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West Virginia
1982



Water Resources Data West Virginia Water Year 1982



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT WV-82-1
Prepared in cooperation with the State of West Virginia
and with other agencies

CALENDAR FOR WATER YEAR 1982

1981

OCTOBER							NOVEMBER							DECEMBER						
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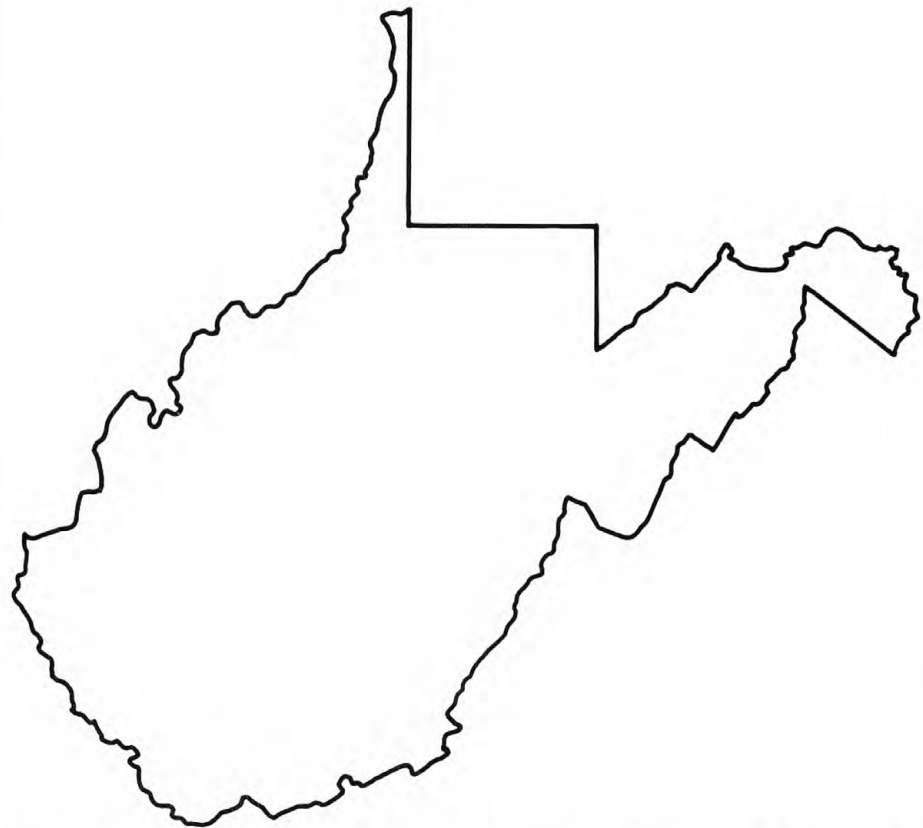
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Water Resources Data West Virginia Water Year 1982

by W.N. Embree, E.A. Friel, T.A. Ehlke, and S.M. Ward



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT WV-82-1
Prepared in cooperation with the State of West Virginia
and with other agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

JAMES G. WATT, Secretary

GEOLOGICAL SURVEY

Dallas L. Peck, Director

For information on the water program in West Virginia write to
District Chief, Water Resources Division
U.S. Geological Survey
3416 Federal Building
Charleston, West Virginia 25301

1983

PREFACE

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

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

- | | | |
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IX

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BERKELEY	392725077582401	20-5-7	Martinsburg	329
BRAXTON	384003080462601	34-2-15	Gassaway	329
GILMER	385604080495901	33-3-1	Glenville	329
GRANT	391652079181401		Mt. Storm	330
GREENBRIER	374804080174001	45-8-2	White Sulphur Springs	330
HAMPSHIRE	391257078404601	23-6-46	Augusta	330
HARDY	385714078441301	25-4-5	Trout Pond Recreation Area	331
LEWIS	390553080280802	16-1-9	Jackson's Mill	331
	390008080283401	SJ4	Brownsville	331
MARION	393101080150501		Farmington	331
	393057080161901		Farmington (west)	332
MARSHALL	395610080452501	4-3-7	Glendale	332
MASON	385450082064601	38-3-53	Pt. Pleasant	332
	385451082062001	38-3-54	Pt. Pleasant (north)	333
MERCER	372149081055001	48-5-1	Princeton	333
MINERAL	392114079081101	22-5-23	Sulphur City	333
MINGO	373554081493401		Justice	334
MONONGALIA	394006080194801	9-1-47	Wadestown	334
	392923079571801	9-7-33	Halleck	334
MORGAN	393043078174001	19-5-14	Berkeley Springs	335
POCAHONTAS	380634080164801		Droop Mountain State Park	335
PRESTON	393306079474501	11-3-8	Masontown	335
RANDOLPH	385341079575401	18-3-110	Coalton	336
	385100079522901	H-63	Beverly	336
RITCHIE	391226081024901	28-3-3	Harrisville	336
TUCKER	390135079275601	15-6-17	Canaan Valley State Park	337
WAYNE	375827082211501	50-6-5	Cabwaylingo State Forest	337
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WATER RESOURCES DATA FOR WEST VIRGINIA, 1982

INTRODUCTION

Water resources data for the 1982 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 116 gaging stations; stage only records for 9 gaging stations; stage and contents for 8 lakes and reservoirs; contents for 1 reservoir; change in contents for 1 reservoir; water quality for 55 gaging stations; and water levels for 29 observation wells. Also included are 2 crest-stage partial-record stations and 1 low-flow partial record station. Locations of these sites are shown on figures 2 and 3. Additional water data were collected at various sites, not involved in the systematic data collection program, and are published as miscellaneous measurements. These data represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in West Virginia.

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

For water years 1961 through 1970, streamflow data were released by the Geological Survey in annual reports on a State-boundary basis. Water-quality records for water years 1964 through 1970 were similarly released either in separate reports or in conjunction with streamflow records.

Beginning with the 1971 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-82-1." Water-Data reports are for sale by the National Technical Information Service, U. S. Department of Commerce, Springfield, Virginia, 22161.

Additional information, including current prices, for ordering specific reports may be obtained from the district chief at the address given on the back of the title page or by telephone (304) 347-5130.

COOPERATION

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

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

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

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

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.

WATER RESOURCES DATA FOR WEST VIRGINIA, 1982

SUMMARY OF HYDROLOGIC CONDITIONS

Streamflow for the 1982 water year was generally above normal throughout West Virginia except in the west-central area, which was about two-thirds of normal. Figures 4 and 4a show monthly and annual discharges at four sites in different regions of the State.

October and November streamflow was average or slightly below throughout the State, except for October in the eastern and northeastern areas which were considerably above normal. December streamflow was considerably below normal statewide except in the east.

January streamflow was below normal in the northeast and west-central regions, and slightly above elsewhere. All regions experienced a considerable freezing trend during some or most of the month. The northern areas experienced high runoff during February, whereas the southern part of the State was more or less normal. Generalized rains during March caused above-normal streamflow and some high water throughout the State, but very few new peaks were observed. April and May streamflows were about half-normal Statewide.

Localized rains caused June and July streamflows to be several times higher than normal in most areas of the State, but no new or particularly high peaks were noted. August and September streamflows were about normal throughout the State except in the north where the September flow was several times higher than normal.

Surface-water quality was near the long-term median concentration for most dissolved constituents during November, December, January, February, and March. Specific conductance in the Kanawha River at Winfield ranged from about 150 to 220 $\mu\text{mho/cm}$ during this period compared to the long-term median of 200 $\mu\text{mho/cm}$. Specific conductance at most sites in the Gauley River basin ranged from about 20 to 75 $\mu\text{mho/cm}$. Specific conductance in the Guyandotte River was generally greater than at other sites during this period, ranging from about 200 to 520 $\mu\text{mho/cm}$.

During December, January, and February, water temperatures generally ranged from about 0°C to 8°C. In general, lower temperatures were observed in northern and mountainous areas than in southern and western areas near the Ohio River. Dissolved oxygen concentrations were generally greatest during this period. For example, the observed maximum dissolved oxygen concentration in the Kanawha River at Winfield, 12.7 mg/L, occurred February 2 at a temperature of 3.5°C.

Increased water temperature in April, May, and June was generally accompanied by lesser dissolved oxygen concentration at most sites. Dissolved oxygen concentration in the Gauley River at Belva on April 20 was 9.8 mg/L in comparison with 14.0 mg/L on January 28.

Most dissolved chemical constituents increased in concentration during June, July, August, and September, because of decreased streamflow. Most dissolved chemical constituents were near or at yearly maximum concentrations during this period. For example, the yearly maximum dissolved-solids concentration in the Kanawha River at Winfield was 142 mg/L on June 29.

Ground-water levels were generally above normal in the northwestern one-third of the State and below normal in the remainder of the State.

The index well in Gilmer County, near the center of the State, reached record high levels at the end of March. A graphical illustration of water levels for the index well is shown in figure 5.

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

Fecal coliform bacteria are bacteria that are present in the intestines or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory they are defined as all organisms which produce blue colonies within 24 hours when incubated at 44.5°C $\pm$ 0.2°C on M-FC medium (nutrient medium for 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 $\pm$ 1.0°C on M-enterococcus medium (nutrient medium for bacteria growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Bed material: See Bottom material.

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

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

Ash mass is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500°C for 1 hour. The ash mass values of zooplankton and phytoplankton are expressed in grams per cubic meter (g/m³), and periphyton and benthic organisms in grams per square meter (g/m²).

Dry mass refers to the mass of residue present after drying in an oven at 60°C for zooplankton and 105°C for periphyton, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry mass values are expressed in the same units as ash mass.

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

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

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

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

Bottom material (continued)

Total in bottom material is the total amount of a given constituent in a representative sample of bottom material. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined.

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

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

Chemical oxygen demand (COD) is a measure of the chemically oxidizable material in the water, and furnishes an approximation of the amount of organic and reducing material present. The determined values 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 ($\mu\text{g/L}$, $\mu\text{g/L}$) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

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

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

Not detected (ND) means that 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 cell/mL of sample.

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

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

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

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

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

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

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material such as humus. The quantity, characteristics, and causes 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.

Sediment (continued)

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 rock or tree, upon which an organism lived.

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

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

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

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

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45 μ m membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results. Determinations of "suspended, recoverable" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituent.

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45 μ m membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total." Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent.

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

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

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the year.

Tons per acre-foot indicates the dry mass of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration in milligrams per liter by 0.00136.

Tons per day is the quantity of substance in solution or suspension that passes a stream section during a 24-hour day.

Total is the total amount of a given constituent in a representative water-suspended sediment sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total." (Note that the word "total" does double duty here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determines all of the constituents in the sample.)

Total load (tons) is the total quantity of any individual constituent, as measured by dry mass or volume, that is dissolved in a specific amount of water (discharge) during a given time. It is computed by multiplying the total discharge in ft^3/s , times the mg/L of the constituent, times the factor 0.0027, times the number of days.

Total, recoverable is the amount of a given constituent that is in solution after a representative water-suspended sediment sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the "total" amount (that is less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

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.

WDR is used as an abbreviation for "Water-Data Report" in the REVISED RECORDS paragraph to refer to State and annual basic-data reports published since 1975.

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

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

DOWNSTREAM ORDER AND STATION NUMBER

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

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

NUMBERING SYSTEM FOR WELLS AND MISCELLANEOUS SITES

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

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

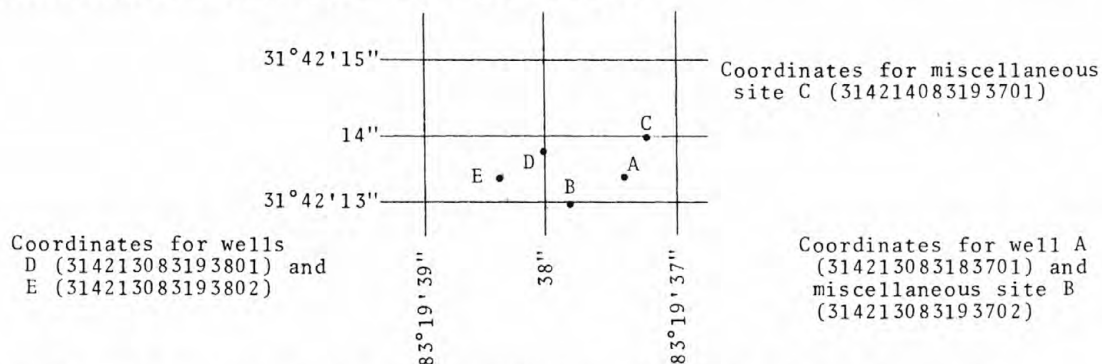


Figure 1. System for numbering wells and miscellaneous sites (latitude and longitude)

SPECIAL NETWORKS AND PROGRAMS

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

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

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

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

EXPLANATION OF STAGE AND WATER-DISCHARGE RECORDS

Collection and computation of data

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Accuracy of field data and computed results

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

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

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

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

Other data available

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

Information on the availability of unpublished data or statistical analyses may be obtained from the district office.

EXPLANATION OF WATER-QUALITY RECORDS

Collection and examination of data

Surface-water samples for analyses are usually collected at or near gaging stations. The quality-of-water records are given immediately following the discharge records at these stations. Where a surface-water daily record station is not available or where the water quality differs significantly from that at the nearby surface-water station, the continuing water-quality record is published with its own station number and name in the regular downstream order sequence.

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

For ground-water records, no descriptive statements are given; however, the well number, depth of well, date of sampling and/or other pertinent data are given in the table containing the chemical analyses of the ground water.

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 discharge.

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.

WATER RESOURCES DATA FOR WEST VIRGINIA, 1982

EXPLANATION OF GROUND-WATER LEVEL RECORDS

Collection of the data

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

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

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

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

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

Thirty-seven manuals by the U.S. Geological Survey have been published to date in the series on techniques describing procedures for planning and executing specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) is on surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises. The reports listed below are for sale by the U.S. Geological Survey, Branch of Distribution, 604 South Pickett St., Alexandria, VA 22304 (authorized agent of the Superintendent of Documents, Government Printing Office).

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

- 1-D1. *Water temperature--influential factors, field measurement, and data presentation*, by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.
- 1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W. W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.
- 2-D1. *Application of surface geophysics to ground-water investigations*, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.
- 2-E1. *Application of borehole geophysics to water-resources investigations*, by W. S. Keys and L. M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages.
- 3-A1. *General field and office procedures for indirect discharge measurements*, by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.
- 3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.
- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.
- 3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages.
- 3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.
- 3-A6. *General procedure for gaging streams*, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.
- 3-A7. *Stage measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages.
- 3-A8. *Discharge measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages.
- 3-A9. *Measurement of time of travel and dispersion in streams by dye tracing*, by E. F. Hubbard, F. A. Kilpatrick, L. A. Martens, and J. F. Wilson, Jr.: USGS--TWRI Book 3, Chapter A9. 1982. 44 pages.
- 3-A11. *Measurement of discharge by moving-boat method*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages.
- 3-B1. *Aquifer-test design, observation, and data analysis*, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages.
- 3-B2. *Introduction to ground-water hydraulics, a programed text for self-instruction*, by G. D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.
- 3-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J. E. Reed: USGS--TWRI Book 3, Chapter B3. 1980. 106 pages.
- 3-C1. *Fluvial sediment concepts*, by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.
- 3-C2. *Field methods for measurement of fluvial sediment*, by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.
- 3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages.
- 4-A1. *Some statistical tools in hydrology*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages.
- 4-A2. *Frequency curves*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages.
- 4-B1. *Low-flow investigations*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages.
- 4-B2. *Storage analyses for water supply*, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.
- 4-B3. *Regional analyses of streamflow characteristics*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages.
- 4-D1. *Computation of rate and volume of stream depletion by wells*, by C. T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages.
- 5-A1. *Methods for determination of inorganic substances in water and fluvial sediments*, by M. W. Skougstad and others, editors: USGS--TWRI Book 5, Chapter A1. 1979. 626 pages.
- 5-A2. *Determination of minor elements in water by emission spectroscopy*, by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages.
- 5-A3. *Methods for analysis of organic substances in water*, by D. F. Goerlitz and Eugene Brown: USGS--TWRI Book 5, Chapter A3. 1972. 40 pages.
- 5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, edited by P. E. Greeson, T. A. Ehlike, G. A. Irwin, B. W. Lium, and K. V. Slack: USGS--TWRI Book 5, Chapter A4. 1977. 332 pages.
- 5-A5. *Methods for determination of radioactive substances in water and fluvial sediments*, by L. L. Thatcher, V. J. Janzer, and K. W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages.
- 5-C1. *Laboratory theory and methods for sediment analysis*, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.
- 7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages.
- 7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L. F. Konikow and J. D. Bredehoeft: USGS--TWRI Book 7, Chapter C2. 1978. 90 pages.
- 7-C3. *A model for simulation of flow in singular and interconnected channels*, by R. W. Schaffranek, R. A. Baltzer, and D. E. Goldberg: USGS--TWRI Book 7, Chapter C3. 1981. 110 pages.
- 8-A1. *Methods of measuring water levels in deep wells*, by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages.
- 8-B2. *Calibration and maintenance of vertical-axis type current meters*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages.

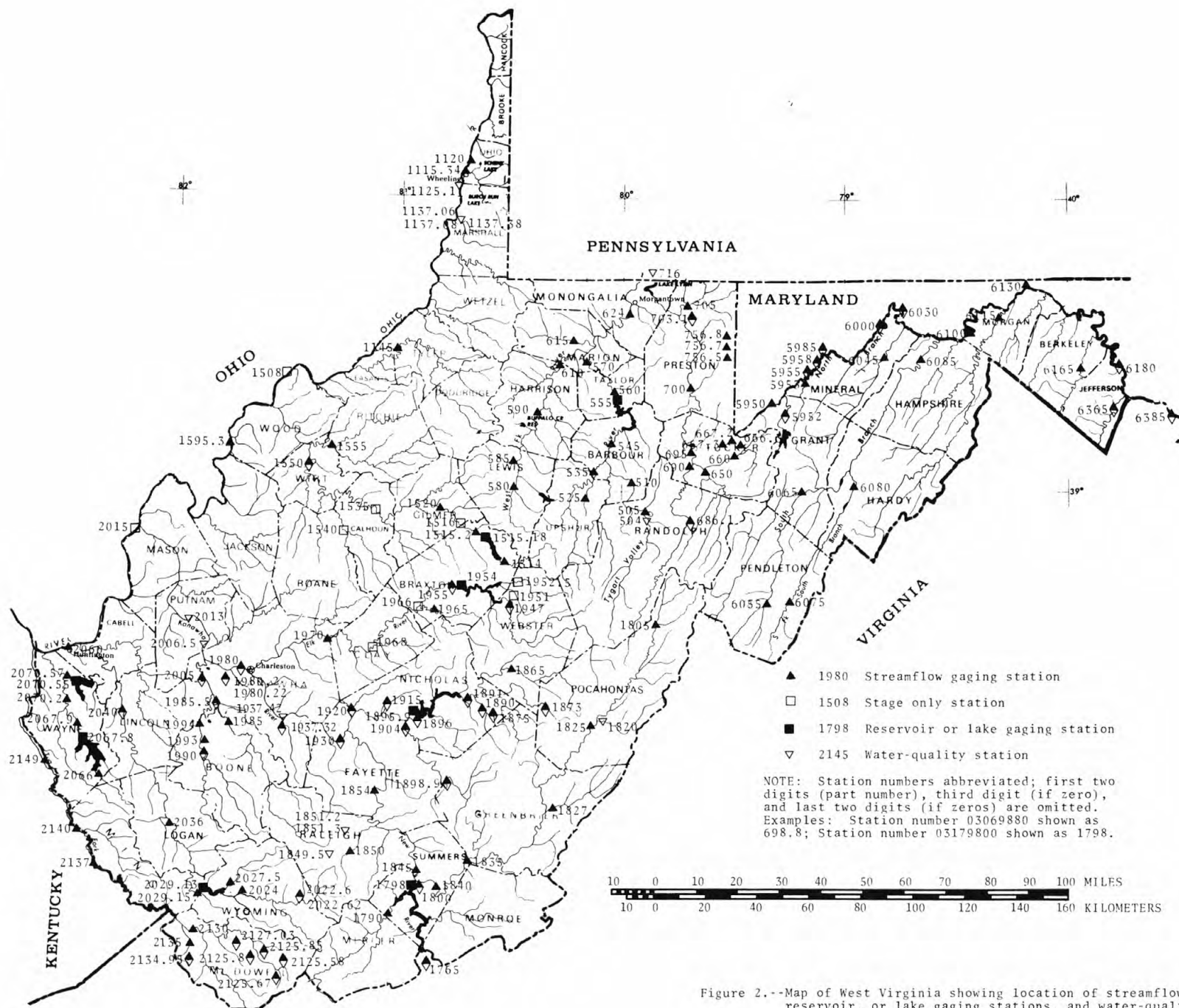


Figure 2.--Map of West Virginia showing location of streamflow, reservoir, or lake gaging stations, and water-quality stations.

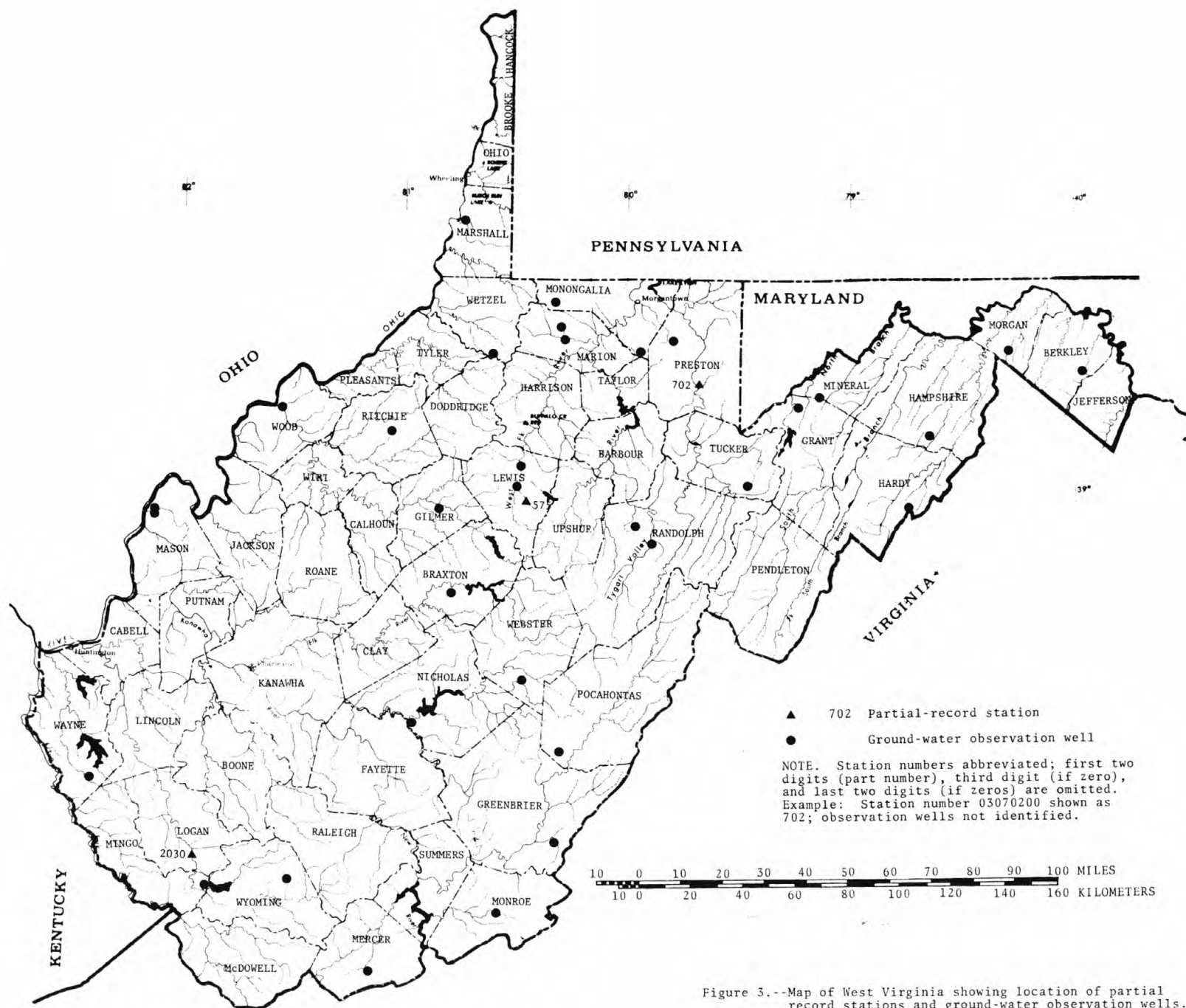


Figure 3.--Map of West Virginia showing location of partial record stations and ground-water observation wells.

WATER RESOURCES DATA FOR WEST VIRGINIA, 1982

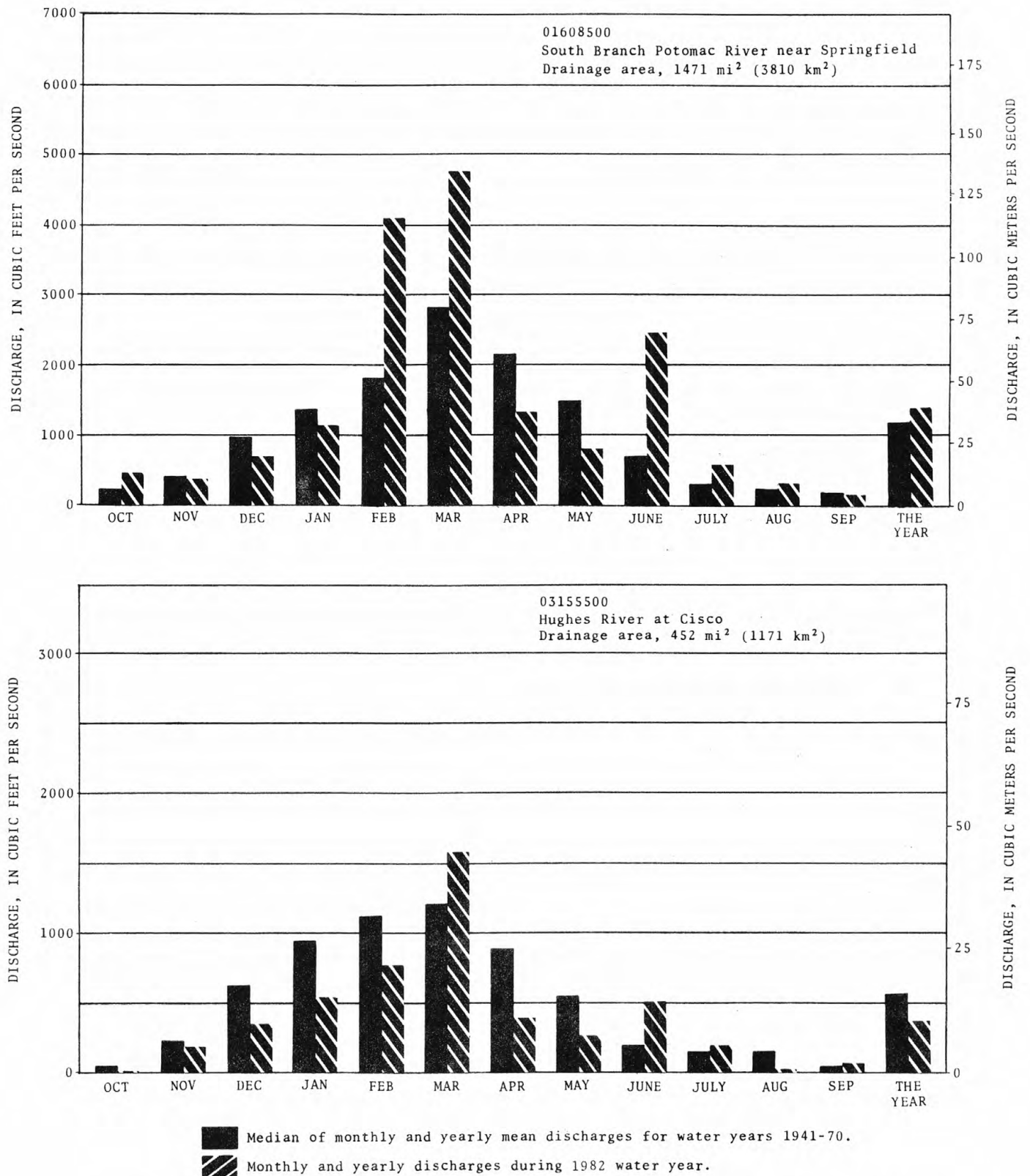


FIGURE 3.--DISCHARGE AT THE SOUTH BRANCH POTOMAC RIVER AND THE HUGHES RIVER INDEX GAGING STATIONS DURING THE 1982 WATER YEAR COMPARED TO MEDIAN DISCHARGE FOR THE PERIOD 1941-70

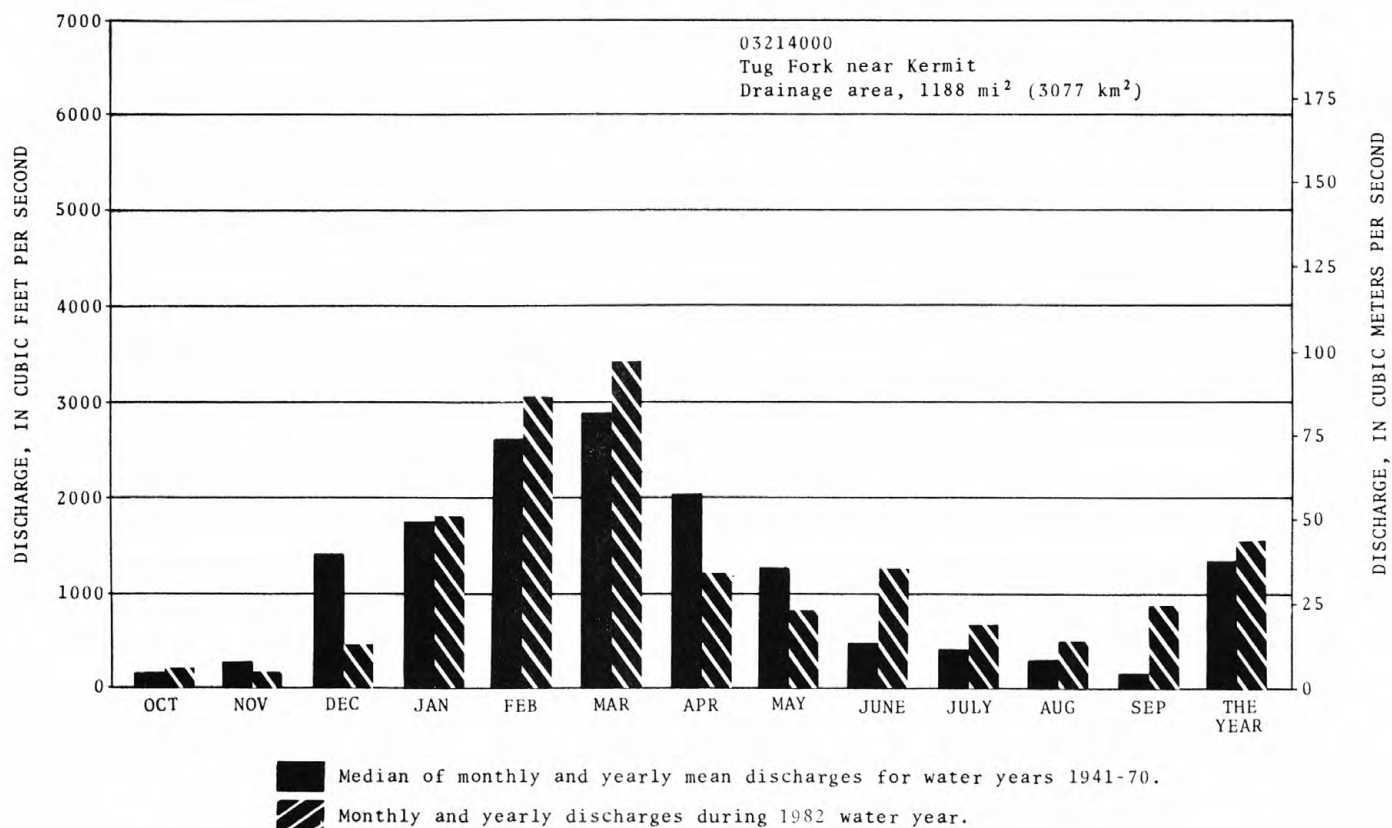
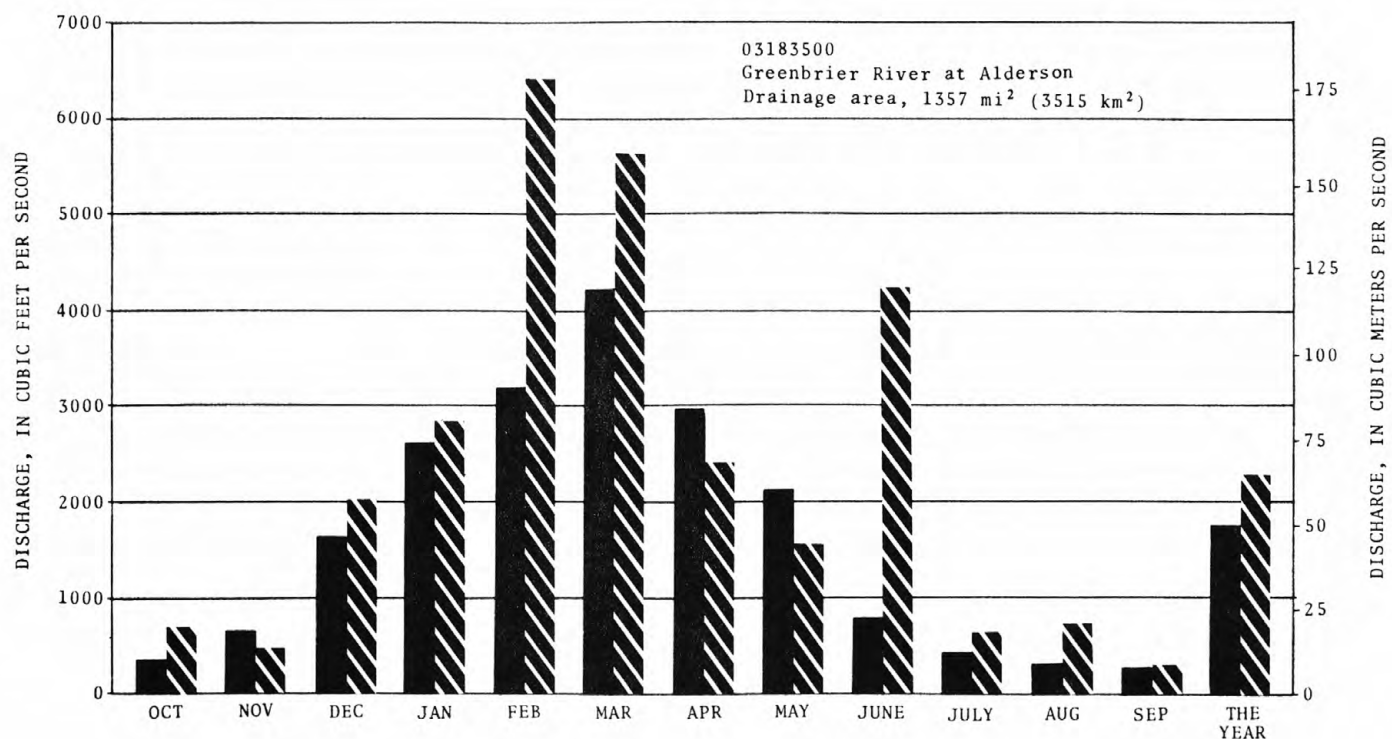


FIGURE 3a.--DISCHARGE AT THE GREENBRIER RIVER AND THE TUG FORK RIVER INDEX GAGING STATIONS DURING THE 1982 WATER YEAR COMPARED TO MEDIAN DISCHARGE FOR THE PERIOD 1941-70

POTOMAC RIVER BASIN

21

01595000 NORTH BRANCH POTOMAC RIVER AT STEYER, MD

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

DRAINAGE AREA.--73.0 mi² (189.1 km²).

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

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

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

AVERAGE DISCHARGE.--26 years, 174 ft³/s (4.928 m³/s), 32.37 in/yr (822 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,900 ft³/s (195 m³/s) July 3, 1978, gage height, 19.30 ft (3.139 m), from rating curve extended above 3,000 ft³/s (85.0 m³/s) on basis of slope-area measurement of peak flow; minimum discharge, 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 floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,230 ft³/s (63.2 m³/s) May 27, gage height, 6.25 ft (1.905 m), no other peak above base of 2,200 ft³/s (62 m³/s); minimum discharge, 6.2 ft³/s (0.18 m³/s) Aug. 31, gage height, 2.13 ft (0.649 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	98	280	168	987	145	206	125	95	51	37	13
2	60	86	287	150	381	143	171	116	110	37	32	32
3	47	81	199	135	1030	143	286	100	301	584	35	66
4	38	68	171	795	901	132	317	90	236	886	30	38
5	29	68	168	525	475	192	225	81	476	243	29	26
6	34	127	146	330	349	148	296	75	323	167	28	20
7	45	129	139	603	251	192	241	68	263	130	26	17
8	33	100	336	396	242	164	215	72	206	174	25	17
9	32	95	246	289	240	150	235	62	163	120	54	17
10	29	95	207	190	205	150	205	58	432	95	54	16
11	23	88	190	180	201	417	198	52	974	95	34	10
12	27	81	180	150	174	1000	210	45	459	105	37	9.7
13	25	70	155	130	140	604	287	43	775	77	26	11
14	23	68	177	115	147	432	255	43	435	64	23	13
15	23	68	150	100	165	344	205	42	283	60	20	37
16	25	66	133	90	346	814	171	37	213	56	20	26
17	23	64	130	85	472	1280	167	35	217	51	14	22
18	26	62	120	80	321	585	177	32	158	45	17	21
19	52	60	110	76	444	403	143	33	120	42	16	17
20	42	64	105	74	457	848	128	56	107	62	13	16
21	34	68	95	84	563	890	116	49	84	62	20	13
22	29	70	444	105	341	562	104	42	75	42	13	51
23	31	75	1350	600	296	385	93	42	64	38	14	37
24	38	79	643	500	285	300	86	41	58	39	22	26
25	36	68	370	381	255	241	79	36	56	31	14	22
26	68	79	265	284	203	265	145	151	51	30	10	22
27	612	260	219	254	177	215	197	550	54	29	13	120
28	453	198	192	218	154	191	209	162	54	136	15	56
29	227	144	192	184	---	195	150	109	62	100	11	43
30	158	121	151	169	---	204	129	115	64	51	8.7	37
31	121	---	137	473	---	206	---	151	---	42	7.7	---
TOTAL	2475	2800	7687	7913	10202	11940	5646	2713	6968	3744	718.4	871.7
MEAN	79.8	93.3	248	255	364	385	188	87.5	232	121	23.2	29.1
MAX	612	260	1350	795	1030	1280	317	550	974	886	54	120
MIN	23	60	95	74	140	132	79	32	51	29	7.7	9.7
CFSM	1.09	1.28	3.40	3.49	4.99	5.27	2.58	1.20	3.18	1.66	.32	.40
IN.	1.26	1.43	3.92	4.03	5.20	6.08	2.88	1.38	3.55	1.91	.37	.44
CAL YR 1981	TOTAL	65626.0	MEAN 180	MAX 1760	MIN 18	CFSM 2.47	IN 33.44					
WTR YR 1982	TOTAL	63678.1	MEAN 174	MAX 1350	MIN 7.7	CFSM 2.38	IN 32.45					

POTOMAC RIVER BASIN

01595200 STONY RIVER NEAR MT. STORM, WV

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

DRAINAGE AREA.--48.8 mi² (126.4 km²).

WATER-DISCHARGE RECORDS

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

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

REMARKS.--Water-discharge records fair except those for January, 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. Regulation since 1963 by Virginia Electric and Power Company dam (Mount Storm Lake) 4.0 mi (6.4 km) upstream from station.

AVERAGE DISCHARGE.--21 years, 100 ft³/s (2.832 m³/s), 27.83 in/yr (707 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,340 ft³/s (151 m³/s) July 3, 1978, from rating curve extended above 2,500 ft³/s (71 m³/s), gage height, 10.34 ft (3.152 m); minimum, 1.8 ft³/s (0.051 m³/s) July 13, 1968; minimum daily, 1.9 ft³/s (0.054 m³/s) July 13, 1968; minimum gage height, 1.79 ft (0.546 m), sometime during period Oct. 3-23, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,160 ft³/s (61.2 m³/s) June 13, gage height, 7.29 ft (2.222 m); minimum, 6.1 ft³/s (0.17 m³/s), Aug. 30, gage height, 1.97 ft (0.600 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	154	64	143	273	143	116	75	48	54	11	8.1
2	31	73	87	198	156	135	102	112	96	53	9.4	10
3	19	75	75	124	352	118	145	135	143	207	8.8	16
4	15	87	92	348	424	90	145	65	94	368	8.1	11
5	14	97	92	264	336	110	114	38	264	273	8.1	12
6	17	135	74	216	368	96	140	34	237	237	7.7	12
7	18	139	60	320	404	114	126	36	279	195	7.0	12
8	16	121	106	252	348	118	116	47	288	189	6.8	11
9	15	81	109	220	336	112	130	43	291	164	15	10
10	15	43	106	195	285	108	120	39	340	30	12	10
11	14	37	98	170	161	189	110	47	448	41	9.1	9.7
12	13	34	90	150	112	440	106	41	420	37	10	12
13	14	32	81	130	94	440	122	37	1330	31	7.9	12
14	15	30	78	108	81	420	180	35	955	28	7.3	11
15	13	28	103	90	83	372	216	31	158	34	7.3	12
16	10	26	94	72	198	468	175	26	153	44	7.0	11
17	9.9	25	72	58	324	855	118	21	145	44	6.8	9.1
18	11	23	70	47	276	805	112	20	126	39	7.7	8.8
19	11	21	63	40	279	540	84	17	112	42	7.3	7.9
20	11	21	59	38	216	504	75	19	140	45	6.8	7.3
21	9.8	24	54	44	340	750	72	20	130	45	8.8	7.3
22	9.1	21	119	43	312	640	64	22	118	38	7.7	22
23	9.2	20	348	86	276	524	45	27	83	47	7.3	13
24	9.6	21	247	130	324	444	39	29	55	64	7.9	8.8
25	9.6	20	272	120	279	198	37	24	49	35	7.9	8.1
26	13	21	512	90	135	192	58	24	42	28	7.3	9.1
27	182	57	70	79	177	195	98	61	38	23	7.5	51
28	174	43	66	72	126	189	106	47	65	23	7.5	33
29	165	33	75	65	---	169	75	44	54	30	6.4	38
30	146	29	79	72	---	148	68	39	54	21	6.4	39
31	138	---	92	169	---	122	---	49	---	13	7.0	---
TOTAL	1162.2	1571	3607	4153	7075	9748	3214	1304	6755	2522	252.8	442.2
MEAN	37.5	52.4	116	134	253	314	107	42.1	225	81.4	8.15	14.7
MAX	182	154	512	348	424	855	216	135	1330	368	15	51
MIN	9.1	20	54	38	81	90	37	17	38	13	6.4	7.3
(†)	1418	1258	1100	1120	1190	1160	1290	1410	1530	1410	1380	1440

CAL YR 1981 TOTAL 37014.9 MEAN 101 MAX 1340 MIN 4.4 CFSM 2.07 IN 28.22
WTR YR 1982 TOTAL 41806.2 MEAN 115 MAX 1330 MIN 6.4 CFSM 2.36 IN 31.87

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

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.

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 recorded, 25.5°C July 7; minimum, 0.5°C Jan. 27.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
(CONTINUOUS ETHYL ALCOHOL-ACTUATED THERMOGRAPH)

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

POTOMAC RIVER BASIN

01595200 STONY RIVER NEAR MOUNT STORM, WV--Continued

WATER-QUALITY RECORDS

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	11.0	7.5	14.0	11.0	21.5	20.0	20.0	17.0	22.0	19.5	18.0	16.5
2	11.0	7.0	15.0	13.5	21.0	19.0	20.5	17.5	21.5	19.0	20.5	17.5
3	11.5	9.0	17.0	13.5	21.0	17.0	20.5	19.0	22.0	20.0	19.0	16.0
4	9.0	7.0	16.5	12.0	17.0	17.0	21.5	19.0	22.5	20.0	16.5	14.5
5	8.5	5.0	17.0	11.5	17.0	16.0	23.0	21.5	23.0	21.5	17.0	13.0
6	8.0	5.0	18.0	13.0	18.0	17.0	25.0	22.5	22.5	21.0	17.0	13.5
7	7.0	4.0	17.0	15.0	20.0	18.0	25.5	24.0	23.5	21.5	17.0	15.0
8	8.0	4.0	16.0	14.0	21.0	19.5	25.0	25.0	23.5	22.0	18.0	16.0
9	7.0	6.0	17.0	12.0	23.0	21.0	25.0	24.5	23.0	21.5	18.5	17.0
10	7.0	5.0	17.0	12.0	22.5	21.0	24.0	22.0	22.5	20.5	18.0	16.0
11	8.0	6.0	18.0	15.0	21.0	17.5	22.5	21.0	21.5	17.0	18.0	15.5
12	10.0	5.5	19.5	15.0	20.0	19.0	22.5	21.5	18.5	16.0	19.0	16.0
13	12.5	8.5	19.0	16.0	22.5	18.5	22.0	20.0	19.0	14.5	19.0	16.5
14	13.0	9.0	20.5	16.0	22.5	18.5	21.0	20.0	19.0	15.5	19.0	17.0
15	14.0	10.0	20.0	16.0	19.5	16.5	21.5	20.0	20.0	15.0	19.5	18.0
16	16.0	12.0	19.5	16.0	21.0	19.0	22.0	20.5	19.5	16.0	20.0	18.0
17	15.0	14.0	19.5	16.0	20.5	19.5	23.0	21.0	20.5	17.0	18.0	15.5
18	14.0	11.0	20.0	16.5	21.0	18.0	23.5	22.5	19.0	15.5	16.5	15.0
19	14.0	9.0	20.0	17.5	21.0	18.5	24.5	22.5	19.5	15.0	---	---
20	13.0	11.0	19.0	17.0	21.0	19.0	24.0	23.5	18.0	16.0	---	---
21	14.0	12.5	18.5	17.0	21.0	19.0	24.0	22.5	19.0	17.0	---	---
22	13.0	11.5	19.0	17.0	20.5	19.0	23.5	21.5	17.5	14.5	---	---
23	12.5	8.0	18.5	18.0	20.0	19.0	23.0	22.5	17.0	15.5	---	---
24	14.0	9.0	18.0	17.0	19.0	17.0	24.5	22.5	20.0	16.0	---	---
25	14.0	10.0	19.0	17.0	20.0	17.0	24.5	22.0	20.5	18.0	---	---
26	13.5	12.5	20.0	17.5	20.0	18.0	24.5	22.5	19.0	15.0	---	---
27	13.0	11.5	19.0	17.0	20.5	19.0	24.0	22.5	18.0	16.0	---	---
28	13.0	10.0	21.0	19.0	21.0	19.0	23.0	22.0	19.5	16.0	---	---
29	14.0	9.0	22.0	19.5	21.0	21.0	22.0	20.0	16.0	12.5	---	---
30	14.5	10.5	21.0	19.0	21.0	20.0	21.5	21.0	15.5	13.0	---	---
31	---	---	22.0	19.0	---	---	22.5	20.0	17.5	15.0	---	---
MONTH YEAR	16.0 25.5	4.0 .5	22.0	11.0	23.0	16.0	25.5	17.0	23.5	12.5	20.5	13.0

01595300 ABRAM CREEK AT OAKMONT, WV

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

DRAINAGE AREA.--42.6 mi² (110.3 km²).

PERIOD OF RECORD.--August 1956 to September 1982 (discontinued).

REVISED RECORDS.--WRD WV-78-1: Drainage area.

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

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

AVERAGE DISCHARGE.--26 years, 68.5 ft³/s (1.940 m³/s), 21.84 in/yr (555 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,310 ft³/s (65.4 m³/s) July 3, 1978, gage height, 8.17 ft (2.490 m), from rating curve extended above 1,200 ft³/s (34 m³/s) on basis of contracted-opening measurement at gage 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 (0.451 m) Sept. 16, 1959.

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

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 1	0115	825 23.4	5.83 1.777	Mar. 20	1045	735 20.8	5.65 1.722
Feb. 4	0445	725 20.5	5.63 1.716	June 11	0545	755 21.4	5.69 1.734
Mar. 12	0045	745 21.1	5.67 1.728	June 13	1030	730 20.7	5.64 1.719
Mar. 16	2300	*890 25.2	5.96 1.817	July 28	1830	810 22.9	5.80 1.768

Minimum discharge, 4.1 ft³/s (0.116 m³/s) Aug. 6, Sept. 14, gage height, 2.35 ft (0.716 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	34	47	47	370	118	91	64	32	29	39	7.1
2	25	32	111	50	154	139	74	59	30	26	31	9.9
3	22	29	79	55	246	154	123	54	108	191	27	17
4	18	27	62	300	423	123	141	48	103	226	23	11
5	17	27	63	224	233	162	99	44	337	83	21	7.3
6	16	38	53	145	194	135	138	41	194	58	18	6.5
7	17	39	51	242	145	147	119	38	151	44	17	5.7
8	15	33	94	173	123	127	104	82	110	37	16	5.5
9	13	30	83	121	110	111	139	60	80	33	24	5.5
10	12	28	68	82	100	103	140	46	204	31	26	5.7
11	12	26	64	73	90	190	124	40	415	57	18	5.0
12	11	25	62	69	82	477	107	37	245	40	21	4.8
13	11	23	61	64	74	360	98	34	519	27	16	4.4
14	11	22	104	58	74	285	87	35	315	26	12	4.4
15	11	22	65	54	101	228	77	31	206	32	11	12
16	11	22	51	49	236	434	71	30	157	37	9.9	9.9
17	11	21	60	46	384	739	70	28	137	30	9.5	6.4
18	11	21	64	43	242	393	82	27	115	22	12	5.3
19	11	20	78	39	241	279	64	26	93	23	9.2	5.5
20	11	20	129	36	242	501	59	32	78	22	7.9	5.7
21	9.8	22	147	34	376	458	54	31	60	20	8.7	5.3
22	9.2	21	164	33	232	305	48	35	50	16	8.2	27
23	13	21	343	110	215	233	43	41	44	17	8.2	18
24	12	23	190	327	232	192	41	40	36	28	11	9.5
25	12	21	126	224	225	164	39	39	32	16	9.0	7.3
26	20	25	95	47	164	153	89	32	29	13	7.3	7.9
27	212	54	82	47	140	132	112	47	26	87	6.8	61
28	137	47	73	49	122	109	121	65	27	300	9.0	22
29	62	33	70	51	---	103	80	41	28	162	6.8	13
30	46	30	54	52	---	96	69	39	29	73	5.9	11
31	38	---	51	164	---	95	---	38	---	53	6.1	---
TOTAL	849.0	836	2844	3108	5570	7245	2703	1304	3990	1859	455.5	326.6
MEAN	27.4	27.9	91.7	100	199	234	90.1	42.1	133	60.0	14.7	10.9
MAX	212	54	343	327	423	739	141	82	519	300	39	61
MIN	9.2	20	47	33	74	95	39	26	26	13	5.9	4.4
CFSM	.58	.59	1.94	2.11	4.21	4.95	1.91	.89	2.81	1.27	.31	.23
IN.	.67	.66	2.24	2.44	4.38	5.70	2.13	1.03	3.14	1.46	.36	.26
CAL YR 1981	TOTAL	24005.4	MEAN 65.8	MAX 551	MIN 2.8	CFSM 1.39	IN 18.88					
WTR YR 1982	TOTAL	31090.1	MEAN 85.2	MAX 739	MIN 4.4	CFSM 1.80	IN 24.45					

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).

