.5	28	13.5	12.5	26.0	21.0	21.0	19.5	24.5	23.0	24.5	22.5	21.0	19.0	29	13.0	11.5	26.0	22.0	21.0	20.0	24.5	23.0	25.5	24.0	19.5	17.5	30	13.5	11.5	25.5	22.5	21.0	20.0	23.0	22.0	26.0	24.0	19.0	17.0	31	---	---	25.5	22.0	---	---	23.5	22.5	27.0	25.0	---	---	MONTH	19.5	6.5	26.0	11.5	25.5	14.5	30.0	21.0	28.0	19.0	28.0	17.0	YEAR	30.0	0.0																																																																																																																																																																																			
15	17.0	14.5	21.0	17.5	23.5	21.5	28.5	27.0	22.0	20.0	23.5	21.5	16	17.5	14.5	21.5	18.5	24.5	21.0	28.5	27.0	23.5	21.5	24.0	22.0	17	17.5	15.0	22.5	19.5	25.5	21.5	28.5	27.0	23.0	22.0	24.0	22.5	18	18.0	15.5	23.0	20.0	24.5	20.5	29.0	28.0	22.5	20.5	24.5	22.5	19	18.5	16.0	23.5	20.5	21.0	19.5	29.5	28.0	21.5	20.0	24.5	22.5	20	18.5	16.5	24.5	21.0	22.0	20.5	30.0	28.5	22.0	20.0	24.0	22.5	21	19.0	17.0	24.0	20.5	23.0	20.5	30.0	29.0	22.5	20.5	23.5	21.0	22	19.5	17.5	24.0	20.5	22.5	21.0	29.5	28.0	23.0	22.0	21.5	20.0	23	19.0	17.5	23.5	21.0	21.5	19.5	28.5	26.5	23.0	22.0	22.0	20.0	24	18.0	15.5	22.5	21.0	20.5	19.0	28.0	26.0	23.0	21.0	22.0	20.5	25	15.5	14.0	22.0	20.0	19.0	17.5	26.0	24.5	21.0	19.0	22.0	20.5	26	14.0	12.0	23.5	20.0	19.0	17.5	24.5	23.5	22.0	20.0	22.0	21.0	27	14.0	10.5	25.0	20.5	20.0	18.5	24.0	23.0	23.0	21.0	21.5	20.5	28	13.5	12.5	26.0	21.0	21.0	19.5	24.5	23.0	24.5	22.5	21.0	19.0	29	13.0	11.5	26.0	22.0	21.0	20.0	24.5	23.0	25.5	24.0	19.5	17.5	30	13.5	11.5	25.5	22.5	21.0	20.0	23.0	22.0	26.0	24.0	19.0	17.0	31	---	---	25.5	22.0	---	---	23.5	22.5	27.0	25.0	---	---	MONTH	19.5	6.5	26.0	11.5	25.5	14.5	30.0	21.0	28.0	19.0	28.0	17.0	YEAR	30.0	0.0																																																																																																																																																																																																
16	17.5	14.5	21.5	18.5	24.5	21.0	28.5	27.0	23.5	21.5	24.0	22.0	17	17.5	15.0	22.5	19.5	25.5	21.5	28.5	27.0	23.0	22.0	24.0	22.5	18	18.0	15.5	23.0	20.0	24.5	20.5	29.0	28.0	22.5	20.5	24.5	22.5	19	18.5	16.0	23.5	20.5	21.0	19.5	29.5	28.0	21.5	20.0	24.5	22.5	20	18.5	16.5	24.5	21.0	22.0	20.5	30.0	28.5	22.0	20.0	24.0	22.5	21	19.0	17.0	24.0	20.5	23.0	20.5	30.0	29.0	22.5	20.5	23.5	21.0	22	19.5	17.5	24.0	20.5	22.5	21.0	29.5	28.0	23.0	22.0	21.5	20.0	23	19.0	17.5	23.5	21.0	21.5	19.5	28.5	26.5	23.0	22.0	22.0	20.0	24	18.0	15.5	22.5	21.0	20.5	19.0	28.0	26.0	23.0	21.0	22.0	20.5	25	15.5	14.0	22.0	20.0	19.0	17.5	26.0	24.5	21.0	19.0	22.0	20.5	26	14.0	12.0	23.5	20.0	19.0	17.5	24.5	23.5	22.0	20.0	22.0	21.0	27	14.0	10.5	25.0	20.5	20.0	18.5	24.0	23.0	23.0	21.0	21.5	20.5	28	13.5	12.5	26.0	21.0	21.0	19.5	24.5	23.0	24.5	22.5	21.0	19.0	29	13.0	11.5	26.0	22.0	21.0	20.0	24.5	23.0	25.5	24.0	19.5	17.5	30	13.5	11.5	25.5	22.5	21.0	20.0	23.0	22.0	26.0	24.0	19.0	17.0	31	---	---	25.5	22.0	---	---	23.5	22.5	27.0	25.0	---	---	MONTH	19.5	6.5	26.0	11.5	25.5	14.5	30.0	21.0	28.0	19.0	28.0	17.0	YEAR	30.0	0.0																																																																																																																																																																																																													
17	17.5	15.0	22.5	19.5	25.5	21.5	28.5	27.0	23.0	22.0	24.0	22.5	18	18.0	15.5	23.0	20.0	24.5	20.5	29.0	28.0	22.5	20.5	24.5	22.5	19	18.5	16.0	23.5	20.5	21.0	19.5	29.5	28.0	21.5	20.0	24.5	22.5	20	18.5	16.5	24.5	21.0	22.0	20.5	30.0	28.5	22.0	20.0	24.0	22.5	21	19.0	17.0	24.0	20.5	23.0	20.5	30.0	29.0	22.5	20.5	23.5	21.0	22	19.5	17.5	24.0	20.5	22.5	21.0	29.5	28.0	23.0	22.0	21.5	20.0	23	19.0	17.5	23.5	21.0	21.5	19.5	28.5	26.5	23.0	22.0	22.0	20.0	24	18.0	15.5	22.5	21.0	20.5	19.0	28.0	26.0	23.0	21.0	22.0	20.5	25	15.5	14.0	22.0	20.0	19.0	17.5	26.0	24.5	21.0	19.0	22.0	20.5	26	14.0	12.0	23.5	20.0	19.0	17.5	24.5	23.5	22.0	20.0	22.0	21.0	27	14.0	10.5	25.0	20.5	20.0	18.5	24.0	23.0	23.0	21.0	21.5	20.5	28	13.5	12.5	26.0	21.0	21.0	19.5	24.5	23.0	24.5	22.5	21.0	19.0	29	13.0	11.5	26.0	22.0	21.0	20.0	24.5	23.0	25.5	24.0	19.5	17.5	30	13.5	11.5	25.5	22.5	21.0	20.0	23.0	22.0	26.0	24.0	19.0	17.0	31	---	---	25.5	22.0	---	---	23.5	22.5	27.0	25.0	---	---	MONTH	19.5	6.5	26.0	11.5	25.5	14.5	30.0	21.0	28.0	19.0	28.0	17.0	YEAR	30.0	0.0																																																																																																																																																																																																																										
18	18.0	15.5	23.0	20.0	24.5	20.5	29.0	28.0	22.5	20.5	24.5	22.5	19	18.5	16.0	23.5	20.5	21.0	19.5	29.5	28.0	21.5	20.0	24.5	22.5	20	18.5	16.5	24.5	21.0	22.0	20.5	30.0	28.5	22.0	20.0	24.0	22.5	21	19.0	17.0	24.0	20.5	23.0	20.5	30.0	29.0	22.5	20.5	23.5	21.0	22	19.5	17.5	24.0	20.5	22.5	21.0	29.5	28.0	23.0	22.0	21.5	20.0	23	19.0	17.5	23.5	21.0	21.5	19.5	28.5	26.5	23.0	22.0	22.0	20.0	24	18.0	15.5	22.5	21.0	20.5	19.0	28.0	26.0	23.0	21.0	22.0	20.5	25	15.5	14.0	22.0	20.0	19.0	17.5	26.0	24.5	21.0	19.0	22.0	20.5	26	14.0	12.0	23.5	20.0	19.0	17.5	24.5	23.5	22.0	20.0	22.0	21.0	27	14.0	10.5	25.0	20.5	20.0	18.5	24.0	23.0	23.0	21.0	21.5	20.5	28	13.5	12.5	26.0	21.0	21.0	19.5	24.5	23.0	24.5	22.5	21.0	19.0	29	13.0	11.5	26.0	22.0	21.0	20.0	24.5	23.0	25.5	24.0	19.5	17.5	30	13.5	11.5	25.5	22.5	21.0	20.0	23.0	22.0	26.0	24.0	19.0	17.0	31	---	---	25.5	22.0	---	---	23.5	22.5	27.0	25.0	---	---	MONTH	19.5	6.5	26.0	11.5	25.5	14.5	30.0	21.0	28.0	19.0	28.0	17.0	YEAR	30.0	0.0																																																																																																																																																																																																																																							
19	18.5	16.0	23.5	20.5	21.0	19.5	29.5	28.0	21.5	20.0	24.5	22.5	20	18.5	16.5	24.5	21.0	22.0	20.5	30.0	28.5	22.0	20.0	24.0	22.5	21	19.0	17.0	24.0	20.5	23.0	20.5	30.0	29.0	22.5	20.5	23.5	21.0	22	19.5	17.5	24.0	20.5	22.5	21.0	29.5	28.0	23.0	22.0	21.5	20.0	23	19.0	17.5	23.5	21.0	21.5	19.5	28.5	26.5	23.0	22.0	22.0	20.0	24	18.0	15.5	22.5	21.0	20.5	19.0	28.0	26.0	23.0	21.0	22.0	20.5	25	15.5	14.0	22.0	20.0	19.0	17.5	26.0	24.5	21.0	19.0	22.0	20.5	26	14.0	12.0	23.5	20.0	19.0	17.5	24.5	23.5	22.0	20.0	22.0	21.0	27	14.0	10.5	25.0	20.5	20.0	18.5	24.0	23.0	23.0	21.0	21.5	20.5	28	13.5	12.5	26.0	21.0	21.0	19.5	24.5	23.0	24.5	22.5	21.0	19.0	29	13.0	11.5	26.0	22.0	21.0	20.0	24.5	23.0	25.5	24.0	19.5	17.5	30	13.5	11.5	25.5	22.5	21.0	20.0	23.0	22.0	26.0	24.0	19.0	17.0	31	---	---	25.5	22.0	---	---	23.5	22.5	27.0	25.0	---	---	MONTH	19.5	6.5	26.0	11.5	25.5	14.5	30.0	21.0	28.0	19.0	28.0	17.0	YEAR	30.0	0.0																																																																																																																																																																																																																																																				
20	18.5	16.5	24.5	21.0	22.0	20.5	30.0	28.5	22.0	20.0	24.0	22.5	21	19.0	17.0	24.0	20.5	23.0	20.5	30.0	29.0	22.5	20.5	23.5	21.0	22	19.5	17.5	24.0	20.5	22.5	21.0	29.5	28.0	23.0	22.0	21.5	20.0	23	19.0	17.5	23.5	21.0	21.5	19.5	28.5	26.5	23.0	22.0	22.0	20.0	24	18.0	15.5	22.5	21.0	20.5	19.0	28.0	26.0	23.0	21.0	22.0	20.5	25	15.5	14.0	22.0	20.0	19.0	17.5	26.0	24.5	21.0	19.0	22.0	20.5	26	14.0	12.0	23.5	20.0	19.0	17.5	24.5	23.5	22.0	20.0	22.0	21.0	27	14.0	10.5	25.0	20.5	20.0	18.5	24.0	23.0	23.0	21.0	21.5	20.5	28	13.5	12.5	26.0	21.0	21.0	19.5	24.5	23.0	24.5	22.5	21.0	19.0	29	13.0	11.5	26.0	22.0	21.0	20.0	24.5	23.0	25.5	24.0	19.5	17.5	30	13.5	11.5	25.5	22.5	21.0	20.0	23.0	22.0	26.0	24.0	19.0	17.0	31	---	---	25.5	22.0	---	---	23.5	22.5	27.0	25.0	---	---	MONTH	19.5	6.5	26.0	11.5	25.5	14.5	30.0	21.0	28.0	19.0	28.0	17.0	YEAR	30.0	0.0																																																																																																																																																																																																																																																																	
21	19.0	17.0	24.0	20.5	23.0	20.5	30.0	29.0	22.5	20.5	23.5	21.0	22	19.5	17.5	24.0	20.5	22.5	21.0	29.5	28.0	23.0	22.0	21.5	20.0	23	19.0	17.5	23.5	21.0	21.5	19.5	28.5	26.5	23.0	22.0	22.0	20.0	24	18.0	15.5	22.5	21.0	20.5	19.0	28.0	26.0	23.0	21.0	22.0	20.5	25	15.5	14.0	22.0	20.0	19.0	17.5	26.0	24.5	21.0	19.0	22.0	20.5	26	14.0	12.0	23.5	20.0	19.0	17.5	24.5	23.5	22.0	20.0	22.0	21.0	27	14.0	10.5	25.0	20.5	20.0	18.5	24.0	23.0	23.0	21.0	21.5	20.5	28	13.5	12.5	26.0	21.0	21.0	19.5	24.5	23.0	24.5	22.5	21.0	19.0	29	13.0	11.5	26.0	22.0	21.0	20.0	24.5	23.0	25.5	24.0	19.5	17.5	30	13.5	11.5	25.5	22.5	21.0	20.0	23.0	22.0	26.0	24.0	19.0	17.0	31	---	---	25.5	22.0	---	---	23.5	22.5	27.0	25.0	---	---	MONTH	19.5	6.5	26.0	11.5	25.5	14.5	30.0	21.0	28.0	19.0	28.0	17.0	YEAR	30.0	0.0																																																																																																																																																																																																																																																																														
22	19.5	17.5	24.0	20.5	22.5	21.0	29.5	28.0	23.0	22.0	21.5	20.0	23	19.0	17.5	23.5	21.0	21.5	19.5	28.5	26.5	23.0	22.0	22.0	20.0	24	18.0	15.5	22.5	21.0	20.5	19.0	28.0	26.0	23.0	21.0	22.0	20.5	25	15.5	14.0	22.0	20.0	19.0	17.5	26.0	24.5	21.0	19.0	22.0	20.5	26	14.0	12.0	23.5	20.0	19.0	17.5	24.5	23.5	22.0	20.0	22.0	21.0	27	14.0	10.5	25.0	20.5	20.0	18.5	24.0	23.0	23.0	21.0	21.5	20.5	28	13.5	12.5	26.0	21.0	21.0	19.5	24.5	23.0	24.5	22.5	21.0	19.0	29	13.0	11.5	26.0	22.0	21.0	20.0	24.5	23.0	25.5	24.0	19.5	17.5	30	13.5	11.5	25.5	22.5	21.0	20.0	23.0	22.0	26.0	24.0	19.0	17.0	31	---	---	25.5	22.0	---	---	23.5	22.5	27.0	25.0	---	---	MONTH	19.5	6.5	26.0	11.5	25.5	14.5	30.0	21.0	28.0	19.0	28.0	17.0	YEAR	30.0	0.0																																																																																																																																																																																																																																																																																											
23	19.0	17.5	23.5	21.0	21.5	19.5	28.5	26.5	23.0	22.0	22.0	20.0	24	18.0	15.5	22.5	21.0	20.5	19.0	28.0	26.0	23.0	21.0	22.0	20.5	25	15.5	14.0	22.0	20.0	19.0	17.5	26.0	24.5	21.0	19.0	22.0	20.5	26	14.0	12.0	23.5	20.0	19.0	17.5	24.5	23.5	22.0	20.0	22.0	21.0	27	14.0	10.5	25.0	20.5	20.0	18.5	24.0	23.0	23.0	21.0	21.5	20.5	28	13.5	12.5	26.0	21.0	21.0	19.5	24.5	23.0	24.5	22.5	21.0	19.0	29	13.0	11.5	26.0	22.0	21.0	20.0	24.5	23.0	25.5	24.0	19.5	17.5	30	13.5	11.5	25.5	22.5	21.0	20.0	23.0	22.0	26.0	24.0	19.0	17.0	31	---	---	25.5	22.0	---	---	23.5	22.5	27.0	25.0	---	---	MONTH	19.5	6.5	26.0	11.5	25.5	14.5	30.0	21.0	28.0	19.0	28.0	17.0	YEAR	30.0	0.0																																																																																																																																																																																																																																																																																																								
24	18.0	15.5	22.5	21.0	20.5	19.0	28.0	26.0	23.0	21.0	22.0	20.5	25	15.5	14.0	22.0	20.0	19.0	17.5	26.0	24.5	21.0	19.0	22.0	20.5	26	14.0	12.0	23.5	20.0	19.0	17.5	24.5	23.5	22.0	20.0	22.0	21.0	27	14.0	10.5	25.0	20.5	20.0	18.5	24.0	23.0	23.0	21.0	21.5	20.5	28	13.5	12.5	26.0	21.0	21.0	19.5	24.5	23.0	24.5	22.5	21.0	19.0	29	13.0	11.5	26.0	22.0	21.0	20.0	24.5	23.0	25.5	24.0	19.5	17.5	30	13.5	11.5	25.5	22.5	21.0	20.0	23.0	22.0	26.0	24.0	19.0	17.0	31	---	---	25.5	22.0	---	---	23.5	22.5	27.0	25.0	---	---	MONTH	19.5	6.5	26.0	11.5	25.5	14.5	30.0	21.0	28.0	19.0	28.0	17.0	YEAR	30.0	0.0																																																																																																																																																																																																																																																																																																																					
25	15.5	14.0	22.0	20.0	19.0	17.5	26.0	24.5	21.0	19.0	22.0	20.5	26	14.0	12.0	23.5	20.0	19.0	17.5	24.5	23.5	22.0	20.0	22.0	21.0	27	14.0	10.5	25.0	20.5	20.0	18.5	24.0	23.0	23.0	21.0	21.5	20.5	28	13.5	12.5	26.0	21.0	21.0	19.5	24.5	23.0	24.5	22.5	21.0	19.0	29	13.0	11.5	26.0	22.0	21.0	20.0	24.5	23.0	25.5	24.0	19.5	17.5	30	13.5	11.5	25.5	22.5	21.0	20.0	23.0	22.0	26.0	24.0	19.0	17.0	31	---	---	25.5	22.0	---	---	23.5	22.5	27.0	25.0	---	---	MONTH	19.5	6.5	26.0	11.5	25.5	14.5	30.0	21.0	28.0	19.0	28.0	17.0	YEAR	30.0	0.0																																																																																																																																																																																																																																																																																																																																		
26	14.0	12.0	23.5	20.0	19.0	17.5	24.5	23.5	22.0	20.0	22.0	21.0	27	14.0	10.5	25.0	20.5	20.0	18.5	24.0	23.0	23.0	21.0	21.5	20.5	28	13.5	12.5	26.0	21.0	21.0	19.5	24.5	23.0	24.5	22.5	21.0	19.0	29	13.0	11.5	26.0	22.0	21.0	20.0	24.5	23.0	25.5	24.0	19.5	17.5	30	13.5	11.5	25.5	22.5	21.0	20.0	23.0	22.0	26.0	24.0	19.0	17.0	31	---	---	25.5	22.0	---	---	23.5	22.5	27.0	25.0	---	---	MONTH	19.5	6.5	26.0	11.5	25.5	14.5	30.0	21.0	28.0	19.0	28.0	17.0	YEAR	30.0	0.0																																																																																																																																																																																																																																																																																																																																															
27	14.0	10.5	25.0	20.5	20.0	18.5	24.0	23.0	23.0	21.0	21.5	20.5	28	13.5	12.5	26.0	21.0	21.0	19.5	24.5	23.0	24.5	22.5	21.0	19.0	29	13.0	11.5	26.0	22.0	21.0	20.0	24.5	23.0	25.5	24.0	19.5	17.5	30	13.5	11.5	25.5	22.5	21.0	20.0	23.0	22.0	26.0	24.0	19.0	17.0	31	---	---	25.5	22.0	---	---	23.5	22.5	27.0	25.0	---	---	MONTH	19.5	6.5	26.0	11.5	25.5	14.5	30.0	21.0	28.0	19.0	28.0	17.0	YEAR	30.0	0.0																																																																																																																																																																																																																																																																																																																																																												
28	13.5	12.5	26.0	21.0	21.0	19.5	24.5	23.0	24.5	22.5	21.0	19.0	29	13.0	11.5	26.0	22.0	21.0	20.0	24.5	23.0	25.5	24.0	19.5	17.5	30	13.5	11.5	25.5	22.5	21.0	20.0	23.0	22.0	26.0	24.0	19.0	17.0	31	---	---	25.5	22.0	---	---	23.5	22.5	27.0	25.0	---	---	MONTH	19.5	6.5	26.0	11.5	25.5	14.5	30.0	21.0	28.0	19.0	28.0	17.0	YEAR	30.0	0.0																																																																																																																																																																																																																																																																																																																																																																									
29	13.0	11.5	26.0	22.0	21.0	20.0	24.5	23.0	25.5	24.0	19.5	17.5	30	13.5	11.5	25.5	22.5	21.0	20.0	23.0	22.0	26.0	24.0	19.0	17.0	31	---	---	25.5	22.0	---	---	23.5	22.5	27.0	25.0	---	---	MONTH	19.5	6.5	26.0	11.5	25.5	14.5	30.0	21.0	28.0	19.0	28.0	17.0	YEAR	30.0	0.0																																																																																																																																																																																																																																																																																																																																																																																						
30	13.5	11.5	25.5	22.5	21.0	20.0	23.0	22.0	26.0	24.0	19.0	17.0	31	---	---	25.5	22.0	---	---	23.5	22.5	27.0	25.0	---	---	MONTH	19.5	6.5	26.0	11.5	25.5	14.5	30.0	21.0	28.0	19.0	28.0	17.0	YEAR	30.0	0.0																																																																																																																																																																																																																																																																																																																																																																																																			
31	---	---	25.5	22.0	---	---	23.5	22.5	27.0	25.0	---	---	MONTH	19.5	6.5	26.0	11.5	25.5	14.5	30.0	21.0	28.0	19.0	28.0	17.0	YEAR	30.0	0.0																																																																																																																																																																																																																																																																																																																																																																																																																
MONTH	19.5	6.5	26.0	11.5	25.5	14.5	30.0	21.0	28.0	19.0	28.0	17.0	YEAR	30.0	0.0																																																																																																																																																																																																																																																																																																																																																																																																																													
YEAR	30.0	0.0																																																																																																																																																																																																																																																																																																																																																																																																																																										