WATER-DISCHARGE RECORDS

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

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

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

AVERAGE DISCHARGE.--33 years, 451 ft³/s (12.77 m³/s), 27.22 in/yr (691 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 discharge, 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)
Dec. 23	1015	3880 110	6.99 2.131	Mar. 20	1200	3650 103	6.88 2.097
Feb. 1	0430	4810 136	7.42 2.262	June 11	0600	4130 117	7.11 2.167
Mar. 12	0200	5000 142	7.50 2.286	June 13	1715	4110 116	7.10 2.164
Mar. 17	0230	*5320 151	7.63 2.326	July 4	0115	3670 104	6.89 2.100

Minimum discharge, 22 ft³/s (0.62 m³/s) Sept. 19, 20, 21, 22, gage height, 2.15 ft (0.655 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	75	359	399	432	2470	515	564	355	262	154	120	38
2	118	260	695	462	878	546	474	366	288	132	102	61
3	117	230	471	392	1860	578	658	355	540	1040	95	113
4	91	223	408	1620	2360	459	807	300	560	1810	90	87
5	79	226	412	1280	1270	626	588	242	1420	720	81	63
6	76	351	356	843	1080	533	722	215	975	537	77	49
7	97	388	303	1420	892	579	645	200	832	420	73	44
8	85	323	651	1040	777	539	573	270	703	431	69	42
9	79	280	581	797	778	483	641	242	627	380	95	41
10	76	224	493	520	709	446	605	202	934	220	131	40
11	72	205	431	430	527	769	563	191	2380	260	88	35
12	69	188	406	340	413	2880	570	180	1290	243	90	32
13	67	170	350	300	383	1940	678	164	3000	177	77	35
14	65	162	316	270	334	1570	657	158	2190	153	65	33
15	65	155	361	240	389	1200	614	146	875	153	57	56
16	63	150	338	220	942	2170	539	135	659	159	52	75
17	61	145	295	200	1620	4220	465	124	616	165	49	34
18	59	134	278	190	1120	2310	516	120	501	135	54	25
19	86	129	251	180	1160	1570	409	107	401	130	48	23
20	88	130	246	170	1070	2340	365	114	367	142	43	22
21	77	139	223	200	1770	2640	337	145	327	168	45	22
22	67	137	515	240	1120	1860	304	132	290	126	49	87
23	64	128	2650	867	954	1370	266	134	251	114	40	112
24	72	128	1410	1140	1030	1100	245	156	190	155	54	69
25	72	135	991	561	979	807	224	165	172	110	50	47
26	86	119	1070	447	669	764	377	128	157	95	42	43
27	1140	402	524	350	630	684	517	712	144	144	37	263
28	1050	398	444	280	528	607	646	869	166	640	47	150
29	599	269	442	280	---	587	448	379	166	470	43	118
30	456	221	364	300	---	585	390	313	185	202	37	107
31	360	---	341	708	---	554	---	339	---	149	36	---
TOTAL	5631	6508	17015	16719	28712	37831	15407	7658	21468	9934	2036	1966
MEAN	182	217	549	539	1025	1220	514	247	716	320	65.7	65.5
MAX	1140	402	2650	1620	2470	4220	807	869	3000	1810	131	263
MIN	59	119	223	170	334	446	224	107	144	95	36	22

CAL YR 1981 TOTAL 161850 MEAN 443 MAX 3360 MIN 34 CFSM 1.97 IN 26.76
WTR YR 1982 TOTAL 170885 MEAN 468 MAX 4220 MIN 22 CFSM 2.08 IN 28.25

POTOMAC RIVER BASIN

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01595500 NORTH BRANCH POTOMAC RIVER AT KITZMILLER, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1980 to current year.

pH: October 1980 to current year.

WATER TEMPERATURES: August 1961 to current year.

DISSOLVED OXYGEN: October 1980 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1980. Temperature recorder prior to October 1980.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES (water years 1961-79, 1982): Maximum, 32.0°C Aug. 15, 16, 18, 1965; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 27.0°C July 25, 26; minimum, 0.0°C on many days during winter periods.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	690	640	665	185	165	173	247	187	239	262	232	252
2	655	585	625	213	163	193	187	148	158	233	183	198
3	585	510	539	230	210	218	189	159	169	234	184	207
4	560	495	513	260	230	245	190	180	186	236	136	185
5	600	560	580	290	240	265	192	172	182	167	137	149
6	595	555	569	300	220	268	203	183	187	188	158	168
7	555	517	---	---	---	---	244	204	218	199	139	166
8	517	457	474	---	---	---	235	165	207	180	140	158
9	466	436	454	---	---	---	186	166	176	190	160	175
10	626	426	509	---	---	---	187	177	184	200	180	186
11	665	605	632	---	---	---	198	188	190	---	---	---
12	615	575	599	---	---	---	210	190	200	---	---	---
13	635	555	596	---	---	---	201	171	186	---	---	---
14	564	494	526	---	---	---	182	162	173	---	---	---
15	654	484	557	---	---	---	203	173	189	210	---	---
16	683	653	667	---	---	---	234	204	215	270	210	239
17	653	593	629	---	---	---	245	225	235	280	230	244
18	652	582	616	---	---	---	267	247	254	270	230	241
19	602	482	535	---	---	---	268	248	259	290	260	280
20	531	421	475	380	---	---	279	239	255	290	250	268
21	541	461	497	390	360	378	260	210	241	290	260	279
22	520	430	478	380	360	370	221	181	202	290	260	276
23	570	500	535	400	350	383	181	102	121	310	110	230
24	537	397	464	370	350	360	133	113	121	130	110	115
25	505	375	438	390	360	371	124	114	122	170	120	132
26	472	372	407	401	351	380	126	106	120	180	150	167
27	459	119	290	412	202	333	167	127	151	230	180	192
28	156	116	128	203	183	187	208	168	179	260	200	227
29	184	154	168	225	195	211	229	199	221	220	206	214
30	201	161	180	246	226	232	240	220	226	227	204	217
31	228	188	206	---	---	---	261	231	243	219	144	192
MONTH	690	116	485	412	163	285	279	102	194	310	110	206

POTOMAC RIVER BASIN

01595500 NORTH BRANCH POTOMAC RIVER AT KITZMILLER, MD--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	128	94	102	---	---	---	276	238	258	---	---	---
2	144	111	129	---	---	---	300	254	276	---	---	---
3	155	98	128	---	---	---	316	263	290	255	---	---
4	119	94	105	---	---	---	263	208	215	286	235	257
5	129	113	121	---	---	---	240	212	224	320	265	291
6	136	130	131	---	---	---	235	180	220	354	294	322
7	143	123	130	---	---	---	225	180	205	341	312	325
8	160	134	143	---	---	---	231	208	220	313	272	294
9	190	155	168	---	---	---	242	214	228	324	262	292
10	190	157	168	---	---	---	255	221	238	344	282	313
11	219	170	187	---	---	---	273	234	250	365	310	335
12	217	191	203	---	---	---	260	222	243	390	320	353
13	227	192	208	---	---	---	246	217	228	405	358	381
14	246	226	235	---	---	---	244	214	229	454	370	409
15	244	205	233	129	---	---	241	203	224	433	380	406
16	195	144	177	146	86	121	244	216	232	448	371	414
17	141	120	128	105	84	96	267	237	255	494	425	458
18	142	126	130	127	109	121	289	247	269	523	453	487
19	153	141	146	148	128	136	348	252	306	542	478	505
20	161	132	150	153	116	131	346	296	313	504	457	477
21	151	127	142	137	125	129	---	---	---	501	404	472
22	175	122	139	141	134	137	---	---	---	469	388	422
23	168	138	153	169	142	157	---	---	---	420	387	408
24	151	137	141	205	170	190	---	---	---	450	404	423
25	177	143	145	251	201	228	---	---	---	408	317	373
26	---	---	---	233	194	213	---	---	---	442	384	409
27	---	---	---	202	194	198	---	---	---	659	---	---
28	---	---	---	249	198	220	---	---	---	---	---	---
29	---	---	---	255	241	248	---	---	---	---	---	---
30	---	---	---	253	233	244	---	---	---	---	---	---
31	---	---	---	272	246	259	---	---	---	---	---	---
MONTH	246	94	154	272	84	177	348	180	246	659	235	384

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	---	---	---	476	397	437	---	---	---	908	838	868
2	---	---	---	486	400	439	---	---	---	960	855	889
3	---	---	---	420	---	---	595	---	---	905	785	834
4	240	---	---	151	120	134	677	565	620	785	630	714
5	233	149	174	180	144	163	665	596	629	846	706	774
6	158	151	154	236	176	209	698	610	650	1000	771	887
7	167	155	162	275	231	252	757	643	697	1020	906	963
8	194	167	180	304	242	264	771	698	730	1080	971	1020
9	211	185	199	259	229	244	773	667	713	1130	996	1050
10	---	185	---	378	247	320	764	566	700	1090	981	1030
11	---	---	---	371	292	331	584	507	549	1150	997	1080
12	---	---	---	392	320	356	605	495	548	1170	1010	1090
13	---	---	---	457	365	406	675	572	624	1190	1010	1090
14	---	---	---	468	397	426	670	585	626	1090	992	1040
15	---	---	---	497	411	451	659	556	611	1080	1010	1050
16	---	---	---	496	433	456	771	643	705	1150	1040	1110
17	---	---	---	457	384	428	796	679	730	1050	918	986
18	---	---	---	510	453	480	751	680	712	1050	963	1010
19	---	---	---	532	462	496	789	658	718	1170	1020	1090
20	---	---	---	555	487	513	753	694	724	1160	1100	1120
21	---	---	---	582	---	---	770	698	735	1160	1030	1100
22	---	---	---	386	---	---	866	753	809	---	---	---
23	313	---	---	427	387	405	831	752	789	---	---	---
24	359	262	313	472	414	447	834	722	776	---	---	---
25	398	267	324	482	396	441	934	723	813	---	---	---
26	451	323	382	532	457	495	968	827	900	---	---	---
27	448	388	421	557	---	---	915	818	848	---	---	---
28	522	443	464	---	---	---	879	790	836	---	---	---
29	487	454	468	---	---	---	812	686	758	---	---	---
30	520	432	481	---	---	---	850	766	808	---	---	---
31	---	---	---	---	---	---	891	820	854	---	---	---
MONTH	522	149	310	582	120	374	968	495	722	1190	630	990

01595500 NORTH BRANCH POTOMAC RIVER AT KITZMILLER, MD--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	5.2	5.1	5.2	5.7	5.6	5.6	6.9	6.3	6.5	6.4	6.2	6.3
2	5.3	5.1	5.2	5.6	5.5	5.6	6.9	6.6	6.7	6.4	6.3	6.4
3	5.4	5.3	5.4	5.5	5.2	5.4	6.7	6.6	6.6	6.4	6.2	6.3
4	5.5	5.4	5.4	5.6	5.4	5.5	6.6	6.4	6.5	6.7	6.4	6.5
5	5.4	5.2	5.3	5.6	5.5	5.6	6.6	6.5	6.5	6.6	6.4	6.4
6	5.3	5.2	5.2	6.0	5.5	5.8	6.8	6.6	6.7	6.4	6.3	6.3
7	5.3	5.2	5.3	---	---	---	6.8	6.4	6.6	6.6	6.3	6.5
8	5.4	5.3	5.3	---	---	---	6.8	6.4	6.6	6.5	6.4	6.4
9	5.4	5.3	5.4	---	---	---	6.7	6.7	6.7	6.5	6.2	6.3
10	5.4	5.3	5.4	---	---	---	6.7	6.7	6.7	6.3	6.0	6.1
11	5.4	5.4	5.4	---	---	---	6.7	6.6	6.6	---	---	---
12	5.4	5.3	5.4	---	---	---	6.6	6.3	6.4	---	---	---
13	5.4	5.2	5.3	---	---	---	6.5	6.4	6.5	---	---	---
14	5.4	5.3	5.3	---	---	---	6.5	6.4	6.4	---	---	---
15	5.4	5.2	5.3	---	---	---	6.4	6.3	6.3	5.9	---	---
16	5.2	5.2	5.2	---	---	---	6.4	6.3	6.4	6.1	5.9	6.0
17	5.3	5.2	5.2	---	---	---	6.5	6.4	6.4	6.2	6.0	6.1
18	5.3	5.2	5.2	---	---	---	6.4	6.3	6.4	6.0	5.9	5.9
19	5.4	5.3	5.4	---	---	---	6.6	6.4	6.5	5.9	5.7	5.7
20	5.5	5.2	5.4	5.9	---	---	6.6	6.5	6.5	5.8	5.7	5.7
21	5.5	5.3	5.4	5.9	5.8	5.8	6.5	6.3	6.4	5.9	5.8	5.8
22	5.4	5.3	5.4	6.0	5.8	5.9	6.7	6.2	6.4	6.2	5.8	5.9
23	5.3	5.2	5.3	6.0	5.9	6.0	6.7	6.3	6.5	6.5	6.2	6.3
24	5.4	5.2	5.3	6.0	5.9	6.0	6.2	6.1	6.2	6.5	6.1	6.2
25	5.5	5.4	5.4	6.0	5.8	6.0	6.2	6.2	6.2	6.1	5.9	6.0
26	5.5	5.3	5.4	6.1	5.9	6.0	6.3	5.9	6.1	6.3	5.8	6.0
27	6.8	5.5	6.1	6.6	6.0	6.3	6.2	6.0	6.1	6.2	5.9	6.0
28	6.7	6.3	6.5	6.6	6.5	6.5	6.2	6.1	6.1	5.9	5.7	5.8
29	6.3	6.1	6.2	6.6	6.5	6.6	6.4	6.2	6.3	5.8	5.6	5.7
30	6.0	5.8	5.9	6.6	6.4	6.5	6.4	6.3	6.4	5.9	5.7	5.8
31	5.8	5.7	5.7	---	---	---	6.5	6.2	6.4	6.6	6.0	6.3
MONTH	6.8	5.1	5.5	6.6	5.2	5.9	6.9	5.9	6.4	6.7	5.6	6.1

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	6.6	6.0	6.2	---	---	---	6.0	5.5	5.7	6.4	6.4	6.4
2	6.1	6.0	6.1	5.8	---	---	5.7	5.5	5.6	6.4	6.2	6.3
3	6.5	6.0	6.2	5.9	5.8	5.8	---	---	---	6.4	6.0	6.2
4	6.2	5.9	6.0	6.2	5.9	6.1	---	---	---	6.2	6.1	6.1
5	5.9	5.8	5.9	6.4	6.2	6.3	6.1	---	---	6.2	6.1	6.1
6	6.0	5.7	5.8	6.2	5.9	6.1	6.2	6.0	6.1	6.2	6.1	6.2
7	6.0	5.7	5.8	6.3	---	---	6.4	6.1	6.2	6.2	5.9	6.1
8	5.9	5.8	5.9	6.2	6.1	6.2	6.5	6.1	6.3	6.0	5.8	5.9
9	6.1	5.8	5.9	6.2	6.0	6.1	6.3	6.0	6.2	6.4	6.0	6.2
10	6.0	5.8	5.9	6.3	6.0	6.1	6.6	6.4	6.5	6.3	6.0	6.2
11	6.5	6.0	6.4	---	---	---	6.6	6.3	6.5	6.0	5.7	5.9
12	6.4	6.0	6.2	---	---	---	6.4	6.0	6.2	5.8	5.7	5.8
13	6.0	5.8	5.9	---	---	---	6.3	6.2	6.3	6.0	5.9	5.9
14	6.1	5.8	6.0	---	---	---	6.2	6.0	6.1	6.4	5.9	6.2
15	6.2	5.8	6.0	6.0	---	---	6.2	6.1	6.1	6.2	5.8	6.0
16	6.4	6.1	6.3	6.4	6.0	6.2	6.2	6.0	6.1	6.0	5.9	5.9
17	6.5	6.2	6.3	6.2	5.8	5.9	6.1	6.0	6.0	6.0	5.8	5.9
18	6.3	6.1	6.2	5.9	5.8	5.8	6.3	6.1	6.2	6.0	5.8	5.9
19	6.4	6.1	6.2	5.9	5.7	5.8	6.2	5.8	6.0	6.0	5.7	5.9
20	6.5	6.1	6.2	6.2	5.7	6.0	6.1	6.0	6.1	5.8	5.6	5.7
21	6.6	6.2	6.4	6.2	6.0	6.0	6.1	6.0	6.0	5.8	5.6	5.8
22	6.2	6.1	6.1	5.9	5.8	5.8	6.0	6.0	6.0	6.0	5.8	5.9
23	6.2	6.0	6.1	5.7	5.7	5.7	6.0	5.8	5.9	6.2	6.0	6.1
24	6.3	5.8	6.0	5.7	5.6	5.7	6.0	5.8	5.9	6.2	5.9	6.0
25	6.4	6.0	6.3	5.7	5.5	5.6	6.0	5.9	5.9	6.4	6.2	6.3
26	---	---	---	5.8	5.5	5.7	6.6	6.0	6.2	6.2	6.0	6.1
27	---	---	---	5.9	5.8	5.9	6.7	6.1	6.5	6.4	---	---
28	---	---	---	5.9	5.6	5.7	6.7	6.5	6.6	---	---	---
29	---	---	---	5.9	5.7	5.8	6.5	6.5	6.5	---	---	---
30	---	---	---	5.9	5.5	5.7	6.5	6.4	6.4	---	---	---
31	---	---	---	5.9	5.6	5.7	---	---	---	---	---	---
MONTH	6.6	5.7	6.1	6.4	5.5	5.9	6.7	5.5	6.2	6.4	5.6	6.0

POTOMAC RIVER BASIN

01595500 NORTH BRANCH POTOMAC RIVER AT KITZMILLER, MD--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	5.8	5.6	5.7	---	---	---	5.0	4.9	4.9
2	---	---	---	5.7	5.6	5.6	---	---	---	5.0	4.9	5.0
3	---	---	---	6.6	5.6	---	5.9	---	---	5.1	4.9	5.0
4	6.4	---	---	6.5	6.4	6.4	5.9	5.6	5.8	5.3	5.1	5.2
5	6.6	6.3	6.4	6.3	6.2	6.3	5.7	5.6	5.6	5.3	5.1	5.2
6	6.5	6.4	6.4	6.2	6.1	6.2	5.7	5.5	5.6	5.2	5.0	5.1
7	6.4	6.3	6.3	6.1	6.0	6.1	5.6	5.5	5.6	5.1	5.0	5.0
8	6.3	6.2	6.3	6.4	6.0	6.1	5.5	5.4	5.5	5.0	4.9	5.0
9	6.2	5.9	6.1	6.3	6.1	6.2	5.7	5.5	5.6	5.0	4.9	4.9
10	---	---	---	6.1	5.9	6.0	5.9	5.6	5.7	5.0	4.8	4.9
11	---	---	---	6.4	5.7	6.1	6.0	5.9	6.0	4.9	4.8	4.8
12	---	---	---	6.5	6.1	6.4	6.2	6.0	6.1	4.9	4.7	4.8
13	---	---	---	6.3	6.2	6.3	6.2	5.8	6.0	4.9	4.8	4.8
14	---	---	---	6.5	6.0	6.2	5.8	5.6	5.7	4.9	4.8	4.8
15	---	---	---	6.3	5.2	6.0	5.6	5.3	5.4	5.0	4.8	4.8
16	---	---	---	6.2	5.9	6.1	5.4	5.2	5.3	4.9	4.8	4.9
17	---	---	---	6.6	6.1	6.2	5.4	5.1	5.3	5.0	4.9	4.9
18	---	---	---	6.3	5.9	6.1	5.4	5.1	5.2	4.9	4.9	4.9
19	---	---	---	6.1	5.6	5.9	5.5	5.2	5.4	5.0	4.8	4.9
20	---	---	---	5.9	5.6	5.8	5.5	5.2	5.3	4.9	4.8	4.8
21	---	---	---	6.1	5.9	6.0	5.3	5.1	5.2	4.9	4.8	4.9
22	---	---	---	6.1	5.8	6.0	5.4	5.1	5.2	---	---	---
23	5.7	---	---	6.0	5.8	5.9	5.2	5.1	5.2	---	---	---
24	5.7	5.5	5.6	5.9	5.3	5.6	5.2	5.1	5.2	---	---	---
25	5.7	5.4	5.5	5.8	5.6	5.7	5.1	5.0	5.1	---	---	---
26	5.5	5.4	5.5	5.8	5.5	5.7	5.2	5.0	5.1	---	---	---
27	5.5	5.4	5.4	---	---	---	5.1	5.0	5.1	---	---	---
28	5.6	5.2	5.4	---	---	---	5.1	5.0	5.1	---	---	---
29	5.8	5.2	5.4	---	---	---	5.2	5.0	5.1	---	---	---
30	5.9	5.6	5.8	---	---	---	5.1	5.0	5.0	---	---	---
31	---	---	---	---	---	---	5.0	4.9	4.9	---	---	---
MONTH	6.6	5.2	5.8	6.6	5.2	6.0	6.2	4.9	5.4	5.3	4.7	4.9

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

01595500 NORTH BRANCH POTOMAC RIVER AT KITZMILLER, MD--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

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

POTOMAC RIVER BASIN

01595500 NORTH BRANCH POTOMAC RIVER AT KITZMILLER, MD--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1				---	---	---	12.6	11.8	12.2	11.1	10.5	10.7
2				---	---	---	12.1	11.9	12.0	10.8	10.4	10.6
3				---	---	---	12.2	12.1	12.1	10.7	10.2	10.4
4				11.6	11.0	11.2	12.3	11.9	12.1	10.7	10.4	10.5
5				11.6	11.0	11.3	12.4	12.1	12.2	11.1	10.7	11.0
6				11.9	11.0	11.4	12.7	12.5	12.6	11.1	10.6	10.9
7				---	---	---	12.9	12.0	12.5	11.2	10.9	11.0
8				---	---	---	12.4	12.1	12.2	11.6	11.4	11.5
9				---	---	---	12.9	12.7	12.8	11.7	11.5	11.6
10				---	---	---	13.1	12.8	12.9	11.8	11.7	11.7
11				---	---	---	13.0	12.8	12.9	---	---	---
12				---	---	---	13.0	12.8	12.9	---	---	---
13				---	---	---	13.1	12.8	13.0	---	---	---
14				---	---	---	13.1	12.6	12.9	---	---	---
15				---	---	---	12.8	12.5	12.6	13.2	12.2	---
16				---	---	---	12.8	12.7	12.7	12.2	11.8	11.9
17				---	---	---	13.0	12.6	12.7	12.1	11.9	12.0
18				---	---	---	12.8	12.6	12.7	12.2	12.1	12.1
19				---	---	---	12.9	12.6	12.7	12.4	12.3	12.3
20				10.5	---	---	12.8	12.5	12.7	12.6	12.4	12.5
21				11.1	10.5	10.9	12.7	11.8	12.3	12.8	12.6	12.7
22				12.0	11.4	11.7	12.2	11.9	12.1	13.0	12.8	12.9
23				12.4	11.4	11.9	12.5	11.9	12.2	13.0	12.8	12.9
24				12.3	11.4	11.8	12.3	12.2	12.3	13.0	12.9	13.0
25				12.7	11.8	12.2	12.6	12.4	12.5	13.1	13.0	13.1
26				12.7	11.8	12.2	13.0	11.7	12.6	13.3	13.1	13.2
27				12.1	11.2	11.6	13.2	12.8	13.0	13.3	13.2	13.2
28				11.9	11.5	11.7	13.2	12.2	12.7	13.4	13.2	13.3
29				12.3	12.0	12.2	12.5	12.0	12.3	13.5	13.4	13.5
30				12.7	12.2	12.5	12.3	11.5	11.9	13.6	13.2	13.4
31				---	---	---	11.8	10.7	11.2	13.5	13.3	13.4
MONTH				12.7	10.5	11.7	13.2	10.7	12.5	13.6	10.2	12.1

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	14.0	13.6	13.8	---	---	---	---	---	---	---	---	---
2	14.2	13.8	14.0	13.6	---	---	---	---	---	---	---	---
3	13.9	13.5	13.6	13.5	13.1	13.3	---	---	---	10.0	---	---
4	13.8	13.6	13.7	13.3	12.6	13.0	---	---	---	11.1	9.8	10.4
5	14.0	13.4	13.7	12.6	12.4	12.5	12.4	---	---	11.5	9.8	10.6
6	14.4	13.5	13.8	12.5	12.2	12.3	13.1	11.8	12.3	11.3	9.6	10.4
7	14.8	14.2	14.6	12.5	---	---	13.6	12.5	13.1	10.8	10.0	10.4
8	14.7	14.0	14.4	12.5	11.8	12.2	13.3	12.0	12.6	11.0	10.4	10.6
9	14.2	13.8	14.0	11.9	11.1	11.5	12.5	11.9	12.2	11.8	10.4	11.1
10	14.8	14.3	14.6	11.5	10.9	11.2	12.9	12.1	12.5	11.9	10.3	11.1
11	14.9	14.2	14.6	11.0	---	---	12.6	11.8	12.2	11.6	10.1	10.9
12	14.9	14.4	14.6	---	---	---	12.7	11.4	12.0	11.2	9.9	10.5
13	14.5	14.1	14.3	---	---	---	11.7	10.5	11.2	10.9	10.1	10.5
14	14.5	13.8	14.2	---	---	---	11.7	10.6	11.2	11.0	9.9	10.4
15	14.2	13.2	13.8	13.2	---	---	11.7	10.4	11.0	11.2	10.0	10.6
16	13.6	12.8	13.1	12.8	12.3	12.6	11.3	10.1	10.6	11.2	10.1	10.6
17	13.0	12.8	12.9	12.6	11.5	11.9	10.5	10.0	10.3	11.1	10.0	10.6
18	13.1	12.0	12.8	11.9	10.9	11.3	11.2	10.5	10.9	11.0	10.1	10.5
19	12.4	11.9	---	11.1	10.5	10.8	11.6	10.3	10.9	10.8	10.0	10.4
20	12.2	11.6	---	11.2	10.7	10.9	---	---	---	10.5	9.7	10.2
21	---	---	---	10.8	10.0	10.4	---	---	---	10.1	9.5	9.8
22	---	12.1	---	10.9	10.6	10.8	---	---	---	9.7	9.1	9.3
23	---	12.1	---	10.9	10.1	10.4	---	---	---	9.4	9.2	9.3
24	---	11.6	---	10.5	9.8	10.1	---	---	---	9.4	8.8	9.1
25	---	11.5	---	10.2	9.4	9.7	---	---	---	9.2	8.9	9.1
26	---	---	---	10.5	9.6	10.0	---	---	---	9.3	8.8	9.1
27	---	---	---	10.8	10.5	10.7	---	---	---	9.5	---	---
28	---	---	---	11.1	10.2	10.6	---	---	---	---	---	---
29	---	---	---	10.6	9.4	10.0	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	14.9	11.5	13.9	13.6	9.4	11.3	13.6	10.0	11.6	11.9	8.8	10.2

POTOMAC RIVER BASIN

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01595500 NORTH BRANCH POTOMAC RIVER AT KITZMILLER, MD--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	9.2	8.6	8.9						
2	---	---	---	9.4	8.7	9.1						
3	---	---	---	9.7	---	---						
4	9.8	---	---	10.1	9.7	9.9						
5	10.1	9.8	9.9	10.1	9.7	9.9						
6	10.0	9.9	10.0	10.1	9.4	9.8						
7	10.0	9.6	9.8	9.9	9.0	9.5						
8	9.8	9.2	9.5	9.5	9.1	9.3						
9	9.2	8.3	8.8	9.7	9.2	9.5						
10	8.8	---	---	9.8	9.0	9.4						
11	---	---	---	9.5	8.9	9.2						
12	---	---	---	9.6	9.0	9.3						
13	---	---	---	9.9	9.0	9.4						
14	---	---	---	9.7	9.1	9.5						
15	---	---	---	9.7	9.0	9.4						
16	---	---	---	9.4	8.8	9.1						
17	---	---	---	9.5	8.8	9.1						
18	---	---	---	9.4	9.0	9.2						
19	---	---	---	9.2	8.5	8.9						
20	---	---	---	8.7	8.4	8.5						
21	---	---	---	8.8	8.4	8.6						
22	---	---	---	9.0	8.2	8.6						
23	11.6	---	---	9.2	8.7	8.9						
24	10.7	9.4	10.0	9.5	8.2	8.8						
25	11.0	9.6	10.3	---	---	---						
26	10.9	9.4	10.2	---	---	---						
27	10.3	8.5	9.4	---	---	---						
28	9.2	8.0	8.6	---	---	---						
29	8.7	8.2	8.4	---	---	---						
30	9.0	8.5	8.8	---	---	---						
31	---	---	---	---	---	---						
MONTH	11.6	8.0	9.5	10.1	8.2	9.2						

POTOMAC RIVER BASIN

01595800 NORTH BRANCH POTOMAC RIVER AT BARNUM, WV

LOCATION.--Lat 39°26'44", long 79°06'39", Mineral County, W. Va., Hydrologic Unit 02070002, on right bank at highway bridge at Barnum, W. Va., 0.4 mi (0.6 km) upstream from Folly Run, and 4.0 mi (6.4 km) southwest of Piedmont, W. Va., and at mile 59.4 (95.6 km).

DRAINAGE AREA.--266 mi² (689 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,151.82 ft (351.075 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. Prior to July 1981 regulation at low flow by Stony River Reservoir, 39 mi (63 km) above station (see station 01595200). Since July 1981 complete regulation by Bloomington Reservoir, 1.5 mi (2.4 km) above station, capacity 96,600 acre-ft (119 hm³).

AVERAGE DISCHARGE.--16 years, 539 ft³/s (15.26 m³/s), 27.52 in/yr (699 mm/yr), adjusted for storage since October 1981.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,100 ft³/s (767 m³/s) July 3, 1978, gage height, 13.37 ft (4.075 m), from rating curve extended above 8,000 ft³/s (230 m³/s) on basis of slope-area measurement of peak flow; minimum discharge, 0.91 ft³/s (0.026 m³/s) Aug. 12, 1981, gage height, 1.76 ft (0.536 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,160 ft³/s (174 m³/s) Mar. 17, gage height, 7.88 ft (2.402 m); minimum discharge, 1.4 ft³/s (0.040 m³/s) Aug. 19, gage height, 1.79 ft (0.546 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	114	263	411	910	641	291	107	52	206	263	232
2	54	84	460	467	703	565	292	107	52	159	263	231
3	54	89	415	624	1150	645	401	107	54	243	261	230
4	54	89	415	1700	2220	683	627	107	54	740	259	229
5	54	91	415	1580	1020	683	442	107	668	839	259	229
6	54	93	386	872	508	683	459	98	1050	853	259	229
7	55	395	281	1180	513	687	475	90	1110	879	259	221
8	56	352	670	1160	334	683	392	98	926	877	260	222
9	56	296	545	581	270	555	396	93	656	878	259	219
10	56	250	415	421	457	521	394	92	852	792	277	234
11	56	227	355	313	640	500	394	104	1510	334	220	242
12	56	212	343	132	485	1860	284	115	2420	424	259	242
13	56	208	343	93	415	2310	200	115	2520	332	259	242
14	56	188	299	76	414	2420	232	110	2400	235	259	242
15	56	171	310	58	421	1950	401	116	2470	172	256	242
16	57	171	355	55	928	2320	626	124	1470	202	248	242
17	58	171	284	50	2120	4910	615	119	782	269	243	242
18	58	171	266	46	1830	2760	613	119	624	268	236	242
19	58	174	288	44	1200	1670	612	118	470	268	198	240
20	58	170	281	39	1090	2640	466	119	426	268	232	239
21	58	153	186	38	1710	2930	353	119	352	267	232	238
22	58	142	398	39	2050	1790	326	121	299	266	232	240
23	58	142	2700	42	1530	1460	306	122	290	267	232	284
24	58	142	1680	457	1200	1030	293	120	184	266	231	238
25	58	159	1140	196	1400	810	276	107	106	266	229	238
26	61	139	1080	41	903	497	215	122	105	266	210	240
27	497	250	821	72	689	493	107	123	149	265	232	239
28	836	402	433	39	685	375	106	89	187	271	231	238
29	206	402	411	38	---	284	105	52	213	264	230	237
30	263	342	411	39	---	270	105	52	217	263	220	322
31	158	---	411	61	---	290	---	52	---	263	232	---
TOTAL	3437	5989	17060	10964	27795	39915	10804	3244	22668	12162	7540	7205
MEAN	111	200	550	354	993	1288	360	105	756	392	243	240
MAX	836	402	2700	1700	2220	4910	627	124	2520	879	277	322
MIN	54	84	186	38	270	270	105	52	52	159	198	219
($\neq$)	16690	19200	20770	38700	49900	63180	77180	89460	94760	92390	80780	70270
CAL YR 1981	TOTAL	176060	MEAN	482	MAX	4500	MIN	39				
WTR YR 1982	TOTAL	168783	MEAN	462	MAX	4910	MIN	38				

$\neq$ Monthend contents, in acre-feet, in Bloomington Reservoir (contents on Sept. 30, 1981, 11,560 acre-feet).
Records furnished by Corps of Engineers.

POTOMAC RIVER BASIN

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01595800 NORTH BRANCH POTOMAC RIVER AT BARNUM, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1980 to current year.

pH: October 1980 to current year.

WATER TEMPERATURES: October 1980 to current year.

DISSOLVED OXYGEN: October 1980 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1980.

REMARKS.--Interruptions in record were due to malfunction of the recording instruments.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE (water year 1982): Maximum, 525 micromhos Oct. 20, 21, 1981; minimum, 172 micromhos Mar. 24, 1982.

pH (water year 1982): Maximum, 7.0 units June 5, 1982; minimum, 4.9 units Oct. 3-7, 9, 1981.

WATER TEMPERATURES (water year 1982): Maximum, 22.0°C Aug. 19, Sept. 9, 1982; minimum 0.5°C on several days during Jan. 1982.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 525 micromhos Oct. 20, 21; minimum, 172 micromhos Mar. 24.

pH: Maximum, 7.0 units June 5; minimum, 4.9 units Oct. 3, 4, 5, 6, 7, 9.

WATER TEMPERATURES: Maximum, 22.0°C Aug. 19, Sept. 9; minimum, 0.5°C on several days during Jan.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	350	344	347	408	391	399	242	236	240
2	---	---	---	351	344	348	389	378	384	242	232	237
3	517	487	501	358	344	350	379	368	371	231	227	228
4	521	514	517	359	348	356	370	365	367	232	208	218
5	520	515	517	360	354	357	367	354	361	230	210	221
6	519	513	516	369	349	356	360	352	356	217	213	215
7	521	516	518	339	317	324	353	335	344	219	208	215
8	520	514	517	341	337	339	335	326	330	208	201	205
9	514	513	514	341	337	339	331	327	329	211	201	206
10	515	506	508	336	333	335	327	312	318	207	205	206
11	506	500	502	333	326	330	315	294	306	217	203	210
12	499	495	497	328	322	325	309	306	307	232	215	223
13	512	497	505	343	324	335	311	305	308	233	231	232
14	517	511	514	359	345	355	313	306	311	246	232	236
15	517	510	513	370	359	366	312	309	311	239	235	237
16	514	512	513	379	369	375	310	308	309	241	238	239
17	512	506	509	386	377	383	312	308	310	240	232	236
18	521	509	514	398	385	394	312	308	311	232	225	229
19	521	518	520	404	399	402	309	308	308	246	230	238
20	525	519	521	412	404	409	308	307	308	250	246	248
21	525	518	521	413	405	410	330	307	313	255	247	252
22	518	515	517	430	414	425	314	297	307	254	251	252
23	517	515	516	434	430	431	297	296	296	254	238	251
24	517	512	514	437	430	433	299	287	293	205	199	203
25	511	505	508	439	434	436	288	279	282	267	204	232
26	509	503	507	436	430	433	282	247	266	267	262	263
27	505	408	472	433	417	427	260	245	254	264	258	261
28	460	396	422	422	417	420	269	260	265	264	261	262
29	400	384	391	421	408	416	266	256	260	267	262	264
30	389	358	369	410	400	404	256	240	248	271	267	269
31	360	336	345	---	---	---	239	233	237	274	219	267
MONTH	525	336	493	439	317	379	408	233	312	274	199	235

POTOMAC RIVER BASIN

01595800 NORTH BRANCH POTOMAC RIVER AT BARNUM, WV--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	289	206	244	217	212	214	208	200	204	261	252	254
2	276	206	240	221	214	217	221	202	211	262	251	256
3	248	194	223	222	219	220	230	195	215	267	257	261
4	255	249	251	223	219	221	199	192	196	264	254	260
5	249	198	220	223	220	222	224	197	209	266	261	264
6	200	182	194	222	220	221	---	---	---	272	259	265
7	196	175	184	229	220	224	---	---	---	274	267	270
8	201	183	194	224	222	223	---	---	---	296	268	278
9	206	189	200	282	210	220	---	---	---	275	268	271
10	194	186	191	214	211	212	---	---	---	278	274	276
11	209	180	196	227	210	213	---	---	---	276	263	269
12	239	202	217	227	205	217	---	---	---	268	259	264
13	237	224	229	228	211	219	---	---	---	---	---	---
14	229	224	226	222	210	213	---	---	---	---	---	---
15	230	224	227	212	205	209	---	---	---	---	---	---
16	230	195	213	247	186	205	225	215	219	---	---	---
17	240	226	234	205	193	199	226	214	220	---	---	---
18	244	237	239	204	187	196	222	214	218	---	---	---
19	238	237	238	199	194	196	221	215	217	---	---	---
20	238	236	237	199	193	195	224	215	220	---	---	---
21	235	229	232	221	190	196	250	220	224	---	---	---
22	233	224	229	196	181	186	225	220	222	---	---	---
23	225	219	221	186	179	183	225	221	223	---	---	---
24	223	215	220	183	172	177	227	221	224	---	---	---
25	214	207	210	185	175	178	230	224	226	---	---	---
26	216	206	212	216	180	184	264	223	241	---	---	---
27	216	212	214	186	181	184	268	255	261	307	292	300
28	215	213	214	198	183	189	254	247	250	339	297	310
29	---	---	---	207	195	199	251	248	250	346	331	335
30	---	---	---	207	201	204	258	231	249	337	333	335
31	---	---	---	209	202	205	---	---	---	337	330	334
MONTH	289	175	220	282	172	205	268	192	225	346	251	282
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	341	336	338	341	232	259	267	262	264	288	283	285
2	342	336	339	385	244	259	264	260	262	300	287	292
3	343	332	339	355	233	287	348	263	274	297	290	294
4	343	335	341	235	227	232	275	268	270	297	292	294
5	338	261	289	235	230	232	277	268	272	298	292	295
6	263	255	261	251	231	239	276	270	272	298	293	295
7	257	245	251	258	240	250	277	274	275	307	289	294
8	259	241	251	336	252	289	277	271	274	320	288	299
9	261	251	256	256	253	254	280	272	274	334	311	320
10	258	243	250	265	254	257	276	254	270	312	293	304
11	277	214	254	268	243	262	276	272	274	298	294	296
12	261	248	257	275	242	248	277	273	274	301	297	298
13	252	242	249	264	242	253	278	274	276	306	299	302
14	256	245	252	274	259	265	277	272	273	306	301	304
15	253	240	246	275	267	271	276	272	274	306	299	302
16	317	239	251	271	255	265	279	275	277	312	297	304
17	254	244	249	258	255	256	282	275	279	302	296	299
18	249	242	246	258	256	257	283	277	280	301	296	298
19	248	238	243	260	255	257	301	281	284	306	297	302
20	242	236	239	261	258	259	284	282	283	305	280	298
21	248	239	244	261	256	258	286	281	283	280	263	274
22	297	235	246	262	257	260	286	281	283	275	266	272
23	248	239	244	293	251	275	285	282	284	298	276	285
24	273	247	258	300	288	295	294	267	281	294	281	285
25	284	275	278	299	296	298	272	264	269	308	292	301
26	285	272	277	298	294	296	310	267	272	309	299	305
27	278	253	263	297	257	286	282	271	274	316	299	311
28	258	250	255	271	260	266	287	277	283	311	301	304
29	254	250	252	276	263	268	285	275	280	311	306	308
30	252	236	244	272	262	266	283	275	280	325	298	311
31	---	---	---	270	263	265	287	283	285	---	---	---
MONTH	343	214	265	385	227	264	348	254	276	334	263	298

01595800 NORTH BRANCH POTOMAC RIVER AT BARNUM, WV--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	---	---	---	5.6	5.5	5.6	6.1	5.8	5.9	6.0	6.0	6.0
2	---	---	---	5.6	5.5	5.5	5.8	5.8	5.8	6.0	5.9	6.0
3	5.0	4.9	5.0	5.7	5.5	5.6	5.9	5.8	5.9	6.0	5.9	5.9
4	5.0	4.9	5.0	5.8	5.6	5.7	5.9	5.8	5.9	6.1	5.8	5.9
5	5.0	4.9	4.9	6.0	5.7	5.8	5.9	5.9	5.9	6.1	5.8	5.9
6	5.0	4.9	5.0	6.2	5.8	6.0	6.0	5.9	6.0	6.1	6.0	6.0
7	5.0	4.9	5.0	5.9	5.7	5.8	6.1	6.0	6.1	6.1	5.9	6.0
8	5.1	5.0	5.0	5.8	5.8	5.8	6.1	6.0	6.0	6.2	5.9	6.0
9	5.1	4.9	5.1	5.9	5.8	5.8	6.1	6.0	6.0	6.2	6.0	6.1
10	5.1	5.0	5.1	5.9	5.8	5.9	6.1	6.0	6.1	6.2	6.1	6.1
11	5.1	5.0	5.1	5.9	5.8	5.9	6.2	6.1	6.2	6.2	6.1	6.1
12	5.1	5.0	5.1	5.9	5.8	5.9	6.2	6.2	6.2	6.4	6.2	6.3
13	5.1	5.0	5.1	6.0	5.8	5.9	6.2	6.1	6.2	6.4	6.4	6.4
14	5.1	5.0	5.1	6.0	5.9	5.9	6.2	6.2	6.2	6.6	6.4	6.5
15	5.2	5.0	5.1	6.0	5.9	6.0	6.2	6.1	6.2	6.6	6.5	6.5
16	5.1	5.0	5.1	6.0	5.9	6.0	6.2	6.1	6.1	6.5	6.5	6.5
17	5.2	5.0	5.1	6.0	5.9	6.0	6.2	6.1	6.2	6.5	6.4	6.5
18	5.2	5.1	5.1	6.0	6.0	6.0	6.2	6.2	6.2	6.6	6.5	6.5
19	5.2	5.1	5.2	6.0	6.0	6.0	6.2	6.1	6.1	6.6	6.6	6.6
20	5.2	5.0	5.2	6.0	5.6	5.8	6.2	6.1	6.1	6.6	6.6	6.6
21	5.2	5.1	5.2	5.6	5.6	5.6	6.3	6.2	6.2	6.6	6.6	6.6
22	5.2	5.0	5.2	5.6	5.6	5.6	6.3	6.1	6.2	6.6	6.6	6.6
23	5.2	5.2	5.2	5.7	5.6	5.6	6.1	6.1	6.1	6.6	6.6	6.6
24	5.3	5.1	5.2	5.7	5.6	5.7	6.1	6.0	6.0	6.2	6.0	6.1
25	5.3	5.2	5.3	5.7	5.6	5.7	6.1	6.0	6.1	6.5	6.0	6.2
26	5.4	5.2	5.3	5.8	5.7	5.7	6.1	6.0	6.1	6.5	6.5	6.5
27	6.9	5.4	6.1	5.7	5.6	5.7	6.2	6.0	6.1	6.6	6.5	6.6
28	5.6	5.3	5.5	5.7	5.6	5.6	6.2	6.0	6.1	6.6	6.6	6.6
29	5.6	5.5	5.6	5.7	5.7	5.7	6.0	6.0	6.0	6.6	6.6	6.6
30	5.6	5.5	5.5	5.8	5.7	5.7	6.2	6.0	6.1	6.6	6.6	6.6
31	5.6	5.5	5.6	---	---	---	6.2	6.0	6.1	6.7	6.3	6.6
MONTH	6.9	4.9	5.2	6.2	5.5	5.8	6.3	5.8	6.1	6.7	5.8	6.3

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	6.3	5.8	6.0	6.2	6.1	6.1	6.2	6.1	6.1	6.6	6.6	6.6
2	6.1	5.8	5.9	6.2	6.1	6.2	6.3	6.1	6.2	6.6	6.5	6.6
3	6.2	5.8	6.0	6.2	6.1	6.1	6.5	6.2	6.3	6.7	6.5	6.6
4	5.9	5.8	5.9	6.1	6.0	6.0	6.3	6.2	6.2	6.7	6.6	6.6
5	6.3	5.9	6.1	6.0	6.0	6.0	6.3	6.1	6.2	6.7	6.6	6.6
6	6.3	6.2	6.2	6.0	5.9	6.0	---	---	---	6.7	6.6	6.6
7	6.3	6.2	6.3	6.1	5.9	6.0	---	---	---	6.7	6.6	6.6
8	6.4	6.3	6.4	6.0	5.9	6.0	---	---	---	6.8	6.6	6.7
9	6.4	6.3	6.4	6.2	6.0	6.1	---	---	---	6.7	6.6	6.7
10	6.4	5.6	6.2	6.2	6.1	6.1	---	---	---	6.7	6.6	6.7
11	---	---	---	6.6	6.1	6.3	---	---	---	6.7	6.6	6.6
12	---	---	---	6.3	5.9	6.1	---	---	---	6.6	6.5	6.5
13	---	---	---	6.1	6.0	6.1	---	---	---	---	---	---
14	---	---	---	6.1	6.0	6.0	---	---	---	---	---	---
15	---	---	---	6.1	6.0	6.1	---	---	---	---	---	---
16	---	---	---	6.6	6.0	6.2	6.1	5.9	6.0	---	---	---
17	---	---	---	6.1	6.0	6.0	6.1	6.0	6.1	---	---	---
18	5.9	5.8	5.9	6.1	5.9	6.1	6.1	6.0	6.0	---	---	---
19	6.0	5.9	6.0	6.1	6.1	6.1	6.1	6.0	6.0	---	---	---
20	6.1	6.0	6.0	6.1	6.0	6.1	6.1	6.0	6.1	---	---	---
21	6.1	5.9	6.0	6.1	5.9	6.1	6.2	6.1	6.1	---	---	---
22	6.0	5.9	5.9	6.0	5.9	6.0	6.2	6.1	6.2	---	---	---
23	6.1	6.0	6.0	6.1	5.9	6.0	6.2	6.1	6.2	---	---	---
24	6.1	6.1	6.1	6.1	6.0	6.0	6.2	6.1	6.2	---	---	---
25	6.1	6.0	6.1	6.1	6.0	6.0	6.3	6.2	6.2	---	---	---
26	6.1	6.0	6.1	6.1	5.9	6.0	6.5	6.2	6.4	---	---	---
27	6.1	6.1	6.1	6.1	6.0	6.0	6.6	6.5	6.6	6.8	6.5	6.6
28	6.1	6.0	6.1	6.1	6.0	6.0	6.6	6.5	6.6	6.8	6.5	6.7
29	---	---	---	6.2	6.1	6.1	6.6	6.5	6.6	6.8	6.8	6.8
30	---	---	---	6.2	6.1	6.2	6.6	6.5	6.6	6.8	6.8	6.8
31	---	---	---	6.2	6.1	6.2	---	---	---	6.8	6.8	6.8
MONTH	6.4	5.6	6.1	6.6	5.9	6.1	6.6	5.9	6.3	6.8	6.5	6.7

POTOMAC RIVER BASIN

01595800 NORTH BRANCH POTOMAC RIVER AT BARNUM, WV--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	6.8	6.8	6.8	6.5	6.4	6.5	6.8	6.7	6.8	6.8	6.7	6.7
2	6.8	6.8	6.8	6.6	6.5	6.5	6.8	6.7	6.8	6.8	6.6	6.7
3	6.8	6.7	6.8	6.7	6.4	6.6	6.8	6.7	6.8	6.8	6.8	6.8
4	6.8	6.8	6.8	6.4	6.3	6.3	6.8	6.7	6.8	6.8	6.8	6.8
5	7.0	6.1	6.5	6.3	6.3	6.3	6.8	6.7	6.8	6.8	6.8	6.8
6	6.1	6.1	6.1	6.4	6.3	6.3	6.8	6.7	6.7	6.8	6.8	6.8
7	6.2	6.1	6.1	6.4	6.3	6.3	6.8	6.7	6.7	6.8	6.8	6.8
8	6.2	6.1	6.1	6.4	6.3	6.4	6.8	6.7	6.8	6.8	6.7	6.8
9	6.2	6.2	6.2	6.4	6.4	6.4	6.8	6.7	6.8	6.8	6.7	6.8
10	6.4	6.1	6.2	6.5	6.4	6.4	6.8	6.7	6.8	6.8	6.7	6.8
11	6.2	6.1	6.1	6.6	6.4	6.5	6.8	6.7	6.8	6.8	6.7	6.8
12	6.1	6.0	6.0	6.6	6.5	6.5	6.8	6.7	6.7	6.8	6.7	6.7
13	6.1	6.0	6.0	6.6	6.5	6.5	6.8	6.7	6.7	6.8	6.7	6.7
14	6.1	6.0	6.0	6.6	6.5	6.6	6.8	6.7	6.7	6.8	6.7	6.7
15	6.0	6.0	6.0	6.6	6.6	6.6	6.8	6.7	6.7	6.8	6.7	6.7
16	6.3	6.0	6.2	6.7	6.6	6.6	6.8	6.7	6.7	6.8	6.7	6.7
17	6.3	6.2	6.3	6.6	6.5	6.6	6.8	6.7	6.8	6.8	6.7	6.8
18	6.3	6.3	6.3	6.6	6.6	6.6	6.8	6.7	6.8	6.8	6.7	6.7
19	6.3	6.3	6.3	6.7	6.6	6.6	6.8	6.6	6.7	6.8	6.7	6.8
20	6.4	6.3	6.3	6.7	6.6	6.6	6.8	6.7	6.7	6.8	6.7	6.8
21	6.4	6.3	6.3	6.7	6.6	6.6	6.8	6.7	6.7	6.8	6.7	6.8
22	6.4	6.2	6.3	6.7	6.6	6.6	6.8	6.7	6.7	6.8	6.7	6.7
23	6.4	6.3	6.3	6.8	6.4	6.7	6.7	6.7	6.7	6.8	6.7	6.8
24	6.6	6.3	6.4	6.8	6.7	6.7	6.9	6.7	6.7	6.8	6.7	6.8
25	6.6	6.5	6.6	6.8	6.7	6.7	6.8	6.7	6.7	6.8	6.7	6.8
26	6.6	6.6	6.6	6.8	6.7	6.8	6.8	6.7	6.7	6.8	6.7	6.8
27	6.6	6.5	6.5	6.8	6.7	6.7	6.7	6.7	6.7	6.8	6.7	6.8
28	6.6	6.5	6.5	6.9	6.7	6.8	6.8	6.7	6.7	6.8	6.7	6.8
29	6.5	6.4	6.5	6.8	6.7	6.8	6.8	6.7	6.7	6.8	6.7	6.8
30	6.5	6.5	6.5	6.8	6.7	6.8	6.8	6.7	6.7	6.8	6.5	6.7
31	---	---	---	6.8	6.7	6.8	6.8	6.7	6.7	---	---	---
MONTH	7.0	6.0	6.4	6.9	6.3	6.6	6.9	6.6	6.7	6.8	6.5	6.8

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

01595800 NORTH BRANCH POTOMAC RIVER AT BARNUM, WV--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

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

POTOMAC RIVER BASIN

01595800 NORTH BRANCH POTOMAC RIVER AT BARNUM, WV--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	9.4	9.2	9.3	---	---	---	---	---	---	---	---	---
4	9.6	9.0	9.3	9.3	8.6	8.9	---	---	---	---	---	---
5	9.3	8.8	9.1	9.0	8.6	8.7	---	---	---	---	---	---
6	9.3	8.8	9.1	8.9	8.6	8.7	---	---	---	---	---	---
7	9.5	9.2	9.4	8.9	8.8	8.8	---	---	---	---	---	---
8	9.5	9.4	9.4	9.1	9.0	9.0	---	---	---	---	---	---
9	9.6	8.9	9.4	9.3	9.3	9.3	---	---	---	---	---	---
10	9.7	9.3	9.5	9.6	9.4	9.5	---	---	---	---	---	---
11	9.5	9.3	9.4	9.6	9.4	9.6	---	---	---	---	---	---
12	9.6	9.3	9.4	9.8	9.6	9.7	---	---	---	---	---	---
13	9.7	9.1	9.5	10.0	9.8	9.9	---	---	---	---	---	---
14	9.7	8.9	9.4	10.1	9.9	10.0	---	---	---	---	---	---
15	9.7	8.8	9.3	10.2	9.9	10.0	12.7	12.3	12.5	---	---	---
16	9.4	9.0	9.2	10.2	10.0	10.1	12.5	11.8	12.2	---	---	---
17	9.6	8.8	9.3	10.3	10.1	10.2	12.4	11.6	12.0	---	---	---
18	9.2	8.9	9.1	10.4	10.3	10.3	11.8	10.9	11.4	---	---	---
19	9.4	9.1	9.3	10.5	10.3	10.4	11.5	11.1	11.3	---	---	---
20	---	---	---	---	---	---	11.3	11.0	11.1	---	---	---
21	---	---	---	---	---	---	11.3	11.1	11.2	---	---	---
22	---	---	---	---	---	---	11.4	11.3	11.3	---	---	---
23	---	---	---	---	---	---	11.6	10.9	11.2	---	---	---
24	---	---	---	---	---	---	11.3	11.3	11.3	---	---	---
25	---	---	---	---	---	---	11.5	11.2	11.4	---	---	---
26	---	---	---	---	---	---	11.7	11.4	11.6	---	---	---
27	---	---	---	---	---	---	11.9	11.4	11.7	---	---	---
28	---	---	---	---	---	---	11.9	11.4	11.7	---	---	---
29	---	---	---	---	---	---	12.3	11.8	12.0	---	---	---
30	---	---	---	---	---	---	12.2	11.7	11.9	---	---	---
31	---	---	---	---	---	---	12.1	11.8	11.9	---	---	---
MONTH	9.7	8.8	9.3	10.5	8.6	9.6	12.7	10.9	11.6	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	13.6	11.7	12.4	12.3	11.9	12.1	12.1	11.7	11.9	9.9	8.7	9.6
2	11.7	9.8	10.6	---	---	---	12.0	11.2	11.6	9.8	8.8	9.5
3	10.4	9.6	10.1	---	---	---	11.6	10.8	11.2	11.3	8.9	10.2
4	10.9	10.6	10.7	---	---	---	11.9	11.5	11.7	11.4	9.7	10.8
5	11.0	10.1	10.4	---	---	---	12.1	11.9	12.0	10.9	9.6	10.3
6	10.5	10.3	10.4	---	---	---	---	---	---	10.4	9.2	9.9
7	10.7	10.6	10.6	---	---	---	---	---	---	10.1	9.0	9.8
8	11.0	10.7	10.8	---	---	---	---	---	---	9.8	9.0	9.6
9	11.1	10.9	11.0	---	---	---	---	---	---	9.9	9.1	9.6
10	11.6	11.3	11.5	---	---	---	---	---	---	10.0	8.9	9.5
11	12.0	11.8	11.9	---	---	---	---	---	---	9.9	9.0	9.6
12	12.3	12.0	12.1	---	---	---	---	---	---	9.7	9.0	9.4
13	12.4	12.3	12.3	---	---	---	---	---	---	---	---	---
14	12.7	12.6	12.7	---	---	---	---	---	---	---	---	---
15	13.1	12.9	13.0	---	---	---	---	---	---	---	---	---
16	13.9	13.3	13.5	---	---	---	11.4	11.2	11.3	---	---	---
17	14.4	13.6	14.1	---	---	---	11.4	10.9	11.1	---	---	---
18	14.2	13.8	13.9	---	---	---	11.3	11.0	11.2	---	---	---
19	14.1	13.4	13.8	13.4	13.2	13.3	11.4	11.1	11.2	---	---	---
20	13.5	13.0	13.3	14.5	13.4	14.1	11.3	10.9	11.1	---	---	---
21	13.7	12.9	13.4	14.4	13.7	14.1	11.2	10.8	11.1	---	---	---
22	13.9	13.6	13.8	13.7	13.1	13.4	11.3	10.9	11.1	---	---	---
23	14.0	13.0	13.5	13.7	12.8	13.2	11.2	10.7	10.9	---	---	---
24	13.1	12.8	12.9	12.9	12.6	12.7	11.0	10.4	10.7	---	---	---
25	13.1	12.9	13.0	12.6	12.3	12.5	10.7	10.0	10.4	---	---	---
26	13.1	12.4	12.6	12.3	12.0	12.2	10.4	9.9	10.1	---	---	---
27	12.5	12.2	12.3	12.6	12.2	12.4	10.1	9.4	10.0	---	---	---
28	12.3	12.1	12.2	12.6	12.1	12.4	10.2	9.1	9.9	9.8	8.5	9.4
29	---	---	---	12.6	12.1	12.4	10.3	9.4	10.0	9.6	8.4	9.2
30	---	---	---	12.7	11.8	12.4	10.2	9.1	9.9	9.5	8.4	9.0
31	---	---	---	12.3	11.8	12.1	---	---	---	9.3	8.1	8.9
MONTH	14.4	9.6	12.2	14.5	11.8	12.8	12.1	9.1	10.9	11.4	8.1	9.6

POTOMAC RIVER BASIN

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01595800 NORTH BRANCH POTOMAC RIVER AT BARNUM, WV--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	9.4	8.8	9.1	12.0	9.3	10.6	8.9	8.6	8.8	---	---	---
2	9.5	8.2	9.0	12.2	10.3	11.2	8.7	8.4	8.6	---	---	---
3	9.5	8.9	9.3	11.0	9.8	10.5	8.5	8.1	8.3	9.2	9.0	9.1
4	9.5	9.3	9.4	11.7	11.1	11.5	8.3	8.0	8.2	9.3	9.0	9.2
5	10.2	9.2	9.8	11.7	11.3	11.6	8.2	8.0	8.2	9.3	9.0	9.2
6	10.4	10.2	10.3	11.5	9.9	10.7	8.3	7.8	8.2	9.3	9.0	9.1
7	10.9	10.4	10.6	10.1	9.8	10.0	8.3	8.0	8.2	9.2	8.9	9.1
8	11.2	9.7	10.4	10.0	9.5	9.8	8.2	7.9	8.1	9.1	8.8	9.0
9	10.0	9.6	9.8	9.9	9.5	9.7	8.2	7.9	8.1	8.9	8.1	8.7
10	10.3	9.9	10.1	9.7	9.1	9.5	8.5	8.1	8.3	9.0	8.7	8.8
11	11.6	9.7	10.8	9.1	8.6	8.9	8.4	8.3	8.3	9.0	8.7	8.9
12	11.7	11.4	11.6	9.0	8.4	8.8	8.5	8.2	8.4	9.0	8.6	8.9
13	12.2	11.6	11.7	9.2	8.0	8.6	8.6	8.3	8.4	9.0	8.6	8.9
14	12.0	11.5	11.6	8.5	8.0	8.3	8.5	8.2	8.4	9.0	8.7	8.8
15	11.7	11.4	11.5	8.7	7.8	8.3	8.6	8.3	8.4	8.9	8.6	8.8
16	11.5	8.6	9.8	8.6	7.9	8.4	8.5	8.2	8.4	8.9	8.6	8.8
17	8.9	8.6	8.8	8.8	7.9	8.4	8.4	8.2	8.3	9.0	8.7	8.8
18	9.4	9.0	9.5	8.8	8.2	8.4	8.5	8.2	8.4	8.9	8.8	8.8
19	9.6	9.1	9.4	8.6	7.9	8.3	8.6	7.7	8.4	8.9	8.6	8.8
20	9.8	9.2	9.5	8.6	8.0	8.3	8.5	8.3	8.4	9.0	8.7	8.8
21	9.5	9.2	9.4	8.7	7.8	8.3	8.5	8.3	8.4	9.2	8.9	9.0
22	9.6	9.1	9.4	8.8	7.8	8.3	8.7	8.1	8.5	9.4	9.2	9.3
23	9.6	9.3	9.5	---	---	---	8.5	8.2	8.4	9.3	9.0	9.2
24	10.9	9.5	10.1	10.5	10.0	10.2	8.5	6.3	8.2	9.3	9.0	9.2
25	10.9	9.0	9.9	10.5	10.2	10.3	8.6	8.3	8.4	9.1	8.9	9.0
26	10.2	9.0	9.6	10.4	10.1	10.2	8.7	8.3	8.5	9.1	9.0	9.0
27	10.0	8.6	9.3	10.0	9.9	9.9	8.6	8.5	8.6	9.0	8.8	8.9
28	9.5	8.6	9.1	9.8	9.5	9.7	8.7	8.3	8.5	9.2	8.9	9.0
29	9.6	8.1	9.3	9.8	9.5	9.6	8.8	8.4	8.6	9.1	8.9	9.0
30	10.1	9.4	9.6	9.5	9.2	9.4	---	---	---	9.4	8.8	9.1
31	---	---	---	9.2	8.9	9.1	---	---	---	---	---	---
MONTH	12.2	8.1	9.9	12.2	7.8	9.5	8.9	6.3	8.4	9.4	8.1	9.0

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).