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

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	147	155	33	53	16	6.9	6	2.8	2	.76	17	34	2	85	94	12	17	25	15	5	2.2	4	1.5	10	16	3	52	33	7	8.3	13	7.0	5	2.0	3	1.1	10	14	4	47	21	6	6.2	6	2.9	4	1.6	12	4.7	10	13	5	43	15	6	5.0	5	2.3	5	2.2	5	2.1	10	12	6	40	11	5	3.6	3	1.3	5	2.2	4	1.6	8	8.9	7	77	30	3	1.9	130	336	5	2.0	4	1.5	6	6.1	8	774	4890	3	1.7	100	335	5	2.0	8	2.8	6	5.7	9	977	13100	3	1.6	24	49	5	2.0	6	2.1	7	6.0	10	260	1380	3	1.6	14	20	4	1.6	13	4.9	6	5.0	11	79	169	1	.54	11	14	4	1.6	26	12	16	13	12	27	34	0	.00	16	23	4	1.6	20	13	59	45	13	17	15	2	.93	25	56	4	1.6	94	152	179	263	14	15	10	5	2.1	17	37	7	2.8	130	336	87	157	15	13	7.6	7	2.8	13	23	13	5.6	74	156	31	46	16	12	6.1	5	2.2	10	15	27	15	48	84	32	40	17	11	5.1	2	.85	7	8.4	10	4.6	18	24	12	13	18	10	4.5	2	.84	5	5.0	7	3.0	8	9.2	10	11	19	9	3.5	2	.85	6	5.1	5	2.0	8	8.6	23	30	20	8	2.7	2	.87	14	12	4	1.6	6	6.4	53	91	21	8	3.1	2	.91	12	11	2	.81	5	4.7	69	144	22	7	2.6	1	.46	10	5.1	1	.40	21	18	63	143	23	7	2.5	0	.00	7	3.8	2	.81	47	65	43	104	24	8	3.0	5	2.1	5	2.7	2	.81	645	5170	27	57	25	30	36	7	2.9	5	2.8	3	1.2	850	5710	16	27	26	248	999	10	4.0	10	5.7	2	.76	197	745	16	23	27	53	135	13	5.5	9	5.3	2	.76	63	206	21	26	28	31	47	15	6.5	8	5.0	1	.38	48	126	24	27	29	26	28	15	7.3	7	4.3	1	.38	---	---	22	23	30	23	21	15	6.9	4	1.9	2	.76	---	---	12	12	31	38	58	---	---	7	3.6	2	.76	---	---	16	15	TOTAL	---	21321.7	---	148.45	---	1025.1	---	67.83	---	12870.96	---
2	85	94	12	17	25	15	5	2.2	4	1.5	10	16	3	52	33	7	8.3	13	7.0	5	2.0	3	1.1	10	14	4	47	21	6	6.2	6	2.9	4	1.6	12	4.7	10	13	5	43	15	6	5.0	5	2.3	5	2.2	5	2.1	10	12	6	40	11	5	3.6	3	1.3	5	2.2	4	1.6	8	8.9	7	77	30	3	1.9	130	336	5	2.0	4	1.5	6	6.1	8	774	4890	3	1.7	100	335	5	2.0	8	2.8	6	5.7	9	977	13100	3	1.6	24	49	5	2.0	6	2.1	7	6.0	10	260	1380	3	1.6	14	20	4	1.6	13	4.9	6	5.0	11	79	169	1	.54	11	14	4	1.6	26	12	16	13	12	27	34	0	.00	16	23	4	1.6	20	13	59	45	13	17	15	2	.93	25	56	4	1.6	94	152	179	263	14	15	10	5	2.1	17	37	7	2.8	130	336	87	157	15	13	7.6	7	2.8	13	23	13	5.6	74	156	31	46	16	12	6.1	5	2.2	10	15	27	15	48	84	32	40	17	11	5.1	2	.85	7	8.4	10	4.6	18	24	12	13	18	10	4.5	2	.84	5	5.0	7	3.0	8	9.2	10	11	19	9	3.5	2	.85	6	5.1	5	2.0	8	8.6	23	30	20	8	2.7	2	.87	14	12	4	1.6	6	6.4	53	91	21	8	3.1	2	.91	12	11	2	.81	5	4.7	69	144	22	7	2.6	1	.46	10	5.1	1	.40	21	18	63	143	23	7	2.5	0	.00	7	3.8	2	.81	47	65	43	104	24	8	3.0	5	2.1	5	2.7	2	.81	645	5170	27	57	25	30	36	7	2.9	5	2.8	3	1.2	850	5710	16	27	26	248	999	10	4.0	10	5.7	2	.76	197	745	16	23	27	53	135	13	5.5	9	5.3	2	.76	63	206	21	26	28	31	47	15	6.5	8	5.0	1	.38	48	126	24	27	29	26	28	15	7.3	7	4.3	1	.38	---	---	22	23	30	23	21	15	6.9	4	1.9	2	.76	---	---	12	12	31	38	58	---	---	7	3.6	2	.76	---	---	16	15	TOTAL	---	21321.7	---	148.45	---	1025.1	---	67.83	---	12870.96	---	1430.7													
3	52	33	7	8.3	13	7.0	5	2.0	3	1.1	10	14	4	47	21	6	6.2	6	2.9	4	1.6	12	4.7	10	13	5	43	15	6	5.0	5	2.3	5	2.2	5	2.1	10	12	6	40	11	5	3.6	3	1.3	5	2.2	4	1.6	8	8.9	7	77	30	3	1.9	130	336	5	2.0	4	1.5	6	6.1	8	774	4890	3	1.7	100	335	5	2.0	8	2.8	6	5.7	9	977	13100	3	1.6	24	49	5	2.0	6	2.1	7	6.0	10	260	1380	3	1.6	14	20	4	1.6	13	4.9	6	5.0	11	79	169	1	.54	11	14	4	1.6	26	12	16	13	12	27	34	0	.00	16	23	4	1.6	20	13	59	45	13	17	15	2	.93	25	56	4	1.6	94	152	179	263	14	15	10	5	2.1	17	37	7	2.8	130	336	87	157	15	13	7.6	7	2.8	13	23	13	5.6	74	156	31	46	16	12	6.1	5	2.2	10	15	27	15	48	84	32	40	17	11	5.1	2	.85	7	8.4	10	4.6	18	24	12	13	18	10	4.5	2	.84	5	5.0	7	3.0	8	9.2	10	11	19	9	3.5	2	.85	6	5.1	5	2.0	8	8.6	23	30	20	8	2.7	2	.87	14	12	4	1.6	6	6.4	53	91	21	8	3.1	2	.91	12	11	2	.81	5	4.7	69	144	22	7	2.6	1	.46	10	5.1	1	.40	21	18	63	143	23	7	2.5	0	.00	7	3.8	2	.81	47	65	43	104	24	8	3.0	5	2.1	5	2.7	2	.81	645	5170	27	57	25	30	36	7	2.9	5	2.8	3	1.2	850	5710	16	27	26	248	999	10	4.0	10	5.7	2	.76	197	745	16	23	27	53	135	13	5.5	9	5.3	2	.76	63	206	21	26	28	31	47	15	6.5	8	5.0	1	.38	48	126	24	27	29	26	28	15	7.3	7	4.3	1	.38	---	---	22	23	30	23	21	15	6.9	4	1.9	2	.76	---	---	12	12	31	38	58	---	---	7	3.6	2	.76	---	---	16	15	TOTAL	---	21321.7	---	148.45	---	1025.1	---	67.83	---	12870.96	---	1430.7																										
4	47	21	6	6.2	6	2.9	4	1.6	12	4.7	10	13	5	43	15	6	5.0	5	2.3	5	2.2	5	2.1	10	12	6	40	11	5	3.6	3	1.3	5	2.2	4	1.6	8	8.9	7	77	30	3	1.9	130	336	5	2.0	4	1.5	6	6.1	8	774	4890	3	1.7	100	335	5	2.0	8	2.8	6	5.7	9	977	13100	3	1.6	24	49	5	2.0	6	2.1	7	6.0	10	260	1380	3	1.6	14	20	4	1.6	13	4.9	6	5.0	11	79	169	1	.54	11	14	4	1.6	26	12	16	13	12	27	34	0	.00	16	23	4	1.6	20	13	59	45	13	17	15	2	.93	25	56	4	1.6	94	152	179	263	14	15	10	5	2.1	17	37	7	2.8	130	336	87	157	15	13	7.6	7	2.8	13	23	13	5.6	74	156	31	46	16	12	6.1	5	2.2	10	15	27	15	48	84	32	40	17	11	5.1	2	.85	7	8.4	10	4.6	18	24	12	13	18	10	4.5	2	.84	5	5.0	7	3.0	8	9.2	10	11	19	9	3.5	2	.85	6	5.1	5	2.0	8	8.6	23	30	20	8	2.7	2	.87	14	12	4	1.6	6	6.4	53	91	21	8	3.1	2	.91	12	11	2	.81	5	4.7	69	144	22	7	2.6	1	.46	10	5.1	1	.40	21	18	63	143	23	7	2.5	0	.00	7	3.8	2	.81	47	65	43	104	24	8	3.0	5	2.1	5	2.7	2	.81	645	5170	27	57	25	30	36	7	2.9	5	2.8	3	1.2	850	5710	16	27	26	248	999	10	4.0	10	5.7	2	.76	197	745	16	23	27	53	135	13	5.5	9	5.3	2	.76	63	206	21	26	28	31	47	15	6.5	8	5.0	1	.38	48	126	24	27	29	26	28	15	7.3	7	4.3	1	.38	---	---	22	23	30	23	21	15	6.9	4	1.9	2	.76	---	---	12	12	31	38	58	---	---	7	3.6	2	.76	---	---	16	15	TOTAL	---	21321.7	---	148.45	---	1025.1	---	67.83	---	12870.96	---	1430.7																																							
5	43	15	6	5.0	5	2.3	5	2.2	5	2.1	10	12	6	40	11	5	3.6	3	1.3	5	2.2	4	1.6	8	8.9	7	77	30	3	1.9	130	336	5	2.0	4	1.5	6	6.1	8	774	4890	3	1.7	100	335	5	2.0	8	2.8	6	5.7	9	977	13100	3	1.6	24	49	5	2.0	6	2.1	7	6.0	10	260	1380	3	1.6	14	20	4	1.6	13	4.9	6	5.0	11	79	169	1	.54	11	14	4	1.6	26	12	16	13	12	27	34	0	.00	16	23	4	1.6	20	13	59	45	13	17	15	2	.93	25	56	4	1.6	94	152	179	263	14	15	10	5	2.1	17	37	7	2.8	130	336	87	157	15	13	7.6	7	2.8	13	23	13	5.6	74	156	31	46	16	12	6.1	5	2.2	10	15	27	15	48	84	32	40	17	11	5.1	2	.85	7	8.4	10	4.6	18	24	12	13	18	10	4.5	2	.84	5	5.0	7	3.0	8	9.2	10	11	19	9	3.5	2	.85	6	5.1	5	2.0	8	8.6	23	30	20	8	2.7	2	.87	14	12	4	1.6	6	6.4	53	91	21	8	3.1	2	.91	12	11	2	.81	5	4.7	69	144	22	7	2.6	1	.46	10	5.1	1	.40	21	18	63	143	23	7	2.5	0	.00	7	3.8	2	.81	47	65	43	104	24	8	3.0	5	2.1	5	2.7	2	.81	645	5170	27	57	25	30	36	7	2.9	5	2.8	3	1.2	850	5710	16	27	26	248	999	10	4.0	10	5.7	2	.76	197	745	16	23	27	53	135	13	5.5	9	5.3	2	.76	63	206	21	26	28	31	47	15	6.5	8	5.0	1	.38	48	126	24	27	29	26	28	15	7.3	7	4.3	1	.38	---	---	22	23	30	23	21	15	6.9	4	1.9	2	.76	---	---	12	12	31	38	58	---	---	7	3.6	2	.76	---	---	16	15	TOTAL	---	21321.7	---	148.45	---	1025.1	---	67.83	---	12870.96	---	1430.7																																																				
6	40	11	5	3.6	3	1.3	5	2.2	4	1.6	8	8.9	7	77	30	3	1.9	130	336	5	2.0	4	1.5	6	6.1	8	774	4890	3	1.7	100	335	5	2.0	8	2.8	6	5.7	9	977	13100	3	1.6	24	49	5	2.0	6	2.1	7	6.0	10	260	1380	3	1.6	14	20	4	1.6	13	4.9	6	5.0	11	79	169	1	.54	11	14	4	1.6	26	12	16	13	12	27	34	0	.00	16	23	4	1.6	20	13	59	45	13	17	15	2	.93	25	56	4	1.6	94	152	179	263	14	15	10	5	2.1	17	37	7	2.8	130	336	87	157	15	13	7.6	7	2.8	13	23	13	5.6	74	156	31	46	16	12	6.1	5	2.2	10	15	27	15	48	84	32	40	17	11	5.1	2	.85	7	8.4	10	4.6	18	24	12	13	18	10	4.5	2	.84	5	5.0	7	3.0	8	9.2	10	11	19	9	3.5	2	.85	6	5.1	5	2.0	8	8.6	23	30	20	8	2.7	2	.87	14	12	4	1.6	6	6.4	53	91	21	8	3.1	2	.91	12	11	2	.81	5	4.7	69	144	22	7	2.6	1	.46	10	5.1	1	.40	21	18	63	143	23	7	2.5	0	.00	7	3.8	2	.81	47	65	43	104	24	8	3.0	5	2.1	5	2.7	2	.81	645	5170	27	57	25	30	36	7	2.9	5	2.8	3	1.2	850	5710	16	27	26	248	999	10	4.0	10	5.7	2	.76	197	745	16	23	27	53	135	13	5.5	9	5.3	2	.76	63	206	21	26	28	31	47	15	6.5	8	5.0	1	.38	48	126	24	27	29	26	28	15	7.3	7	4.3	1	.38	---	---	22	23	30	23	21	15	6.9	4	1.9	2	.76	---	---	12	12	31	38	58	---	---	7	3.6	2	.76	---	---	16	15	TOTAL	---	21321.7	---	148.45	---	1025.1	---	67.83	---	12870.96	---	1430.7																																																																	
7	77	30	3	1.9	130	336	5	2.0	4	1.5	6	6.1	8	774	4890	3	1.7	100	335	5	2.0	8	2.8	6	5.7	9	977	13100	3	1.6	24	49	5	2.0	6	2.1	7	6.0	10	260	1380	3	1.6	14	20	4	1.6	13	4.9	6	5.0	11	79	169	1	.54	11	14	4	1.6	26	12	16	13	12	27	34	0	.00	16	23	4	1.6	20	13	59	45	13	17	15	2	.93	25	56	4	1.6	94	152	179	263	14	15	10	5	2.1	17	37	7	2.8	130	336	87	157	15	13	7.6	7	2.8	13	23	13	5.6	74	156	31	46	16	12	6.1	5	2.2	10	15	27	15	48	84	32	40	17	11	5.1	2	.85	7	8.4	10	4.6	18	24	12	13	18	10	4.5	2	.84	5	5.0	7	3.0	8	9.2	10	11	19	9	3.5	2	.85	6	5.1	5	2.0	8	8.6	23	30	20	8	2.7	2	.87	14	12	4	1.6	6	6.4	53	91	21	8	3.1	2	.91	12	11	2	.81	5	4.7	69	144	22	7	2.6	1	.46	10	5.1	1	.40	21	18	63	143	23	7	2.5	0	.00	7	3.8	2	.81	47	65	43	104	24	8	3.0	5	2.1	5	2.7	2	.81	645	5170	27	57	25	30	36	7	2.9	5	2.8	3	1.2	850	5710	16	27	26	248	999	10	4.0	10	5.7	2	.76	197	745	16	23	27	53	135	13	5.5	9	5.3	2	.76	63	206	21	26	28	31	47	15	6.5	8	5.0	1	.38	48	126	24	27	29	26	28	15	7.3	7	4.3	1	.38	---	---	22	23	30	23	21	15	6.9	4	1.9	2	.76	---	---	12	12	31	38	58	---	---	7	3.6	2	.76	---	---	16	15	TOTAL	---	21321.7	---	148.45	---	1025.1	---	67.83	---	12870.96	---	1430.7																																																																														
8	774	4890	3	1.7	100	335	5	2.0	8	2.8	6	5.7	9	977	13100	3	1.6	24	49	5	2.0	6	2.1	7	6.0	10	260	1380	3	1.6	14	20	4	1.6	13	4.9	6	5.0	11	79	169	1	.54	11	14	4	1.6	26	12	16	13	12	27	34	0	.00	16	23	4	1.6	20	13	59	45	13	17	15	2	.93	25	56	4	1.6	94	152	179	263	14	15	10	5	2.1	17	37	7	2.8	130	336	87	157	15	13	7.6	7	2.8	13	23	13	5.6	74	156	31	46	16	12	6.1	5	2.2	10	15	27	15	48	84	32	40	17	11	5.1	2	.85	7	8.4	10	4.6	18	24	12	13	18	10	4.5	2	.84	5	5.0	7	3.0	8	9.2	10	11	19	9	3.5	2	.85	6	5.1	5	2.0	8	8.6	23	30	20	8	2.7	2	.87	14	12	4	1.6	6	6.4	53	91	21	8	3.1	2	.91	12	11	2	.81	5	4.7	69	144	22	7	2.6	1	.46	10	5.1	1	.40	21	18	63	143	23	7	2.5	0	.00	7	3.8	2	.81	47	65	43	104	24	8	3.0	5	2.1	5	2.7	2	.81	645	5170	27	57	25	30	36	7	2.9	5	2.8	3	1.2	850	5710	16	27	26	248	999	10	4.0	10	5.7	2	.76	197	745	16	23	27	53	135	13	5.5	9	5.3	2	.76	63	206	21	26	28	31	47	15	6.5	8	5.0	1	.38	48	126	24	27	29	26	28	15	7.3	7	4.3	1	.38	---	---	22	23	30	23	21	15	6.9	4	1.9	2	.76	---	---	12	12	31	38	58	---	---	7	3.6	2	.76	---	---	16	15	TOTAL	---	21321.7	---	148.45	---	1025.1	---	67.83	---	12870.96	---	1430.7																																																																																											
9	977	13100	3	1.6	24	49	5	2.0	6	2.1	7	6.0	10	260	1380	3	1.6	14	20	4	1.6	13	4.9	6	5.0	11	79	169	1	.54	11	14	4	1.6	26	12	16	13	12	27	34	0	.00	16	23	4	1.6	20	13	59	45	13	17	15	2	.93	25	56	4	1.6	94	152	179	263	14	15	10	5	2.1	17	37	7	2.8	130	336	87	157	15	13	7.6	7	2.8	13	23	13	5.6	74	156	31	46	16	12	6.1	5	2.2	10	15	27	15	48	84	32	40	17	11	5.1	2	.85	7	8.4	10	4.6	18	24	12	13	18	10	4.5	2	.84	5	5.0	7	3.0	8	9.2	10	11	19	9	3.5	2	.85	6	5.1	5	2.0	8	8.6	23	30	20	8	2.7	2	.87	14	12	4	1.6	6	6.4	53	91	21	8	3.1	2	.91	12	11	2	.81	5	4.7	69	144	22	7	2.6	1	.46	10	5.1	1	.40	21	18	63	143	23	7	2.5	0	.00	7	3.8	2	.81	47	65	43	104	24	8	3.0	5	2.1	5	2.7	2	.81	645	5170	27	57	25	30	36	7	2.9	5	2.8	3	1.2	850	5710	16	27	26	248	999	10	4.0	10	5.7	2	.76	197	745	16	23	27	53	135	13	5.5	9	5.3	2	.76	63	206	21	26	28	31	47	15	6.5	8	5.0	1	.38	48	126	24	27	29	26	28	15	7.3	7	4.3	1	.38	---	---	22	23	30	23	21	15	6.9	4	1.9	2	.76	---	---	12	12	31	38	58	---	---	7	3.6	2	.76	---	---	16	15	TOTAL	---	21321.7	---	148.45	---	1025.1	---	67.83	---	12870.96	---	1430.7																																																																																																								
10	260	1380	3	1.6	14	20	4	1.6	13	4.9	6	5.0	11	79	169	1	.54	11	14	4	1.6	26	12	16	13	12	27	34	0	.00	16	23	4	1.6	20	13	59	45	13	17	15	2	.93	25	56	4	1.6	94	152	179	263	14	15	10	5	2.1	17	37	7	2.8	130	336	87	157	15	13	7.6	7	2.8	13	23	13	5.6	74	156	31	46	16	12	6.1	5	2.2	10	15	27	15	48	84	32	40	17	11	5.1	2	.85	7	8.4	10	4.6	18	24	12	13	18	10	4.5	2	.84	5	5.0	7	3.0	8	9.2	10	11	19	9	3.5	2	.85	6	5.1	5	2.0	8	8.6	23	30	20	8	2.7	2	.87	14	12	4	1.6	6	6.4	53	91	21	8	3.1	2	.91	12	11	2	.81	5	4.7	69	144	22	7	2.6	1	.46	10	5.1	1	.40	21	18	63	143	23	7	2.5	0	.00	7	3.8	2	.81	47	65	43	104	24	8	3.0	5	2.1	5	2.7	2	.81	645	5170	27	57	25	30	36	7	2.9	5	2.8	3	1.2	850	5710	16	27	26	248	999	10	4.0	10	5.7	2	.76	197	745	16	23	27	53	135	13	5.5	9	5.3	2	.76	63	206	21	26	28	31	47	15	6.5	8	5.0	1	.38	48	126	24	27	29	26	28	15	7.3	7	4.3	1	.38	---	---	22	23	30	23	21	15	6.9	4	1.9	2	.76	---	---	12	12	31	38	58	---	---	7	3.6	2	.76	---	---	16	15	TOTAL	---	21321.7	---	148.45	---	1025.1	---	67.83	---	12870.96	---	1430.7																																																																																																																					
11	79	169	1	.54	11	14	4	1.6	26	12	16	13	12	27	34	0	.00	16	23	4	1.6	20	13	59	45	13	17	15	2	.93	25	56	4	1.6	94	152	179	263	14	15	10	5	2.1	17	37	7	2.8	130	336	87	157	15	13	7.6	7	2.8	13	23	13	5.6	74	156	31	46	16	12	6.1	5	2.2	10	15	27	15	48	84	32	40	17	11	5.1	2	.85	7	8.4	10	4.6	18	24	12	13	18	10	4.5	2	.84	5	5.0	7	3.0	8	9.2	10	11	19	9	3.5	2	.85	6	5.1	5	2.0	8	8.6	23	30	20	8	2.7	2	.87	14	12	4	1.6	6	6.4	53	91	21	8	3.1	2	.91	12	11	2	.81	5	4.7	69	144	22	7	2.6	1	.46	10	5.1	1	.40	21	18	63	143	23	7	2.5	0	.00	7	3.8	2	.81	47	65	43	104	24	8	3.0	5	2.1	5	2.7	2	.81	645	5170	27	57	25	30	36	7	2.9	5	2.8	3	1.2	850	5710	16	27	26	248	999	10	4.0	10	5.7	2	.76	197	745	16	23	27	53	135	13	5.5	9	5.3	2	.76	63	206	21	26	28	31	47	15	6.5	8	5.0	1	.38	48	126	24	27	29	26	28	15	7.3	7	4.3	1	.38	---	---	22	23	30	23	21	15	6.9	4	1.9	2	.76	---	---	12	12	31	38	58	---	---	7	3.6	2	.76	---	---	16	15	TOTAL	---	21321.7	---	148.45	---	1025.1	---	67.83	---	12870.96	---	1430.7																																																																																																																																		
12	27	34	0	.00	16	23	4	1.6	20	13	59	45	13	17	15	2	.93	25	56	4	1.6	94	152	179	263	14	15	10	5	2.1	17	37	7	2.8	130	336	87	157	15	13	7.6	7	2.8	13	23	13	5.6	74	156	31	46	16	12	6.1	5	2.2	10	15	27	15	48	84	32	40	17	11	5.1	2	.85	7	8.4	10	4.6	18	24	12	13	18	10	4.5	2	.84	5	5.0	7	3.0	8	9.2	10	11	19	9	3.5	2	.85	6	5.1	5	2.0	8	8.6	23	30	20	8	2.7	2	.87	14	12	4	1.6	6	6.4	53	91	21	8	3.1	2	.91	12	11	2	.81	5	4.7	69	144	22	7	2.6	1	.46	10	5.1	1	.40	21	18	63	143	23	7	2.5	0	.00	7	3.8	2	.81	47	65	43	104	24	8	3.0	5	2.1	5	2.7	2	.81	645	5170	27	57	25	30	36	7	2.9	5	2.8	3	1.2	850	5710	16	27	26	248	999	10	4.0	10	5.7	2	.76	197	745	16	23	27	53	135	13	5.5	9	5.3	2	.76	63	206	21	26	28	31	47	15	6.5	8	5.0	1	.38	48	126	24	27	29	26	28	15	7.3	7	4.3	1	.38	---	---	22	23	30	23	21	15	6.9	4	1.9	2	.76	---	---	12	12	31	38	58	---	---	7	3.6	2	.76	---	---	16	15	TOTAL	---	21321.7	---	148.45	---	1025.1	---	67.83	---	12870.96	---	1430.7																																																																																																																																															
13	17	15	2	.93	25	56	4	1.6	94	152	179	263	14	15	10	5	2.1	17	37	7	2.8	130	336	87	157	15	13	7.6	7	2.8	13	23	13	5.6	74	156	31	46	16	12	6.1	5	2.2	10	15	27	15	48	84	32	40	17	11	5.1	2	.85	7	8.4	10	4.6	18	24	12	13	18	10	4.5	2	.84	5	5.0	7	3.0	8	9.2	10	11	19	9	3.5	2	.85	6	5.1	5	2.0	8	8.6	23	30	20	8	2.7	2	.87	14	12	4	1.6	6	6.4	53	91	21	8	3.1	2	.91	12	11	2	.81	5	4.7	69	144	22	7	2.6	1	.46	10	5.1	1	.40	21	18	63	143	23	7	2.5	0	.00	7	3.8	2	.81	47	65	43	104	24	8	3.0	5	2.1	5	2.7	2	.81	645	5170	27	57	25	30	36	7	2.9	5	2.8	3	1.2	850	5710	16	27	26	248	999	10	4.0	10	5.7	2	.76	197	745	16	23	27	53	135	13	5.5	9	5.3	2	.76	63	206	21	26	28	31	47	15	6.5	8	5.0	1	.38	48	126	24	27	29	26	28	15	7.3	7	4.3	1	.38	---	---	22	23	30	23	21	15	6.9	4	1.9	2	.76	---	---	12	12	31	38	58	---	---	7	3.6	2	.76	---	---	16	15	TOTAL	---	21321.7	---	148.45	---	1025.1	---	67.83	---	12870.96	---	1430.7																																																																																																																																																												
14	15	10	5	2.1	17	37	7	2.8	130	336	87	157	15	13	7.6	7	2.8	13	23	13	5.6	74	156	31	46	16	12	6.1	5	2.2	10	15	27	15	48	84	32	40	17	11	5.1	2	.85	7	8.4	10	4.6	18	24	12	13	18	10	4.5	2	.84	5	5.0	7	3.0	8	9.2	10	11	19	9	3.5	2	.85	6	5.1	5	2.0	8	8.6	23	30	20	8	2.7	2	.87	14	12	4	1.6	6	6.4	53	91	21	8	3.1	2	.91	12	11	2	.81	5	4.7	69	144	22	7	2.6	1	.46	10	5.1	1	.40	21	18	63	143	23	7	2.5	0	.00	7	3.8	2	.81	47	65	43	104	24	8	3.0	5	2.1	5	2.7	2	.81	645	5170	27	57	25	30	36	7	2.9	5	2.8	3	1.2	850	5710	16	27	26	248	999	10	4.0	10	5.7	2	.76	197	745	16	23	27	53	135	13	5.5	9	5.3	2	.76	63	206	21	26	28	31	47	15	6.5	8	5.0	1	.38	48	126	24	27	29	26	28	15	7.3	7	4.3	1	.38	---	---	22	23	30	23	21	15	6.9	4	1.9	2	.76	---	---	12	12	31	38	58	---	---	7	3.6	2	.76	---	---	16	15	TOTAL	---	21321.7	---	148.45	---	1025.1	---	67.83	---	12870.96	---	1430.7																																																																																																																																																																									
15	13	7.6	7	2.8	13	23	13	5.6	74	156	31	46	16	12	6.1	5	2.2	10	15	27	15	48	84	32	40	17	11	5.1	2	.85	7	8.4	10	4.6	18	24	12	13	18	10	4.5	2	.84	5	5.0	7	3.0	8	9.2	10	11	19	9	3.5	2	.85	6	5.1	5	2.0	8	8.6	23	30	20	8	2.7	2	.87	14	12	4	1.6	6	6.4	53	91	21	8	3.1	2	.91	12	11	2	.81	5	4.7	69	144	22	7	2.6	1	.46	10	5.1	1	.40	21	18	63	143	23	7	2.5	0	.00	7	3.8	2	.81	47	65	43	104	24	8	3.0	5	2.1	5	2.7	2	.81	645	5170	27	57	25	30	36	7	2.9	5	2.8	3	1.2	850	5710	16	27	26	248	999	10	4.0	10	5.7	2	.76	197	745	16	23	27	53	135	13	5.5	9	5.3	2	.76	63	206	21	26	28	31	47	15	6.5	8	5.0	1	.38	48	126	24	27	29	26	28	15	7.3	7	4.3	1	.38	---	---	22	23	30	23	21	15	6.9	4	1.9	2	.76	---	---	12	12	31	38	58	---	---	7	3.6	2	.76	---	---	16	15	TOTAL	---	21321.7	---	148.45	---	1025.1	---	67.83	---	12870.96	---	1430.7																																																																																																																																																																																						
16	12	6.1	5	2.2	10	15	27	15	48	84	32	40	17	11	5.1	2	.85	7	8.4	10	4.6	18	24	12	13	18	10	4.5	2	.84	5	5.0	7	3.0	8	9.2	10	11	19	9	3.5	2	.85	6	5.1	5	2.0	8	8.6	23	30	20	8	2.7	2	.87	14	12	4	1.6	6	6.4	53	91	21	8	3.1	2	.91	12	11	2	.81	5	4.7	69	144	22	7	2.6	1	.46	10	5.1	1	.40	21	18	63	143	23	7	2.5	0	.00	7	3.8	2	.81	47	65	43	104	24	8	3.0	5	2.1	5	2.7	2	.81	645	5170	27	57	25	30	36	7	2.9	5	2.8	3	1.2	850	5710	16	27	26	248	999	10	4.0	10	5.7	2	.76	197	745	16	23	27	53	135	13	5.5	9	5.3	2	.76	63	206	21	26	28	31	47	15	6.5	8	5.0	1	.38	48	126	24	27	29	26	28	15	7.3	7	4.3	1	.38	---	---	22	23	30	23	21	15	6.9	4	1.9	2	.76	---	---	12	12	31	38	58	---	---	7	3.6	2	.76	---	---	16	15	TOTAL	---	21321.7	---	148.45	---	1025.1	---	67.83	---	12870.96	---	1430.7																																																																																																																																																																																																			
17	11	5.1	2	.85	7	8.4	10	4.6	18	24	12	13	18	10	4.5	2	.84	5	5.0	7	3.0	8	9.2	10	11	19	9	3.5	2	.85	6	5.1	5	2.0	8	8.6	23	30	20	8	2.7	2	.87	14	12	4	1.6	6	6.4	53	91	21	8	3.1	2	.91	12	11	2	.81	5	4.7	69	144	22	7	2.6	1	.46	10	5.1	1	.40	21	18	63	143	23	7	2.5	0	.00	7	3.8	2	.81	47	65	43	104	24	8	3.0	5	2.1	5	2.7	2	.81	645	5170	27	57	25	30	36	7	2.9	5	2.8	3	1.2	850	5710	16	27	26	248	999	10	4.0	10	5.7	2	.76	197	745	16	23	27	53	135	13	5.5	9	5.3	2	.76	63	206	21	26	28	31	47	15	6.5	8	5.0	1	.38	48	126	24	27	29	26	28	15	7.3	7	4.3	1	.38	---	---	22	23	30	23	21	15	6.9	4	1.9	2	.76	---	---	12	12	31	38	58	---	---	7	3.6	2	.76	---	---	16	15	TOTAL	---	21321.7	---	148.45	---	1025.1	---	67.83	---	12870.96	---	1430.7																																																																																																																																																																																																																
18	10	4.5	2	.84	5	5.0	7	3.0	8	9.2	10	11	19	9	3.5	2	.85	6	5.1	5	2.0	8	8.6	23	30	20	8	2.7	2	.87	14	12	4	1.6	6	6.4	53	91	21	8	3.1	2	.91	12	11	2	.81	5	4.7	69	144	22	7	2.6	1	.46	10	5.1	1	.40	21	18	63	143	23	7	2.5	0	.00	7	3.8	2	.81	47	65	43	104	24	8	3.0	5	2.1	5	2.7	2	.81	645	5170	27	57	25	30	36	7	2.9	5	2.8	3	1.2	850	5710	16	27	26	248	999	10	4.0	10	5.7	2	.76	197	745	16	23	27	53	135	13	5.5	9	5.3	2	.76	63	206	21	26	28	31	47	15	6.5	8	5.0	1	.38	48	126	24	27	29	26	28	15	7.3	7	4.3	1	.38	---	---	22	23	30	23	21	15	6.9	4	1.9	2	.76	---	---	12	12	31	38	58	---	---	7	3.6	2	.76	---	---	16	15	TOTAL	---	21321.7	---	148.45	---	1025.1	---	67.83	---	12870.96	---	1430.7																																																																																																																																																																																																																													
19	9	3.5	2	.85	6	5.1	5	2.0	8	8.6	23	30	20	8	2.7	2	.87	14	12	4	1.6	6	6.4	53	91	21	8	3.1	2	.91	12	11	2	.81	5	4.7	69	144	22	7	2.6	1	.46	10	5.1	1	.40	21	18	63	143	23	7	2.5	0	.00	7	3.8	2	.81	47	65	43	104	24	8	3.0	5	2.1	5	2.7	2	.81	645	5170	27	57	25	30	36	7	2.9	5	2.8	3	1.2	850	5710	16	27	26	248	999	10	4.0	10	5.7	2	.76	197	745	16	23	27	53	135	13	5.5	9	5.3	2	.76	63	206	21	26	28	31	47	15	6.5	8	5.0	1	.38	48	126	24	27	29	26	28	15	7.3	7	4.3	1	.38	---	---	22	23	30	23	21	15	6.9	4	1.9	2	.76	---	---	12	12	31	38	58	---	---	7	3.6	2	.76	---	---	16	15	TOTAL	---	21321.7	---	148.45	---	1025.1	---	67.83	---	12870.96	---	1430.7																																																																																																																																																																																																																																										
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21	8	3.1	2	.91	12	11	2	.81	5	4.7	69	144	22	7	2.6	1	.46	10	5.1	1	.40	21	18	63	143	23	7	2.5	0	.00	7	3.8	2	.81	47	65	43	104	24	8	3.0	5	2.1	5	2.7	2	.81	645	5170	27	57	25	30	36	7	2.9	5	2.8	3	1.2	850	5710	16	27	26	248	999	10	4.0	10	5.7	2	.76	197	745	16	23	27	53	135	13	5.5	9	5.3	2	.76	63	206	21	26	28	31	47	15	6.5	8	5.0	1	.38	48	126	24	27	29	26	28	15	7.3	7	4.3	1	.38	---	---	22	23	30	23	21	15	6.9	4	1.9	2	.76	---	---	12	12	31	38	58	---	---	7	3.6	2	.76	---	---	16	15	TOTAL	---	21321.7	---	148.45	---	1025.1	---	67.83	---	12870.96	---	1430.7																																																																																																																																																																																																																																																																				
22	7	2.6	1	.46	10	5.1	1	.40	21	18	63	143	23	7	2.5	0	.00	7	3.8	2	.81	47	65	43	104	24	8	3.0	5	2.1	5	2.7	2	.81	645	5170	27	57	25	30	36	7	2.9	5	2.8	3	1.2	850	5710	16	27	26	248	999	10	4.0	10	5.7	2	.76	197	745	16	23	27	53	135	13	5.5	9	5.3	2	.76	63	206	21	26	28	31	47	15	6.5	8	5.0	1	.38	48	126	24	27	29	26	28	15	7.3	7	4.3	1	.38	---	---	22	23	30	23	21	15	6.9	4	1.9	2	.76	---	---	12	12	31	38	58	---	---	7	3.6	2	.76	---	---	16	15	TOTAL	---	21321.7	---	148.45	---	1025.1	---	67.83	---	12870.96	---	1430.7																																																																																																																																																																																																																																																																																	
23	7	2.5	0	.00	7	3.8	2	.81	47	65	43	104	24	8	3.0	5	2.1	5	2.7	2	.81	645	5170	27	57	25	30	36	7	2.9	5	2.8	3	1.2	850	5710	16	27	26	248	999	10	4.0	10	5.7	2	.76	197	745	16	23	27	53	135	13	5.5	9	5.3	2	.76	63	206	21	26	28	31	47	15	6.5	8	5.0	1	.38	48	126	24	27	29	26	28	15	7.3	7	4.3	1	.38	---	---	22	23	30	23	21	15	6.9	4	1.9	2	.76	---	---	12	12	31	38	58	---	---	7	3.6	2	.76	---	---	16	15	TOTAL	---	21321.7	---	148.45	---	1025.1	---	67.83	---	12870.96	---	1430.7																																																																																																																																																																																																																																																																																														
24	8	3.0	5	2.1	5	2.7	2	.81	645	5170	27	57	25	30	36	7	2.9	5	2.8	3	1.2	850	5710	16	27	26	248	999	10	4.0	10	5.7	2	.76	197	745	16	23	27	53	135	13	5.5	9	5.3	2	.76	63	206	21	26	28	31	47	15	6.5	8	5.0	1	.38	48	126	24	27	29	26	28	15	7.3	7	4.3	1	.38	---	---	22	23	30	23	21	15	6.9	4	1.9	2	.76	---	---	12	12	31	38	58	---	---	7	3.6	2	.76	---	---	16	15	TOTAL	---	21321.7	---	148.45	---	1025.1	---	67.83	---	12870.96	---	1430.7																																																																																																																																																																																																																																																																																																											
25	30	36	7	2.9	5	2.8	3	1.2	850	5710	16	27	26	248	999	10	4.0	10	5.7	2	.76	197	745	16	23	27	53	135	13	5.5	9	5.3	2	.76	63	206	21	26	28	31	47	15	6.5	8	5.0	1	.38	48	126	24	27	29	26	28	15	7.3	7	4.3	1	.38	---	---	22	23	30	23	21	15	6.9	4	1.9	2	.76	---	---	12	12	31	38	58	---	---	7	3.6	2	.76	---	---	16	15	TOTAL	---	21321.7	---	148.45	---	1025.1	---	67.83	---	12870.96	---	1430.7																																																																																																																																																																																																																																																																																																																								
26	248	999	10	4.0	10	5.7	2	.76	197	745	16	23	27	53	135	13	5.5	9	5.3	2	.76	63	206	21	26	28	31	47	15	6.5	8	5.0	1	.38	48	126	24	27	29	26	28	15	7.3	7	4.3	1	.38	---	---	22	23	30	23	21	15	6.9	4	1.9	2	.76	---	---	12	12	31	38	58	---	---	7	3.6	2	.76	---	---	16	15	TOTAL	---	21321.7	---	148.45	---	1025.1	---	67.83	---	12870.96	---	1430.7																																																																																																																																																																																																																																																																																																																																					
27	53	135	13	5.5	9	5.3	2	.76	63	206	21	26	28	31	47	15	6.5	8	5.0	1	.38	48	126	24	27	29	26	28	15	7.3	7	4.3	1	.38	---	---	22	23	30	23	21	15	6.9	4	1.9	2	.76	---	---	12	12	31	38	58	---	---	7	3.6	2	.76	---	---	16	15	TOTAL	---	21321.7	---	148.45	---	1025.1	---	67.83	---	12870.96	---	1430.7																																																																																																																																																																																																																																																																																																																																																		
28	31	47	15	6.5	8	5.0	1	.38	48	126	24	27	29	26	28	15	7.3	7	4.3	1	.38	---	---	22	23	30	23	21	15	6.9	4	1.9	2	.76	---	---	12	12	31	38	58	---	---	7	3.6	2	.76	---	---	16	15	TOTAL	---	21321.7	---	148.45	---	1025.1	---	67.83	---	12870.96	---	1430.7																																																																																																																																																																																																																																																																																																																																																															
29	26	28	15	7.3	7	4.3	1	.38	---	---	22	23	30	23	21	15	6.9	4	1.9	2	.76	---	---	12	12	31	38	58	---	---	7	3.6	2	.76	---	---	16	15	TOTAL	---	21321.7	---	148.45	---	1025.1	---	67.83	---	12870.96	---	1430.7																																																																																																																																																																																																																																																																																																																																																																												
30	23	21	15	6.9	4	1.9	2	.76	---	---	12	12	31	38	58	---	---	7	3.6	2	.76	---	---	16	15	TOTAL	---	21321.7	---	148.45	---	1025.1	---	67.83	---	12870.96	---	1430.7																																																																																																																																																																																																																																																																																																																																																																																									
31	38	58	---	---	7	3.6	2	.76	---	---	16	15	TOTAL	---	21321.7	---	148.45	---	1025.1	---	67.83	---	12870.96	---	1430.7																																																																																																																																																																																																																																																																																																																																																																																																						
TOTAL	---	21321.7	---	148.45	---	1025.1	---	67.83	---	12870.96	---	1430.7																																																																																																																																																																																																																																																																																																																																																																																																																			

GUYANDOTTE RIVER BASIN

03202400 GUYANDOTTE RIVER NEAR BAILEYSVILLE, WV--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

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)					
	CONCENTRATION	LOADS	CONCENTRATION	LOADS	CONCENTRATION	LOADS	CONCENTRATION	LOADS	CONCENTRATION	LOADS	CONCENTRATION	LOADS	CONCENTRATION	LOADS	CONCENTRATION	LOADS	CONCENTRATION	LOADS	CONCENTRATION	LOADS				
	APRIL				MAY				JUNE				JULY				AUGUST				SEPTEMBER			
1	3	2.4	35	79	40	25	50	45	64	37	7	3.5												
2	10	7.7	12	22	45	20	47	31	47	21	6	2.9												
3	37	41	9	14	28	11	51	27	33	12	7	3.0												
4	1100	29900	10	14	22	7.5	53	23	23	7.8	14	6.0												
5	1430	54600	88	231	22	6.8	33	13	17	4.9	10	4.1												
6	530	5370	200	648	21	7.2	17	6.4	17	5.0	12	4.5												
7	243	1210	72	159	15	5.5	12	4.3	32	10	11	3.7												
8	137	510	42	73	16	5.1	10	3.2	19	6.8	11	3.8												
9	77	227	20	29	32	12	10	2.8	19	6.5	11	3.7												
10	46	112	10	12	47	21	11	3.0	43	14	11	3.6												
11	28	57	9	10	32	11	47	19	175	152	12	3.8												
12	23	41	7	6.8	29	8.3	16	5.4	355	263	12	3.4												
13	16	25	5	4.2	21	5.8	23	6.6	1330	14900	14	3.8												
14	11	15	5	4.0	138	107	22	5.6	755	6160	20	5.3												
15	7	9.0	5	3.6	148	114	20	5.5	170	716	22	6.8												
16	5	5.8	5	3.3	130	57	15	3.9	63	122	39	13												
17	5	5.2	5	3.1	82	30	14	3.3	105	224	80	43												
18	6	5.7	4	2.3	194	309	14	3.0	193	802	31	13												
19	7	6.5	4	2.3	136	111	21	4.3	106	219	53	23												
20	11	11	3	1.6	119	73	13	2.5	86	106	87	54												
21	10	8.6	3	1.5	113	58	15	2.8	78	67	65	34												
22	8	6.3	2	.93	119	50	46	14	111	99	50	19												
23	25	20	3	1.4	123	82	28	8.0	94	99	26	8.6												
24	50	61	5	2.2	238	322	26	6.3	297	1510	20	6.0												
25	51	64	12	5.3	307	784	95	66	300	1310	15	4.2												
26	22	25	20	9.1	154	281	200	259	57	113	22	6.3												
27	11	11	14	5.9	87	101	102	62	24	29	47	19												
28	22	22	7	2.8	67	70	56	20	34	32	28	9.5												
29	506	2510	6	2.2	188	254	105	41	30	22	17	4.8												
30	180	598	6	2.3	82	93	197	263	25	16	27	7.0												
31	---	---	19	12	---	---	103	91	14	7.9	---	---												
TOTAL	---	95687.2	---	1367.83	---	3042.2	---	1050.9	---	27093.9	---	326.3												
TOTAL LOAD FOR YEAR:	165433.07				TONS.																			

GUYANDOTTE RIVER BASIN

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03202480 BRIER CREEK AT FANROCK, WV

LOCATION.--Lat 37°33'50", long 81°39'16", Wyoming County, Hydrologic Unit 05070101, on right bank on Secondary State Route 14, 0.3 mi (0.5 km) south of Fanrock, and 0.3 mi (0.5 km) upstream from mouth.

DRAINAGE AREA.--7.20 mi² (18.65 km²).

PERIOD OF RECORD.--July 1969 to September 1977 (discontinued). Prior to October 1975, published as Briar Creek at Fanrock.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 1,220 ft (372 m), from topographic map.

REMARKS.--Records fair except those for period Dec. 22 to Feb. 11, which are poor. No gage-height record Apr. 4.

AVERAGE DISCHARGE.--8 years, 10.5 ft³/s (0.297 m³/s), 19.80 in/yr (503 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 980 ft³/s (27.8 m³/s) Apr. 4, 1977, gage height, 7.29 ft (2.222 m), from floodmarks, from rating curve extended above 180 ft³/s (5.1 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 0.06 ft³/s (0.002 m³/s) Oct. 22-31, 1969.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 150 ft³/s (4.2 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)
Oct. 9	0845	261	7.39	4.33	1.320	Aug. 13	1415	683	19.3	6.34	1.899
Apr. 4	1400	*980	27.8	a7.29	2.222						

a From floodmarks.

Minimum daily discharge, 0.40 ft³/s (0.011 m³/s) July 20, 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	11	2.4	2.0	1.6	8.3	5.2	12	.80	4.1	2.4	1.4
2	3.3	9.4	2.6	1.8	1.5	6.5	5.2	9.0	.73	2.4	2.2	1.3
3	1.3	7.6	2.8	1.7	1.4	5.5	9.0	7.6	.73	1.6	1.4	1.1
4	.73	6.5	2.5	1.7	1.3	5.2	505	6.8	.66	1.3	1.1	.95
5	.60	5.2	2.3	1.7	1.3	4.9	296	20	.60	1.0	.95	.80
6	.54	4.3	2.2	1.7	1.3	4.3	69	29	2.2	1.0	1.3	.73
7	4.9	3.8	32	1.7	1.3	3.8	27	17	1.6	.87	2.0	.73
8	80	3.6	31	1.7	1.3	3.6	18	11	.87	.80	1.6	.80
9	151	3.0	16	1.8	1.3	3.6	15	7.9	2.7	.80	1.4	.87
10	25	3.3	11	1.9	1.5	3.3	12	6.1	1.4	.87	9.0	.87
11	9.4	3.0	9.4	1.8	2.5	3.3	9.8	5.5	1.0	1.1	24	.87
12	5.5	2.7	5.5	1.7	6.8	3.0	8.3	5.2	.95	.95	16	.87
13	4.1	2.7	5.5	1.6	20	8.7	7.2	4.3	.80	.87	223	.80
14	3.3	2.4	6.5	1.6	17	11	6.5	4.1	4.1	.75	60	.87
15	2.7	2.7	4.6	2.0	17	9.4	6.1	3.8	1.6	.70	27	1.6
16	2.4	3.0	4.9	2.5	12	8.3	5.5	3.3	1.0	.60	13	1.4
17	2.7	3.0	4.3	2.2	10	6.5	5.5	3.0	1.0	.55	14	1.4
18	2.4	3.2	4.3	1.9	7.6	7.6	5.2	2.4	.87	.50	17	1.3
19	2.2	3.4	4.3	1.7	5.8	7.2	5.2	2.2	1.3	.45	9.0	1.3
20	2.0	4.0	4.3	1.5	6.1	18	4.9	2.2	1.8	.40	5.2	4.3
21	2.7	3.0	4.0	1.4	5.2	23	4.3	1.8	1.0	.40	3.6	1.8
22	2.3	2.4	2.3	1.4	5.8	19	4.1	1.8	2.0	1.1	3.3	1.1
23	1.9	2.2	2.3	1.3	9.4	17	4.9	1.6	4.6	.90	2.0	1.0
24	2.3	2.0	2.3	1.4	48	15	6.1	1.6	7.9	.75	12	1.0
25	11	2.2	2.4	1.4	31	14	5.2	1.3	12	8.0	8.3	1.0
26	40	2.4	2.6	1.5	17	12	4.6	1.1	4.6	9.0	4.3	2.7
27	20	2.7	2.7	1.5	13	11	4.1	1.1	3.3	5.0	2.7	2.2
28	8.5	3.0	2.8	1.6	9.8	9.0	8.3	.95	4.9	1.2	1.8	1.6
29	5.8	2.7	3.0	1.6	---	8.0	39	.80	6.8	4.6	1.3	1.3
30	5.5	2.5	2.1	1.6	---	7.2	20	.80	4.3	6.5	1.1	1.1
31	11	---	2.2	1.6	---	5.5	---	.73	---	3.3	1.1	---
TOTAL	426.07	112.9	187.1	52.5	257.8	272.7	1126.2	175.98	78.11	62.36	473.05	39.06
MEAN	13.7	3.76	6.04	1.69	9.21	8.80	37.5	5.68	2.60	2.01	15.3	1.30
MAX	151	11	32	2.5	48	23	505	29	12	9.0	223	4.3
MIN	.54	2.0	2.1	1.3	1.3	3.0	4.1	.73	.60	.40	.95	.73
CFSM	1.90	.52	.84	.24	1.28	1.22	5.21	.79	.36	.28	2.13	.18
IN.	2.20	.58	.97	.27	1.33	1.41	5.82	.91	.40	.32	2.44	.20
CAL YR 1976	TOTAL	2257.57	MEAN	6.17	MAX	151	MIN	.11	CFSM	.86	IN	11.66
WTR YR 1977	TOTAL	3263.83	MEAN	8.94	MAX	505	MIN	.40	CFSM	1.24	IN	16.86

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)	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)
Oct. 9	1145	1040	29.5	12.20	3.719	Aug. 13	---	Unknown		Unknown	
Apr. 4	1930	*6300	178	18.67	5.691						

Minimum discharge, 1.7 ft³/s (0.05 m³/s) July 19, 20, 21, gage height, 6.59 ft (2.009 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	68	13	13	9.5	73	26	106	4.0	17	9.0	7.6
2	43	62	14	12	9.5	58	25	75	4.1	12	9.5	10
3	20	55	15	11	9.5	50	66	56	3.4	7.9	9.5	7.2
4	11	45	14	11	9.0	50	2670	49	3.1	6.0	6.0	6.9
5	7.6	34	13	11	8.5	45	1790	154	2.7	5.2	3.5	6.5
6	5.8	26	13	11	8.5	39	346	318	4.0	4.5	5.5	7.6
7	26	21	165	11	8.0	35	180	160	7.2	4.0	9.0	8.2
8	360	19	220	11	8.0	31	121	95	4.1	3.5	8.5	11
9	770	16	116	12	8.0	25	85	65	7.6	3.1	15	11
10	231	17	81	12	8.5	23	68	48	6.9	3.3	30	9.6
11	79	15	71	12	25	22	55	36	4.1	6.2	40	9.3
12	43	16	92	11	67	21	45	28	3.4	4.0	15	8.6
13	27	13	151	10	152	94	38	23	3.1	3.1	1000	7.9
14	20	11	132	10	157	102	34	19	18	2.8	500	8.2
15	15	12	100	13	136	81	30	16	14	2.4	250	15
16	13	14	77	16	108	66	26	13	6.9	2.3	150	12
17	12	14	59	14	86	52	22	11	5.6	2.1	250	16
18	10	15	45	12	69	59	21	9.6	4.7	1.9	380	14
19	8.6	16	37	11	60	56	21	8.6	4.5	1.8	180	11
20	8.2	18	39	10	58	144	24	7.6	5.2	1.7	85	40
21	9.6	18	36	9.5	49	170	19	6.5	5.2	1.8	35	21
22	8.6	17	15	9.5	56	154	17	5.8	4.5	5.6	19	13
23	7.2	14	15	9.5	73	122	19	5.4	14	4.0	75	11
24	8.9	13	16	9.5	296	101	40	5.2	23	3.3	210	9.6
25	51	13	16	9.5	258	79	39	4.9	91	37	110	8.9
26	236	13	17	9.5	157	63	32	4.9	41	48	55	14
27	122	14	18	9.5	119	52	28	4.5	19	12	35	17
28	68	14	18	9.5	90	47	38	4.0	20	6.0	20	12
29	47	20	19	9.5	---	40	354	3.8	35	12	15	10
30	40	15	13	9.5	---	38	190	4.0	21	40	11	9.3
31	65	---	15	9.5	---	32	---	3.5	---	14	8.9	---
TOTAL	2445.5	658	1665	338.5	2103.0	2024	6469	1350.3	390.3	278.5	3549.4	353.4
MEAN	78.9	21.9	53.7	10.9	75.1	65.3	216	43.6	13.0	8.98	114	11.8
MAX	770	68	220	16	296	170	2670	318	91	48	1000	40
MIN	5.8	11	13	9.5	8.0	21	17	3.5	2.7	1.7	3.5	6.5
CFSM	1.94	.54	1.32	.27	1.85	1.60	5.31	1.07	.32	.22	2.80	.29
IN.	2.24	.60	1.52	.31	1.92	1.85	5.91	1.23	.36	.25	3.24	.32
CAL YR 1976	TOTAL	14572.8	MEAN	39.8	MAX	770	MIN	1.2	CFSM	.98	IN	13.32
WTR YR 1977	TOTAL	21624.9	MEAN	59.2	MAX	2670	MIN	1.7	CFSM	1.46	IN	19.76

GUYANDOTTE RIVER BASIN

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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 October 1976.

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, 758 mg/L Apr. 4, 1977; minimum daily mean, 1 mg/L Oct. 8, 1974, and on several days during 1976.

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.--

WATER TEMPERATURES: Maximum, 25.5°C July 21; minimum, 0.0°C on many days in December, January, and February.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 758 mg/L Apr. 4; minimum daily mean, 2 mg/L Nov. 6.

SEDIMENT LOADS: Maximum daily, 5,410 tons (4,910 tonnes) Apr. 4; minimum daily, 0.03 ton (0.03 tonne) July 19, 20.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	90	64	---	---	---	102	115	74	190	112	142	134
2	94	63	---	---	---	89	110	---	194	123	154	133
3	98	65	---	---	---	67	112	124	---	---	179	134
4	83	66	---	91	---	---	---	---	---	---	182	135
5	110	69	---	---	---	73	53	85	238	---	189	146
6	114	77	---	88	---	70	62	66	---	---	205	---
7	141	80	---	---	---	66	76	80	187	---	147	---
8	56	83	---	---	85	68	71	87	193	---	183	148
9	48	90	64	---	---	102	80	---	174	---	134	163
10	60	85	---	---	104	101	83	99	162	---	92	165
11	64	88	76	---	---	106	84	96	186	---	103	158
12	71	110	80	---	---	108	98	---	207	---	---	159
13	79	---	66	---	---	88	89	---	146	---	---	175
14	81	116	66	---	---	71	98	---	156	---	---	171
15	87	---	72	---	---	81	---	120	148	---	---	163
16	86	---	79	---	---	82	101	119	155	---	---	167
17	98	---	---	---	79	84	101	130	---	---	60	142
18	105	---	92	---	---	---	112	133	163	---	66	145
19	108	97	98	---	---	---	111	143	166	---	72	147
20	115	---	104	---	99	---	120	150	173	---	83	140
21	113	---	---	---	93	63	---	150	180	---	101	110
22	122	---	---	---	92	68	117	155	121	---	147	109
23	122	---	110	---	104	67	114	155	225	---	95	124
24	120	---	136	---	56	71	---	---	226	222	---	128
25	98	---	---	---	59	84	93	156	98	136	95	155
26	51	---	100	---	64	96	98	171	126	111	95	161
27	52	---	---	---	104	92	93	168	104	125	102	142
28	62	---	---	---	104	---	104	186	116	182	110	139
29	87	---	99	---	---	92	68	189	99	118	122	136
30	104	---	100	---	---	94	67	212	106	109	127	146
31	67	---	---	---	---	107	---	---	---	114	128	---
MEAN	90	82	89	---	87	84	93	133	163	135	125	146
WTR YR 1977	MEAN	113	MAX	238	MIN	48						

GUYANDOTTE RIVER BASIN

03202750 CLEAR FORK AT CLEAR FORK, WV

LOCATION.--Lat 37°37'20", long 81°41'42", Wyoming County, Hydrologic Unit 05070101, on right bank 0.8 mi (1.3 km) southwest of Clear Fork, 1.0 mi (1.6 km) downstream from Laurel Branch, 1.0 mi (1.6 km) upstream from Cedar Creek, and at mile 4.0 (6.4 km).

DRAINAGE AREA.--123 mi² (319 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Altitude of gage is 1,160 ft (354 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 Dec. 22 to Feb. 11, 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), 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).

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	1500	3430 97.1	13.93 4.246	Apr. 5	0415	*9900 280	18.64 5.681
Feb. 24	1815	2080 58.9	12.41 3.783	Aug. 13	2030	2530 71.6	12.98 3.956

Minimum discharge, 11 ft³/s (0.31 m³/s) July 21, gage height, 7.34 ft (2.237 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	170	348	49	50	45	240	91	265	24	88	126	63
2	144	255	60	50	43	186	87	211	21	59	115	68
3	84	192	60	45	43	159	99	163	20	43	73	56
4	54	154	60	45	42	157	4000	140	19	34	55	50
5	40	124	55	45	42	164	6380	132	17	29	46	46
6	33	102	54	45	41	150	1210	137	19	27	41	46
7	43	89	446	45	40	142	584	137	20	23	39	41
8	875	80	692	45	39	129	393	140	17	21	39	39
9	2770	70	342	50	40	118	295	124	26	19	38	36
10	875	67	225	50	45	110	232	107	33	18	36	33
11	293	67	188	50	120	102	190	95	24	23	84	32
12	170	66	218	45	439	96	159	82	20	36	78	30
13	121	56	378	40	768	206	140	73	19	25	1370	28
14	94	48	336	45	612	247	129	67	26	24	1990	27
15	75	48	260	50	397	211	116	61	35	22	975	27
16	61	50	202	70	312	181	105	55	25	18	310	33
17	55	49	163	60	232	150	95	48	23	15	216	80
18	48	48	134	50	186	179	88	44	34	14	456	53
19	42	50	112	48	166	252	82	41	27	13	255	47
20	39	50	110	46	186	257	92	38	28	12	154	188
21	40	50	115	45	170	230	81	35	26	12	108	112
22	37	52	60	45	164	272	74	33	24	27	223	70
23	33	49	60	45	290	325	75	35	38	23	247	53
24	35	45	60	44	1420	293	112	32	88	20	548	45
25	94	44	65	44	1130	228	129	33	123	80	965	40
26	488	45	65	44	596	182	126	31	78	163	351	43
27	310	49	70	44	472	154	118	28	52	68	196	52
28	186	52	75	45	333	139	110	27	75	39	134	49
29	137	59	80	50	---	126	728	25	250	70	118	43
30	121	55	55	47	---	115	456	25	142	342	94	38
31	282	---	60	45	---	105	---	24	---	142	75	---
TOTAL	7849	2513	4909	1472	8413	5605	16576	2488	1373	1549	9555	1568
MEAN	253	83.8	158	47.5	300	181	553	80.3	45.8	50.0	308	52.3
MAX	2770	348	692	70	1420	325	6380	265	250	342	1990	188
MIN	33	44	49	40	39	96	74	24	17	12	36	27
CFSM	2.06	.68	1.29	.39	2.44	1.47	4.50	.65	.37	.41	2.50	.43
IN.	2.37	.76	1.48	.45	2.54	1.70	5.01	.75	.42	.47	2.89	.47

CAL YR 1976	TOTAL	48967.1	MEAN 134	MAX 2770	MIN 8.7	CFSM 1.09	IN 14.81
WTR YR 1977	TOTAL	63870.0	MEAN 175	MAX 6380	MIN 12	CFSM 1.42	IN 19.32

GUYANDOTTE RIVER BASIN

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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 to September 1977.
 WATER TEMPERATURES: November 1974 to May 1975, October 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, 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.--

WATER TEMPERATURES: Maximum, 30.5°C July 20; minimum, 0.5°C Dec. 25, 26, Jan. 14-16, Feb. 11-13.
 SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,670 mg/L Oct. 8; minimum daily mean, 0 mg/L May 27, 28, June 3.
 SEDIMENT LOADS: Maximum daily, 16,900 tons (15,300 tonnes) Apr. 4; minimum daily, 0 ton (0 tonne) May 27, 28, June 3.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
 ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	410	260	339	237	653	329	279	315
2	---	190	290	270	420	325	---	---	682	379	---	384
3	---	---	---	---	390	343	---	317	641	---	315	378
4	370	---	---	245	400	362	---	333	665	433	368	---
5	---	---	---	270	380	349	---	343	---	465	374	388
6	430	---	---	290	380	---	136	341	673	---	399	406
7	410	288	---	270	---	347	275	341	706	509	459	459
8	205	305	---	250	410	352	291	---	707	---	---	449
9	127	319	---	270	420	359	334	327	657	546	469	452
10	---	334	---	---	420	371	354	338	663	555	---	---
11	270	337	---	260	360	378	372	360	608	596	---	459
12	---	344	---	260	275	390	385	385	---	683	385	475
13	330	441	---	---	185	353	390	---	635	446	175	---
14	345	457	---	---	170	257	395	435	614	493	120	510
15	370	448	---	245	175	251	399	445	677	527	236	503
16	380	418	---	---	---	267	404	461	594	631	---	513
17	---	400	---	215	205	288	413	470	---	---	156	442
18	400	396	---	235	220	288	426	493	564	637	---	380
19	410	403	---	255	240	253	---	510	---	669	---	445
20	420	401	---	265	---	233	476	519	620	676	---	---
21	---	---	175	280	250	---	455	534	633	687	---	289
22	440	---	215	320	245	234	470	530	603	602	---	321
23	---	400	250	320	235	202	466	---	523	616	194	354
24	440	393	---	---	143	205	456	638	410	632	218	380
25	430	---	---	330	150	231	385	568	355	486	146	402
26	155	---	250	320	190	---	342	619	404	342	191	407
27	157	---	---	---	220	276	332	588	---	369	---	---
28	223	---	270	340	245	297	350	602	386	394	276	375
29	---	---	290	340	---	---	177	---	256	---	300	405
30	253	---	---	340	---	326	195	644	---	244	312	408
31	236	---	300	420	---	319	---	650	---	287	305	---
MEAN	324	369	255	287	286	301	361	463	580	509	284	412
WTR YR 1977	MEAN	379	MAX	707	MIN	120						

GUYANDOTTE RIVER BASIN

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) above mean sea level. Prior to Oct. 1, 1962, at datum 1.32 ft (0.402 m) lower.

REMARKS.--Water-discharge records good except those for period Dec. 22 to Feb. 13, 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.--15 years, 1,156 ft³/s (32.74 m³/s), 18.78 in/yr (477 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, 43,900 ft³/s (1,240 m³/s) Apr. 5, gage height, 30.55 ft (9.312 m), from rating curve extended as explained above; minimum, 130 ft³/s (3.68 m³/s) July 20, 21, gage height, 4.55 ft (1.387 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1190	1800	387	500	370	1930	744	2050	332	863	1330	478
2	1250	1580	377	470	360	1540	664	1610	356	657	728	435
3	821	1300	441	450	360	1320	699	1290	288	490	514	425
4	518	1090	412	430	370	1250	10800	1090	256	385	385	380
5	376	909	397	430	380	1310	33400	1100	236	328	332	370
6	291	737	381	420	370	1170	20000	2220	280	296	304	348
7	279	626	1000	420	360	1110	15200	2070	348	276	312	328
8	1970	555	3300	410	350	973	7740	1630	276	252	332	308
9	10100	499	2530	410	350	878	2580	1290	312	248	390	292
10	9230	471	1610	400	380	809	2030	1060	320	244	360	288
11	2800	461	1350	400	450	756	1720	908	320	252	615	272
12	1460	477	1390	390	600	716	1450	784	268	252	760	256
13	991	444	2060	390	1000	1730	1000	692	228	260	5810	248
14	743	396	2200	400	2950	2140	1220	643	232	212	15500	240
15	591	363	1840	450	2510	1770	1040	587	370	185	6510	248
16	494	352	1650	450	2100	1530	1040	538	425	170	2730	375
17	431	357	1290	450	1670	1250	1000	496	312	170	1670	478
18	394	361	1060	430	1350	1240	800	460	308	158	2610	460
19	363	355	885	410	1200	1520	752	435	671	143	2190	410
20	324	367	804	400	1290	1560	713	415	484	134	1290	728
21	300	364	837	390	1210	1830	713	390	380	134	881	713
22	296	373	650	390	1110	1870	650	370	340	244	899	490
23	292	364	540	390	1390	2010	643	348	375	244	1080	375
24	283	351	540	390	3720	1940	720	352	574	272	1850	324
25	368	331	560	390	7050	1670	899	344	1300	526	4390	292
26	1790	327	560	390	4180	1400	845	328	1270	908	2360	284
27	2560	331	580	390	3080	1200	800	324	845	784	1340	375
28	1510	348	600	390	2500	1060	768	308	720	440	926	375
29	1080	381	540	390	---	968	2630	292	1720	478	760	328
30	905	393	520	390	---	891	3480	276	1300	1230	636	284
31	1330	---	500	390	---	827	---	288	---	1090	544	---
TOTAL	45330	17063	31791	12800	43010	42168	116740	24988	15446	12325	60338	11207
MEAN	1462	565	1026	413	1536	1360	3891	806	515	398	1946	374
MAX	10100	1800	3300	500	7050	2140	33400	2220	1720	1230	15500	728
MIN	279	327	377	390	350	716	643	276	228	134	304	240
CFSM	1.75	.68	1.23	.49	1.84	1.63	4.65	.96	.62	.48	2.33	.45
IN.	2.02	.76	1.41	.57	1.91	1.88	5.19	1.11	.69	.55	2.68	.50
CAL YR 1976	TOTAL	330025	MEAN	902	MAX	10100	MIN 100	CFSM	1.08	IN	14.69	
WTR YR 1977	TOTAL	433206	MEAN	1187	MAX	33400	MIN 134	CFSM	1.42	IN	19.28	

GUYANDOTTE RIVER BASIN

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03203670 WHITMAN CREEK AT WHITMAN, WV

LOCATION.--Lat 37°48'28", long 82°01'42", Logan County, Hydrologic Unit 05070101, on right bank 75 ft (23 m) up-stream from abandoned bridge off Secondary State Route 9/1, 0.8 mi (1.3 km) south of Whitman, and at mile 2.0 (3.2 km).

DRAINAGE AREA.--10.9 mi² (28.2 km²).

PERIOD OF RECORD.--April 1969 to September 1977 (discontinued).

GAGE.--Water-stage recorder. Concrete control since Sept. 11, 1969. Altitude of gage is 760 ft (232 m), from topographic map.

REMARKS.--Records good except those for Jan. 1 to Feb. 11, which are poor.

AVERAGE DISCHARGE.--8 years, 13.9 ft³/s (0.394 m³/s), 17.32 in/yr (440 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,420 ft³/s (40.2 m³/s) Aug. 14, 1977, gage height, 6.66 ft (2.030 m), from rating curve extended above 100 ft³/s (2.8 m³/s) by step-backwater method; no flow several days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft³/s (2.8 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)
Oct. 9	1015	109	3.09	2.61	0.796	Aug. 14	0945	*1420	40.2	6.66	2.030
Apr. 4	2315	616	17.4	4.76	1.451						

No flow July 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	15	2.4	7.5	4.2	19	7.9	4.6	2.4	4.1	36	5.6
2	18	13	2.5	7.0	3.6	18	7.6	5.8	2.5	2.7	13	4.8
3	10	12	2.2	6.5	3.2	16	10	5.3	2.5	1.9	6.8	4.2
4	6.3	10	2.2	6.3	3.0	18	212	5.3	2.2	1.2	4.8	3.9
5	4.4	9.1	2.2	6.5	3.0	18	226	6.5	2.2	1.0	3.9	3.7
6	3.9	8.2	2.4	6.8	3.0	18	77	6.5	2.2	.81	3.2	3.3
7	4.4	7.0	11	6.8	3.0	17	50	14	2.2	.75	4.6	3.3
8	6.5	6.3	18	7.0	3.0	15	35	16	2.5	.75	7.9	3.2
9	71	5.3	17	7.2	3.0	13	29	14	2.4	1.1	7.6	3.0
10	41	4.4	15	7.4	3.0	11	24	10	2.1	.70	7.0	2.5
11	23	4.1	15	7.0	3.9	10	18	8.5	2.1	.75	9.1	1.9
12	15	4.1	18	6.6	5.3	11	16	6.8	1.8	.60	7.6	1.8
13	11	3.9	24	6.4	13	57	13	5.6	1.8	.43	109	1.8
14	8.8	3.7	25	6.2	18	46	10	5.3	1.9	.31	380	1.8
15	7.0	3.7	24	8.0	24	33	8.5	5.3	1.6	.35	81	1.8
16	6.0	3.2	21	10	23	24	7.0	4.6	1.5	.31	42	5.1
17	5.8	2.5	17	8.8	21	21	5.6	4.1	1.6	.23	37	4.1
18	5.1	2.4	13	7.8	18	22	4.2	3.9	1.5	.12	35	2.2
19	4.1	2.2	11	6.6	17	22	3.9	4.1	2.7	.03	24	9.7
20	3.9	2.2	11	6.0	18	19	3.5	4.2	1.6	.00	17	12
21	3.9	2.2	10	5.8	17	18	2.8	3.7	.94	.08	13	10
22	3.5	2.4	9.4	5.5	17	21	2.8	3.5	1.8	1.9	12	8.5
23	3.0	2.2	8.8	5.2	19	19	3.5	3.0	2.5	.43	10	6.5
24	2.8	2.4	8.2	5.0	34	17	4.1	3.3	4.8	3.5	28	6.0
25	7.3	2.2	7.6	5.0	34	15	3.5	3.2	5.1	3.0	29	5.6
26	13	2.1	7.9	5.0	25	13	3.0	2.7	3.3	1.2	21	5.3
27	11	2.1	7.9	5.0	20	12	2.4	2.7	1.9	.60	15	5.8
28	9.7	2.2	7.6	5.0	20	11	4.4	2.5	2.5	.47	11	5.3
29	8.5	2.8	7.6	5.0	---	9.7	7.3	2.5	6.3	8.8	9.1	4.6
30	9.1	2.4	8.2	5.0	---	9.1	4.6	2.4	3.5	7.3	7.3	4.1
31	16	---	7.9	4.8	---	8.5	---	2.7	---	3.3	6.3	---
TOTAL	370.0	145.3	345.0	198.7	379.2	581.3	806.6	172.6	73.94	48.72	998.2	141.4
MEAN	11.9	4.84	11.1	6.41	13.5	18.8	26.9	5.57	2.46	1.57	32.2	4.71
MAX	71	15	25	10	34	57	226	16	6.3	8.8	380	12
MIN	2.8	2.1	2.2	4.8	3.0	8.5	2.4	2.4	.94	.00	3.2	1.8
CFSM	1.09	.44	1.02	.59	1.24	1.73	2.47	.51	.23	.14	2.95	.43
IN.	1.26	.50	1.18	.68	1.29	1.98	2.75	.59	.25	.17	3.41	.48
CAL YR 1976 TOTAL	3413.56			MEAN 9.33	MAX 83	MIN .00	CFSM .86	IN 11.65				
WTR YR 1977 TOTAL	4260.96			MEAN 11.7	MAX 380	MIN .00	CFSM 1.07	IN 14.54				

GUYANDOTTE RIVER BASIN

03203700 ISLAND CREEK AT LOGAN, WV--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	JANUARY			FEBRUARY			MARCH		
				MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1									430	87	101	
2									259	77	54	
3									193	42	22	
4									140	147	56	
5									296	113	90	
6									296	77	62	
7									193	62	32	
8									225	50	30	
9									175	16	7.6	
10									175	17	8.0	
11									117	20	6.3	
12									93	23	5.8	
13									1480	851	3400	
14									730	185	365	
15									590	137	218	
16									382	97	100	
17									259	54	38	
18									430	347	403	
19									296	117	94	
20									430	68	79	
21									338	65	59	
22									382	136	140	
23									430	155	180	
24									430	35	41	
25									296	20	16	
26									196	18	9.5	
27									175	26	12	
28									140	32	12	
29									140	25	9.5	
30									117	20	6.3	
31									96	27	7.0	
TOTAL									9929	---	5664.0	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	APRIL			MAY			JUNE		
				MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	65	25	4.4	475	49	63	32	147	13			
2	42	131	15	382	35	36	42	132	15			
3	117	112	35	338	37	34	24	66	4.3			
4	1520	2810	11500	296	45	36	32	65	5.6			
5	1420	1250	4790	430	52	60	32	64	5.5			
6	1190	472	1520	590	47	75	65	32	5.6			
7	1030	406	1130	530	220	315	32	20	1.7			
8	807	310	675	430	620	720	52	30	4.2			
9	674	290	528	338	382	349	52	56	7.9			
10	617	295	491	259	177	124	47	53	6.7			
11	605	309	505	193	83	43	32	54	4.7			
12	590	330	526	225	57	35	42	37	4.2			
13	590	392	624	175	37	17	24	77	5.0			
14	530	448	641	175	27	13	65	67	12			
15	475	370	475	225	23	14	32	52	4.5			
16	382	243	251	225	21	13	32	44	3.8			
17	382	103	106	117	20	6.3	32	33	2.9			
18	338	43	39	175	480	227	32	47	4.1			
19	338	40	37	175	838	396	42	64	7.3			
20	338	34	31	117	145	46	32	87	7.5			
21	296	36	29	117	37	12	42	46	5.2			
22	225	106	64	175	37	17	42	43	4.9			
23	259	127	89	96	34	8.8	32	43	3.7			
24	338	168	153	96	35	9.1	80	450	97			
25	296	64	51	96	43	11	96	250	65			
26	296	90	72	96	34	8.8	65	57	10			
27	259	43	30	80	22	4.8	42	33	3.7			
28	338	141	129	65	30	5.3	52	58	8.1			
29	1020	347	956	42	61	6.9	430	445	517			
30	1360	80	294	42	44	5.0	96	195	51			
31	---	---	---	42	70	7.9	---	---	---			
TOTAL	16737	---	25790.4	6817	---	2718.9	1752	---	891.1			

GUYANDOTTE RIVER BASIN

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03203700 ISLAND CREEK AT LOGAN, WV--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	96	225	58	530	757	1080	80	135	29
2	80	42	9.1	140	157	59	117	238	75
3	65	34	6.0	80	67	14	175	366	173
4	42	30	3.4	65	100	18	117	124	39
5	65	25	4.4	52	57	8.0	140	87	33
6	42	27	3.1	52	35	4.9	117	53	17
7	32	23	2.0	65	139	24	117	63	20
8	32	28	2.4	42	80	9.1	80	53	11
9	32	34	2.9	52	72	10	96	40	10
10	42	55	6.2	52	70	9.8	96	33	8.6
11	42	27	3.1	96	200	52	96	46	12
12	42	17	1.9	65	113	20	80	41	8.9
13	32	23	2.0	1050	1370	3880	80	28	6.0
14	24	27	1.7	1100	2530	7510	80	24	5.2
15	32	27	2.3	760	2260	4640	65	30	5.3
16	42	35	4.0	640	1200	2070	65	36	6.3
17	32	27	2.3	670	2180	3940	259	230	161
18	24	29	1.9	650	980	1720	80	52	11
19	24	32	2.1	620	440	737	80	124	27
20	24	37	2.4	382	400	413	175	355	168
21	24	59	3.8	225	500	304	80	136	29
22	52	200	28	296	650	519	80	104	22
23	42	33	3.7	225	400	243	80	63	14
24	32	98	8.5	1250	1620	5470	80	32	6.9
25	65	272	48	1300	661	2320	65	33	5.8
26	96	63	16	910	450	1110	80	74	16
27	42	34	3.9	530	380	544	80	70	15
28	24	36	2.3	296	320	256	65	60	11
29	338	164	150	225	270	164	65	46	8.1
30	117	197	62	175	250	118	65	22	3.9
31	65	62	11	96	202	52	---	---	---
TOTAL	1743	---	458.4	12691	---	37318.8	2935	---	958.0
YEAR	52604.00		73799.6						

GUYANDOTTE RIVER BASIN

03204000 GUYANDOTTE RIVER AT BRANCLAND, WV

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) above mean sea level, 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 552.90 ft (168.524 m) above mean sea level.

REMARKS.--Water-discharge records good except those for Dec. 22 to Feb. 13, which are poor. High flows affected since 1974 by R. D. Bailey Lake at mile 112 (180 km). Corps of Engineers gage-light telemeter at station.

AVERAGE DISCHARGE.--50 years (water years 1916-17, 1930-77), 1,614 ft³/s (45.71 m³/s), 17.88 in/yr (454 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, 34,700 ft³/s (983 m³/s) Apr. 6, gage height, 39.09 ft (11.915 m), backwater; minimum, 150 ft³/s (4.25 m³/s) July 21, gage height, 3.20 ft (0.975 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3140	2510	516	650	540	3200	1110	3970	326	1410	1510	653
2	3070	2630	528	650	520	2490	1000	2680	343	930	1770	581
3	1900	2150	516	600	520	2030	1040	2110	373	695	827	587
4	1100	1750	570	600	540	2620	3550	1690	306	540	595	522
5	720	1410	540	600	540	3070	22800	1600	266	433	454	552
6	546	1140	552	580	520	2530	31800	1960	257	371	380	492
7	474	940	1730	580	500	2130	25100	3480	292	329	357	433
8	648	811	3770	560	500	1830	16600	2940	358	302	376	398
9	4160	720	4710	560	500	1550	6800	2210	322	277	391	376
10	8110	672	3170	540	520	1400	4040	1720	353	292	498	349
11	7180	636	2300	540	600	1270	3150	1400	336	354	564	333
12	3230	624	2300	540	800	1170	2540	1160	326	301	799	314
13	1910	618	3050	560	1600	4120	2010	980	284	269	1330	297
14	1320	570	3750	560	5060	4710	1750	855	253	283	14300	289
15	976	522	3230	600	5980	3810	1680	776	248	242	20800	281
16	783	486	2760	650	5520	2900	1480	708	362	212	8460	290
17	672	462	2220	600	4440	2300	1580	634	427	194	3660	515
18	588	462	1740	600	3640	2080	1230	596	322	188	3390	559
19	534	462	1400	580	3070	2330	1070	552	335	178	4090	515
20	498	456	1210	560	3180	2470	1000	500	697	167	2600	584
21	462	462	1220	540	2880	2460	924	485	527	158	1600	827
22	415	456	900	540	1960	2790	884	449	412	236	1110	734
23	395	462	750	540	2320	2920	828	420	370	314	1240	540
24	395	444	750	540	3720	2970	859	401	404	261	1720	425
25	474	426	800	540	7350	2710	953	399	828	376	4220	365
26	1290	410	800	540	6870	2270	1090	388	1670	669	4990	334
27	3480	410	850	540	4940	1930	996	365	1260	1050	2640	327
28	2890	456	900	540	4000	1670	988	354	892	755	1590	417
29	1790	504	800	540	---	1490	2620	336	1130	487	1110	410
30	1380	522	700	540	---	1350	4950	315	2140	862	893	361
31	1830	---	700	540	---	1260	---	304	---	1530	754	---
TOTAL	56360	24583	49732	17650	73130	73830	146422	36737	16419	14665	89018	13660
MEAN	1818	819	1604	569	2612	2382	4881	1185	547	473	2872	455
MAX	8110	2630	4710	650	7350	4710	31800	3970	2140	1530	20800	827
MIN	395	410	516	540	500	1170	828	304	248	158	357	281
CFSM	1.48	.67	1.31	.46	2.13	1.94	3.98	.97	.45	.39	2.34	.37
IN.	1.71	.75	1.51	.54	2.22	2.24	4.44	1.11	.50	.44	2.70	.41

CAL YR 1976 TOTAL 485177 MEAN 1326 MAX 8110 MIN 112 CFSM 1.08 IN 14.72
WTR YR 1977 TOTAL 612206 MEAN 1677 MAX 31800 MIN 158 CFSM 1.37 IN 18.58

GUYANDOTTE RIVER BASIN

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03204000 GUYANDOTTE RIVER AT BRANCLAND, 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.

WATER TEMPERATURES: March to December 1976, February to September 1977.

TURBIDITY: October 1975 to December 1976 (discontinued).

SUSPENDED SEDIMENT DISCHARGE: March 1976 to current year.

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.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 3,250 mg/L Dec. 9; minimum daily mean, 5 mg/L Oct. 24, July 17, 20.

SEDIMENT LOADS.--Maximum daily, 205,000 tons (186,000 tonnes) Apr. 5; minimum daily, 2.3 tons (2.1 tonnes) July 20.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	238	217	422	---	---	236	373	204	676	279	---	---
2	263	212	---	381	---	257	387	219	694	316	356	460
3	269	211	---	---	---	282	384	253	696	343	346	454
4	291	218	---	367	---	258	291	284	675	---	383	---
5	312	236	---	389	---	251	141	301	688	403	403	453
6	---	248	---	---	---	277	132	332	692	---	429	512
7	332	---	---	410	---	---	137	244	708	462	276	533
8	349	287	---	373	---	302	202	236	720	497	470	548
9	257	309	---	---	---	321	278	252	660	515	488	555
10	120	333	---	---	---	331	333	290	635	522	483	583
11	146	347	---	---	108	359	---	319	635	499	445	589
12	---	351	---	---	---	364	---	352	626	502	466	599
13	226	368	---	---	337	217	---	381	647	563	433	---
14	264	373	---	---	269	228	---	412	654	576	---	622
15	295	389	---	---	213	259	---	435	674	591	161	625
16	326	409	---	---	193	262	446	460	705	599	180	612
17	358	429	---	---	211	256	422	463	690	634	228	622
18	384	445	---	---	219	266	464	496	655	656	267	520
19	408	437	---	---	233	288	---	514	632	688	237	513
20	421	439	---	---	235	---	504	536	670	704	249	493
21	433	---	---	---	269	283	---	553	519	706	291	483
22	448	456	330	---	268	279	477	580	520	653	331	460
23	478	447	325	---	258	251	516	598	585	---	365	452
24	485	446	355	---	244	238	526	598	483	---	234	452
25	483	448	357	---	193	238	518	618	442	593	314	463
26	340	---	358	---	159	250	499	629	382	612	181	494
27	293	433	383	---	188	261	497	634	338	445	214	520
28	178	425	371	---	---	303	452	646	314	464	---	532
29	180	---	---	---	---	319	292	664	316	450	315	512
30	---	407	371	---	---	332	270	669	273	447	349	473
31	191	---	---	---	---	350	---	692	---	324	---	---
MEAN	313	358	364	384	225	280	371	447	587	520	329	523
WTR YR 1977	MEAN	403	MAX	720	MIN	108						

GUYANDOTTE RIVER BASIN

03204200 GUYANDOTTE RIVER AT BARBOURSVILLE, WV

LOCATION.--Lat 38°24'56", long 82°17'44", Cabell County, Hydrologic Unit 05070102, at bridge on U.S. Highway 60, at Barboursville.

DRAINAGE AREA.--1,309 mi² (3,390 km²).

PERIOD OF RECORD.--October 1975 to April 1977 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1975 to April 1977 (discontinued).

WATER TEMPERATURES: June 1976 to April 1977 (discontinued).

TURBIDITY: October 1975 to April 1977 (discontinued).

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 720 micromhos, Sept. 3, 1976; minimum daily, 120 micromhos, Jan. 3, 1976.
WATER TEMPERATURES: Maximum daily, 28.5°C, July 28, 1976; minimum daily, 0.0°C on many days during winter 1976-77.

TURBIDITY: Maximum daily 200 JTU Apr. 5-7, 1977; minimum daily, 1 JTU Jan. 2, 6, 1977.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily during period October to April, 514 micromhos, Apr. 23, 24; minimum daily, 130 micromhos, Oct. 11, 12, Apr. 7.

WATER TEMPERATURES: Maximum daily during period October to April, 20.5°C Apr. 21; minimum daily, 0.0°C on many days during December, January, and February.

TURBIDITY: Maximum daily during period October to April, 200 JTU Apr. 5-7; minimum daily, 1 JTU Jan. 2, 6.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	300	230	420	340	453	238	320					
2	230	230	430	390	455	239	321					
3	250	230	440	404	455	229	323					
4	270	230	410	349	459	229	325					
5	300	240	420	399	450	248	180					
6	310	250	230	355	440	250	144					
7	320	270	230	183	454	276	130					
8	340	280	240	315	456	304	152					
9	330	310	230	326	456	305	192					
10	150	320	180	328	456	302	292					
11	130	350	170	326	280	335	327					
12	130	350	190	329	265	346	358					
13	210	370	180	328	271	240	388					
14	260	380	190	325	263	239	420					
15	240	390	200	324	260	256	430					
16	300	400	190	324	206	263	435					
17	330	420	200	326	206	252	451					
18	350	440	180	285	222	260	454					
19	150	440	230	283	214	260	468					
20	390	450	250	283	266	270	488					
21	420	460	270	283	229	277	498					
22	440	460	290	283	227	277	509					
23	450	460	310	285	250	256	514					
24	460	460	300	285	237	239	514					
25	460	460	320	282	235	239	509					
26	330	460	320	286	160	254	509					
27	360	460	340	281	173	253	491					
28	260	430	310	285	200	267	489					
29	180	440	320	346	---	309	397					
30	200	390	320	341	---	309	329					
31	200	---	330	350	---	309	---					
MONTH	293	369	279	317	311	269	379					

GUYANDOTTE RIVER BASIN

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03204200 GUYANDOTTE RIVER AT BARBOURSVILLE, WV--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.5	8.5	2.0	0.0	0.0	5.0	15.0					
2	18.0	8.0	2.0	0.0	0.0	4.5	16.0					
3	18.0	9.0	1.0	0.0	0.0	6.0	15.5					
4	17.0	8.0	2.0	0.0	0.0	6.5	15.0					
5	18.0	7.0	1.0	0.0	0.0	7.0	11.0					
6	18.0	6.5	2.0	0.0	0.0	8.0	10.0					
7	16.5	6.0	3.0	0.0	0.0	8.0	10.0					
8	15.0	5.0	3.0	0.0	0.0	9.0	10.5					
9	14.5	6.0	3.0	0.0	0.0	9.0	10.0					
10	14.0	6.5	3.0	0.0	0.0	9.5	11.5					
11	13.5	6.0	3.0	0.0	0.0	10.0	13.5					
12	13.5	5.5	4.5	0.0	0.0	11.0	15.0					
13	14.5	5.0	5.0	0.0	0.0	10.5	16.5					
14	15.0	5.5	4.5	0.0	0.0	11.0	17.5					
15	14.5	4.0	4.0	0.0	0.0	11.0	18.0					
16	14.0	4.0	4.5	0.0	0.0	11.5	18.0					
17	13.5	4.0	5.0	0.0	0.5	11.5	17.5					
18	12.0	5.0	4.5	0.0	0.5	11.5	19.0					
19	11.0	6.5	4.5	0.0	0.0	10.5	19.0					
20	11.0	5.5	5.0	0.0	0.0	10.5	19.5					
21	10.0	5.0	3.0	0.0	0.5	11.0	20.5					
22	10.0	4.0	1.5	0.0	1.0	9.5	20.0					
23	8.0	4.0	1.0	0.0	1.5	8.5	19.5					
24	9.0	3.5	0.0	0.0	5.5	8.0	18.5					
25	10.0	3.0	0.0	0.0	6.0	8.5	16.5					
26	10.0	5.5	0.0	0.0	7.0	9.5	15.0					
27	10.0	7.5	0.0	0.0	6.0	10.0	16.0					
28	9.0	4.5	1.5	0.0	7.0	10.0	15.0					
29	8.5	4.0	0.5	0.0	---	14.0	15.0					
30	7.5	2.5	1.0	0.0	---	16.0	15.0					
31	7.5	---	0.0	0.0	---	15.5	---					
MONTH	13.0	5.5	2.5	0.0	1.5	9.5	15.5					

TURBIDITY (JTU), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	100	35	3	2	7	20	60					
2	100	30	4	1	9	20	80					
3	100	30	4	3	5	90	60					
4	60	15	3	2	5	90	50					
5	50	10	3	3	5	30	200					
6	30	9	80	1	4	30	200					
7	20	6	100	2	6	20	200					
8	20	4	55	4	4	15	100					
9	100	9	85	3	9	10	100					
10	150	3	40	6	6	10	100					
11	100	7	15	3	70	10	80					
12	80	7	25	2	50	10	50					
13	40	3	25	3	50	150	35					
14	20	5	25	4	50	150	30					
15	20	7	25	2	50	60	30					
16	15	5	10	2	9	60	20					
17	10	3	8	3	10	35	30					
18	8	2	15	3	10	40	15					
19	6	3	7	4	10	20	15					
20	25	4	6	3	50	30	10					
21	15	2	4	3	60	20	15					
22	5	3	8	3	55	30	10					
23	3	2	10	4	55	25	20					
24	4	2	3	3	50	20	10					
25	40	4	4	3	100	20	8					
26	80	2	4	3	100	15	9					
27	60	3	4	2	50	10	10					
28	50	5	5	3	40	10	8					
29	40	5	4	60	---	10	100					
30	30	5	4	50	---	10	100					
31	25	---	3	80	---	10	---					
MONTH	45	7	20	8	35	35	60					

GUYANDOTTE RIVER BASIN

03204500 MUD RIVER NEAR MILTON, WV
(National stream-quality accounting network station)

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).

WATER-DISCHARGE RECORDS

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) above mean sea level, 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.--Water-discharge records good except those for period Dec. 10 to Feb. 18, which are poor.