WATER-DISCHARGE RECORDS

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

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

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

REMARKS.--Water-discharge records good except those for January, which are fair. Flow regulated prior to July 1981 by Stony River Reservoir, 45 mi (72 km) above station (see station 01595200), since December 1950 by Savage River Reservoir, 5 mi (8 km) above station (see station 01597500), and since July 1981 by Bloomington Reservoir, 9 mi (14 km) above station (see station 01595800). Some regulation at low flow by West Virginia Pulp and Paper Company at site used 1899-1906.

AVERAGE DISCHARGE.--39 years (water years 1900-05, 1950-82), 715 ft³/s (20.25 m³/s), 24.03 in/yr (610 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 discharge, 6 ft³/s (0.17 m³/s) Sept. 4, 1904.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,330 ft³/s (208 m³/s) Mar. 17, gage height, 8.57 ft (2.612 m); minimum discharge, 83 ft³/s (2.35 m³/s) May 25, gage height, 1.14 ft (0.347 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	164	431	389	555	1040	1050	479	175	172	258	326	287
2	165	282	730	591	1370	977	443	172	155	194	327	287
3	162	190	793	761	1590	1050	497	168	154	441	326	288
4	162	188	661	1990	2920	977	792	166	174	1300	325	285
5	162	191	583	2330	2210	1040	600	160	1130	1160	342	283
6	163	199	553	1480	1330	1070	602	146	1790	1070	320	283
7	161	477	537	1750	1080	1080	647	134	1600	1040	318	276
8	162	477	990	1870	734	881	543	162	1350	1010	320	278
9	162	417	938	1250	617	765	558	142	965	986	322	273
10	160	360	768	895	639	814	542	137	1130	940	340	307
11	160	337	699	559	815	859	541	142	1890	434	272	311
12	160	311	674	311	676	2340	446	153	2830	537	313	311
13	132	308	672	224	579	3280	342	151	3070	454	306	311
14	107	294	634	209	577	3750	385	146	2990	322	293	312
15	107	271	523	177	646	3440	467	146	2960	229	292	316
16	107	270	520	173	1310	3290	827	158	1960	248	290	311
17	107	269	437	180	3180	6500	802	147	1080	340	302	309
18	109	268	397	175	3120	4880	797	147	887	339	302	308
19	109	268	429	170	2220	3790	772	146	664	340	270	308
20	107	268	420	167	1530	4400	632	147	598	343	316	308
21	107	256	315	157	1940	4390	483	149	499	337	330	308
22	107	237	435	153	2990	3160	418	155	414	336	327	317
23	99	237	2970	500	2810	2320	398	160	406	338	308	372
24	95	238	2530	450	2030	1600	381	157	283	334	288	306
25	95	249	1630	400	1990	1290	362	160	160	333	285	305
26	103	242	1370	127	1380	966	340	166	154	333	262	313
27	499	315	1180	112	1100	927	189	233	185	335	283	321
28	1420	521	697	117	1080	740	184	271	230	361	268	308
29	810	520	545	106	---	495	177	227	270	340	286	307
30	733	476	549	107	---	470	195	199	272	331	275	403
31	476	---	549	111	---	489	---	193	---	330	288	---
TOTAL	7372	9367	25117	18157	43503	63080	14841	5115	30422	15693	9422	9212
MEAN	238	312	810	586	1554	2035	495	165	1014	506	304	307
MAX	1420	521	2970	2330	3180	6500	827	271	3070	1300	342	403
MIN	95	188	315	106	577	470	177	134	154	194	262	273
CAL YR 1981	TOTAL	244949	MEAN 671	MAX 4470	MIN 95	CFSM 1.66	IN 22.55					
WTR YR 1982	TOTAL	251301	MEAN 688	MAX 6500	MIN 95	CFSM 1.70	IN 23.14					

POTOMAC RIVER BASIN

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01598500 NORTH BRANCH POTOMAC RIVER AT LUKE, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: December 1961 to December 1962, July to September 1963, December 1963 to September 1973, October 1974 to September 1982 (discontinued).

INSTRUMENTATION.--Temperature recorder during all periods.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE (water years 1964-72, 1977, 1981-82): Maximum, 33.0°C July 3, 1966; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 23.5°C May 24, 25; minimum, 0.0°C Jan. 11, 17, 25.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

POTOMAC RIVER BASIN

01598500 NORTH BRANCH POTOMAC RIVER AT LUKE, MD--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	21.5	19.0	20.0	20.0	16.0	18.5	22.5	20.0	21.0	20.5	19.0	20.0
2	20.5	17.5	19.0	20.0	16.5	18.5	22.0	19.5	21.0	21.5	19.5	20.5
3	19.0	17.0	18.0	19.5	17.0	18.0	23.0	19.5	21.0	20.5	19.0	20.0
4	17.0	16.0	16.5	16.5	14.5	15.5	22.5	20.0	21.5	20.5	18.0	19.0
5	16.0	13.0	14.5	15.0	14.0	14.5	23.0	20.5	21.5	20.5	18.0	19.5
6	13.0	12.5	13.0	18.0	13.5	15.5	22.5	20.5	21.5	21.0	18.0	19.5
7	13.0	11.5	12.5	19.0	16.5	17.5	22.5	20.5	21.5	20.5	18.5	19.5
8	14.0	11.5	12.5	19.5	17.0	18.0	22.5	21.0	21.5	21.0	19.0	20.0
9	16.5	13.5	14.5	19.0	17.0	18.0	22.0	20.5	21.5	21.5	20.0	20.5
10	14.0	13.0	13.5	19.5	17.5	18.0	22.5	20.5	21.0	21.5	19.5	20.5
11	14.5	12.0	13.0	20.0	17.5	18.5	20.5	19.5	20.0	21.5	19.0	20.5
12	12.0	12.0	12.0	21.0	18.0	19.0	21.5	19.0	20.0	21.5	19.5	20.5
13	12.5	11.5	12.0	21.0	17.5	19.5	22.0	19.0	20.5	22.0	19.0	20.5
14	13.0	11.5	12.0	21.0	18.5	19.5	22.0	19.0	20.5	22.0	19.5	21.0
15	13.5	12.0	12.5	22.0	19.0	20.5	22.5	19.0	20.5	21.5	20.0	21.0
16	18.0	12.5	14.5	22.5	20.0	21.0	22.5	19.5	21.0	21.5	20.0	20.5
17	18.5	17.0	17.5	23.0	19.5	21.0	22.5	19.5	21.0	21.0	19.0	20.0
18	20.0	17.0	18.0	22.0	20.0	21.0	22.5	19.5	21.0	20.5	18.5	19.0
19	19.0	16.0	17.5	23.0	19.5	21.0	22.5	19.0	20.5	20.0	17.5	19.0
20	19.5	16.5	18.0	22.5	20.0	21.5	21.5	19.0	20.5	20.0	18.5	19.0
21	19.0	16.0	17.5	23.0	20.0	21.5	21.5	20.0	20.5	19.0	17.5	18.5
22	19.0	16.5	17.5	23.0	19.5	21.5	21.5	18.5	20.0	18.0	16.5	17.0
23	19.5	16.0	18.0	22.0	20.5	21.0	20.5	19.0	19.5	17.0	15.5	16.0
24	19.0	16.0	17.5	23.5	20.0	21.5	22.0	19.5	20.5	17.5	15.5	16.5
25	19.5	16.0	18.0	23.5	20.0	21.5	22.0	19.5	21.0	18.5	16.0	17.0
26	20.0	17.5	19.0	23.0	20.5	22.0	22.0	18.5	20.0	17.5	16.0	16.5
27	20.5	18.5	19.5	22.5	20.5	21.5	21.0	19.0	19.5	17.0	16.0	16.5
28	21.5	18.0	20.0	21.5	20.5	21.0	21.0	18.5	20.0	17.5	16.5	17.0
29	20.5	18.5	19.5	22.5	19.5	21.0	20.5	17.5	19.0	17.5	16.0	17.0
30	20.5	18.0	19.0	21.0	19.5	20.5	19.5	18.0	19.0	17.5	16.0	17.0
31	---	---	---	22.5	20.0	21.0	21.0	18.5	19.5	---	---	---
MONTH	21.5	11.5	16.0	23.5	13.5	19.5	23.0	17.5	20.5	22.0	15.5	19.0

POTOMAC RIVER BASIN

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01598500 NORTH BRANCH POTOMAC RIVER AT LUKE, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: December 1961 to December 1962, July to September 1963, December 1963 to September 1973, October 1974 to September 1982 (discontinued).

INSTRUMENTATION.--Temperature recorder during all periods.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE (water years 1964-72, 1977, 1981-82): Maximum, 33.0°C July 3, 1966; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 23.5°C May 24, 25; minimum, 0.0°C Jan. 11, 17, 25.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

POTOMAC RIVER BASIN

01598500 NORTH BRANCH POTOMAC RIVER AT LUKE, MD--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	21.5	19.0	20.0	20.0	16.0	18.5	22.5	20.0	21.0	20.5	19.0	20.0
2	20.5	17.5	19.0	20.0	16.5	18.5	22.0	19.5	21.0	21.5	19.5	20.5
3	19.0	17.0	18.0	19.5	17.0	18.0	23.0	19.5	21.0	20.5	19.0	20.0
4	17.0	16.0	16.5	16.5	14.5	15.5	22.5	20.0	21.5	20.5	18.0	19.0
5	16.0	13.0	14.5	15.0	14.0	14.5	23.0	20.5	21.5	20.5	18.0	19.5
6	13.0	12.5	13.0	18.0	13.5	15.5	22.5	20.5	21.5	21.0	18.0	19.5
7	13.0	11.5	12.5	19.0	16.5	17.5	22.5	20.5	21.5	20.5	18.5	19.5
8	14.0	11.5	12.5	19.5	17.0	18.0	22.5	21.0	21.5	21.0	19.0	20.0
9	16.5	13.5	14.5	19.0	17.0	18.0	22.0	20.5	21.5	21.5	20.0	20.5
10	14.0	13.0	13.5	19.5	17.5	18.0	22.5	20.5	21.0	21.5	19.5	20.5
11	14.5	12.0	13.0	20.0	17.5	18.5	20.5	19.5	20.0	21.5	19.0	20.5
12	12.0	12.0	12.0	21.0	18.0	19.0	21.5	19.0	20.0	21.5	19.5	20.5
13	12.5	11.5	12.0	21.0	17.5	19.5	22.0	19.0	20.5	22.0	19.0	20.5
14	13.0	11.5	12.0	21.0	18.5	19.5	22.0	19.0	20.5	22.0	19.5	21.0
15	13.5	12.0	12.5	22.0	19.0	20.5	22.5	19.0	20.5	21.5	20.0	21.0
16	18.0	12.5	14.5	22.5	20.0	21.0	22.5	19.5	21.0	21.5	20.0	20.5
17	18.5	17.0	17.5	23.0	19.5	21.0	22.5	19.5	21.0	21.0	19.0	20.0
18	20.0	17.0	18.0	22.0	20.0	21.0	22.5	19.5	21.0	20.5	18.5	19.0
19	19.0	16.0	17.5	23.0	19.5	21.0	22.5	19.0	20.5	20.0	17.5	19.0
20	19.5	16.5	18.0	22.5	20.0	21.5	21.5	19.0	20.5	20.0	18.5	19.0
21	19.0	16.0	17.5	23.0	20.0	21.5	21.5	20.0	20.5	19.0	17.5	18.5
22	19.0	16.5	17.5	23.0	19.5	21.5	21.5	18.5	20.0	18.0	16.5	17.0
23	19.5	16.0	18.0	22.0	20.5	21.0	20.5	19.0	19.5	17.0	15.5	16.0
24	19.0	16.0	17.5	23.5	20.0	21.5	22.0	19.5	20.5	17.5	15.5	16.5
25	19.5	16.0	18.0	23.5	20.0	21.5	22.0	19.5	21.0	18.5	16.0	17.0
26	20.0	17.5	19.0	23.0	20.5	22.0	22.0	18.5	20.0	17.5	16.0	16.5
27	20.5	18.5	19.5	22.5	20.5	21.5	21.0	19.0	19.5	17.0	16.0	16.5
28	21.5	18.0	20.0	21.5	20.5	21.0	21.0	18.5	20.0	17.5	16.5	17.0
29	20.5	18.5	19.5	22.5	19.5	21.0	20.5	17.5	19.0	17.5	16.0	17.0
30	20.5	18.0	19.0	21.0	19.5	20.5	19.5	18.0	19.0	17.5	16.0	17.0
31	---	---	---	22.5	20.0	21.0	21.0	18.5	19.5	---	---	---
MONTH	21.5	11.5	16.0	23.5	13.5	19.5	23.0	17.5	20.5	22.0	15.5	19.0

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).

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1332: 1943.

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

REMARKS.--Water-discharge records good except those for winter periods, which are fair. Some regulation at low flow by Stony River Reservoir, 66 mi (106 km) above station (see station 01595200) prior to July 1981. Low-flow regulation since December 1950 by Savage River Reservoir, 25 mi (40 km) above station (see station 01597500). Flow regulated by Bloomington Reservoir, 29 mi (47 km) above station (see station 01595800) since July 1981.

AVERAGE DISCHARGE.--44 years, 892 ft³/s (25.26 m³/s), 20.32 in/yr (516 mm/yr), adjusted for storage since October 1981.

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 discharge, 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, 9,690 ft³/s (274 m³/s) Mar. 17, gage height, 11.32 ft (3.450 m); minimum discharge, 126 ft³/s (3.57 m³/s) Oct. 24, 25, gage height 1.88 ft (0.572 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	200	537	472	687	665	1470	712	418	276	331	382	303
2	209	461	797	699	1930	1400	658	385	251	279	372	304
3	202	269	1000	878	1760	1440	773	367	259	539	366	310
4	199	260	861	1990	3500	1390	1210	343	339	1660	361	299
5	199	260	700	3290	3130	1350	960	324	1690	1450	393	296
6	199	295	675	2040	1920	1410	950	307	2520	1250	369	303
7	198	429	605	2020	1550	1520	1060	277	2110	1200	353	298
8	193	566	920	2420	1140	1340	849	441	1860	1150	367	280
9	196	512	1260	1710	926	1220	919	422	1260	1120	383	290
10	194	451	937	1180	855	1140	917	345	1330	1080	363	290
11	195	416	836	781	1050	1290	898	312	2190	707	354	327
12	195	368	789	600	939	2890	847	312	3100	778	341	320
13	195	360	769	500	761	4600	619	299	3810	614	345	317
14	147	359	764	450	741	4720	705	292	3660	426	323	315
15	139	325	649	400	800	4190	585	271	3330	341	315	324
16	140	321	611	350	1890	4180	1070	270	2630	299	312	318
17	139	319	534	330	4950	8790	1060	263	1480	379	315	313
18	145	318	459	320	4290	6350	1090	251	1270	398	336	312
19	149	313	478	300	3230	4720	1020	243	902	399	323	313
20	145	314	477	290	2540	5330	916	239	815	401	295	312
21	142	311	428	270	3090	5610	707	267	675	381	359	312
22	143	286	332	260	3650	4440	583	281	547	374	346	349
23	146	280	2380	250	3680	3190	561	320	525	378	345	344
24	134	283	3230	600	2900	2350	527	305	436	375	318	356
25	129	283	2010	300	2760	1910	513	299	289	367	308	314
26	154	300	1520	220	2120	1520	598	276	247	363	301	316
27	679	281	1630	200	1610	1350	510	314	236	360	283	372
28	2100	527	939	190	1520	1200	492	386	297	644	292	332
29	1010	565	677	180	---	795	444	372	325	640	293	317
30	1000	559	653	170	---	747	423	318	339	436	298	356
31	613	---	642	169	---	734	---	301	---	403	292	---
TOTAL	9828	11128	29034	24044	59897	84586	23176	9820	38998	19522	10403	9512
MEAN	317	371	937	776	2139	2729	773	317	1300	630	336	317
MAX	2100	566	3230	3290	4950	8790	1210	441	3810	1660	393	372
MIN	129	260	332	169	665	734	423	239	236	279	283	280
CAL YR 1981 TOTAL	301940	MEAN 827	MAX 6190	MIN 116	CFSM 1.39	IN 18.85						
WTR YR 1982 TOTAL	329948	MEAN 904	MAX 8790	MIN 129	CFSM 1.52	IN 20.59						

POTOMAC RIVER BASIN

01600000 NORTH BRANCH POTOMAC RIVER AT PINTO, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969-74, 1976 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1980 to current year.

pH: October 1980 to current year.

WATER TEMPERATURES: October 1980 to current year.

DISSOLVED OXYGEN: October 1980 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1980.

REMARKS.--Interruptions in record were due to malfunction of the recording instruments.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE (water year 1982): Maximum, 1,240 micromhos Oct. 20, 1982; minimum, 160 micromhos July 5, 1982.

pH (water year 1982): Maximum, 8.6 units June 27, 1982; minimum, 6.6 units Mar. 14, 1982.

WATER TEMPERATURES (water year 1982): Maximum, 26.5°C June 29, July 27, Aug. 5, 1982; minimum, 0.5°C Jan. 10, 12-30, 1982.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 1,240 micromhos Oct. 20; minimum, 160 micromhos July 5.

pH: Maximum, 8.6 units June 27; minimum, 6.6 units Mar. 14.

WATER TEMPERATURES: Maximum, 26.5°C June 29, July 27, Aug. 5; minimum, 0.5°C Jan. 10, 12-30.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	950	370	689	430	400	412	578	518	540	390	370	382
2	960	830	899	460	420	431	577	550	560	390	380	384
3	851	751	811	560	450	487	550	390	430	390	330	359
4	821	771	794	650	580	631	400	390	395	350	230	312
5	872	800	845	620	610	615	470	400	440	240	220	225
6	902	862	884	620	540	583	466	456	462	250	240	245
7	883	823	855	540	490	535	485	465	471	250	230	240
8	903	853	881	490	420	430	485	360	410	240	220	226
9	884	824	859	472	422	452	360	335	347	250	230	233
10	814	684	730	463	412	447	364	360	380	260	240	253
11	895	695	817	473	463	465	384	364	374	---	---	---
12	895	885	890	504	453	473	393	373	382	---	---	---
13	896	876	892	554	504	531	383	373	382	450	380	415
14	936	886	908	584	554	567	383	363	374	500	450	474
15	1150	897	959	590	565	575	392	302	365	550	490	510
16	1190	1150	1180	620	590	610	482	382	438	570	550	562
17	1210	1140	1170	620	595	610	492	442	461	670	570	648
18	1180	1120	1140	615	560	590	521	481	495	760	670	710
19	1230	1180	1200	560	540	550	531	481	510	700	610	640
20	1240	1110	1170	650	570	600	500	480	484	610	600	605
21	1130	1080	1110	658	638	646	510	480	493	630	600	610
22	1230	1070	1180	708	648	666	660	470	528	660	560	627
23	1230	1160	1200	720	680	690	620	270	410	600	560	571
24	1190	1140	1150	690	680	685	270	260	265	700	580	648
25	1220	1130	1180	690	680	685	280	260	270	580	350	368
26	1140	1090	1120	700	660	680	310	270	298	500	350	382
27	1140	660	980	680	659	667	310	270	281	660	500	600
28	660	410	480	719	549	641	330	290	322	920	660	748
29	410	330	343	568	548	556	410	330	371	980	790	888
30	340	320	326	568	550	559	410	400	405	940	790	853
31	400	320	373	---	---	---	410	390	396	940	890	913
MONTH	1240	320	904	720	400	569	660	260	411	980	220	505

01600000 NORTH BRANCH POTOMAC RIVER AT PINTO, MD--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	900	430	800	331	317	327	---	---	---	644	556	597
2	430	250	272	335	330	330	---	---	---	662	591	636
3	284	229	263	---	---	---	---	---	---	696	635	659
4	245	204	226	---	---	---	---	---	---	698	661	675
5	204	187	194	390	311	348	---	---	---	820	670	771
6	200	179	189	342	308	331	---	---	---	890	790	818
7	220	181	209	340	327	331	---	---	---	900	870	882
8	274	209	250	366	320	343	---	---	---	920	760	844
9	343	274	320	372	356	364	---	---	---	780	750	768
10	364	339	350	441	359	384	343	340	340	840	770	797
11	431	304	334	356	324	340	348	327	338	910	850	890
12	365	322	347	330	240	290	391	328	363	920	900	909
13	450	365	417	244	224	236	496	380	430	---	---	---
14	469	444	454	225	216	219	528	450	470	---	---	---
15	474	447	460	223	210	215	---	---	---	702	672	690
16	452	266	340	227	205	210	623	355	439	783	713	748
17	266	230	239	223	205	215	---	---	---	747	705	728
18	243	228	236	210	203	206	---	---	---	807	747	782
19	280	232	250	230	210	220	---	---	---	838	798	808
20	310	280	285	240	230	235	387	363	378	850	800	823
21	310	280	295	252	240	245	---	---	---	812	772	797
22	285	275	280	262	245	255	---	---	---	803	753	780
23	---	---	---	310	262	292	---	---	---	825	645	755
24	270	254	258	322	310	315	---	---	---	667	627	644
25	264	256	260	352	315	333	---	---	---	758	658	710
26	314	259	280	418	340	380	---	---	---	770	630	716
27	322	312	317	435	425	430	---	---	---	770	680	733
28	330	322	325	448	435	443	---	---	---	680	600	628
29	---	---	---	554	445	520	---	---	---	610	530	577
30	---	---	---	571	540	560	598	579	589	620	600	609
31	---	---	---	544	430	470	---	---	---	620	600	608
MONTH	900	179	313	571	203	324	623	327	418	920	530	737
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	650	620	629	---	---	---	550	530	542	690	650	666
2	720	650	690	580	560	568	560	540	549	650	618	630
3	730	720	720	580	420	520	590	560	577	697	627	663
4	---	---	---	500	170	229	590	570	582	685	655	673
5	---	---	---	190	160	169	610	560	590	673	643	659
6	---	---	---	210	180	186	620	530	580	661	631	648
7	---	---	---	230	190	210	600	560	582	650	370	501
8	---	---	---	230	220	226	600	550	579	368	348	356
9	---	---	---	---	---	---	610	570	596	476	356	408
10	---	---	---	---	---	---	610	560	575	644	484	537
11	240	220	230	---	---	---	580	490	552	653	573	613
12	260	240	250	---	---	---	700	590	643	631	581	604
13	260	240	250	---	---	---	610	580	594	669	639	653
14	250	210	230	---	---	---	600	580	591	648	608	626
15	250	220	230	---	---	---	640	580	594	696	636	666
16	230	210	220	---	---	---	660	620	632	636	584	613
17	270	220	240	---	---	---	650	610	631	672	602	642
18	270	220	250	---	---	---	630	590	613	611	561	580
19	300	230	260	---	---	---	590	580	587	647	599	621
20	---	---	---	---	---	---	740	590	625	677	647	662
21	---	---	---	---	---	---	670	590	613	676	656	664
22	---	---	---	---	---	---	630	610	620	654	624	647
23	---	---	---	---	---	---	620	580	600	692	632	656
24	---	---	---	580	550	560	650	580	602	690	510	608
25	580	520	540	590	560	575	660	620	644	639	609	631
26	770	580	700	560	540	549	620	520	572	667	627	647
27	790	750	770	570	540	558	690	560	598	695	635	668
28	860	760	800	570	320	397	660	590	622	683	643	666
29	---	---	---	440	330	392	700	600	665	682	622	653
30	---	---	---	520	450	485	690	650	661	640	540	591
31	---	---	---	540	520	528	740	660	678	---	---	---
MONTH	860	210	438	590	160	410	740	490	603	697	348	615

POTOMAC RIVER BASIN

01600000 NORTH BRANCH POTOMAC RIVER AT PINTO, MD--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	7.8	7.3	7.5	7.3	7.2	7.3	7.3	7.2	7.3	7.3	7.2	7.3
2	7.5	7.2	7.3	7.4	7.3	7.3	7.4	7.3	7.3	7.3	7.2	7.3
3	7.5	7.2	7.4	7.5	7.3	7.4	7.3	7.2	7.2	7.6	7.2	7.3
4	7.8	7.5	7.6	7.6	7.4	7.5	7.3	7.2	7.2	7.3	7.0	7.2
5	7.5	7.4	7.4	7.6	7.4	7.5	7.3	7.2	7.2	7.1	6.9	7.0
6	7.5	7.4	7.4	7.7	7.4	7.5	7.3	7.3	7.3	7.1	7.1	7.1
7	7.5	7.4	7.5	7.5	7.3	7.4	7.3	7.2	7.3	7.1	7.1	7.1
8	7.5	7.4	7.5	7.4	7.2	7.3	7.4	7.3	7.3	7.1	6.9	7.0
9	7.5	7.4	7.4	7.3	7.1	7.2	7.2	7.0	7.1	7.2	7.0	7.1
10	7.7	7.4	7.5	7.5	7.1	7.3	7.3	7.1	7.2	7.2	7.1	7.1
11	7.5	7.3	7.4	7.7	7.2	7.4	7.3	7.2	7.3	---	---	---
12	7.4	7.3	7.3	7.9	7.3	7.5	7.3	7.3	7.3	---	---	---
13	7.4	7.3	7.3	7.5	7.4	7.4	7.3	7.2	7.3	7.4	7.2	7.3
14	7.5	7.3	7.4	7.5	7.4	7.4	7.4	7.2	7.3	7.5	7.4	7.5
15	7.4	7.2	7.3	7.4	7.3	7.4	7.3	7.2	7.2	7.6	7.5	7.5
16	7.5	7.3	7.4	7.4	7.3	7.3	7.3	7.3	7.3	7.7	7.5	7.6
17	7.5	7.4	7.4	7.4	7.3	7.3	7.3	7.2	7.3	7.7	7.6	7.6
18	7.5	7.4	7.4	7.4	7.3	7.3	7.4	7.2	7.3	7.6	7.6	7.6
19	7.5	7.4	7.5	7.5	7.3	7.4	7.4	7.4	7.4	7.6	7.4	7.5
20	7.6	7.5	7.5	7.4	7.3	7.4	7.4	7.4	7.4	7.5	7.4	7.5
21	7.7	7.4	7.5	7.4	7.4	7.4	7.5	7.3	7.4	7.6	7.5	7.5
22	7.7	7.5	7.6	7.6	7.4	7.5	7.5	7.3	7.4	7.7	7.6	7.6
23	7.6	7.5	7.5	7.7	7.5	7.5	7.5	7.3	7.4	7.6	7.5	7.6
24	7.6	7.5	7.6	7.5	7.4	7.5	7.3	7.1	7.2	7.6	7.5	7.6
25	7.6	7.5	7.6	7.6	7.4	7.5	7.1	6.9	7.0	7.5	7.2	7.3
26	7.7	7.6	7.6	7.6	7.5	7.5	7.0	6.9	6.9	7.4	7.2	7.3
27	7.6	7.3	7.4	7.6	7.4	7.5	7.0	6.8	6.9	7.6	7.4	7.5
28	7.3	6.8	6.9	7.5	7.2	7.4	7.2	7.0	7.2	7.7	7.5	7.6
29	7.3	6.9	7.2	7.3	7.1	7.2	7.3	7.2	7.3	7.7	7.6	7.7
30	7.3	7.2	7.2	7.3	7.2	7.2	7.4	7.3	7.3	7.7	7.7	7.7
31	7.3	7.2	7.2	---	---	---	7.3	7.3	7.3	7.7	7.6	7.7
MONTH	7.8	6.8	7.4	7.9	7.1	7.4	7.5	6.8	7.3	7.7	6.9	7.4

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	7.7	7.4	7.6	7.1	7.0	7.1	---	---	---	7.7	7.3	7.4
2	7.3	6.8	7.0	7.2	7.0	7.1	---	---	---	7.6	7.2	7.4
3	7.2	7.1	7.1	---	---	---	---	---	---	8.0	7.3	7.6
4	7.0	6.9	6.9	---	---	---	---	---	---	8.2	7.3	7.7
5	7.0	6.8	6.9	7.0	6.9	7.0	---	---	---	8.4	7.3	8.1
6	7.2	7.1	7.1	7.1	6.9	7.0	---	---	---	8.2	7.4	7.7
7	7.2	7.1	7.2	7.1	7.0	7.0	---	---	---	7.8	7.3	7.5
8	7.2	7.1	7.2	7.1	7.0	7.1	---	---	---	7.5	7.3	7.4
9	7.3	7.2	7.3	7.1	7.0	7.0	---	---	---	7.5	7.1	7.3
10	7.3	7.3	7.3	7.2	7.1	7.1	---	---	---	7.5	7.0	7.2
11	7.3	7.2	7.2	7.1	7.0	7.1	7.3	7.2	7.2	8.0	7.4	7.6
12	7.2	7.2	7.2	7.0	6.7	6.8	7.3	7.2	7.3	7.3	6.9	7.1
13	7.3	7.2	7.3	6.9	6.7	6.8	7.3	7.2	7.3	---	---	---
14	7.4	7.3	7.3	6.8	6.6	6.7	7.4	7.3	7.3	---	---	---
15	7.4	7.3	7.3	6.9	6.7	6.8	---	---	---	8.0	7.3	7.5
16	7.4	7.2	7.3	7.3	6.9	7.1	7.4	7.1	7.2	7.6	7.3	7.4
17	7.2	7.0	7.1	7.3	6.8	7.0	---	---	---	7.6	7.3	7.4
18	7.0	6.9	7.0	6.8	6.7	6.8	---	---	---	7.6	7.3	7.4
19	7.2	6.9	7.0	6.8	6.8	6.8	---	---	---	7.5	7.3	7.4
20	7.2	7.0	7.1	6.8	6.7	6.7	7.4	7.0	7.2	7.6	7.4	7.5
21	7.2	7.0	7.1	6.7	6.7	6.7	---	---	---	7.4	7.3	7.4
22	7.2	7.1	7.1	6.8	6.7	6.7	---	---	---	7.4	7.3	7.3
23	---	---	---	6.8	6.7	6.7	---	---	---	7.4	7.2	7.3
24	7.1	7.0	7.1	7.2	6.8	7.0	---	---	---	7.5	7.4	7.4
25	7.1	7.0	7.0	7.2	7.1	7.1	---	---	---	7.5	7.4	7.4
26	7.2	7.0	7.1	7.1	7.0	7.1	---	---	---	7.6	7.4	7.5
27	7.2	7.1	7.1	7.0	6.9	6.9	---	---	---	7.6	7.4	7.5
28	7.1	7.0	7.1	7.0	6.8	6.9	---	---	---	7.5	7.4	7.4
29	---	---	---	7.0	6.8	7.0	---	---	---	7.5	7.3	7.4
30	---	---	---	7.1	7.0	7.0	8.3	7.4	7.8	7.4	7.3	7.4
31	---	---	---	7.1	7.0	7.1	---	---	---	7.5	7.3	7.4
MONTH	7.7	6.8	7.2	7.3	6.6	6.9	8.3	7.0	7.3	8.4	6.9	7.5

01600000 NORTH BRANCH POTOMAC RIVER AT PINTO, MD--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	7.3	7.3	7.3	---	---	---	7.5	7.3	7.4	7.4	7.1	7.2
2	7.4	7.2	7.3	8.5	7.4	8.0	7.4	7.2	7.3	7.4	7.1	7.2
3	7.3	7.3	7.3	7.7	7.3	7.5	7.4	7.2	7.3	7.4	7.1	7.2
4	---	---	---	7.3	7.1	7.2	7.4	7.2	7.3	7.3	7.1	7.2
5	---	---	---	7.3	7.1	7.2	7.4	7.2	7.3	7.4	7.0	7.2
6	---	---	---	7.4	7.1	7.3	7.4	7.3	7.4	7.4	7.0	7.2
7	---	---	---	7.3	7.1	7.2	7.5	7.3	7.3	7.6	7.1	7.3
8	---	---	---	7.2	7.1	7.1	7.3	7.2	7.3	7.7	7.0	7.3
9	---	---	---	---	---	---	7.3	7.2	7.3	7.7	7.0	7.3
10	---	---	---	---	---	---	7.3	7.2	7.3	7.5	7.1	7.3
11	7.2	7.0	7.1	---	---	---	7.3	7.2	7.2	7.6	7.1	7.4
12	7.2	6.9	7.0	---	---	---	7.4	7.2	7.3	7.5	7.1	7.3
13	7.1	6.9	7.0	---	---	---	7.4	7.2	7.3	7.4	7.2	7.3
14	7.2	7.0	7.1	---	---	---	7.4	7.2	7.3	7.4	7.2	7.3
15	7.1	7.0	7.0	---	---	---	7.4	7.2	7.3	7.3	7.2	7.3
16	7.2	6.9	7.0	---	---	---	7.4	7.2	7.3	7.4	7.2	7.3
17	7.4	7.2	7.3	---	---	---	7.5	7.2	7.3	7.4	7.1	7.2
18	7.3	7.2	7.2	---	---	---	7.6	7.2	7.3	7.2	7.1	7.1
19	7.4	7.2	7.3	---	---	---	7.3	6.9	7.1	7.4	7.1	7.3
20	---	---	---	---	---	---	7.2	6.8	7.0	7.3	7.2	7.2
21	---	---	---	---	---	---	7.2	7.1	7.1	7.3	7.2	7.2
22	---	---	---	---	---	---	7.1	7.0	7.1	7.2	7.1	7.1
23	---	---	---	---	---	---	7.1	7.0	7.0	7.1	7.1	7.1
24	---	---	---	7.4	7.2	7.3	7.1	7.0	7.0	7.3	7.1	7.2
25	8.3	7.4	7.8	7.3	7.2	7.2	7.2	7.1	7.1	7.4	7.3	7.3
26	8.5	7.6	8.0	7.3	7.1	7.2	7.2	7.0	7.1	7.4	7.3	7.3
27	8.6	7.6	8.0	7.3	7.2	7.3	7.1	7.0	7.0	7.3	7.3	7.3
28	8.2	7.7	7.9	7.5	7.2	7.3	7.3	7.0	7.1	7.3	7.3	7.3
29	---	---	---	7.5	7.1	7.3	7.3	7.1	7.2	7.3	7.2	7.2
30	---	---	---	7.5	7.4	7.4	7.2	7.1	7.2	7.7	7.3	7.5
31	---	---	---	7.5	7.3	7.4	7.2	7.1	7.2	---	---	---
MONTH	8.6	6.9	7.4	8.5	7.1	7.3	7.6	6.8	7.2	7.7	7.0	7.3

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

POTOMAC RIVER BASIN

01600000 NORTH BRANCH POTOMAC RIVER AT PINTO, MD--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	---	---	---	3.0	2.0	2.5	---	---	---	14.5	13.0	14.0
2	3.0	1.0	2.0	4.0	3.0	3.5	---	---	---	15.0	13.0	14.0
3	3.5	2.5	3.0	---	---	---	---	---	---	17.0	13.5	15.0
4	2.5	2.0	2.5	---	---	---	---	---	---	17.5	14.5	16.0
5	3.0	2.0	2.5	5.0	4.5	4.5	---	---	---	18.5	15.0	17.5
6	3.0	2.5	3.0	5.0	4.0	4.5	---	---	---	19.5	16.0	17.5
7	2.5	1.0	1.5	4.0	3.5	3.5	---	---	---	19.5	17.5	18.5
8	3.0	1.5	2.0	4.5	3.5	4.0	---	---	---	18.5	16.5	18.0
9	3.5	3.0	3.0	5.0	4.0	4.5	---	---	---	19.5	15.0	16.5
10	3.0	2.0	2.5	5.0	4.0	4.5	---	---	---	20.0	17.5	18.5
11	3.0	1.5	2.0	7.0	5.0	6.0	8.5	7.5	8.0	22.0	16.0	18.5
12	3.0	2.0	2.5	9.0	7.0	8.5	9.5	6.5	8.0	24.5	21.5	22.5
13	3.5	2.5	3.0	7.0	5.0	6.0	12.0	9.0	11.0	25.0	23.5	24.0
14	4.0	2.5	3.5	6.5	4.5	5.5	11.5	10.0	10.5	24.5	20.0	22.5
15	4.5	3.5	4.0	6.0	4.5	4.5	---	---	---	22.5	19.0	21.0
16	5.0	4.5	4.5	5.0	4.5	5.0	12.5	11.5	12.0	22.5	19.0	21.0
17	---	---	---	7.5	4.5	6.0	---	---	---	23.5	19.5	21.5
18	---	---	---	7.5	5.5	6.5	---	---	---	23.5	20.5	22.0
19	4.0	3.0	3.5	7.5	6.5	7.0	---	---	---	23.5	21.5	22.5
20	5.0	4.0	4.5	7.5	6.5	7.0	12.0	11.5	11.5	23.5	21.5	22.0
21	5.0	4.0	4.5	7.5	6.5	7.0	---	---	---	21.5	20.5	21.0
22	4.0	3.5	3.5	7.0	5.5	6.5	---	---	---	21.0	20.0	20.5
23	---	---	---	8.0	6.0	7.0	---	---	---	20.0	18.0	19.0
24	6.0	4.5	5.0	12.0	8.0	9.5	---	---	---	18.0	17.5	17.5
25	6.0	3.5	4.5	13.0	10.5	11.5	---	---	---	20.0	17.5	18.5
26	4.5	2.0	3.5	13.0	7.5	10.5	---	---	---	21.0	19.0	20.0
27	5.0	3.5	4.5	7.5	5.5	6.0	---	---	---	22.0	20.0	21.0
28	5.5	3.0	4.0	8.5	5.0	6.5	---	---	---	22.5	21.0	21.5
29	---	---	---	8.5	6.0	7.5	---	---	---	23.0	21.0	22.0
30	---	---	---	9.0	8.0	8.5	15.0	12.5	14.0	23.5	21.5	22.5
31	---	---	---	11.0	9.0	9.5	---	---	---	25.0	22.0	23.5
MONTH	6.0	1.0	3.5	13.0	2.0	6.5	15.0	6.5	10.5	25.0	13.0	19.5

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

01600000 NORTH BRANCH POTOMAC RIVER AT PINTO, MD--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	9.7	8.7	9.1	9.9	9.5	9.7	12.0	10.7	11.4	12.8	12.5	12.7
2	8.4	7.5	8.0	10.0	9.3	9.4	10.7	10.2	10.3	12.7	12.4	12.6
3	9.7	8.4	9.0	11.3	10.0	11.0	10.7	10.2	10.5	12.5	12.3	12.4
4	10.8	9.3	9.9	11.8	11.3	11.6	11.3	10.6	10.9	12.4	11.6	11.9
5	9.6	8.4	9.0	12.5	11.7	12.1	11.2	10.8	10.0	12.2	11.8	12.0
6	8.3	7.7	8.1	11.8	11.0	11.4	11.9	11.1	11.5	12.3	12.0	12.2
7	8.8	7.6	8.2	11.8	10.0	10.9	11.8	11.4	11.6	12.0	11.9	12.0
8	8.6	8.2	8.4	10.9	10.1	10.4	11.3	11.0	11.1	12.7	12.0	12.5
9	9.4	8.5	8.9	10.1	9.7	10.0	11.7	11.0	11.5	12.5	12.3	12.4
10	10.4	8.7	9.3	10.6	9.8	10.1	12.2	11.6	11.9	13.2	12.2	12.8
11	9.1	8.2	8.7	10.9	9.8	10.2	12.2	11.8	12.0	---	---	---
12	9.0	8.2	8.4	12.2	10.4	11.5	12.3	11.8	12.1	---	---	---
13	9.1	8.3	8.6	12.4	11.6	11.9	12.4	12.0	12.2	13.5	13.4	13.4
14	11.8	8.3	11.1	12.1	11.7	11.9	12.4	12.1	12.2	13.4	13.2	13.3
15	12.4	11.7	12.2	12.0	11.7	11.8	12.2	11.9	12.1	---	---	---
16	11.9	11.6	11.7	11.8	11.4	11.6	12.2	11.7	11.9	13.5	12.5	13.1
17	12.2	11.9	12.1	11.8	11.6	11.7	12.4	12.1	12.2	13.2	12.1	12.9
18	12.1	11.9	12.0	12.2	11.7	11.8	12.4	11.8	12.2	13.1	12.2	12.9
19	12.5	11.0	12.3	12.4	12.2	12.3	12.8	12.2	12.4	12.2	11.8	12.0
20	13.0	12.5	12.9	12.2	11.8	11.9	13.2	12.8	13.0	11.9	9.5	10.8
21	13.0	12.2	12.8	12.4	12.0	12.1	13.9	13.0	13.3	10.1	9.4	9.8
22	12.7	12.2	12.6	13.1	12.4	12.9	14.3	12.2	13.8	11.0	10.1	10.6
23	12.5	12.1	12.2	13.1	12.9	13.0	12.2	10.0	11.1	11.3	10.5	11.0
24	13.1	12.5	13.0	13.0	12.8	12.9	13.2	10.8	11.9	12.1	10.7	11.1
25	13.6	13.1	13.5	12.9	12.0	12.6	13.2	13.0	13.1	12.5	10.7	11.9
26	13.4	12.4	13.3	12.6	12.0	12.4	13.3	13.0	13.2	11.1	10.1	10.6
27	12.4	8.2	9.5	12.8	12.6	12.7	13.0	12.8	12.9	12.4	10.2	11.2
28	9.6	8.2	9.4	12.5	10.4	11.5	12.8	12.6	12.7	11.1	9.1	10.5
29	9.9	9.5	9.7	10.6	10.2	10.5	12.5	12.2	12.3	9.2	7.5	8.5
30	10.0	9.7	9.8	11.4	10.4	10.8	12.7	12.3	12.5	9.2	8.0	8.7
31	10.0	9.7	9.9	---	---	---	13.0	12.6	12.8	---	---	---
MONTH	13.6	7.5	10.4	13.1	9.3	11.5	14.3	10.0	12.0	13.5	7.5	11.7
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1				---	---	---				8.4	7.5	8.0
2				---	---	---				9.3	7.8	8.3
3				---	---	---				9.7	7.9	8.7
4				---	---	---				9.8	7.7	8.5
5				11.8	11.4	11.7				9.5	6.6	8.0
6				11.7	11.4	11.5				---	---	---
7				12.1	11.7	11.9				---	---	---
8				12.4	11.9	12.2				---	---	---
9				12.4	11.8	12.2				---	---	---
10				12.4	11.7	12.0				---	---	---
11				11.8	10.9	11.5				---	---	---
12				---	---	---				---	---	---
13				---	---	---				---	---	---
14				11.7	11.2	11.4				---	---	---
15				12.0	11.2	11.6				---	---	---
16				---	---	---				---	---	---
17				---	---	---				---	---	---
18				---	---	---				---	---	---
19				---	---	---				---	---	---
20				---	---	---				---	---	---
21				---	---	---				---	---	---
22				---	---	---				---	---	---
23				---	---	---				---	---	---
24				---	---	---				---	---	---
25				---	---	---				---	---	---
26				---	---	---				---	---	---
27				---	---	---				---	---	---
28				---	---	---				---	---	---
29				---	---	---				---	---	---
30				---	---	---				---	---	---
31				---	---	---				---	---	---
MONTH				12.4	10.9	11.8				9.8	6.6	8.3

POTOMAC RIVER BASIN

01600000 NORTH BRANCH POTOMAC RIVER AT PINTO, MD--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1				8.9	5.0	7.5	7.5	6.0	6.8	10.1	8.0	8.9
2				8.3	5.0	6.4	7.6	5.7	6.9	9.6	9.2	9.4
3				6.4	6.0	6.2	7.5	6.0	6.7	9.9	9.2	9.6
4				7.3	5.9	6.9	7.3	5.8	6.6	10.6	9.9	10.3
5				7.8	7.1	7.5	6.0	5.8	4.6	11.0	10.6	10.8
6				7.9	7.1	7.6	---	---	---	11.2	10.8	11.0
7				7.3	6.7	7.1	---	---	---	11.6	10.7	11.2
8				7.4	6.9	7.1	---	---	---	11.8	11.5	11.6
9				---	---	---	---	---	---	11.6	11.0	11.4
10				---	---	---	---	---	---	11.1	10.8	11.0
11				---	---	---	---	---	---	11.0	10.6	10.8
12				---	---	---	---	---	---	10.9	10.4	10.7
13				---	---	---	---	---	---	10.6	10.1	10.4
14				---	---	---	---	---	---	10.4	9.8	10.1
15				---	---	---	---	---	---	9.9	9.6	9.7
16				---	---	---	---	---	---	10.0	9.6	9.8
17				---	---	---	---	---	---	10.4	9.9	10.2
18				---	---	---	---	---	---	10.9	10.4	10.7
19				---	---	---	---	---	---	11.2	10.9	11.0
20				---	---	---	---	---	---	10.9	10.6	10.7
21				---	---	---	---	---	---	11.0	10.8	10.9
22				---	---	---	---	---	---	11.4	10.9	11.1
23				---	---	---	7.2	6.8	7.0	11.9	11.3	11.6
24				7.0	6.3	6.7	7.1	6.7	7.0	11.8	11.7	11.7
25				6.8	6.2	6.3	6.8	6.2	6.5	11.7	11.0	11.4
26				7.3	6.0	6.5	7.4	6.4	6.8	11.1	11.0	11.1
27				6.6	5.6	6.3	7.0	6.6	7.1	11.1	10.8	11.0
28				7.2	6.4	6.7	7.4	6.6	7.0	11.1	11.0	11.0
29				7.9	7.2	7.5	7.5	6.9	7.1	11.1	10.5	10.8
30				7.9	7.1	7.7	8.7	7.0	7.4	10.8	10.6	10.7
31				7.9	6.1	7.0	9.2	7.9	8.4	---	---	---
MONTH				8.9	5.0	6.9	9.2	5.7	6.9	11.9	8.0	10.7

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).

WATER-DISCHARGE RECORDS

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 U.S. Weather Bureau.

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

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

REMARKS.--Water-discharge records good except those for January, which are fair. Prior to July 1981 some regulation at low flow by Stony River Reservoir, 79 mi (127 km) above station (see station 01595200). Low-flow regulation since December 1950 by Savage River Reservoir, 39 mi (63 km) above station (see station 01597500). Flow regulated by Bloomington Reservoir, 43 mi (69 km) above station (see station 01595800) since July 1981. 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 below station. Diversion to Chesapeake and Ohio Canal prior to 1935. Gage-height telemeter at station.