AVERAGE DISCHARGE.--39 years, 282 ft³/s (7.986 m³/s), 14.96 in/yr (380 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.--Maximum discharge, 7,940 ft³/s (225 m³/s) Apr. 5, gage height, 23.18 ft (7.065 m), no other peak above base of 3,700 ft³/s (100 m³/s); minimum, 2.1 ft³/s (0.06 m³/s) July 24, 25, gage height, 0.43 ft (0.131 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	585	729	100	95	50	238	145	247	10	82	9.0	25
2	613	354	108	75	50	200	125	188	7.8	64	9.5	18
3	292	244	113	68	50	175	270	163	7.4	37	7.5	29
4	165	194	103	64	48	1140	879	134	6.8	24	9.5	64
5	106	155	94	60	45	1570	6390	128	5.9	16	8.2	36
6	72	124	89	60	45	762	4910	314	5.9	11	6.1	95
7	62	101	1490	60	45	454	949	310	4.8	8.7	6.2	79
8	176	84	1760	60	45	328	522	693	4.3	7.2	6.6	43
9	1160	72	664	60	45	255	374	344	14	5.9	9.6	29
10	2200	63	360	60	55	215	295	215	32	8.4	14	23
11	690	59	310	60	80	186	247	163	23	7.7	58	19
12	274	56	600	58	150	168	209	128	13	5.7	44	14
13	183	53	2000	56	1000	1810	183	105	10	9.5	74	11
14	133	49	700	56	900	1880	168	88	8.2	9.1	461	9.4
15	101	45	400	62	800	658	153	74	6.7	6.5	386	9.7
16	81	42	310	75	700	427	134	63	5.7	4.9	161	10
17	67	40	240	72	620	318	119	55	4.8	4.1	86	13
18	55	38	190	68	560	461	108	47	4.2	3.5	239	14
19	46	36	160	64	508	734	99	42	3.8	3.0	199	18
20	43	34	140	60	742	435	99	37	3.6	2.7	89	16
21	45	33	150	55	796	357	114	32	3.5	2.5	55	11
22	44	32	110	55	730	331	95	27	3.4	2.8	39	9.5
23	41	29	75	55	1700	393	88	24	3.4	2.3	29	13
24	39	28	78	55	1260	324	98	21	3.3	2.2	121	9.8
25	181	27	82	55	1050	269	104	18	3.4	4.2	450	8.0
26	1140	26	86	55	564	228	89	17	3.7	13	173	6.7
27	464	26	94	55	409	198	79	16	23	9.3	87	6.0
28	244	36	98	55	311	180	73	14	30	9.2	55	6.0
29	171	82	110	55	---	167	470	12	64	9.7	40	5.4
30	142	138	100	50	---	151	437	11	62	11	32	5.2
31	801	---	110	50	---	150	---	10	---	8.5	27	---
TOTAL	10416	3029	11024	1888	13358	15162	18025	3740	381.6	395.6	2991.2	655.7
MEAN	336	101	356	60.9	477	489	601	121	12.7	12.8	96.5	21.9
MAX	2200	729	2000	95	1700	1880	6390	693	64	82	461	95
MIN	39	26	75	50	45	150	73	10	3.3	2.2	6.1	5.2
CFSM	1.31	.40	1.39	.24	1.86	1.91	2.35	.47	.05	.05	.38	.09
IN.	1.51	.44	1.60	.27	1.94	2.20	2.62	.54	.06	.06	.43	.10
CAL YR 1976	TOTAL	89945.9	MEAN 246	MAX 4660	MIN 3.2	CFSM .96	IN 13.07					
WTR YR 1977	TOTAL	81066.1	MEAN 222	MAX 6390	MIN 2.2	CFSM .87	IN 11.78					

03204500 MUD RIVER NEAR MILTON, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to September 1977 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1975 to December 1976, February to September 1977 (discontinued).
 WATER TEMPERATURES: October 1975 to December 1976, February to September 1977 (discontinued).
 SUSPENDED-SEDIMENT DISCHARGE: October 1975 to September 1977 (discontinued).

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 245 micromhos July 21, 22, 1976; minimum daily, 60 micromhos Mar. 22, 1976.
 WATER TEMPERATURES: Maximum daily, 30.0°C July 11, 1976, July 14, 16-21, 1977; minimum daily, 0.0°C on many days during winter periods.
 SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,090 mg/L Apr. 5, 1977; minimum daily mean, 0 mg/L Nov. 7, 8, 1975.
 SEDIMENT LOADS: Maximum daily, 17,600 tons (16,000 tonnes) Apr. 5, 1977; minimum daily mean, 0 ton (0 tonne) Nov. 7, 8, 1975.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 194 micromhos June 18; minimum daily, 76 micromhos Apr. 5.
 WATER TEMPERATURES: Maximum daily, 30.0°C July 14, 16-21; minimum daily, 0.0°C on many days during winter period.
 SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,090 mg/L Apr. 5; minimum daily mean, 1 mg/L Nov. 9, Jan. 23, 24.
 SEDIMENT LOADS: Maximum daily, 17,600 tons (16,000 tonnes) Apr. 5; minimum daily, 0.04 ton (0.04 tonne) July 24.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	FECAL COLIFORM (COL./100 ML)	FECAL STREPTOCOCCI KF AGAR (COL./100 ML)	HARDNESS (CA+MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	
OCT													
21...	1230	45	133	8.2	9.5	13	8.6	110	260	43	8	11	
NOV													
16...	1400	42	125	8.4	7.0	3	10.2	85	5	43	8	12	
JAN													
10...	1200	66	110	7.2	.0	3	11.0	230	90	46	30	12	
FEB													
11...	1000	657	144	--	.5	--	--	--	--	--	--	--	
23...	1100	2150	112	7.1	3.0	43	--	2100	1000	34	18	10	
23...	1515	1830	98	--	5.0	--	--	--	--	--	--	--	
MAR													
14...	1735	1410	99	--	13.0	--	--	--	--	--	--	--	
APR													
04...	1845	7940	113	--	15.0	--	--	--	--	--	--	--	
14...	1100	170	120	7.3	16.0	5	8.6	140	200	40	19	11	
MAY													
03...	1245	160	100	--	17.0	9	8.5	1000	480	36	18	9.5	
23...	1330	24	130	6.9	23.0	1	9.6	75	130	50	16	13	
JUN													
21...	1230	3.6	290	6.8	23.0	1	6.6	120	180	58	13	16	
JUL													
20...	1045	2.7	190	7.0	27.0	1	6.2	580	340	57	4	15	
AUG													
17...	1230	92	130	6.9	24.0	20	8.0	1300	3400	37	12	10	
SEP													
12...	1000	14	210	7.3	19.0	40	9.9	90	310	51	16	14	
DATE		DIS-SOLVED MAGNESIUM (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CAC03 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLORIDE (CL) (MG/L)	DIS-SOLVED FLUORIDE (F) (MG/L)	DIS-SOLVED SILICA (SI02) (MG/L)	DIS-SOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)
OCT													
21...		3.8	4.0	2.5	43	0	35	.4	16	5.4	.1	7.4	84
NOV													
16...		3.2	4.6	1.9	43	0	35	.3	17	5.7	.1	6.8	66
JAN													
10...		3.9	4.7	1.4	20	0	16	2.0	21	7.0	.1	6.4	69
FEB													
11...		--	--	--	--	--	--	--	--	--	--	--	--
23...		2.2	4.0	1.5	19	0	16	2.4	22	7.3	.1	5.5	82
23...		--	--	--	--	--	--	--	--	--	--	--	--
MAR													
14...		--	--	--	--	--	--	--	--	--	--	--	--
APR													
04...		--	--	--	--	--	--	--	--	--	--	--	--
14...		3.0	3.7	1.7	26	0	21	2.1	19	5.4	.1	1.6	67
MAY													
03...		3.1	3.6	2.5	22	--	18	--	20	4.5	.0	6.3	52
23...		4.3	6.1	2.6	42	0	34	8.5	16	7.4	.0	4.6	63
JUN													
21...		4.5	8.7	2.8	56	0	46	14	13	12	.1	2.5	88
JUL													
20...		4.7	10	3.1	64	0	53	10	12	14	.1	4.7	102
AUG													
17...		3.0	4.6	2.7	31	0	25	6.2	18	5.6	.1	7.0	70
SEP													
12...		4.0	6.0	3.4	43	0	35	3.4	15	7.2	.1	6.3	88

GUYANDOTTE RIVER BASIN

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03204500 MUD RIVER NEAR MILTON, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED ZINC (ZN) (UG/L)	TOTAL PHYTO-PLANK-TON (CELLS PER ML)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT CHARGE (T/DAY)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM
OCT 21...	--	840	11	1.0	100
NOV 16...	10	0	8	.91	25
JAN 10...	--	300	16	2.9	33
FEB 11...	--	110	70	124	--
23...	30	1200	590	3430	90
23...	--	--	468	2310	--
MAR 14...	--	--	182	693	--
APR 04...	--	--	988	21200	--
14...	--	--	18	8.3	54
MAY 03...	--	--	17	7.3	61
23...	20	19000	9	.58	59
JUN 21...	--	480	14	.14	67
JUL 20...	--	430	10	.07	58
AUG 17...	10	2300	65	16	90
SEP 12...	--	130	31	1.2	83

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977 ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	106	92	145	102	---	109	123	101	153	154	167	133
2	89	94	138	124	---	---	122	105	151	155	169	133
3	88	97	131	122	---	111	130	110	154	169	152	136
4	94	102	130	---	---	110	113	112	153	174	149	138
5	95	105	124	---	---	94	76	116	167	169	149	141
6	99	103	117	---	---	91	79	133	164	---	151	157
7	106	104	103	---	---	97	96	121	162	---	153	192
8	135	106	86	130	---	100	103	103	163	---	143	142
9	110	107	85	---	---	105	104	103	164	---	139	140
10	83	109	90	---	---	109	109	102	157	151	126	140
11	90	---	90	---	---	109	112	107	166	151	168	141
12	95	112	108	---	109	112	113	111	173	153	137	142
13	100	112	92	---	99	98	116	114	168	153	154	142
14	103	114	85	---	94	91	118	116	176	152	117	137
15	106	116	88	---	96	98	124	123	183	147	127	139
16	---	116	89	---	101	103	122	123	185	145	108	141
17	111	116	91	---	101	106	123	123	192	144	113	142
18	---	118	---	---	108	117	125	125	194	158	135	144
19	---	118	94	---	110	107	125	126	190	179	101	150
20	---	120	97	---	114	107	---	130	184	174	97	157
21	---	123	105	---	111	108	---	130	177	171	100	161
22	122	124	108	---	117	---	---	131	175	166	105	---
23	132	124	111	---	99	113	123	132	173	160	109	---
24	131	122	112	---	100	109	128	138	173	159	111	---
25	132	---	112	---	99	107	135	138	170	154	132	---
26	110	122	109	---	100	109	134	137	166	152	---	---
27	104	121	124	---	104	110	136	140	163	148	104	---
28	104	123	121	---	106	114	134	143	164	147	104	---
29	104	126	114	---	---	115	128	144	163	151	115	---
30	107	161	108	---	---	116	99	149	175	167	115	---
31	118	---	---	---	---	120	---	148	---	162	117	---
MONTH	107	115	107	---	---	107	117	124	170	158	129	---
YEAR	MAX	194	MIN	76	MEAN	126						

GUYANDOTTE RIVER BASIN

03204500 MUD RIVER NEAR MILTON, WV--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.0	8.0	1.0	0.0	---	4.0	15.0	6.0	25.0	24.0	26.0	27.0
2	15.0	7.0	2.0	0.0	---	---	17.0	15.0	25.0	24.0	26.0	27.0
3	17.0	8.0	0.0	---	---	3.0	15.0	19.0	23.0	25.0	26.0	27.0
4	17.0	7.0	2.0	---	---	6.0	15.0	19.0	23.0	25.0	27.0	26.0
5	18.0	6.0	2.0	0.0	---	8.0	11.0	19.0	24.0	27.0	27.0	26.0
6	17.0	6.0	1.0	---	---	7.0	10.0	20.0	23.0	---	28.0	25.0
7	17.0	7.0	3.0	---	---	6.0	20.0	20.0	20.0	---	27.0	27.0
8	14.0	5.0	3.0	0.0	---	7.0	11.0	18.0	16.0	---	25.0	25.0
9	13.0	4.0	3.0	---	---	8.0	11.0	16.0	18.0	---	26.0	25.0
10	14.0	6.0	2.0	---	---	9.0	15.0	15.0	19.0	27.0	25.0	26.0
11	12.0	---	3.0	---	---	11.0	16.0	16.0	18.0	28.0	25.0	21.0
12	15.0	4.0	5.0	---	2.0	12.0	17.0	16.0	22.0	28.0	24.0	---
13	15.0	4.0	5.0	---	0.0	12.0	18.0	18.0	23.0	29.0	23.0	---
14	13.0	4.0	5.0	---	0.0	11.0	18.0	20.0	22.0	30.0	24.0	21.0
15	12.0	4.0	3.0	---	0.0	12.0	19.0	22.0	24.0	29.0	25.0	20.0
16	---	4.0	3.0	---	0.0	11.0	20.0	20.0	25.0	30.0	25.0	22.0
17	12.0	4.0	3.0	---	0.0	10.0	20.0	22.0	25.0	30.0	24.0	23.0
18	---	5.0	---	---	0.0	11.0	20.0	23.0	25.0	30.0	23.0	24.0
19	---	5.0	5.0	---	2.0	10.0	19.0	23.0	26.0	30.0	22.0	23.0
20	---	6.0	4.0	---	0.0	11.0	---	24.0	25.0	30.0	22.0	22.0
21	---	4.0	2.0	---	0.0	10.0	---	25.0	24.0	30.0	24.0	21.0
22	7.0	4.0	0.0	---	2.0	9.0	---	25.0	21.0	28.0	23.0	---
23	7.0	3.0	0.0	---	5.0	8.0	19.0	24.0	22.0	26.0	24.0	---
24	10.0	3.0	0.0	---	6.0	9.0	16.0	23.0	23.0	26.0	24.0	---
25	---	---	0.0	---	6.0	9.0	15.0	23.0	23.0	25.0	21.0	---
26	10.0	5.0	0.0	---	9.0	11.0	14.0	23.0	25.0	26.0	---	---
27	8.0	10.0	0.0	---	7.0	13.0	16.0	25.0	26.0	28.0	25.0	---
28	7.0	4.0	1.0	---	6.0	13.0	15.0	25.0	24.0	26.0	27.0	---
29	7.0	4.0	0.0	---	---	12.0	14.0	25.0	25.0	23.0	26.0	---
30	6.0	0.0	1.0	---	---	17.0	15.0	26.0	24.0	25.0	27.0	---
31	7.0	---	---	---	---	16.0	---	26.0	---	26.0	27.0	---
MONTH	12.0	5.0	2.0	---	---	10.0	16.0	20.5	23.0	27.0	25.0	---
YEAR	MAX	30.0	MIN	0.0	MEAN	15.5						

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

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	214	352	74	146	7	1.9	7	1.8	7	.94	12	7.7
2	170	281	29	28	7	2.0	3	.61	7	.91	11	5.9
3	76	60	16	11	7	2.1	2	.37	8	1.1	16	7.6
4	32	14	10	5.2	8	2.2	2	.35	9	1.2	271	1020
5	27	7.7	5	2.1	6	1.5	2	.32	15	1.8	277	1170
6	17	3.3	5	1.7	11	3.0	3	.49	20	2.4	125	257
7	7	1.2	3	.82	313	1390	4	.65	15	1.8	40	49
8	350	166	4	.91	191	908	4	.65	7	.85	24	21
9	439	1750	1	.19	72	129	4	.65	12	1.4	19	13
10	203	1270	2	.34	29	28	13	2.1	30	4.4	16	9.3
11	59	110	2	.32	23	19	10	1.6	67	14	14	7.0
12	27	20	2	.30	80	130	9	1.4	354	143	15	6.8
13	13	6.4	2	.29	133	718	5	.76	268	724	955	5610
14	10	3.6	2	.26	48	91	4	.60	106	258	310	1570
15	10	2.7	3	.36	30	32	6	1.0	54	117	106	188
16	10	2.2	5	.57	21	18	9	1.8	26	49	63	73
17	14	2.5	3	.32	17	11	7	1.4	17	28	39	33
18	15	2.2	2	.21	15	7.7	7	1.3	13	20	151	241
19	12	1.5	5	.49	13	5.6	5	.86	4	5.5	166	329
20	11	1.3	3	.28	11	4.2	3	.49	54	125	77	90
21	13	1.6	12	1.1	15	6.1	2	.30	52	112	35	34
22	45	5.3	4	.35	13	3.9	2	.30	181	413	28	25
23	8	.89	2	.16	10	2.0	1	.15	623	2940	38	40
24	9	.95	3	.23	10	2.1	1	.15	337	1150	23	20
25	56	65	3	.22	14	3.1	2	.30	262	800	18	13
26	181	581	3	.21	13	3.0	2	.30	95	145	20	12
27	53	66	4	.28	10	2.5	3	.44	36	40	20	11
28	20	13	5	.49	9	2.4	3	.44	18	15	15	7.3
29	12	5.5	15	3.3	11	3.3	7	1.0	---	---	13	5.9
30	87	34	33	12	9	2.4	5	.68	---	---	13	5.3
31	221	364	---	---	7	2.1	6	.81	---	---	14	5.7
TOTAL	---	5214.84	---	218.00	---	3537.1	---	24.07	---	7115.30	---	10887.5

GUYANDOTTE RIVER BASIN

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03204500 MUD RIVER NEAR MILTON, WV--Continued

SUSPENDED-SEDIMENT WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

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)					
	CONCENTRATION	LOADS	CONCENTRATION	LOADS	CONCENTRATION	LOADS	CONCENTRATION	LOADS	CONCENTRATION	LOADS	CONCENTRATION	LOADS	CONCENTRATION	LOADS	CONCENTRATION	LOADS	CONCENTRATION	LOADS	CONCENTRATION	LOADS				
	APRIL				MAY				JUNE				JULY				AUGUST				SEPTEMBER			
1	19	7.4	47	31	10	.27	83	18	10	.24	20	1.4												
2	23	7.8	17	8.6	10	.21	53	9.2	35	.90	15	.73												
3	53	68	16	7.0	7	.14	56	5.6	46	.93	22	1.7												
4	568	2780	17	6.2	7	.13	40	2.6	30	.77	45	7.8												
5	1050	17600	23	7.9	12	.19	25	1.1	7	.15	17	1.7												
6	260	3450	118	100	11	.18	17	.50	10	.16	52	13												
7	190	256	75	63	10	.13	12	.28	14	.23	79	17												
8	63	85	185	346	10	.12	8	.16	28	.50	47	5.5												
9	43	43	63	59	22	.83	7	.11	27	.70	33	2.6												
10	17	14	28	16	37	3.2	23	.52	72	4.1	35	2.2												
11	23	15	23	10	21	1.3	23	.48	75	12	39	2.0												
12	16	9.0	24	8.3	17	.60	17	.26	66	7.8	33	1.2												
13	10	4.9	16	4.5	14	.38	17	.44	83	17	27	.80												
14	14	6.4	10	2.4	15	.33	13	.32	305	366	27	.69												
15	12	5.0	9	1.8	14	.25	14	.25	164	171	23	.60												
16	15	5.4	12	2.0	12	.18	13	.17	97	42	27	.73												
17	12	3.9	13	1.9	12	.16	10	.11	108	25	21	.74												
18	8	2.3	9	1.1	12	.14	9	.09	175	113	23	.87												
19	8	2.1	6	.68	12	.12	7	.06	156	84	25	1.2												
20	10	2.7	5	.50	13	.13	8	.06	88	21	30	1.3												
21	12	3.7	5	.43	14	.13	7	.05	45	6.7	27	.80												
22	7	1.8	6	.44	13	.12	8	.06	29	3.1	10	.26												
23	8	1.9	5	.32	12	.11	8	.05	23	1.8	11	.39												
24	7	1.9	3	.17	11	.10	7	.04	95	82	12	.32												
25	9	2.5	4	.19	10	.09	27	.31	260	316	11	.24												
26	8	1.9	5	.23	10	.10	45	1.4	108	50	11	.20												
27	7	1.5	7	.30	17	1.1	15	.38	56	13	13	.21												
28	11	2.2	7	.26	16	1.3	15	.37	40	5.9	11	.18												
29	142	214	6	.19	62	11	13	.34	32	3.5	10	.15												
30	125	147	5	.15	50	8.4	12	.36	26	2.2	9	.13												
31	---	---	6	.16	---	---	10	.23	22	1.6	---	---												
TOTAL	---	24750.3	---	680.72	---	31.44	---	43.90	---	1353.28	---	66.64												
TOTAL LOAD FOR YEAR:	53923.09 TONS.																							

GUYANDOTTE RIVER BASIN
03204500 MUD RIVER NEAR MILTON, WV--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1976 TO SEPTEMBER 1977

DATE TIME	OCT 21.76 1230		NOV 16.76 1400		JAN 10.77 1200		FEB 11.77 1000		FEB 23.77 1100		MAY 3.77 1245		MAY 23.77 1330		JUN 21.77 1230		JUL 20.77 1045		AUG 17.77 1230		SEP 12.77 1000	
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	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
...NAVICULACEAE																						
...FRUSTULIA	--	-	--	-	--	-	--	-	--	-	--	-	--	-	--	-						
...NAVICULA	*	0	--	-	--	-	18#	16	--	-	19	7	--	-	20	4	28	7	14	1	71	3
...PINNULARIA	--	-	--	-	--	-	--	-	--	-	--	-	--	-	--	-	--	-			0	0
...NITZSCHIA																						
...NITZSCHIAEAE	--	-	--	-	3	1	27#	23	500#	40	95#	34	510	3	--	-	--	-	100	4		
...SURIRELLACEAE																						
...SURIRELLA	--	-	--	-	--	-	10	9	--	-	11	4	--	-	--	-	--	-				
...CHRYSOPHYCEAE																						
...CHRYSOMONADALES																						
...OCHROMONADACEAE																						
...DINOKRYON	--	-	--	-	--	-	--	-	--	-	--	-	--	-	100#	21	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)																						
...CYANOPHYCEAE																						
...CHROCOCCALES																						
...CHROCOCCAEAE																						
...AGMENELLUM	--	-	--	-	--	-	--	-	--	-	--	-	--	-	--	-	170#	38	--	-	--	-
...ANACYSTIS	--	-	--	-	--	-	--	-	--	-	--	-	250	1	78#	16	--	-	1400#	60	22#	17
...HOMOGONALES																						
...OSCILLATORIAEAE																						
...LYNGBYA	--	-	--	-	32	11	--	-	--	-	--	-	--	-	--	-	--	-	--	-	--	-
...OSCILLATORIA	790#	94	--	-	--	-	--	-	--	-	54#	19	--	-	--	-	--	-	510#	22	--	-
...PHORMIDIUM	--	-	--	-	--	-	--	-	--	-	--	-	--	-	--	-	57	13	--	-	--	-
...CHROCOCCALES																						
...CHROCOCCAEAE																						
...GOMPHUSPHAERIA	--	-	--	-	--	-	--	-	--	-	--	-	--	-	--	-	120#	29	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)																						
...CRYPTOPHYCEAE																						
...CRYPTOMONIDALES																						
...CRYPTOMONADACEAE																						
...CRYPTOMONAS	--	-	--	-	--	-	--	-	--	-	3	1	--	-	--	-	--	-	--	-	--	-
...EUGLENOPHYCEAE																						
...EUGLENALES																						
...EUGLENACEAE																						
...EUGLENA	--	-	--	-	--	-	--	-	--	-	--	-	--	-	--	-	--	-	--	-	--	-
...PHACUS	--	-	--	-	--	-	--	-	--	-	--	-	--	-	--	-	--	-	--	-	22#	17
...THACHELUMUNAS	44	5	--	-	--	-	--	-	--	-	5	2	--	-	34	7	24	5	29	1	14	11

- Dominant organism; equal to or greater than 15%.
* - Observed organism, may not have been counted; less than 1/2%.

GUYANDOTTE RIVER BASIN

03205180 MUD RIVER AT BARBOURSVILLE, WV

LOCATION.--Lat 38°24'58", long 82°17'42", Cabell County, Hydrologic Unit 05070102, at bridge on Old Guyan River Road at Barboursville, and 200 ft (61 m) upstream from mouth.

DRAINAGE AREA.--360 mi² (932 km²).

PERIOD OF RECORD.--Water years 1975 to April 1977 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1975 to April 1977 (discontinued).

WATER TEMPERATURES: June to April 1977 (discontinued).

TURBIDITY: October 1975 to April 1977 (discontinued).

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 480 micromhos July 12, 1976; minimum, 67 micromhos Mar. 22, 1976.

WATER TEMPERATURES: Maximum daily, 28.0°C July 12, 1976; minimum daily, 0.0°C on many days during winter periods.

TURBIDITY: Maximum daily, 350 JTU July 16, 1976; minimum daily, 1 JTU Jan. 6, 1977.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily during period October to April, 330 micromhos Jan. 17; minimum daily, 87 micromhos Apr. 6.

WATER TEMPERATURES: Maximum daily during period October to April, 20.0°C Apr. 21; minimum daily, 0.0°C on many days during winter period.

TURBIDITY: Maximum daily during period October to April, 250 JTU Apr. 6; minimum daily, 1 JTU Jan. 6.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C); WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	170	120	160	170	216	133	147					
2	110	110	170	137	201	140	148					
3	120	110	170	184	214	169	168					
4	100	110	180	154	214	173	170					
5	110	120	160	232	215	112	124					
6	110	120	140	135	213	110	87					
7	250	120	140	189	213	113	90					
8	150	130	100	274	213	123	109					
9	110	130	100	186	214	127	129					
10	100	140	100	186	135	123	128					
11	90	140	120	190	122	139	132					
12	100	140	130	194	120	142	132					
13	110	150	130	184	131	93	135					
14	120	150	120	181	122	95	141					
15	120	150	110	220	126	113	143					
16	130	150	110	285	131	116	146					
17	130	150	110	330	150	122	150					
18	130	150	110	302	134	134	160					
19	---	150	120	164	132	132	152					
20	160	160	130	170	128	127	156					
21	150	150	130	165	127	131	156					
22	150	160	150	165	127	140	156					
23	150	160	140	165	131	139	169					
24	170	160	150	169	126	135	162					
25	190	160	150	164	119	149	167					
26	140	160	150	165	126	132	166					
27	120	160	160	170	121	131	168					
28	120	190	150	193	129	136	168					
29	120	190	140	184	---	139	170					
30	150	160	150	214	---	141	147					
31	150	---	210	202	---	140	---					
MONTH	142	145	138	194	155	131	146					

GUYANDOTTE RIVER BASIN

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03205180 MUD RIVER AT BARBOURSVILLE, WV--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.5	8.5	4.0	0.0	0.0	4.5	14.0					
2	18.0	8.0	2.5	0.0	0.0	4.0	16.0					
3	18.0	8.5	1.0	0.0	0.0	5.5	14.5					
4	15.0	7.5	2.0	0.0	0.0	6.0	13.5					
5	17.0	7.0	1.0	0.0	0.0	7.0	11.5					
6	16.5	6.5	2.0	0.0	0.0	7.5	10.0					
7	15.0	6.5	3.0	0.0	0.0	7.0	9.0					
8	15.0	5.0	3.5	0.0	0.0	7.5	10.0					
9	13.0	5.5	3.0	0.0	0.0	7.5	10.5					
10	13.0	6.5	2.5	0.0	0.0	8.0	10.5					
11	12.5	6.0	2.5	0.0	0.0	9.5	13.5					
12	12.5	5.5	4.0	0.0	0.0	9.5	15.0					
13	13.5	4.5	4.5	0.0	0.0	10.0	16.0					
14	14.0	5.0	4.0	0.0	0.0	10.5	17.0					
15	13.5	4.5	4.5	0.0	0.0	10.0	17.5					
16	13.0	4.5	3.0	0.0	0.0	10.5	18.5					
17	12.0	4.0	3.5	0.0	0.0	10.5	17.0					
18	11.0	5.0	3.0	0.0	0.5	11.5	19.0					
19	12.0	6.0	4.0	0.0	0.0	10.5	18.5					
20	10.0	5.0	4.0	0.0	0.0	10.0	19.0					
21	10.0	4.5	1.5	0.0	0.5	10.0	20.0					
22	9.0	3.5	1.0	0.0	1.0	8.5	19.5					
23	7.5	3.5	1.0	0.0	1.5	8.0	19.0					
24	9.0	3.0	0.0	0.0	4.5	8.0	18.0					
25	10.5	3.0	0.0	0.0	6.0	8.0	16.0					
26	10.0	5.0	0.0	0.0	7.0	8.5	15.0					
27	7.5	7.5	0.0	0.0	7.0	9.0	15.0					
28	8.0	4.5	0.5	0.0	6.5	4.0	15.0					
29	8.0	3.0	0.0	0.0	---	13.0	15.0					
30	7.0	1.5	0.0	0.0	---	15.0	15.0					
31	7.5	---	0.0	0.0	---	14.5	---					
MONTH	12.0	5.5	2.0	0.0	1.0	9.0	15.5					

TURBIDITY (JTU), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	70	4	7	35	7	10					
2	100	30	4	7	35	10	10					
3	60	20	9	7	35	150	85					
4	40	10	7	3	40	150	85					
5	15	8	8	5	35	90	200					
6	20	5	80	1	35	90	250					
7	10	3	80	2	30	35	100					
8	25	4	80	10	30	15	70					
9	150	4	50	10	35	15	35					
10	100	3	25	15	150	15	20					
11	70	3	15	10	100	10	15					
12	30	3	50	15	100	10	20					
13	20	4	45	15	150	200	20					
14	20	3	20	10	150	200	20					
15	20	4	20	10	150	40	20					
16	15	4	7	10	70	35	20					
17	10	3	8	15	85	30	15					
18	7	4	10	15	15	30	15					
19	7	3	7	20	95	90	15					
20	20	4	9	40	100	35	15					
21	6	9	7	20	100	30	10					
22	9	3	10	25	100	25	9					
23	3	3	7	25	100	15	100					
24	7	4	8	45	100	15	45					
25	70	3	4	25	100	15	10					
26	90	3	5	30	55	10	8					
27	60	5	5	50	25	9	7					
28	35	4	8	15	15	10	9					
29	15	4	8	10	---	10	10					
30	40	4	9	6	---	10	90					
31	40	---	15	10	---	10	---					
MONTH	35	7	20	15	75	45	45					

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) above mean sea level, 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) above mean sea level, 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, 391,000 ft³/s (11,100 m³/s) Apr. 6, gage height, 49.64 ft (15.130 m); minimum, not determined; minimum gage height, 24.59 ft (7.495 m) May 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51000	131000	44800		---	221000	115000	83100		36300	33100	---
2	74200	139000	36300		---	203000	107000	69000		34700	35100	---
3	55000	116000	38300		---	189000	156000	64400		29200	25300	---
4	39600	102000	31100		---	169000	250000	60400		20100	25400	---
5	29200	82900	25700		---	208000	334000	78200		23900	29000	---
6	29200	68600	22700		---	220000	381000	88700		28300	22600	---
7	28300	60600	87900		---	209000	345000	121000		27200	34300	---
8	39800	48900	161000		---	186000	262000	157000		41000	57000	---
9	131000	50000	169000		---	161000	275000	138000		39500	57500	---
10	260000	48000	116000		---	141000	263000	103000		33300	57700	---
11	280000	41300	96800		---	131000	211000	82200		29300	59200	---
12	243000	38400	80100		48900	121000	187000	56400		30300	53900	---
13	163000	30500	86100		88300	168000	164000	57300		31100	52700	---
14	128000	34800	89300		125000	239000	128000	47600		48000	78200	---
15	93000	30800	88400		128000	261000	99900	36200		59300	114000	---
16	75800	25900	67700		114000	247000	90900	28600		47500	107000	---
17	76100	25300	64000		90100	190000	74100	29300		37100	80400	---
18	60400	28600	56400		80100	168000	52000	28200		28900	89000	---
19	46000	31400	51300		70300	203000	51000	29500		28600	90300	48300
20	37600	26000	47400		64700	229000	46600	29700		32900	60700	55600
21	44300	23200	46400		58300	204000	45700	28100		64800	42900	64000
22	41400	25800	56700		54600	171000	45100	20200		75500	39900	70800
23	51500	24700	48400		80300	164000	39500	24800		67300	30200	61200
24	48200	31800	---		135000	180000	47300	22100		68400	38400	48500
25	52700	17500	39800		222000	182000	62500	20200		62500	54200	47300
26	96400	22400	36100		275000	165000	71400	30500		79100	49000	64500
27	142000	28800	31400		288000	145000	74000	---		59600	38500	62400
28	143000	20900	38200		265000	127000	64400	---		57300	29400	65100
29	111000	32500	42900		---	120000	73600	---		42000	27800	67300
30	93900	42400	42700		---	129000	87600	---		32800	28100	52800
31	110000	---	27000		---	118000	---	---		27300	25600	---
TOTAL	2874600	1430000	---		---	5569000	4204000	---		1323100	1566400	---
MEAN	92730	47670	---		---	179600	140100	---		42680	50530	---
MAX	280000	139000	---		---	261000	381000	---		79100	114000	---
MIN	28300	17500	---		---	118000	39900	---		20100	22600	---

TWELVEPOLE CREEK BASIN

243

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 Devilstrace 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) above mean sea level. Prior to Dec. 22, 1964, nonrecording gage at same site and datum.

REMARKS.--Water-discharge records good except those for period Dec. 21 to Feb. 25, which are poor. Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--13 years, 51.8 ft³/s (1.467 m³/s), 18.41 in/yr (468 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)	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)
Oct. 9	1330	936	26.5	9.52	2.902	Aug. 14	1830	1800	51.0	11.70	3.566
Apr. 5	0430	*2400	68.0	12.82	3.911						

Minimum discharge, 0.48 ft³/s (0.014 m³/s) July 21, gage height, 4.95 ft (1.509 m).

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	181	90	12	27	11	55	21	55	3.2	7.5	19	10
2	90	65	15	24	9.0	45	21	43	2.0	6.0	13	8.7
3	43	51	12	22	8.0	40	28	31	1.2	4.0	7.2	8.1
4	26	39	10	35	8.5	174	356	26	.96	2.8	4.9	7.5
5	17	30	9.0	45	10	245	1300	36	.88	2.2	3.8	7.5
6	13	23	15	43	9.0	166	287	68	2.0	2.0	3.2	11
7	17	21	213	39	8.5	122	148	226	3.8	1.4	2.8	7.2
8	21	18	187	30	8.0	86	99	144	2.6	1.2	2.6	6.3
9	546	15	104	20	7.0	62	69	79	5.7	1.1	2.6	5.7
10	217	16	75	28	18	45	55	50	4.9	16	15	5.7
11	82	13	66	24	35	37	44	36	2.6	10	26	4.9
12	45	13	112	20	55	41	36	26	1.8	5.2	15	4.3
13	30	11	132	17	130	480	31	20	1.1	3.2	257	3.8
14	23	9.5	103	20	100	240	28	16	1.8	2.4	1140	4.0
15	18	9.5	79	30	80	134	24	13	2.6	1.8	277	4.3
16	14	8.7	61	34	65	89	21	9.5	1.8	1.1	76	5.2
17	11	8.1	46	28	50	63	18	8.1	1.0	.96	69	7.2
18	9.5	8.1	35	24	40	84	16	7.2	.88	.88	86	5.4
19	8.7	8.1	29	20	32	84	15	6.3	4.0	.72	52	7.2
20	9.5	8.1	33	17	37	76	13	5.7	4.9	.64	36	9.5
21	12	7.8	28	14	32	62	12	5.2	5.2	.80	26	6.0
22	9.0	7.8	24	12	45	94	10	4.9	4.3	19	20	4.6
23	8.1	7.2	20	11	65	89	13	4.9	3.2	4.9	16	3.8
24	8.7	6.6	17	14	100	77	16	4.3	3.2	6.3	84	3.2
25	19	6.6	15	17	150	63	12	4.0	6.3	13	68	3.0
26	108	6.6	33	15	120	52	11	3.5	4.9	8.4	43	3.0
27	65	7.8	29	14	95	43	9.4	3.0	3.8	4.3	30	4.0
28	44	11	37	13	67	38	46	2.6	15	3.0	22	4.9
29	33	15	38	13	---	33	214	2.2	18	18	18	4.6
30	33	12	34	12	---	28	90	2.0	7.5	33	14	3.8
31	115	---	30	11	---	25	---	2.6	---	10	12	---
TOTAL	1876.5	553.5	1653.0	693	1395.0	2972	3063.4	945.0	121.12	191.80	2461.1	174.4
MEAN	60.5	18.5	53.3	22.4	49.8	95.9	102	30.5	4.04	6.19	79.4	5.81
MAX	546	90	213	45	150	480	1300	226	18	33	1140	11
MIN	8.1	6.6	9.0	11	7.0	25	9.4	2.0	.88	.64	2.6	3.0
CFSM	1.58	.48	1.40	.59	1.30	2.51	2.67	.80	.11	.16	2.08	.15
IN.	1.83	.54	1.61	.67	1.36	2.89	2.98	.92	.12	.19	2.40	.17

CAL YR 1976 TOTAL 15664.40 MEAN 42.8 MAX 942 MIN .38 CFSM 1.12 IN 15.25
WTR YR 1977 TOTAL 16099.82 MEAN 44.1 MAX 1300 MIN .64 CFSM 1.15 IN 15.68

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 at mean sea level (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, 30,020 acre-ft (37.0 hm³) Apr. 8, elevation, 672.82 ft (205.076 m); minimum, 11,720 acre ft (14.5 hm³) Jan. 13, elevation, 656.01 ft (199.952 m).

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

Date	Elevation (feet)	Contents (acre-feet)	Change in Contents (acre-feet)	Change in Contents (equivalent in cfs)
Sept. 30.....	662.97	18180	-	-
Oct. 31.....	662.72	17920	-260	-4
Nov. 30.....	656.46	12090	-5830	-98
Dec. 31.....	656.59	12200	+110	+2
CAL YR 1976	-	-	-1650	-2
Jan. 31.....	656.32	11980	-220	-4
Feb. 28.....	656.15	11830	-150	-3
Mar. 31.....	658.35	13730	+1900	+31
Apr. 30.....	663.62	18860	+5130	+86
May 31.....	662.70	17900	-960	-16
June 30.....	663.20	18420	+520	+9
July 31.....	663.65	18890	+470	+8
Aug. 31.....	663.55	18790	-100	-2
Sept. 30.....	662.15	17340	-1450	-24
WTR YR 1977	-	-	-840	-1

TWELVEPOLE CREEK BASIN

245

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) above mean sea level (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.--15 years, 165 ft³/s (4.673 m³/s), 16.24 in/yr (412 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, 2,420 ft³/s (68.5 m³/s) Apr. 9, gage height, 22.20 ft (6.767 m); minimum, 5.6 ft³/s (0.16 m³/s) May 26, gage height, 11.20 ft (3.414 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	190	437	71	116	57	145	19	641	7.7	13	21	9.3
2	232	430	51	114	57	107	19	504	7.5	9.2	21	8.4
3	166	254	50	114	38	108	25	319	7.5	8.2	21	8.6
4	130	255	51	114	29	409	344	168	7.5	7.7	20	8.7
5	116	214	48	116	30	664	216	135	7.5	7.3	20	8.7
6	106	170	69	116	30	689	34	252	8.0	7.1	12	9.3
7	102	166	650	116	29	516	24	310	8.2	6.9	8.5	8.9
8	99	127	751	116	29	430	263	305	8.2	6.9	8.8	8.8
9	866	104	547	116	29	285	1590	353	9.2	7.3	13	8.9
10	1230	103	463	116	34	141	2340	281	8.5	8.5	17	8.9
11	240	99	300	114	70	106	1980	158	8.2	8.7	11	8.9
12	79	102	242	114	176	109	950	69	8.2	7.3	18	8.8
13	73	103	406	78	295	575	467	64	8.0	7.3	99	23
14	130	104	468	60	236	817	258	74	8.0	11	902	31
15	132	105	298	66	338	797	99	73	8.0	13	1010	38
16	67	102	228	64	617	482	75	47	8.0	12	253	41
17	42	105	226	99	679	218	46	33	8.0	12	106	73
18	28	105	140	158	374	175	46	22	8.2	12	101	62
19	22	102	86	178	217	174	45	18	8.2	12	102	50
20	22	98	60	178	221	272	45	14	8.2	12	67	43
21	22	92	59	129	218	331	44	11	9.0	12	29	40
22	22	137	59	108	230	332	44	12	8.7	20	19	38
23	22	160	97	106	385	330	45	12	8.5	11	13	35
24	22	160	113	106	464	205	45	12	8.5	11	33	34
25	33	158	76	106	610	119	45	12	13	12	88	33
26	62	156	60	73	678	105	44	7.7	8.7	11	97	32
27	104	109	99	67	518	74	44	9.2	8.2	10	90	22
28	111	85	117	58	290	25	79	11	12	10	63	18
29	120	130	117	58	---	18	494	8.2	10	12	27	18
30	126	134	117	57	---	19	746	7.3	8.2	19	17	13
31	331	---	116	57	---	20	---	7.5	---	22	12	---
TOTAL	5067	4610	6235	3188	6978	8797	10515	3949.9	255.6	339.4	3319.3	750.2
MEAN	164	154	201	103	249	284	351	127	8.52	10.9	107	25.0
MAX	1230	437	751	178	679	817	2340	641	13	22	1010	73
MIN	22	85	48	57	29	18	19	7.3	7.5	6.9	8.5	8.4
CAL YR 1976 TOTAL	53235.5			MEAN 145	MAX 1500	MIN 4.3	MEAN† 143	CFSM† 1.04	IN† 14.16			
WTR YR 1977 TOTAL	54024.4			MEAN 148	MAX 2340	MIN 6.9	MEAN† 147	CFSM† 1.07	IN† 14.52			

† 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) above mean sea level. 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, nonrecording 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.--35 years (water years 1916-17, 1929-31, 1947-54, 1956-77), 337 ft³/s (9.544 m³/s), 15.25 in/yr (387 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, 4,860 ft³/s (138 m³/s) Apr. 5, gage height, 18.71 ft (5.703 m); minimum, 14 ft³/s (0.40 m³/s) July 21; minimum gage height, 3.63 ft (1.106 m) June 7, 8.

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	373	662	155	200	95	360	168	934	21	109	82	63
2	402	593	106	180	93	269	158	865	20	79	51	51
3	331	464	94	191	86	249	248	585	18	45	56	48
4	215	327	84	195	67	1180	1190	360	17	34	46	44
5	175	337	80	198	84	1380	3750	497	17	27	38	218
6	149	243	110	213	86	1160	2600	540	18	23	34	124
7	145	229	1610	219	72	916	760	799	15	19	23	53
8	164	206	1430	203	68	670	497	686	15	18	25	44
9	1090	165	1030	212	63	550	1310	570	36	26	25	39
10	1960	154	720	220	107	367	2420	490	33	21	94	35
11	747	150	575	200	318	286	2240	337	25	44	64	31
12	251	143	534	160	493	282	1380	234	25	28	52	29
13	193	142	685	130	946	1410	615	172	21	23	375	27
14	181	137	760	128	676	1590	502	178	19	20	1230	56
15	213	139	612	232	628	1240	276	164	17	21	2470	63
16	195	133	418	259	805	916	236	142	17	18	1370	85
17	87	129	375	270	862	520	180	103	16	17	415	106
18	74	132	309	300	651	500	162	91	17	16	382	124
19	51	126	221	350	379	502	152	69	17	15	397	150
20	51	122	175	350	449	505	144	61	17	15	288	192
21	55	114	175	262	411	567	136	48	24	14	180	94
22	50	131	145	143	493	562	129	43	31	162	141	87
23	47	181	164	125	804	562	133	50	29	63	106	75
24	47	179	189	116	999	480	147	47	25	50	188	67
25	222	177	176	126	1070	345	138	39	40	57	297	63
26	454	175	162	166	1060	300	127	36	73	63	282	63
27	261	161	176	126	880	276	120	30	36	45	232	60
28	253	131	226	120	580	214	174	30	73	32	200	41
29	219	187	224	110	---	182	1130	29	63	32	121	37
30	229	206	192	110	---	166	1060	26	66	59	102	36
31	525	---	216	101	---	222	---	24	---	102	73	---
TOTAL	9389	6375	12128	5915	13325	18728	22282	8281	861	1297	9439	2205
MEAN	303	213	391	191	476	604	743	267	28.7	41.8	304	73.5
MAX	1960	662	1610	350	1070	1590	3750	934	73	162	2470	218
MIN	47	114	80	101	63	166	120	24	15	14	23	27

CAL YR 1976 TOTAL 106969 MEAN 292 MAX 2950 MIN 12 MEAN† 290 CFSM† 0.97 IN† 13.20
WTR YR 1977 TOTAL 110225 MEAN 302 MAX 3750 MIN 14 MEAN† 301 CFSM† 1.00 IN† 13.57

† Adjusted for change in contents in East Lynn Lake.

TWELVEPOLE CREEK BASIN

247

03207057 BEECH FORK BELOW BEECH FORK DAM, WV

LOCATION.--Lat 38°18'18", long 82°25'28", (corrected) 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.

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), corrected, above mean sea level (levels by Corps of Engineers).

REMARKS.--Records good except those for January and February, which are poor. High flows affected by Beech Fork Lake.

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, 1,840 ft³/s (52.1 m³/s) Apr. 5, gage height, 10.29 ft (3.136 m); minimum, 0.02 ft³/s (0.001 m³/s) July 20, gage height, 0.15 ft (0.046 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	114	15	15	4.2	54	28	58	1.9	27	5.1	3.0
2	43	51	15	14	3.8	43	29	55	1.7	28	7.2	2.7
3	18	33	14	14	3.6	38	178	43	1.5	9.5	5.3	2.8
4	10	24	16	14	3.2	575	460	32	1.4	5.1	2.7	2.8
5	7.1	19	12	15	4.5	656	1700	82	1.4	3.0	1.4	119
6	4.8	14	12	15	5.0	370	1150	218	1.9	2.2	.98	35
7	5.3	12	310	17	4.5	105	285	128	1.4	2.4	1.4	17
8	17	7.6	537	18	4.0	72	122	108	1.3	1.7	2.2	10
9	318	8.0	438	16	3.5	56	88	53	10	1.5	4.9	7.0
10	254	5.3	121	17	15	46	71	34	12	1.0	7.7	5.0
11	50	5.4	53	15	4.32	39	58	24	7.5	6.7	19	4.0
12	23	5.5	122	11	705	40	49	19	4.2	4.6	14	3.3
13	16	6.8	182	8.8	929	797	42	15	2.7	1.5	100	2.8
14	12	5.6	89	5.4	563	345	38	12	1.9	1.0	364	2.4
15	8.8	2.4	58	50	224	121	35	11	2.4	.62	130	3.0
16	7.1	2.8	46	117	130	93	30	9.3	1.8	.92	35	4.0
17	5.0	2.8	35	66	81	65	26	7.7	1.3	.80	79	5.5
18	5.3	1.5	26	45	54	190	24	6.4	1.1	.10	134	8.0
19	4.0	2.4	20	33	45	216	22	6.2	1.2	.09	38	11
20	3.8	4.6	20	25	118	124	20	5.1	1.1	.18	17	16
21	4.8	4.6	25	25	96	98	18	4.2	1.3	.68	11	6.0
22	8.8	1.1	19	21	126	106	16	3.6	1.0	3.0	8.0	4.5
23	7.9	.24	16	17	383	105	17	4.0	1.0	1.8	5.7	3.8
24	7.7	1.6	14	14	315	81	36	5.9	1.1	.92	29	3.4
25	38	.31	12	11	222	63	25	4.2	2.2	21	41	3.2
26	361	.34	20	10	122	53	18	3.2	5.5	24	17	3.1
27	96	.40	37	8.5	95	45	16	2.7	5.9	9.5	10	2.9
28	39	.67	37	7.5	70	41	38	2.4	8.5	4.0	6.9	2.5
29	12	34	27	6.2	---	37	340	2.1	26	3.6	5.3	2.2
30	33	19	22	3.5	---	33	107	2.4	11	6.2	4.0	1.8
31	203	---	18	4.7	---	30	---	2.0	---	4.4	3.5	---
TOTAL	1671.0	389.96	2388	669.6	4761.3	4737	5086	963.4	123.2	177.01	1110.28	297.7
MEAN	53.9	13.0	77.0	21.6	170	153	170	31.1	4.11	5.71	35.8	9.92
MAX	361	114	537	117	929	797	1700	218	26	28	364	119
MIN	3.8	.24	12	4.7	3.2	30	16	2.0	1.0	.09	.98	1.8
WTR YR 1977	TOTAL	22374.45	MEAN	61.3	MAX	1700	MIN	.09	CFSM	0.76	IN	10.35

BIG SANDY RIVER BASIN

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.-- 502 mi² (1,300 km²).

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) above mean sea level. 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 periods Dec. 22 to Feb. 12 and Apr. 4 to May 18, which are poor. National Weather Service gage-height telemeter at station.

AVERAGE DISCHARGE.--47 years, 546 ft³/s (15.46 m³/s), 14.77 in/yr (375 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.--Maximum discharge, 54,500 ft³/s (1,540 m³/s) Apr. 4, gage height, 27.37 ft (8.342 m), no other peak above base of 6,000 ft³/s (170 m³/s); minimum, 96 ft³/s (2.72 m³/s) Sept. 30, gage height, 0.89 ft (0.271 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	285	422	242	250	220	1010	464	820	210	345	154	137
2	511	392	260	230	210	843	434	900	196	280	135	142
3	415	374	242	220	220	717	780	970	178	230	145	125
4	335	350	226	210	230	674	22000	850	175	196	166	118
5	285	310	210	200	230	650	20000	750	169	182	137	145
6	257	270	203	200	210	596	8000	1200	290	178	130	130
7	233	246	798	210	190	561	4000	900	512	175	151	120
8	1180	234	1600	220	180	526	2200	780	242	163	145	130
9	4370	222	980	220	180	491	1400	630	260	160	148	142
10	2280	234	690	220	190	464	1100	540	265	157	154	140
11	1130	222	618	220	240	440	900	480	206	206	335	122
12	753	226	726	210	350	428	760	440	189	192	410	113
13	554	210	1180	190	674	771	680	400	178	169	1300	111
14	452	192	1100	200	634	960	600	370	398	163	1150	118
15	398	182	880	400	674	798	550	350	404	142	674	157
16	368	192	735	300	610	699	520	330	255	137	410	130
17	335	192	603	270	512	603	480	320	214	132	416	135
18	310	210	519	240	458	634	450	310	270	125	843	145
19	242	210	446	230	430	825	480	300	242	120	477	140
20	169	210	440	210	400	1000	520	280	218	120	275	218
21	178	203	470	200	370	1140	500	270	189	122	203	142
22	157	206	300	200	450	1120	460	255	203	169	182	120
23	145	196	280	190	603	1010	430	250	825	169	175	111
24	151	182	280	190	1720	900	490	238	717	137	214	107
25	242	189	290	200	2500	807	450	238	807	246	285	105
26	1740	189	300	200	1690	717	420	250	626	320	199	125
27	1060	196	320	200	1390	650	400	226	452	206	163	154
28	1180	189	340	210	1200	610	500	214	416	154	160	125
29	470	218	340	210	---	582	800	206	519	160	151	113
30	392	260	250	220	---	554	1200	196	422	230	137	100
31	446	---	270	230	---	540	---	226	---	196	142	---
TOTAL	21023	7128	16138	6900	16965	22320	71968	14489	10247	5681	9766	3920
MEAN	678	238	521	223	606	720	2399	467	342	183	315	131
MAX	4370	422	1600	400	2500	1140	22000	1200	825	345	1300	218
MIN	145	182	203	190	180	428	400	196	169	120	130	100
CFSM	1.35	.47	1.04	.44	1.21	1.43	4.78	.93	.68	.37	.63	.26
IN.	1.56	.53	1.20	.51	1.26	1.65	5.33	1.07	.76	.42	.72	.29
CAL YR 1976	TOTAL	167494	MEAN 458	MAX 4370	MIN 45	CFSM .91	IN 12.41					
WTR YR 1977	TOTAL	206545	MEAN 566	MAX 22000	MIN 100	CFSM 1.13	IN 15.31					

BIG SANDY RIVER BASIN

249

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.--30.8 mi² (79.8 km²).

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 good except those for period Dec. 23 to Feb. 23 and Apr. 4 to May 20, which are poor.

AVERAGE DISCHARGE.--31 years, 36.2 ft³/s (1.025 m³/s), 15.96 in/yr (405 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)	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)
Oct. 9	0915	1060	30.0	6.64	2.024	Apr. 4	b1700	*6600	187	a12.10	3.688

a From floodmarks.
b About.

Minimum discharge, 2.6 ft³/s (0.74 m³/s) July 20, gage height, 1.85 ft (0.564 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	141	33	14	15	14	43	22	60	7.3	26	8.2	15
2	57	31	14	14	14	37	22	50	4.9	17	7.9	10
3	21	29	14	14	14	33	91	48	4.0	12	5.1	7.9
4	11	25	13	13	15	29	2300	47	3.5	9.9	4.7	6.8
5	8.4	21	12	13	16	27	650	49	3.2	7.9	4.2	5.9
6	7.4	18	12	13	13	24	200	60	44	7.3	5.6	5.9
7	16	16	95	13	11	23	108	50	23	6.5	6.8	5.9
8	327	14	135	13	11	21	81	40	11	5.6	6.8	5.9
9	658	13	71	13	11	20	66	34	18	5.6	10	4.9
10	181	13	50	14	13	19	60	28	13	4.7	33	4.5
11	74	13	45	13	19	18	54	23	8.5	6.2	54	4.0
12	44	13	63	13	22	18	47	19	7.9	4.7	98	4.0
13	29	12	103	13	40	80	42	16	5.9	4.7	312	3.8
14	23	11	83	13	45	82	37	14	78	3.8	137	6.2
15	18	11	60	25	40	60	34	12	46	3.8	69	7.6
16	15	12	48	20	37	47	31	10	28	3.3	38	6.8
17	14	11	37	15	33	36	28	8.2	18	3.0	48	6.2
18	12	11	28	14	30	47	26	7.1	13	3.3	38	4.7
19	11	11	24	13	28	56	24	5.8	10	2.9	22	47
20	.1	11	25	12	32	111	26	4.8	9.2	3.0	15	25
21	11	11	22	12	30	117	24	4.0	8.5	3.3	12	12
22	10	11	20	11	29	96	22	3.5	23	11	10	7.9
23	9.3	9.3	17	11	40	73	20	4.0	63	4.7	25	6.2
24	11	8.8	14	11	132	61	23	3.8	48	4.0	33	5.4
25	20	9.0	14	11	132	49	22	4.5	55	24	23	5.4
26	111	9.0	15	11	86	38	20	5.4	43	12	16	11
27	66	9.8	15	11	68	31	19	4.7	30	7.1	11	7.3
28	36	10	16	11	50	28	30	3.8	33	4.5	11	5.9
29	28	12	17	13	---	27	77	3.5	53	7.6	8.5	5.1
30	24	12	16	16	---	26	50	3.5	34	23	39	12
31	32	---	18	15	---	24	---	17	---	10	25	---
TOTAL	2037.1	430.9	1130	419	1025	1401	4256	643.6	746.9	252.4	1136.8	266.2
MEAN	65.7	14.4	36.5	13.5	36.6	45.2	142	20.8	24.9	8.14	36.7	8.87
MAX	658	33	135	25	132	117	2300	60	78	26	312	47
MIN	7.4	8.8	12	11	11	18	19	3.5	3.2	2.9	4.2	3.8
CFSM	2.13	.47	1.19	.44	1.19	1.47	4.61	.68	.81	.26	1.19	.29
IN.	2.46	.52	1.36	.51	1.24	1.69	5.14	.78	.90	.30	1.37	.32

CAL YR 1976	TOTAL	9514.82	MEAN	26.0	MAX	658	MIN	.87	CFSM	.84	IN	11.49
WTR YR 1977	TOTAL	13744.90	MEAN	37.7	MAX	2300	MIN	2.9	CFSM	1.22	IN	16.60

BIG SANDY RIVER BASIN

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.--932 mi² (2,414 km²).

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) above mean sea level, Ohio River datum (levels by Corps of Engineers). Prior to Jan. 21, 1969, at datum 0.92 ft (0.280 m) lower.

REMARKS.--Records good except for periods Dec. 22 to Feb. 13 and Apr. 4-13 which are poor. Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--10 years, 1,172 ft³/s (33.19 m³/s), 17.08 in/yr (434 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)	
Oct. 9	1930	12400	351	21.11	6.434	Aug. 13	2400	12700	360	21.45	6.538
Apr. 5	1300	*94000	2660	52.56	16.020						

a From floodmarks.

b About.

Minimum discharge, 152 ft³/s (4.30 m³/s) Sept. 14, gage height, 2.68 ft (0.817 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1530	1310	348	500	440	1640	830	1560	356	870	560	285
2	1770	1080	348	480	420	1390	815	1630	313	700	488	253
3	950	905	396	470	410	1220	915	1730	275	456	380	231
4	545	815	368	460	430	1170	10000	1370	248	368	300	219
5	356	705	356	450	450	1140	74000	1390	240	308	316	199
6	270	590	328	440	400	1060	11000	2010	305	283	319	201
7	235	500	816	440	370	1000	6000	1970	860	268	364	219
8	2420	452	2860	440	350	945	4000	1560	640	273	488	221
9	8310	412	2290	440	350	885	3000	1310	468	260	1090	189
10	6640	384	1590	450	400	830	2500	1120	540	275	680	191
11	2390	384	1300	440	500	790	2200	955	416	290	1270	189
12	1420	356	1350	410	700	760	1900	810	322	270	1360	177
13	1010	380	2140	390	1000	1780	1700	740	283	290	4880	160
14	775	334	2330	380	2060	2260	1560	680	263	243	7140	160
15	610	303	1860	900	2140	1780	1460	680	615	221	2540	219
16	488	298	1550	600	1690	1470	1360	585	555	209	1470	290
17	408	298	1250	530	1330	1240	1260	540	392	197	1080	530
18	368	303	1050	470	1100	1190	1180	492	348	195	1970	305
19	337	316	900	450	1010	1490	1110	480	376	179	1470	268
20	305	325	805	420	950	1630	1060	464	380	160	895	1120
21	295	319	875	400	820	2000	1120	428	310	158	600	860
22	298	313	720	390	800	1930	985	400	285	480	472	472
23	273	310	630	380	1200	1800	965	388	464	360	400	340
24	253	300	610	380	2040	1580	1120	380	1230	293	650	290
25	360	285	600	380	4050	1420	1170	356	1100	440	1150	263
26	1780	285	610	380	2910	1240	1030	356	1140	760	700	340
27	2410	293	620	390	2290	1110	965	364	875	640	444	675
28	1450	305	630	400	1950	1040	930	340	900	404	313	545
29	1040	325	640	420	---	970	1710	313	1540	412	298	420
30	840	352	500	430	---	915	1930	300	1170	1040	295	348
31	1160	---	540	460	---	920	---	300	---	805	268	---
TOTAL	41296	13577	31210	13970	32560	40595	139775	26001	17209	12107	34650	10179
MEAN	1332	453	1007	451	1163	1310	4659	839	574	391	1118	339
MAX	8310	1310	2860	900	4050	2260	74000	2010	1540	1040	7140	1120
MIN	235	285	328	380	350	760	815	300	240	158	268	160
CFSM	1.43	.49	1.08	.48	1.25	1.41	5.00	.90	.62	.42	1.20	.36
IN.	1.65	.54	1.25	.56	1.30	1.62	5.58	1.04	.69	.48	1.38	.41

CAL YR 1976 TOTAL 317920 MEAN 869 MAX 8310 MIN 67 CFSM .93 IN 12.69
WTR YR 1977 TOTAL 413129 MEAN 1132 MAX 74000 MIN 158 CFSM 1.22 IN 16.49

BIG SANDY RIVER BASIN

251

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.--1,185 mi² (3,069 km²).

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) above mean sea level.

REMARKS.--Records good except those for Dec. 22 to Feb. 14 and period of no gage-height record, Apr. 5-13, which are poor. National Weather Service gage-height telemeter at station.

AVERAGE DISCHARGE.--43 years, 1,391 ft³/s (39.39 m³/s), 15.94 in/yr (405 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 (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)
Oct. 10	0200	14300	405	23.54	7.175	Aug. 14	1500	26700	756	32.85	10.013
Apr. 6	b0100	*104000	2950	a52.91	16.127						

* From rating curve extended as explained above.
a From floodmarks.
b About.

Minimum discharge, 194 ft³/s (5.49 m³/s) July 21, gage height, 1.74 ft (0.530 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2280	1740	424	640	550	2020	901	2170	441	1190	1320	402
2	2300	1460	452	620	520	1720	813	1980	445	966	953	376
3	1350	1220	469	600	530	1480	885	2280	374	751	672	342
4	792	1060	455	600	560	1480	7500	1790	338	594	440	321
5	550	930	442	580	550	1560	78000	1660	315	493	395	293
6	422	788	430	570	520	1440	34500	2300	411	412	427	280
7	378	686	1000	560	490	1300	10500	2660	932	368	424	307
8	1180	606	3150	560	460	1200	5000	2190	946	357	559	309
9	8590	547	2940	570	450	1070	3800	1770	679	422	961	280
10	10700	512	2040	570	500	986	3200	1490	738	378	882	272
11	3370	495	1690	540	600	912	2800	1350	616	529	1130	273
12	1790	510	1800	500	900	865	2600	1150	485	397	1490	261
13	1210	487	2520	490	1400	2900	2400	1020	405	418	5560	236
14	922	446	2860	480	2100	3400	2150	925	371	352	22000	231
15	736	410	2400	1200	3260	2570	2000	855	526	310	8470	290
16	592	394	1980	900	3140	2020	1850	796	802	281	2590	388
17	500	390	1630	780	2530	1630	1690	743	569	250	1850	857
18	440	389	1350	700	2180	1530	1580	685	484	235	2610	537
19	409	395	1150	620	1870	1800	1500	641	489	223	2160	445
20	387	406	1070	570	1700	1870	1400	615	574	210	1360	1080
21	369	401	1110	540	1510	2190	1440	579	467	212	953	1110
22	357	393	950	520	1390	2220	1310	537	417	539	798	624
23	338	382	850	500	1600	2130	1260	548	481	624	688	429
24	316	372	800	500	2380	1870	1370	522	1300	398	947	349
25	405	352	780	500	4390	1670	1540	492	1470	534	1580	308
26	1610	346	760	510	3840	1480	1380	463	1390	863	1190	316
27	2940	357	740	520	2870	1290	1300	463	1170	837	857	656
28	1850	371	800	530	2390	1160	1240	461	1040	560	652	594
29	1300	405	760	540	---	1090	2300	420	1880	643	534	464
30	1060	417	660	550	---	1020	2650	394	1610	1450	475	375
31	1440	---	680	580	---	993	---	385	---	1180	415	---
TOTAL	50883	17667	39142	18440	45180	50866	180859	34334	22165	16976	65342	13005
MEAN	1641	589	1263	595	1614	1641	6029	1108	739	548	2108	434
MAX	10700	1740	3150	1200	4390	3400	78000	2660	1880	1450	22000	1110
MIN	316	346	424	480	450	865	813	385	315	210	395	231
CFSM	1.39	.50	1.07	.50	1.36	1.39	5.09	.94	.62	.46	1.78	.37
IN.	1.60	.55	1.23	.58	1.42	1.60	5.68	1.08	.70	.53	2.05	.41
CAL YR 1976	TOTAL	404791	MEAN	1106	MAX	10700	MIN	92	CFSM	.93	IN	12.71
WTR YR 1977	TOTAL	554859	MEAN	1520	MAX	78000	MIN	210	CFSM	1.28	IN	17.42

BIG SANDY RIVER BASIN

03214500 TUG FORK AT KERMIT, WV

LOCATION.--Lat 37°50'17", long 82°24'35", Mingo County, Hydrologic Unit 05070201, at city water plant, at Kermit, 0.8 mi (1.3 km) downstream from Wolf Creek, and 3.0 mi (4.8 km) downstream from gaging station near Kermit, and at mile 34.7 (55.8 km).

DRAINAGE AREA.--1,274 mi² (3,300 km²) at water plant; 1,185 mi² (3,069 km²) at gaging station.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1946 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum daily, 32.0°C July 29, 1949; minimum daily, -0.5°C Dec. 31, 1976, Jan. 1, 2, 8-13, 24, 1977.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum daily, 25.0°C May 31; minimum daily, -0.5°C Dec. 31 to Jan. 2, Jan. 8-13, 24.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.5	7.0	3.0	-0.5	0.5	3.0	14.0	16.0	24.0	24.0	23.5	23.0
2	18.0	7.0	3.0	-0.5	0.5	3.5	15.0	16.0	24.0	24.0	23.0	23.0
3	17.0	7.0	3.0	0.0	0.5	3.5	15.0	16.5	24.5	24.0	23.0	23.5
4	16.0	7.0	2.0	0.5	0.0	4.0	15.0	16.0	24.5	24.0	23.0	23.5
5	16.0	6.5	3.5	0.0	0.0	4.5	---	16.0	24.0	24.0	23.0	23.5
6	16.5	6.5	3.5	0.0	0.0	4.5	---	16.5	24.0	24.5	23.5	24.0
7	16.5	6.5	3.5	0.5	0.0	5.0	---	16.0	23.5	24.5	23.5	24.0
8	16.0	6.5	4.0	-0.5	0.5	4.5	---	16.0	23.5	24.5	23.5	24.0
9	15.0	6.5	4.0	-0.5	0.5	5.5	---	16.5	23.0	24.0	23.0	24.0
10	14.5	7.0	3.0	-0.5	1.0	5.5	16.5	16.5	23.0	24.0	24.0	23.5
11	14.5	6.5	3.5	-0.5	1.5	6.5	16.5	15.5	23.0	23.5	24.0	23.5
12	14.0	6.5	3.5	-0.5	2.0	7.0	16.5	15.5	23.5	23.5	24.5	23.5
13	14.0	6.0	4.0	-0.5	2.0	7.0	16.5	16.0	23.5	23.5	24.0	23.0
14	13.5	6.0	3.5	0.5	2.0	7.0	17.0	16.5	24.0	24.0	23.5	23.0
15	12.0	6.5	3.5	0.5	1.5	8.0	17.0	17.0	24.0	24.0	23.0	23.0
16	13.0	5.5	4.0	0.5	1.5	8.5	18.0	17.0	24.5	24.5	23.0	21.5
17	12.0	6.0	4.0	0.5	2.0	8.5	18.0	18.0	24.5	24.5	22.0	21.5
18	11.5	6.0	4.0	0.0	2.0	9.0	18.0	18.5	24.5	24.5	22.0	21.5
19	11.5	6.0	4.0	0.0	2.0	9.5	18.5	19.0	24.0	24.5	22.0	21.0
20	11.0	5.5	3.5	0.0	1.5	10.5	18.5	20.0	23.5	24.5	21.5	21.0
21	10.5	5.0	3.0	0.0	1.5	10.5	18.5	21.0	23.5	24.5	21.5	21.0
22	10.0	4.5	2.0	0.5	2.0	11.0	18.0	22.0	23.0	23.5	21.0	20.5
23	10.0	4.0	2.0	0.0	2.0	11.0	18.0	23.0	23.0	23.0	21.0	20.5
24	10.5	4.0	1.5	-0.5	3.5	11.0	18.0	23.0	23.5	23.5	21.0	20.5
25	10.5	3.5	2.0	0.0	3.5	11.0	18.0	23.0	23.5	23.5	21.0	20.0
26	10.0	3.5	3.0	0.0	3.5	11.5	18.0	23.5	23.5	23.5	21.5	19.5
27	10.0	3.0	3.0	0.5	3.0	11.5	18.0	23.5	23.5	23.5	21.5	19.5
28	9.5	3.5	2.0	0.5	3.0	13.0	17.0	24.0	23.5	24.0	22.0	19.5
29	8.5	2.0	2.0	0.0	---	14.0	---	24.5	24.0	23.5	22.0	19.5
30	8.5	2.0	0.5	0.0	---	14.0	15.0	24.5	24.0	23.5	23.0	19.5
31	8.0	---	-0.5	0.0	---	15.0	---	25.0	---	23.5	23.0	---
MONTH	13.0	5.5	3.0	0.0	1.5	8.5	17.0	19.0	23.5	24.0	22.5	22.0
YEAR	MAX	25.0	MIN	-0.5	MEAN	13.5						

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.--1,500 mi² (3,885 km²).

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) above mean sea level.

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

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)	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)
Oct. 10	1300	11000	312	21.65	6.599	Aug. 15	0500	21600	612	30.40	9.266
Apr. 6	1700	*48000	1360	44.00	13.411						

Minimum discharge, 195 ft³/s (5.52 m³/s) Sept. 13, gage height, 2.50 ft (0.762 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3650	2330	522	920	800	3000	1330	2560	451	1450	1120	492
2	3130	2140	550	900	760	2470	1190	2170	487	1180	1320	468
3	2350	1800	573	880	740	2170	1200	2270	466	919	832	421
4	1490	1550	577	860	780	2330	4100	2110	437	712	603	382
5	1050	1350	568	840	800	2890	28900	1820	434	586	454	346
6	811	1150	568	820	740	2590	45800	2120	424	494	410	314
7	712	970	1430	800	680	2260	34900	2830	729	438	402	295
8	708	850	3170	800	660	2020	11500	2700	959	490	447	308
9	4410	766	3770	820	680	1790	5130	2170	801	483	575	306
10	8230	708	2930	840	760	1620	4200	1760	707	455	1070	268
11	5240	667	2380	780	1000	1470	3650	1530	695	384	1260	254
12	3010	663	2300	740	1200	1370	3250	1340	587	332	1960	248
13	2140	649	3080	700	1800	3330	2930	1170	502	303	2760	218
14	1650	604	4000	850	2700	4620	2660	1050	458	265	16500	273
15	1300	559	3300	2000	4500	3660	2430	971	433	242	18700	531
16	990	534	2700	1400	4000	3000	2220	897	636	225	4800	741
17	870	514	2300	1000	3200	2510	2030	831	678	208	2950	476
18	766	506	2000	920	2700	2290	1860	774	536	265	3320	524
19	690	506	1600	850	2400	2520	1730	719	504	553	3170	1280
20	645	510	1500	800	2200	2570	1620	676	579	599	2340	850
21	627	510	1600	770	2100	2630	1540	654	569	435	1680	532
22	577	510	1400	740	2000	2840	1510	615	490	501	1300	390
23	546	494	1300	720	2500	2830	1420	595	475	750	1090	314
24	518	486	1200	700	3500	2610	1460	586	645	490	1220	275
25	522	470	1150	700	6500	2370	1570	568	1540	454	1880	366
26	1380	450	1100	700	5000	2150	1540	536	1390	609	1720	636
27	2940	454	1100	720	4000	1910	1400	518	1330	793	1250	521
28	2660	494	1100	720	3500	1720	1330	510	1140	661	925	402
29	1850	506	1150	750	---	1610	2310	497	1410	540	734	386
30	1460	514	960	780	---	1500	2840	470	2010	1280	635	1500
31	1730	---	980	820	---	1420	---	458	---	1350	563	---
TOTAL	58652	24214	52858	26640	62200	74070	179550	38475	22502	18446	77990	14317
MEAN	1892	807	1705	859	2221	2389	5585	1241	750	595	2516	477
MAX	8230	2330	4000	2000	6500	4620	45800	2830	2010	1450	18700	1500
MIN	518	450	522	700	660	1370	1190	458	424	208	402	218
CFSM	1.26	.54	1.14	.57	1.48	1.59	3.99	.83	.50	.40	1.68	.32
IN.	1.45	.60	1.31	.66	1.54	1.84	4.45	.95	.56	.46	1.93	.36

WTR YR 1977 TOTAL 649914 MEAN 1781 MAX 45800 MIN 208 CFSM 1.19 IN 16.12

BIG SANDY RIVER BASIN

03214900 TUG FORK AT GLENHAYES, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March to September 1977.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: March to September 1977.

SUSPENDED SEDIMENT DISCHARGE: March to September 1977.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily during period March to September, 793 micromhos June 4; minimum daily, 143 micromhos Aug. 14.

SEDIMENT CONCENTRATIONS: Maximum daily mean during period March to September, 4,020 mg/L Apr. 5; minimum daily mean, 7 mg/L July 20.

SEDIMENT LOADS: Maximum daily during period March to September, 320,000 tons (290,000 tonnes) Apr. 5; minimum daily, 5.6 tons (5.1 tonnes).