AVERAGE DISCHARGE.--53 years, 1,263 ft³/s (35.77 m³/s), 19.60 in/yr (498 mm/yr), adjusted for storage since October 1981.

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 (935 m³/s) on basis of slope-area measurement of peak flow; minimum discharge (river only), 12 ft³/s (0.34 m³/s) Sept. 22, 1932, gage height, 2.38 ft (0.725 m); minimum daily discharge (including flow in canal), 38 ft³/s (1.08 m³/s) Sept. 24, 1932.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 29.2 ft (8.90 m) June 1, 1889, 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.--Maximum discharge, 13,100 ft³/s (371 m³/s) Mar. 17, gage height, 11.89 ft (3.624 m), no other peak above base of 10,000 ft³/s (280 m³/s); minimum discharge, 150 ft³/s (4.25 m³/s) Oct. 25, gage height, 2.20 ft (0.671 m); minimum daily discharge, 160 ft³/s (4.53 m³/s) Oct. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	264	752	641	938	700	2020	1160	677	569	437	512	335
2	274	671	884	944	2700	2030	1050	637	496	382	466	338
3	267	459	1240	1070	2300	1970	1190	604	520	504	444	348
4	262	399	1140	2530	5090	1930	1850	573	673	1890	430	338
5	259	387	962	5150	4840	1790	1610	538	3020	1660	444	331
6	257	478	915	3180	2960	1890	1730	512	4480	1380	451	327
7	255	532	815	2990	2210	2040	1820	479	3410	1290	402	330
8	247	734	1050	3490	1720	1890	1570	682	2830	1240	458	307
9	245	686	1560	2590	1390	1720	1630	812	1900	1210	480	310
10	247	647	1210	1500	1260	1530	1620	638	1790	1160	437	309
11	244	593	1100	1100	1280	1760	1570	595	2470	910	444	351
12	244	540	1020	1000	1230	4380	1510	578	3540	961	458	347
13	242	516	956	900	1060	8400	1290	553	4690	746	430	343
14	209	504	931	800	981	8510	1290	528	4860	536	395	342
15	172	478	887	700	1080	6730	1150	488	4260	451	368	347
16	172	460	771	650	2610	6020	1420	458	3680	382	361	347
17	169	453	708	600	7570	11800	1470	444	2170	423	355	338
18	187	445	642	550	6700	10400	1530	416	1760	586	382	335
19	190	432	592	550	4940	7420	1390	402	1300	496	368	337
20	182	430	601	500	3920	7460	1300	395	1150	480	335	335
21	177	426	566	480	4620	7940	1060	409	971	444	402	338
22	173	404	473	440	5040	7060	916	520	812	423	395	420
23	180	379	1810	420	5110	4900	855	620	737	430	395	407
24	171	375	4270	450	4570	3670	805	612	647	423	375	431
25	160	379	2590	800	4050	2910	780	612	488	409	361	353
26	226	385	1940	500	3220	2450	886	553	388	402	355	357
27	1460	368	1970	400	2350	2010	901	544	361	402	330	440
28	3050	562	1240	369	2110	1800	790	803	395	1010	338	426
29	1530	670	989	385	---	1330	726	851	423	1220	324	373
30	1310	656	879	364	---	1210	688	709	458	709	332	357
31	898	---	835	365	---	1170	---	638	---	586	324	---
TOTAL	13923	15200	36187	36705	87611	128140	37557	17880	55248	23582	12351	10597
MEAN	449	507	1167	1184	3129	4134	1252	577	1842	761	398	353
MAX	3050	752	4270	5150	7570	11800	1850	851	4860	1890	512	440
MIN	160	368	473	364	700	1170	688	395	361	382	324	307

CAL YR 1981 TOTAL 422174 MEAN 1157 MAX 11600 MIN 141 CFSM 1.32 IN 17.95
WTR YR 1982 TOTAL 474981 MEAN 1301 MAX 11800 MIN 160 CFSM 1.49 IN 20.19

POTOMAC RIVER BASIN

01603000 NORTH BRANCH POTOMAC RIVER NEAR CUMBERLAND, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1964 to September 1982 (discontinued).

SUSPENDED SEDIMENT DISCHARGE: October 1964 to September 1982 (discontinued).

REMARKS.--Water temperatures were measured in field at time of sampling.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES (water years 1965-81): Maximum daily, 33.0°C July 13, 14, 1966, July 16, 18, Aug. 19, 23, 1968, July 17, 1977; minimum daily, 0.0°C on many days during winter periods.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,600 mg/L Feb. 13, 1966, July 4, 1978; minimum daily mean, 1 mg/L Jan. 17, 1975.

SEDIMENT LOADS: Maximum daily, 66,300 tons (59,800 tonnes) July 4, 1978; minimum daily, 2.0 tons (1.8 tonnes) Jan. 28, 1982.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum daily, 27.0°C Aug. 8; minimum daily, 0.0°C Jan. 11, 12, 15, 16, 22.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 529 mg/L Mar. 17; minimum daily mean, 2 mg/L Jan. 16, 17, 22-24, 27, 28.

SEDIMENT LOADS: Maximum daily, 17,300 tons (15,700 tonnes) Mar. 17; minimum daily, 2.0 tons (1.8 tonnes) Jan. 28.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
DEC 09...	1200	1560	268	7.3	-1.0	4.1	9	13.1	110	92	33	6.6
APR 19...	1430	1380	316	7.9	20.0	12.6	6	7.5	140	110	39	9.8

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
DEC 09...	11	18	.5	1.7	18	79	15	<.1	4.4	187	162
APR 19...	16	20	.6	1.4	25	100	21	.1	4.9	233	208

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
DEC 09...	.25	788	.79	.080	.25	850	820	32	470	60	410
APR 19...	.32	868	.82	.040	.12	510	450	57	430	20	410

01603000 NORTH BRANCH POTOMAC RIVER NEAR CUMBERLAND, MD--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.0	11.0	4.0	---	3.0	5.0	10.0	14.0	21.0	21.0	22.0	17.0
2	15.0	13.0	6.0	7.0	3.0	6.0	10.0	18.0	19.0	26.0	21.0	22.0
3	13.0	12.0	6.0	8.0	4.0	5.0	10.0	14.0	18.0	20.0	21.0	20.0
4	12.0	13.0	8.0	3.0	---	5.0	11.0	14.0	19.0	19.0	24.0	22.0
5	15.0	11.0	9.0	4.0	4.0	6.0	8.0	16.0	17.0	20.0	25.0	23.0
6	15.0	10.0	5.0	4.0	5.0	---	9.0	17.0	15.0	20.0	25.0	22.0
7	15.0	10.0	5.0	5.0	4.0	---	7.0	16.0	16.0	22.0	25.0	20.0
8	15.0	9.0	6.0	3.0	5.0	8.0	7.0	18.0	15.0	23.0	27.0	18.0
9	15.0	9.0	4.0	5.0	4.0	6.0	9.0	18.0	20.0	23.0	25.0	20.0
10	11.0	9.0	3.0	2.0	4.0	5.0	9.0	14.0	20.0	23.0	---	20.0
11	14.0	10.0	6.0	.0	5.0	7.0	11.0	15.0	16.0	23.0	22.0	23.0
12	15.0	11.0	4.0	.0	4.0	8.0	10.0	17.0	16.0	22.0	19.0	---
13	16.0	7.0	6.0	1.0	6.0	10.0	10.0	18.0	---	21.0	18.0	20.0
14	15.0	7.0	3.0	2.0	8.0	10.0	11.0	19.0	16.0	23.0	21.0	20.0
15	14.0	6.0	4.0	.0	7.0	9.0	---	20.0	18.0	22.0	22.0	23.0
16	14.0	8.0	4.0	.0	6.0	7.0	11.0	20.0	17.0	24.0	---	23.0
17	14.0	8.0	3.0	---	3.0	6.0	13.0	19.0	19.0	25.0	---	20.0
18	14.0	---	3.0	---	---	9.0	16.0	20.0	17.0	---	20.0	20.0
19	11.0	9.0	3.0	4.0	4.0	9.0	13.0	20.0	21.0	23.0	21.0	19.0
20	12.0	8.0	---	4.0	8.0	9.0	13.0	---	19.0	24.0	20.0	17.0
21	11.0	8.0	---	---	8.0	8.0	13.0	20.0	19.0	26.0	22.0	18.0
22	10.0	8.0	3.0	.0	5.0	8.0	13.0	20.0	19.0	24.0	24.0	---
23	11.0	5.0	5.0	---	6.0	7.0	11.0	16.0	19.0	25.0	---	15.0
24	11.0	4.0	5.0	---	6.0	9.0	15.0	16.0	17.0	24.0	20.0	14.0
25	9.0	5.0	---	---	6.0	---	13.0	17.0	19.0	25.0	20.0	17.0
26	10.0	5.0	5.0	---	5.0	9.0	15.0	17.0	23.0	24.0	20.0	---
27	11.0	7.0	---	---	5.0	7.0	14.0	17.0	24.0	25.0	20.0	17.0
28	11.0	8.0	5.0	4.0	7.0	---	11.0	20.0	24.0	24.0	21.0	14.0
29	10.0	8.0	4.0	3.0	---	7.0	12.0	18.0	26.0	22.0	22.0	17.0
30	12.0	6.0	4.0	3.0	---	10.0	13.0	20.0	---	22.0	15.0	16.0
31	11.0	---	4.0	3.0	---	10.0	---	21.0	---	24.0	19.0	---
MEAN	13.0	8.5	4.5	3.0	5.0	7.5	11.5	17.5	19.0	23.0	21.5	19.0

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	10	7.1	9	18	19	33	7	18	29	55	8	44
2	10	7.4	9	16	16	38	5	13	45	328	7	38
3	8	5.8	12	15	28	94	4	12	76	472	8	43
4	7	5.0	21	23	30	92	66	558	103	1420	9	47
5	8	5.6	24	25	15	39	66	972	48	627	8	39
6	8	5.6	14	18	10	25	18	155	33	264	8	41
7	6	4.1	20	29	10	22	30	242	22	131	9	50
8	6	4.0	11	22	14	40	20	188	12	56	9	46
9	8	5.3	9	17	18	76	9	63	14	53	10	46
10	8	5.3	9	16	10	33	22	89	11	37	7	29
11	7	4.6	11	18	6	18	16	48	11	38	10	48
12	8	5.3	9	13	6	17	8	22	9	30	131	1610
13	9	5.9	8	11	5	13	6	15	7	20	112	2540
14	7	4.0	8	11	5	13	6	13	6	16	150	3450
15	9	4.2	8	10	5	12	3	5.7	10	29	58	1050
16	10	4.6	9	11	4	8.3	2	3.5	64	521	81	1390
17	9	4.1	11	13	5	9.6	2	3.2	151	3110	529	17300
18	9	4.5	10	12	12	21	3	4.5	61	1100	176	5290
19	8	4.1	9	10	9	14	3	4.5	29	387	57	1140
20	7	3.4	8	9.3	8	13	5	6.8	25	265	55	1110
21	8	3.8	9	10	6	9.2	4	5.2	39	486	84	1800
22	10	4.7	10	11	5	6.4	2	2.4	40	544	34	648
23	9	4.4	9	9.2	76	470	2	2.3	24	331	26	344
24	7	3.2	8	8.1	74	904	2	2.4	20	247	21	208
25	6	2.6	8	8.2	19	133	4	8.6	13	142	14	110
26	26	16	9	9.4	10	52	3	4.1	10	87	13	86
27	134	458	8	7.9	8	43	2	2.2	16	102	11	60
28	104	856	9	14	7	23	2	2.0	12	68	9	44
29	20	83	9	16	5	13	3	3.1	---	---	8	29
30	14	50	10	18	4	9.5	4	3.9	---	---	8	26
31	8	19	---	---	7	16	5	4.9	---	---	8	25
TOTAL	---	1600.6	---	429.1	---	2310.0	---	2477.3	---	10966	---	38731

POTOMAC RIVER BASIN

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01604500 PATTERSON CREEK NEAR HEADSVILLE, WV

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

DRAINAGE AREA.--219 mi² (567 km²).

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

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

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

REMARKS.--Records good except those for January, 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.--44 years, 167 ft³/s (4.729 m³/s), 10.36 in/yr (263 mm/yr).

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,090 ft³/s (87.5 m³/s) June 13, gage height, 9.31 ft (2.838 m); minimum, 7.8 ft³/s (0.22 m³/s) Sept. 18, 19, gage height, 2.52 ft (0.768 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	73	42	52	309	370	219	179	52	52	94	14
2	17	60	97	56	665	334	184	161	49	46	76	15
3	17	52	97	63	908	304	274	146	66	108	66	19
4	16	46	85	397	1500	265	319	128	77	174	54	17
5	16	42	75	563	1200	233	230	116	398	128	47	16
6	17	47	66	376	805	209	219	103	340	108	40	14
7	24	42	58	304	524	262	194	95	262	80	35	13
8	28	38	55	245	386	328	172	114	212	67	33	12
9	29	36	53	206	361	361	177	114	174	64	48	11
10	30	35	52	165	319	370	184	99	196	58	46	11
11	30	33	49	130	258	355	179	87	896	74	40	10
12	20	31	46	98	219	559	170	79	604	277	37	10
13	11	29	40	74	193	510	161	74	1810	143	34	11
14	11	28	35	52	173	430	152	71	1740	106	31	9.0
15	10	27	48	49	273	394	139	66	941	88	26	9.0
16	11	26	42	39	785	944	126	61	592	80	24	9.0
17	11	25	35	35	1570	2030	120	59	574	68	23	9.0
18	12	25	32	42	1050	1160	135	55	448	68	23	8.3
19	14	24	29	54	844	808	122	53	372	122	20	8.5
20	14	23	27	59	1120	1160	114	52	314	300	19	8.8
21	13	23	29	66	1530	1780	106	53	259	157	19	9.9
22	14	22	31	59	1070	1270	99	54	212	122	18	11
23	18	21	36	56	820	832	90	59	170	101	17	10
24	20	21	59	53	792	657	85	59	135	87	19	14
25	19	23	82	50	682	573	82	59	106	73	19	14
26	25	22	94	47	566	510	114	55	85	58	16	14
27	301	22	79	50	492	444	168	53	70	49	16	24
28	400	22	71	53	430	384	228	64	61	770	17	26
29	211	22	66	56	---	340	222	63	58	420	16	25
30	139	23	56	62	---	298	201	60	56	194	14	22
31	96	---	50	91	---	259	---	58	---	128	14	---
TOTAL	1610	963	1716	3702	19844	18733	4985	2549	11329	4370	1001	413.5
MEAN	51.9	32.1	55.4	119	709	604	166	82.2	378	141	32.3	13.8
MAX	400	73	97	563	1570	2030	319	179	1810	770	94	26
MIN	10	21	27	35	173	209	82	52	49	46	14	8.3
CFSM	.24	.15	.25	.54	3.24	2.76	.76	.38	1.73	.64	.15	.06
IN.	.27	.16	.29	.63	3.37	3.18	.85	.43	1.92	.74	.17	.07
CAL YR 1981	TOTAL	31665.6	MEAN	86.8	MAX	685	MIN	5.0	CFSM	.40	IN	5.38
WTR YR 1982	TOTAL	71215.5	MEAN	195	MAX	2030	MIN	8.3	CFSM	.89	IN	12.10

POTOMAC RIVER BASIN

01605500 SOUTH BRANCH POTOMAC RIVER AT FRANKLIN, WV

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

DRAINAGE AREA.--182 mi² (471 km²).

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

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

REMARKS.--Records good except those for Nov. 9 to Feb. 26, which are poor.

AVERAGE DISCHARGE.--35 years, 166 ft³/s (4.701 m³/s), 12.39 in/yr (315 mm/yr).

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

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

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Oct. 27	1500	1980 56.1	4.57 1.393	Mar. 20	1200	*7270 206	7.72 2.353
Jan. 31	2200	3770 107	5.78 1.762	June 13	1200	2510 71.1	4.95 1.509

Minimum daily discharge, 23 ft³/s (0.65 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	101	83	98	1200	217	243	181	108	78	81	37
2	26	88	100	101	620	230	210	168	98	68	61	37
3	29	76	120	97	950	239	282	155	117	68	59	35
4	29	67	110	687	1400	211	372	144	140	80	53	33
5	26	63	110	525	880	206	323	132	286	81	54	32
6	27	66	100	359	560	195	327	126	237	69	76	31
7	32	57	90	304	410	331	272	127	186	68	72	31
8	28	53	100	252	330	380	242	123	156	78	90	31
9	27	54	130	203	420	337	239	116	132	92	82	35
10	26	51	120	160	500	305	220	106	180	71	70	32
11	26	50	110	120	380	284	196	99	199	86	61	31
12	27	49	100	110	310	391	183	94	177	83	57	30
13	26	47	93	100	270	389	172	90	1430	68	53	29
14	25	46	88	120	230	369	164	87	992	65	50	29
15	25	44	94	110	200	352	152	84	547	77	49	29
16	25	43	100	97	220	434	144	79	387	113	47	29
17	25	42	74	89	870	718	143	76	311	114	45	28
18	26	41	76	83	1200	687	163	79	239	172	48	28
19	28	41	66	89	870	548	142	81	194	113	44	28
20	27	40	57	94	720	3580	138	77	166	113	42	30
21	26	40	51	100	940	2830	134	73	143	84	48	31
22	26	41	78	137	720	1380	125	101	127	70	42	56
23	27	39	260	119	510	859	119	182	116	84	40	46
24	29	38	324	170	420	611	115	124	103	83	40	36
25	27	39	233	118	340	478	110	147	95	64	40	34
26	33	41	181	102	280	423	160	129	92	57	40	41
27	993	53	157	86	257	355	187	116	89	52	38	102
28	479	120	137	80	233	297	222	117	81	51	40	57
29	254	100	120	82	---	259	209	116	88	56	37	44
30	158	90	99	86	---	233	194	131	84	52	35	41
31	123	---	93	826	---	228	---	126	---	89	36	---
TOTAL	2708	1720	3654	5704	16240	18356	5902	3586	7300	2499	1630	1113
MEAN	87.4	57.3	118	184	580	592	197	116	243	80.6	52.6	37.1
MAX	993	120	324	826	1400	3580	372	182	1430	172	90	102
MIN	23	38	51	80	200	195	110	73	81	51	35	28
CFSM	.48	.32	.65	1.01	3.19	3.25	1.08	.64	1.34	.44	.29	.20
IN.	.55	.35	.75	1.17	3.32	3.75	1.21	.73	1.49	.51	.33	.23

CAL YR 1981	TOTAL	39794	MEAN 109	MAX 2570	MIN 20	CFSM .60	IN 8.13
WTR YR 1982	TOTAL	70412	MEAN 193	MAX 3580	MIN 23	CFSM 1.06	IN 14.39

01606500 SOUTH BRANCH POTOMAC RIVER NEAR PETERSBURG, WV

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

DRAINAGE AREA.--642 mi² (1,663 km²).

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

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

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

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

AVERAGE DISCHARGE.--54 years, 710 ft³/s (20.11 m³/s), 15.02 in/yr (382 mm/yr).

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

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

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 1	0500	6800 193	7.59 2.313	Mar. 20	1900	*21900 620	13.45 4.100
Mar. 17	0600	7220 204	7.81 2.380	June 13	1700	11900 337	9.95 3.033

Minimum discharge, 66 ft³/s (1.87 m³/s) Sept. 17-20, gage height, 1.18 ft (0.360 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	84	406	314	406	4330	945	993	811	439	260	253	118
2	96	350	395	424	2160	907	924	741	384	232	209	122
3	102	301	439	407	3450	904	968	662	358	215	192	125
4	107	269	400	1800	4860	833	1340	591	621	262	192	121
5	99	248	390	2990	3000	801	1230	535	1480	295	166	109
6	96	240	359	1850	2090	784	1230	488	1590	272	235	100
7	94	269	328	1530	1490	1020	1110	456	1250	221	352	94
8	100	251	382	1450	1190	1520	1000	449	989	226	281	89
9	97	237	488	1200	1490	1380	986	413	790	250	485	93
10	94	234	439	864	1790	1280	961	374	842	246	318	91
11	92	230	395	460	1390	1220	888	344	1420	259	244	88
12	91	217	382	400	1140	3110	837	324	1070	273	217	84
13	90	204	336	360	988	3100	824	304	6990	228	193	79
14	87	195	332	420	829	2810	827	290	5950	199	171	74
15	84	186	354	380	752	2170	740	274	2960	195	157	73
16	80	180	386	340	800	2840	669	259	1860	230	146	72
17	80	177	346	300	3200	6430	630	246	1340	408	137	68
18	83	171	350	280	4240	4410	731	235	1040	470	136	66
19	83	168	305	300	2910	3040	673	236	821	566	136	66
20	86	160	265	320	2600	11400	632	230	671	448	127	66
21	88	160	240	350	3360	11100	616	235	558	384	138	69
22	88	160	305	450	2700	5880	564	232	478	290	162	104
23	88	151	1260	410	1970	3640	516	466	423	245	141	142
24	88	151	1970	600	1650	2540	482	501	369	285	129	132
25	91	165	1310	430	1610	1930	455	910	329	236	127	109
26	100	157	984	370	1370	1620	521	671	300	199	125	108
27	1550	204	796	320	1210	1350	738	582	284	177	126	242
28	2290	456	659	280	1070	1110	964	469	270	169	122	309
29	1030	390	556	300	---	1010	942	471	260	180	118	190
30	680	332	457	350	---	914	879	495	281	194	111	149
31	505	---	390	814	---	879	---	547	---	189	106	---
TOTAL	8423	7019	16312	21155	59639	82877	24870	13841	36417	8303	5752	3352
MEAN	272	234	526	682	2130	2673	829	446	1214	268	186	112
MAX	2290	456	1970	2990	4860	11400	1340	910	6990	566	485	309
MIN	80	151	240	280	752	784	455	230	260	169	106	66
CFSM	.42	.36	.82	1.06	3.32	4.16	1.29	.70	1.89	.42	.29	.17
IN.	.49	.41	.95	1.23	3.46	4.80	1.44	.80	2.11	.48	.33	.19

CAL YR 1981	TOTAL	185396	MEAN 508	MAX 4340	MIN 50	CFSM .79	IN 10.74
WTR YR 1982	TOTAL	287960	MEAN 789	MAX 11400	MIN 66	CFSM 1.23	IN 16.69

POTOMAC RIVER BASIN

01607500 SOUTH FORK SOUTH BRANCH POTOMAC RIVER AT BRANDYWINE, WV

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

DRAINAGE AREA.--102 mi² (264 km²).

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

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

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

REMARKS.--Records good except those for January, February, and April, 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.--39 years, 99.0 ft³/s (2.804 m³/s), 13.18 in/yr (335 mm/yr).

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,990 ft³/s (84.7 m³/s) Mar. 20, gage height, 5.49 ft (1.673 m); minimum, 4.9 ft³/s (0.14 m³/s) Oct. 1; minimum gage height, 1.41 ft (0.430 m) Sept. 14, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.2	38	14	29	224	96	85	186	46	21	34	8.5
2	5.7	30	25	27	310	100	72	148	54	19	25	9.1
3	5.7	27	27	36	1020	109	78	121	62	18	24	8.5
4	5.7	25	25	375	541	102	80	100	56	19	22	8.0
5	5.4	24	25	474	317	95	72	95	42	20	19	8.0
6	5.3	25	25	244	195	88	71	69	31	18	29	7.6
7	5.5	22	24	166	146	120	66	53	54	18	49	7.6
8	5.8	20	24	123	120	190	60	51	35	17	48	7.6
9	5.4	16	24	93	105	250	61	48	32	23	72	8.0
10	5.4	15	20	52	200	223	59	42	35	18	46	8.0
11	5.5	14	20	45	170	187	56	39	56	19	35	7.6
12	5.4	14	20	40	140	258	54	38	48	20	31	7.2
13	5.5	12	15	35	120	282	52	35	351	32	25	7.2
14	5.5	12	18	31	100	234	51	34	385	25	23	6.7
15	5.5	12	29	27	82	206	49	31	218	23	19	7.2
16	5.6	12	32	23	140	252	47	30	148	23	18	7.2
17	5.7	11	30	20	340	472	47	29	138	26	16	6.7
18	5.9	11	32	22	660	411	49	78	113	31	16	6.7
19	6.2	11	25	26	440	300	47	70	95	97	14	7.2
20	6.5	11	23	29	370	1620	46	41	82	118	13	8.0
21	6.4	11	20	34	442	1560	45	32	72	85	16	8.0
22	6.2	10	27	38	342	946	44	88	62	51	14	13
23	6.6	10	38	34	240	578	43	324	54	41	12	14
24	7.2	10	89	31	190	284	42	100	46	41	12	10
25	7.1	11	80	28	152	218	41	80	31	35	12	9.1
26	7.9	10	65	25	127	183	40	64	31	30	11	12
27	224	11	58	23	113	138	39	56	29	26	9.6	34
28	201	12	50	25	107	116	38	59	25	24	10	25
29	100	12	44	30	---	103	92	80	25	24	9.1	18
30	63	11	36	36	---	92	158	56	24	20	8.5	15
31	44	---	32	102	---	88	---	51	---	34	8.5	---
TOTAL	785.8	470	1016	2323	7453	9901	1784	2328	2480	1016	700.7	310.7
MEAN	25.3	15.7	32.8	74.9	266	319	59.5	75.1	82.7	32.8	22.6	10.4
MAX	224	38	89	474	1020	1620	158	324	385	118	72	34
MIN	5.2	10	14	20	82	88	38	29	24	17	8.5	6.7
CFSM	.25	.15	.32	.73	2.61	3.13	.58	.74	.81	.32	.22	.10
IN.	.29	.17	.37	.85	2.72	3.61	.65	.85	.90	.37	.26	.11
CAL YR 1981	TOTAL	14937.4	MEAN	40.9	MAX	623	MIN	3.4	CFSM	.40	IN	5.45
WTR YR 1982	TOTAL	30568.2	MEAN	83.7	MAX	1620	MIN	5.2	CFSM	.82	IN	11.15

POTOMAC RIVER BASIN

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01608000 SOUTH FORK SOUTH BRANCH POTOMAC RIVER NEAR MOOREFIELD, WV

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

DRAINAGE AREA.--283 mi² (733 km²).

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

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

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

REMARKS.--Records good except those for January, 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.--51 years, 218 ft³/s (6.174 m³/s), 10.46 in/yr (266 mm/yr).

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,040 ft³/s (143 m³/s) Mar. 20, gage height, 6.90 ft (2.103 m); minimum, 16 ft³/s (0.45 m³/s) Sept. 17, 18; minimum gage height, 1.06 ft (0.323 m) Oct. 16-18, 22, Sept. 17, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	170	38	97	574	305	245	330	166	58	63	33
2	28	141	39	88	637	287	255	290	150	54	70	35
3	27	120	45	84	680	288	260	245	134	52	60	30
4	26	104	58	186	1700	285	280	215	142	57	54	26
5	26	94	63	1000	1100	273	315	190	171	66	51	24
6	26	94	62	716	759	259	320	165	233	65	47	23
7	25	89	59	509	541	293	290	141	215	52	92	21
8	24	79	61	384	418	648	270	138	183	80	115	21
9	23	73	66	302	399	690	265	129	159	77	421	20
10	23	68	63	240	659	612	250	114	274	74	309	20
11	23	64	60	190	553	534	235	102	679	72	194	19
12	23	61	54	155	426	948	225	95	448	72	140	19
13	23	57	52	130	350	955	220	88	1910	62	107	18
14	23	53	54	100	291	782	215	83	1930	54	86	17
15	22	51	57	82	248	665	200	78	855	53	73	17
16	22	48	64	65	229	824	180	73	515	59	63	17
17	21	47	56	50	711	1670	170	69	373	124	57	16
18	22	46	57	57	1910	1320	175	66	294	135	53	17
19	22	42	47	68	1260	938	185	95	232	150	49	17
20	22	42	43	77	1230	2300	170	118	194	256	46	17
21	22	45	38	90	1230	3520	160	95	163	287	52	17
22	22	39	53	104	1060	2040	150	89	140	202	45	21
23	23	37	76	119	760	1370	140	758	122	155	43	22
24	24	39	104	134	597	907	130	738	107	135	41	23
25	23	38	186	109	524	670	128	487	94	117	38	23
26	25	37	187	92	461	540	122	368	80	97	35	27
27	92	35	171	75	399	455	125	292	69	83	32	45
28	695	36	158	88	353	380	190	248	73	77	33	43
29	432	36	142	102	---	320	300	231	66	74	30	48
30	289	35	123	117	---	290	400	226	65	67	28	41
31	214	---	108	163	---	265	---	189	---	63	27	---
TOTAL	2339	1920	2444	5773	20059	25633	6570	6545	10236	3029	2554	737
MEAN	75.5	64.0	78.8	186	716	827	219	211	341	97.7	82.4	24.6
MAX	695	170	187	1000	1910	3520	400	758	1930	287	421	48
MIN	21	35	38	50	229	259	122	66	65	52	27	16
CFSM	.27	.23	.28	.66	2.53	2.92	.77	.75	1.21	.35	.29	.09
IN.	.31	.25	.32	.76	2.64	3.37	.86	.86	1.35	.40	.34	.10

CAL YR 1981 TOTAL 45500 MEAN 125 MAX 1130 MIN 14 CFSM .44 IN 5.98
WTR YR 1982 TOTAL 87839 MEAN 241 MAX 3520 MIN 16 CFSM .85 IN 11.55

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

REMARKS.--Discharge records good except those for January, which are poor. National Weather Service gage-height tele-meter at station.

AVERAGE DISCHARGE.--58 years (water years 1900-01, 1904-05, 1929-82), 1,296 ft³/s (36.70 m³/s), 11.96 in/yr (304 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 (0.119) July 30, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in November 1877 reached a stage of about 34 ft (10.4 m), from floodmarks, discharge, 140,000 ft³/s (3,960 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)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 1	2300	10400	295	Mar. 21	1200	*25400	719
Feb. 4	1800	12200	346	June 14	0400	20500	581
Mar. 17	0900	14800	419				

Minimum discharge, 107 ft³/s (3.03 m³/s) Sept. 19, 20; minimum gage height, 1.60 ft (0.488 m) Oct. 17, 18, Sept. 19, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	158	809	442	616	4960	1840	1490	1560	766	439	340	168
2	162	656	458	633	5860	1680	1550	1390	654	428	350	175
3	161	563	529	661	4530	1630	1530	1230	591	481	360	229
4	161	495	575	1040	9580	1610	2140	1090	626	647	317	197
5	166	446	551	4610	6800	1500	2120	961	1320	511	308	186
6	173	430	528	3930	4490	1450	1930	871	2750	612	286	175
7	167	407	498	2760	3270	1530	1870	790	2200	493	259	161
8	160	406	462	2440	2540	2680	1630	790	1680	481	451	151
9	155	405	471	2060	2190	3120	1530	817	1310	457	439	144
10	154	379	607	1620	2890	2910	1540	710	1340	457	817	137
11	157	368	565	767	2750	2640	1440	640	5380	668	605	137
12	154	359	524	710	2250	4020	1330	584	3420	1200	463	134
13	153	345	502	660	1900	5630	1250	544	8340	742	390	131
14	149	331	462	750	1650	4970	1220	518	16200	518	340	128
15	147	318	453	680	1510	4060	1170	487	7240	417	304	128
16	145	307	470	600	1910	4470	1060	457	4280	390	272	125
17	142	297	507	540	4030	13400	988	428	3380	390	250	116
18	145	290	473	500	8380	9680	1040	406	2400	619	246	113
19	151	281	463	540	6270	6350	1090	385	1810	808	229	110
20	148	274	386	580	6180	7110	988	390	1420	1090	216	110
21	145	267	320	610	6890	21200	943	423	1150	916	221	110
22	147	261	374	820	6120	13400	898	451	970	774	233	128
23	153	258	449	730	4410	7790	817	457	835	598	221	134
24	157	258	1940	1000	3500	5390	758	1390	734	505	242	154
25	157	256	2210	750	3050	3970	718	1170	654	493	212	189
26	167	255	1680	630	2730	3240	726	1350	584	439	197	186
27	331	259	1360	550	2360	2740	916	1070	524	380	193	193
28	4060	255	1130	490	2080	2280	1450	961	481	844	193	250
29	2680	442	961	520	---	1930	1910	790	469	531	189	417
30	1570	477	808	610	---	1720	1760	758	451	390	178	317
31	1090	---	683	1400	---	1560	---	758	---	360	175	---
TOTAL	13765	11154	21841	34807	115080	147500	39802	24626	73959	18078	9496	5033
MEAN	444	372	705	1123	4110	4758	1327	794	2465	583	306	168
MAX	4060	809	2210	4610	9580	21200	2140	1560	16200	1200	817	417
MIN	142	255	320	490	1510	1450	718	385	451	360	175	110
CFSM	.30	.25	.48	.76	2.79	3.24	.90	.54	1.68	.40	.21	.11
IN.	.35	.28	.55	.88	2.91	3.73	1.01	.62	1.87	.46	.24	.13
CAL YR 1981	TOTAL	306846	MEAN	841	MAX	6270	MIN	81	CFSM	.57	IN	7.76
WTR YR 1982	TOTAL	515141	MEAN	1411	MAX	21200	MIN	110	CFSM	.96	IN	13.03

01610000 POTOMAC RIVER AT PAW PAW, WV

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

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

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

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

REMARKS.--Records good except those for January, which are fair. Low flow affected by Stony River Reservoir prior to July 1981 (see station 01595200); since December 1950 by Savage River Reservoir (see station 01597500), and since July 1981 by Bloomington Reservoir (see station 01595800). Several observations of water temperature were made during the year. Gage-height telemeter at station.

AVERAGE DISCHARGE.--44 years, 3,263 ft³/s (92.41 m³/s), 14.25 in/yr (362 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 discharge, 164 ft³/s (4.64 m³/s) Sept. 10, 11, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 54.0 ft (16.46 m) Mar. 18, 1936, discharge, 240,000 ft³/s (6,800 m³/s), from rating curve extended above 85,000 ft³/s (2,410 m³/s) on basis of slope-area measurement of peak flow at site 5.0 mi (8.0 km) upstream at Okonoko, W. Va.

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)
Feb. 4	2230	21100 598	15.94 4.859	Mar. 21	1715	*39000 1100	21.91 6.678
Feb. 17	2145	20200 572	15.60 4.755	June 14	0630	31600 895	19.53 5.953
Mar. 17	1615	35000 991	20.63 6.288				

Minimum discharge, 395 ft³/s (11.2 m³/s) Oct. 17, 18, gage height, 3.40 ft (1.036 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	598	2270	1390	2010	1600	5320	3670	3190	2000	1240	1260	610
2	539	1930	1970	2170	9000	5160	3500	2940	1770	1190	1140	614
3	533	1630	2320	2230	7600	4920	3890	2700	1610	1240	1140	639
4	527	1320	2390	4760	15700	4720	6370	2460	2230	3090	1050	678
5	522	1200	2160	11400	15900	4400	5490	2230	4710	3020	1010	632
6	522	1220	1960	9610	10200	4400	5170	2050	9490	2640	999	615
7	522	1310	1820	7060	7530	4520	5170	1910	7310	2370	903	604
8	498	1380	1740	6810	5920	5640	4640	2030	5790	2160	954	582
9	487	1430	2310	5820	5070	6260	4400	2780	4550	2160	1300	551
10	481	1410	2310	3600	5040	6180	4490	2290	4110	2080	1430	549
11	481	1320	2140	2400	5110	5860	4280	1990	7830	2050	1480	544
12	475	1250	1970	1850	4560	9360	4040	1810	8250	3240	1250	583
13	464	1170	1830	1800	3990	16800	3760	1700	12800	2550	1140	569
14	452	1110	1730	1700	3480	16100	3550	1590	27600	1850	1010	561
15	420	1080	1710	1500	3420	13200	3360	1480	14700	1420	900	553
16	400	1020	1660	1400	5600	12300	3240	1360	9830	1200	830	563
17	400	997	1560	1250	15900	30100	3330	1290	8250	1100	790	544
18	395	968	1520	1200	19700	26800	3570	1210	5950	1300	773	531
19	415	939	1270	1100	15100	17700	3400	1150	4670	1790	763	529
20	415	912	1220	1050	13100	15200	3170	1170	3830	2250	724	531
21	405	895	1210	1000	15800	33900	2890	1170	3250	2020	716	527
22	400	872	1160	950	15200	27800	2610	1280	2770	1770	759	596
23	400	824	1390	900	12600	16600	2390	1530	2400	1520	765	657
24	410	810	5390	1000	11700	11700	2250	2110	2160	1350	780	651
25	405	808	5740	1700	9950	8880	2140	2440	1850	1240	752	660
26	415	802	4490	1300	8330	7490	2220	2440	1540	1200	692	649
27	2410	808	3930	900	6660	6300	2770	2120	1380	1090	669	720
28	8420	804	3290	800	5790	5460	3060	2230	1260	2050	640	780
29	6360	1130	2670	740	---	4660	3570	2830	1270	2820	635	900
30	3950	1390	2270	720	---	4100	3440	2480	1270	1900	623	912
31	3010	---	2020	700	---	3820	---	2170	---	1450	619	---
TOTAL	36131	35009	70540	81430	259550	345650	109830	62130	166430	58350	28496	18634
MEAN	1166	1167	2275	2627	9270	11150	3661	2004	5548	1882	919	621
MAX	8420	2270	5740	11400	19700	33900	6370	3190	27600	3240	1480	912
MIN	395	802	1160	700	1600	3820	2140	1150	1260	1090	619	527

CAL YR 1981	TOTAL	923597	MEAN	2530	MAX	18900	MIN	280	CFSM	.81	IN	11.05
WTR YR 1982	TOTAL	1272180	MEAN	3485	MAX	33900	MIN	395	CFSM	1.12	IN	15.22

01611500 CACAPON RIVER NEAR GREAT CACAPON, WV

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

DRAINAGE AREA.--677 mi² (1,753 km²).

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

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

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

REMARKS.--Records good except those for period of no gage-height record, Mar. 8 to May 3, and those for January, which are poor.

AVERAGE DISCHARGE.--59 years (water years 1924-82), 586 ft³/s (16.60 m³/s), 11.75 in/yr (298 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)
Feb. 2	1400	6900	195	8.93	2.722	Mar. 17	---	a6000	170	Unknown	
Feb. 4	1700	15200	430	13.13	4.002	Mar. 21	Unknown	11200	317	11.33	3.453
Feb. 21	1800	3930	111	6.86	2.091	June 14	0600	*15800	447	13.38	4.078

a Estimated from hydrograph comparison.

Minimum discharge, 54 ft³/s (1.5 m³/s) Sept. 20; minimum gage height, 0.78 (0.238 m) Oct. 17, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	267	103	199	352	848	600	790	151	149	98	67
2	69	218	112	195	4620	765	570	717	149	135	93	67
3	73	187	126	230	5130	710	600	643	293	170	93	68
4	67	167	153	318	8250	660	725	550	228	349	87	68
5	67	153	152	1260	3580	585	860	472	384	293	84	67
6	68	163	141	1360	1860	540	780	416	944	228	87	68
7	71	186	135	903	1410	560	720	372	914	190	82	67
8	70	232	134	685	1020	880	670	368	640	160	81	65
9	65	209	129	527	854	1300	645	353	460	177	84	64
10	64	182	123	334	805	1200	640	353	456	160	135	63
11	63	163	123	200	765	1100	560	300	800	147	115	63
12	64	150	116	190	615	1440	520	259	1030	195	129	61
13	64	141	107	184	525	2320	520	239	3400	135	107	61
14	64	133	100	184	472	2100	480	221	11000	135	94	61
15	63	127	116	180	416	1800	450	200	3750	117	87	61
16	64	122	123	195	625	1950	430	190	1980	107	84	60
17	62	118	123	185	1370	5240	385	175	1650	104	79	57
18	64	115	145	178	2250	4000	355	157	1360	102	77	58
19	67	108	195	172	1890	2600	335	147	944	107	74	53
20	67	103	222	173	2070	2750	367	137	705	145	73	56
21	64	100	238	182	3340	8200	345	139	540	160	76	56
22	65	97	156	187	3330	5800	323	133	432	208	82	63
23	73	95	133	189	2310	3500	305	137	349	157	74	63
24	70	95	139	191	1970	2400	287	172	297	123	73	63
25	71	95	429	193	1740	1600	274	271	268	133	73	64
26	89	94	543	194	1440	1300	270	265	239	167	73	67
27	158	94	408	197	1170	1090	280	239	213	121	71	74
28	1120	94	332	200	992	880	390	205	190	107	70	77
29	1050	93	294	210	---	780	595	192	175	104	68	79
30	538	94	255	222	---	680	880	182	160	98	68	86
31	349	---	212	315	---	630	---	165	---	94	67	---
TOTAL	4969	4195	5817	10132	55171	60208	15161	9159	34101	4777	2638	1950
MEAN	160	140	188	327	1970	1942	505	295	1137	154	85.1	65.0
MAX	1120	267	543	1360	8250	8200	880	790	11000	349	135	86
MIN	62	93	100	172	352	540	270	133	149	94	67	56
CFSM	.24	.21	.28	.48	2.91	2.87	.75	.44	1.68	.23	.13	.10
IN.	.27	.23	.32	.56	3.03	3.31	.83	.50	1.87	.26	.14	.11
CAL YR 1981	TOTAL	128660	MEAN	352	MAX	3250	MIN	49	CFSM	.52	IN	7.07
WTR YR 1982	TOTAL	208278	MEAN	571	MAX	11000	MIN	56	CFSM	.84	IN	11.44

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 U.S. Weather Service.

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

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

REMARKS.--Records good except those for January, which are fair. Slight regulation at low flow from power plants upstream. Low flow affected slightly (prior to July 1981) by Stony River Reservoir (see station 01595200), since December 1950 by Savage River Reservoir (see station 01597500), and since July 1981 by Bloomington Reservoir (see station 01595800). Several observations of water temperature were made during the year. Gage-height telemeter at station.

AVERAGE DISCHARGE.--50 years, 4,130 ft³/s (117.0 m³/s), 13.77 in/yr (350 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 discharge observed, 180 ft³/s (5.10 m³/s) Oct. 4, 1932, gage height, 2.01 ft (0.613 m).

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

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 4	2030	*47000 1330	19.40 5.913	Mar. 22	0145	41600 1180	18.15 5.532
Feb. 18	2000	23000 651	13.12 4.000	June 14	1115	42700 1210	18.42 5.614
Mar. 17	2145	43200 1220	18.54 5.651				

Minimum discharge, 491 ft³/s (13.9 m³/s) Oct. 19, 20, gage height, 2.65 ft (0.808 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	765	5120	1490	2360	1800	6790	4550	4390	2530	1450	1520	682
2	750	3850	1660	2310	6080	6380	4350	4040	2230	1390	1340	677
3	705	2860	2270	2470	17200	6160	4330	3710	2120	1380	1280	677
4	673	2130	2640	3010	23900	5810	7730	3370	2690	2050	1280	686
5	652	1780	2660	8340	24000	5500	8030	3060	3670	3670	1150	731
6	635	1600	2390	14100	14700	5140	6850	2790	9550	3130	1230	688
7	626	1480	2180	9910	10300	5220	6790	2570	10000	2830	1100	672
8	616	1560	2050	8070	7870	6010	6280	2460	7520	2500	1020	656
9	596	1650	1960	7490	6560	7380	5600	2930	6040	2400	1520	639
10	575	1690	2410	4000	5770	7840	5550	3330	4810	2360	1570	605
11	562	1640	2440	2700	6050	7610	5400	2770	5470	2290	1690	598
12	560	1540	2290	2100	5560	9570	5100	2450	10100	2770	1620	588
13	553	1450	2120	2000	4910	18400	4790	2240	10200	3400	1370	625
14	552	1360	1970	1900	4290	19900	4430	2070	35800	2460	1250	618
15	546	1290	1890	1700	3930	16800	4220	1920	22800	1870	1090	612
16	540	1250	1880	1600	4310	14000	3890	1790	13600	1510	982	603
17	511	1190	1820	1450	12100	27900	3910	1650	11400	1300	909	596
18	499	1140	1730	1350	21900	36400	4020	1550	8750	1210	867	585
19	497	1110	1670	1250	19900	23600	4220	1460	6570	1560	841	567
20	491	1070	1440	1200	15600	17600	3980	1380	5110	1950	827	562
21	498	1030	1330	1150	18100	30000	3690	1370	4280	2410	796	568
22	498	1010	1210	1100	20400	36200	3330	1390	3610	2110	801	601
23	498	982	1400	1050	16800	22200	3050	1490	3080	1880	833	649
24	505	946	1810	1000	15700	15600	2830	1720	2700	1590	839	706
25	511	929	4730	1200	13500	11700	2680	2200	2400	1430	843	699
26	511	920	5720	1700	11300	9620	2630	2660	2070	1390	809	728
27	699	914	4930	1200	9160	8350	2940	2710	1770	1370	764	778
28	2740	915	4360	900	7610	7100	3600	2370	1600	1440	738	794
29	10200	907	3610	850	---	6180	4490	3600	1480	2740	696	850
30	8000	1200	3030	800	---	5270	4750	3870	1480	2770	692	978
31	6420	---	2590	780	---	4840	---	2940	---	1870	680	---
TOTAL	42984	46513	75680	91040	329300	411070	138010	78250	205430	64480	32947	20018
MEAN	1387	1550	2441	2937	11760	13260	4600	2524	6848	2080	1063	667
MAX	10200	5120	5720	14100	24000	36400	8030	4390	35800	3670	1690	978
MIN	491	907	1210	780	1800	4840	2630	1370	1480	1210	680	562
CFSM	.34	.38	.60	.72	2.89	3.26	1.13	.62	1.68	.51	.26	.16
IN.	.39	.42	.69	.83	3.01	3.75	1.26	.71	1.88	.59	.30	.18

CAL YR 1981	TOTAL	1119427	MEAN	3067	MAX	27100	MIN	347	CFSM	.75	IN	10.22
WTR YR 1982	TOTAL	1535722	MEAN	4207	MAX	36400	MIN	491	CFSM	1.03	IN	14.03

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) National Geodetic Vertical Datum of 1929. Prior to July 1906, nonrecording gage at approximately the same site at different datum. July 23, 1947, to July 22, 1948, nonrecording gage at present site and datum.

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

AVERAGE DISCHARGE.--35 years (water years 1947-82), 227 ft³/s (6.429 m³/s), 11.33 in/yr (288 mm/yr).

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

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

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Mar. 17	1500	2370 67.1	9.43 2.874	June 17	1200	1940 54.9	8.30 2.530
June 14	0100	*7020 199	12.98 3.956				

Minimum discharge, 41 ft³/s (1.16 m³/s) Dec. 14, gage height, 1.60 ft (0.488 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	68	50	71	599	281	292	232	171	212	139	85
2	49	63	63	100	661	270	260	218	229	203	130	85
3	49	60	62	102	711	259	331	205	164	243	136	87
4	47	58	58	438	929	243	569	190	487	292	126	82
5	47	57	55	519	559	235	342	178	724	220	130	79
6	46	73	53	250	364	225	328	172	862	202	125	78
7	48	82	51	193	288	261	300	167	401	192	121	78
8	47	69	50	158	240	421	277	173	290	189	118	77
9	46	60	49	130	230	442	286	187	235	190	218	79
10	46	58	47	87	246	394	318	166	383	186	191	78
11	46	56	47	80	212	345	293	155	399	184	135	76
12	46	55	47	85	189	594	273	149	282	191	124	75
13	46	54	47	96	181	563	257	144	2740	181	119	74
14	45	53	49	120	171	407	247	140	4800	166	113	74
15	46	53	58	120	185	328	233	135	912	164	108	76
16	46	51	66	110	287	388	223	131	650	160	105	89
17	47	51	63	100	640	1830	219	127	1480	202	103	73
18	46	50	61	93	797	854	272	123	1010	162	103	73
19	47	50	60	95	510	572	242	120	625	184	102	73
20	50	52	57	100	732	594	227	123	467	227	97	73
21	46	55	54	120	1430	927	218	122	382	196	116	71
22	47	51	58	150	1010	772	207	119	336	170	105	75
23	49	49	64	140	760	544	198	123	306	159	97	80
24	51	49	136	160	616	448	192	125	279	163	98	73
25	52	50	127	140	484	395	189	121	263	148	96	72
26	54	50	96	120	378	373	220	116	254	139	90	72
27	130	49	83	100	333	337	371	114	243	137	89	105
28	338	48	75	91	305	303	377	118	232	157	92	94
29	154	48	70	95	---	288	310	164	225	147	86	78
30	95	46	64	100	---	276	256	127	222	140	84	74
31	76	---	59	145	---	275	---	114	---	147	85	---
TOTAL	2030	1668	1979	4408	14047	14444	8327	4598	20053	5653	3581	2362
MEAN	65.5	55.6	63.8	142	502	466	278	148	668	182	116	78.7
MAX	338	82	136	519	1430	1830	569	232	4800	292	218	105
MIN	45	46	47	71	171	225	189	114	164	137	84	71
CFSM	.24	.20	.24	.52	1.85	1.71	1.02	.54	2.46	.67	.43	.29
IN.	.28	.23	.27	.60	1.92	1.98	1.14	.63	2.74	.77	.49	.32

CAL YR 1981	TOTAL	39192	MEAN 107	MAX 710	MIN 34	CFSM .39	IN 5.36
WTR YR 1982	TOTAL	83150	MEAN 228	MAX 4800	MIN 45	CFSM .84	IN 11.37

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).

WATER-DISCHARGE RECORDS

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

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

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

REMARKS.--Water-discharge records good except those for January, which are fair. Some regulation at low flow by power plants above station, prior to July 1981 by Stony River Reservoir (see station 01595200), since December 1950 by Savage River Reservoir (see station 01597500), and since July 1981 by Bloomington Reservoir (see station 01595800). Gage-height telemeter at station.

AVERAGE DISCHARGE.--43 years (water years 1929-53, 1965-82), 6,096 ft³/s (172.6 m³/s), 13.95 in/yr (354 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 (5,660 m³/s) on basis of slope-area measurement of peak flow; minimum discharge, 170 ft³/s (4.81 m³/s) Aug. 1, 1966; minimum daily discharge, 185 ft³/s (5.24 m³/s) July 31, 1966.