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	CROSS SECTION LOCATION (FT)	SUSPENDED SEDIMENT DISCHARGE												
			INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM	BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM
JUL 13...	1600		294	70	56										
JUL 13...	1605	225	0	1	5	38	72	80	85	90	95	100			
JUL 13...	1610	250	0	1	4	64	91	97	99	100	--	--			
JUL 13...	1615	275	0	0	3	52	87	91	92	94	96	100			
JUL 13...	1620	300	0	0	5	70	91	96	98	100	--	--			
JUL 13...	1625	325	0	1	7	69	96	98	100	--	--	--			

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C.) WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977 ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	371	394	782	366	399	---
2						---	381	369	760	403	255	---
3						---	381	387	761	438	372	---
4						---	333	422	793	459	423	---
5						---	164	364	779	482	478	---
6						---	161	387	766	501	495	555
7						---	192	366	619	532	510	545
8						---	228	---	668	---	558	577
9						---	338	337	564	566	---	606
10						---	364	363	701	548	---	590
11						325	380	383	679	572	---	617
12						---	403	402	621	569	293	660
13						---	421	423	614	599	250	---
14						252	433	480	639	645	143	---
15						236	444	539	675	716	160	---
16						240	464	571	676	728	209	650
17						240	477	576	686	766	239	621
18						257	491	564	688	793	218	491
19						264	480	613	685	756	236	463
20						274	509	621	599	320	259	---
21						298	528	612	575	---	---	560
22						256	538	672	607	683	321	388
23						248	549	684	667	581	338	454
24						246	539	696	690	664	---	---
25						255	550	698	553	571	---	490
26						264	554	731	520	575	---	530
27						271	565	724	414	608	---	---
28						282	558	741	426	---	389	500
29						309	410	744	406	498	403	530
30						321	410	758	356	349	---	500
31						339	---	750	---	438	---	---
MEAN						272	421	546	632	562	331	544
WTR YR 1977	MEAN	487		MAX	793		MIN	143				

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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 1977

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Annual maximum		
					Date	Gage height (feet)	Dis-charge (ft ³ /s)
Potomac River basin							
01605700	Reeds Creek Tributary near Franklin, WV	Lat 38°41'47", long 79°23'55", Pendleton County, Hydrologic Unit 02070001, at culvert on U.S. Highway 33, 0.7 mi upstream from mouth, and 5.0 mi northwest of Franklin.	0.45	1965-77	10-9-76	4.30	41
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 ft upstream from highway bridge at Cabins, 1.8 mi downstream from Jordan Run, 6.0 mi west of Petersburg, and at mile 3.0 mi.	314	1940-61+, 1962-77a	4-9-77	12.22	15,500
01606800	Brushy Run near Petersburg, WV	Lat 38°48'20", long 79°12'50", Pendleton County, Hydrologic Unit 02070001, at culvert on State Route 4, 14.0 mi southwest of Petersburg, and at mile 3.2.	1.43	1965-77	10-9-76	5.62	98
01608100	Williams Hollow near Moorefield, WV	Lat 39°05'20", long 78°53'55", Hardy County, Hydrologic Unit 02070001, at culvert on State Route 55, 4.0 mi northeast of Moorefield, and at mile 3.8.	0.24	1965-77	10-9-76	5.43	64
01611150	Tearcoat Creek Tributary near Augusta, WV	Lat 39°12'40", long 78°41'07", Hampshire County, Hydrologic Unit 02070003, at culvert at intersection of State Routes 7 and 7/9, 0.1 mi upstream from mouth, and 6.0 mi southwest of Augusta.	2.65	1965-77	10-9-76	5.64	254
Monongahela River basin							
03050650	Leading Creek Tributary at Gilman, WV	Lat 38°58'35", long 79°50'16", Randolph County, Hydrologic Unit 05020001, at culvert on U.S. Highway 219, 0.3 mi northeast of Gilman, 0.4 mi upstream from mouth, and 3.7 mi north of Elkins.	0.38	1964-77	10-9-76	5.38	52
03055020	Bonica Run on U.S. Highway 250 near Philippi, WV	Lat 39°07'29", long 79°59'50", Barbour County, Hydrologic Unit 05020001, at culvert on U.S. Highway 250, 2.0 mi southeast (corrected) of Philippi, and at mile 2.5.	0.60	1965-77	10-9-76	4.38	59
03055040	Bonica Run on State Route 38 near Philippi, WV	Lat 39°09'11", long 79°58'44", Barbour County, Hydrologic Unit 05020001, at culvert on State Route 38, 0.5 mi upstream from mouth, and 3.2 mi east of Philippi.	3.15	1964-77	10-9-76	3.40	137
03056600	Right Fork Wickwire Run on U.S. Highway 119 near Grafton, WV	Lat 39°22'44", long 79°57'48", Taylor County, Hydrologic Unit 05020001, at culvert at intersection of U.S. Highway 119 and Wickwire Road, 0.7 mi upstream from confluence with Wickwire Run, and 4.0 mi northeast of Grafton.	2.33	1965-77	10-9-76	6.54	142

See footnotes at end of table.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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Annual maximum discharge at crest-stage partial-record stations during water year 1977--Continued

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Annual maximum		
					Date	Gage height (feet)	Dis-charge (ft ³ /s)
Monongahela River basin--Continued							
03057500	Skin Creek near Brownsville, WV	Lat 38°58'30", long 80°26'40", Lewis County, Hydrologic Unit 05020002, 2.6 mi southeast of Brownsville, 4.7 mi southeast of Weston, and at mile 3.0.	25.7	1946-60†, 1961-77a	4-5-77	6.29	1220
03063950	Job Run near Wymer, WV	Lat 38°52'55", long 79°35'45", Randolph County, Hydrologic Unit 05020004, at culvert on U.S. Highway 33, 0.1 mi upstream from mouth, and 1.2 mi southeast of Wymer.	1.08	1965-77	10-9-76	4.12	89
03069650	Right Fork Clover Run near Parsons, WV	Lat 39°09'10", long 79°45'46", Tucker County, Hydrologic Unit 05020004, on left bank 12 ft upstream from culvert entrance, at intersection of State Route 38 and Secondary Route 15/5, and 6.0 mi northwest of Parsons.	2.21	1967-77	10-9-76	4.37	85
03069850	Long Run near Parsons, WV	Lat 39°15'32", long 79°43'18", Tucker County, Hydrologic Unit 05020004, on left bank 8 ft upstream from entrance to culvert on State Route 72, 0.1 mi southeast of Tucker County line, and 11.0 mi north of Parsons.	0.95	1967-77	10-9-76	7.47	68
Middle Island Creek basin							
03114550	Buffalo Run near Friendly, WV	Lat 39°30'23", long 81°01'41", Tyler County, Hydrologic Unit 05030201, on right bank 10 ft upstream from culvert on State Secondary Route 6, and 1.8 mi southeast of Friendly.	0.88	1967-77	10-9-76	7.88	287
03114600	Little Buffalo Run near Friendly, WV	Lat 39°30'10", long 81°00'59", Tyler County, Hydrologic Unit 05030201, on left bank 12 ft upstream from culvert on State Secondary Route 6, and 2.5 mi southeast of Friendly.	1.22	1967-77	10-9-76	6.10	225
Little Kanawha River basin							
03155450	Big Island Run near Elizabeth, WV	Lat 39°05'00", long 81°15'40", Ritchie-Wirt County line, Hydrologic Unit 05030203, at culvert on State Route 53, and 7.5 mi east of Elizabeth.	3.52	1965-77	10-9-76	6.82	757
Mill Creek basin							
03159700	Grasslick Run near Ripley, WV	Lat 38°45'53", long 81°40'40", Jackson County, Hydrologic Unit 05030202, at culvert on U.S. Highway 21, 1.0 mi upstream from Burnt Run, and 3.8 mi southeast of Ripley.	0.70	1965-77	10-9-76	6.12	147
Kanawha River basin							
03180350	West Fork Greenbrier River Tributary at Durbin, WV	Lat 38°33'30", long 79°49'52", Pocahontas County, Hydrologic Unit 05050003, at culvert on U.S. Highway 250, 0.2 mi upstream from mouth, and 0.9 mi northeast of Durbin.	1.13	1966-68, 1970-77	10-9-76	4.88	69

See footnotes at end of table.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Annual maximum discharge at crest-stage partial-record stations during water year 1977--Continued

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Annual maximum		
					Date	Gage height (feet)	Dis-charge (ft ³ /s)
Kanawha River basin--Continued							
03180530	Brush Run near Bartow, WV	Lat 38°30'30", long 79°47'03", Pocahontas County, Hydrologic Unit 05050003, on left bank 12 ft upstream from culvert on State Route 28, 2.3 mi south of Bartow, and at mile 4.2.	1.28	1966-77	10-9-76	6.28	200
03180680	Cooper Run near Green Bank, WV	Lat 38°24'32", long 79°48'43", Pocahontas County, Hydrologic Unit 05050003, at culvert on Secondary Route 6, 0.4 mi upstream from mouth, and 1.3 mi southeast of Green Bank.	1.52	1965-77	10-9-76	4.91	100
03181900	Moody Moore Hollow near Huntersville, WV	Lat 38°13'55", long 79°58'44", Pocahontas County, Hydrologic Unit 05050003, at culvert on Secondary Route 11, 0.1 mi upstream from mouth, and 3.5 mi northeast of Huntersville.	0.55	1966-77	10-9-76	3.79	10
03183550	Griffith Creek near Alderson, WV	Lat 37°44'15", long 80°42'36", Summers County, Hydrologic Unit 05050003, at culvert on State Secondary Route 7/14 at Griffith School, 4.0 mi northwest of Alderson, and at mile 2.0.	3.84	1966-77	4-5-77	9.93	313
03183570	Buggar Lick at Pence Springs, WV	Lat 37°41'03", long 80°43'00", Summers County, Hydrologic Unit 05050003, at culvert on State Route 3 at Pence Springs, and 0.3 mi upstream from mouth.	2.71	1966-77	4-5-77	9.44	546
03185020	Little Beaver Creek Tributary near Shady Spring, WV	Lat 37°43'30", long 81°06'02", Raleigh County, Hydrologic Unit 05050004, at culvert on U.S. Highways 19 and 21 and State Highway 3, 0.3 mi upstream from mouth, and 1.3 mi north of Shady Spring.	0.62	1966-77	4-5-77	6.82	65
03191400	Laurel Creek near Summersville, WV	Lat 38°15'28", long 80°59'24", Nicholas County, Hydrologic Unit 05050005, at culvert on Secondary Route 22, at intersection of Secondary Routes 11 and 22, at Tipton, 7.8 mi southwest of Summersville, and at mile 1.4.	4.28	1966-77	10-9-76	5.17	144
03193725	Little Fork at Mossy, WV	Lat 37°58'52", long 81°16'25", Fayette County, Hydrologic Unit 05050006, at culvert on State Route 15, 100 ft upstream from mouth, and 0.6 mi northeast of Mossy.	0.42	1966-77	10-9-76	5.19	29
03197150	Ashleycamp Run near Left Hand, WV	Lat 38°37'34", long 81°14'02", Roane County, Hydrologic Unit 05050007, at culvert on State Route 36, 1.2 mi east of Left Hand, and at mile 1.0.	2.01	1966-77	9-30-77	7.50	292

See footnotes at end of table.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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Annual maximum discharge at crest-stage partial-record stations during water year 1977--Continued

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Annual maximum		
					Date	Gage height (feet)	Dis-charge (ft ³ /s)
Kanawha River basin--Continued							
03197900	Elk Twomile Creek Tributary near Charleston, WV	Lat 38°21'13", long 81°31'22", Kanawha County, Hydrologic Unit 05050007, at culvert on Elk Two-mile Road, 0.1 mi upstream from mouth, and 5.0 mi northeast of Charleston.	0.49	1965-77	1977	(†)	(†)
03198780	Hunters Branch near Madison, WV	Lat 38°00'20", long 81°48'55", Boone County, Hydrologic Unit 05050009, at culvert on U.S. Highway 119, 0.1 mi upstream from mouth, and 4.0 mi south of Madison.	1.97	1966-77	4-5-77	5.72	167
03198800	Low Gap Creek near Madison, WV	Lat 38°01'41", long 81°50'03", Boone County, Hydrologic Unit 05050009, at culvert at entrance to Low Gap Memory Garden, 0.2 mi upstream from mouth, and 2.7 mi southwest of Madison.	1.28	1963, 1965-77	4-5-77	10.30	25
03200600	Little Scary Creek near Nitro, WV	Lat 38°27'04", long 81°51'14", Putnam County, Hydrologic Unit 05050008, at culvert on Interstate Highway 64, 0.2 mi west of St. Albans interchange, 2.5 mi northwest of Nitro, and at mile 1.0.	0.87	1966-68, 1971-77	4-5-77	12.45	151
03201420	Long Branch near Teays, WV	Lat 38°28'43", long 81°55'49", Putnam County, Hydrologic Unit 05050008, on State Route 34, 1.5 mi north of Winfield interchange on Interstate 64, and 2.0 mi north of Teays.	2.05	1965-77	4-5-77	10.66	338
03201440	Sixteenmile Creek near Pliny, WV	Lat 38°28'39", long 82°02'53", Mason County, Hydrologic Unit 05050008, at culvert on Pliny Apple Grove Road, 2.0 mi from Mason-Putnam County line, and 3.7 mi northwest of Pliny.	1.04	1965-77	10-10-76	6.19	183
03201480	Threemile Creek Tributary near Point Pleasant, WV	Lat 38°50'15", long 82°05'42", Mason County, Hydrologic Unit 05050008, at culvert on State Route 2, at intersection of U.S. Highway 35 and State Route 2, 0.2 mi upstream from mouth, and 2.5 mi southeast of Point Pleasant.	0.70	1965-77	10-10-76	6.33	101
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 downstream side of highway bridge at Man, 500 ft upstream from Buffalo Creek, and 0.7 mi downstream from Huff Creek, and at mile 93.4.	762	1928-62 [†] , 1963-77 ^a	4-4-77	19.70	33,000

† Not determined.

‡ Operated as a continuous-record gaging station.

a Recorder chart on file in district office.

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS
 WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

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 06	1420	71	18.0	21.0	150	--	8.3
20	1345	103	12.0	8.0	200	6.1	8.0
NOV 30	1330	67	2.5	-10.0	160	6.3	9.8
FEB 02	1230	23	0.0	-3.0	210	6.3	9.0
MAR 2	1215	270	5.5	1.5	--	7.0	9.0
APR 13	1245	153	17.0	24.5	150	6.5	7.4
MAY 24	1320	42	17.5	23.0	175	6.4	8.8
JUN 01	1030	31	19.5	22.0	180	8.0	7.2
23	0915	16	14.0	15.5	260	5.2	8.2
JUL 05	1120	13	19.0	24.5	285	>4.0	7.8
26	0940	23	16.0	19.0	285	4.3	9.4
AUG 15	1115	20	19.0	24.5	300	>4.0	8.0
30	1030	9.4	20.0	25.0	330	>4.0	7.5
01595300 ABRAM CREEK AT OAKMONT, WV (LAT 39 22 00 LONG 79 10 45)							
OCT 20	1105	36	6.0	6.0	400	3.4	9.6
NOV 30	1210	35	0.0	-8.0	310	<4.0	8.0
JAN 27	1305	17	0.0	-3.0	500	3.3	--
MAR 02	1115	105	-1.0	1.0	--	5.0	8.8
APR 13	1130	73	13.0	22.5	260	3.7	8.2
MAY 24	1135	33	17.5	22.5	300	3.7	7.8
JUL 5	1045	6.2	20.0	23.0	600	<4.0	7.4
AUG 15	1025	14	20.0	23.0	700	>4.0	7.2
01604500 PATTERSON CREEK NEAR HEADSVILLE, WV (LAT 39 26 35 LONG 78 49 20)							
OCT 06	1145	164	15.0	16.0	190	--	8.4
DEC 02	1220	51	0.5	12.0	245	--	11.4
FEB 03	0955	26	0.0	4.0	290	8.7	18.4
MAR 10	1205	256	7.5	21.0	155	8.3	11.6
APR 20	1450	117	17.5	27.0	190	8.8	10.2
MAY 26	1320	27	23.0	28.5	262	7.9	8.2
JUL 07	1200	8.2	28.0	36.0	255	7.6	6.8
AUG 17	1400	13	26.0	28.0	230	7.2	6.7
01605500 SOUTH BRANCH POTOMAC RIVER AT FRANKLIN, WV (LAT 38 38 14 LONG 79 20 14)							
NOV 30	1300	150	1.5	5.0	185	7.8	15.9
JAN 03	1220	65	1.0	5.0	200	8.5	17.4
FEB 10	1205	47	4.0	14.0	190	8.9	17.0
MAR 24	1300	337	7.0	11.0	160	8.4	14.2
MAY 03	1240	76	15.5	24.0	175	8.6	12.4
JUN 14	1255	45	19.0	21.0	155	8.3	11.6
JUL 27	1040	36	17.0	23.5	205	8.0	8.7
SEP 07	1140	39	19.0	23.0	175	8.6	10.3
01605600 FRIENDS RUN NEAR FRANKLIN, WV (LAT 38 39 23 LONG 79 23 31)							
OCT 04	1215	0.55	13.0	18.5	170	--	10.8
10	1050	43	10.0	8.5	--	7.4	11.2
JAN 03	1050	0.17	--	7.0	100	10.4	16.4
MAR 24	1110	6.8	5.5	10.0	54	8.9	13.4
MAY 03	1125	0.69	15.0	23.0	83	6.8	10.2
JUN 14	1100	0.16	18.5	21.0	93	8.7	10.4
JUL 27	1215	0.07	22.0	23.5	190	7.1	7.7
SEP 07	1035	0.07	20.0	23.5	245	8.6	8.0
01606500 SOUTH BRANCH POTOMAC RIVER NEAR PETERSBURG, WV (LAT 38 59 34 LONG 79 10 26)							
OCT 04	1700	614	15.5	20.0	160	--	11.2
JAN 03	1635	294	1.0	4.5	--	--	--
FEB 10	1650	159	1.5	13.0	195	7.8	13.4
MAR 25	1040	1410	5.0	10.0	140	7.9	12.0
MAY 03	1725	291	18.0	28.0	185	8.5	10.9
JUN 15	0920	166	17.5	18.5	180	7.9	10.2
JUL 26	1650	147	24.0	27.0	225	7.4	8.6
SEP 08	0900	98	21.0	21.5	200	8.4	7.5
01607500 SOUTH FORK SOUTH BRANCH POTOMAC RIVER AT BRANDYWINE, WV (LAT 38 37 53 LONG 79 14 38)							
OCT 04	1405	189	15.5	18.0	90	--	11.2
NOV 30	1120	98	1.0	2.0	120	7.0	15.1
JAN 03	1405	26	0.0	5.0	158	8.3	17.7
FEB 10	1410	15	1.0	16.5	170	8.8	19.6
MAR 24	1455	211	8.0	12.0	99	8.0	13.7
MAY 03	1435	27	19.0	26.5	160	8.4	10.7
JUN 14	1505	7.8	19.0	21.5	173	8.0	10.1
JUL 27	0910	7.2	18.0	19.0	195	7.7	8.1
SEP 07	1405	27	24.0	24.0	130	8.4	8.9

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

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WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

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							
01608000 SOUTH FORK SOUTH BRANCH POTOMAC RIVER NEAR MOOREFIELD, WV (LAT 39 00 44 LONG 78 57 23)							
OCT 05	1125	418	15.0	17.0	95	--	8.9
DEC 01	0930	147	0.5	-1.0	158	7.0	--
JAN 44	0950	69	1.0	2.5	160	7.5	13.1
FEB 11	0930	39	1.0	14.5	190	8.6	13.5
MAR 24	1720	490	5.0	13.0	--	--	--
MAY 04	0900	82	17.0	19.0	175	7.8	8.8
JUN 15	1155	33	18.5	19.0	177	7.6	8.5
JUL 26	1350	22	22.0	23.0	220	7.0	7.5
SEP 08	1105	25	22.0	23.0	190	7.2	7.7
01608050 FORT RUN NEAR MOOREFIELD, WV (LAT 39 03 56 LONG 78 54 49)							
OCT 05	0945	4.3	13.5	16.0	60	--	9.5
10	1310	31	11.0	10.0	--	7.2	10.6
DEC 01	1120	0.74	0.5	2.0	73	7.8	15.2
FEB 11	1100	0.39	2.0	11.0	82	7.7	13.0
MAR 25	0825	6.9	2.0	0.0	61	8.4	12.6
MAY 04	1045	0.57	15.0	19.5	75	7.6	9.8
JUN 15	1340	0.02	19.0	20.5	64	7.9	8.3
JUL 26	1200	0.01	19.0	23.0	147	6.7	9.0
SEP 07	1635	0.19	20.0	25.0	95	7.7	8.4
01608400 BUFFALO CREEK NEAR ROMNEY, WV (LAT 39 22 18 LONG 78 43 51)							
OCT 05	1345	5.4	15.0	22.0	75	--	9.3
DEC 01	1555	0.34	3.5	10.0	90	6.4	13.8
MAR 09	1730	2.8	7.0	23.5	90	7.7	12.6
APR 21	1010	0.59	14.0	23.0	90	6.3	10.2
MAY 26	1110	0.02	17.0	23.0	119	7.6	7.0
01608500 SOUTH BRANCH POTOMAC RIVER NEAR SPRINGFIELD, WV (LAT 39 26 49 LONG 78 39 16)							
OCT 06	1015	1180	15.5	14.0	170	--	8.9
DEC 22	1200	789	0.0	5.0	190	7.5	16.5
MAR 09	1610	1520	8.0	23.0	145	8.0	13.2
APR 21	1700	837	20.0	30.5	190	8.7	12.0
MAY 25	1505	311	23.5	25.0	230	8.1	8.5
JUL 06	1505	145	29.0	35.0	215	8.1	7.6
AUG 17	1240	153	26.0	26.0	205	7.8	6.9
01609800 LITTLE CACAPON RIVER NEAR LEVELS, WV (LAT 39 29 55 LONG 78 29 20)							
OCT 05	1640	141	16.0	22.0	80	--	9.6
DEC 21	1415	39	0.5	-3.0	82	7.5	14.1
MAR 09	1315	100	7.0	22.0	84	7.6	13.6
29	1210	267	10.0	23.0	74	8.5	12.5
APR 20	1250	33	18.0	25.0	72	8.6	9.8
MAY 25	1300	2.4	22.0	24.0	102	8.4	7.3
JUL 06	1310	0.12	28.0	33.0	118	7.5	7.2
AUG 16	1350	0.15	26.0	30.0	95	8.3	7.4
01610200 LOST RIVER AT MCCAULEY NEAR BAKER, WV (LAT 39 03 18 LONG 78 43 31)							
OCT 10	1430	1200	12.0	15.0	--	7.0	10.0
20	1510	110	8.0	9.0	130	7.5	9.0
DEC 01	1420	31	2.0	8.0	140	7.2	15.8
JAN 04	1310	27	0.0	8.0	150	7.5	13.9
FEB 03	1345	12	2.0	11.0	160	8.9	18.3
MAR 10	0940	95	7.0	12.0	95	8.2	11.8
APR 21	1405	64	19.0	28.5	125	8.3	11.4
MAY 26	0915	13	19.5	20.5	168	8.1	7.1
JUL 07	0855	3.0	25.0	27.0	185	7.8	5.8
AUG 17	0930	3.8	24.0	25.5	170	6.8	5.7
01611500 CACAPON RIVER NEAR GREAT CACAPON, WV (LAT 39 34 43 LONG 78 18 34)							
NOV 23	1445	246	2.5	8.0	135	9.3	14.0
DEC 21	1100	345	1.0	1.0	115	7.5	14.2
MAR 09	1045	487	6.0	13.0	110	8.3	13.0
MAY 25	1030	115	23.0	24.0	163	8.3	7.4
JUL 06	1055	58	27.0	32.0	182	8.0	7.4
AUG 16	1150	58	25.0	28.0	150	9.5	8.3
01616500 OPEQUON CREEK NEAR MARTINSBURG, WV (LAT 39 25 25 LONG 77 56 20)							
OCT 19	1520	224	9.0	17.0	470	--	11.6
NOV 24	0945	166	3.0	3.0	515	9.3	12.1
DEC 20	1310	163	15.0	14.0	400	8.5	13.7
MAR 08	1535	139	9.0	17.0	445	8.2	15.0
MAY 24	1620	106	20.0	29.0	540	8.1	9.3
JUL 05	1250	65	23.0	32.0	430	8.1	8.9
AUG 15	1630	66	--	--	450	8.0	9.0

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS
 WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

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							
01617000 TUSCARORA CREEK ABOVE MARTINSBURG, WV (LAT 39 28 10 LONG 77 58 18)							
OCT 19	1250	13	10.0	14.0	440	--	11.4
NOV 24	1125	11	6.0	5.0	505	9.5	12.6
DEC 20	1125	8.7	8.0	16.0	490	8.5	13.8
JAN 25	1245	6.0	4.0	9.0	490	8.7	16.3
MAR 08	1115	6.9	8.0	13.5	455	8.5	13.0
APR 19	1110	18	14.0	24.0	440	8.2	11.6
MAY 24	1050	8.2	17.0	26.0	510	7.7	9.3
JUL 05	1100	4.0	20.0	30.5	435	7.8	8.4
01636500 SHENANDOAH RIVER AT MILLVILLE, WV (LAT 39 16 55 LONG 77 47 22)							
JUL 05	1645	485	27.5	35.0	520	8.5	9.9
SEP 01	1100	491	26.0	26.0	620	7.2	7.5
MONONGAHELA RIVER BASIN							
03050500 TYGART VALLEY RIVER NEAR ELKINS, WV (LAT 38 55 30 LONG 79 52 45)							
OCT 06	1120	117	16.0	20.0	70	7.0	--
NOV 17	1205	214	35.0	14.0	78	7.1	9.0
FEB 24	1800	4970	4.0	7.0	--	7.6	8.4
MAR 24	1110	1220	5.5	5.0	64	7.0	10.0
MAY 03	1605	235	18.0	24.0	--	--	--
JUN 14	1340	64	20.0	23.0	92	9.0	5.4
AUG 04	1620	30	26.0	23.0	--	7.5	6.0
SEP 07	1535	112	24.0	26.0	90	8.0	7.2
03051000 TYGART VALLEY RIVER AT BELINGTON, WV (LAT 39 01 45 LONG 79 56 10)							
OCT 04	1625	654	12.0	17.0	135	7.0	--
NOV 15	1450	383	5.0	7.0	120	7.1	10.0
MAR 22	1430	1150	6.0	0.0	92	6.7	10.2
MAY 03	1330	405	17.0	27.0	85	7.0	9.8
JUN 14	1120	102	22.0	21.5	140	8.2	6.0
JUL 26	1445	2500	22.0	26.0	85	7.0	6.8
SEP 06	1435	123	25.0	29.0	115	8.3	9.4
03052000 MIDDLE FORK RIVER AT AUDRA, WV (LAT 39 02 25 LONG 80 04 10)							
OCT 05	1345	134	16.5	20.0	54	6.6	--
NOV 16	1340	137	3.0	4.5	50	5.7	9.2
FEB 17	1230	275	0.0	-10.0	--	5.3	9.4
MAR 23	1415	655	5.5	10.0	42	5.8	10.6
MAY 04	1230	217	16.0	19.0	44	5.9	7.6
JUN 15	1340	66	21.0	21.0	75	8.4	6.6
JUL 27	1655	137	22.0	22.0	80	6.3	7.0
SEP 07	1245	70	22.0	27.0	65	7.4	7.2
03052500 SAND RUN NEAR BUCKHANNON, WV (LAT 38 57 50 LONG 80 09 10)							
NOV 19	0955	9.3	1.0	13.0	100	6.7	11.0
MAY 18	1440	3.7	24.0	33.0	200	7.7	8.1
JUN 28	1335	4.0	22.5	--	240	7.6	8.3
AUG 09	1135	6.1	21.0	26.0	100	7.5	8.2
03053500 BUCKHANNON RIVER AT HALL, WV (LAT 39 03 05 LONG 80 06 50)							
OCT 05	1200	317	--	22.0	72	7.0	--
NOV 16	1135	192	25.0	7.0	110	6.7	10.2
FEB 10	1435	154	0.0	12.0	140	6.3	8.2
MAR 23	1120	1180	5.5	4.0	80	6.8	9.2
MAY 04	1045	248	17.0	20.0	85	6.8	7.2
JUN 15	1140	73	22.0	30.0	170	8.4	7.2
JUL 27	1415	603	21.0	23.0	95	6.8	7.2
SEP 07	1045	101	23.0	26.0	80	7.4	8.0
03054500 TYGART VALLEY RIVER AT PHILIPPI, WV (LAT 39 09 00 LONG 80 02 25)							
OCT 04	1340	1490	13.0	19.5	190	7.0	--
NOV 15	1220	713	3.0	7.0	100	6.8	10.4
FEB 09	1415	456	0.0	3.0	--	--	--
MAR 22	1145	2140	7.0	1.0	77	7.0	7.2
MAY 03	1150	1180	17.0	25.0	75	6.7	9.6
JUL 26	1200	3020	19.0	22.0	120	7.0	7.0
SEP 6	1220	418	24.0	28.0	100	7.4	7.2

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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							
03057000 TYGART VALLEY RIVER AT COLFAX, WV (LAT 39 26 15 LONG 80 07 55)							
NOV 19	1220	1070	6.0	8.0	130	7.7	10.0
MAR 16	1245	6250	11.0	16.0	120	7.3	9.0
APR 26	1125	656	10.5	11.5	120	7.7	8.8
JUN 08	1320	199	17.0	15.5	120	7.8	--
JUL 22	1125	387	25.0	24.0	145	6.0	8.2
03058000 WEST FORK RIVER AT BROWNSVILLE, WV (LAT 39 00 10 LONG 80 28 35)							
MAY 18	1045	16	22.0	24.0	110	7.8	7.6
JUN 28	1040	20	21.5	--	125	7.8	7.9
AUG 09	0945	29	27.0	25.0	175	6.3	5.3
03058500 WEST FORK RIVER AT BUTCHERVILLE, WV (LAT 39 05 25 LONG 80 28 05)							
NOV 09	1340	41	1.0	14.0	320	6.9	9.8
DEC 28	1230	177	0.0	-1.0	--	--	--
MAY 18	1240	36	23.5	33.5	150	7.0	6.9
JUN 28	1145	81	22.0	--	175	7.3	7.4
AUG 09	1430	75	23.0	30.0	180	7.6	5.5
03059000 WEST FORK RIVER AT CLARKSBURG, WV (LAT 39 16 15 LONG 80 21 20)							
NOV 17	1455	88	4.0	4.0	--	7.7	11.0
DEC 19	1125	455	0.0	--	360	7.8	10.4
FEB 02	1150	179	0.0	-4.0	340	7.8	--
MAR 15	1315	1160	10.0	19.0	180	7.2	9.2
APR 25	1115	262	17.0	16.5	480	7.7	9.0
JUN 09	1150	81	18.0	15.0	500	7.9	--
JUL 19	1000	49	26.5	26.5	300	7.6	7.4
AUG 30	1115	44	25.0	27.5	380	8.2	7.2
03061000 WEST FORK RIVER AT ENTERPRISE, WV (LAT 39 25 20 LONG 80 16 40)							
NOV 17	1320	228	5.0	11.0	--	7.2	10.4
DEC 29	1420	721	0.5	2.0	600	7.6	9.6
FEB 02	1410	269	1.0	-2.0	850	7.2	--
MAR 15	1610	2070	11.0	19.0	600	7.8	8.8
APR 25	1255	623	16.0	17.5	760	7.3	7.6
JUN 09	1525	331	14.5	12.0	1650	8.1	--
JUL 19	1210	93	28.0	29.5	1200	6.7	7.4
AUG 30	1315	130	27.0	25.5	680	7.2	8.2
03061500 BUFFALO CREEK AT BARRACKVILLE, WV (LAT 39 30 15 LONG 80 10 20)							
NOV 10	1245	56	5.0	4.0	--	8.0	11.2
DEC 28	1025	75	1.0	2.0	220	7.8	10.2
FEB 01	1200	20	0.0	-4.0	1100	7.6	--
MAR 16	0955	214	10.0	15.0	240	7.8	9.2
APR 25	1455	237	13.5	13.5	230	7.9	8.0
JUN 08	1515	11	18.0	18.5	1300	8.0	--
JUL 22	0945	42	23.0	23.5	900	7.1	5.0
SEP 06	1030	36	22.0	24.5	700	7.5	7.2
03062400 COBUN CREEK AT MORGANTOWN, WV (LAT 39 36 30 LONG 79 57 20)							
NOV 08	1400	4.0	5.0	5.0	--	7.1	10.2
DEC 30	1320	9.3	0.0	-3.0	170	7.1	10.4
JAN 21	1345	3.8	0.0	-2.0	150	7.1	13.0
FEB 04	1300	3.9	0.0	1.0	220	7.5	11.6
MAR 16	1445	20	8.0	15.0	120	7.2	10.6
MAR 18	1215	46	1.0	13.0	160	7.1	9.0
APR 26	1610	27	11.5	19.5	180	7.5	9.2
JUN 13	1345	1.0	19.5	26.0	225	7.3	--
JUL 18	1155	0.99	24.5	33.0	275	7.1	6.6
AUG 29	1335	2.6	24.5	30.0	180	7.4	6.8
SEP 14	1435	0.42	20.5	27.0	250	7.3	7.6
03063600 HORSECAMP RUN AT HARMAN, WV (LAT 38 54 51 LONG 79 30 32)							
OCT 27	1120	21	5.0	4.5	160	7.1	7.2
DEC 08	1155	17	2.0	-10.0	160	7.6	8.6
JAN 19	1215	2.2	0.0	--	220	7.6	11.0
FEB 23	1335	15	4.0	13.5	--	7.6	9.6
APR 08	1120	25	6.0	4.0	150	8.0	7.6
MAY 28	0845	1.7	9.5	13.5	190	8.0	8.8
JUN 02	1205	0.54	16.0	23.0	210	7.4	9.0
JUN 29	1100	5.3	15.0	22.0	180	8.0	7.4
AUG 03	1040	0.35	17.5	21.5	--	8.0	7.0
AUG 30	1640	0.35	19.0	25.0	240	8.0	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							
03065000 DRY FORK AT HENDRICKS, WV (LAT 39 04 20 LONG 79 37 20)							
OCT 19	1445	298	9.0	15.0	60	7.0	9.2
JAN 26	1705	124	0.0	-3.0	65	6.9	9.4
MAR 01	1430	1840	1.0	0.0	--	7.0	6.1
APR 15	1055	525	13.0	22.0	--	--	--
MAY 25	1425	151	19.0	23.0	65	7.4	7.6
JUL 06	1435	144	25.0	29.0	65	8.0	7.4
AUG 16	1440	445	21.5	28.0	60	7.5	8.8
03066000 BLACKWATER RIVER AT DAVIS, WV (LAT 39 07 35 LONG 79 28 10)							
OCT 20	1500	156	7.0	7.0	110	3.2	8.2
NOV 30	1650	137	0.0	-10.0	--	--	--
FEB 02	1755	39	0.0	0.0	--	--	--
MAR 02	1540	393	2.0	0.0	--	5.3	13.6
APR 13	1550	133	17.5	23.0	85	5.2	7.0
MAY 24	1530	127	0.0	23.5	82	5.5	7.6
JUN 05	1425	28	23.5	28.5	90	6.7	6.4
AUG 15	1435	337	21.0	26.0	90	4.0	7.2
03068000 SHAVERS FORK AT BEMIS, WV (LAT 38 48 27 LONG 79 44 16)							
DEC 16	1350	346	6.5	10.0	28	6.5	7.6
MAR 13	1730	4130	6.0	9.0	<50	6.2	--
APR 06	1500	952	3.0	1.0	30	5.1	10.0
28	1130	175	11.0	19.5	26	7.0	9.2
JUN 02	1530	36	20.0	21.0	28	7.6	6.0
30	1440	334	20.0	27.0	32	6.7	--
AUG 03	1420	75	22.0	24.0	--	7.0	7.6
SEP 01	1240	123	21.5	27.0	31	7.0	7.4
29	1155	117	--	13.5	34	7.0	7.6
03068600 SHAVERS FORK ABOVE BOWDEN, WV (LAT 38 54 10 LONG 79 41 41)							
MAY 26	1315	56	18.0	23.0	32	7.3	7.0
AUG 31	1130	242	19.5	21.0	32	6.8	7.4
03068610 TAYLOR RUN AT BOWDEN, WV (LAT 38 54 27 LONG 79 41 49)							
OCT 28	1500	18	6.0	8.0	49	7.0	9.2
DEC 08	1310	22	1.0	-10.0	66	7.0	10.4
FEB 24	1540	159	2.5	13.5	--	7.6	10.6
APR 07	1050	29	5.0	5.0	48	7.8	10.0
28	1255	13	10.5	17.5	55	7.4	9.0
JUN 28	1210	14	15.5	21.0	60	7.0	7.8
AUG 04	1105	2.5	17.5	20.5	--	7.3	7.4
31	1105	6.9	17.0	19.0	75	7.3	6.4
SEP 28	1415	4.2	13.0	12.5	68	7.5	7.6
03068690 NORTH SPRING AT BOWDEN, WV (LAT 38 54 43 LONG 79 42 16)							
NOV 03	1025	3.0	11.0	12.5	--	--	--
03068710 SOUTH SPRING AT BOWDEN, WV (LAT 38 54 38 LONG 79 42 22)							
SEP 01	1705	2.1	16.5	26.0	95	7.0	6.2
03068800 SHAVERS FORK BELOW BOWDEN, WV (LAT 38 54 47 LONG 79 46 14)							
OCT 28	1650	563	5.0	6.0	38	7.0	9.2
DEC 09	1445	464	1.0	3.0	44	6.9	12.2
FEB 04	1320	66	0.0	1.0	49	6.8	8.0
25	1255	2070	3.0	15.0	--	--	--
MAR 13	2255	3690	6.0	9.0	32	5.2	--
APR 28	1515	249	11.5	14.0	45	7.5	9.0
JUN 01	1635	47	22.0	27.0	68	7.8	6.8
30	1000	484	17.0	20.0	40	7.0	8.8
AUG 04	1500	124	25.5	27.0	--	9.0	7.8
31	1650	226	20.0	23.0	40	7.2	7.2
SEP 08	1435	126	21.5	23.0	47	7.6	8.0
28	1215	155	15.0	13.5	44	7.2	6.6
03068900 SHAVERS FORK NEAR ELKINS, WV (LAT 38 57 58 LONG 79 46 02)							
MAR 13	2140	6880	12.0	6.5	32	4.8	--
MAY 26	1020	89	18.0	21.5	48	7.4	8.8
AUG 31	1320	276	23.0	27.0	43	7.0	7.8