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

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 5	0830	44700 1270	13.41 4.087	Mar. 18	0700	53900 1530	15.12 4.609
Feb. 18	1430	34000 963	11.26 3.432	Mar. 22	1100	48900 1380	14.20 4.328
Feb. 22	1130	30600 867	10.53 3.210	June 14	2030	*62700 1780	16.64 5.072
Mar. 14	0300	29200 827	10.23 3.118				

Minimum discharge, 618 ft³/s (17.5 m³/s) Oct. 19, gage height, 1.58 ft (0.482 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	992	4690	1520	3920	2400	10500	6610	6360	3870	2600	2480	939
2	980	3640	1930	4110	3840	9790	6210	5830	3760	2500	2080	857
3	940	3050	2500	4520	9000	9440	6000	5360	3510	2500	1950	917
4	900	2660	3120	5530	15900	8760	10400	4920	3660	2750	1780	992
5	880	2320	3330	13800	33700	8220	13700	4510	5260	3990	1830	1040
6	860	2070	3160	18800	23600	7730	11200	4120	14100	4720	1810	1030
7	840	2270	2870	15000	16200	7700	11000	3810	17000	3970	1890	1020
8	820	2430	2600	11300	12200	8480	10100	3620	12800	3620	1680	958
9	800	2350	2500	9870	9800	10100	9200	3670	9620	3470	1610	834
10	780	2320	2500	5400	8410	11100	8830	4360	7850	3380	2030	1010
11	760	2300	2930	3700	7760	11200	9020	4160	7730	3180	2100	1100
12	750	2210	2810	2900	7630	12700	8860	3600	11300	3520	2170	1060
13	740	2070	2580	2700	6810	22500	8140	3290	15300	4490	2130	816
14	730	1950	2410	2600	5880	27900	7550	3040	47600	4160	1890	798
15	720	1830	2300	2300	5440	24500	6870	2830	43000	3200	1740	821
16	723	1740	2200	2200	5570	20000	6360	2660	23400	2640	1620	992
17	696	1690	2150	2000	14800	27400	5860	2500	20600	2330	1530	971
18	738	1620	2100	1800	32300	50700	6160	2340	18000	2150	1310	912
19	686	1550	2000	1700	29700	36500	6540	2230	14200	2230	1250	912
20	699	1500	1800	1600	22800	26100	6160	2160	10700	2540	1240	925
21	687	1460	1700	1550	24700	28100	5770	2100	8040	3520	1260	873
22	649	1380	1600	1500	30100	46300	5290	2080	6860	3580	1240	885
23	703	1370	2030	1400	26800	34400	4810	2250	6180	3110	1270	993
24	735	1400	2970	1300	24500	23200	4450	2510	4780	2640	1330	812
25	771	1410	5150	1500	22600	17500	4190	2670	4210	2270	1300	880
26	838	1420	7920	2000	18300	14100	4120	3480	3790	2050	1180	919
27	1150	1300	6560	1500	15000	12400	4480	3390	3340	1980	1060	1360
28	5640	1250	5690	1200	12300	10500	5340	3390	3100	2050	1120	1620
29	13500	1250	5290	1050	---	9060	6190	4810	2780	2230	1140	1520
30	10100	1240	4560	1000	---	8020	6760	6730	2640	3410	1140	1280
31	6210	---	4030	950	---	7190	---	4810	---	3280	1110	---
TOTAL	57016	59740	96810	130700	448040	562090	216170	113590	338980	94060	49270	30046
MEAN	1839	1991	3123	4216	16000	18130	7206	3664	11300	3034	1589	1002
MAX	13500	4690	7920	18800	33700	50700	13700	6730	47600	4720	2480	1620
MIN	648	1240	1520	950	2400	7190	4120	2080	2640	1980	1060	798
CFSM	.31	.34	.53	.71	2.70	3.05	1.21	.62	1.90	.51	.27	.17
IN.	.36	.37	.61	.82	2.81	3.52	1.35	.71	2.12	.59	.31	.19

CAL YR 1981 TOTAL 1536788 MEAN 4210 MAX 40200 MIN 600 CFSM .71 IN 9.63
WTR YR 1982 TOTAL 2196512 MEAN 6018 MAX 50700 MIN 648 CFSM 1.01 IN 13.77

POTOMAC RIVER BASIN

01618000 POTOMAC RIVER AT SHEPHERDSTOWN, WV--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (FTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)
NOV 02...	1315	3560	258	7.6	22.0	13.0	9.0	10.1	68	430	110	52
JAN 19...	1230	3490	320	8.0	-7.0	.0	18	14.6	K10	200	110	48
FEB 08...	1345	11900	205	7.6	2.0	4.0	--	14.2	--	--	--	--
MAR 15...	1230	24700	163	7.0	8.0	7.5	30	12.8	440	540	65	33
MAY 10...	1230	4320	290	8.0	23.0	18.0	1.6	9.6	93	500	120	41
JUL 13...	1330	4560	315	8.1	27.0	27.0	12	9.0	630	470	130	48
SEP 20...	1015	920	445	7.9	18.5	22.0	2.3	10.4	K21	1900	200	84

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
NOV 02...	33	6.1	6.6	11	.3	2.5	56	37	8.1	<.1	6.8	150
JAN 19...	34	6.7	9.4	15	.4	1.7	65	37	12	<.1	7.0	161
FEB 08...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 15...	19	4.2	4.6	13	.3	1.3	32	28	6.4	<.1	5.8	102
MAY 10...	37	7.1	7.6	12	.3	1.5	81	38	12	<.1	1.2	171
JUL 13...	41	7.5	7.3	11	.3	1.6	85	38	10	.1	2.1	203
SEP 20...	62	12	20	17	.6	2.3	120	65	31	.2	2.4	295

DATE	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS P04)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS P04)
NOV 02...	134	.20	1440	1.3	.050	.06	.93	≥070	.21	.050	.030	.09
JAN 19...	147	.22	1520	1.9	.090	.12	.50	≥100	.31	.040	.030	.09
FEB 08...	--	--	--	1.6	.060	.08	.20	≥040	.12	.030	.040	.12
MAR 15...	89	.14	6800	--	--	--	--	--	--	--	--	--
MAY 10...	153	.23	2000	.73	.050	.06	.55	≥040	.12	.020	.020	.06
JUL 13...	159	.28	2500	1.1	.040	.05	.60	≥080	.25	.030	.030	.09
SEP 20...	267	.40	733	.98	.050	.06	.70	≥100	.31	.080	.070	.21

K Results based on colony count outside the acceptable range (non-ideal colony count).

POTOMAC RIVER BASIN

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01618000 POTOMAC RIVER AT SHEPHERDSTOWN, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)
NOV 02...	1	0	2	100	60	40	<1	<1	10	--
MAR 15...	1	0	1	100	60	40	3	<1	20	0
MAY 10...	1	0	1	<100	--	53	<1	<1	10	0
SEP 20...	2	0	2	100	20	76	<1	2	10	--

DATE	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)
NOV 02...	<10	2	<1	7	5	2	390	330	59	5
MAR 15...	20	6	<1	9	7	2	1700	1700	47	4
MAY 10...	20	<1	1	4	0	4	220	210	9	4
SEP 20...	<10	1	<1	14	5	9	130	120	10	7

DATE	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)
NOV 02...	--	<1	60	50	9	<.1	--	<.1	3
MAR 15...	--	<1	180	150	31	<.1	--	<.1	9
MAY 10...	2	2	60	50	6	<.1	--	<.1	5
SEP 20...	4	3	50	50	4	.2	.0	.2	7

DATE	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 02...	1	2	<1	<1	<1	<1	60	50	6
MAR 15...	6	3	<1	<1	<1	<1	60	--	<4
MAY 10...	1	4	<1	<1	<1	<1	20	10	6
SEP 20...	4	3	<1	<1	<1	<1	30	--	<4

POTOMAC RIVER BASIN

01618000 POTOMAC RIVER AT SHEPHERDSTOWN, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
NOV 02...	100	40	384
JAN 19...	90	21	198
MAR 15...	95	77	5140
JUL 13...	57	35	431
SEP 20...	100	6	15

01636500 SHENANDOAH RIVER AT MILLVILLE, WV
(National stream-quality accounting network station)

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 (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).

WATER-DISCHARGE RECORDS

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

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

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

REMARKS.--Water-discharge records good except those for January, which are poor. Regulation by hydroelectric plants, particularly that of Potomac Light and Power Co., 0.5 mi (0.8 km) upstream from station. National Weather Service gage-height telemeter at station.

AVERAGE DISCHARGE.--67 years (water years 1896-1908, 1929-82), 2,678 ft³/s (75.84 m³/s), 11.96 in/yr (304 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 discharges above base of 15,000 ft³/s (420 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 4	1415	20600 583	9.91 3.021	June 15	0330	*29400 833	11.77 3.587
Mar. 22	0030	24700 700	10.83 3.301				

Minimum discharge, 331 ft³/s (9.37 m³/s) Nov. 14, gage height, 1.12 ft (0.341 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	449	1530	561	1040	2640	3760	3530	4570	2210	1670	1350	800
2	449	1120	589	1050	4890	3500	3410	3880	2370	1550	1370	813
3	446	1080	630	1020	11200	3310	3240	3380	3030	1540	1670	850
4	418	976	607	1230	10300	3250	3080	3000	3130	1570	1520	776
5	423	893	592	1860	13200	3310	2980	2650	3990	1460	1300	764
6	432	865	617	2500	8870	3100	2960	2370	5630	1410	1200	726
7	427	788	616	4580	6350	3050	2790	2210	5500	1350	1260	716
8	422	794	659	3740	5090	3700	2600	2090	4880	1410	2120	720
9	427	771	561	2960	4290	5510	2540	1960	3910	1430	2810	666
10	427	721	586	2100	4190	5930	2470	1930	3180	1290	3460	630
11	418	681	572	1300	4940	5310	2430	1800	2950	1530	3020	656
12	416	670	557	1100	4370	4950	2360	1660	2860	2250	2260	681
13	374	665	551	1200	3770	5000	2180	1590	4480	2110	1840	632
14	423	616	547	1400	3300	5140	2170	1480	16600	1930	1650	645
15	414	622	632	1400	2980	4810	2030	1430	25400	1800	1510	578
16	371	630	710	1300	2780	4800	1890	1370	14000	1560	1250	647
17	440	603	720	1100	3090	7290	1910	1210	9790	1880	1400	680
18	396	606	792	1000	5610	8420	1900	1270	7710	2170	2310	598
19	392	565	828	1100	11200	7460	1870	1260	6410	1980	2000	562
20	394	621	709	1300	10300	6930	1910	1160	5080	1770	1630	573
21	423	552	586	1500	11500	14700	1940	1110	4130	1720	1510	562
22	414	554	618	1600	10800	21500	1840	1180	3500	2240	1240	618
23	400	584	856	1400	8760	13700	1800	1280	3040	2360	1050	638
24	464	556	931	1500	7060	9630	1690	1420	2650	2130	1030	579
25	443	569	994	1400	6000	7620	1590	1460	2430	3640	1030	661
26	555	571	1000	1300	5200	6440	1700	2540	2230	3560	896	688
27	621	564	1060	1200	4560	5760	2130	2340	2060	2410	900	799
28	1360	562	1170	1100	4060	5160	3150	2350	1900	1850	864	885
29	2410	556	1140	1100	---	4470	5770	2440	1780	1630	846	755
30	2800	562	1120	1300	---	3960	5570	2400	1780	1440	800	835
31	1990	---	1060	1660	---	3660	---	2160	---	1410	805	---
TOTAL	20238	21447	23171	49340	181300	195130	77430	62950	158610	58050	47901	20733
MEAN	653	715	747	1592	6475	6295	2581	2031	5287	1873	1545	691
MAX	2800	1530	1170	4580	13200	21500	5770	4570	25400	3640	3460	885
MIN	371	552	547	1000	2640	3050	1590	1110	1780	1290	800	562
CFSM	.22	.24	.25	.52	2.13	2.07	.85	.67	1.74	.62	.51	.23
IN.	.25	.26	.28	.60	2.22	2.39	.95	.77	1.94	.71	.59	.25

CAL YR 1981	TOTAL	408343	MEAN	1119	MAX	4950	MIN	371	CFSM	.37	IN	5.00
WTR YR 1982	TOTAL	916300	MEAN	2510	MAX	25400	MIN	371	CFSM	.83	IN	11.21

POTOMAC RIVER BASIN

01636500 SHENANDOAH RIVER AT MILLVILLE, WV--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960-63, 1965, 1969-71, 1979 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1980 to current year.

WATER TEMPERATURES: October 1980 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1980.

REMARKS.--Periods of missing record due to instrument malfunction.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 777 micromhos Oct. 27; minimum, 212 micromhos Jan. 17.

WATER TEMPERATURES: Maximum daily, 29°C July 18, 19; minimum daily, 0.0°C on many days during winter periods.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (FTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS NONCAR- BONATE (MG/L AS CAC03)
NOV												
02...	1115	631	480	8.1	20.0	14.0	4.5	10.2	36	480	150	24
JAN												
19...	1045	1100	405	7.3	-6.0	.0	1.5	14.8	<1	K12	130	38
MAR												
15...	1030	4830	260	7.9	5.0	7.0	8.0	14.6	29	230	110	24
MAY												
10...	1045	1950	350	8.2	17.5	17.5	1.9	9.0	K46	530	120	19
JUL												
13...	1115	2260	405	8.5	28.0	26.0	3.2	7.8	170	K12000	160	17
SEP												
20...	1245	564	490	8.1	21.0	21.5	3.7	8.0	K16	380	190	34

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
NOV												
02...	42	12	29	29	1.1	2.0	130	60	20	.1	3.1	262
JAN												
19...	38	8.7	29	32	1.2	2.2	93	65	10	<.1	5.0	222
MAR												
15...	30	7.4	9.2	16	.4	1.4	81	26	8.5	<.1	4.8	151
MAY												
10...	33	8.4	16	23	.7	1.5	98	40	9.3	.1	2.9	174
JUL												
13...	42	13	19	20	.7	2.1	141	36	12	.1	1.4	258
SEP												
20...	48	16	34	28	1.2	2.8	152	60	23	.2	2.1	295

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS P04)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS P04)
NOV											
02...	246	.36	44.6	1.6	.050	.06	1.20	.250	.77	.230	.210
JAN											
19...	214	.30	659	1.5	.110	.14	.51	.100	.31	.090	.080
MAR											
15...	136	.21	1970	--	--	--	--	--	--	--	--
MAY											
10...	170	.24	916	.88	.050	.06	.65	.090	.28	.070	.070
JUL											
13...	210	.35	1570	1.2	.020	.03	.70	.100	.31	.060	.060
SEP											
20...	278	.40	449	1.0	.050	.06	1.10	.200	.61	.130	.130

K Results based on colony count outside the acceptable range (non-ideal colony count).

POTOMAC RIVER BASIN

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01636500 SHENANDOAH RIVER AT MILLVILLE, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA)	BARIIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)
NOV 02...	1	0	2	100	70	30	<1	<1	10	--
MAR 15...	1	0	1	100	60	36	3	<1	30	10
MAY 10...	2	1	1	<100	--	35	<1	<1	20	10
SEP 20...	2	0	2	100	50	51	1	2	10	--

DATE	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)
NOV 02...	<10	2	<1	45	42	3	270	240	27	79
MAR 15...	20	2	<1	7	5	2	630	610	17	7
MAY 10...	10	3	<1	4	1	3	210	--	<3	6
SEP 20...	<10	1	<1	5	0	5	430	420	13	2

DATE	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)
NOV 02...	77	2	30	20	10	<.1	--	<.1	4
MAR 15...	6	<1	40	40	4	.1	--	<.1	3
MAY 10...	0	6	30	30	3	.1	--	<.1	4
SEP 20...	0	2	20	10	8	.2	.0	.2	4

DATE	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL SOLVED (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 02...	0	5	<1	<1	<1	<1	90	80	8
MAR 15...	2	1	<1	<1	<1	<1	40	--	<4
MAY 10...	0	4	<1	<1	<1	<1	60	60	3
SEP 20...	2	2	<1	<1	<1	<1	20	--	<4

POTOMAC RIVER BASIN

01636500 SHENANDOAH RIVER AT MILLVILLE, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
NOV 02...	100	11	19
JAN 19...	80	56	166
MAR 15...	86	32	417
JUL 13...	62	24	146
SEP 20...	100	10	15

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	530	484	511	481	476	479	624	608	619	505	499	502
2	537	481	514	486	475	482	606	578	588	500	489	497
3	552	498	534	473	464	467	609	584	602	495	487	492
4	579	523	548	480	470	476	612	607	609	492	487	489
5	594	544	570	482	468	477	622	612	619	487	481	485
6	598	546	578	470	464	466	622	617	619	483	435	464
7	614	542	585	488	470	478	619	612	617	431	359	378
8	624	572	602	510	491	503	611	596	605	356	336	342
9	635	577	612	511	475	498	600	594	596	340	333	337
10	650	599	629	488	468	474	603	600	601	334	301	326
11	652	573	634	510	489	502	611	604	609	329	285	315
12	652	594	628	508	499	504	611	603	607	335	328	331
13	647	578	626	508	504	506	603	600	602	334	330	332
14	654	612	635	507	501	505	606	603	605	333	326	329
15	667	633	649	509	505	508	602	588	595	390	290	350
16	668	602	642	508	499	504	589	573	581	397	292	378
17	656	595	625	518	500	509	627	574	597	377	212	317
18	658	605	635	526	519	522	647	630	639	393	375	381
19	669	609	643	551	526	536	656	649	654	413	393	406
20	665	610	648	570	553	564	654	628	641	420	406	413
21	674	614	648	571	564	567	627	604	616	434	419	426
22	702	620	662	566	561	564	603	586	594	465	435	452
23	732	667	705	588	568	577	584	565	576	473	461	467
24	749	698	728	596	588	594	563	549	558	477	431	463
25	753	692	732	594	588	591	573	549	560	482	405	457
26	770	711	741	588	577	582	593	575	586	503	407	478
27	777	684	738	623	586	605	573	562	565	519	387	469
28	732	635	696	633	625	631	565	512	538	512	474	492
29	706	610	662	631	626	629	510	500	504	501	484	496
30	639	391	463	627	624	626	503	497	501	492	476	485
31	476	414	460	---	---	---	503	495	498	493	436	456
MONTH	777	391	622	633	464	531	656	495	590	519	212	420

01636500 SHENANDOAH RIVER AT MILLVILLE, WV--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C) • WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	534	441	499	290	283	288	318	313	315	310	302	304
2	501	396	467	289	280	284	325	316	319	303	297	299
3	345	318	325	281	276	278	330	326	329	295	294	295
4	405	276	345	286	278	282	334	330	332	299	294	296
5	274	249	256	287	284	286	339	331	335	304	299	302
6	258	249	254	285	283	284	339	332	335	225	218	222
7	260	256	259	290	285	287	339	332	336	230	222	226
8	259	252	255	294	290	293	341	328	335	238	229	234
9	268	259	264	295	284	292	350	342	345	240	237	239
10	273	268	270	284	278	280	349	344	348	335	239	296
11	277	273	275	280	277	278	349	345	347	343	336	340
12	281	274	278	281	275	279	346	341	344	345	341	342
13	284	279	281	275	267	270	345	342	343	354	347	350
14	291	283	287	267	262	265	352	345	349	372	357	368
15	297	292	295	265	262	264	350	342	344	378	369	374
16	299	295	296	265	263	265	348	344	346	383	365	374
17	299	294	296	264	262	263	348	342	345	395	384	389
18	302	287	295	261	250	253	353	343	347	406	396	401
19	286	257	270	252	250	251	354	352	353	412	402	408
20	285	264	275	255	251	253	359	353	356	402	397	399
21	275	243	253	304	255	266	358	350	353	403	397	400
22	245	240	242	298	230	264	355	346	350	403	400	401
23	243	239	241	235	224	228	349	346	348	410	403	406
24	245	240	242	251	237	244	353	348	351	412	400	407
25	252	242	247	265	251	258	359	351	355	406	390	398
26	260	252	255	274	264	269	358	353	356	396	392	395
27	268	259	265	282	273	279	367	356	362	397	372	384
28	282	268	274	295	282	289	368	342	361	395	370	382
29	---	---	---	303	295	300	340	311	324	427	409	422
30	---	---	---	311	303	306	317	310	314	460	424	446
31	---	---	---	318	308	313	---	---	---	439	407	421
MONTH	534	239	288	318	224	275	368	310	343	460	218	352
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	421	404	411	361	353	358	495	479	486	504	499	502
2	409	403	407	361	356	360	508	495	502	515	501	508
3	420	391	410	357	353	356	519	507	514	512	501	505
4	393	381	386	366	354	360	512	507	510	499	487	494
5	389	360	379	365	360	362	508	506	507	---	---	---
6	369	357	362	365	360	362	507	502	504	499	494	497
7	357	340	345	367	364	365	522	506	513	497	490	493
8	351	344	348	376	366	370	525	513	521	497	488	493
9	366	353	359	396	377	387	514	502	508	499	496	498
10	371	366	369	405	396	401	516	488	506	500	495	497
11	390	370	381	410	404	407	487	458	474	501	495	497
12	397	391	395	419	409	412	469	451	460	499	470	490
13	395	383	391	426	415	422	475	462	468	509	473	502
14	385	264	350	573	416	539	465	447	454	513	501	508
15	313	271	288	604	556	573	476	458	467	513	489	507
16	277	270	272	598	544	562	485	475	481	505	488	500
17	290	277	285	551	520	541	493	482	486	505	498	501
18	298	291	295	520	512	515	497	487	493	498	491	495
19	311	299	307	522	499	509	496	476	489	495	484	489
20	320	312	316	497	480	488	485	458	474	551	472	487
21	330	320	325	497	482	490	484	463	477	478	473	475
22	338	331	335	515	499	509	486	480	482	479	468	474
23	345	339	341	511	454	476	487	475	483	468	461	464
24	351	346	348	490	452	471	474	451	460	485	465	472
25	357	352	354	493	488	491	---	---	---	505	485	496
26	362	358	360	492	459	477	473	468	470	522	508	516
27	364	353	359	459	437	447	485	472	477	514	498	508
28	369	356	363	446	435	438	492	480	487	497	478	487
29	366	355	362	464	445	455	498	485	493	478	473	475
30	361	352	357	474	463	469	504	494	499	478	471	473
31	---	---	---	483	474	480	507	502	505	---	---	---
MONTH	421	264	352	604	353	447	525	447	488	551	461	493

POTOMAC RIVER BASIN

01636500 SHENANDOAH RIVER AT MILLVILLE, WV--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	.5	.0	.0	4.5	3.0	4.0	11.5	9.0	10.5	15.5	15.0	15.0
2	.5	.0	.0	4.0	3.5	4.0	12.5	10.0	11.0	16.5	15.0	15.5
3	.0	.0	.0	4.5	3.5	4.0	12.0	11.0	11.5	17.5	15.0	16.5
4	.5	.0	.0	4.5	3.5	4.0	11.5	10.5	11.0	18.0	16.0	17.0
5	1.5	.0	.5	5.0	3.5	4.0	10.5	9.5	10.0	18.0	16.5	17.5
6	2.0	1.5	1.5	4.5	4.0	4.0	10.5	7.0	9.0	20.0	18.5	19.0
7	2.0	1.0	1.5	4.0	3.5	3.5	7.0	5.5	6.5	21.5	19.5	20.5
8	2.0	1.5	1.5	4.0	3.0	3.5	8.0	6.5	7.0	20.5	19.5	20.0
9	2.0	1.5	2.0	4.5	3.0	4.0	7.5	7.0	7.5	20.0	18.5	19.5
10	2.0	1.0	1.5	4.5	3.5	4.0	8.5	7.0	7.5	20.0	18.0	19.0
11	2.5	1.0	1.5	6.5	4.5	5.5	10.0	8.0	9.0	20.0	18.0	19.0
12	2.0	1.5	1.5	8.5	6.5	7.5	10.5	8.5	9.5	21.5	18.5	20.0
13	2.0	1.5	2.0	9.0	8.0	8.5	11.5	10.0	10.5	22.5	20.5	21.5
14	2.5	1.0	1.5	9.0	8.5	8.5	13.0	11.0	12.0	23.0	21.5	22.0
15	3.5	1.5	2.5	8.5	7.5	8.0	13.5	12.0	12.5	23.0	21.5	22.5
16	5.0	3.5	4.0	7.5	6.5	7.0	15.0	12.0	13.5	23.5	22.0	22.5
17	5.0	3.5	4.5	7.5	6.5	7.0	17.5	14.5	16.0	24.5	22.5	23.5
18	3.5	2.5	3.0	8.5	6.5	7.5	17.5	16.0	17.0	25.0	24.0	24.5
19	3.5	2.0	2.5	9.0	8.0	8.5	16.5	15.0	16.0	25.0	24.0	24.5
20	4.0	3.0	3.5	9.0	8.5	8.5	16.5	15.0	16.0	24.5	23.5	24.0
21	4.5	3.5	4.0	8.5	8.0	8.5	17.0	15.5	16.0	24.0	23.5	23.5
22	4.5	4.0	4.5	8.0	7.5	8.0	16.0	15.0	15.5	23.5	22.0	22.5
23	5.0	4.0	4.5	8.5	7.0	8.0	15.5	13.5	14.5	22.0	20.0	20.5
24	5.0	4.5	5.0	9.5	7.5	8.5	16.5	14.0	15.5	19.5	19.0	19.5
25	5.0	4.5	5.0	10.5	8.5	9.5	17.0	15.5	16.5	20.5	19.5	20.0
26	4.5	3.5	4.0	10.5	9.5	9.5	17.0	16.0	16.5	21.5	20.5	21.0
27	4.0	3.5	4.0	9.5	7.5	8.5	16.5	15.5	16.0	23.0	21.0	22.0
28	4.5	3.0	3.5	8.0	7.0	7.5	16.5	14.5	15.5	23.0	22.5	22.5
29	---	---	---	8.5	6.5	7.5	16.0	14.5	15.5	24.0	22.5	23.5
30	---	---	---	9.5	7.5	8.5	16.0	15.0	15.5	25.0	23.5	24.0
31	---	---	---	10.5	8.5	9.5	---	---	---	26.0	24.0	25.0
MONTH	5.0	.0	2.5	10.5	3.0	6.5	17.5	5.5	12.5	26.0	15.0	21.0

POTOMAC RIVER BASIN

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01636500 SHENANDOAH RIVER AT MILLVILLE, WV--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

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 mi (9.7 km) upstream from Monocacy River, and at mile 159.5 (256.6 km).

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

WATER-DISCHARGE RECORDS

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

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

GAGE.--Water-stage recorder. Datum of gage is 200.63 ft (61.152 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 28, 1929, nonrecording gage at same site. Prior to Sept. 2, 1902, at datum about 0.45 ft (0.317 m) higher.

REMARKS.--Water-discharge records good except those for January, which are fair. Low flow affected slightly since 1913 by Stony River Reservoir (see station 01595200), since December 1950 by Savage River Reservoir (see station 01597500), and since July 1981, by Bloomington Reservoir (see station 01595800). Low flow affected extensively at times by run-of-the-river hydroelectric plants. Gage-height telemeter at station.

AVERAGE DISCHARGE.--87 years, 9,350 ft³/s (264.8 m³/s), 13.16 in/yr (334 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 discharge, 530 ft³/s (15.0 m³/s) Sept. 11, 12, 1966, gage height, 0.27 ft (0.082 m).

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

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 4	----	Unknown	Ice Jam	Mar. 18	1330	61400 1740	12.74 3.883
Feb. 5	----	Unknown	Ice Jam	Mar. 22	1400	69600 1970	13.85 4.221
Feb. 19	1630	39900 1130	9.48 2.890	June 15	0230	*92000 2610	16.66 5.078
Feb. 22	1600	41000 1160	9.67 2.947				

Minimum discharge, 1,170 ft³/s (33.1 m³/s) Oct. 17, 20, gage height, 0.70 ft (0.213 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1390	7090	2020	4710	5600	15000	11000	12000	7040	5030	4600	2080
2	1490	5550	2560	4650	8500	13900	10400	10700	6940	4780	4020	1960
3	1420	4590	3010	5020	17000	13300	10000	9690	7230	4750	4070	2070
4	1430	4080	3710	6280	37000	12600	12100	8830	7360	5260	3980	1960
5	1380	3640	4100	12500	47000	12100	17500	8060	10300	5330	3580	1970
6	1380	3380	4140	20500	37000	11400	15500	7360	16600	6870	3490	1960
7	1390	3220	3800	21000	25200	11400	14500	6820	23500	6280	3480	1950
8	1350	3290	3520	16200	18600	12300	13700	6440	19100	5790	3670	1880
9	1340	3290	3330	13500	15000	15100	12800	6220	14800	5450	5150	1760
10	1320	3150	3210	10000	13100	17300	12200	6560	12200	5430	5000	1710
11	1290	3120	3470	6000	12600	17000	12000	6810	10800	5210	5970	1840
12	1300	3120	3630	4300	12500	17100	12100	6040	12600	6170	4940	1940
13	1260	2970	3420	4000	11200	24600	11300	5550	21300	6740	4540	1860
14	1240	2850	3290	4000	10000	32600	10700	5140	53900	7080	4090	1570
15	1270	2750	3280	4100	8990	30100	9890	4860	76400	6060	3740	1560
16	1240	2600	3390	4400	8670	25900	9210	4600	41500	5110	3290	1650
17	1190	2500	3340	3800	13100	30000	8680	4310	33000	4530	3200	1790
18	1270	2400	3340	4300	32700	57100	8850	4210	28800	5030	3710	1750
19	1270	2300	3260	4500	39000	47500	9120	3980	21500	4620	3810	1600
20	1220	2400	2990	4800	35200	35300	9000	3920	16400	4490	3360	1630
21	1250	2310	2590	4500	34900	36200	8590	3780	13200	4740	3320	1630
22	1280	2170	2360	4300	40200	65600	8020	3690	11300	5390	2870	1590
23	1240	2130	2390	4000	37200	52400	7470	3880	9780	5850	2690	1770
24	1300	2120	3240	3800	32100	35800	6960	4280	8520	5270	2580	1670
25	1380	2070	4120	3500	29700	27300	6550	4470	7680	5540	2670	1550
26	1480	2070	8980	3400	24700	22100	6760	6000	7030	6520	2530	1740
27	2050	2050	8290	3300	20600	19000	7430	6330	6370	5050	2230	2560
28	3750	2000	7210	3100	17200	16700	9040	6480	5890	5050	2230	2700
29	14400	1960	6650	3200	---	14400	12100	7170	5500	4460	2180	2770
30	15000	1950	5720	3300	---	12800	13200	10100	5190	4680	2160	2340
31	9600	---	5030	3700	---	11600	---	8310	---	5500	2140	---
TOTAL	79170	89120	123390	198760	644560	765500	316770	196590	521730	168060	109290	56810
MEAN	2554	2971	3980	6412	23020	24690	10560	6342	17390	5421	3525	1894
MAX	15000	7090	8980	21000	47000	65600	17600	12000	76400	7080	5970	2770
MIN	1190	1950	2020	3100	5600	11400	6550	3690	5190	4460	2140	1550
CFSM	.27	.31	.41	.66	2.39	2.56	1.09	.66	1.80	.56	.37	.20
IN.	.31	.34	.48	.77	2.48	2.95	1.22	.76	2.01	.65	.42	.22

CAL YR 1981	TOTAL	2004490	MEAN	5492	MAX	40400	MIN	1180	CFSM	.57	IN	7.73
WTR YR 1982	TOTAL	3269750	MEAN	8958	MAX	76400	MIN	1190	CFSM	.93	IN	12.60

POTOMAC RIVER BASIN

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01638500 POTOMAC RIVER AT POINT OF ROCKS, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1960 to current year.

SUSPENDED SEDIMENT DISCHARGE: October 1960 to current year.

REMARKS.--Water temperatures are measured daily in field at time of sampling.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum daily, 33.5°C Aug. 24, 1964, July 19, 1977; minimum daily, 0.0°C on many days during winter periods.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,350 mg/L Apr. 3, 1970; minimum daily mean, 1 mg/L on many days most years.

SEDIMENT LOADS: Maximum daily, 689,000 tons (625,000 tonnes) June 23, 1972; minimum daily, 2.0 tons (1.8 tonnes) on many days during 1964, 1966-69.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum daily, 29.0°C July 18; minimum daily, 0.0°C Jan. 16.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 648 mg/L June 15; minimum daily mean, 1 mg/L Oct. 24, 25, Nov. 11-22, 27-30.

SEDIMENT LOADS: Maximum daily, 143,000 tons (130,000 tonnes) June 15; minimum daily, 3.5 tons (3.2 tonnes) Oct. 24.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
NOV 20...	1300	2400	470	8.8	10.0	4	150	54	46	9.6	22
APR 19...	1315	9160	265	8.9	15.0	<1	110	33	33	7.4	8.0

DATE	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAR (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
NOV 20...	23	.8	2.2	100	58	16	.1	.1	242	214	.33
APR 19...	13	.3	1.5	80	35	8.5	<.1	1.5	160	143	.22

DATE	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
NOV 20...	1570	.88	.050	.15	150	130	18	20	10	7
APR 19...	3960	1.1	.040	.12	170	140	31	20	10	7

POTOMAC RIVER BASIN

01638500 POTOMAC RIVER AT POINT OF ROCKS, MD--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM
MAR							
18...	1720	60200	692	112000	37	47	59
22...	0920	67400	313	57000	38	47	57
22...	1610	69500	392	73600	39	52	60

DATE	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM
MAR						
18...	71	83	93	98	100	--
22...	66	74	88	96	99	100
22...	70	79	90	97	100	--

DATE	TRITIUM IN WATER MOLE- CULES (TU)	TRITIUM WATER MOLE- CULES COUNT ERROR (TU)	DATE	TRITIUM IN WATER MOLE- CULES (TU)	TRITIUM WATER MOLE- CULES COUNT ERROR (TU)
OCT			DEC		
01-16	34.7	1.9	01-17	10.0	.5
17-20	33.8	1.3	18-31	32.7	1.5
21-31	30.5	1.2	JAN		
NCV			01-07	32.7	1.5
01-07	30.5	1.2	08-16	33.7	1.5
10-29	33.3	1.5	FEB		
30-30	10.0	.5	04-22	29.7	1.4

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.0	12.0	3.0	2.0	---	4.0	9.0	14.0	22.0	22.0	26.0	23.0
2	17.0	11.0	6.0	1.0	---	4.0	10.0	17.0	22.0	23.0	24.0	25.0
3	13.0	12.0	4.0	1.5	---	4.0	10.0	15.0	23.0	23.0	24.0	25.0
4	15.0	11.0	5.0	2.0	---	3.0	10.0	16.0	20.0	22.0	25.0	22.0
5	15.0	11.0	4.0	2.0	1.0	5.0	9.0	16.0	19.0	22.0	26.0	20.0
6	17.0	12.0	4.0	2.0	1.0	5.0	7.0	16.0	19.0	22.0	26.0	21.0
7	14.0	9.0	4.0	3.0	1.0	4.0	6.0	19.0	17.0	23.0	25.0	22.0
8	13.0	11.0	5.0	2.0	2.0	3.0	5.0	18.0	17.0	24.0	26.0	22.0
9	11.0	9.0	4.0	2.0	1.0	3.0	6.0	19.0	18.0	24.0	25.0	21.0
10	12.0	9.0	2.0	2.0	1.0	3.0	6.0	17.0	19.0	25.0	25.0	21.0
11	14.0	8.0	2.0	2.0	1.0	4.0	8.0	17.0	19.0	25.0	24.0	22.0
12	12.0	8.0	3.0	1.0	1.0	6.0	8.0	18.0	19.0	25.0	23.0	22.0
13	12.0	7.0	3.0	1.0	2.0	7.0	8.0	19.0	18.0	25.0	22.0	22.0
14	12.0	7.0	2.0	1.0	2.0	8.0	9.0	20.0	19.0	25.0	23.0	23.0
15	12.0	7.0	2.0	1.0	4.0	7.0	10.0	23.0	18.0	26.0	24.0	23.0
16	15.0	8.0	2.0	.0	4.0	7.0	12.0	23.0	19.0	27.0	23.0	23.0
17	12.0	8.0	1.0	---	3.0	7.0	14.0	21.0	19.0	28.0	25.0	21.0
18	13.0	8.0	3.0	---	2.0	7.0	15.0	22.0	20.0	29.0	24.0	21.0
19	10.0	7.0	1.0	---	2.0	7.0	14.0	23.0	22.0	27.0	23.0	22.0
20	9.0	8.0	1.0	---	3.0	8.0	14.0	22.0	20.0	27.0	25.0	20.0
21	9.0	6.0	2.0	---	4.0	8.0	14.0	22.0	20.0	26.0	24.0	20.0
22	12.0	5.0	2.0	---	5.0	8.0	13.0	22.0	20.0	25.0	22.0	19.0
23	13.0	4.0	2.0	---	5.0	8.0	13.0	19.0	20.0	27.0	23.0	17.0
24	10.0	4.0	2.0	---	5.0	8.0	14.0	18.0	20.0	26.0	23.0	19.0
25	9.0	4.0	2.0	---	4.0	10.0	17.0	19.0	20.0	26.0	24.0	17.0
26	9.0	4.0	1.0	---	3.0	8.0	15.0	20.0	---	27.0	21.0	18.0
27	13.0	4.0	2.0	---	4.0	7.0	15.0	20.0	---	27.0	22.0	18.0
28	13.0	4.0	2.0	---	4.0	8.0	14.0	20.0	---	26.0	21.0	18.0
29	11.0	5.0	2.0	---	---	7.0	14.0	21.0	---	24.0	19.0	17.0
30	11.0	3.0	1.0	---	---	8.0	14.0	23.0	25.0	24.0	20.0	---
31	11.0	---	1.0	---	---	9.0	---	22.0	---	25.0	20.0	---

01638500 POTOMAC RIVER AT POINT OF ROCKS, MD--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)
OCTOBER			NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	3	11	23	440	2	11	9	114	15	230	16	648
2	3	12	16	240	8	55	9	113	20	460	10	375
3	4	15	14	174	9	73	10	136	40	1850	10	359
4	5	19	9	99	12	120	12	203	100	10000	11	374
5	8	30	8	79	11	122	35	1180	300	38000	12	392
6	6	22	6	55	12	134	87	4840	260	26000	11	339
7	5	19	5	43	9	92	84	4760	165	11200	9	277
8	5	18	3	27	12	114	47	2060	78	3920	10	332
9	6	22	3	27	15	135	26	948	41	1660	14	571
10	6	21	2	17	12	104	15	405	24	849	18	841
11	5	17	1	8.4	10	94	10	162	18	612	18	826
12	4	14	1	8.4	10	98	9	104	12	405	22	1020
13	3	10	1	8.0	10	92	9	97	11	333	52	3580
14	3	10	1	7.7	10	89	9	97	10	270	121	10700
15	5	17	1	7.4	10	89	9	100	9	218	121	9830
16	3	10	1	7.0	10	92	8	95	10	234	86	6010
17	3	9.6	1	6.8	9	81	60	616	38	1740	78	6610
18	3	10	1	6.5	11	99	40	464	210	19600	581	91300
19	4	14	1	6.2	10	88	30	364	285	30000	465	61300
20	3	9.9	1	6.5	10	81	20	259	150	14300	150	14300
21	2	6.8	1	6.2	10	70	15	182	97	9140	97	9660
22	2	6.9	1	5.9	9	57	10	116	125	13600	336	60600
23	2	6.7	2	12	8	52	10	108	112	11200	384	57400
24	1	3.5	2	11	9	79	10	103	75	6500	155	15000
25	1	3.7	2	11	12	133	10	94	64	5130	75	5530
26	2	8.0	2	11	22	533	9	83	45	3000	49	2920
27	3	17	1	5.5	19	425	9	80	29	1610	37	1900
28	13	132	1	5.4	32	623	9	75	20	929	24	1080
29	72	2800	1	5.3	23	413	8	69	---	---	18	700
30	75	3040	1	5.3	13	201	8	71	---	---	19	657
31	42	1090	---	---	10	136	8	80	---	---	19	595
TOTAL	---	7425.1	---	1352.5	---	4585	---	18178	---	212990	---	366026
APRIL			MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	17	505	14	454	35	665	12	163	18	224	8	45
2	17	477	11	318	46	862	10	129	18	195	8	42
3	16	432	11	288	38	742	15	192	20	220	9	50
4	25	817	10	238	33	656	17	241	21	226	9	48
5	50	2380	8	174	51	1420	21	302	22	213	11	59
6	42	1760	8	159	72	3230	22	408	22	207	13	69
7	34	1330	7	129	122	7740	17	288	21	197	9	47
8	25	925	8	139	80	4130	16	250	16	159	8	41
9	15	518	9	151	55	2200	25	368	33	459	11	52
10	11	362	10	177	38	1250	27	396	30	405	12	55
11	10	324	13	239	35	1020	30	422	33	532	12	60
12	11	359	11	179	40	1360	32	533	27	360	12	63
13	10	305	8	120	100	5750	30	546	24	294	10	50
14	9	260	9	125	505	87600	32	612	21	232	9	38
15	8	214	11	144	648	143000	30	491	22	222	10	42
16	8	199	13	161	210	23500	30	414	21	187	10	45
17	7	164	14	163	160	14300	17	208	17	147	11	53
18	7	167	13	148	155	12100	18	244	17	170	9	43
19	7	172	13	140	85	4930	19	237	17	175	6	26
20	8	194	13	138	61	2700	20	242	16	145	8	35
21	13	302	11	112	42	1500	25	320	13	117	9	40
22	11	238	11	110	31	946	26	378	11	85	9	39
23	11	222	13	136	26	687	29	458	9	65	9	43
24	12	226	14	162	22	506	29	413	8	56	6	27
25	12	212	18	217	17	353	26	389	10	72	6	25
26	13	237	24	389	15	285	34	599	11	75	7	33
27	14	281	24	410	13	224	30	409	9	54	9	62
28	17	415	25	437	11	175	37	504	10	60	7	51
29	22	719	24	465	11	163	26	313	10	59	10	75
30	22	784	42	1150	10	140	26	329	9	52	10	63
31	---	---	35	785	---	---	28	416	9	52	---	---
TOTAL	---	15500	---	8157	---	324134	---	11214	---	5716	---	1421

TOTAL LOAD FOR YEAR: 976698.6 TONS.

MONONGAHELA RIVER BASIN

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.

COOPERATION.--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 15; minimum daily, 0.0°C Jan. 15, 16.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.5	10.5	5.0	3.0	2.0	5.0	8.0	14.0	20.0	22.0	24.0	19.0
2	15.5	10.5	5.0	2.0	3.0	6.0	11.0	13.0	20.0	22.0	22.0	19.0
3	14.5	11.5	5.0	3.0	3.0	6.0	10.0	14.0	20.0	22.0	22.0	19.0
4	14.0	12.0	5.0	3.0	4.0	6.0	11.0	14.0	19.0	22.0	24.0	19.0
5	14.5	13.0	5.0	3.0	3.0	6.0	8.0	15.0	19.0	22.0	25.0	19.0
6	14.5	11.5	5.0	3.0	3.0	6.0	8.0	17.0	18.0	22.0	23.0	19.0
7	13.5	11.0	4.0	5.0	4.0	5.0	7.0	17.0	17.0	23.0	23.5	19.0
8	13.0	8.5	4.0	2.5	3.0	4.0	6.0	17.0	18.0	22.0	24.0	19.0
9	12.0	8.0	4.0	1.0	3.0	4.0	6.0	15.0	17.0	22.0	25.0	21.0
10	12.0	8.0	4.0	1.0	2.0	5.0	5.0	15.0	18.0	22.0	25.0	20.0
11	12.0	8.5	3.0	1.0	2.0	7.0	7.0	17.0	18.0	22.0	25.0	21.0
12	12.0	6.5	4.0	1.0	2.0	7.0	7.0	18.0	18.0	22.0	24.0	21.0
13	12.0	5.5	3.0	1.0	2.0	9.0	10.0	19.0	18.0	22.0	22.0	21.0
14	12.0	5.0	3.0	2.0	2.0	8.0	10.0	19.0	18.0	24.0	25.0	21.0
15	12.0	5.5	3.0	.0	4.0	8.0	11.0	20.0	19.0	26.0	24.0	21.0
16	12.0	5.5	2.0	.0	4.0	7.0	13.0	21.0	19.0	25.0	22.0	22.0
17	12.0	5.5	2.0	1.0	5.0	8.0	13.0	21.0	19.0	25.0	22.0	21.0
18	12.0	4.5	2.0	1.0	5.0	8.0	13.0	21.0	19.0	24.0	21.0	21.0
19	12.0	4.0	1.0	1.0	5.0	10.0	9.0	22.0	19.0	25.0	21.0	20.0
20	12.0	4.0	1.0	1.0	5.0	9.0	10.0	21.0	19.0	25.0	22.0	20.0
21	12.0	3.0	2.0	2.0	5.0	10.0	10.0	21.0	22.0	24.0	22.0	19.0
22	12.0	3.0	2.0	1.0	5.0	8.0	10.0	21.0	22.0	24.0	22.0	17.0
23	10.0	3.0	1.0	2.0	5.0	10.0	12.0	21.0	21.0	24.0	20.0	19.0
24	10.5	1.0	3.0	2.0	6.0	8.0	12.0	21.0	21.0	24.0	21.0	14.0
25	10.0	1.5	3.0	2.0	6.0	8.0	13.0	21.0	21.0	25.0	21.0	13.0
26	10.0	1.0	3.0	2.0	4.0	8.0	14.0	21.0	22.0	25.0	21.0	14.0
27	10.0	2.0	3.0	2.0	3.0	6.0	15.0	21.0	22.0	25.0	20.0	15.0
28	10.5	4.5	3.0	2.0	5.0	4.0	14.0	21.0	22.0	24.0	20.0	15.0
29	11.0	3.0	2.0	2.0	---	6.0	14.0	21.0	22.0	24.0	19.0	16.0
30	11.0	3.0	2.0	2.0	---	6.0	14.0	21.0	22.0	24.0	19.0	17.0
31	11.0	---	3.0	3.0	---	8.0	---	21.0	---	24.0	19.0	---
MEAN	12.0	6.0	3.0	2.0	4.0	7.0	10.5	18.5	19.5	23.5	22.0	18.5
WTR YR 1982	MEAN	12.5		MAX	26.0	MIN	.0					

MONONGAHELA RIVER BASIN

83

03050500 TYGART VALLEY RIVER NEAR ELKINS, WV

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

DRAINAGE AREA.--272 mi² (704 km²).

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

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

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

AVERAGE DISCHARGE.--38 years, 539 ft³/s (15.26 m³/s), 26.91 in/yr (684 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,100 ft³/s (371 m³/s) Dec. 31, 1969, gage height, 15.65 ft (4.770 m); maximum gage height, 15.84 ft (4.828 m) Jan. 27, 1978; minimum daily discharge, 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)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 24	0430	6520	12.72	Feb. 4	1000	5180	11.35
Jan. 23	1130	5510	11.71	Mar. 21	Unknown	*10200	15.49
		185	3.877			147	3.459
		156	3.569			289	4.721

Minimum discharge, 16 ft³/s (0.45 m³/s) Oct. 17, gage height, 1.33 ft (0.405 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	227	340	322	1630	383	899	351	429	153	716	289
2	33	181	410	379	1270	348	886	297	324	114	357	423
3	37	144	360	416	2980	337	780	254	351	111	305	800
4	53	132	305	1600	4460	308	940	212	351	1480	203	484
5	44	117	340	2540	1660	294	728	185	756	1300	146	191
6	43	181	318	1170	992	281	680	163	1620	704	114	128
7	69	337	276	912	655	478	660	150	1940	337	114	120
8	74	324	395	1050	464	854	644	148	1060	206	177	97
9	68	276	840	813	811	780	728	144	613	229	1150	86
10	53	245	632	440	2040	1040	836	127	522	212	610	74
11	44	214	461	390	1180	1060	796	116	1540	360	305	64
12	42	183	389	353	764	3900	764	104	958	179	218	57
13	38	153	316	315	587	2610	728	78	3130	122	125	52
14	35	132	286	285	423	1960	764	71	3650	96	120	47
15	29	118	629	255	362	1440	558	71	1180	86	104	43
16	22	111	748	225	511	1870	420	67	572	93	84	38
17	17	106	543	205	2260	2810	348	57	368	151	75	39
18	29	104	515	189	3610	1510	343	61	259	139	61	37
19	43	98	386	169	1860	962	321	57	187	111	110	34
20	50	93	276	151	1460	3900	284	55	146	348	92	33
21	50	98	268	928	1580	10000	271	55	116	423	335	32
22	50	108	764	2220	1490	3700	231	92	98	193	247	70
23	60	106	4840	4050	994	1320	206	92	88	146	127	125
24	86	108	5330	3670	926	804	187	110	80	114	141	110
25	92	134	1640	1380	908	602	169	201	69	102	161	93
26	104	141	923	789	672	554	212	197	57	69	179	78
27	1330	664	658	423	540	515	308	264	50	56	114	750
28	2110	1140	493	395	455	445	426	185	55	132	163	850
29	863	613	413	375	---	458	508	114	88	1180	130	605
30	478	392	347	345	---	512	426	768	250	423	108	300
31	310	---	288	333	---	569	---	1070	---	335	86	---
TOTAL	6385	6980	24729	27087	37544	46604	16051	5916	20907	9704	6977	6149
MEAN	206	233	798	874	1341	1503	535	191	697	313	225	205
MAX	2110	1140	5330	4050	4460	10000	940	1070	3650	1480	1150	850
MIN	17	93	268	151	362	281	169	55	50	56	61	32
CFSM	.76	.86	2.93	3.21	4.93	5.53	1.97	.70	2.56	1.15	.83	.75
IN.	.87	.95	3.38	3.70	5.13	6.37	2.20	.81	2.86	1.33	.95	.84

CAL YR 1981 TOTAL 198062.2 MEAN 543 MAX 5960 MIN 7.9 CFSM 2.00 IN 27.09
WTR YR 1982 TOTAL 215033.0 MEAN 589 MAX 10000 MIN 17 CFSM 2.17 IN 29.41

03051000 TYGART VALLEY RIVER AT BELINGTON, WV

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

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

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

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

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

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

AVERAGE DISCHARGE.--75 years, 812 ft³/s (23.00 m³/s), 27.03 in/yr (687 mm/yr).

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

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

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 23	2200	9220 261	13.22 4.029	Mar. 12	1700	6480 184	11.07 3.374
Jan. 23	1700	8310 235	12.52 3.816	Mar. 21	1200	*14100 399	16.55 5.044
Feb. 4	0500	6800 193	11.33 3.453	June 14	0700	6900 195	11.42 3.481

Minimum discharge, 41 ft³/s (1.16 m³/s) Oct. 17, 18, gage height, 2.39 ft (0.728 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	418	537	545	1940	592	1210	510	719	394	719	548
2	76	330	653	626	1930	517	1290	445	480	240	485	1720
3	102	289	605	657	3490	487	1280	390	702	193	370	1470
4	76	207	508	1710	6350	452	1760	330	1200	1620	301	1130
5	80	202	580	3540	2750	435	1330	288	1390	3100	214	510
6	72	356	593	1820	1600	422	1160	256	2890	1520	163	274
7	94	701	513	1410	1050	698	1090	227	3710	763	133	242
8	107	710	647	1650	746	1330	1030	227	2080	460	167	190
9	107	562	1290	1310	916	1210	1210	223	1150	410	2330	159
10	91	468	1070	741	2550	1230	1450	194	840	340	1410	133
11	74	399	794	418	1730	1670	1350	167	1550	768	592	96
12	67	334	656	375	1150	5580	1250	148	1620	435	405	85
13	63	278	550	355	886	4400	1120	137	3970	283	288	80
14	58	241	464	325	661	3110	1150	99	6180	232	186	70
15	54	210	815	305	573	2300	895	102	2180	174	163	63
16	50	191	1090	285	861	2870	686	94	1040	190	137	56
17	44	176	835	267	2990	4920	560	85	663	170	96	60
18	45	170	870	245	4950	2640	560	80	451	223	91	55
19	69	160	711	227	3050	1610	521	78	333	170	99	52
20	102	157	497	215	2640	5290	470	99	273	360	114	48
21	91	167	394	914	2320	12100	440	242	215	736	301	49
22	80	168	1270	2790	2350	5510	395	218	170	400	485	120
23	96	171	7410	6100	1600	2250	335	186	158	223	223	182
24	159	187	8040	5980	1440	1450	306	170	133	186	186	170
25	178	232	2840	2360	1400	1030	278	198	110	148	237	120
26	198	250	1530	1330	1070	998	301	320	92	127	270	117
27	2200	740	1070	763	858	934	430	296	77	78	227	1140
28	3820	1790	808	638	718	796	543	306	84	96	232	1340
29	1690	1050	695	580	---	768	670	190	206	1110	214	758
30	922	668	608	535	---	790	609	587	578	653	163	450
31	582	---	498	500	---	846	---	1630	---	380	140	---
TOTAL	11497	11982	39441	39516	54569	69235	25679	8522	35244	16182	11141	11487
MEAN	371	399	1272	1275	1949	2233	856	275	1175	522	359	383
MAX	3820	1790	8040	6100	6350	12100	1760	1630	6180	3100	2330	1720
MIN	44	157	394	215	573	422	278	78	77	78	91	48
CFSM	.91	.98	3.12	3.13	4.78	5.47	2.10	.67	2.88	1.28	.88	.94
IN.	1.05	1.09	3.60	3.60	4.98	6.31	2.34	.78	3.21	1.48	1.02	1.05
CAL YR 1981	TOTAL	327072	MEAN 896	MAX 8830	MIN 16	CFSM 2.20	IN 29.82					
WTR YR 1982	TOTAL	334495	MEAN 916	MAX 12100	MIN 44	CFSM 2.25	IN 30.50					

MONONGAHELA RIVER BASIN

85

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 January, which are poor.

AVERAGE DISCHARGE.--36 years, 26.8 ft³/s (0.759 m³/s), 25.10 in/yr (638 mm/yr).

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 430 ft³/s (12.2 m³/s) Mar. 12, gage height, 3.68 ft (1.122 m), no other peak above base of 400 ft³/s (11 m³/s); minimum, 1.1 ft³/s (0.03 m³/s) May 19, 20, gage height, 0.50 ft (0.152 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	11	13	16	18	13	24	4.3	9.1	26	3.3	26
2	5.3	9.1	13	14	16	12	22	4.3	7.0	13	2.5	30
3	2.8	7.6	11	15	109	11	32	3.8	6.4	33	2.9	35
4	2.0	6.4	13	36	136	9.8	34	3.5	8.0	132	2.1	21
5	1.9	6.1	36	36	69	11	29	3.3	32	39	1.8	14
6	2.2	47	38	29	42	9.8	30	3.2	124	20	1.5	9.8
7	3.5	39	29	43	25	34	24	3.0	93	13	1.4	7.3
8	2.2	26	30	44	19	39	25	5.1	39	11	9.1	5.9
9	2.0	18	30	37	40	40	37	4.1	20	21	102	4.8
10	1.9	13	26	32	50	55	40	3.2	29	21	26	3.8
11	1.7	11	23	23	35	112	36	2.9	20	12	13	3.3
12	1.7	9.1	19	21	26	246	28	2.6	14	8.3	11	2.8
13	1.7	7.6	16	19	21	126	23	2.3	74	5.6	7.0	2.3
14	1.7	6.4	23	17	16	90	18	2.0	56	4.3	5.1	2.0
15	1.6	6.1	46	15	21	82	15	1.9	28	3.6	3.6	1.9
16	1.3	5.9	40	14	65	148	13	1.7	17	3.0	3.0	2.6
17	1.6	5.3	37	13	109	202	13	1.5	14	2.3	3.6	2.2
18	2.2	4.8	48	12	71	80	13	1.4	9.5	2.1	5.1	1.7
19	6.1	4.3	33	11	70	47	11	1.1	7.0	2.2	2.5	1.7
20	3.8	5.9	24	14	66	210	10	2.9	7.0	16	2.0	1.6
21	2.9	5.9	29	71	65	236	9.8	6.1	4.8	7.6	112	2.8
22	2.6	5.6	188	121	52	103	8.3	2.6	3.6	3.6	23	17
23	8.0	5.1	275	294	42	54	7.3	2.8	3.3	2.6	12	5.6
24	12	13	97	114	42	36	6.7	4.1	2.6	2.2	27	3.5
25	8.0	27	52	54	31	26	6.4	7.0	2.2	1.7	36	3.0
26	20	24	34	32	21	36	6.4	3.2	2.0	1.4	24	9.8
27	254	24	26	25	18	31	6.7	3.2	1.8	1.2	29	44
28	103	18	20	19	16	28	6.1	2.6	4.1	16	29	93
29	47	14	18	15	---	25	5.3	5.6	80	12	18	33
30	24	12	14	13	---	22	4.6	40	91	4.6	13	16
31	14	---	13	15	---	24	---	17	---	4.1	9.8	---
TOTAL	545.3	398.2	1314	1234	1311	2198.6	544.6	152.3	809.4	445.4	541.3	407.4
MEAN	17.6	13.3	42.4	39.8	46.8	70.9	18.2	4.91	27.0	14.4	17.5	13.6
MAX	254	47	275	294	136	246	40	40	124	132	112	93
MIN	1.3	4.3	11	11	16	9.8	4.6	1.1	1.8	1.2	1.4	1.6
CFSM	1.21	.92	2.92	2.75	3.23	4.89	1.26	.34	1.86	.99	1.21	.94
IN.	1.40	1.02	3.37	3.17	3.36	5.64	1.40	.39	2.08	1.14	1.39	1.05
CAL YR 1981	TOTAL	9659.44	MEAN	26.5	MAX	275	MIN	.38	CFSM	1.83	IN	24.78
WTR YR 1982	TOTAL	9901.50	MEAN	27.1	MAX	294	MIN	1.1	CFSM	1.87	IN	25.40

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) 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 January, which are poor. Some regulation at low flow from mine pumpage above station.

AVERAGE DISCHARGE.--67 years, 597 ft³/s (16.91 m³/s), 29.27 in/yr (743 mm/yr).

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

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

Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)	Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)
Dec. 23	1800	6010	170	10.11	3.082	Mar. 21	0730	*6810	193	10.68	3.255
Jan. 23	1900	5440	154	9.70	2.957						

Minimum discharge, 33 ft³/s (0.93 m³/s) Sept. 21, gage height, 4.03 ft (1.228 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	432	380	374	681	471	786	164	476	360	733	551
2	88	332	410	400	734	402	769	157	319	234	492	797
3	138	274	360	382	1310	365	818	157	282	167	355	794
4	111	234	324	638	2950	337	1220	138	416	2240	266	915
5	84	206	510	1200	1950	326	927	124	761	1580	192	510
6	71	365	608	904	1220	312	841	116	1560	698	154	319
7	76	705	515	820	848	443	813	108	2600	527	126	230
8	124	601	482	974	614	755	719	116	1610	346	124	174
9	103	488	634	828	651	736	758	124	894	346	744	144
10	88	405	582	563	1250	891	895	116	723	449	1260	132
11	78	342	515	390	1060	1250	839	97	809	290	725	116
12	73	294	444	355	824	3780	753	90	588	230	510	97
13	65	254	380	325	702	3000	679	82	1220	174	370	86
14	61	216	365	290	560	2280	672	74	2180	132	266	73
15	56	195	588	265	524	1640	569	69	1210	108	195	67
16	52	178	733	240	926	1840	460	62	702	97	154	60
17	48	164	608	215	2050	2910	395	55	471	90	121	60
18	54	154	817	195	2060	1760	405	48	365	119	113	54
19	73	141	733	184	1520	1100	385	42	262	95	160	44
20	154	144	515	285	1580	2840	319	52	202	262	116	40
21	135	167	444	992	1600	6190	302	74	167	786	533	38
22	116	174	1270	2700	1560	3500	286	88	129	400	582	80
23	124	160	5390	4470	1180	1650	242	78	111	220	242	141
24	278	170	4140	4000	995	1050	212	101	95	157	184	113
25	324	370	1780	1760	880	763	198	306	84	124	230	82
26	314	390	1080	1060	713	785	188	223	71	97	278	73
27	2660	380	785	685	601	816	206	129	62	80	209	223
28	3350	640	608	590	554	708	209	178	58	76	294	665
29	1720	545	517	525	---	640	202	129	148	2500	290	569
30	944	438	438	472	---	601	178	438	601	1160	195	319
31	594	---	356	458	---	608	---	954	---	608	154	---
TOTAL	12202	9558	27311	27539	32097	44749	16245	4689	19176	14752	10367	7566
MEAN	394	319	881	888	1146	1444	542	151	639	476	334	252
MAX	3350	705	5390	4470	2950	6190	1220	954	2600	2500	1260	915
MIN	46	141	324	184	524	312	178	42	58	76	113	38
CFSM	1.42	1.15	3.18	3.21	4.14	5.21	1.96	.55	2.31	1.72	1.21	.91
IN.	1.64	1.28	3.67	3.70	4.31	6.01	2.18	.63	2.58	1.98	1.39	1.02

CAL YR 1981	TOTAL	243550	MEAN	667	MAX	7330	MIN	12	CFSM	2.41	IN	32.71
WTR YR 1982	TOTAL	226251	MEAN	620	MAX	6190	MIN	38	CFSM	2.24	IN	30.38

MONONGAHELA RIVER BASIN

87

03054500 TYGART VALLEY RIVER AT PHILIPPI, WV

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

DRAINAGE AREA.--916 mi² (2,372 km²).

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

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

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

AVERAGE DISCHARGE.--42 years, 1,870 ft³/s (52.96 m³/s), 27.72 in/yr (704 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 (1,000 m³/s).

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 23	2000	18400 521	16.24 4.950	Jan. 23	2000	16500 467	15.19 4.630
Jan. 23	0300	18400 521	16.25 4.953	Mar. 21	1300	*22800 646	18.40 5.608

Minimum discharge, 126 ft³/s (3.57 m³/s) Sept. 21, gage height, 1.88 ft (0.573 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	143	1400	1430	1290	2820	1520	2450	888	1720	1350	1630	1190
2	169	1080	1560	1430	3480	1300	2640	807	1080	796	1330	3230
3	305	885	1470	1450	5130	1190	2630	732	1020	633	900	2980
4	292	714	1280	2420	11000	1100	3730	652	2140	4510	761	3100
5	234	632	1550	5790	6500	1050	3010	578	2580	6710	532	1690
6	210	930	1820	3700	3900	1020	2660	515	5400	3030	410	986
7	201	2000	1610	2930	2650	1340	2540	474	8540	1820	346	704
8	284	2030	1600	3380	1930	2500	2280	474	5240	1110	320	531
9	300	1690	2480	2890	2020	2470	2470	487	2910	968	2980	427
10	263	1410	2400	1980	4350	2640	2950	456	2080	992	3980	362
11	222	1190	1980	1300	3670	3670	2810	390	2550	1140	2010	316
12	199	1010	1670	1160	2650	11100	2580	340	2600	866	1350	262
13	183	845	1430	1060	2200	9650	2330	308	4900	616	983	233
14	170	721	1360	940	1740	7060	2320	284	9840	445	662	207
15	158	633	1870	860	1550	5230	1990	248	4750	360	520	186
16	151	574	2510	780	2260	5800	1620	234	2510	357	405	177
17	144	523	2140	701	5760	9690	1360	217	1700	299	330	168
18	141	490	2380	650	8390	6110	1340	195	1240	345	297	166
19	163	464	2200	599	5980	3740	1280	186	903	326	381	150
20	290	451	1630	721	5570	8870	1130	312	696	543	353	137
21	332	498	1450	1970	5000	20100	1060	494	564	1770	879	134
22	287	519	3450	13100	5100	11700	980	529	440	1130	1760	246
23	290	492	15300	14200	3740	5330	843	400	391	616	852	420
24	489	518	14500	12600	3210	3380	756	415	339	457	565	405
25	747	863	6640	5830	3020	2440	692	861	289	353	626	300
26	722	998	3670	3390	2450	2330	660	748	250	286	750	259
27	5420	1260	2610	2110	2030	2320	807	550	218	237	622	1140
28	9270	3130	2050	1850	1790	2020	942	652	208	197	673	2530
29	5030	2410	1740	1670	---	1870	1060	501	559	3820	749	2030
30	2890	1750	1530	1490	---	1850	1000	942	1920	2700	562	1200
31	1930	---	1260	1470	---	1920	---	3070	---	1350	437	---
TOTAL	31629	32110	90570	95711	109890	142310	54920	17939	69577	40132	28955	25868
MEAN	1020	1070	2922	3087	3925	4591	1831	579	2319	1295	934	862
MAX	9270	3130	15300	14200	11000	20100	3730	3070	9840	6710	3980	3230
MIN	141	451	1260	599	1550	1020	660	186	208	197	297	134
CFSM	1.11	1.17	3.19	3.37	4.29	5.01	2.00	.63	2.53	1.41	1.02	.94
IN.	1.28	1.30	3.68	3.89	4.46	5.78	2.23	.73	2.83	1.63	1.18	1.05

CAL YR 1981	TOTAL	776800	MEAN	2128	MAX	18900	MIN	46	CFSM	2.32	IN	31.55
WTR YR 1982	TOTAL	739611	MEAN	2026	MAX	20100	MIN	134	CFSM	2.21	IN	30.04

MONONGAHELA RIVER BASIN
03055500 TYGART LAKE NEAR GRAFTON, WV

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

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

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

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

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

COOPERATION.--Records furnished by Corps of Engineers.

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

EXTREMES FOR CURRENT YEAR.--Maximum contents, 154,320 acre-ft (190 hm³) Mar. 22, elevation 1,116.55 ft (340.324 m); minimum, 19,090 acre-ft (23.5 hm³) Feb. 1, elevation, 1,020.79 ft (311.137 m).

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)	(equivalent in cfs)
Sept. 30.....	1074.78	80370	-	-
Oct. 31.....	1074.27	79620	-750	-12
Nov. 30.....	1056.62	55660	-23960	-403
Dec. 31.....	1035.68	32350	-23310	-379
CAL YR 1981			-5637	-8
Jan. 31.....	1026.30	23720	-8630	-140
Feb. 28.....	1035.08	31760	+8040	+145
Mar. 31.....	1044.10	41070	+9310	+151
Apr. 30.....	1063.21	64240	+23170	+389
May 31.....	1080.61	89260	+25020	+407
June 30.....	1095.26	113500	+24240	+407
July 31.....	1092.65	108900	-4600	-75
Aug. 31.....	1093.16	109800	+900	+15
Sept. 30.....	1086.73	99060	-10740	-181
WTR YR 1982			+18690	+26

MONONGAHELA RIVER BASIN

89

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.--44 years, 2,366 ft³/s (67.01 m³/s), 27.14 in/yr (689 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, 13,800 ft³/s (391 m³/s) Mar. 23; minimum daily, 170 ft³/s (4.81 m³/s) May 12-18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	560	6630	2430	2380	4760	2130	4210	320	250	1550	1060	535
2	560	5060	2410	1890	289	952	4110	320	250	1550	616	1110
3	560	3060	2400	1870	343	1450	4040	320	420	1540	620	2340
4	558	2400	2380	1880	1450	1940	4060	325	590	2350	568	3900
5	550	1790	2360	3310	4510	1930	4100	330	593	6410	620	3860
6	550	1210	2350	4240	6700	1920	4080	330	1070	7940	620	2220
7	500	1220	2350	4220	6530	1430	4030	330	5290	6230	620	958
8	450	1240	2340	4200	5820	983	3960	330	9490	3450	620	620
9	450	1260	2340	4170	2870	2020	3400	330	7490	951	750	620
10	450	1280	2940	4060	3200	3040	2940	330	4190	616	4260	620
11	450	1280	3470	2940	3690	3630	2990	250	2090	620	3620	620
12	450	1280	3400	1910	6350	4520	1790	170	1540	620	1520	620
13	450	1280	3310	1890	8080	5200	1080	170	1560	620	958	620
14	450	1280	3210	1400	6220	5500	1110	170	5860	620	620	620
15	445	1260	3130	937	3370	6980	1130	170	9670	620	620	615
16	440	1250	3100	947	645	7060	1150	170	7870	620	620	610
17	440	1240	3090	950	2730	7290	1170	170	3480	620	620	610
18	440	1230	3040	950	767	8900	1060	170	1540	620	620	610
19	440	1220	3030	943	3710	8780	940	210	1540	620	620	610
20	440	1210	2990	940	6790	5400	830	250	1080	620	620	610
21	496	1200	2890	950	8110	4770	720	300	620	1190	620	605
22	668	1190	2820	2310	9230	9850	595	330	620	1540	1070	775
23	742	1180	3350	3550	8880	12600	520	330	500	1530	1520	880
24	740	1170	7200	6780	8420	13500	520	290	380	1070	1510	880
25	740	1160	10000	10100	7900	12900	520	250	380	610	1060	880
26	740	1160	9720	9810	6270	12200	420	250	380	610	610	880
27	1960	1160	9250	9300	3960	10700	320	250	380	610	610	1180
28	2850	1180	8640	8700	2890	8560	320	250	380	454	610	1480
29	5520	1820	6860	7950	---	7380	320	250	380	1660	610	2430
30	7180	2440	5300	7050	---	6380	320	250	962	3000	610	2980
31	6930	---	3960	6180	---	4940	---	250	---	2250	610	---
TOTAL	38199	51340	126060	118707	134484	184835	56755	8165	70845	53311	30232	35898
MEAN	1232	1711	4066	3829	4803	5962	1892	263	2362	1720	975	1197
MAX	7180	6630	10000	10100	9230	13500	4210	330	9670	7940	4260	3900
MIN	440	1160	2340	937	289	952	320	170	250	454	568	535

CAL YR 1981 TOTAL 977427 MEAN 2678 MAX 15600 MIN 260 MEAN# 2670 CFSM# 2.26 IN# 30.68
WTR YR 1982 TOTAL 908831 MEAN 2490 MAX 13500 MIN 170 MEAN# 2516 CFSM# 2.12 IN# 28.78

* Adjusted for changes in contents in Tygart Lake.

MONONGAHELA RIVER BASIN

03057000 TYGART VALLEY RIVER AT COLFAX, WV

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

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

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

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

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

REMARKS.--Records good except those for January and those for period of no gage-height record, Oct. 1-16 and Nov. 20 to Dec. 2, which are poor. Flow regulated by Tygart Lake (station 03055500). Corps of Engineers gage-height tel meter at station.

AVERAGE DISCHARGE.--43 years, 2,657 ft³/s (75.25 m³/s), 26.41 in/yr (671 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, 14,000 ft³/s (396 m³/s) Mar. 23, gage height, 12.81 ft (3.904 m); minimum, 157 ft³/s (4.45 m³/s) May 17-19, gage height, 3.29 ft (1.003 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	580	6630	2620	2750	5620	2580	4130	345	264	1500	1300	539
2	580	5710	2600	2070	280	1080	3990	345	255	1470	610	745
3	580	3430	2590	2060	345	1260	4050	340	273	3540	598	1790
4	580	2460	2540	2600	2080	1940	4310	340	574	6220	556	3250
5	580	2220	2650	3550	4020	1940	4180	336	898	6200	592	3820
6	580	1690	2640	4600	6470	1920	4190	336	1420	8460	592	2420
7	500	1740	2580	4530	6200	1820	4100	336	3970	6040	592	1200
8	430	1570	2570	4420	5720	1240	4000	354	8940	4340	592	586
9	430	1470	2590	4350	3370	1700	3700	354	7400	1350	629	580
10	433	1420	2850	4150	2880	3210	3140	345	4580	724	2880	580
11	434	1390	3580	3440	3400	3670	3140	331	2460	696	4340	580
12	435	1370	3490	2060	5050	5860	2440	205	1580	773	1480	580
13	437	1340	3370	1750	7590	5740	1280	176	1750	710	1210	574
14	439	1320	3280	1390	6170	5700	1270	168	4300	675	592	574
15	443	1300	3250	1110	4410	6390	1260	165	9110	655	586	574
16	431	1290	3210	1020	650	8400	1250	162	7850	636	580	574
17	456	1280	3180	960	1750	8930	1250	160	4930	629	580	574
18	466	1270	3210	900	770	9300	1210	160	2060	623	580	568
19	468	1250	3160	840	3030	8630	1030	160	1750	662	598	568
20	472	1240	3100	810	6910	7060	986	239	1460	689	598	568
21	482	1230	2990	1210	7510	5430	801	268	724	906	629	568
22	611	1220	3360	2110	8880	9280	745	358	675	1470	731	649
23	822	1200	5930	7860	8480	12400	568	368	623	1460	1440	860
24	822	1200	7210	7980	7960	13500	562	349	400	1310	1440	852
25	814	1200	10200	11500	7440	12700	562	259	381	610	1290	837
26	839	1220	9750	10400	6330	12100	544	243	372	598	586	852
27	2620	1220	9180	9800	4240	10700	368	239	372	592	580	994
28	3560	1220	8540	9300	2860	8300	358	239	368	592	580	1450
29	4600	1240	7240	8600	---	7050	349	243	385	1090	574	1860
30	7210	1800	5330	7810	---	6310	345	286	592	2880	574	2950
31	6940	---	4440	6060	---	4970	---	273	---	2500	574	---
TOTAL	39074	54140	133230	131990	130415	191110	60108	8482	70716	60600	29083	33116
MEAN	1260	1805	4298	4258	4658	6165	2004	274	2357	1955	938	1104
MAX	7210	6630	10200	11500	8880	13500	4310	368	9110	8460	4340	3820
MIN	430	1200	2540	810	280	1080	345	160	255	592	556	539

CAL YR 1981 TOTAL 1087810 MEAN 2980 MAX 15800 MIN 278 MEAN# 2972 CFSM# 2.18 IN# 29.59
WTR YR 1982 TOTAL 942064 MEAN 2581 MAX 13500 MIN 160 MEAN# 2607 CFSM# 1.91 IN# 25.93

* Adjusted for change in contents in Tygart Lake.

MONONGAHELA RIVER BASIN

91

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.

REVISED RECORDS.--WRD WV-81-1: 1981(P).

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

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

AVERAGE DISCHARGE.--36 years, 167 ft³/s (4.729 m³/s), 22.23 in/yr (565 mm/yr).

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

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 23	0800	2490 70.5	10.62 3.237	Mar. 21	1100	*3390 96.0	12.11 3.691
Mar. 12	0800	2250 63.7	10.21 3.112				

Minimum discharge, 3.4 ft³/s (0.096 m³/s) Oct. 15, 16, May 18, 19, 20; minimum gage height, 5.02 ft (1.530 m) May 18, 19, 20.

REVISIONS.--The peak discharge above base of 2,200 ft³/s (62 m³/s) for May 31, 1981 (0700) is 2,640 ft³/s (75.8 m³/s), gage height, 10.87 ft (3.313 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.5	54	47	78	188	74	190	21	52	53	130	543
2	12	40	64	85	157	65	171	20	27	27	75	266
3	28	33	65	85	488	64	240	20	15	46	49	236
4	14	28	65	385	895	60	469	18	11	1110	36	215
5	5.8	26	140	417	477	60	252	15	204	392	28	93
6	7.0	150	196	220	259	58	226	13	335	102	21	58
7	5.8	222	150	185	157	117	201	12	369	54	17	40
8	14	133	117	202	111	245	189	20	150	82	26	25
9	16	88	94	170	121	267	195	25	76	195	449	20
10	12	64	75	109	224	463	203	23	194	105	175	14
11	7.0	50	60	82	195	584	180	17	201	54	89	12
12	7.0	41	50	66	152	1900	146	13	100	33	63	10
13	5.8	34	40	57	140	898	121	9.8	944	21	46	10
14	5.8	29	35	50	114	631	104	8.2	816	14	32	8.5
15	3.4	26	88	46	162	447	84	6.8	220	10	22	8.5
16	4.0	24	129	42	556	936	72	5.8	104	7.0	16	8.5
17	7.0	23	109	40	1020	1440	66	4.8	71	5.5	13	7.0
18	7.0	22	205	37	601	481	67	4.0	52	8.8	35	7.0
19	14	20	196	33	414	260	58	3.6	37	23	31	5.8
20	18	22	125	33	454	1100	51	7.6	28	967	20	5.8
21	28	26	88	348	395	2680	49	15	21	378	745	5.8
22	28	27	629	923	303	1050	44	14	16	112	127	8.5
23	35	25	1800	2270	225	359	37	11	12	76	62	10
24	73	42	729	1080	187	211	33	6.7	9.2	77	58	8.5
25	60	134	286	317	141	155	31	54	6.8	47	110	5.8
26	113	121	169	184	101	296	31	44	5.6	27	94	8.5
27	1160	90	122	109	87	267	34	20	4.8	17	85	38
28	856	70	93	109	83	199	34	12	4.9	375	155	106
29	237	54	83	108	---	155	29	14	18	1380	89	85
30	117	44	70	103	---	127	24	114	104	321	55	43
31	74	---	59	114	---	138	---	131	---	102	40	---
TOTAL	2982.1	1762	6178	8087	8407	15787	3631	703.3	4208.3	6221.3	2993	1912.2
MEAN	96.2	58.7	199	261	300	509	121	22.7	140	201	96.5	63.7
MAX	1160	222	1800	2270	1020	2680	469	131	944	1380	745	543
MIN	3.4	20	35	33	83	58	24	3.6	4.8	5.5	13	5.8
CFSM	.94	.58	1.95	2.56	2.94	4.99	1.19	.22	1.37	1.97	.95	.63
IN.	1.09	.64	2.25	2.95	3.07	5.76	1.32	.26	1.53	2.27	1.09	.70
CAL YR 1981	TOTAL	71011.10	MEAN	195	MAX	2840	MIN	.60	CFSM	1.91	IN	25.90
WTR YR 1982	TOTAL	62872.20	MEAN	172	MAX	2680	MIN	3.4	CFSM	1.69	IN	22.93

MONONGAHELA RIVER BASIN

03058500 WEST FORK RIVER AT BUTCHERVILLE, WV

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

DRAINAGE AREA.--181 mi² (469 km²).

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

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

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

REMARKS.--Records good, except those for January, which are fair. 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.--67 years, 302 ft³/s (8.553 m³/s), 22.66 in/yr (576 mm/yr).

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

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,010 ft³/s (142 m³/s) Mar. 21, gage height, 8.61 ft (2.624 m); minimum, 14 ft³/s (0.40 m³/s) May 19, gage height, 0.78 ft (0.238 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	86	74	203	450	177	404	40	94	79	165	1290
2	53	68	93	209	344	162	323	38	55	48	110	720
3	65	58	97	210	737	156	438	37	39	78	71	567
4	64	51	94	749	1300	149	698	34	31	1270	54	387
5	55	48	197	733	762	152	429	31	417	579	44	177
6	55	193	277	436	463	144	453	30	527	165	38	106
7	54	326	226	403	311	236	407	30	546	84	44	74
8	50	208	180	408	239	399	350	55	261	69	46	59
9	49	137	151	348	257	448	345	53	186	258	503	49
10	46	100	120	250	357	727	339	45	340	172	249	41
11	44	78	102	208	335	891	295	38	359	98	127	34
12	43	65	87	180	281	2770	241	32	218	65	86	30
13	41	56	76	165	271	1460	201	29	1190	49	66	26
14	39	50	74	155	239	1010	170	25	1230	38	54	26
15	39	46	136	146	330	821	139	23	412	31	45	34
16	39	43	262	133	962	1430	115	20	174	26	40	34
17	39	41	245	120	1650	2440	104	18	131	22	38	32
18	46	40	374	119	1020	855	107	16	86	21	55	32
19	49	37	365	117	738	490	90	15	64	38	57	31
20	45	44	266	128	760	1870	80	73	53	1240	46	31
21	45	48	204	440	682	3940	74	47	43	685	915	31
22	48	49	971	1070	543	1680	65	44	36	228	215	33
23	64	46	2590	3570	420	605	58	40	31	127	97	32
24	79	64	1150	1750	354	377	53	30	26	132	80	31
25	95	183	514	610	283	300	73	51	23	79	125	30
26	170	189	341	359	221	762	77	61	21	54	148	33
27	1570	141	269	300	201	528	58	39	20	41	106	82
28	1090	109	224	265	192	380	57	29	22	252	213	167
29	361	84	208	231	---	297	49	41	37	1600	129	132
30	185	69	183	223	---	247	43	259	145	519	80	72
31	119	---	171	258	---	297	---	222	---	167	65	---
TOTAL	4786	2757	10321	14496	14702	26200	6335	1545	6817	8314	4111	4423
MEAN	154	91.9	333	468	525	845	211	49.8	227	268	133	147
MAX	1570	326	2590	3570	1650	3940	698	259	1230	1600	915	1290
MIN	39	37	74	117	192	144	43	15	20	21	38	26
CFSM	.85	.51	1.84	2.59	2.90	4.67	1.17	.28	1.25	1.48	.74	.81
IN.	.98	.57	2.12	2.98	3.02	5.38	1.30	.32	1.40	1.71	.84	.91
CAL YR 1981	TOTAL	116750	MEAN	320	MAX	4340	MIN	13	CFSM	1.77	IN	23.99
WTR YR 1982	TOTAL	104807	MEAN	287	MAX	3940	MIN	15	CFSM	1.59	IN	21.54

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

REMARKS.--Records good except those for January, February, August, and September, 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 multipurpose reservoir. Some additional regulation of low flow by five other reservoirs, combined capacity of 1950 acre-ft (2.40 hm³).

AVERAGE DISCHARGE.--59 years, 593 ft³/s (16.79 m³/s), 20.97 in/yr (533 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.--Peak discharges above base of 6,700 ft³/s (190 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 23	1600	*8080 229	12.88 3.926	Mar. 21	1800	7270 206	12.07 3.679

Minimum discharge, 9.4 ft³/s (0.27 m³/s) May 18, gage height, 2.64 (0.805 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	164	130	312	929	326	736	75	299	227	211	440
2	40	119	177	366	746	295	656	71	154	113	170	1700
3	44	96	186	366	1030	274	644	66	96	214	145	1080
4	53	79	182	1090	2270	263	1140	61	69	1560	120	700
5	59	74	321	1710	1550	263	906	58	852	1270	100	480
6	53	146	541	922	937	252	786	54	1420	490	80	310
7	48	486	498	710	633	328	894	51	1040	227	68	210
8	48	446	381	761	488	593	756	64	714	133	150	140
9	46	275	299	644	430	692	696	100	425	184	345	92
10	44	183	232	466	370	1110	696	93	440	327	710	66
11	43	135	186	344	310	1440	620	72	744	205	460	55
12	41	106	154	304	270	3990	540	60	515	124	300	48
13	39	87	132	274	240	2910	460	51	1110	82	190	42
14	37	74	119	245	230	2070	390	45	2330	69	120	37
15	34	66	140	225	280	1530	323	41	1040	53	78	34
16	31	61	305	210	1600	2320	267	37	510	44	72	45
17	36	57	389	200	2810	4650	223	27	535	38	65	52
18	40	57	501	185	2160	2120	217	14	335	33	86	45
19	50	54	614	160	1450	1090	205	18	196	34	89	42
20	48	60	487	150	1490	2890	168	182	139	828	78	40
21	44	70	374	173	1250	6430	149	307	107	1790	240	40
22	42	77	717	1400	1040	4220	133	126	82	642	740	47
23	53	73	4180	6190	808	1500	115	89	75	291	520	47
24	65	93	2600	4130	678	897	102	71	68	202	310	45
25	84	255	1080	1270	568	683	94	57	51	157	190	42
26	137	377	667	725	446	1500	107	58	44	98	122	45
27	2080	297	520	430	383	1330	122	66	40	68	158	115
28	2050	214	435	350	354	899	111	50	40	100	142	259
29	900	158	373	305	---	692	98	57	105	1570	168	344
30	426	120	307	340	---	577	84	259	303	906	140	223
31	249	---	258	484	---	526	---	555	---	255	121	---
TOTAL	7005	4559	17485	25441	25750	48660	12438	2935	13878	12334	6488	6865
MEAN	226	152	564	821	920	1570	415	94.7	463	398	209	229
MAX	2080	486	4180	6190	2810	6430	1140	555	2330	1790	740	1700
MIN	31	54	119	150	230	252	84	14	40	33	65	34
MEAN#	237	162	575	832	930	1580	425	105	473	408	219	238
CFSM#	.62	.42	1.50	2.17	2.42	4.11	1.11	.27	1.23	1.06	.57	.62
IN#	.72	.47	1.73	2.50	2.52	4.74	1.24	.31	1.37	1.22	.66	.69
CAL YR 1981 TOTAL	220920			MEAN 605	MAX 10300	MIN 18	MEAN# 615	CFSM# 1.60	IN# 21.72			
WTR YR 1982 TOTAL	183838			MEAN 504	MAX 6430	MIN 14	MEAN# 514	CFSM# 1.34	IN# 18.19			

* Adjusted for diversion by City of Clarksburg, records furnished by Clarksburg Water Board.

MONONGAHELA RIVER BASIN

03061000 WEST FORK RIVER AT ENTERPRISE, WV

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

DRAINAGE AREA.--759 mi² (1,966 km²).

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

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

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

REMARKS.--Records good except those for January and February, which are fair. 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 multipurpose reservoir. Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--58 years (water years 1908-1916, 1934-82), 1,152 ft³/s (32.62 m³/s), 20.61 in/yr (523 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 (600 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, 17,100 ft³/s (484 m³/s), Jan. 23, gage height, 17.09 ft (5.209 m), no other peaks above base of 12,000 ft³/s (340 m³/s); minimum, 58 ft³/s (1.64 m³/s), Sept. 16, gage height, 1.49 ft (0.454 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	87	280	260	433	1630	496	1380	211	524	436	253	233
2	91	222	411	496	1440	469	1260	208	313	256	208	1900
3	89	184	420	491	1520	451	1260	194	218	1610	190	1160
4	103	166	368	1570	4000	433	2020	178	172	4720	143	1010
5	113	149	501	3400	3210	501	1750	166	1300	2320	113	539
6	129	394	785	1860	1930	510	1530	160	2950	1110	96	304
7	121	553	796	1260	1170	553	1740	152	1840	505	82	214
8	116	604	653	1300	790	912	1480	197	1180	342	80	181
9	105	442	534	1060	700	1080	1390	256	642	296	242	157
10	98	334	442	885	630	1660	1380	239	620	389	957	127
11	94	272	368	720	540	2290	1210	194	876	334	511	113
12	91	228	317	600	440	6680	1040	166	680	250	359	105
13	87	190	276	473	400	5580	888	146	894	190	232	87
14	87	172	239	411	385	3810	768	129	3130	154	169	73
15	78	154	242	381	450	2640	642	116	1640	152	132	64
16	71	143	276	360	2290	4240	558	105	752	138	105	61
17	66	132	372	340	4430	9900	505	96	1850	113	91	78
18	73	127	438	320	4190	4820	514	74	930	91	103	94
19	98	127	568	291	2700	2370	473	62	496	89	135	75
20	118	135	604	280	2780	4640	416	163	355	241	127	69
21	115	175	505	425	2300	10300	385	714	280	2140	418	110
22	98	174	501	1470	1900	8070	351	429	222	864	1010	129
23	101	184	6600	10600	1440	3270	308	284	194	398	368	129
24	162	197	5210	10200	1150	1970	280	280	184	264	246	116
25	197	389	2170	2960	936	1470	268	268	163	225	190	98
26	234	534	1150	1560	686	2370	272	268	135	169	160	89
27	3140	519	790	1220	573	2650	317	200	118	135	222	197
28	3700	455	615	948	534	1850	308	166	108	118	200	370
29	1530	342	534	768	---	1420	264	211	227	652	250	386
30	604	272	460	653	---	1170	228	714	643	1380	211	292
31	389	---	385	741	---	1080	---	1010	---	510	157	---
TOTAL	12185	8249	27790	48476	45144	89655	25185	7756	23636	20591	7760	8560
MEAN	393	275	896	1564	1612	2892	840	250	788	664	250	285
MAX	3700	604	6600	10600	4430	10300	2020	1010	3130	4720	1010	1900
MIN	66	127	239	280	385	433	228	62	108	89	80	61
CFSM	.52	.36	1.18	2.06	2.12	3.81	1.11	.33	1.04	.88	.33	.38
IN.	.60	.40	1.36	2.38	2.21	4.39	1.23	.38	1.16	1.01	.38	.42
CAL YR 1981	TOTAL	441623	MEAN	1210	MAX	22500	MIN	58	CFSM	1.59	IN	21.64
WTR YR 1982	TOTAL	324987	MEAN	890	MAX	10600	MIN	61	CFSM	1.17	IN	15.93

MONONGAHELA RIVER BASIN

95

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 down-stream side of highway bridge at Barrackville, 1,700 ft (518 m) upstream from Finchs Run, and at mile 4.0 (6.4 km).

DRAINAGE AREA.--115 mi² (298 km²).

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

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

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

REMARKS.--Records good except those for December, January, and February, which are poor. Flow from 5.20 mi² (13.5 km²) is partially controlled, but not diverted, by three floodwater-detention reservoirs. Some additional regulation at low flow from mine pumpage above station.

AVERAGE DISCHARGE.--59 years (water years 1908, 1916-23, 1933-82), 169 ft³/s (4.786 m³/s), 19.96 in/yr (507 mm/yr).

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

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,370 ft³/s (124 m³/s) Jan. 23, gage height, 10.91 ft (3.325 m), no other peak above base of 3,500 ft³/s (99 m³/s); minimum, 4.8 ft³/s (0.14 m³/s) Oct. 17, 18; minimum gage height, 1.85 ft (0.564 m) Sept. 14, 15, and 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.0	25	76	69	498	76	104	20	65	70	17	11
2	8.7	19	174	73	265	72	92	20	50	37	15	11
3	9.4	17	101	72	258	75	109	18	39	878	13	14
4	10	16	76	369	389	79	136	17	31	1390	9.7	15
5	9.0	17	144	458	296	370	110	17	260	290	12	14
6	9.0	30	135	220	217	270	167	15	414	143	13	12
7	9.0	50	98	173	140	296	196	14	268	91	12	11
8	9.4	40	83	193	118	273	168	41	140	64	12	11
9	8.7	33	75	161	100	243	163	125	86	50	18	10
10	9.0	44	62	102	90	295	156	68	75	41	35	11
11	9.7	55	56	84	79	458	136	46	62	34	32	8.9
12	8.7	41	49	70	68	1050	116	36	48	31	39	7.4
13	7.7	33	41	58	62	509	101	28	61	27	28	7.0
14	7.7	28	36	49	58	384	87	25	63	21	20	6.9
15	7.7	25	33	45	72	285	71	21	47	19	16	6.9
16	8.3	22	31	43	347	642	64	17	41	18	13	7.1
17	7.5	20	29	40	454	867	60	14	64	16	12	7.1
18	5.4	18	28	38	510	363	60	13	50	15	14	7.0
19	8.3	18	27	35	400	235	48	14	39	18	19	7.2
20	11	17	26	33	394	316	43	21	34	22	14	8.7
21	13	23	25	56	299	503	40	248	29	74	13	10
22	12	32	28	96	218	353	33	105	24	38	12	11
23	14	29	958	2760	169	228	29	63	21	27	12	13
24	27	33	543	1300	146	162	28	177	20	23	14	12
25	20	44	225	358	120	129	27	134	20	19	33	11
26	20	42	137	226	91	176	27	77	19	15	42	12
27	335	79	105	152	88	180	28	55	16	12	22	20
28	134	93	83	138	83	142	26	44	14	17	17	26
29	69	60	77	120	---	122	24	37	27	38	13	17
30	44	44	68	105	---	105	22	120	92	26	11	11
31	31	---	56	179	---	101	---	101	---	20	11	---
TOTAL	892.2	1047	3685	7875	6029	9359	2471	1751	2219	3584	563.7	337.2
MEAN	28.8	34.9	119	254	215	302	82.4	56.5	74.0	116	18.2	11.2
MAX	335	93	958	2760	510	1050	196	248	414	1390	42	26
MIN	5.4	16	25	33	58	72	22	13	14	12	9.7	6.9
CFSM	.25	.30	1.04	2.21	1.87	2.63	.72	.49	.64	1.01	.16	.10
IN.	.29	.34	1.19	2.55	1.95	3.03	.80	.57	.72	1.16	.18	.11
CAL YR 1981	TOTAL	59388.8	MEAN 163	MAX 4840	MIN 5.4	CFSM 1.42	IN 19.21					
WTR YR 1982	TOTAL	39813.1	MEAN 109	MAX 2760	MIN 5.4	CFSM .95	IN 12.88					

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 January, April, and May, which are poor.

AVERAGE DISCHARGE.--17 years, 16.8 ft³/s (0.476 m³/s), 20.93 in/yr (532 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,100 ft³/s (87.8 m³/s) Aug. 18, 1980, gage height, 19.94 ft (6.078 m), from floodmarks, from rating curve extended above 800 ft³/s (23 m³/s) on basis of culvert rating computation and flow-over-road measurement of peak flow; no flow for many days.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 333 ft³/s (9.43 m³/s) Jan. 23, gage height, 5.23 ft (1.594 m), no other peak above base of 250 ft³/s (7.1 m³/s); no flow part or all of each day Sept. 14-21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	4.5	11	14	41	9.5	18	3.4	2.7	2.7	1.2	.26
2	1.3	4.3	14	14	27	8.9	16	3.3	2.8	1.4	.98	1.6
3	1.0	3.9	11	14	36	8.9	27	2.9	2.6	86	.76	1.7
4	1.0	3.5	11	47	46	10	30	2.7	2.2	94	.69	.69
5	.93	3.9	18	41	33	27	22	2.6	42	57	.55	.40
6	1.0	13	15	29	25	21	28	2.5	63	24	.50	.26
7	1.0	10	13	29	19	30	22	2.4	45	12	.35	.18
8	.93	8.1	17	23	19	24	18	3.2	23	7.9	.40	.10
9	.83	7.3	18	19	14	24	23	4.0	13	5.9	2.1	.09
10	.83	7.7	15	17	11	25	21	3.2	13	4.8	1.2	.07
11	.83	6.9	13	14	15	43	19	2.6	9.4	3.8	2.2	.03
12	.83	6.2	10	12	17	74	17	2.3	6.9	3.1	2.9	.02
13	.74	5.5	9.8	10	7.6	51	15	2.1	17	2.6	1.4	.01
14	.66	4.8	13	8.8	8.1	37	13	1.9	16	2.0	.83	.00
15	.58	4.8	9.4	7.8	14	31	11	1.7	10	1.7	.55	.00
16	.58	4.5	8.9	6.6	38	67	10	1.5	11	1.2	.40	.00
17	.58	4.3	8.9	5.8	45	82	10	1.4	17	.98	.26	.00
18	.74	4.1	9.4	6.4	33	45	10	1.3	11	.83	.35	.00
19	1.2	3.7	9.8	6.2	41	31	8.4	1.2	8.2	4.0	.26	.00
20	1.2	4.5	8.1	6.6	41	41	7.8	2.1	6.6	4.0	.14	.00
21	.93	4.8	8.5	17	37	44	7.7	4.5	4.8	2.1	.09	.02
22	.93	4.5	29	17	29	34	6.5	3.1	4.1	1.2	.08	.98
23	2.6	4.3	85	215	23	26	5.8	3.0	3.8	1.1	.18	.69
24	2.6	5.1	46	93	22	20	5.4	3.9	2.9	.83	1.4	.40
25	1.9	5.5	30	42	17	18	5.0	2.8	2.2	.62	3.4	.22
26	3.3	5.1	21	28	14	30	4.9	2.2	1.8	.45	1.2	1.1
27	29	9.8	17	26	13	24	5.2	2.1	1.4	.40	.69	7.3
28	15	11	14	20	11	19	4.8	2.0	1.1	5.5	.55	3.1
29	9.4	8.9	12	14	---	17	4.2	2.0	2.2	5.1	.35	1.6
30	6.9	6.9	9.8	12	---	15	3.7	3.3	4.6	2.4	.22	1.1
31	5.5	---	9.4	21	---	17	---	3.7	---	1.7	.14	---
TOTAL	96.42	181.4	525.0	836.2	696.7	954.3	399.4	80.9	351.3	341.31	26.32	21.92
MEAN	3.11	6.05	16.9	27.0	24.9	30.8	13.3	2.61	11.7	11.0	.85	.73
MAX	29	13	85	215	46	82	30	4.5	63	94	3.4	7.3
MIN	.58	3.5	8.1	5.8	7.6	8.9	3.7	1.2	1.1	.40	.08	.00
CFSM	.29	.56	1.55	2.48	2.28	2.83	1.22	.24	1.07	1.01	.08	.07
IN.	.33	.62	1.79	2.85	2.38	3.26	1.36	.28	1.20	1.16	.09	.07
CAL YR 1981	TOTAL	6658.96	MEAN	18.2	MAX	225	MIN	.10	CFSM	1.67	IN	22.72
WTR YR 1982	TOTAL	4511.17	MEAN	12.4	MAX	215	MIN	.00	CFSM	1.14	IN	15.39

MONONGAHELA RIVER BASIN

97

03065000 DRY FORK AT HENDRICKS, WV

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

DRAINAGE AREA.--345 mi² (894 km²).

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

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

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

AVERAGE DISCHARGE.--42 years, 763 ft³/s (21.61 m³/s), 30.03 in/yr (763 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 (430 m³/s) on basis of slope-area measurement of peak flow; minimum, 5.5 ft³/s (0.17 m³/s) Sept. 10, 11, 1965, gage height, 0.99 ft (0.302 m).

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Mar. 17	0500	7810 221	6.98 2.128	June 13	1300	*12400 351	8.54 2.603
Mar. 20	1600	11300 320	8.19 2.496				

Minimum discharge, 50 ft³/s (1.42 m³/s) Sept. 21, gage height, 1.31 ft (0.399 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	74	494	703	598	3730	644	1090	592	298	233	154	921
2	211	408	1030	596	1940	590	912	518	314	148	122	1050
3	219	343	798	597	4890	601	1050	448	455	142	151	939
4	158	295	668	3750	4640	520	1340	378	696	844	147	624
5	127	263	629	3470	2360	630	1020	336	1350	905	101	384
6	151	435	518	1830	1580	605	1060	303	1820	548	81	266
7	262	635	431	2240	1060	885	939	271	2100	332	76	211
8	206	507	938	2120	856	953	840	266	1350	295	87	170
9	155	551	1060	1430	1160	844	894	262	894	268	625	151
10	127	581	845	1030	1380	768	808	224	939	204	380	130
11	114	515	718	743	1040	1130	800	198	1690	212	211	114
12	106	438	617	469	791	5070	776	177	1390	401	184	100
13	97	375	538	440	691	3760	1130	162	7280	248	143	84
14	86	324	533	400	502	3120	1240	151	4080	174	104	74
15	81	291	729	360	491	1970	912	140	1810	146	82	74
16	79	267	660	350	953	2640	752	124	1090	168	70	103
17	79	244	543	340	3450	6170	664	114	765	172	61	74
18	103	245	534	325	3240	3060	903	103	568	129	66	63
19	181	238	421	306	2270	1930	720	94	418	176	93	59
20	144	244	337	292	1810	7000	632	121	353	258	74	55
21	124	269	311	280	2840	6220	592	238	277	323	622	52
22	114	231	985	265	1920	3180	497	181	221	199	434	211
23	114	221	5220	2530	1330	1860	422	185	204	145	213	276
24	158	237	3310	2410	1340	1280	372	228	172	117	160	155
25	140	259	1780	1420	1520	975	342	314	141	96	196	106
26	174	223	1220	1100	1130	912	555	276	121	80	225	111
27	2390	1020	935	1090	940	752	808	354	116	69	148	1020
28	2650	1360	746	927	766	585	1060	242	132	82	180	684
29	1360	906	673	554	---	600	808	198	196	209	147	414
30	885	683	499	462	---	608	688	511	292	159	109	286
31	639	---	414	892	---	656	---	476	---	113	101	---
TOTAL	11508	13102	29343	33616	50620	60518	24626	8185	31532	7595	5547	8961
MEAN	371	437	947	1084	1808	1952	821	264	1051	245	179	299
MAX	2650	1360	5220	3750	4890	7000	1340	592	7280	905	625	1050
MIN	74	221	311	265	491	520	342	94	116	69	61	52
CFSM	1.08	1.27	2.75	3.14	5.24	5.66	2.38	.77	3.05	.71	.52	.87
IN.	1.24	1.41	3.16	3.62	5.46	6.53	2.66	.88	3.40	.82	.60	.97

CAL YR 1981	TOTAL	291825	MEAN 800	MAX 8850	MIN 14	CFSM 2.32	IN 31.47
WTR YR 1982	TOTAL	285153	MEAN 781	MAX 7280	MIN 52	CFSM 2.26	IN 30.75

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) 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 January, which are poor.

AVERAGE DISCHARGE.--61 years, 199 ft³/s (5.636 m³/s), 31.35 in/yr (796 mm/yr).

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

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 4	2000	1640 46.4	6.37 1.942	Mar. 17	1400	1840 52.1	6.73 2.051
Jan. 23	1600	1580 44.7	6.27 1.911	June 13	1100	*1930 54.7	6.88 2.097

Minimum discharge, 15 ft³/s (0.42 m³/s) Aug. 8, gage height, 1.40 ft (0.427 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	150	255	160	964	148	220	118	125	81	30	469
2	73	127	436	184	511	140	156	111	154	57	25	481
3	89	109	250	140	1070	142	240	97	255	275	27	403
4	66	97	176	1130	1280	131	376	82	298	956	24	218
5	53	86	166	1050	688	176	228	74	490	278	20	118
6	60	142	134	502	378	158	258	68	445	138	18	79
7	97	196	140	728	243	203	243	64	373	95	16	62
8	73	152	370	560	238	198	210	68	275	76	21	54
9	56	142	245	300	275	164	230	70	190	70	134	47
10	48	129	180	224	283	148	198	60	278	63	107	44
11	43	109	153	160	223	295	184	53	1220	60	54	39
12	39	95	139	123	190	1010	205	49	724	102	48	34
13	38	82	150	112	142	716	358	46	1610	73	39	30
14	36	74	165	104	134	576	320	50	1550	55	29	28
15	35	71	180	98	128	373	218	45	692	49	22	109
16	37	67	163	92	308	580	170	41	308	57	19	54
17	41	64	145	87	568	1720	154	38	273	48	20	36
18	41	63	125	84	454	1090	205	36	194	41	53	28
19	55	63	110	78	514	469	152	38	142	39	32	26
20	56	64	92	74	493	916	124	54	127	63	22	25
21	49	71	82	70	764	1320	120	60	104	73	118	24
22	43	81	335	68	439	868	104	57	82	49	138	100
23	46	106	1190	1040	310	442	88	55	74	39	64	98
24	49	67	1100	852	328	318	81	71	66	36	58	57
25	45	66	604	640	323	248	73	60	57	31	45	42
26	63	129	308	386	223	263	136	120	52	27	47	47
27	728	318	220	197	180	225	248	228	50	24	42	293
28	1090	330	188	176	160	186	330	98	146	56	43	182
29	511	176	170	162	---	190	176	63	150	91	38	109
30	275	127	138	156	---	190	133	144	124	49	29	74
31	188	---	127	365	---	180	---	228	---	36	26	---
TOTAL	4158	3553	8236	10102	11811	13783	5938	2446	10628	3187	1408	3410
MEAN	134	118	266	326	422	445	198	78.9	354	103	45.4	114
MAX	1090	330	1190	1130	1280	1720	376	228	1610	956	138	481
MIN	35	63	82	68	128	131	73	36	50	24	16	24
CFSM	1.56	1.37	3.09	3.78	4.90	5.16	2.30	.92	4.11	1.20	.53	1.32
IN.	1.79	1.53	3.55	4.36	5.10	5.95	2.56	1.06	4.59	1.38	.61	1.47
CAL YR 1981	TOTAL	84359	MEAN 231	MAX 1590	MIN 11	CFSM 2.68	IN 36.41					
WTR YR 1982	TOTAL	78660	MEAN 216	MAX 1720	MIN 16	CFSM 2.51	IN 33.95					

MONONGAHELA RIVER BASIN

99

03066630 TUB RUN NEAR DOUGLAS, WV

LOCATION.--Lat 39°06'53", long 79°33'00", Tucker County, Hydrologic Unit 05020004, on left bank 1.9 mi (3.1 km) southwest of Douglas, 1.2 mi (1.9 km) upstream from Forest Service Rd. #18 and at mile 1.4 (2.3 km).

DRAINAGE AREA.--1.17 mi² (3.03 km²).

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

GAGE.--Water-stage and rainfall recorders. Altitude of gage is 3,150 ft (960 m), from topographic map.

REMARKS.--Records good except those for November and January, which are poor. Rainfall records collected at site since August 1980 are contained in files of U.S. Geological Survey with only monthly totals published in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 172 ft³/s (4.87 m³/s) June 6, 1981, gage height, 4.21 ft (1.283 m) from rating curve extended above 7.0 ft³/s (0.20 m³/s) on basis of runoff comparison with nearby station; no flow part or all of each day Sept. 10-21, 1980, July 12, 17-19, Aug. 22-31, 1981; May 17-20, July 27, Sept. 18, 1982.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 35 ft³/s (0.99 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 23	1430	35 0.99	3.02 0.920	June 3	1515	*47 1.33	3.22 0.981
Mar. 12	0100	42 1.19	3.14 0.957				

No flow part or all of each day May 17-20, July 27, Sept. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.35	.95	2.6	2.1	13	.94	2.8	.75	1.2	.61	.21	11
2	1.5	.79	3.6	2.2	5.1	.93	1.4	.73	4.4	.32	.15	6.2
3	1.1	.68	1.7	1.9	14	1.1	4.5	.58	13	6.9	.16	7.1
4	.61	.57	1.3	15	9.4	1.0	5.6	.44	6.9	12	.09	1.8
5	.47	.56	1.3	7.9	3.4	2.2	2.1	.36	9.3	3.1	.06	.67
6	1.8	3.2	1.1	2.8	2.4	1.7	2.5	.31	10	1.2	.05	.37
7	2.5	2.2	1.0	9.0	1.8	3.4	2.4	.28	7.8	.58	.03	.29
8	1.1	1.6	4.3	6.4	1.1	2.4	1.8	.36	2.8	.70	2.8	.19
9	.68	1.5	2.8	5.3	3.0	1.6	1.9	.25	1.5	.56	8.8	.13
10	.51	1.2	1.9	4.2	3.5	1.7	1.6	.18	3.9	.36	2.1	.08
11	.44	.88	1.8	3.5	3.5	5.7	1.3	.12	9.1	.34	.81	.06
12	.40	.80	1.8	2.8	3.3	16	1.5	.08	4.0	.37	.93	.05
13	.34	.71	1.7	2.3	2.8	6.4	5.3	.05	15	.23	.45	.03
14	.29	.65	1.6	1.9	2.1	3.9	5.0	.04	5.2	.18	.27	.05
15	.25	.61	1.7	1.6	1.3	2.4	1.9	.02	1.6	.14	.22	.19
16	.32	.58	1.5	1.3	5.5	8.4	1.2	.01	1.3	.20	.18	.13
17	.31	.54	1.3	1.0	8.9	12	.98	.00	2.5	.23	.26	.05
18	1.1	.64	1.1	.88	4.6	3.5	1.8	.00	1.1	.09	.77	.01
19	2.6	.58	1.0	.68	7.1	2.1	1.2	.00	.66	.10	.35	.06
20	1.3	.79	.88	.60	4.8	10	.83	.60	.59	1.4	.23	.06
21	.88	.74	.79	6.7	7.5	10	.89	.57	.38	.83	6.6	.07
22	.68	.66	10	6.2	3.0	4.4	.71	.30	.28	.32	1.4	.90
23	1.0	.58	24	16	2.5	2.3	.54	.47	.26	.21	1.2	.46
24	1.4	.60	7.5	11	2.9	1.5	.46	.45	.15	.13	2.1	.24
25	.95	.65	3.0	14	2.9	1.2	.39	.30	.10	.07	1.0	.15
26	2.6	.84	2.3	12	1.8	2.5	.85	1.4	.08	.02	.60	.89
27	11	12	1.4	5.6	1.2	1.6	2.1	3.3	.09	.00	.46	3.7
28	8.2	6.0	1.1	2.4	1.1	1.3	4.1	.82	.18	2.6	.68	2.5
29	3.4	3.2	1.5	1.0	---	1.7	1.6	.81	1.3	2.8	.38	1.4
30	1.8	1.5	1.1	2.5	---	2.0	.97	5.2	1.0	.53	.25	.68
31	1.2	---	.82	9.0	---	2.2	---	3.4	---	.30	.22	---
TOTAL	51.08	46.80	89.49	159.76	123.5	118.07	60.22	22.18	105.67	37.42	33.81	39.51
MEAN	1.65	1.56	2.89	5.15	4.41	3.81	2.01	.72	3.52	1.21	1.09	1.32
MAX	11	12	24	16	14	16	5.6	5.2	15	12	8.8	11
MIN	.25	.54	.79	.60	1.1	.93	.39	.00	.08	.00	.03	.01
CFSM	1.41	1.33	2.47	4.40	3.77	3.26	1.72	.62	3.01	1.03	.93	1.13
IN.†	1.62	1.49	2.84	5.08	3.92	3.75	1.91	.70	3.36	1.19	1.07	1.26
IN.‡	4.46	1.57	3.97	4.84	4.82	6.18	3.62	4.35	8.55	6.44	6.34	8.06

CAL YR 1981 TOTAL 839.34 MEAN 2.30 MAX 43 MIN .00 CFSM 1.97 IN† 26.66 IN‡ 57.64
WTR YR 1982 TOTAL 887.51 MEAN 2.43 MAX 24 MIN .00 CFSM 2.08 IN† 28.19 IN‡ 63.20

† Runoff.