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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							
03069000 SHAVERS FORK AT PARSONS, WV (LAT 39 05 45 LONG 79 40 40)							
OCT 19	1710	241	10.0	10.5	49	7.0	6.2
DEC 01	1420	421	2.0	9.0	48	6.8	5.0
JAN 25	1340	95	--	0.0	58	6.8	11.0
MAR 03	0930	587	0.0	2.0	--	6.7	10.2
APR 15	1150	328	15.0	20.5	--	--	--
MAY 25	1650	115	22.0	23.0	56	7.3	8.0
JUN 06	1405	181	27.0	30.0	50	8.0	7.2
AUG 17	1135	428	22.0	22.0	--	7.1	8.2
03069500 CHEAT RIVER NEAR PARSONS, WV (LAT 39 07 20 LONG 79 40 50)							
OCT 19	1210	703	9.0	11.0	65	6.7	8.4
MAR 01	1145	4290	10.0	10.0	--	7.0	10.0
APR 12	1230	1500	12.0	21.0	--	--	--
MAY 25	1215	418	19.5	23.0	70	7.0	7.0
JUL 06	1150	348	23.0	29.5	75	7.0	7.0
AUG 16	1235	1620	22.0	29.0	62	7.0	7.2
03069880 BUFFALO CREEK NEAR ROWLESBURG, WV (LAT 39 17 19 LONG 79 42 16)							
OCT 18	1455	6.9	7.5	8.0	55	7.2	9.2
DEC 06	1055	8.9	0.0	5.0	<50	7.5	12.0
JAN 20	1230	12	0.0	6.5	<50	7.0	13.5
FEB 23	1400	76	5.0	8.0	--	7.4	11.2
MAR 17	1310	18	8.0	12.0	<50	7.3	10.2
APR 27	1555	34	16.5	19.0	<50	7.1	9.0
JUN 07	1255	1.8	13.5	16.0	65	7.5	--
JUL 20	1315	3.6	24.5	30.0	60	7.5	8.0
AUG 31	1250	4.2	23.0	25.5	60	7.1	7.2
03070000 CHEAT RIVER AT ROWLESBURG, WV (LAT 30 20 50 LONG 79 40 00)							
OCT 18	1225	1110	10.0	13.0	85	6.8	8.1
DEC 06	1305	1030	0.0	5.0	55	7.2	10.6
FEB 23	1120	1400	3.0	--	--	7.2	11.2
MAR 17	1045	3320	9.0	15.0	55	7.0	9.0
APR 27	1430	1100	12.5	20.5	<50	7.5	9.0
JUN 07	1105	228	18.0	17.0	80	7.1	--
JUL 08	1025	192	13.0	14.0	70	7.1	--
JUL 20	1100	381	28.0	29.0	85	6.7	6.6
AUG 31	1100	476	25.0	25.5	80	6.8	6.6
03070200 SALT LICK CREEK AT ROWLESBURG, WV (LAT 39 21 00 LONG 79 39 50)							
OCT 18	1320	14.4	9.5	13.0	95	7.4	8.6
03070500 BIG SANDY CREEK AT ROCKVILLE, WV (LAT 39 37 15 LONG 79 42 20)							
NOV 18	1105	144	2.0	3.0	--	7.1	11.0
DEC 30	1010	114	0.0	-3.0	160	6.6	10.0
FEB 11	1200	141	0.0	7.0	170	6.2	10.6
MAR 17	1600	426	9.0	14.0	165	6.5	9.0
APR 27	1110	332	10.0	14.0	85	7.1	8.8
JUN 06	1220	72	18.5	22.0	205	7.6	--
JUL 18	0950	11	23.0	23.5	150	7.3	8.0
AUG 31	1500	65	25.5	30.0	150	6.9	7.4
KINGS CREEK BASIN							
03110830 KINGS CREEK AT WEIRTON, WV (LAT 40 26 08 LONG 80 35 34)							
OCT 28	1040	29	3.0	7.5	390	8.6	13.0
NOV 17	0900	6.1	0.5	-8.5	440	8.0	13.6
DEC 15	0845	26	0.5	4.0	410	--	12.6
MAR 03	0840	39	0.0	5.5	315	7.8	13.0
APR 29	0900	128	9.5	28.0	300	7.9	10.8
APR 26	1410	35	12.0	15.0	435	8.5	13.2
MAY 25	0900	27	21.0	23.5	450	7.3	8.2
JUN 22	0930	9.6	17.0	16.0	500	8.0	9.0
JUL 20	0845	11	25.0	27.5	565	7.9	7.3
AUG 24	0930	4.1	20.0	23.5	400	8.1	--
SEP 21	1010	14	18.0	18.0	320	8.7	8.6

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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)
WHEELING CREEK BASIN							
03112000 WHEELING CREEK AT ELM GROVE, WV (LAT 40 02 40 LONG 80 39 40)							
OCT 27	1210	338	6.5	3.5	250	8.1	12.4
MAR 28	1145	547	8.5	22.5	280	8.0	10.8
APR 06	1045	2210	9.5	3.5	360	8.1	10.9
26	0900	145	10.0	11.0	400	8.0	10.5
JUN 21	0930	84	21.0	6.5	280	8.2	8.1
JUL 19	0910	47	25.0	24.0	435	7.9	7.0
AUG 23	1020	31	21.0	19.0	290	8.1	--
SEP 20	1010	55	22.0	18.5	350	10.1	8.4
LITTLE GRAVE CREEK BASIN							
03113700 LITTLE GRAVE CREEK NEAR GLENDALE, WV (LAT 39 57 50 LONG 80 42 04)							
OCT 27	1010	4.7	5.5	-1.0	230	8.0	11.8
NOV 15	1630	1.8	1.5	4.0	385	8.3	13.4
DEC 13	1440	4.6	0.5	-4.0	--	--	--
FEB 23	1115	12	0.5	0.5	--	7.9	12.2
APR 06	1300	22	9.0	4.0	310	7.9	11.4
26	1055	2.2	9.5	9.5	375	8.4	11.9
MAY 24	0910	1.0	20.0	31.5	380	7.7	8.6
JUN 02	0855	0.34	18.5	17.5	430	7.8	16.0
20	1500	0.90	21.0	28.0	390	7.5	8.8
JUL 19	1110	0.26	26.0	29.0	415	8.1	8.0
AUG 23	1250	0.47	23.5	26.5	420	8.2	--
SEP 20	1155	2.0	19.5	--	330	8.3	8.9
MIDDLE ISLAND CREEK AT LITTLE, WV (LAT 39 28 30 LONG 80 59 50)							
NOV 15	1305	89	1.0	5.0	170	7.7	13.2
APR 25	1255	895	15.0	14.0	120	8.4	8.7
MAY 23	1205	84	25.5	31.0	210	7.5	7.6
JUN 20	1225	14	26.0	33.5	190	7.3	6.8
JUL 18	1030	48	28.0	28.0	340	6.7	6.3
AUG 25	1255	83	20.0	17.0	370	6.9	--
BUFFALO RUN NEAR LITTLE, WV (LAT 39 29 13 LONG 81 00 27)							
OCT 26	1200	6.4	9.0	8.5	190	7.4	10.8
NOV 15	1140	0.45	1.0	4.0	255	7.6	12.6
DEC 13	1100	2.8	0.5	-3.0	--	--	--
FEB 22	1125	4.7	0.5	4.5	--	7.7	13.8
APR 05	1130	35	13.0	--	110	7.8	10.4
25	1030	1.4	11.0	10.0	255	8.0	11.5
MAY 23	1035	0.25	22.5	30.5	240	7.4	7.1
JUN 20	1100	0.21	21.5	26.5	280	7.3	7.8
JUL 18	1135	0.07	25.0	28.0	320	7.3	6.7
AUG 25	1140	0.34	20.5	17.0	340	7.4	--
LITTLE KANAWHA RIVER BASIN							
03151400 LITTLE KANAWHA RIVER NEAR WILDCAT, WV (LAT 38 44 00 LONG 80 31 23)							
NOV 11	1305	75	5.0	5.0	43	7.1	8.8
DEC 20	1300	110	4.0	7.0	<50	7.3	11.2
FEB 07	1355	55	0.5	-2.0	105	5.2	10.5
24	1520	2120	5.0	8.0	--	7.4	10.6
MAR 10	1100	154	5.0	13.0	--	7.3	10.0
APR 21	0925	56	17.5	24.0	<50	7.5	9.0
MAY 24	1345	14	21.5	27.0	<50	7.5	8.6
JUN 02	0920	4.6	22.0	20.5	60	7.3	--
JUL 11	1350	19	26.0	36.0	60	6.8	6.8
AUG 25	0930	79	19.0	19.5	65	6.4	6.8
LITTLE KANAWHA RIVER BELOW BURNSVILLE DAM, WV (LAT 38 50 41 LONG 80 37 45)							
JUL 16*	0750	80	21.0	20.0	--	7.0	6.4
AUG 17*	0925	30	21.0	17.0	70	7.0	7.0
23*	1340	8.5	26.0	26.0	70	7.4	6.6
SEP 01*	1445	5.9	23.0	28.0	80	8.2	8.0
28*	1600	341	18.0	17.0	90	7.0	--
29*	0915	241	16.0	12.0	70	7.1	--
NOV 11	1030	92	5.0	5.0	56	7.0	9.4
DEC 23	1305	132	0.5	0.5	100	7.2	9.6
JAN 27	1030	111	0.0	-3.0	<50	7.2	--
FEB 25	0835	1740	4.0	10.0	--	7.7	10.6
28	1430	604	1.0	2.0	--	7.5	10.0
MAR 10	0900	220	3.0	5.0	--	7.6	9.6
APR 20	1355	82	20.5	31.0	60	7.1	8.8
MAY 26	1025	3.6	22.5	25.5	70	7.3	7.6
JUN 02	1150	8.7	25.5	24.5	80	7.0	--
JUL 12	0945	25	26.5	27.0	85	6.9	6.4
AUG 24	1445	28	22.5	24.0	60	6.8	6.8

* 1976 Water year (previously not published)

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

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WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

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							
03151600 LITTLE KANAWHA RIVER AT BURNSVILLE, WV (LAT 38 51 55 LONG 80 40 32)							
NOV 11	1510	106	5.0	5.0	70	7.2	9.6
DEC 23	1030	158	0.5	0.0	200	7.2	10.0
JAN 27	1130	130	0.0	-2.0	<50	7.2	--
FEB 25	1100	2180	5.0	12.0	--	7.5	10.8
28	1440	656	--	--	--	7.3	10.4
MAR 10	0845	271	3.0	4.0	--	7.4	9.6
APR 20	1545	101	21.0	26.5	100	7.1	9.0
MAY 24	1515	2.4	26.5	26.0	130	7.9	8.8
JUN 02	1250	9.4	26.0	24.0	110	7.4	--
JUL 11	1535	28	30.0	37.5	80	6.9	6.6
AUG 24	1605	69	24.0	22.5	90	6.8	6.8
03152000 LITTLE KANAWHA RIVER AT GLENVILLE, WV (LAT 38 56 00 LONG 80 50 20)							
OCT 01	0945	1280	15.0	13.0	180	7.7	--
NOV 10	1530	158	5.5	7.0	120	7.2	10.2
JAN 26	1445	165	0.0	-2.0	140	7.3	--
MAR 09	1230	494	7.0	13.0	--	7.2	9.0
APR 18	1455	183	19.0	29.5	150	7.4	9.2
JUN 01	1545	19	25.5	28.0	390	7.1	--
JUL 12	1405	37	27.0	27.5	160	7.1	7.0
AUG 24	1215	86	22.0	20.5	180	6.9	6.6
03152200 BUCK RUN NEAR LEOPOLD, WV (LAT 39 07 26 LONG 80 41 26)							
NOV 05	1420	1.7	5.0	3.0	--	7.4	10.6
DEC 15	1130	2.6	2.0	4.0	70	7.2	10.6
JAN 24	1445	0.47	2.0	1.0	85	7.7	12.6
MAR 07	1225	3.7	5.0	8.0	--	7.0	9.2
APR 18	1250	0.96	21.0	27.5	90	7.5	9.6
MAY 31	1200	0.04	22.5	27.0	130	7.0	--
JUL 12	1225	0.03	23.5	27.0	170	7.0	5.6
AUG 22	1115	0.23	20.0	26.5	110	6.2	6.4
03153500 LITTLE KANAWHA RIVER AT GRANTSVILLE, WV (LAT 38 55 20 LONG 81 05 50)							
OCT 01	1300	3430	14.0	14.0	95	7.1	--
NOV 10	1345	341	5.5	9.5	130	7.0	9.6
DEC 17	1130	926	4.0	10.0	120	7.1	10.2
JAN 26	1220	332	0.0	-2.0	130	7.0	--
MAR 09	0945	1100	3.0	8.0	--	7.0	9.2
APR 20	1030	515	18.5	28.5	140	7.7	9.0
JUN 01	1405	41	27.5	35.0	190	7.6	--
JUL 12	1545	72	27.0	28.0	200	7.4	6.6
AUG 24	1000	171	21.5	20.0	100	7.1	6.4
03154250 TANNER RUN AT SPENCER, WV (LAT 38 48 11 LONG 81 21 58)							
NOV 04	1545	1.6	7.0	5.5	--	7.9	9.4
DEC 16	1700	1.8	2.0	5.0	250	8.0	10.4
JAN 26	0905	0.67	0.0	-3.0	220	7.8	--
MAR 08	1545	2.2	4.0	13.0	--	7.9	9.4
APR 19	0840	0.69	15.5	17.5	185	8.0	9.8
JUN 01	1130	0.01	27.5	30.0	415	8.0	--
JUL 13	0905	0.61	24.5	26.0	340	7.8	7.2
AUG 23	1510	0.11	28.0	28.0	360	7.3	6.4
03154500 REEDY CREEK NEAR REEDY, WV (LAT 38 57 40 LONG 81 23 25)							
NOV 05	0900	46	6.0	0.0	--	7.1	9.4
DEC 16	1505	53	4.0	10.0	150	7.0	10.2
JAN 25	1530	17	0.0	-3.0	160	7.0	--
MAR 08	1430	71	5.0	10.0	--	7.0	9.6
APR 19	1010	19	18.5	26.0	160	7.2	7.6
JUN 01	1015	6.2	23.0	27.5	180	7.1	--
JUL 13	1030	8.2	26.0	33.5	180	7.1	6.4
AUG 23	1325	6.9	23.5	24.0	160	7.3	6.6
03155000 LITTLE KANAWHA RIVER AT PALESTINE, WV (LAT 39 03 35 LONG 81 23 25)							
DEC 16	1345	1980	4.0	10.0	150	7.2	10.0
JAN 25	1230	530	0.0	-2.0	160	7.5	--
MAR 08	1230	2710	4.0	8.0	--	7.3	7.6
APR 19	1235	645	19.5	34.0	105	7.9	9.4
MAY 31	1620	83	27.0	30.5	160	7.5	--
JUL 13	1330	244	29.0	31.0	200	7.5	7.0
AUG 23	1030	330	22.5	20.0	110	7.3	6.4
03155500 HUGHES RIVER AT CISCO, WV (LAT 39 07 10 LONG 81 16 40)							
DEC 15	1410	374	1.5	8.0	155	7.7	10.0
JAN 25	1030	70	1.0	-2.0	150	7.5	12.0
MAR 08	1010	597	4.0	5.0	--	7.3	10.4
APR 19	1445	139	20.5	31.0	170	7.6	9.2
MAY 31	1430	22	24.0	29.0	160	7.3	--
JUL 13	1515	294	26.0	27.5	260	6.9	6.2
AUG 22	1500	73	22.0	21.0	195	6.9	6.6

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS
 WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	DISSOLVED OXYGEN (MG/L)
KANAWHA RIVER BASIN							
03179000 BLUESTONE RIVER NEAR PIPESTEM, WV (LAT 37 32 45 LONG 81 00 30)							
OCT 05	1050	154	13.0	13.0	265	--	10.8
NOV 15	1430	144	3.0	5.0	--	--	--
FEB 25	1210	4780	--	--	120	7.0	12.6
MAR 23	1040	794	5.0	6.0	160	7.6	--
MAY 24	1030	120	20.0	25.0	--	--	--
JUL 27	1230	111	22.5	--	--	--	--
AUG 30	1110	65	24.0	25.0	320	8.3	6.6
03180000 NEW RIVER AT BLUESTONE DAM, WV (LAT 37 38 35 LONG 80 53 00)							
NOV 05	1130	5720	6.5	--	--	--	--
DEC 06	1510	3670	2.0	3.0	155	--	11.2
MAR 14	1620	25900	10.0	19.0	125	6.8	9.5
MAY 04	1600	6120	18.0	21.0	--	--	--
MAY 27	0910	4650	22.0	27.0	160	7.7	7.2
JUN 29	0850	4640	22.0	29.0	--	--	--
JUL 26	0915	1430	26.0	--	--	--	--
03180500 GREENBRIER RIVER AT DURBIN, WV (LAT 38 32 35 LONG 79 50 00)							
NOV 15	0820	134	1.0	2.0	110	7.4	--
DEC 16	0910	287	3.0	2.0	70	--	--
FEB 25	0910	1750	3.0	10.0	--	--	--
MAR 23	1150	776	4.0	2.0	110	8.5	--
MAY 03	1310	88	17.0	23.0	162	--	11.6
MAY 31	1130	42	21.0	21.0	150	7.4	6.5
JUL 07	1000	42	23.5	27.0	270	7.4	5.3
AUG 10	1240	43	25.0	24.0	260	8.2	5.9
03181200 INDIAN DRAFT NEAR MARLINTON, WV (LAT 38 16 48 LONG 80 04 31)							
OCT 09	1130	224	--	--	--	--	--
OCT 09	1145	225	--	--	--	--	--
NOV 15	1155	2.3	8.0	10.0	180	8.6	--
DEC 13	0950	6.1	5.0	-1.0	140	--	--
JAN 20	1320	0.43	1.0	-2.0	200	8.2	--
FEB 10	1130	0.28	1.0	10.0	--	--	--
FEB 22	1240	2.1	8.0	12.0	--	--	--
FEB 24	1200	133	--	--	--	--	--
MAR 21	1100	4.5	10.0	8.0	155	8.6	--
MAY 06	0945	2.3	14.0	20.0	175	--	12.2
JUN 03	1050	0.16	20.0	18.0	200	8.4	6.5
JUL 07	0800	0.14	22.0	24.0	220	8.3	5.5
03182500 GREENBRIER RIVER AT BUCKEYE, WV (LAT 38 11 15 LONG 80 07 50)							
OCT 07	0900	222	16.0	16.0	180	7.5	--
OCT 09	1435	33800	--	--	--	--	--
NOV 16	1350	398	5.0	9.0	150	8.2	--
DEC 14	1200	1020	1.0	3.0	--	--	--
JAN 20	1055	127	0.5	-8.0	215	7.7	--
JAN 24	1140	141	1.0	-2.0	--	--	--
FEB 04	1030	141	1.0	2.0	--	--	--
FEB 10	1010	125	1.0	7.0	--	--	--
MAR 21	0955	1240	7.0	4.0	125	8.2	--
MAY 03	0955	232	16.5	21.0	175	--	8.6
JUN 03	0810	88	19.5	16.0	240	7.4	4.3
JUL 05	1020	92	23.0	23.0	190	8.3	6.3
AUG 10	0945	82	25.0	25.0	240	7.6	6.9
03182700 ANTHONY CREEK NEAR ANTHONY, WV (LAT 37 54 30 LONG 80 17 30)							
DEC 14	1215	292	1.0	6.0	--	6.3	13.8
JAN 20	1050	33	0.0	-12.0	100	6.8	--
FEB 09	1345	21	0.0	3.0	--	--	--
APR 28	1015	56	13.0	16.0	--	--	--
MAY 26	1030	27	18.5	21.0	100	6.7	9.2
JUL 06	1415	13	26.0	28.0	120	7.6	8.9
AUG 10	1240	9.1	24.0	26.0	--	7.8	8.8
SEP 01	1240	12	24.0	26.0	150	7.6	13.8
03182950 HOWARD CREEK AT CALDWELL, WV (LAT 37 46 54 LONG 80 23 15)							
OCT 07	0915	15	15.0	15.0	515	--	8.0
NOV 08	1415	41	4.0	-0.5	210	7.8	13.4
DEC 14	0935	180	1.0	--	110	6.9	13.2
JAN 11	1145	16	0.0	-10.0	270	7.4	14.4
FEB 09	--	15	0.0	3.0	--	--	--
MAR 16	1230	182	10.0	13.0	110	6.8	--
MAY 04	0945	47	16.0	17.0	--	--	--
MAY 26	0935	22	17.0	22.0	--	--	--
JUN 30	0935	21	20.0	24.0	360	7.7	9.2
AUG 10	1025	8.6	24.0	26.0	462	8.1	8.7
SEP 01	1010	9.8	22.0	24.0	510	8.0	8.0

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

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WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

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							
03183500 GREENBRIER RIVER AT ALDERSON, WV (LAT 37 43 30 LONG 80 38 30)							
OCT 26	1515	11300	8.0	7.0	104	7.1	10.8
DEC 07	1500	2870	3.0	6.0	165	--	13.8
JAN 24	1345	371	-0.5	-2.0	--	--	--
FEB 09	1000	210	0.0	-10.0	--	--	--
MAR 16	1040	4450	10.0	11.0	80	6.7	--
MAY 04	1245	529	17.0	19.0	--	--	--
25	0910	291	20.0	21.0	150	6.8	8.5
JUL 05	1405	264	26.0	30.0	180	7.7	7.7
26	1515	189	26.5	--	--	--	--
03184000 GREENBRIER RIVER AT HILLDALE, WV (LAT 37 38 25 LONG 80 48 20)							
NOV 02	1200	6940	9.0	10.0	--	7.5	--
DEC 07	1130	3470	1.0	4.0	115	7.1	13.4
MAR 15	1205	9010	10.0	20.0	75	6.8	12.8
MAY 05	0910	882	18.0	18.5	--	--	--
25	1310	343	22.0	25.0	150	7.0	7.8
JUL 05	1130	287	26.0	29.0	200	7.8	7.6
25	1425	140	26.0	--	--	--	--
03184200 BIG CREEK NEAR BELLEPOINT, WV (LAT 37 40 28 LONG 80 48 52)							
OCT 05	1340	0.66	16.0	18.0	145	--	11.8
DEC 08	1050	40	0.0	-6.0	85	--	--
JAN 12	1020	1.9	0.0	-5.0	120	7.0	13.7
FEB 02	1020	1.1	0.0	-4.0	105	7.0	--
MAR 15	1410	15	14.0	19.0	85	6.7	10.1
MAY 05	1020	8.5	14.5	22.0	--	--	--
25	1530	1.8	21.0	22.0	125	7.2	7.8
JUN 29	1345	7.6	23.0	28.0	--	--	--
JUL 06	0930	0.40	23.0	27.0	150	7.5	8.5
AUG 30	1340	1.7	25.0	31.0	100	8.4	5.2
03184500 NEW RIVER AT HINTON, WV (LAT 37 40 15 LONG 80 53 40)							
NOV 05	1115	7880	6.5	-2.0	--	--	--
MAR 14	1645	45900	10.0	19.0	70	6.6	12.8
MAY 03	1430	7550	20.0	26.0	--	--	--
24	1130	2300	22.0	24.0	160	7.4	8.4
JUL 26	1250	1480	28.0	--	--	--	--
03185000 PINEY CREEK AT RALEIGH, WV (LAT 37 45 40 LONG 81 09 50)							
OCT 01	0945	92	11.0	10.0	250	--	10.8
NOV 01	1230	110	6.0	6.0	200	6.9	12.7
DEC 06	1100	26	0.0	1.0	250	7.3	12.0
JAN 04	1140	26	1.0	4.0	310	6.9	11.0
FEB 01	1320	18	0.0	-1.0	300	7.4	--
MAR 14	1030	112	9.0	10.0	230	6.7	13.4
MAY 05	1205	74	16.0	17.0	--	--	--
23	1355	16	23.0	26.0	320	7.5	--
JUN 28	0915	21	20.0	22.0	320	6.9	9.3
JUL 25	1055	55	21.0	21.5	--	--	--
03186500 WILLIAMS RIVER AT DYER, WV (LAT 38 22 45 LONG 80 29 05)							
OCT 05	1230	232	14.0	19.0	<50	6.6	--
NOV 17	0930	116	1.0	1.0	<50	7.0	--
DEC 15	1240	438	3.0	5.0	<50	--	--
MAY 04	1245	365	14.0	20.0	<50	--	9.3
JUN 02	1115	28	20.5	23.0	110	7.6	7.0
JUL 06	0915	93	20.0	25.0	<50	7.0	6.0
AUG 09	0900	76	20.0	21.0	70	--	6.9
03189100 GAULEY RIVER NEAR CRAIGSVILLE, WV (LAT 38 17 30 LONG 80 38 30)							
OCT 06	1030	852	15.0	20.0	<50	6.8	--
NOV 16	1000	652	3.0	2.0	<50	6.8	--
MAR 25	1020	2070	5.0	4.0	<50	8.7	--
JUN 01	0920	192	23.0	22.0	110	8.3	6.4
AUG 09	1130	478	23.0	24.0	105	--	6.2
03189600 GAULEY RIVER BELOW SUMMERSVILLE DAM, WV (LAT 38 13 00 LONG 80 53 30)							
OCT 06	1100	2410	15.0	17.0	65	--	10.3
NOV 08	1210	2340	--	--	--	--	--
08	1330	2340	--	--	--	--	--
08	1550	1810	--	--	--	--	--
08	1615	1810	--	--	--	--	--
09	1100	991	9.0	--	--	--	--
09	1130	966	9.0	--	--	--	--
09	1430	591	9.0	--	--	--	--
09	1500	566	9.0	--	--	--	--
10	1115	193	9.0	--	--	--	--
10	1110	182	--	--	--	--	--
10	1545	213	9.0	--	--	--	--
10	1545	208	9.0	--	--	--	--
11	0950	116	8.0	--	--	--	--
11	0955	111	--	--	--	--	--
12	1135	400	9.0	--	--	--	--
MAR 21	1310	2480	7.5	18.0	50	6.1	--
APR 27	1245	656	8.0	15.0	--	--	--
MAY 25	1150	372	10.0	17.0	--	--	--
JUN 29	1240	1770	10.0	24.0	55	6.4	12.8
AUG 09	1310	1200	16.0	--	--	6.8	12.2

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS
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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)
KANAWHA RIVER BASIN--Continued							
03189650 COLLISON CREEK NEAR NALLEN, WV (LAT 38 10 35 LONG 80 52 07)							
OCT 04	1425	2.3	12.0	15.5	<50	--	8.5
NOV 04	1450	4.3	7.0	--	--	--	--
DEC 13	1350	14	3.0	2.0	<50	--	12.0
JAN 18	1025	2.5	0.0	-15.0	<50	6.8	13.0
FEB 10	0955	1.4	1.0	4.0	--	--	--
MAR 22	1215	5.6	6.0	2.0	<50	5.8	--
APR 27	0915	1.4	7.0	8.0	--	--	--
MAY 23	1310	0.38	14	28.0	--	--	--
JUN 29	0930	1.1	19	17.0	<50	5.5	8.7
AUG 08	1345	0.19	21	25.0	--	--	8.7
31	1255	0.87	18	25.0	<50	5.8	8.4
03190400 MEADOW RIVER NEAR MT. LOOKOUT, WV (LAT 38 11 25 LONG 80 56 55)							
NOV 10	1400	371	7.5	--	--	--	--
FEB 17	1200	690	0.0	-3.0	--	--	--
MAR 22	1030	817	7.0	7.0	60	6.7	--
MAY 25	1000	110	20.0	17.0	--	--	--
AUG 09	1000	89	24.0	--	--	7.1	8.5
03192000 GAULEY RIVER ABOVE BELVA, WV (LAT 38 14 00 LONG 81 10 45)							
OCT 04	1215	2940	14.5	16.0	70	--	10.0
FEB 08	1210	471	-1.0	1.0	--	--	--
MAR 17	1050	4170	8.0	9.0	50	6.2	--
MAY 23	1030	508	19.5	28.0	--	--	--
SEP 09	1110	698	22.0	24.0	80	6.9	--
03193000 KANAWHA RIVER AT KANAWHA FALLS, WV (LAT 38 08 20 LONG 81 12 45)							
NOV 22	1145	7100	--	--	--	--	--
DEC 15	1200	17500	3.0	1.0	90	7.5	11.6
MAR 08	1400	18100	8.0	13.0	80	6.4	11.0
APR 18	1115	7280	--	--	--	--	--
MAY 10	0920	10500	13.0	--	--	--	--
JUL 14	1035	4140	26.0	30.0	--	--	--
SEP 19	0915	4160	22.0	22.5	140	7.9	--
03193830 GILMER RUN NEAR MARLINTON, WV (LAT 38 19 12 LONG 80 05 52)							
NOV 15	1250	1.3	2.0	7.0	180	7.8	--
DEC 13	0855	5.0	1.0	-5.0	155	--	--
JAN 20	1410	0.17	0.0	-7.0	220	8.0	--
FEB 10	1215	0.12	--	--	--	--	--
22	1340	0.55	2.0	9.0	--	--	--
24	1240	92	2.0	14.0	--	--	--
MAR 21	1220	3.8	6.0	9.5	150	8.1	--
22	1240	18	5.0	1.0	--	--	--
MAY 06	1145	2.8	16.0	22.0	185	--	11.0
JUN 01	1140	<0.10	22.0	25.0	240	8.0	6.3
JUL 05	1220	<0.10	19.0	25.0	--	--	--
03194700 ELK RIVER BELOW WEBSTER SPRINGS, WV (LAT 38 35 50 LONG 80 29 20)							
OCT 05	0940	343	15.0	13.0	120	7.4	--
10	0930	4400	--	--	--	--	--
10	1055	5870	--	--	--	--	--
NOV 17	1215	276	4.0	8.0	115	7.6	--
DEC 15	1010	1000	3.0	2.0	65	--	--
JAN 21	1335	212	0.0	-3.0	118	8.2	--
FEB 23	1205	907	2.0	13.0	--	--	--
MAR 24	0900	1340	5.0	2.0	120	8.6	--
MAY 04	0905	374	17.0	18.0	115	--	8.8
JUN 02	0815	70	20.0	15.0	150	7.7	5.5
AUG 08	1000	104	24.5	24.0	120	7.2	6.3
03195100 RIGHT FORK HOLLY RIVER AT GUARDIAN, WV (LAT 38 38 08 LONG 80 27 58)							
OCT 04	1320	70	15.0	22.0	75	7.1	--
DEC 08	1110	439	1.0	-8.0	--	--	--
JAN 13	1210	26	1.0	-9.0	--	--	--
FEB 09	1120	23	1.0	0.0	--	--	--
MAR 17	0950	96	7.0	8.0	<50	7.8	--
APR 25	1350	30	--	--	--	--	--
MAY 26	1010	22	--	21.0	105	7.3	7.3
JUN 29	1120	156	19.5	23.0	110	7.2	7.2
AUG 05	1130	2.9	25.0	27.0	--	--	--
03195250 LEFT FORK HOLLY RIVER NEAR REPLETE, WV (LAT 38 41 19 LONG 80 26 01)							
NOV 09	0830	46	2.0	-1.0	--	7.6	--
DEC 06	0955	47	1.0	-1.0	<50	--	--
MAR 17	0820	110	6.0	3.0	<50	8.0	--
APR 25	1200	40	--	--	--	--	--
MAY 26	0845	13	18.0	17.0	110	7.6	14.2
JUN 29	0945	143	19.0	21.0	110	7.4	6.4
AUG 03	1130	9.3	22.0	24.0	80	--	6.6

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

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WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

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							
03195500 ELK RIVER AT SUTTON, WV (LAT 38 39 45 LONG 80 42 35)							
NOV 09	1150	907	--	6.0	--	--	--
DEC 06	1340	618	2.0	6.0	100	--	--
JAN 11	1250	341	1.0	-8.0	130	7.5	--
FEB 08	1150	266	1.0	-4.0	--	--	--
MAR 14	1250	5150	10.0	14.0	110	8.4	--
APR 26	1210	335	--	--	--	--	--
MAY 25	1255	184	15.0	26.0	115	9.1	11.0
JUN 28	1130	581	16.0	29.0	122	7.7	--
AUG 02	1010	192	21.0	21.0	92	--	7.2
03195600 GRANNY CREEK AT SUTTON, WV (LAT 38 40 36 LONG 80 42 47)							
NOV 08	1155	2.0	4.0	-1.0	--	--	--
DEC 08	0925	24	1.0	-4.0	--	--	--
JAN 11	1410	6.3	1.0	-7.0	--	--	--
FEB 08	1455	5.0	1.0	5.0	--	--	--
MAR 16	1145	7.4	12.0	13.0	200	8.7	--
APR 26	1025	2.2	--	--	--	--	--
MAY 27	1100	0.27	21.0	25.0	420	7.8	7.0
JUN 28	1030	1.9	23.0	28.0	320	8.2	6.2
03196600 ELK RIVER AT FRAMETOWN, WV (LAT 38 35 34 LONG 80 53 06)							
NOV 08	1325	1190	--	2.0	--	--	--
DEC 06	1220	750	1.0	3.5	110	--	--
MAR 14	1515	6180	10.0	16.5	115	8.0	--
APR 26	--	447	--	--	--	--	--
MAY 27	0940	206	21.0	20.0	130	7.2	6.1
AUG 02	1205	224	25.0	24.0	110	--	5.7
03196800 ELK RIVER AT CLAY, WV (LAT 38 27 36 LONG 81 05 15)							
NOV 09	1440	1370	--	7.0	--	--	--
MAR 15	1340	6850	10.0	25.0	105	8.5	--
APR 28	1330	510	--	--	--	--	--
MAY 25	0950	287	23.0	21.0	120	8.4	8.4
AUG 04	1050	240	25.0	25.0	--	--	--
03197000 ELK RIVER AT QUEEN SHOALS, WV (LAT 38 28 20 LONG 81 17 10)							
MAR 15	1050	7290	9.0	19.0	110	8.8	--
APR 28	1500	633	--	--	--	--	--
MAY 24	1230	281	24.0	26.0	--	--	--
AUG 04	1225	268	26.0	27.0	--	--	--
03198000 KANAWHA RIVER AT CHARLESTON, WV (LAT 38 22 10 LONG 81 42 05)							
OCT 28	1425	40000	12.0	--	--	--	--
MAR 15	1340	61800	--	--	--	--	--
MAY 19	1230	5240	--	--	--	--	--
SEP 22	1240	6820	--	--	--	--	--
03198450 DRAWDY CREEK NEAR PEYTONA, WV (LAT 38 07 29 LONG 81 41 33)							
NOV 01	1515	5.3	--	17.0	--	--	--
DEC 01	1155	1.6	1.0	--	--	--	--
JAN 20	1330	7.3	-1.0	-4.5	250	--	--
FEB 24	1440	34	6.0	11.0	190	6.8	--
MAR 24	1210	9.7	--	--	270	6.5	--
APR 27	1310	3.9	18.0	21.0	--	--	--
JUN 09	1155	2.6	15.5	15.5	630	6.6	--
JUL 27	1445	0.49	28.5	27.0	540	--	--
SEP 01	1155	0.38	29.5	32.0	650	7.3	--
03198500 BIG COAL RIVER AT ASHFORD, WV (LAT 38 10 45 LONG 81 42 40)							
NOV 03	1430	631	--	--	--	--	--
DEC 01	0950	133	1.0	--	--	--	--
FEB 24	1220	2700	5.0	13.5	210	7.5	--
APR 27	1100	270	13.0	16.0	--	--	--
JUN 09	1330	83	16.0	16.5	590	7.1	--
JUL 25	1355	74	23.5	24.5	--	--	--
AUG 25	1130	1570	19.5	22.0	280	7.3	--
03198550 BIG COAL RIVER NEAR ALUM CREEK, WV (LAT 38 15 00 LONG 81 47 54)							
OCT 26	1215	539	--	9.0	--	--	--
NOV 30	1130	197	2.0	-6.0	360	--	--
FEB 25	1240	3070	5.5	19.0	190	6.9	--
MAY 09	1130	552	16.0	17.0	--	--	--
JUN 06	1150	55	22.0	--	520	--	--
AUG 30	1115	243	25.0	27.0	300	7.6	--

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS
 WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

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							
03199000 LITTLE COAL RIVER AT DANVILLE, WV (LAT 38 04 47 LONG 81 50 12)							
NOV 01	1300	585	9.0	16.0	--	--	--
29	1130	110	3.0	-1.0	--	--	--
FEB 23	1325	866	5.0	17.0	310	7.6	--
MAR 24	1420	472	--	--	370	6.8	--
APR 27	1445	169	16.0	23.0	--	--	--
JUN 08	1030	45	15.0	14.0	1100	7.6	--
JUL 27	1135	64	22.0	24.0	550	7.0	--
AUG 26	1130	441	21.5	30.0	355	7.4	--
03199400 LITTLE COAL RIVER AT JULIAN, WV (LAT 38 09 17 LONG 81 51 10)							
NOV 03	1100	549	--	--	--	--	--
30	1440	118	2.0	-1.0	--	--	--
FEB 22	1140	568	1.0	10.5	340	--	--
MAR 24	1540	524	--	--	360	6.7	--
APR 28	1055	174	16.0	22.0	--	--	--
JUN 08	1250	44	15.0	17.0	1130	7.6	--
SEP 02	1205	117	25.0	31.5	500	7.9	--
03199700 COAL RIVER AT ALUM CREEK, WV (LAT 38 17 11 LONG 81 48 25)							
NOV 02	1100	1710	--	--	--	--	--
29	1515	331	4.0	-1.0	--	--	--
MAR 21	1320	1530	9.5	20.0	255	6.8	--
APR 28	1320	467	15.5	17.0	--	--	--
JUN 27	1230	119	19.5	17.5	660	7.3	--
JUL 26	1435	322	24.0	27.5	--	--	--
SEP 01	1500	330	29.0	35	340	7.9	--
03200500 COAL RIVER AT TORNADO, WV (LAT 38 20 20 LONG 81 50 30)							
OCT 27	1315	1410	10.0	--	--	--	--
DEC 14	1420	2540	4.0	11.0	200	7.6	11.4
MAR 11	1440	862	7.0	22.0	340	6.9	--
25	1305	1310	8.5	8.0	250	7.5	--
MAY 09	1610	1000	15.5	18.0	--	--	--
JUN 07	1430	118	20.5	--	640	7.3	--
AUG 01	1150	277	24.0	--	400	--	--
SEP 07	1230	248	24.0	26.5	315	7.6	--
03201000 POCATALICO RIVER AT SISSONVILLE, WV (LAT 38 31 35 LONG 81 37 50)							
OCT 06	1150	92	16.0	25.0	--	7.3	--
NOV 17	1420	41	3.0	8.0	320	7.3	12.8
DEC 10	1430	340	--	15.5	--	--	--
JAN 25	1105	74	0.0	0.0	310	6.8	--
MAR 08	1015	298	6.0	7.0	210	6.5	13.7
APR 21	0850	68	--	--	--	--	--
MAY 12	1550	62	17.0	27.0	245	6.5	--
JUL 15	1030	45	25.0	24.0	--	--	--
AUG 23	1020	42	20.0	19.0	255	7.6	--
SEP 12	1200	13	21.0	23.5	380	7.4	--
03201410 POPLAR FORK AT TEAYS, WV (LAT 38 27 23 LONG 81 55 54)							
OCT 06	0940	1.7	17.5	22.5	--	--	--
NOV 17	1225	1.4	2.0	--	205	--	13.6
DEC 13	1150	14	4.0	5.0	170	7.1	11.9
MAR 11	0910	4.6	6.0	12.0	70	6.6	13.6
APR 19	1415	3.2	--	--	--	--	--
MAY 12	1320	1.3	17.0	25.5	235	6.9	--
JUL 07	1320	0.16	26.0	30.5	--	--	--
AUG 23	1515	0.74	23.5	30.0	280	7.4	--
SEP 13	1055	0.47	20.0	28.0	260	7.4	--
GUYANDOTTE RIVER BASIN							
03202400 GUYANDOTTE RIVER NEAR BAILEYSVILLE, WV (LAT 37 36 15 LONG 81 38 44)							
DEC 02	1240	231	0.0	3.0	380	7.9	--
FEB 03	1020	174	-1.0	0.0	520	--	12.0
MAR 09	1640	337	7.5	16.5	400	8.2	--
31	1020	350	14.0	14.5	390	7.9	--
APR 05	--	36700	--	--	--	--	--
05	1445	11300	--	--	--	--	--
MAY 10	1430	406	14.0	12.0	--	--	--
JUN 01	1530	244	23.0	28.0	250	7.2	7.3
JUL 28	1545	126	23.0	27.0	350	--	--

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

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WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

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							
03202480 BRIER CREEK AT FANROCK, WV (LAT 37 33 50 LONG 81 39 16)							
OCT 29	0930	6.0	--	--	--	--	--
DEC 03	1050	2.8	0.0	-4.0	--	--	--
FEB 01	1615	1.6	-1.0	-3.5	195	--	13.2
MAR 08	1520	3.5	7.0	15.0	170	8.6	--
30	1720	8.0	15.5	23.0	150	8.1	--
APR 04	--	980	--	--	--	--	--
MAY 11	0830	5.2	8.0	1.0	--	--	--
JUN 02	0850	0.66	15.0	17.0	280	7.3	8.4
03202490 INDIAN CREEK AT FANROCK, WV (LAT 37 34 00 LONG 81 39 10)							
OCT 29	1120	36	6.0	--	--	--	--
DEC 03	0910	15	0.0	-4.0	90	--	--
MAR 09	1310	26	5.5	10.0	110	7.0	--
30	1635	37	15.5	23.0	90	6.7	--
APR 04	--	6300	--	--	--	--	--
MAY 11	1000	34	11.0	17.0	--	--	--
JUN 02	1130	5.3	18.0	23.0	200	6.7	8.7
JUL 28	1740	5.2	23.0	30.0	145	--	--
SEP 08	1430	4.8	22.0	25.0	135	--	--
03202750 CLEAR FORK AT CLEAR FORK, WV (LAT 37 37 20 LONG 81 41 42)							
OCT 28	1300	180	6.5	--	--	--	--
DEC 02	1550	61	1.0	3.0	--	--	--
FEB 02	1320	42	-1.0	5.0	450	--	12.4
MAR 09	1105	114	4.0	14.0	350	6.8	--
30	1415	116	14.0	23.0	360	6.9	--
APR 04	--	9900	--	--	--	--	--
MAY 10	1220	109	12.0	11.0	--	--	--
JUN 01	1300	23	24.0	29.0	625	7.2	8.9
JUL 28	1355	37	21.0	28.5	410	--	--
03203600 GUYANDOTTE RIVER AT LOGAN, WV (LAT 37 50 34 LONG 81 58 50)							
NOV 30	1005	411	2.0	-7.0	--	--	--
MAR 08	0940	979	7.0	3.0	338	8.6	9.4
MAY 17	1055	486	--	--	--	--	--
JUN 22	1100	362	22.0	--	330	7.2	--
JUL 29	0955	320	24.0	22.0	--	--	--
03203670 WHITMAN CREEK AT WHITMAN, WV (LAT 37 48 28 LONG 82 01 42)							
OCT 27	1400	10	6.0	3.0	--	--	--
JAN 26	1100	6.7	5.0	4.0	270	7.7	--
MAR 08	1055	18	7.0	7.0	245	8.4	11.8
JUN 20	1330	1.1	22.0	28.5	285	7.0	--
AUG 30	1150	6.9	21.0	27.0	--	--	--
03204000 GUYANDOTTE RIVER AT BRANCHLAND, WV (LAT 38 13 15 LONG 82 12 10)							
OCT 05	1405	701	19.5	27.5	--	--	--
MAR 09	1110	1700	8.0	19.0	280	6.8	11.8
APR 20	1120	973	--	--	--	--	--
MAY 17	1445	694	--	--	--	--	--
JUL 14	1120	277	29.0	32.0	--	--	--
AUG 02	1345	1550	22.5	--	210	--	--
SEP 15	1240	290	21.0	27.5	625	--	--
03204500 MUD RIVER NEAR MILTON, WV (LAT 38 23 15 LONG 82 06 46)							
OCT 05	1000	100	18.5	25.5	--	7.1	--
NOV 16	1430	40	7.0	--	125	8.4	10.2
DEC 10	1125	344	--	13.0	--	--	--
MAR 09	1300	278	8.0	22.0	100	6.4	11.4
APR 20	1355	101	--	--	--	--	--
MAY 12	1025	126	13.0	19.5	120	6.7	--
JUL 08	1340	8.1	26.5	33.0	--	--	--
AUG 22	1420	38	22.0	29.0	100	--	--
SEP 16	1145	11	21.0	22.5	140	--	--
TWELVEPOLE CREEK BASIN							
03206600 EAST FORK TWELVEPOLE CREEK NEAR DUNLOW, WV (LAT 38 01 02 LONG 82 17 46)							
OCT 27	0950	68	8.0	3.0	--	7.4	--
DEC 01	1120	15	1.0	0.0	--	--	--
FEB 01	1210	12	0.0	-2.0	110	7.6	--
MAR 09	1500	56	7.0	22.0	115	8.5	--
JUN 15	1515	2.7	24.0	26.0	--	--	--
JUL 21	1245	0.43	29.0	35.0	--	--	--
AUG 24	1305	123	20.5	22.0	--	--	--

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS
WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	DISSOLVED OXYGEN (MG/L)
TWELVEPOLE CREEK BASIN--Continued							
03206790 EAST FORK TWELVEPOLE CREEK BELOW EAST LYNN DAM, WV (LAT 38 08 52 LONG 82 23 00)							
OCT 04	1345	130	19.0	27.0	--	6.9	--
NOV 15	1230	105	6.5	7.0	82	--	12.0
DEC 17	1125	215	3.5	9.0	85	7.4	13.0
JAN 27	1105	59	4.0	1.0	130	7.4	--
MAR 10	1425	115	8.0	22.0	60	5.6	11.7
APR 19	1100	45	--	--	--	--	--
MAY 11	1125	121	13.5	18.5	--	6.7	--
JUL 14	1330	13	24.0	33.0	--	--	--
AUG 03	1115	21	23.0	27.5	80	6.9	--
03207020 TWELVEPOLE CREEK BELOW WAYNE, WV (LAT 38 14 56 LONG 82 26 06)							
OCT 04	1050	210	17.0	23.5	--	7.0	--
NOV 15	1500	136	4.0	7.0	104	--	12.8
MAR 10	1225	401	8.0	20.0	75	6.2	12.4
APR 19	0950	154	--	--	--	--	--
MAY 11	1450	322	--	--	--	--	--
JUL 15	0815	20	26.0	20.0	--	--	--
AUG 03	1430	56	24.0	31.0	130	7.1	--
03207057 BEECH FORK BELOW BEECH FORK DAM, WV (LAT 38 18 28 LONG 82 25 28)							
DEC 03	0855	14	1.0	-7.0	--	--	--
FEB 01	1415	4.2	1.0	0.0	265	7.5	--
18	1010	54	0.0	--	--	--	--
23	1315	354	3.0	--	--	--	--
MAR 11	0815	58	8.0	6.0	180	8.4	--
APR 05	1100	1790	--	12.0	--	--	--
05	1315	1820	11.0	7.0	--	--	--
06	1030	1240	9.0	6.5	--	--	--
06	1345	1150	9.0	7.0	--	--	--
JUN 29	1430	31	26.5	28.5	220	6.9	--
JUL 08	1120	1.4	27.0	31.5	--	--	--
28	1255	4.0	23.0	27.0	--	--	--
AUG 26	0835	17	22.0	18.0	--	--	--
BIG SANDY RIVER BASIN							
03213000 TUG FORK AT LITWAR, WV (LAT 37 29 05 LONG 81 50 40)							
OCT 28	1400	606	9.0	11.0	--	7.8	--
NOV 29	1515	227	3.0	-5.0	--	--	--
FEB 02	1310	213	2.0	2.0	725	8.4	--
MAR 07	1510	591	9.5	9.0	470	8.5	12.4
APR 04 or 05	--	54500	--	--	--	--	--
JUN 20	1315	212	24.0	26.0	750	8.0	7.6
JUL 26	1105	349	23.0	24.0	--	--	--
AUG 31	1150	149	25.0	27.0	--	--	--
03213500 PANTHER CREEK NEAR PANTHER, WV (LAT 37 26 45 LONG 81 52 15)							
OCT 28	1235	39	2.0	1.0	--	7.5	--
NOV 29	1425	12	2.5	-3.0	--	--	--
FEB 02	1210	14	2.0	1.0	430	8.3	--
MAR 07	1355	22	8.0	9.0	245	7.4	12.8
JUN 20	1400	8.5	21.0	24.0	340	7.9	8.3
24	0840	49	17.0	20.0	120	--	9.4
JUL 26	1020	11	21.0	20.0	--	--	--
AUG 31	1110	29	20.0	24.0	--	--	--
03213700 TUG FORK AT WILLIAMSON, WV (LAT 37 40 21 LONG 82 16 50)							
MAR 09	1035	854	9.0	13.0	420	8.4	12.0
APR 05	--	94000	--	--	--	--	--
JUN 21	1810	317	--	--	--	--	--
JUL 21	0920	149	30.0	27.0	--	--	--
AUG 25	1030	1130	--	--	--	--	--
03214000 TUG FORK NEAR KERMIT, WV (LAT 37 49 05 LONG 82 23 20)							
APR 06	--	104000	--	--	--	--	--
JUN 23	1420	428	21.0	23.5	760	7.7	--
JAN 26	1525	25300	--	--	--	--	--
26	1720	27900	--	--	--	--	--
27	0945	25600	--	--	--	--	--
FEB 03	0950	1680	--	--	--	--	--
MAR 23	0955	2070	11.0	13.0	440	7.2	--
03214900 TUG FORK AT GLENHAYES, WV (LAT 38 00 20 LONG 82 30 53)							
OCT 26	1355	1630	--	--	--	--	--
DEC 02	1255	529	3.0	-2.0	--	--	--
MAR 01	1345	2780	--	--	--	--	--
10	0955	1610	9.0	13.0	330	7.9	--
APR 05	0935	28100	--	--	--	--	--
05	1250	30400	--	--	--	--	--
05	1615	34700	--	--	--	--	--
05	1850	33900	--	--	--	--	--
06	0755	43800	--	--	--	--	--
06	1235	51000	--	--	--	--	--
08	0750	12900	--	--	--	--	--
08	1350	9400	--	--	--	--	--
09	0740	5430	--	--	--	--	--
MAY 10	0940	1650	--	--	--	--	--
JUN 27	1400	1190	7.6	30.5	450	7.6	--
JUL 28	0930	654	--	24.0	--	--	--
SEP 02	0820	462	12.0	28.0	--	--	--

GROUND-WATER RECORDS

275

GROUND-WATER LEVELS

BERKELEY COUNTY

392725077582401. Local number, 20-5-7.
 LOCATION.--Lat 39°27'25", 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) above mean sea level. Measuring point: Top edge of recorder shelter base, 3.3 ft (1.01 m) above land-surface datum.
 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 1976 TO SEPTEMBER 1977
 NOON VALUES FROM DIGITAL RECORDER

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	38.18	33.95	38.17	40.77	45.29	45.60	29.95	35.96	41.57	46.40	46.47	56.63
10	30.45	34.99	37.50	41.15	46.10	45.52	32.05	36.28	41.89	47.09	47.66	56.94
15	34.04	35.83	38.32	41.89	45.98	42.11	33.89	37.17	42.92	47.70	49.80	*57.07
20	35.31	36.47	39.04	42.89	46.23	41.84	35.08	38.09	43.05	45.16	52.19	*57.12
25	34.44	37.19	39.66	43.99	46.53	39.18	35.32	39.17	44.11	45.79	55.05	57.17
Eom	32.36	37.49	40.32	44.85	46.47	38.30	35.96	40.29	45.02	45.53	56.23	.....

WTR YEAR 1977 MAX 29.52 APR 6, 1977 MIN 57.18 SEP 26, 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) above mean sea level. 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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 6	73.76	DEC 1	73.46	FEB 2	73.62	APR 6	72.91	JUN 1	73.78	AUG 3	73.88
13	73.64	8	73.48	9	73.67	13	73.08	8	73.80	10	73.88
20	73.41	15	73.48	16	73.57	20	73.23	15	73.84	17	73.88
27	73.49	22	73.47	23	73.39	27	73.43	22	73.86	24	73.87
NOV 3	73.49	29	73.46	MAR 2	73.29	MAY 4	73.56	29	73.86	31	73.86
10	73.50	JAN 5	73.44	9	73.20	11	73.63	JUL 6	73.86	SEP 7	73.86
17	73.59	12	73.44	16	73.13	18	73.71	13	73.87	14	73.87
21	73.45	19	73.50	23	73.08	25	73.74	20	73.87	21	73.87
		26	73.56	30	73.01			27	73.88	28	73.87

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) above mean sea level. 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 ft (4.14 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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	16.91	DEC 6	17.36	FEB 7	17.14	APR 4	16.48	JUN 6	17.54	AUG 8	17.02
11	15.37	13	16.78	14	16.21	11	15.63	13	17.56	15	15.81
18	16.05	20	16.71	21	16.24	18	16.11	20	17.60	22	16.14
22	16.31	27	16.90	28	16.12	25	16.19	27	17.61	29	16.44
25	16.44	JAN 3	16.98	MAR 7	15.75	MAY 2	16.36	JUL 5	17.41	SEP 6	16.82
NOV 1	16.32	10	16.95	14	15.54	9	16.14	11	17.50	12	17.17
8	16.46	17	16.72	21	15.89	16	16.45	18	17.54	20	17.37
15	16.80	24	16.94	28	16.26	23	16.92	25	17.54	26	17.43
22	17.03	31	17.06			31	17.33				
29	17.34										

* Estimated

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) above mean sea level. 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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 2	4.85	DEC 4	4.90	FEB 5	5.45	APR 2	4.88	JUN 4	6.14	AUG 6	5.37
9	3.64	11	4.74	12	5.18	9	4.76	11	6.10	13	5.09
17	4.20	18	4.90	19	5.02	16	4.96	18	5.97	20	4.99
23	4.73	25	5.01	26	4.65	23	4.99	25	5.86	27	5.05
30	4.85	JAN 1	4.98	MAR 5	4.90	30	4.97	JUL 2	5.08	SEP 3	5.28
NOV 6	4.92	8	5.12	12	4.99	MAY 7	4.87	9	5.30	10	5.24
13	4.98	15	5.07	18	4.85	14	4.94	16	5.24	17	5.26
20	4.92	22	5.05	26	4.76	21	4.98	23	5.34	24	5.43
27	4.95	29	5.24			28	5.98	30	5.28		

374809080173901. Local number, 45-8-4.

LOCATION.--Lat 37°48'09", long 80°17'39", Hydrologic Unit 05050003, at Greenbrier State Park, West Virginia Dept. of Natural Resources, near White Sulphur Springs.

Owner: State of West Virginia.

AQUIFER.--Marcellus Formation of Middle Devonian Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in (0.15 m), depth 44 ft (13.4 m), cased with steel.

DATUM.--Land-surface datum is about 1,875 ft (572 m) above mean sea level. Measuring point: Top of breather pipe, in sanitary seal, 1.48 ft (0.45 m) above land-surface datum.

REMARKS.--Well buried January 1976.

PERIOD OF RECORD.--December 1970 to January 1976, discontinued.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.02 ft (0.92 m) below land-surface datum, Mar. 20, 1975; lowest measured, 11.46 ft (3.49 m) below land-surface datum, Oct. 18, 1973.

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) above mean sea level. Measuring point: Top of casing at land-surface datum.

REMARKS.--No water-level record Oct. 2-5, 8-12, 17-19, 21-31, Nov. 1-22, Dec. 7-21, 23-28.

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 1976 TO SEPTEMBER 1977
NOON VALUES FROM GRAPHIC RECORDER

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	.....	.....	9.39	9.98	10.90	6.16	0.33	10.64	12.06	12.62	13.23	13.55
10	.....	.....	.....	9.95	11.28	7.13	3.49	10.80	12.12	12.72	13.35	13.60
15	5.37	.....	.....	10.24	9.74	0.55	8.57	11.14	12.27	12.52	13.46	13.80
20	*6.98	.....	.....	10.49	10.45	2.85	9.80	11.42	12.22	12.61	13.56	13.88
25	.....	9.10	.....	10.64	6.49	0.76	10.00	11.63	12.34	12.80	13.70	14.09
Eom	.....	9.26	9.40	10.85	7.85	4.87	10.56	11.92	12.42	12.96	13.65	14.20

WTR YEAR 1977 MAX 0.31 APR 5, 1977 MIN 14.20 SEP 30, 1977

* Estimated.

GROUND-WATER LEVELS

277

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) above mean sea level. 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. Recorder removed November 23, 1976.
 PERIOD OF RECORD.--March 1968 to November 1976, water-level recorder, November 1976 to present, 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 Nov. 6, 1970.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
NOON VALUES FROM GRAPHIC RECORDER

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	.....	269.92										
10	.....	269.73										
15	.....	269.83										
20	*270.35	269.67										
25	270.43	.....									
Eom	269.83	.....									

NOTE.--Water-level measurement May 4, 1977, 269.33 ft.

LEWIS COUNTY

390553080280801. Local number, 16-1-8.
 LOCATION.--Lat 39°05'53", long 80°28'08", Hydrologic Unit 05020002, at Jackson's Mill 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 92 ft (28.0 m), cased.
 DATUM.--Land-surface datum is about 1,020 ft (311 m) above mean sea level. Measuring point: Hole in concrete pump platform at land-surface datum.
 REMARKS.--Water level affected by stage of West Fork River. Well inaccessible during the year.
 PERIOD OF RECORD.--May 1961 to May 1976, discontinued.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.40 ft (2.87 m) below land-surface datum, Dec. 30, 1969; lowest measured, 23.85 ft (7.27 m) below land-surface datum, Oct. 14, 1963.

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) above mean sea level. Measuring point: Drilled hole in steel plate covering casing at land-surface datum.
 REMARKS.--Water level affected by stage of West Fork River. No measurements this year.
 PERIOD OF RECORD.--May 1961 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.88 ft (2.71 m) below land-surface datum, Dec. 30, 1969; lowest measured, 23.95 ft (7.30 m) below land-surface datum, Sept. 18, 1961.

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) above mean sea level. 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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	61.15	DEC 8	59.52	FEB 23	63.37	APR 4	61.77	JUN 8	62.67	AUG 3	61.73
12	61.00	15	59.32	MAR 1	62.75	11	61.48	16	62.84	10	61.90
18	60.05	22	59.05	8	62.57	20	61.39	23	63.05	17	61.95
25	60.09	JAN 7	58.85	14	62.50	25	61.37	29	62.82	24	62.18
NOV 1	60.11	14	58.37	22	62.07	MAY 3	61.55	JUL 6	62.55	31	61.97
8	60.05			29	61.99	10	61.69	14	62.31	SEP 7	61.75
15	59.88					18	61.93	21	61.87	14	61.48
23	59.72					23	62.17	28	61.55	21	61.37
29	59.64					31	62.48			28	61.22

* Estimated.

GROUND-WATER LEVELS

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) above mean sea level. 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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 1	38.80	DEC 3	38.63	FEB 4	38.92	APR 1	38.95	JUN 3	39.12	AUG 5	39.31
8	38.81	10	38.64	11	39.00	8	38.96	10	39.14	12	39.37
15	38.81	17	38.62	18	38.97	15	38.84	17	39.04	19	39.40
22	38.78	24	38.66	25	38.94	22	38.82	24	39.08	26	39.42
29	38.75	31	38.66	MAR 4	39.01	29	38.77	JUL 1	39.12	SEP 2	39.46
NOV 5	38.68	JAN 7	38.71	11	39.00	MAY 6	38.80	8	39.15	9	39.56
12	38.68	14	38.76	18	38.99	13	38.86	15	39.20	16	39.57
19	38.63	21	38.82	25	39.02	20	38.90	22	39.26	23	39.66
26	38.60	28	38.90			27	39.04	29	39.26	30	39.74

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) above mean sea level. Measuring point: Top of casing, 3.0 ft (0.91 m) above land-surface datum.

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 1976 TO SEPTEMBER 1977
NOON VALUES FROM GRAPHIC RECORDER

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	24.33	24.21	24.37	24.47	24.58	24.64	24.50	24.56	24.80	24.67	24.93	25.04
10	24.28	24.22	24.34	24.43	24.64	24.66	24.52	24.55	24.76	24.72	24.96	25.04
15	24.28	24.25	24.37	24.46	24.66	24.58	24.55	24.61	24.79	24.76	24.89	25.09
20	24.30	24.27	24.38	24.48	24.67	24.53	24.57	24.66	24.82	24.84	24.94	25.05
25	24.25	24.30	24.41	24.52	24.66	24.56	24.58	24.72	24.82	24.86	24.96	25.08
Eom	24.22	24.32	24.42	24.52	24.68	24.56	24.56	24.76	24.72	24.86	25.02	25.12

WTR YEAR 1977 MAX 24.21 NOV 4, 5, 1976 MIN 25.12 SEP 30, 1977

MERCER COUNTY

372623081071101. Local number, 48-2-4.

LOCATION.--Lat 37°26'23", long 81°07'11", Hydrologic Unit 05050002, at Spanishburg High School, Princeton.

Owner: Mercer County Board of Education.

AQUIFER.--Mauch Chunk Group of Upper Mississippian Age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 8 in (0.20 m), reported depth 200+ ft (61+ m), cased with steel.

DATUM.--Land-surface datum is about 2,070 ft (631 m) above mean sea level. Measuring point: Top of sanitary seal on casing, 2.05 ft (0.62 m) above land-surface datum.

REMARKS.--Well affected by pumping. No measurements this year.

PERIOD OF RECORD.--August 1971 to February 1976, discontinued.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.55 ft (4.13 m) below land-surface datum, Sept. 13, 1973; lowest measured, 25.55 ft (7.79 m) below land-surface datum, Mar. 14, 1974.

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) above mean sea level. 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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 6	2.10	DEC 1	flowing	FEB 2	flowing	APR 6	flowing	JUN 1	2.88	AUG 3	12.07
13	2.10	8	flowing	9	flowing	13	flowing	8	4.94	10	14.95
20	2.32	15	flowing	16	flowing	20	flowing	15	6.89	17	14.57
27	0.97	22	flowing	23	flowing	27	flowing	22	7.73	24	16.17
NOV 3	flowing	29	flowing	MAR 2	flowing	MAY 4	flowing	29	9.12	31	15.76
10	flowing	JAN 5	flowing	9	flowing	11	flowing	JUL 6	9.10	SEP 7	21.57
24	flowing	12	flowing	16	flowing	18	flowing	13	9.03	14	20.50
		19	flowing	23	flowing	25	1.07	20	9.59	21	20.38
		26	flowing	30	flowing			27	10.93	28	19.16

GROUND-WATER LEVELS

279

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) above mean sea level. Measuring point: Top of casing, 1.5 ft (0.46 m) below land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.96 ft (2.73 m) below land-surface datum, Apr. 11, 1973; 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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 6	11.10	DEC 1	11.17	FEB 2	13.13	APR 6	9.29	JUN 1	12.61	AUG 3	13.92
13	10.08	8	11.11	9	12.98	13	9.97	8	12.92	10	13.89
20	10.64	15	11.06	16	12.93	20	10.83	15	12.78	17	13.39
27	9.90	22	11.61	23	12.89	27	11.21	22	12.99	24	13.66
NOV 3	9.82	29	11.46	MAR 2	12.23	MAY 4	11.58	29	13.16	31	13.91
10	10.16	JAN 5	12.12	9	10.96	11	11.67	JUL 6	12.68	SEP 7	13.95
17	10.74	12	12.48	16	10.13	18	12.22	13	13.53	14	13.93
24	11.19	19	12.46	23	9.81	25	12.51	20	14.01	21	14.08
		26	12.61	30	9.59			27	13.97	28	13.90

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) above mean sea level. 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 current year.

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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 1	5.50	MAY 4	0.65								
8	3.90										
15	2.10										
22	0.70										

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) above mean sea level. 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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 7	7.58	DEC 7	6.89	FEB 1	7.68	APR 5	6.82	JUN 7	8.12	AUG 2	7.91
14	7.26	14	6.79	8	7.06	12	6.86	14	8.26	9	7.73
21	6.98	21	6.71	15	7.13	19	7.35	21	8.40	16	7.29
28	7.22	28	7.31	22	7.02	26	7.41	28	8.37	23	7.25
NOV 4	7.26	JAN 4	7.45	MAR 1	6.83	MAY 3	7.38	JUL 5	8.34	30	7.80
11	7.32	11	7.46	8	6.68	10	7.03	12	7.68	SEP 6	7.91
18	7.38	18	7.46	15	6.65	17	7.24	19	7.69	13	8.66
23	7.45	25	7.49	22	6.71	24	7.55	26	8.03	20	8.79
30	7.16			29	6.73	31	7.61			27	8.76

GROUND-WATER LEVELS
MONONGALIA COUNTY--Continued

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) above mean sea level. 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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	51.95	JAN 21	65.53	MAR 28	55.00	MAY 27	67.17	JUL 27	71.25	SEP 27	71.55
DEC 28	60.35	FEB 23	54.05	APR 26	54.80	JUN 29	71.61	AUG 29	70.24		

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 32 ft (9.75 m).
DATUM.--Land-surface datum is about 2,050 ft (625 m) above mean sea level. 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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 6	52.00	DEC 1	52.20	FEB 2	51.90	APR 6	51.20	JUN 1	51.40	AUG 3	52.00
13	52.10	8	52.10	9	51.80	13	51.40	8	51.20	10	52.20
20	51.90	15	52.00	16	51.70	20	51.50	15	51.50	17	52.30
27	52.00	22	51.90	23	51.50	27	51.60	22	51.60	24	52.00
NOV 3	52.00	29	51.90	MAR 2	51.40	MAY 4	51.50	29	51.50	31	51.90
10	52.30	JAN 5	52.10	9	51.30	11	51.30	JUL 6	51.60	SEP 7	52.20
17	52.20	12	52.00	16	51.40	18	51.40	13	51.70	14	52.30
24	52.10	19	52.30	23	51.20	25	51.60	20	51.70	21	52.10
		26	52.10	30	51.30			27	51.90	28	52.20

MORGAN COUNTY

393043078174001. Local number, 19-5-14.
LOCATION.--Lat 39°30'45", 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) above mean sea level. Measuring point: Top of breather pipe, in cap on casing, 1.2 ft (0.37 m) above land-surface datum.
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 measured, 31.40 ft (9.57 m) below land-surface datum, Mar. 19, 1975; 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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	33.52	DEC 21	33.43	MAR 9	33.06	MAY 25	33.75				
NOV 23	33.66	JAN 26	33.27	APR 20	32.94	JUL 6	35.13				

NOON VALUES FROM GRAPHIC RECORDER

DAY	AUG	SEP
5		33.60
10		33.82
15		34.04
20	34.91	34.73
25	33.72	35.05
From	33.15	34.70

GROUND-WATER LEVELS

281

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) above mean sea level. Measuring point: Top of concrete slab at land-surface datum.
 REMARKS.--No measurements this year but not discontinued.
 PERIOD OF RECORD.--December 1970 to current year.
 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.

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) above mean sea level. Measuring point: Top of casing at land-surface datum.
 REMARKS.--No measurements this year but not discontinued.
 PERIOD OF RECORD.--December 1970 to current year.
 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.

380708080102201. Local number, 44-4-9.
 LOCATION.--Lat 38°07'08", long 80°10'22", 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 8 in (0.20 m), depth 53 ft (16.2 m), cased with steel.
 DATUM.--Land-surface datum is about 2,100 ft (640 m) above mean sea level. Measuring point: Top of seal on casing, 0.55 ft (0.17 m) above land-surface datum.
 REMARKS.--Well being used, no measurements this year.
 PERIOD OF RECORD.--December 1970 to November 1975, discontinued.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.65 ft (0.20 m) below land-surface datum, Apr. 15, 1975; lowest measured, 12.11 ft (3.69 m) below land-surface datum, Aug. 5, 1975.

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) above mean sea level. Measuring point: Top of casing, 0.85 ft (0.26 m) above land-surface datum.
 REMARKS.--No measurements this year but not discontinued.
 PERIOD OF RECORD.--December 1970 to current year.
 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.

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) above mean sea level. 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 water level measured, 108 ft (32.9 m) below land-surface datum, Feb. 3, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	65.10	JAN 21	65.80	MAR 28	64.80	MAY 27	66.92	JUL 27	66.83	SEP 27	66.90
DEC 28	64.25	FEB 23	65.55	APR 26	66.00	JUN 29	65.80	AUG 29	66.94		

GROUND-WATER LEVELS

PRESTON COUNTY--Continued

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) above mean sea level. 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.
 PERIOD OF RECORD.--April 1971 to January 1976, water-level recorder, January 1976 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 water level, 14.84 ft (4.52 m) below land-surface datum, Aug. 16, 1975.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
 NOON VALUES FROM DIGITAL RECORDER

DAY	OCT	NOV	DEC	JAN
5	10.76	10.46	11.30	11.25
10	5.38	11.08	10.24	11.23
15	10.45	11.24	10.15	
20	11.22	11.35	10.92	
25	9.88	11.46	11.26	
Eom	10.26	10.72	11.39	

MONTHLY WATER-LEVEL MEASUREMENTS

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 23	11.20	APR 27	11.35	JUN 7	12.20	JUL 20	11.82	AUG 31	11.90	SEP 22	11.55

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) above mean sea level. 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 current year, weekly 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.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 6	22.31	OCT 27	21.02	NOV 10	20.10	NOV 24	19.60	DEC 8	18.15	DEC 22	17.43
13	22.10	NOV 5	20.70	17	19.70	DEC 1	18.45	15	17.77	29	17.20
20	21.21										

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) above mean sea level. Measuring point: Floor of shelter box, 2.45 ft (0.75 m) above land-surface datum.
 REMARKS.--Water level affected by nearby pumping. No water-level record Dec. 28, 29, 31, Jan. 1, 7, 10-12.
 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, semi-annual 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 water level, 23.35 ft (7.12 m) below land-surface datum, Oct. 28, 1971.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
 NOON VALUES FROM GRAPHIC RECORDER

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.85	13.86	12.99	13.59								
10	14.89	12.97	14.70	.....							
15	13.35	16.10	17.00	13.83								
20	12.98	13.59	13.10	.....							
25	13.25	*18.89	12.83	.....							
Eom	15.35	*13.56	.....	.....						

* Estimated.

GROUND-WATER LEVELS

283

RANDOLPH COUNTY--Continued

385509079311401. Local number, 18-5-44.
 LOCATION.--Lat 38°55'09", long 79°31'14", Hydrologic Unit 05020004, on U.S. Route 33, Harman.
 Owner: Jack E. Judy.
 AQUIFER.--Pocono Formation of Lower Mississippian Age.
 WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in (0.15 m), depth 67 ft (20.4 m), cased with steel.
 DATUM.--Land-surface datum is about 2,390 ft (728 m) above mean sea level. Measuring point: Top of casing, 1.4 ft (0.43 m) above land-surface datum.
 REMARKS.--Water level affected by nearby pumping. September, 1977, discontinued.
 PERIOD OF RECORD.--July 1971 to August 1973, weekly water-level measurements, September 1976 to current year, weekly water-level measurements.
 EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 8.75 ft (2.67 m) below land-surface datum, Jan. 5, 1973, Oct. 8, 1976; lowest measured, 12.46 ft (3.80 m) below land-surface datum, July 9, 1971.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 1	11.60	OCT 8	8.75	OCT 15	10.04	APR 23	10.10				

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) above mean sea level. 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 water level 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 1976 TO SEPTEMBER 1977
NOON VALUES FROM DIGITAL RECORDER

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	18.90	18.78	19.59	19.43	19.63	18.68	18.55	19.15	20.18	19.62	19.24	19.27
10	18.23	18.97	18.85	19.20	19.74	19.06	18.93	18.98	20.22	19.81	19.07	19.26
15	18.67	19.19	18.79	19.48	18.78	18.70	19.31	19.48	20.06	19.19	18.52	19.64
20	18.83	19.39	18.77	19.57	18.92	18.76	19.59	19.70	19.99	19.56	18.67	19.42
25	18.50	19.49	19.12	19.42	18.67	19.11	19.05	19.75	20.08	19.15	18.97	19.39
Eom	18.41	19.68	19.50	19.74	19.13	19.39	19.37	20.01	19.72	19.22	19.13	19.33
WTR YEAR 1977	MAX	17.96	OCT 9, 1976	MIN	20.33	JUN 4, 1977						

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) above mean sea level. Measuring point: Top of casing, 1.55 ft (0.47 m) above land-surface datum.
 REMARKS.--No measurements this year but not discontinued.
 PERIOD OF RECORD.--June 1971 to current year.
 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.

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) above mean sea level. 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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 6	29.55	DEC 1	29.40	FEB 2	28.50	APR 6	28.50	JUN 1	29.80	AUG 3	29.70
13	29.55	8	29.50	9	28.45	13	28.70	8	29.80	10	29.60
22	29.45	15	28.90	16	28.50	20	29.00	15	29.70	17	28.70
NOV 3	29.45	22	28.70	23	28.55	MAY 4	29.70	22	29.70	24	28.80
10	29.45	JAN 5	28.90	MAR 2	28.40	11	29.80	JUL 6	29.70	31	29.20
17	29.40	12	28.70	9	28.30	18	29.80	13	29.70	7	29.30
24	29.40	20	28.50	16	28.10	25	29.80	22	29.80	14	29.30
				23	28.40					21	29.60

GROUND-WATER LEVELS

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) above mean sea level. 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 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 6	6.30	DEC 1	6.70	FEB 2	6.60	APR 6	5.90	JUN 1	7.30	AUG 3	6.85
13	6.10	8	6.60	9	6.80	13	7.20	8	7.40	10	6.80
20	6.60	15	6.60	16	6.20	20	7.40	15	7.00	17	7.10
27	6.40	22	6.50	23	5.90	26	7.50	22	6.75	24	7.30
NOV 3	6.40	29	6.70	MAR 2	6.10	MAY 4	6.80	29	6.70	31	7.50
10	6.50	JAN 5	6.90	9	6.15	11	7.30	JUL 6	6.90	SEP 7	7.40
17	6.60	12	6.80	16	6.30	18	7.60	13	7.30	14	7.50
24	7.10	19	6.90	23	6.25	25	7.30	20	7.50	21	7.00
		26	6.60	30	6.30			27	5.90	28	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) above mean sea level. 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, 20.70 ft (6.31 m) below land-surface datum, Aug. 10, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 6	13.00	DEC 1	11.10	FEB 2	13.50	APR 6	13.50	JUN 1	17.10	AUG 3	13.40
13	16.90	8	17.00	9	12.00	13	12.40	8	12.20	10	20.70
20	16.20	15	11.70	16	17.80	20	12.00	14	13.90	17	15.70
27	7.90	22	15.50	23	18.70	27	19.50	22	14.40	23	17.70
NOV 3	18.70	29	14.40	MAR 2	17.50	MAY 4	11.70	29	13.10	30	11.20
10	15.50	JAN 5	18.80	9	11.10	11	15.10	JUL 6	17.10	7	13.90
17	18.70	12	19.90	16	11.30	18	16.90	14	17.80	14	13.20
26	19.40	19	9.00	23	11.30			20	13.70	21	13.10
		26	19.80	30	10.90			27	12.40	28	9.90

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) above mean sea level. 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 1976 TO SEPTEMBER 1977

NOON VALUES FROM GRAPHIC RECORDER

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	26.76	26.37	27.35	28.10	28.75	28.21	25.75	27.33	28.05	27.77	27.67	27.56
10	26.31	26.57	27.18	28.15	29.12	28.24	25.70	27.15	27.73	27.45	28.40	27.20
15	26.13	26.80	27.44	28.28	29.06	27.75	26.18	27.52	27.47	27.05	28.05	27.09
20	26.42	27.02	27.55	28.40	29.38	27.15	26.79	27.60	27.18	26.77	27.55	27.12
25	26.53	27.12	27.77	28.60	29.11	27.22	27.05	27.73	27.13	27.30	27.43	26.91
Eom	26.44	27.29	28.07	28.57	28.38	27.40	27.22	27.92	27.60	26.98	27.68	26.75

* Estimated.

GROUND-WATER LEVELS

285

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 2015 ft (615 m) above mean sea level. Measuring point: Top of recorder shelter floor, 2.62 ft (0.80 m) above land-surface datum.

REMARKS.--Drilled Dec. 19, 1976. Aquifer test data available. Digital recorder installed Feb. 17, 1977.

PERIOD OF RECORD.--December 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 20.09 ft (6.12 m) below land-surface datum, Apr. 5, 1977; lowest, 29.95 ft (12.18 m) below land-surface datum, July 24, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
NOON VALUES FROM GRAPHIC RECORDER

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5						*20.13	20.09	21.55	29.88	22.85	28.72	22.60
10						20.79	20.29	21.23	27.62	26.89	27.53	23.13
15						20.42	21.40	21.08	26.68	26.25	25.39	24.47
20			*22.00		20.97	22.05	21.30	26.89	26.47	36.64	24.17	24.90
25				*22.23	20.89	21.70	22.96	28.28	25.32	34.78	24.21	24.61
Eom					20.67	21.10	22.45	29.82	23.90	29.90	23.48	24.43
WTR YEAR 1977		MAX	20.09	APR 5, 1977	MIN	38.49	JUL 24, 1977					

* Estimated.

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FACTORS FOR CONVERTING U.S. CUSTOMARY UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the U.S. customary units published herein to the International System of Units (SI). Subsequent reports will contain both the U.S. customary and SI unit equivalents in the station manuscript descriptions until such time that all data will be published in SI units.

Multiply U.S. customary 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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