‡ Rainfall.

MONONGAHELA RIVER BASIN
03066720 BIG RUN NEAR DOUGLAS, WV

LOCATION.--Lat 39°06'44", long 79°34'22", Tucker County, Hydrologic Unit 05020004, on left bank, 10 ft (3 m) downstream from culvert on U.S. Forest Service Road No. 18, 3.1 miles (5.0 km) south southwest of Douglas and at mile 1.6 (2.6 km).

DRAINAGE AREA.--1.30 mi² (3.84 km²).

PERIOD OF RECORD.--September 1980 to September 1982 (discontinued).

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 3,170 ft (966 m), from topographic map.

REMARKS.--Records good except those for period of no gage-height record June 8-18, and those for January, which are poor. Rainfall records collected at site since September 1980 are contained in files of U.S. Geological Survey, with only monthly totals published in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 190 ft³/s (5.38 m³/s) June 6, 1981, gage height, 4.70 ft (1.433 m), from floodmark, from rating curve extended above 14 ft³/s (0.40 m³/s) on basis of culvert computation and flow-over-road measurement of peak flow; minimum, 0.06 ft³/s (0.002 m³/s) Aug. 30, 31, 1981, gage height, 2.65 ft (0.808 m).

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 45 ft³/s (1.27 m³/s) (revised) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 23	0945	46 1.30	3.88 1.183	July 3	2300	61 1.73	4.01 1.222
Mar. 11	2245	88 2.49	4.19 1.277	Sept. 1	1045	*165 4.67	4.60 1.402
June 3	1245	120 3.40	4.37 1.332	Sept. 2	2045	55 1.56	3.96 1.207
June 13	Unknown	48 1.36	a3.90 1.189				

a From crest stage gage.

Minimum discharge, 0.46 ft³/s (0.013 m³/s) July 28; minimum gage height, 2.93 ft (0.893 m) May 19, 20, July 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	1.8	4.8	2.8	19	2.4	5.3	1.5	1.8	1.1	.74	36
2	2.4	1.6	5.5	2.0	4.6	2.5	3.3	1.5	10	.73	.66	21
3	1.3	1.4	2.4	2.1	30	2.5	13	1.3	25	19	.71	25
4	.92	1.2	2.0	30	17	2.5	7.0	1.1	9.0	17	.60	6.6
5	.81	1.1	1.9	9.7	6.2	5.4	3.0	1.1	18	7.7	.58	3.1
6	3.0	5.2	1.7	3.5	4.9	3.3	4.2	.95	20	2.4	.54	2.0
7	2.7	2.4	1.6	18	3.4	6.9	2.7	.90	11	1.5	.50	1.7
8	1.3	1.9	6.4	5.6	2.7	3.6	2.3	.97	3.7	1.7	12	1.3
9	1.0	1.9	3.0	2.8	5.3	2.7	2.3	.95	2.5	1.3	16	1.1
10	.87	1.6	2.2	2.5	5.1	2.9	2.0	.85	6.4	1.0	3.2	.99
11	.81	1.4	2.0	2.1	2.7	15	1.8	.80	21	.87	1.8	.85
12	.81	1.2	1.8	1.9	2.4	26	2.6	.75	8.6	.91	2.1	.80
13	.75	1.1	1.7	1.6	2.3	15	12	.71	45	.76	1.2	.71
14	.71	1.0	1.6	1.4	2.1	7.4	6.9	.70	11	.67	.93	.69
15	.67	.95	2.0	1.2	2.3	4.7	3.0	.63	2.3	.72	.83	.78
16	.74	.88	1.8	1.1	11	18	2.2	.58	1.8	.63	.74	.80
17	.74	.85	1.6	1.0	18	22	2.5	.58	13	.58	.98	.71
18	3.6	1.0	1.5	.96	7.5	7.1	3.4	.53	1.5	.61	1.6	.66
19	3.1	.89	1.4	.88	11	4.9	2.0	.50	1.2	.86	.76	.71
20	1.5	1.2	1.3	.85	7.8	23	1.7	2.0	1.2	6.4	1.1	.67
21	1.3	1.1	1.2	7.3	13	23	1.7	1.0	.93	1.4	16	.67
22	1.1	.98	24	2.7	5.0	7.8	1.5	.74	.84	.81	2.0	6.7
23	1.9	.92	33	24	4.0	4.8	1.4	.93	.81	.68	3.1	1.6
24	2.3	.87	9.9	14	6.0	3.9	1.2	.85	.72	.64	2.6	.97
25	1.5	.98	3.9	19	5.7	3.3	1.1	.73	.66	.58	1.6	.79
26	5.1	1.4	2.5	16	3.4	4.5	2.8	3.9	.63	.53	1.2	5.9
27	24	15	2.1	7.8	2.7	3.1	5.8	4.0	.66	.50	1.2	14
28	18	5.6	1.8	3.5	2.5	2.6	3.9	1.3	.82	9.4	1.5	9.0
29	5.9	2.6	1.9	1.5	---	3.2	2.1	1.8	2.5	3.8	.94	4.0
30	2.8	2.1	1.5	1.6	---	4.0	1.7	9.8	1.5	1.1	.83	2.2
31	2.1	---	1.4	12	---	5.8	---	4.1	---	.87	.84	---
TOTAL	94.93	62.12	131.4	201.39	207.6	243.8	106.4	48.05	224.07	86.75	79.38	152.00
MEAN	3.06	2.07	4.24	6.50	7.41	7.86	3.55	1.55	7.47	2.80	2.56	5.07
MAX	24	15	33	30	30	26	13	9.8	45	19	16	36
MIN	.67	.85	1.2	.85	2.1	2.4	1.1	.50	.63	.50	.50	.66
CFSM	2.35	1.59	3.26	5.00	5.70	6.05	2.73	1.19	5.75	2.15	1.97	3.90
IN.†	2.71	1.78	3.76	5.76	5.94	6.97	3.04	1.37	6.41	2.48	2.27	4.35
IN.*	4.51	1.89	4.12	4.74	4.82	7.19	3.79	4.17	8.56	6.02	6.86	5.80

CAL YR 1981	TOTAL	1580.45	MEAN	4.33	MAX	46	MIN	.08	CFSM	3.33	IN†	45.19	IN#	60.21
WTR YR 1982	TOTAL	1637.89	MEAN	4.49	MAX	45	MIN	.50	CFSM	3.45	IN†	46.83	IN#	62.47

† Runoff.

* Rainfall.

03066730 WEST FORK BIG RUN NEAR DOUGLAS, WV

LOCATION.--Lat 39°06'55", long 79°34'47", Tucker County, Hydrologic Unit 05020004, on left bank, 3.5 mi (8.8 km) west-southwest of Douglas, and at mile 0.4 (0.6 km).

DRAINAGE AREA.--1.07 mi² (2.77 km²) (revised).

PERIOD OF RECORD.--September 1980 to September 1982 (discontinued).

REVISED RECORDS.--WRD WV-82-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 3,205 ft (977 m), from topographic map.

REMARKS.--Records good except those for December and January, which are poor. Rainfall records collected at site since September 1980 are contained in the files of the U.S. Geological Survey with only monthly totals published in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 123 ft³/s (3.48 m³/s) June 6, 1981, gage height, 3.59 ft (1.094 m), from rating curve extended above 10 ft³/s (0.28 m³/s) on basis of runoff comparisons with nearby stations; minimum, 0.07 ft³/s (0.002 m³/s) Aug. 30, 1981, gage height, 1.27 ft (0.387 m).

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 35 ft³/s (0.99 m³/s) (revised) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Dec. 23	1000	37	1.05	2.84	0.866	Aug. 9	0030	37	1.05	2.84	0.866
Mar. 11	2345	40	1.13	2.89	0.881	Sept. 1	1130	*94	2.66	3.41	1.039
June 3	1315	63	1.78	3.15	0.960						

Minimum discharge, 0.18 ft³/s (0.005 m³/s) July 26, gage height, 1.41 ft (0.430 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.85	2.3	4.2	4.1	13	2.8	4.3	1.7	2.0	.69	.56	22
2	2.4	1.9	4.9	3.4	6.7	2.7	2.7	1.6	5.1	.46	.49	9.5
3	1.3	1.6	3.0	3.6	17	2.7	6.9	1.4	17	6.9	.61	11
4	.96	1.4	2.5	18	12	2.4	6.1	1.2	10	8.9	.43	5.9
5	.79	1.3	2.3	9.2	7.1	5.3	4.1	1.0	11	5.6	.37	4.0
6	2.8	4.5	2.0	6.2	6.0	3.8	4.8	.93	13	2.8	.33	2.6
7	2.8	2.8	1.8	11	4.7	5.9	3.9	.84	10	1.4	.31	1.7
8	1.4	2.1	4.4	7.2	3.7	4.4	3.2	.99	6.5	2.8	11	1.3
9	1.1	2.1	3.3	5.4	5.4	3.5	3.2	.89	4.8	1.9	16	.87
10	.98	1.9	2.6	4.7	5.0	3.5	2.5	.71	7.5	1.1	6.0	.75
11	.92	1.6	2.5	3.9	4.0	9.0	2.1	.63	8.8	.97	3.9	.65
12	.85	1.4	2.2	3.4	3.9	16	2.8	.57	5.7	1.0	4.4	.59
13	.79	1.2	1.9	2.9	2.5	9.7	6.6	.54	16	.67	1.9	.53
14	.73	1.1	1.9	2.5	2.1	6.8	5.5	.49	8.1	.58	1.2	.52
15	.69	1.0	2.2	2.1	2.4	5.2	3.6	.43	5.2	.52	.88	.60
16	.77	.92	2.0	1.8	7.7	13	2.7	.40	3.9	.42	.69	.64
17	.74	.88	1.8	1.6	10	15	2.8	.37	5.0	.36	.90	.57
18	2.2	1.1	1.7	1.4	7.3	6.9	3.5	.35	2.6	.33	1.6	.53
19	2.6	.88	1.6	1.3	8.5	5.4	2.2	.32	1.6	.43	.61	.53
20	1.2	1.2	1.5	1.9	7.2	13	1.9	1.6	1.5	3.5	.77	.52
21	1.1	1.2	1.4	5.5	9.2	13	1.9	.91	1.0	.97	12	.50
22	.93	1.1	11	4.7	6.2	7.1	1.5	.64	.82	.49	3.1	3.5
23	1.5	.95	24	13	5.4	5.2	1.3	.81	.76	.42	3.8	1.5
24	1.9	.96	10	9.9	5.9	4.2	1.1	.67	.58	.35	4.6	.80
25	1.2	1.0	7.0	12	6.1	3.4	1.0	.51	.48	.28	2.7	.58
26	2.6	1.1	5.5	4.9	4.2	4.1	2.7	1.1	.44	.25	1.6	1.9
27	12	6.4	4.6	4.0	3.6	2.9	4.0	2.7	.43	.23	1.7	6.0
28	9.0	4.3	3.8	3.2	3.1	2.3	3.9	.97	.51	5.4	2.0	4.3
29	5.7	2.6	3.8	2.6	---	2.5	2.4	1.5	1.7	4.5	.99	2.8
30	3.9	2.0	2.8	2.7	---	2.9	2.0	7.3	1.1	.91	.77	1.7
31	2.9	---	2.2	8.5	---	4.1	---	4.5	---	.72	.75	---
TOTAL	69.60	54.79	126.4	166.6	179.9	188.7	97.2	38.57	153.12	55.85	86.96	88.88
MEAN	2.25	1.83	4.08	5.37	6.43	6.09	3.24	1.24	5.10	1.80	2.81	2.96
MAX	12	6.4	24	18	17	16	6.9	7.3	17	8.9	16	22
MIN	.69	.88	1.4	1.3	2.1	2.3	1.0	.32	.43	.23	.31	.50
CFSM	2.10	1.71	3.81	5.02	6.01	5.69	3.03	1.16	4.77	1.68	2.63	2.77
IN.†	2.42	1.90	4.39	5.79	6.25	6.55	3.38	1.34	5.32	1.94	3.02	3.09
IN.#	4.63	2.35	4.00	3.45	3.83	7.09	4.13	3.97	8.71	6.02	7.26	6.14

CAL YR 1981 TOTAL 1267.65 MEAN 3.47 MAX 48 MIN .08 CFSM 3.24 IN† 44.03 IN# 57.08
WTR YR 1982 TOTAL 1306.57 MEAN 3.58 MAX 24 MIN .23 CFSM 3.35 IN† 45.38 IN# 61.58

† Runoff.

Rainfall.

MONONGAHELA RIVER BASIN

03068610 TAYLOR RUN AT BOWDEN, WV

LOCATION.--Lat 38°54'27", long 79°41'49", Randolph County, Hydrologic Unit 05020004, 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 September 1982 (discontinued).

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

REMARKS.--Water-discharge records good except those for Jan. 10-18, Feb. 7 to Mar. 15, May 1-12, and Sept. 24-30, which are poor.

AVERAGE DISCHARGE.--9 years, 15.3 ft³/s (0.433 m³/s), 41.06 in/yr (1043 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 382 ft³/s (10.8 m³/s) June 8, 1974, gage height, 6.91 ft (2.106 m), from rating curve extended above 160 ft³/s (4.5 m³/s); minimum, 0.31 ft³/s (0.009 m³/s) Aug. 30, 1981; minimum gage height, 3.72 ft (1.134 m) Aug. 9, 10, 1973.

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Mar. 11	Unknown	176 4.98	5.75 1.753	June 13	0900	186 5.27	5.81 1.771
Mar. 20	0915	*188 5.32	5.82 1.774	July 4	2030	162 4.59	5.66 1.725

Minimum discharge, 1.3 ft³/s (0.037 m³/s) Oct. 1, gage height, 4.00 ft (1.219 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	11	14	13	55	10	18	8.6	3.6	6.9	3.0	25
2	6.0	9.0	13	12	34	9.2	14	7.6	6.2	4.9	2.3	34
3	3.4	7.6	11	14	87	9.2	21	6.8	6.6	18	2.5	38
4	2.6	6.4	10	78	61	8.8	19	6.1	6.2	51	2.0	21
5	2.2	6.0	9.7	46	36	8.4	15	5.1	20	48	1.8	13
6	5.6	22	8.3	30	26	10	16	4.8	44	23	1.6	9.0
7	5.3	18	8.6	42	19	15	13	4.5	45	15	1.4	6.6
8	3.9	16	31	31	14	20	12	4.3	27	13	3.2	5.6
9	3.4	17	22	23	26	14	13	4.3	16	10	26	4.7
10	3.0	15	17	10	28	13	11	3.9	14	8.0	8.3	4.1
11	2.6	12	14	9.4	17	26	12	3.5	28	15	6.2	3.6
12	2.5	9.7	12	8.7	14	90	12	3.2	28	18	5.8	2.8
13	2.3	8.3	10	7.9	10	56	15	3.0	111	10	4.5	2.5
14	2.2	7.3	12	7.3	8.6	58	13	2.6	57	7.6	3.6	2.3
15	2.2	6.4	15	6.7	9.8	36	10	2.5	30	6.4	3.0	2.3
16	2.5	5.8	11	6.1	25	57	9.0	2.2	19	5.3	2.5	2.2
17	2.3	5.3	10	5.6	74	79	10	2.1	13	4.7	2.6	1.8
18	6.0	6.0	9.0	5.1	78	42	10	2.0	9.3	3.7	3.6	1.7
19	6.6	5.1	7.6	4.7	40	29	8.3	1.7	7.6	3.7	2.2	1.8
20	5.1	6.4	7.3	6.4	34	103	7.6	2.1	7.6	11	2.0	1.7
21	4.5	6.0	6.6	19	40	85	7.3	2.3	5.6	6.2	4.1	1.6
22	4.3	5.8	40	17	30	46	6.2	2.0	4.5	4.5	2.1	6.9
23	6.0	5.6	96	46	21	30	5.6	2.3	4.9	3.9	1.8	2.6
24	6.4	6.0	55	37	22	21	5.3	2.3	3.7	3.2	4.5	2.5
25	5.6	6.0	33	24	26	16	4.9	2.0	3.2	2.5	6.9	2.3
26	9.3	6.4	23	17	19	15	11	2.5	2.6	2.2	3.7	29
27	54	29	18	13	14	11	13	2.8	2.3	2.1	6.0	22
28	48	22	14	11	12	9.7	14	2.0	2.3	6.6	5.3	14
29	29	16	14	9.0	---	9.3	11	2.3	8.6	4.7	3.6	9.2
30	19	13	10	9.3	---	9.0	9.7	12	11	3.0	3.4	7.2
31	14	---	9.3	33	---	14	---	4.7	---	3.4	3.4	---
TOTAL	272.3	316.1	571.4	602.2	880.4	959.6	346.9	118.1	547.8	325.5	132.9	281.0
MEAN	8.78	10.5	18.4	19.4	31.4	31.0	11.6	3.81	18.3	10.5	4.29	9.37
MAX	54	29	96	78	87	103	21	12	111	51	26	38
MIN	2.2	5.1	6.6	4.7	8.6	8.4	4.9	1.7	2.3	2.1	1.4	1.6
CFSM	1.74	2.08	3.64	3.83	6.21	6.13	2.29	.75	3.62	2.08	.85	1.85
IN.	2.00	2.32	4.20	4.43	6.47	7.05	2.55	.87	4.03	2.39	.98	2.07

CAL YR 1981	TOTAL	5451.35	MEAN	14.9	MAX	112	MIN	.34	CFSM	2.95	IN	40.07
WTR YR 1982	TOTAL	5354.20	MEAN	14.7	MAX	111	MIN	1.4	CFSM	2.91	IN	39.36

MONONGAHELA RIVER BASIN

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03068610 TAYLOR RUN AT BOWDEN, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973 to 1982 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1975 to September 1980 (discontinued).

WATER TEMPERATURES: June 1975 to May 1979 (discontinued).

TURBIDITY: June 1975 to September 1980 (discontinued).

SUSPENDED SEDIMENT DISCHARGE: October 1974 to September 1980 (discontinued).

INSTRUMENTATION.--Automatic sediment-pumping sampler since Dec. 17, 1980.

REMARKS.--Samples were collected by automatic sampler at 5.0 ft (1.524 m) gage height and above.

EXTREMES FOR PERIOD OF DAILY RECORD.--

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

WATER TEMPERATURES: Maximum daily, 22.5°C Aug. 17, 1978; minimum daily 0.0°C on many days during January 1977.

TURBIDITY: Maximum daily, 85 NTU June 27, 1975; minimum daily, 0.3 NTU Jan. 21, 29, Feb. 20, 27, 1980 (minimum previously determined to nearest 1 JTU).

SEDIMENT CONCENTRATIONS: Maximum daily mean, 484 mg/L July 3, 1980; minimum daily mean, 0 mg/L on many days.

SEDIMENT LOADS: Maximum daily, 162 tons (147 tonnes) July 3, 1980; 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, July 30, 1974 and Aug. 8, 1979. A turbidity of 100 NTU was observed June 25, 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
OCT					
15...	1115	2.2	83	7.0	9.0
JAN					
18...	1625	5.0	75	7.3	.0
MAR					
18...	1415	39	50	7.0	14.0
MAY					
12...	1500	3.1	90	7.2	16.0
JUL					
07...	1110	15	60	7.1	11.0

03068610 TAYLOR RUN AT BOWDEN, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	TUR- BID- ITY (NTU)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	TUR- BID- ITY (NTU)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
DEC							MAR						
22...	1345	60	84	8.0	303	49	20...	0530	150	55	110	655	266
22...	1515	60	73	11	341	55	20...	0545	158	51	110	614	262
22...	1530	62	72	10	258	43	20...	0600	159	52	110	608	261
22...	1545	63	71	7.2	216	37	20...	0615	159	51	95	512	220
22...	1600	63	70	5.4	180	31	20...	0630	162	51	90	435	190
22...	1615	64	71	5.3	129	22	20...	0645	159	50	75	368	158
22...	1630	66	70	4.7	143	25	20...	0700	160	49	80	312	135
22...	1645	66	68	6.3	113	20	20...	0715	158	48	75	364	155
22...	1700	68	67	6.8	116	21	20...	0730	158	48	80	433	185
22...	1715	70	66	4.3	86	16	20...	0745	168	49	85	609	276
22...	1730	72	65	6.2	76	15	20...	0800	174	48	85	581	273
22...	1745	74	66	4.8	75	15	20...	0815	171	49	85	529	244
22...	1800	74	65	3.2	67	13	20...	0830	170	48	80	431	198
22...	1815	75	65	4.0	62	13	20...	0845	179	48	70	325	157
22...	1830	75	65	6.8	62	13	20...	0900	176	47	65	329	156
22...	1845	76	65	6.5	60	12	20...	0915	187	47	55	261	132
22...	1900	75	65	5.7	57	12	20...	0930	171	48	50	224	103
22...	1915	76	65	7.8	99	20	20...	0945	166	47	45	195	87
22...	1930	76	64	5.7	67	14	20...	1000	165	47	40	170	76
22...	1945	75	67	7.7	64	13	20...	1115	150	51	20	120	49
22...	2000	75	64	5.2	47	9.5	20...	1130	145	50	20	104	41
22...	2015	74	64	4.7	36	7.2	20...	1245	129	48	16	113	39
22...	2030	75	64	4.5	48	9.7	20...	1300	124	48	14	122	41
22...	2045	74	64	7.0	46	9.2	20...	1315	123	48	13	105	35
JAN							20...	1330	121	47	13	122	40
23...	1600	60	72	9.7	58	9.4	20...	1345	118	48	12	98	31
23...	1615	60	73	9.2	45	7.3	20...	1400	116	47	11	120	38
23...	1630	63	70	7.5	42	7.1	20...	1415	115	47	11	211	66
23...	1645	63	70	9.5	43	7.3	20...	1430	113	47	10	145	44
23...	1700	63	69	8.3	34	5.8	20...	1445	111	47	11	163	49
23...	1715	63	74	8.3	31	5.3	20...	1500	110	47	9.3	101	30
23...	1730	64	72	7.5	26	4.5	20...	1515	108	48	10	86	25
23...	1745	64	69	9.7	34	5.9	20...	1530	108	47	8.5	130	38
23...	1800	64	68	6.7	26	4.5	20...	1545	107	47	8.0	46	13
23...	1815	64	67	5.5	26	4.5	20...	1600	105	47	8.5	60	17
23...	1830	64	67	6.3	27	4.7	20...	1615	105	48	10	74	21
23...	1845	64	67	4.7	23	4.0	20...	1630	104	47	7.4	68	19
23...	1900	64	67	5.8	18	3.1	20...	1645	102	48	8.7	49	13
23...	1915	64	66	5.0	16	2.8	20...	1700	100	47	7.3	53	14
23...	1930	64	66	4.5	14	2.4	20...	1715	100	47	8.2	69	19
23...	1945	63	66	3.3	18	3.1	20...	1730	99	49	7.4	70	19
23...	2000	63	65	4.2	13	2.2	20...	1800	96	47	6.4	89	23
23...	2015	63	67	3.8	12	2.0	JUN						
23...	2030	62	65	3.8	11	1.8	06...	1000	58	67	33	160	25
23...	2045	62	65	3.6	12	2.0	06...	1015	58	59	35	207	32
23...	2100	60	64	2.4	7	1.1	06...	1030	60	58	33	189	31
23...	2115	62	65	3.2	11	1.8	06...	1045	60	58	31	172	28
23...	2130	60	64	2.7	8	1.3	06...	1100	62	57	28	151	25
31...	1815	62	67	13	47	7.9	06...	1115	62	57	27	142	24
31...	1830	66	66	14	62	11	06...	1130	62	56	24	124	21
31...	1845	68	67	18	87	16	06...	1145	62	57	24	110	18
31...	1900	70	66	18	91	17	06...	1200	63	56	21	112	19
31...	1915	70	66	18	74	14	06...	1215	63	55	19	109	19
31...	1930	72	65	17	66	13	06...	1230	63	55	18	108	18
31...	1945	72	64	16	73	14	06...	1245	63	55	18	137	23
31...	2000	74	64	15	59	12	06...	1300	63	55	17	135	23
31...	2015	74	63	13	51	10	06...	1315	63	55	17	84	14
31...	2030	72	62	12	49	9.5	06...	1330	62	55	15	75	13
31...	2045	72	61	10	41	8.0	06...	1345	62	60	14	59	9.9
31...	2100	74	60	12	47	9.4	06...	1400	62	55	13	97	16
31...	2115	74	59	9.5	34	6.8	06...	1415	60	54	12	62	10
31...	2130	74	59	9.5	36	7.2	06...	1430	60	54	13	53	8.6
31...	2145	74	58	10	33	6.6	06...	1445	58	54	12	52	8.1
31...	2200	75	58	12	36	7.3	06...	1500	58	54	11	54	8.5
31...	2215	78	59	12	47	9.9	06...	2045	58	53	9.5	43	6.7
31...	2230	78	56	11	53	11	06...	2100	58	52	10	50	7.8
31...	2245	81	56	13	59	13	06...	2115	60	52	8.8	37	6.0
31...	2300	81	57	14	66	14	JUL						
31...	2315	82	57	13	62	14	03...	1800	60	63	90	184	30
31...	2330	84	56	12	61	14	03...	2130	62	55	33	137	23
31...	2345	82	57	10	54	12	03...	2145	74	55	45	174	35
31...	2400	81	56	11	48	10	03...	2200	76	57	50	187	38
MAR							03...	2215	76	55	38	197	40
20...	0415	62	60	20	88	15	03...	2230	75	53	40	160	32
20...	0430	75	59	35	151	31	03...	2245	75	53	37	140	28
20...	0445	94	55	50	229	58	03...	2300	75	50	31	110	22
20...	0500	118	55	80	412	131	03...	2315	74	47	27	90	18
20...	0515	147	56	110	557	221							

03069000 SHAVERS FORK AT PARSONS, WV

LOCATION.--Lat 39°05'45", long 79°40'40", Tucker County, Hydrologic Unit 05020004, on right bank at Parsons, 0.7 mi (1.1 km) upstream from confluence with Black Fork.

DRAINAGE AREA.--214 mi² (554 km²).

PERIOD OF RECORD.--October 1910 to September 1926, October 1940 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 583: 1922. WSP 923: Drainage area. WSP 1335: 1911-12, 1915-17, 1918(M), 1921-22(M), 1926(M). WSP 1705: 1955.

GAGE.--Water-stage recorder. Datum of gage is 1,634.87 ft (498.308 m) National Geodetic Vertical Datum of 1929. Prior to Aug. 25, 1923, nonrecording gage on old highway bridge 800 ft (244 m) downstream and Aug. 25, 1923, to Sept. 30, 1926, nonrecording gage on railroad bridge 760 ft (232 m) downstream at datum 3.0 ft (0.9 m) lower. Oct. 4, 1940, to Apr. 4, 1942, nonrecording gage at present site and datum.

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

AVERAGE DISCHARGE.--58 years, 553 ft³/s (15.66 m³/s), 35.09 in/yr (891 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,800 ft³/s (476 m³/s) Mar. 20, 1982, gage height, 12.02 ft (3.664 m), from rating curve extended above 11,000 ft³/s (320 m³/s) on basis of slope-conveyance study; maximum gage height, 12.34 (3.761 m) Oct. 16, 1954; minimum daily discharge, 3.0 ft³/s (0.085 m³/s) Oct. 7, 1914.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 10, 1888, and July 17, 1907, reached a stage of approximately 12.5 ft (3.8 m) at site and datum of former gage, discharge, 25,000 ft³/s (710 m³/s), from rating curve extended above 8,000 ft³/s (230 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,300 ft³/s (150 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Oct. 27	1845	5690 161	6.56 1.999	Mar. 12	1015	5420 153	6.38 1.945
Jan. 23	0730	7740 219	7.85 2.393	Mar. 20	2115	*16800 476	12.02 3.664
Feb. 3	2045	6360 180	7.00 2.134	June 13	1630	7390 209	7.64 2.329
Feb. 17	2315	6040 171	6.79 2.070				

Minimum discharge, 51 ft³/s (1.44 m³/s) Sept. 21, gage height, 0.59 ft (0.180 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	413	394	353	2480	439	924	348	353	297	777	960
2	90	346	456	452	1370	387	632	308	299	240	368	662
3	130	299	496	407	3360	382	804	275	611	197	319	817
4	119	265	407	1630	3870	372	1110	245	676	1470	266	556
5	97	241	389	2280	1780	349	676	214	1150	1110	208	314
6	89	308	342	1090	1110	407	625	198	1970	559	175	233
7	110	497	292	1120	766	548	562	183	2410	364	601	186
8	163	434	429	1580	561	853	480	174	1250	281	402	153
9	140	379	650	935	644	597	513	171	732	361	1010	129
10	106	369	453	553	1310	526	466	156	618	286	563	113
11	92	341	365	246	758	703	442	140	1770	265	341	102
12	86	300	320	225	556	3940	409	124	1110	321	279	92
13	79	266	291	204	464	2420	513	115	4560	236	243	83
14	74	239	290	188	388	2470	796	108	2890	189	197	74
15	70	221	372	170	346	1460	576	100	1280	177	163	68
16	68	205	404	155	542	1640	442	94	778	234	139	66
17	66	190	332	144	3120	3160	393	87	540	256	125	63
18	73	185	335	133	3230	2320	576	82	420	288	128	63
19	106	181	287	300	1710	1450	486	76	336	229	179	57
20	128	178	242	981	1380	7400	383	95	286	432	135	52
21	130	204	204	1400	1720	5550	348	137	245	553	424	52
22	115	198	935	3250	1370	2510	316	130	205	305	395	91
23	125	157	4000	2540	883	1300	275	140	187	231	212	384
24	155	179	2570	1610	829	868	245	137	160	197	173	197
25	199	199	1230	827	1100	653	227	163	141	170	201	124
26	203	182	800	522	839	639	267	241	128	140	271	111
27	2310	409	602	371	621	534	480	189	124	117	238	1260
28	2800	1220	481	364	511	414	660	156	122	132	223	925
29	1270	672	438	319	---	393	534	151	140	889	213	514
30	767	455	374	299	---	398	409	398	308	413	172	342
31	536	---	316	367	---	500	---	820	---	331	145	---
TOTAL	10561	9732	19496	25015	37618	45582	15569	5955	25799	11270	9285	8843
MEAN	341	324	629	807	1344	1470	519	192	860	364	300	295
MAX	2800	1220	4000	3250	3870	7400	1110	820	4560	1470	1010	1260
MIN	65	157	204	133	346	349	227	76	122	117	125	52
CFSM	1.59	1.51	2.94	3.77	6.28	6.87	2.43	.90	4.02	1.70	1.40	1.38
IN.	1.84	1.69	3.39	4.35	6.54	7.92	2.71	1.04	4.48	1.96	1.61	1.54

CAL YR 1981 TOTAL 207485 MEAN 568 MAX 6320 MIN 36 CFSM 2.65 IN 36.07
WTR YR 1982 TOTAL 224725 MEAN 616 MAX 7400 MIN 52 CFSM 2.88 IN 39.06

03069500 CHEAT RIVER NEAR PARSONS, WV

LOCATION.--Lat 39°07'20", long 79°40'50", Tucker County, Hydrologic Unit 05020004, on left bank 2.0 mi (3.2 km) north of Parsons, 3.0 mi (4.8 km) downstream from confluence of Black and Shavers Forks, and at mile 74.8 (120.4 km).

DRAINAGE AREA.--718 mi² (1,860 km²).

PERIOD OF RECORD.--January 1913 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 893: Drainage area. WSP 1305: 1917(M), 1924(M), 1932(M), 1936(M), 1938-39(M). WSP 1335: 1916. WSP 1385: 1918-19(M).

GAGE.--Water-stage recorder. Datum of gage is 1,589.66 ft (484.528 m) National Geodetic Vertical Datum, adjustment of 1912. Prior to Aug. 17, 1944, nonrecording gage on Moss Bridge about 1,600 ft (488 m) upstream at datum 1.13 ft (0.344 m) higher.

REMARKS.--Records good except those for January, which are poor. Monongahela Power Company gage-height telemeter at station.

AVERAGE DISCHARGE.--69 years, 1,695 ft³/s (48.00 m³/s), 32.06 in/yr (814 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 52,100 ft³/s (1,480 m³/s) Oct. 15, 1954, gage height, 19.08 ft (5.816 m), from rating curve extended above 26,000 ft³/s (740 m³/s) on basis of slope-area measurement of peak flow; minimum observed, 9 ft³/s (0.25 m³/s) Aug. 12, 1930, gage height, 1.28 ft (0.390 m), site and datum then in use.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 10, 1888, reached a stage of 20.5 ft (6.25 m), discharge, 51,300 ft³/s (1,450 m³/s), from floodmarks, at site and datum in use prior to Aug. 17, 1944; it was not exceeded until flood of Oct. 15, 1954, which reached a stage 0.3 ft (0.09 m) higher at that site and datum.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 16,000 ft³/s (450 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 23	1500	16700 473	9.94 3.030	Mar. 30	2200	*29000 821	12.78 3.895
Feb. 3	2100	16200 459	9.82 2.993	June 13	1300	24500 694	11.77 3.587

Minimum discharge, 145 ft³/s (4.1 m³/s) Sept. 21, gage height, 2.14 ft (0.652 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	189	1260	1540	1300	8040	1440	2510	1230	1050	818	1060	3170
2	351	1040	2420	1510	4300	1290	2080	1090	1030	590	653	2970
3	488	890	1890	1390	10300	1280	2380	944	1950	681	597	2870
4	390	770	1500	7480	11000	1190	3470	810	2410	4090	548	1820
5	311	688	1400	7940	5420	1310	2420	709	3770	2760	405	1020
6	299	1020	1190	4050	3510	1380	2320	639	5140	1620	342	702
7	524	1620	998	4770	2390	1790	2150	590	5850	1040	770	536
8	506	1320	1960	4970	1930	2300	1880	566	3530	818	783	446
9	390	1260	2380	3120	2280	1870	1960	566	2290	899	2520	380
10	315	1260	1790	2030	3280	1650	1850	500	2230	716	1490	333
11	279	1130	1480	1800	2290	2200	1720	434	5430	653	834	299
12	255	971	1300	1560	1790	11200	1640	390	3890	980	688	263
13	235	834	1150	1360	1510	7640	2340	360	15500	716	578	231
14	215	730	1120	1170	1170	7010	2880	342	9720	536	446	207
15	199	667	1440	1040	1100	4300	2150	320	4410	458	360	247
16	195	611	1430	910	2000	5060	1680	291	2590	548	307	259
17	195	566	1240	800	7570	13000	1430	271	1980	590	275	203
18	211	560	1170	715	7760	7430	1900	247	1530	566	351	176
19	390	554	944	650	5060	4400	1650	231	1160	530	385	160
20	365	548	778	615	4240	15200	1350	311	989	890	307	151
21	338	618	667	580	5940	15400	1240	476	826	1190	1680	148
22	303	572	2340	540	4260	7620	1080	410	667	709	1310	342
23	307	518	12300	1900	2900	4290	917	416	611	524	688	850
24	400	554	8320	4900	2820	2940	810	482	530	434	584	458
25	410	597	4290	7970	3300	2260	730	560	452	365	566	303
26	464	530	2810	2130	2540	2180	1010	681	385	311	681	271
27	5890	1940	2150	1440	2060	1910	1730	1250	360	275	560	2650
28	7750	3390	1720	1400	1690	1480	2460	667	434	360	566	2140
29	3760	2080	1570	1200	---	1430	1850	554	667	1430	512	1250
30	2330	1480	1240	1030	---	1450	1440	1440	935	834	395	834
31	1650	---	1040	1700	---	1520	---	2010	---	590	351	---
TOTAL	29904	30578	67567	73970	112450	135420	55027	19787	82316	27541	21592	25689
MEAN	965	1019	2180	2386	4016	4368	1834	638	2744	888	697	856
MAX	7750	3390	12300	7970	11000	15400	3470	2010	15500	4090	2520	3170
MIN	189	518	667	540	1100	1190	730	231	360	275	275	148
CFSM	1.34	1.42	3.04	3.32	5.59	6.08	2.55	.89	3.82	1.24	.97	1.19
IN.	1.55	1.58	3.50	3.83	5.83	7.02	2.85	1.03	4.26	1.43	1.12	1.33

CAL YR 1981 TOTAL 674115 MEAN 1847 MAX 20800 MIN 66 CFSM 2.57 IN 34.93
WTR YR 1982 TOTAL 681841 MEAN 1868 MAX 15500 MIN 148 CFSM 2.60 IN 35.33

03070000 CHEAT RIVER AT ROWLESBURG, WV

LOCATION.--Lat 39°20'50", long 79°40'00", Preston County, Hydrologic Unit 05020004, on left bank 50 ft (15 m) downstream from Baltimore & Ohio Railroad bridge at Rowlesburg, 300 ft (91 m) upstream from Saltlick Creek, and at mile 44.1 (71.0 km). Records include flow of Saltlick Creek.

DRAINAGE AREA.--972 mi² (2,517 km²), including that of Saltlick Creek.

PERIOD OF RECORD.--July 1912 to September 1923 (gage heights only), October 1923 to current year. Gage-height records collected at practically the same site since 1884 are contained in reports of National Weather Service. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 803: Drainage area. WSP 893: 1936-37. WSP 1173: 1924-34(M,m). WSP 1725: 1924(M), 1930(M), 1932(M), 1936(M), 1938-39(M), 1944(M), 1948-49(M).

GAGE.--Water-stage recorder. Datum of gage is 1,369.8 ft (417.52 m) Baltimore & Ohio RR datum. Prior to Nov. 18, 1923, nonrecording gages at several sites within 500 ft (152 m) of present site at various datums.

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

AVERAGE DISCHARGE.--59 years, 2,281 ft³/s (64.60 m³/s), 31.87 in/yr (809 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 66,300 ft³/s (1,880 m³/s) Oct. 16, 1954, gage height, 15.67 ft (4.776 m), from rating curve extended above 42,000 ft³/s (1,200 m³/s); minimum, 10 ft³/s (0.28 m³/s) Oct. 15, 1930; minimum gage height observed, 0.50 ft (0.152 m) Oct. 3, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 6, 1844, reached a stage of 16.7 ft (5.09 m), referred to present gage by relation curve, discharge, 89,000 ft³/s (2,520 m³/s), from rating curve extended above 45,000 ft³/s (1,300 m³/s). Flood of July 10, 1888, reached a stage of 16.2 ft (4.94 m), referred to present gage by relation curve, discharge, 84,000 ft³/s (2,380 m³/s), from rating curve extended above 45,000 ft³/s (1,300 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 20,000 ft³/s (570 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 23	Unknown	24900 705	9.23 2.813	June 13	2000	23000 651	8.88 2.707
Mar. 21	0300	*33200 940	10.57 3.222				

Minimum discharge, 133 ft³/s (3.77 m³/s) Sept. 20, 21, gage height, 0.98 ft (0.299 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	259	1720	1840	1800	6400	1900	2740	1520	1860	864	840	1420
2	261	1440	2940	2150	7000	1700	2880	1350	1450	590	820	3850
3	438	1230	2640	2000	6490	1660	2620	1190	1700	1760	610	2820
4	467	1080	2110	10800	12300	1660	4320	1040	3040	6730	590	2340
5	377	972	1940	11400	8110	1580	3400	924	3980	4180	492	1350
6	316	1200	1760	5800	4750	1580	3060	830	6370	2350	380	912
7	382	2050	1520	6800	3280	1730	3040	770	7810	1470	420	690
8	540	1890	2050	7000	2470	2760	2640	740	5220	1620	670	550
9	494	1660	3500	4400	2300	2600	2640	720	3280	1240	1690	468
10	384	1650	2680	2900	3520	2320	2640	670	2620	1010	1890	404
11	320	1510	2160	2600	2900	2530	2370	590	6610	876	1030	352
12	282	1310	1840	2200	2350	9120	2320	524	4780	900	740	310
13	253	1150	1650	2000	2020	9760	2780	484	11900	936	630	270
14	234	1030	1630	1700	1730	9090	3560	444	13500	680	508	232
15	214	936	1950	1550	1520	5720	2900	420	5520	550	404	203
16	202	876	2000	1350	1900	5100	2230	388	3040	508	331	251
17	198	820	1780	1200	6250	14500	1870	352	2230	560	284	251
18	233	770	1700	1100	10700	10600	2020	324	1700	590	277	192
19	339	760	1460	980	6490	5620	2110	303	1300	570	345	165
20	433	760	1200	930	6340	12300	1730	345	1020	720	373	144
21	397	810	980	860	6430	22300	1560	540	852	1180	1120	144
22	359	830	3300	800	6220	10800	1410	600	680	900	1580	257
23	354	750	17000	8180	3900	5780	1210	532	580	660	912	690
24	417	740	12000	10400	3300	3850	1080	580	524	508	670	700
25	488	810	5900	4880	3520	2920	984	770	452	428	570	428
26	605	800	4000	3200	3300	2680	960	790	404	359	600	338
27	5420	1510	3100	2280	2620	2510	1650	1620	366	303	640	1510
28	11200	4300	2400	1980	2230	2060	2470	1260	324	540	540	2560
29	5100	2940	2200	1780	---	1920	2230	864	516	1130	540	1590
30	3100	2080	1870	1510	---	1920	1750	1550	760	1180	468	1070
31	2220	---	1600	1630	---	2020	---	2760	---	690	380	---
TOTAL	36286	40384	94700	108160	130340	162590	69174	25794	94388	36582	21344	26461
MEAN	1171	1346	3055	3489	4655	5245	2306	832	3146	1180	689	882
MAX	11200	4300	17000	11400	12300	22300	4320	2760	13500	6730	1890	3850
MIN	198	740	980	800	1520	1580	960	303	324	303	277	144
CFSM	1.21	1.39	3.14	3.59	4.79	5.40	2.37	.86	3.24	1.21	.71	.91
IN.	1.39	1.55	3.62	4.14	4.99	6.22	2.65	.99	3.61	1.40	.82	1.01

CAL YR 1981	TOTAL	903305	MEAN	2475	MAX	28600	MIN	84	CFSM	2.55	IN	34.57
WTR YR 1982	TOTAL	846203	MEAN	2318	MAX	22300	MIN	144	CFSM	2.39	IN	32.39

MONONGAHELA RIVER BASIN

03070310 CONNER RUN NEAR VALLEY POINT, WV

LOCATION.--Lat 39°34'18", long 79°40'39", Preston County, Hydrologic Unit 05020004, on left bank, 2.3 mi (3.7 km) west-southwest of Valley Point, and at mile 2.4 (3.9 km).

DRAINAGE AREA.--0.38 mi² (0.98 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January to September 1982.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 2,020 ft (616 m), from topographic map.

REMARKS.--Water-discharge records good. Rainfall and air temperature records collected at site since May 1982; rainfall records collected since February 1982 and air temperature, relative humidity, solar radiation, and wind speed records collected since May 1982 at site near center of basin (lat 39°34'32", long 79°40'08") are contained in files of the U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31.6 ft³/s (0.89 m³/s) Mar. 16, 1982, gage height, 3.81 ft (1.161 m); minimum, 0.01 ft³/s (<0.001 m³/s) part or all of each day July 22, 23, 26-28, Aug. 8, 16-21, Sept. 12-15, 17, 18, 20, 21; minimum gage height, 1.06 ft (0.323 m) Aug. 20.

EXTREMES FOR CURRENT PERIOD.--Peak discharges above base of 15 ft³/s (0.42 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 23	1645	27.6 0.78	3.54 1.079	June 16	2015	15.3 0.43	2.72 0.829
Jan. 31	2230	16.5 0.47	2.80 0.853	July 3	1415	27.4 0.78	3.53 1.076
Mar. 16	1445	*31.6 0.89	3.81 1.161				

Minimum discharge, 0.01 ft³/s (<0.001 m³/s) July 22, 23, 26-28, Aug. 8, 16-21, Sept. 12-15, 17, 18, 20, 21; minimum gage height, 1.06 ft (0.323 m) Aug. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				---	3.1	.42	.61	.12	.09	.10	.02	.07
2				---	1.2	.39	.46	.12	.17	.06	.02	.15
3				---	5.2	.47	1.7	.12	.08	7.2	.03	.77
4				---	2.5	.77	.98	.10	.07	2.4	.02	.10
5				---	1.3	1.5	.68	.10	3.1	.83	.03	.06
6				---	.85	.77	1.2	.09	1.6	.45	.03	.03
7				---	.48	.95	.81	.10	.69	.26	.02	.03
8				---	.46	.72	.75	.36	.39	.40	.10	.02
9				---	.63	.66	.96	.18	.25	.21	.13	.02
10				---	.52	1.5	.89	.11	.35	.16	.06	.02
11				---	.40	3.4	1.1	.09	.22	.15	.50	.02
12				---	.32	2.7	.86	.08	.14	.13	.19	.01
13				---	.37	1.8	.71	.07	.77	.09	.07	.01
14				---	.37	.99	.54	.07	.29	.07	.03	.01
15				---	2.0	.94	.44	.05	.16	.06	.02	.01
16				---	2.7	6.3	.36	.03	1.7	.05	.02	.02
17				---	3.3	3.1	.41	.03	.96	.03	.01	.01
18				---	1.5	1.3	.39	.02	.43	.02	.03	.01
19				---	3.4	.98	.25	.02	.28	.06	.01	.02
20				---	2.5	2.0	.22	.13	.38	.11	.01	.01
21				---	2.0	1.8	.21	.19	.16	.06	.61	.11
22				.50	1.2	1.0	.18	.15	.11	.03	.06	1.0
23				16	1.0	.74	.17	.18	.12	.05	.08	.20
24				4.3	.83	.57	.16	.14	.09	.03	.27	.13
25				1.2	.60	.59	.15	.13	.06	.02	1.0	.10
26				.81	.43	.89	.24	.07	.05	.01	.14	1.4
27				.58	.43	.59	.25	.05	.05	.01	.09	1.6
28				.62	.42	.62	.20	.14	.04	.89	.08	.60
29				.53	---	.63	.15	.11	.46	.15	.02	.37
30				1.6	---	.56	.13	.26	.26	.07	.02	.23
31				5.5	---	.91	---	.14	---	.05	.02	---
TOTAL				---	40.01	40.56	16.16	3.55	13.52	14.21	3.74	7.14
MEAN				---	1.43	1.31	.54	.11	.45	.46	.12	.24
MAX				---	5.2	6.3	1.7	.36	3.1	7.2	1.0	1.6
MIN				---	.32	.39	.13	.02	.04	.01	.01	.01
CFSM				---	3.76	3.45	1.42	.29	1.18	1.21	.32	.63
IN.				---	3.91	3.96	1.58	.35	1.32	1.39	.37	.70

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	NITRO- GEN DIS- SOLVED (MG/L AS N)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
JAN									
23...	1020	25	280	3.5	1.0	--	--	52	--
FEB									
03...	1020	10	400	3.7	1.0	--	--	--	--
09...	1125	.80	1190	3.1	.5	--	--	--	--
17...	1000	3.7	480	3.2	2.0	--	--	--	--
18...	1210	1.6	550	3.0	1.0	--	--	--	--
25...	0900	.62	970	3.4	.5	16.8	.90	182	182
MAR									
11...	1230	1.9	560	3.5	3.0	--	--	--	--
12...	0930	2.8	450	3.4	4.0	--	--	--	--
15...	1015	1.0	750	3.4	2.0	--	--	--	--
30...	1020	.62	980	3.3	5.0	11.8	.56	200	200
APR									
22...	1035	.23	1200	3.1	6.0	--	--	--	--
28...	0920	.22	1600	3.2	7.0	11.4	.70	329	329
MAY									
13...	1215	.09	1600	2.8	18.0	--	--	--	--
25...	1035	.15	1700	2.8	17.0	8.5	--	476	476
JUL									
14...	1030	.10	1680	2.7	19.5	7.3	--	418	418
AUG									
04...	1400	.03	2100	2.7	22.5	--	--	--	--
SEPT									
02...	0805	.14	1890	2.6	18.5	6.0	--	538	538
13...	1500	.02	2050	2.7	23.0	--	--	--	--
17...	1150	.01	2050	2.4	16.0	--	--	--	--
27...	1120	.99	800	--	12.0	--	--	--	--

[illegible][illegible]

MONONGAHELA RIVER BASIN

03070310 CONNER RUN NEAR VALLEY POINT, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS RE)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	BERYL- LIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	IRON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)
JAN 23...	--	--	--	<10	--	--	--	--	--	--	--	--
FEB 25...	--	--	--	<10	--	--	--	--	--	--	--	--
MAR 30...	--	--	--	<20	--	--	--	--	--	--	--	--
APR 28...	--	--	--	<20	--	--	--	--	--	--	--	--
MAY 25...	--	--	--	<10	--	--	--	--	--	--	--	--
JUL 14...	10	17	--	<10	4	3	--	20	20	--	82	87
SEP 02...	--	--	--	10	--	--	--	--	--	--	--	--
13...	--	--	1	--	--	--	<1	--	--	4	--	--

DATE	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)
JAN 23...	--	6800	3100	3700	--	--	--	2400	100	2300	--	--
FEB 25...	--	18000	0	18000	--	--	--	8100	0	8300	--	--
MAR 30...	--	17000	0	17000	--	--	--	8900	0	9000	--	--
APR 28...	--	31000	2000	29000	--	--	--	16000	2000	14000	--	--
MAY 25...	--	40000	4000	36000	--	--	--	2100	0	20000	--	--
JUL 14...	--	47000	10000	37000	6	7	--	17000	0	18000	.1	.2
SEP 02...	--	36000	0	37000	--	--	--	28000	8000	20000	--	--
13...	31	--	--	--	--	--	10	--	--	--	--	--

DATE	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	NICKEL, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
JAN 23...	--	--	--	--	--	--	--	--	--	--	57	3.8
JUL 14...	--	730	680	--	<1	<1	--	1900	1900	--	--	--
SEP 13...	<.01	--	--	20	--	--	<1	--	--	96	--	--

MONONGAHELA RIVER BASIN

111

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, which are poor.

AVERAGE DISCHARGE.--69 years (water years 1910-17, 1922-82), 423 ft³/s (11.98 m³/s), 28.72 in/yr (729 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 21,300 ft³/s (603 m³/s) July 24, 1912, gage height, 18.0 ft (5.49 m), from rating curve extended above 10,000 ft³/s (280 m³/s) on basis of velocity-area studies; minimum, 0.1 ft³/s (0.003 m³/s) Oct. 21-27, 1953.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 10, 1888, reached a stage of about 20 ft (6.1 m), discharge, about 30,000 ft³/s (850 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,850 ft³/s (137 m³/s) Dec. 23, gage height, 10.42 ft (3.176 m), no other peak above base of 4,800 ft³/s (140 m³/s); minimum, 14 ft³/s (0.40 m³/s) part or all of each day Sept. 19-21; minimum gage height, 3.25 ft (0.991 m) Sept. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	193	344	348	2770	315	516	103	125	168	36	29
2	58	167	665	326	1290	301	457	100	121	106	32	33
3	62	146	460	353	1370	291	562	94	101	716	44	144
4	48	127	374	1610	2050	286	675	87	90	2060	39	100
5	44	115	353	1430	1230	736	535	81	1100	709	260	55
6	46	305	314	844	840	605	708	77	2040	421	145	42
7	57	375	295	739	588	581	663	76	1420	285	83	35
8	54	307	1370	602	489	489	575	111	766	261	119	31
9	44	265	1040	483	458	436	593	124	513	261	117	28
10	39	278	701	390	359	415	507	97	381	207	96	26
11	36	253	553	346	290	684	506	85	294	159	101	24
12	35	225	437	320	258	2200	661	79	221	138	229	22
13	32	196	367	300	261	1340	663	76	558	110	129	20
14	30	179	311	278	232	949	573	80	581	91	90	18
15	29	167	354	254	267	729	475	70	369	79	68	17
16	30	155	313	235	875	1110	403	61	301	68	54	16
17	29	143	254	218	1610	2640	357	56	593	58	48	15
18	31	129	291	200	1390	1360	342	53	420	55	62	15
19	41	117	225	185	1320	877	274	50	312	57	54	14
20	43	133	216	175	1240	797	244	53	266	138	40	14
21	40	147	233	160	1360	740	222	87	196	158	87	15
22	34	126	620	155	948	610	190	97	158	77	61	149
23	40	113	3700	2370	704	512	170	106	169	60	47	123
24	53	115	2150	2190	639	435	159	103	134	52	49	61
25	50	116	1160	925	541	383	149	105	106	43	97	46
26	61	110	756	225	428	459	148	83	91	38	116	49
27	680	172	587	228	396	411	159	75	80	34	63	347
28	686	205	466	238	345	360	139	106	78	45	51	214
29	432	183	448	246	---	371	118	126	122	96	42	165
30	312	165	366	255	---	369	107	115	343	55	34	122
31	238	---	324	865	---	421	---	167	---	41	31	---
TOTAL	3458	5427	20047	17493	24548	22212	11850	2783	12049	6846	2524	1989
MEAN	112	181	647	564	877	717	395	89.8	402	221	81.4	66.3
MAX	686	375	3700	2370	2770	2640	708	167	2040	2060	260	347
MIN	29	110	216	155	232	286	107	50	78	34	31	14
CFSM	.56	.91	3.24	2.82	4.39	3.59	1.98	.45	2.01	1.11	.41	.33
IN.	.64	1.01	3.73	3.25	4.57	4.13	2.20	.52	2.24	1.27	.47	.37

CAL YR 1981 TOTAL 164360 MEAN 450 MAX 5400 MIN 14 CFSM 2.25 IN 30.57
WTR YR 1982 TOTAL 131226 MEAN 360 MAX 3700 MIN 14 CFSM 1.80 IN 24.41

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, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.0	---	8.0	---	1.0	5.0	9.0	---	25.0	23.5	---	22.0
2	18.5	14.0	7.0	---	1.0	5.0	9.5	---	---	23.0	25.5	22.0
3	---	13.0	6.5	---	2.0	6.0	---	15.5	---	---	24.5	21.5
4	---	13.0	6.0	3.5	2.5	5.0	---	18.0	---	---	26.0	---
5	19.0	13.0	---	3.0	4.0	5.0	9.5	16.0	---	---	25.0	---
6	18.5	---	---	3.5	---	---	9.5	19.0	---	---	25.5	---
7	17.5	---	4.5	5.0	---	---	9.0	19.5	---	---	---	21.5
8	17.0	---	4.5	4.5	5.0	4.0	10.0	---	---	---	---	20.5
9	17.5	12.0	4.5	---	3.5	4.0	---	---	22.0	---	25.5	20.5
10	---	---	4.5	---	4.0	5.5	---	19.0	22.0	---	25.0	21.0
11	---	---	4.5	2.0	4.0	6.0	---	19.0	20.0	---	25.0	---
12	17.0	11.0	---	2.0	---	7.0	10.0	20.0	---	25.0	23.5	---
13	17.0	---	---	2.5	---	---	8.0	20.5	---	25.5	25.0	23.5
14	---	---	3.0	1.0	---	---	8.5	20.5	19.5	25.5	---	23.5
15	---	---	3.0	1.5	---	8.0	---	---	22.0	25.5	---	23.5
16	16.5	11.0	2.0	---	2.0	8.0	12.0	---	18.5	26.5	25.0	---
17	---	10.5	1.5	---	2.0	7.0	---	22.0	18.5	---	25.5	21.0
18	---	10.5	1.0	3.0	3.0	8.0	---	22.0	20.0	---	25.0	---
19	16.5	10.0	---	7.0	4.0	---	14.0	24.0	---	26.5	24.5	20.5
20	15.5	10.0	---	1.0	---	---	14.5	24.0	---	26.5	24.0	20.5
21	15.5	---	1.0	1.0	---	---	14.0	23.5	20.0	26.0	---	20.5
22	15.5	---	1.5	1.0	4.0	9.0	14.0	---	---	25.5	---	20.0
23	15.0	9.0	2.0	---	4.5	9.0	14.0	---	---	26.0	23.0	19.5
24	---	10.0	2.0	---	4.5	10.0	---	23.5	---	---	23.5	19.0
25	---	8.5	---	1.0	5.0	11.0	---	23.5	21.0	---	23.5	---
26	14.5	---	---	1.0	4.0	9.0	15.5	---	---	26.5	---	---
27	15.0	---	---	1.0	---	---	15.0	24.5	---	26.5	19.5	19.5
28	---	---	4.0	1.0	---	---	14.5	24.5	24.5	26.5	---	20.0
29	---	---	4.0	1.0	---	9.0	14.5	---	24.5	26.5	---	19.0
30	15.0	7.5	4.0	---	---	9.5	14.5	---	22.0	25.5	22.0	---
31	---	---	4.0	---	---	9.5	---	---	---	---	22.0	---
MEAN	16.5	11.0	4.0	2.5	3.5	7.5	12.0	21.0	21.5	25.5	24.0	21.0
WTR YR 1982	MEAN	14.0		MAX	26.5	MIN	1.0					

MONONGAHELA RIVER BASIN

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03075650 HAYES RUN NEAR CRANESVILLE, WV

LOCATION.--Lat 39°31'55", long 79°29'16", Preston County, Hydrologic Unit 05020006, on left bank, 1.5 mi (2.4 km) southeast of Cranesville, and at mile 0.2 (0.1 km).

DRAINAGE AREA.--0.93 mi² (2.41 km²).

PERIOD OF RECORD.--August 1980 to September 1982 (discontinued).

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 2,550 ft (777 m), from topographic map.

REMARKS.--Records good except those for January, which are poor. Rainfall records collected at site since August 1980 are contained in files of U.S. Geological Survey with monthly totals only published in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 39 ft³/s (1.10 m³/s) July 3, 1982, gage height, 3.97 ft (1.210 m), from rating curve extended above 15 ft³/s (0.42 m³/s) on basis of culvert computation; minimum 0.25 ft³/s (0.01 m³/s) Sept. 12-15, 17-21, 1982, gage height, 1.23 ft (0.375 m).

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 25 ft³/s (0.71 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 23	0830	30 0.85	3.37 1.027	July 3	1530	*39 1.10	3.97 1.210
Jan. 31	2245	26 0.74	3.13 0.954				

Minimum discharge, 0.25 ft³/s (0.01 m³/s) Sept. 12-15, 17-21, gage height, 1.23 ft (0.375 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.53	2.3	2.5	1.7	9.1	1.8	1.2	.58	.49	.71	1.0	.40
2	.55	2.0	2.2	1.4	3.6	1.6	1.1	.56	.75	.65	.99	.44
3	.52	1.5	1.9	1.4	12	1.5	2.4	.52	.63	14	.95	.58
4	.50	1.2	1.8	6.8	9.9	1.5	2.5	.49	.56	9.0	.86	.37
5	.48	1.2	1.7	3.8	6.3	2.2	2.3	.46	2.8	5.5	.91	.34
6	.54	3.0	1.6	3.2	4.9	1.5	2.8	.44	2.6	3.9	.77	.34
7	.49	2.1	1.7	4.2	3.4	1.6	2.2	.44	2.5	3.1	.72	.34
8	.46	1.9	5.4	3.0	2.6	1.5	2.1	.66	2.2	4.4	.95	.34
9	.44	1.8	3.6	2.1	2.6	1.4	2.0	.70	1.9	2.9	.79	.31
10	.42	1.8	3.3	1.8	1.9	1.3	1.8	.60	2.2	2.7	.70	.31
11	.42	1.5	2.9	1.6	1.5	5.1	1.6	.53	1.9	3.8	.95	.31
12	.42	1.4	2.5	1.5	1.3	7.6	1.9	.50	1.7	2.7	.82	.28
13	.40	1.3	2.2	1.3	1.2	7.0	2.8	.50	3.0	2.3	.65	.28
14	.40	1.2	1.9	1.2	1.1	5.5	2.4	.49	2.4	2.0	.61	.28
15	.40	1.1	1.8	1.2	2.1	4.5	2.4	.47	2.1	1.8	.59	.34
16	.40	1.1	1.5	1.0	3.7	9.0	2.2	.46	2.1	1.5	.57	.31
17	.40	1.0	1.4	.98	5.1	9.7	2.0	.44	3.0	1.4	.69	.28
18	.60	.99	1.3	.88	3.4	6.8	1.7	.43	2.0	1.8	.70	.28
19	.56	.92	1.2	.82	4.7	5.3	1.5	.40	1.8	1.8	.56	.28
20	.38	1.1	1.1	.77	5.9	5.4	1.3	.82	1.7	2.8	.52	.25
21	.36	.95	1.1	.73	8.3	5.3	1.2	.93	1.5	1.6	.66	.34
22	.38	.88	5.6	.70	4.6	3.7	1.1	.58	1.3	1.4	.51	1.0
23	.51	.85	19	2.8	4.5	3.1	.97	.56	1.2	1.5	.53	.47
24	.51	.84	8.5	2.5	4.1	2.3	.89	.53	1.1	1.3	.66	.39
25	.43	.81	6.2	1.9	3.3	1.8	.82	.49	.95	1.1	.74	.36
26	.88	.92	4.5	1.4	2.6	1.9	.83	.49	.86	1.1	.47	.69
27	5.3	1.7	3.3	1.3	2.3	1.3	.81	.49	.80	.99	.40	1.4
28	5.0	1.2	2.7	1.2	2.0	1.1	.71	.59	.73	3.0	.40	1.0
29	3.7	1.2	2.3	1.1	---	1.2	.64	.53	1.7	1.4	.37	.90
30	3.1	1.1	1.8	1.4	---	1.2	.61	.57	.98	1.1	.37	.81
31	2.7	---	1.5	8.5	---	1.4	---	.51	---	1.1	.37	---
TOTAL	32.18	40.86	100.0	64.18	118.0	106.1	48.78	16.76	49.45	84.35	20.78	14.02
MEAN	1.04	1.36	3.23	2.07	4.21	3.42	1.63	.54	1.65	2.72	.67	.47
MAX	5.3	3.0	19	8.5	12	9.7	2.8	.93	3.0	14	1.0	1.4
MIN	.36	.81	1.1	.70	1.1	1.1	.61	.40	.49	.65	.37	.25
CFSM	1.12	1.46	3.47	2.23	4.53	3.68	1.75	.58	1.77	2.93	.72	.51
IN.†	1.29	1.63	4.00	2.56	4.71	4.24	1.95	.67	1.98	3.37	.83	.56
IN.*	3.98	2.01	5.14	3.21	4.03	5.10	1.77	3.51	6.62	8.44	2.40	4.05

CAL YR 1981	TOTAL	850.52	MEAN	2.33	MAX	19	MIN	.36	CFSM	2.51	IN†	33.98	IN#	59.95
WTR YR 1982	TOTAL	695.46	MEAN	1.91	MAX	19	MIN	.25	CFSM	2.05	IN†	27.79	IN#	50.26

† Runoff.

* Rainfall.

MONONGAHELA RIVER BASIN

03075670 MUDDY CREEK NEAR CRANESVILLE, WV

LOCATION.--Lat 39°31'29", long 79°28'54", Garrett County, Md., Hydrologic Unit 05020006, on left bank 5 ft (2 m) upstream from culvert on Riley Road, 0.2 mi (0.3 km) north of Lake Ford, Md., 2.1 mi (3.4 km) south of Cranesville, and at mile 5.8 (9.3 km).

DRAINAGE AREA.--5.09 mi² (13.2 km²).

PERIOD OF RECORD.--August 1980 to September 1982 (discontinued).

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 2,530 ft (771 m), from topographic map.

REMARKS.--Records poor. Rainfall records collected at site since September 1980 are contained in files of the U.S. Geological Survey with only monthly totals published in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 140 ft³/s (3.96 m³/s) July 4, 1982, gage height 6.08 ft (1.853 m); minimum daily, 0.80 ft³/s (0.02 m³/s), Aug. 27, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 140 ft³/s (3.96 m³/s) July 4, gage height, 6.08 ft (1.853 m), no other peak above base of 75 ft³/s (2.12 m³/s); minimum daily, 0.93 ft³/s (0.026 m³/s) Oct. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	6.6	9.0	8.5	32	11	16	6.3	2.9	4.5	3.2	2.1
2	2.6	6.4	10	8.3	31	11	14	5.9	6.4	3.2	2.8	2.0
3	2.4	6.3	9.1	8.1	33	10	17	5.6	6.2	50	2.8	2.6
4	2.2	6.2	8.7	14	47	10	17	6.3	5.3	119	2.4	2.0
5	2.1	6.4	8.6	14	32	18	14	6.5	16	44	2.6	1.8
6	2.0	8.1	8.3	10	25	11	16	6.7	26	19	2.3	1.7
7	2.2	6.9	8.1	12	20	13	14	6.7	23	12	2.1	1.4
8	2.2	5.8	12	10	17	10	14	6.8	16	18	3.0	1.5
9	2.1	5.6	11	9.0	17	9.8	14	4.3	14	16	4.0	1.4
10	1.9	5.8	10	8.6	17	10	13	1.5	14	10	2.6	1.4
11	1.8	5.6	9.6	8.0	15	10	13	2.1	17	9.4	3.3	1.4
12	1.8	5.4	9.1	7.7	14	37	13	2.2	14	13	6.6	1.4
13	1.8	5.3	8.5	7.4	14	30	16	2.6	21	9.2	4.0	1.3
14	1.7	5.1	8.1	7.4	14	27	15	2.6	19	6.9	2.7	1.2
15	1.7	5.0	8.0	7.1	15	23	14	2.8	12	5.6	2.1	1.6
16	1.7	4.9	7.9	6.9	22	27	12	3.0	11	4.9	1.9	1.4
17	1.5	4.9	7.5	6.9	28	44	12	2.8	18	4.0	1.8	1.3
18	1.4	4.9	7.4	6.6	25	29	12	3.0	13	4.5	2.2	1.2
19	1.6	4.8	7.3	6.4	23	25	11	3.2	9.1	8.0	2.2	1.2
20	1.7	5.6	7.1	6.2	24	25	10	3.5	8.4	13	1.9	1.2
21	.99	5.6	6.9	5.8	34	27	10	5.6	6.9	11	1.9	1.4
22	.93	5.5	9.6	5.6	26	23	9.7	4.5	5.6	7.0	2.2	8.4
23	1.2	5.4	27	9.0	21	19	9.3	4.0	4.9	5.9	2.1	6.4
24	1.2	5.2	27	11	22	18	9.0	3.7	4.1	5.0	2.2	2.8
25	1.1	5.1	15	10	21	16	8.7	3.3	3.6	4.0	2.6	2.0
26	1.6	5.1	11	8.8	12	18	8.5	3.0	3.3	3.4	3.2	2.6
27	5.4	7.3	10	7.5	10	16	8.6	3.4	3.1	3.2	3.0	14
28	12	8.8	9.4	6.9	10	15	8.1	3.6	2.9	6.6	2.6	11
29	9.2	8.2	9.3	6.5	---	15	6.9	3.6	5.8	15	2.3	7.8
30	8.0	7.8	8.4	7.0	---	16	6.4	3.6	10	7.5	2.2	4.9
31	7.1	---	8.1	11	---	17	---	3.4	---	4.4	2.1	---
TOTAL	87.82	179.6	317.0	262.2	621	590.8	362.2	126.1	322.5	447.2	82.9	92.4
MEAN	2.83	5.99	10.2	8.46	22.2	19.1	12.1	4.07	10.8	14.4	2.67	3.08
MAX	12	8.8	27	14	47	44	17	6.8	26	119	6.6	14
MIN	.93	4.8	6.9	5.6	10	9.8	6.4	1.5	2.9	3.2	1.8	1.2
CFSM	.56	1.18	2.00	1.66	4.36	3.75	2.38	.80	2.12	2.83	.53	.61
IN.†	.64	1.31	2.32	1.92	4.54	4.32	2.65	.92	2.36	3.27	.61	.68
IN.‡	4.09	1.60	3.51	2.20	4.04	4.57	1.91	2.41	5.57	8.27	2.39	3.77
CAL YR 1981	TOTAL	4105.36	MEAN	11.2	MAX	91	MIN	.80	CFSM	2.20	IN†	30.00
WTR YR 1982	TOTAL	3491.72	MEAN	9.57	MAX	119	MIN	.93	CFSM	1.88	IN†	25.51
											IN‡	56.97
												45.00

† Runoff.

‡ Rainfall.

MONONGAHELA RIVER BASIN

115

03075680 CUPP RUN NEAR CRANESVILLE, WV

LOCATION.--Lat 39°30'45", long 79°30'05", Preston County, Hydrologic Unit 05020006, on right bank, 10 ft below bridge on State Highway 47, 2.8 mi (4.5 km) southwest from Cranesville, 4.9 mi (7.9 km) northeast of Terra Alta and at mile 1.1 (1.8 km).

DRAINAGE AREA.--1.42 mi² (3.68 km²).

PERIOD OF RECORD.--September 1980 to September 1982 (discontinued).

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 2,670 ft (814 m), from topographic map.

REMARKS.--Records good except those for December and January, which are poor. Rainfall records collected at site since September 1980 are contained in files of U.S. Geological Survey with only monthly totals published in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 142 ft³/s (4.02 m³/s) July 3, 1982; minimum daily, 0.19 ft³/s (0.005 m³/s) Aug. 30, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 40 ft³/s (1.13 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 24	1915	63 1.78	3.43 1.045	July 3	1530	*142 4.02	4.27 1.301
Mar. 11	2400	43 1.22	3.16 0.963	July 8	1215	59 1.67	3.37 1.027

Minimum discharge, 0.24 ft³/s (0.007 m³/s) Sept. 12, 13, gage height, 1.69 ft (0.515 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.68	2.2	11	2.6	10	2.7	3.2	1.0	.75	.71	.68	.46
2	1.0	1.9	3.7	1.9	7.0	2.6	2.7	1.0	1.4	.47	.89	.46
3	.88	1.8	10	2.2	21	2.4	7.8	.95	1.4	50	1.2	.59
4	.81	1.5	6.0	17	22	2.6	6.0	.87	1.1	24	.73	.48
5	.68	1.9	4.4	7.9	9.2	4.5	3.9	.83	10	6.8	.71	.41
6	1.1	7.6	2.7	5.2	6.1	2.7	6.3	.79	10	3.9	.58	.38
7	1.1	4.0	2.6	7.9	4.3	3.2	4.6	.78	6.8	2.5	.54	.39
8	.76	3.1	2.3	4.4	2.9	2.6	3.7	1.0	3.9	26	4.9	.29
9	.65	2.8	3.7	3.6	3.7	2.4	3.9	1.0	2.8	8.4	3.0	.34
10	.60	2.6	2.5	3.0	5.3	2.5	3.3	.79	3.1	4.6	1.5	.30
11	.56	2.1	2.1	2.4	2.2	10	3.0	.62	3.0	3.7	2.3	.28
12	.56	1.8	1.8	2.0	1.9	23	4.1	.56	2.2	2.8	2.2	.25
13	.56	1.6	1.7	1.7	1.7	14	8.3	.55	5.4	1.9	1.4	.25
14	.56	1.5	1.7	1.2	1.6	9.1	8.6	.53	3.1	1.4	.98	.26
15	.56	1.4	2.1	1.1	3.5	6.2	5.3	.52	2.4	1.1	.84	.49
16	.56	1.3	2.3	1.0	11	16	3.4	.48	2.5	.94	.76	.41
17	.56	1.2	1.9	.98	13	20	3.1	.45	8.4	.78	.93	.36
18	1.6	1.1	1.9	.92	6.4	10	2.8	.44	4.2	1.1	1.1	.35
19	1.9	1.0	1.6	.83	9.2	6.9	2.3	.42	3.2	2.2	.74	.34
20	1.2	1.8	1.4	.80	9.0	10	2.0	1.1	3.1	3.8	.63	.34
21	.94	1.3	1.2	.75	13	14	2.1	2.4	2.1	1.4	.82	.34
22	.75	1.2	5.2	.70	5.7	8.1	1.7	1.1	1.6	.93	.72	3.7
23	1.5	1.1	22	12	5.9	5.7	1.4	.98	1.4	1.6	.58	1.7
24	1.8	3.2	16	35	6.2	3.6	1.4	.84	1.1	1.0	1.6	.61
25	1.3	2.7	9.0	33	5.0	3.3	1.3	.71	.92	.77	1.7	.46
26	3.7	1.9	4.6	9.0	3.2	4.7	1.5	.61	.76	.67	.71	1.6
27	15	2.2	3.4	2.4	2.8	3.1	1.8	.57	.71	.62	.59	4.5
28	12	19	2.7	2.0	2.6	2.8	1.4	.89	.63	2.1	.57	3.1
29	6.2	18	2.4	1.6	---	3.6	1.2	.91	1.0	1.9	.50	2.4
30	4.3	17	2.1	1.7	---	3.6	1.1	.96	1.3	.82	.46	1.5
31	2.8	---	1.7	5.9	---	4.4	---	1.0	---	.76	.46	---
TOTAL	67.17	111.8	137.7	172.68	195.4	210.3	103.2	25.65	90.27	159.67	35.32	27.34
MEAN	2.17	3.73	4.44	5.57	6.98	6.78	3.44	.83	3.01	5.15	1.14	.91
MAX	15	19	22	35	22	23	8.6	2.4	10	50	4.9	4.5
MIN	.56	1.0	1.2	.70	1.6	2.4	1.1	.42	.63	.47	.46	.25
CFSM	1.53	2.63	3.13	3.92	4.92	4.78	2.42	.59	2.12	3.63	.80	.64
IN.†	1.76	2.93	3.60	4.52	5.12	5.51	2.70	.67	2.36	4.18	.92	.72
IN.‡	3.77	1.69	2.76	2.50	3.96	5.26	2.39	2.46	6.07	9.41	4.46	4.00

CAL YR 1981	TOTAL	1569.80	MEAN	4.30	MAX	38	MIN	.19	CFSM	3.03	IN†	41.10	IN‡	53.04
WTR YR 1982	TOTAL	1336.50	MEAN	3.66	MAX	50	MIN	.25	CFSM	2.58	IN†	34.99	IN‡	48.73

† Runoff.

‡ Rainfall.

OHIO RIVER MAIN STEM

03111534 OHIO RIVER AT MARTINS FERRY, OH
(Formerly published as 03112500 Ohio River at Wheeling, WV)

LOCATION.--Lat 40°06'18", long 80°42'31", Belmont County, Ohio, Hydrologic Unit 05030106, on right bank at water plant at Martins Ferry, Ohio, 300 ft (91 m) downstream from Old Lock 12, 0.9 mi (1.4 km) downstream from Glens Run (Ohio), 3.0 mi (4.8 km) upstream from Wheeling Creek (Ohio), and at mile 87.5 (140.8 km), measured downstream from Pittsburgh, Pa.

DRAINAGE AREA.--24,700 mi² (64,000 km²), approximately.

PERIOD OF RECORD.--January to March 1844, January 1905 to December 1906 (gage heights only), December 1906 to February 1907, March to April 1913, February to April 1936, December 1936 to February 1937 (published as "at Wheeling"), October 1978 to current year. Monthly discharge for some periods published in WSP 1305. Gage-height records collected in this vicinity since 1882 are in reports of the National Weather Service.

GAGE.--Water-stage recorder. Datum of gage is 610.80 ft (186.172 m) National Geodetic Vertical Datum of 1929. See WSP 1305 for history of gages prior to 1978. Auxiliary water-stage recorder 12.9 mi (20.8 km) downstream from base gage at same datum.

REMARKS.--Records good except those for Jan. 11 to Mar. 12 and those below 18,000 ft³/s (510 m³/s), which are poor. Flow regulated by Ohio River system of locks, dams, and reservoirs. Corps of Engineers gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 466,000 ft³/s (13,200 m³/s) Mar. 19, 1936, gage height 55.2 ft (16.82 m); minimum not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 183,000 ft³/s (5,180 m³/s) Mar. 18; maximum gage height, 28.05 ft (8.550 m); minimum gage height, 12.06 ft (3.676 m) Aug. 13, discharge not determined.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14800	59300	33200	42000	120000	36000	66100	19700	36600	42600	17100	9100
2	16900	50900	31900	36200	150000	37000	74100	16400	36800	31400	15000	14000
3	28700	42300	39700	37700	120000	36000	74900	14000	28300	29800	15000	21100
4	25600	33500	32200	45100	93300	40000	72300	13000	25500	59000	13000	15900
5	25800	31700	38400	77000	102000	46000	74000	12000	31700	59900	11000	16000
6	25100	35000	37000	94600	92000	49000	71100	11500	61700	42600	8900	14000
7	25200	37000	36000	81500	85000	46000	75000	12000	79100	33300	8400	12000
8	25500	42100	36000	70500	68000	43000	72500	13000	76200	30100	9100	11000
9	27700	41300	45000	66600	60000	41000	66900	15000	69700	26400	12000	8900
10	26900	37400	49100	50200	54000	45000	65600	20600	57600	22700	18000	7900
11	20900	34700	45500	33000	50000	51000	62500	20100	48300	19500	17900	6100
12	20000	29700	40100	28000	45000	80000	56900	18200	43300	17600	17000	6700
13	19000	24300	37200	29000	45000	111000	53700	18700	36200	18100	12000	7000
14	19000	25400	33900	31000	42000	127000	48400	16100	41700	16700	11000	7500
15	16000	20400	32700	33000	40000	136000	43800	14000	55000	16600	8000	7000
16	14000	19200	33200	27000	52000	118000	43500	12000	48400	16100	6900	8000
17	14000	17500	33900	22000	74000	154000	36900	12000	48200	13000	7700	7000
18	12000	17000	31000	21000	89000	177000	38600	12000	63700	13000	9800	6000
19	13000	19200	29000	23000	93000	138000	32200	13000	49200	11000	8000	5600
20	14000	23000	27000	24000	89000	127000	35800	12000	41300	13000	6900	5100
21	14000	30400	23000	25000	88000	126000	29500	17300	37100	16300	7000	7000
22	15000	30500	26000	27000	87000	137000	27000	17100	34100	16800	6500	9300
23	16000	30900	63600	70000	79000	128000	25200	18000	32200	16700	13000	13000
24	18000	30700	128000	130000	71000	114000	22900	39100	28400	15000	15600	12000
25	18000	33100	107000	90000	65000	106000	20400	47000	24200	12000	16400	11000
26	21000	32600	84400	60000	60000	99400	19200	33700	18700	10000	14900	10000
27	25800	25000	70500	45000	50000	101000	20000	28900	15600	9000	10000	13000
28	59500	33000	65000	42000	43000	88400	23400	26800	15600	11000	11000	15000
29	86600	32500	58000	42000	---	69500	21800	35000	21000	14000	8000	16000
30	72400	24300	50000	49000	---	62700	17100	45500	31600	17200	9000	17000
31	68700	---	47000	70000	---	63600	---	38800	---	21500	9000	---
TOTAL	819100	943900	1444500	1522400	2106300	2733600	1391300	642500	1237000	691900	353100	319200
MEAN	26420	31460	46600	49110	75230	88180	46380	20730	41230	22320	11390	10640
MAX	86600	59300	128000	130000	150000	177000	75000	47000	79100	59900	18000	21100
MIN	12000	17000	23000	21000	40000	36000	17100	11500	15600	9000	6500	5100

CAL YR 1981 TOTAL 15932700 MEAN 43650 MAX 250000 MIN 6600
WTR YR 1982 TOTAL 14204800 MEAN 38920 MAX 177000 MIN 5100

WHEELING CREEK BASIN

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03112000 WHEELING CREEK AT ELM GROVE, WV

LOCATION.--Lat 40°02'40", long 80°39'40", Ohio County, Hydrologic Unit 05030106, on right bank at highway bridge at Elm Grove, 500 ft (152 m) downstream from Little Wheeling Creek, and at mile 7.7 (12.4 km).

DRAINAGE AREA.--282 mi² (730 km²).

PERIOD OF RECORD.--October 1940 to current year. Monthly discharge only for October 1940, published in WSP 1907.

REVISED RECORDS.--WSP 1305: 1941(M).

GAGE.--Water-stage recorder. Datum of gage is 667.59 ft (203.481 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for December, January, and February, which are poor. Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--42 years, 336 ft³/s (9.516 m³/s), 16.18 in/yr (411 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,100 ft³/s (626 m³/s) Dec. 30, 1942, gage height, 13.67 ft (4.167 m), from rating curve extended above 15,000 ft³/s (430 m³/s) on basis of slope-area measurements at gage heights 13.2 ft (4.02 m) and 13.67 ft (4.167 m); minimum, 0.1 ft³/s (0.003 m³/s) Oct. 7, 1963, Sept. 26, 27, 1964; minimum gage height, 0.63 ft (0.192 m) Aug. 31, 1953.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,840 ft³/s (194 m³/s) Jan. 23, gage height, 6.56 ft (1.999 m), no other peak above base of 6,000 ft³/s (170 m³/s); minimum, 1.5 ft³/s (0.04 m³/s) Sept. 18, 20, gage height, 0.77 ft (0.235 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	54	177	188	1920	175	540	88	89	100	13	9.6
2	31	49	347	198	936	168	432	85	62	58	11	49
3	36	44	255	217	736	161	478	81	54	1150	11	195
4	35	41	216	926	793	342	494	74	42	2070	10	91
5	32	42	335	1080	577	1530	400	68	190	1210	8.9	45
6	50	100	360	692	477	901	463	68	306	442	8.0	30
7	55	199	302	540	289	745	410	66	234	235	9.1	23
8	50	133	428	370	260	549	371	113	137	178	28	18
9	38	109	504	276	230	512	390	150	95	302	31	15
10	32	126	388	160	210	506	361	105	139	190	68	13
11	28	129	301	130	190	868	377	85	106	119	41	11
12	26	108	242	110	170	1940	385	74	75	91	37	9.1
13	25	91	200	94	153	1260	370	68	61	72	31	7.4
14	23	78	170	82	145	846	329	63	53	60	21	5.9
15	21	71	155	76	245	621	291	57	44	53	15	4.9
16	19	65	138	70	829	1420	261	52	80	47	11	4.2
17	19	61	123	67	1170	2290	243	46	240	42	9.1	3.3
18	25	56	112	63	1410	1280	219	42	148	38	8.0	2.3
19	26	77	104	55	1130	865	185	44	93	38	5.5	1.9
20	26	148	110	50	974	910	170	71	79	40	4.0	1.6
21	25	180	120	58	797	849	155	90	55	47	3.9	5.9
22	30	156	151	121	619	623	137	80	44	38	3.2	17
23	66	126	1430	3660	492	504	125	68	41	32	6.0	11
24	80	117	990	3010	433	422	117	56	36	27	5.9	8.9
25	63	120	584	1000	360	376	113	50	30	23	120	11
26	60	113	403	803	253	401	117	44	26	20	76	14
27	140	121	334	580	207	349	129	38	23	18	37	53
28	186	126	285	400	188	283	113	64	30	18	24	59
29	108	111	245	315	---	281	98	58	66	18	16	37
30	78	97	220	329	---	260	91	65	120	16	12	27
31	63	---	208	853	---	405	---	114	---	16	11	---
TOTAL	1528	3048	9937	16573	16193	22642	8364	2227	2798	6808	695.6	784.0
MEAN	49.3	102	321	535	578	730	279	71.8	93.3	220	22.4	26.1
MAX	186	199	1430	3660	1920	2290	540	150	306	2070	120	195
MIN	19	41	104	50	145	161	91	38	23	16	3.2	1.6
CFSM	.18	.36	1.14	1.90	2.05	2.59	.99	.26	.33	.78	.08	.09
IN.	.20	.40	1.31	2.19	2.14	2.99	1.10	.29	.37	.90	.09	.10
CAL YR 1981	TOTAL	158831.0	MEAN	435	MAX	8090	MIN	12	CFSM	1.54	IN	20.95
WTR YR 1982	TOTAL	91597.6	MEAN	251	MAX	3660	MIN	1.6	CFSM	.89	IN	12.08

OHIO RIVER MAIN STEM

03112510 OHIO RIVER AT BENWOOD NEAR WHEELING, WV
(National Stream-quality accounting network station)

LOCATION.--Lat 40°00'54", long 80°44'20", Marshall County, Hydrologic Unit 05030106, at Bellaire Toll Bridge, at Benwood, and at mile 94.3 (151.7 km).

DRAINAGE AREA.--Approximately 25,070 mi² (64,931 km²).

PERIOD OF RECORD.--Water years 1978 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS NONCAR- BONATE (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)
NOV 18...	1015	21900	313	6.5	8.0	6.8	11.5	870	1700	92	66	27
FEB 04...	1000	44600	280	7.5	1.0	92	13.2	7200	5000	83	--	23
MAR 24...	1200	51300	238	6.2	9.0	31	--	1100	330	74	55	20
MAY 20...	0930	11700	465	7.5	22.0	3.6	8.1	8600	600	154	120	42
JUL 29...	1330	19140	385	7.9	28.5	4.4	8.1	1900	850	130	89	37
SEP 15...	0930	32800	518	6.4	25.0	1.7	6.4	1600	440	164	110	46

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
NOV 18...	6.1	12	2.3	27	66	15	.2	4.3	176	149	10407	.70
FEB 04...	6.3	13	1.8	26	59	16	.1	5.0	157	--	18906	1.1
MAR 24...	6.0	8.3	1.3	20	54	9.7	.1	5.0	137	117	18976	.89
MAY 20...	12	24	2.5	39	130	26	.3	.6	331	261	10456	.87
JUL 29...	9.1	21	2.4	41	97	23	.3	1.7	250	216	12919	.67
SEP 15...	12	39	3.4	55	140	31	.4	.3	307	305	27188	1.0

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS PO4)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)
NOV 18...	.240	.36	.050	.010	.020	.06	--	--	--	--	--
FEB 04...	.200	1.10	.280	.020	<.010	--	2	1	100	50	51
MAR 24...	.150	.49	.110	.010	.010	.03	2	1	100	50	52
MAY 20...	.140	.81	.050	.010	<.010	--	--	--	--	--	--
JUL 29...	<.010	.40	.060	.010	.010	.03	1	0	100	40	56
SEP 15...	.210	2.60	.080	.040	.030	.09	1	0	1	<100	73

OHIO RIVER MAIN STEM

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03112510 OHIO RIVER AT BENWOOD NEAR WHEELING, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDE RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)
NOV 18...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 04...	1	<1	20	10	10	13	11	2	74	66	8	810
MAR 24...	3	<1	60	10	50	7	6	1	11	9	2	3900
MAY 20...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 29...	1	<1	10	0	10	2	0	2	50	45	5	540
SEP 15...	<1	<1	20	0	20	1	--	<1	9	8	1	420

DATE	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)
NOV 18...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 04...	750	58	24	22	2	1100	590	510	.2	--	<.1	24
MAR 24...	3900	23	9	8	1	400	150	250	<.1	--	<.1	15
MAY 20...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 29...	--	<3	7	6	1	90	--	<1	.2	.0	.3	7
SEP 15...	--	<3	5	4	1	80	70	7	.2	.0	.2	10

DATE	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 18...	--	--	--	--	--	--	--	--	--	10	591	68
FEB 04...	18	6	<1	<1	<1	<1	110	100	7	239	28800	24
MAR 24...	14	1	<1	<1	<1	<1	70	60	11	90	12500	73
MAY 20...	--	--	--	--	--	--	--	--	--	60	1900	91
JUL 29...	4	3	<1	<1	<1	<1	70	--	<4	32	1650	12
SEP 15...	8	2	<1	<1	2	<1	60	--	<4	10	886	58

LITTLE GRAVE CREEK BASIN

03113706 LITTLE GRAVE CREEK AT MOUNDSVILLE, WV

LOCATION.--Lat 39°55'45", long 80°44'54", Marshall County, Hydrologic Unit 05030106, at U.S. Highway 250 bridge, and at mile 1.0 (1.6 km).

DRAINAGE AREA.--11.9 mi² (30.8 km²).

PERIOD OF RECORD.--Water years 1978 to September 1982 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
OCT								
26...	1245	1.5	400	7.1	11.0	8.6	2	.00
NOV								
19...	1100	.78	525	6.7	7.0	10.8	1	.00
DEC								
01...	0848	23	362	--	--	--	49	3.0
01...	0950	25	394	--	--	--	45	3.0
22...	1045	4.2	900	7.2	.5	13.5	11	.12
23...	0840	235	332	--	--	--	738	468
23...	0940	225	325	--	--	--	474	288
23...	1040	325	325	--	--	--	369	324
23...	1141	175	329	--	--	--	330	156
23...	1240	168	331	--	--	--	95	43
23...	1340	150	333	--	--	--	99	40
23...	1430	132	340	--	--	--	88	31
JAN								
04...	0855	220	330	--	--	--	586	348
04...	0955	200	340	--	--	--	5420	2930
04...	1055	198	330	--	--	--	260	139
04...	1155	175	330	--	--	--	162	77
04...	1255	162	335	--	--	--	117	51
23...	0845	1420	265	--	--	--	1270	4870
23...	0945	1470	253	--	--	--	1160	4600
23...	1045	1485	260	--	--	--	1150	4610
23...	1147	1490	260	--	--	--	795	3200
23...	1248	1520	262	--	--	--	1240	5090
23...	1349	1540	265	--	--	--	1360	5650
23...	1445	1550	275	--	--	--	2090	8750
23...	1545	1680	278	--	--	--	2570	11700
23...	1645	1770	275	--	--	--	2920	14000
FEB								
03...	1050	22	430	6.7	3.5	12.7	6	.36
16...	0835	17	415	--	--	--	38	1.7
16...	0935	16	418	--	--	--	20	.86
19...	0840	21	417	--	--	--	86	4.9
19...	0940	20	409	--	--	--	91	4.9
MAR								
16...	1130	26	400	--	--	--	344	24
16...	1235	48	333	--	--	--	1130	146
16...	1330	175	396	--	--	--	8930	4220
16...	1430	180	322	--	--	--	9310	4520
16...	1530	137	287	--	--	--	3060	1130
16...	1630	120	283	--	--	--	1580	512
16...	1730	106	286	--	--	--	1050	301
16...	1830	83	295	--	--	--	743	167
24...	1020	18	435	6.9	4.0	--	11	.53
APR								
14...	1000	9.7	475	8.0	7.0	13.6	9	.24
MAY								
19...	1125	.79	500	7.0	17.0	7.3	8	.02
JUN								
02...	1020	19	--	--	--	--	187	9.6
05...	0920	22	375	--	--	--	304	18
05...	1020	19	377	--	--	--	187	9.6
15...	1145	1.3	452	7.2	19.0	10.3	6	.02
16...	1840	19	260	--	--	--	451	23
16...	1940	20	302	--	--	--	772	42
16...	2040	24	383	--	--	--	1750	113
16...	2140	20	392	--	--	--	1120	60
JUL								
03...	0915	27	413	--	--	--	778	57
03...	1010	31	372	--	--	--	973	81
03...	1110	39	305	--	--	--	1170	123
03...	1210	48	338	--	--	--	2280	295
03...	1310	48	332	--	--	--	1660	215
03...	1410	74	330	--	--	--	8100	1620
03...	1510	103	345	--	--	--	4190	1170
03...	1610	97	337	--	--	--	5190	1360
03...	1710	71	305	--	--	--	2160	414
03...	1810	24	288	--	--	--	923	60
30...	1005	.22	284	6.4	19.0	3.8	42	.02
AUG								
09...	1350	18	420	--	--	--	27	1.3
09...	1455	16	410	--	--	--	25	1.1
SEP								
03...	0800	22	403	--	--	--	34	2.0
03...	0900	22	405	--	--	--	28	1.7
14...	1300	.18	434	6.3	20.5	3.7	21	.01

LITTLE GRAVE CREEK BASIN

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03113708 PAR RUN AT MOUNDSVILLE, WV

LOCATION.--Lat 39°55'35", long 80°44'34", Marshall County, Hydrologic Unit 05030106, 1000 ft (304 m) upstream from Jefferson Ave. bridge, and at mile 0.3 (0.5 km).

DRAINAGE AREA.--1.30 mi² (3.37 km²).

PERIOD OF RECORD.--Water years 1978 to September 1982 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
OCT								
26...	1145	.80	455	7.0	12.0	9.6	7	.02
NOV								
19...	1000	.32	630	6.9	9.0	10.9	1	.00
DEC								
01...	0830	3.0	518	--	--	--	76	.62
01...	0932	2.7	587	--	--	--	34	.25
22...	1140	1.8	1450	7.7	3.5	12.2	136	.66
23...	0825	8.6	600	--	--	--	98	2.3
23...	0920	7.6	611	--	--	--	71	1.5
23...	1020	6.0	611	--	--	--	49	.79
23...	1121	4.5	607	--	--	--	37	.45
23...	1220	3.6	615	--	--	--	32	.31
23...	1320	3.6	610	--	--	--	24	.23
JAN								
04...	0840	8.6	505	--	--	--	149	3.5
04...	0940	7.6	521	--	--	--	107	2.2
04...	1040	8.6	495	--	--	--	104	2.4
04...	1140	7.6	830	--	--	--	67	1.4
04...	1240	5.5	662	--	--	--	48	.71
23...	0830	27	385	--	--	--	1020	74
23...	0930	46	370	--	--	--	889	110
23...	1035	48	381	--	--	--	981	127
23...	1135	46	390	--	--	--	1000	124
23...	1235	46	390	--	--	--	1040	129
23...	1335	46	394	--	--	--	1190	148
23...	1435	48	395	--	--	--	1720	223
23...	1530	46	392	--	--	--	1620	201
23...	1630	42	390	--	--	--	979	111
FEB								
03...	0955	2.6	620	6.7	4.5	11.2	7	.05
16...	0820	2.0	630	--	--	--	14	.08
16...	0920	2.2	620	--	--	--	115	.68
19...	0825	3.6	570	--	--	--	117	1.1
19...	0925	3.3	630	--	--	--	58	.52
MAR								
16...	1045	28	319	--	--	--	1020	77
16...	1145	90	318	--	--	--	5290	1290
16...	1245	62	380	--	--	--	5670	949
16...	1345	37	387	--	--	--	1850	185
16...	1445	29	405	--	--	--	1020	80
16...	1545	26	420	--	--	--	667	47
16...	1645	24	430	--	--	--	491	32
16...	1745	17	445	--	--	--	350	16
24...	0935	1.9	625	7.0	5.5	--	18	.09
APR								
14...	1040	.90	640	7.3	11.0	11.3	4	.00
MAY								
19...	1015	.38	660	7.1	19.5	8.2	6	.00
JUN								
05...	0900	3.0	573	--	--	--	59	.48
05...	1000	2.2	590	--	--	--	43	.26
15...	1100	.40	625	7.4	21.0	9.7	4	.00
16...	0820	2.1	630	--	--	--	14	.08
16...	0830	3.0	488	--	--	--	1	.01
16...	0832	3.0	--	--	--	--	148	1.2
16...	1820	17	437	--	--	--	10500	482
16...	1920	8.6	470	--	--	--	2240	52
16...	2020	3.6	530	--	--	--	786	7.6
16...	2120	2.2	528	--	--	--	335	2.0
JUL								
03...	0845	26	262	--	--	--	1050	74
03...	0950	18	362	--	--	--	1790	87
03...	1045	17	390	--	--	--	990	45
03...	1145	8.6	392	--	--	--	884	21
03...	1245	7.6	413	--	--	--	329	6.8
03...	1345	80	450	--	--	--	15600	3370
03...	1445	35	364	--	--	--	2650	250
03...	1545	17	387	--	--	--	760	35
03...	1645	8.6	420	--	--	--	411	9.5
03...	1745	28	362	--	--	--	1250	94
30...	0930	.40	585	7.0	20.5	6.6	2	.00
AUG								
09...	1320	2.4	365	--	--	--	33	.21
09...	1420	1.4	428	--	--	--	17	.06
SEP								
02...	1600	48	250	--	--	--	1720	223
02...	1700	17	329	--	--	--	485	22
02...	1800	5.5	457	--	--	--	264	3.9
14...	1210	.38	547	7.2	23.0	8.0	2	.00

GRAVE CREEK BASIN

03113738 MIDDLE GRAVE CREEK AT MOUNDSVILLE, WV

LOCATION.--Lat 39°54'46", long 80°43'43", Marshall County, Hydrologic Unit 05030106, at 12th Street bridge, and at mile 0.8 (1.3 km).

DRAINAGE AREA.--28.6 mi² (70.1 km²).

PERIOD OF RECORD.--Water years 1978 to September 1982 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
OCT								
26...	1030	8.7	465	7.2	9.0	10.4	1	.02
NOV								
19...	0910	6.2	390	7.4	2.0	13.2	21	.35
DEC								
01...	0816	50	365	--	--	--	55	7.4
01...	0918	50	358	--	--	--	127	17
22...	1245	16	670	7.2	.0	14.2	61	2.6
23...	0800	250	275	--	--	--	737	497
23...	0900	235	269	--	--	--	481	305
23...	1000	195	265	--	--	--	297	156
23...	1102	160	416	--	--	--	226	98
23...	1201	160	285	--	--	--	141	61
23...	1302	140	278	--	--	--	106	40
23...	1402	115	275	--	--	--	84	26
JAN								
04...	0815	200	291	--	--	--	479	259
04...	0915	180	282	--	--	--	297	144
04...	1015	180	282	--	--	--	245	119
04...	1115	170	279	--	--	--	166	76
04...	1215	145	276	--	--	--	126	49
23...	0810	820	203	--	--	--	2160	4780
23...	0910	880	198	--	--	--	1440	3420
23...	1015	975	199	--	--	--	1310	3450
23...	1115	980	202	--	--	--	1370	3630
23...	1215	978	205	--	--	--	1370	3620
23...	1315	1020	209	--	--	--	1740	4790
23...	1415	1040	210	--	--	--	2050	5760
23...	1510	1060	210	--	--	--	2440	6980
23...	1610	1015	210	--	--	--	2160	5920
FEB								
03...	0850	58	340	6.7	3.0	13.2	8	1.3
16...	0758	132	300	--	--	--	94	34
16...	0858	108	297	--	--	--	85	25
19...	0805	91	328	--	--	--	44	11
19...	0902	95	326	--	--	--	54	14
MAR								
16...	1110	112	324	--	--	--	540	163
16...	1210	205	321	--	--	--	3980	2200
16...	1310	425	315	--	--	--	3720	4270
16...	1410	665	299	--	--	--	5030	9030
16...	1510	565	262	--	--	--	3250	4960
16...	1610	530	247	--	--	--	1930	2760
16...	1710	460	247	--	--	--	1090	1350
16...	1810	395	250	--	--	--	730	779
MAR								
24...	0845	43	382	7.0	2.0	--	6	.70
APR								
14...	1145	27	352	8.1	11.5	13.5	4	.29
MAY								
19...	0920	4.3	427	7.7	19.0	8.5	9	.10
JUN								
05...	0840	64	385	--	--	--	697	120
05...	0940	55	364	--	--	--	552	82
15...	1005	3.0	398	7.7	20.0	10.4	4	.03
16...	1800	25	306	--	--	--	1430	97
16...	1900	31	340	--	--	--	759	64
16...	2000	160	346	--	--	--	4160	1800
16...	2100	155	319	--	--	--	4160	1740
JUL								
03...	0825	94	242	--	--	--	533	135
03...	0925	75	224	--	--	--	1480	300
03...	1025	94	330	--	--	--	1390	353
03...	1125	165	335	--	--	--	1860	829
03...	1225	220	312	--	--	--	2470	1470
03...	1330	310	257	--	--	--	1850	1550
03...	1425	520	327	--	--	--	1490	2090
03...	1525	670	289	--	--	--	4960	8970
03...	1625	525	283	--	--	--	4740	6720
03...	1725	390	246	--	--	--	2290	2410
30...	0840	1.5	440	7.1	20.0	6.2	8	.03
AUG								
09...	1300	18	325	--	--	--	85	4.1
09...	1400	16	352	--	--	--	162	7.0
SEP								
03...	0715	50	325	--	--	--	100	13
03...	0815	21	330	--	--	--	342	19
14...	1120	1.1	209	7.2	21.5	8.5	3	.00

MIDDLE ISLAND CREEK BASIN

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03114500 MIDDLE ISLAND CREEK AT LITTLE, WV

LOCATION.--Lat 39°28'30", long 80°59'50", Tyler County, Hydrologic Unit 05030201, on right bank at downstream side of highway bridge at Little, 0.1 mi (0.2 km) upstream from Stewarts Run, 5.0 mi (8.0 km) west of Middlebourne, and at mile 24.5 (39.4 km).

DRAINAGE AREA.--458 mi² (1,186 km²).

PERIOD OF RECORD.--May 1915 to September 1916, October 1916 to September 1922 (gage heights only), October 1928 to current year.

GAGE.--Water-stage recorder. Datum of gage is 631.32 ft (192.426 m) National Geodetic Vertical Datum, adjustment of 1912. Prior to July 11, 1947, nonrecording gage at same site and datum.

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

AVERAGE DISCHARGE.--55 years (water years 1916, 1929-82), 640 ft³/s (18.12 m³/s), 18.98 in/yr (482 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.--Maximum discharge, 12,900 ft³/s (365 m³/s) Jan. 23, gage height, 15.66 ft (4.773 m), no other peak above base of 9,000 ft³/s (250 m³/s); minimum, 1.9 ft³/s (0.05 m³/s) Oct. 20, gage height, 1.78 ft (0.543 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.7	76	95	188	2900	220	744	88	624	350	20	18
2	9.7	61	216	240	1220	197	612	81	294	164	21	20
3	8.5	50	233	298	831	191	582	76	188	540	24	20
4	7.9	42	179	1280	1420	230	1190	72	132	5330	22	20
5	6.7	46	182	1900	1380	887	804	70	4180	1200	20	44
6	7.3	52	294	859	852	744	887	65	3210	474	17	44
7	6.1	113	282	630	540	696	1010	62	1550	244	14	39
8	5.2	188	210	762	375	786	756	95	780	164	13	28
9	4.6	130	164	564	330	792	648	618	425	120	15	22
10	4.6	108	134	306	295	1170	624	334	375	95	17	17
11	4.6	102	108	265	260	2020	540	216	672	86	56	13
12	4.6	82	91	220	230	5750	468	145	370	70	77	11
13	4.3	68	81	180	207	2610	400	104	237	59	57	9.7
14	4.0	58	72	160	200	2180	346	86	314	53	52	8.5
15	3.4	52	68	148	244	1260	290	76	375	46	50	6.7
16	2.5	46	64	139	1630	2620	248	62	237	41	39	5.2
17	2.4	42	61	130	2470	6830	226	53	546	37	30	4.0
18	2.4	40	58	124	1780	2310	230	44	1550	33	21	3.4
19	2.2	37	57	104	1330	1160	216	37	468	35	14	3.1
20	2.0	40	56	97	1590	2940	191	207	244	122	15	3.4
21	2.0	45	65	110	1150	6380	173	696	170	255	16	4.0
22	2.2	57	84	298	845	3420	156	252	120	207	15	4.6
23	14	66	2780	7420	642	1240	137	167	90	122	52	4.6
24	14	77	2330	7700	522	792	122	678	74	81	76	4.3
25	24	142	817	1310	435	594	110	570	68	65	70	4.0
26	28	274	468	838	322	831	108	259	61	52	64	4.3
27	33	194	326	660	259	1150	113	156	52	41	52	5.5
28	530	142	255	510	237	786	117	102	46	33	42	6.7
29	255	117	223	435	---	600	110	148	40	28	33	6.7
30	148	93	195	380	---	492	97	1430	474	24	26	28
31	102	---	173	552	---	450	---	1520	---	22	22	---
TOTAL	1254.9	2640	10421	28807	24496	52328	12255	8569	17966	10193	1062	412.7
MEAN	40.5	88.0	336	929	875	1688	409	276	599	329	34.3	13.8
MAX	530	274	2780	7700	2900	6830	1190	1520	4180	5330	77	44
MIN	2.0	37	56	97	200	191	97	37	40	22	13	3.1
CFSM	.09	.19	.73	2.03	1.91	3.69	.89	.60	1.31	.72	.08	.03
IN.	.10	.21	.85	2.34	1.99	4.25	1.00	.70	1.46	.83	.09	.03
CAL YR 1981	TOTAL	237262.4	MEAN	650	MAX	12600	MIN 2.0	CFSM 1.42	IN 19.27			
WTR YR 1982	TOTAL	170404.6	MEAN	467	MAX	7700	MIN 2.0	CFSM 1.02	IN 13.84			

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) Sandy Hook datum.

REMARKS.--Corps of Engineers gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 38.52 ft (11.741 m) Feb. 27, 1979; minimum, 10.83 ft (3.301 m) Oct. 6, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 27.12 ft (8.266 m) Mar. 18; minimum, 15.00 ft (4.572 m) Sept. 24, 25.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.81	17.73	15.84	16.80	24.47	16.62	19.28	16.02	16.42	16.64	15.87	15.96
2	15.59	16.96	16.55	16.76	26.28	16.39	19.63	16.24	16.10	16.34	15.61	16.15
3	16.26	16.74	16.79	16.64	23.03	17.36	20.19	15.92	15.89	16.19	15.79	16.22
4	16.49	16.28	16.94	17.66	22.05	17.51	20.34	16.00	15.74	17.95	15.80	15.70
5	15.90	16.09	16.52	19.38	21.83	18.34	19.91	15.87	17.22	18.54	15.62	15.65
6	15.85	15.97	16.21	20.62	21.68	18.74	19.45	15.45	17.68	17.65	15.81	15.69
7	15.99	16.46	16.61	20.30	20.82	18.33	19.43	15.50	18.43	16.90	16.07	15.80
8	15.75	16.76	16.56	19.05	19.83	17.91	19.69	15.83	18.76	16.47	16.15	15.92
9	15.91	17.01	16.93	18.74	19.05	17.41	19.03	16.12	17.83	16.50	15.73	15.56
10	16.39	16.91	16.96	18.10	18.52	17.37	18.53	16.36	17.73	15.80	16.32	15.57
11	16.25	16.32	16.68	16.79	17.69	17.98	18.47	16.41	17.23	15.71	15.80	15.94
12	15.78	16.03	16.55	16.36	17.90	20.37	18.16	16.15	16.88	15.53	15.88	15.96
13	15.59	15.94	16.18	17.02	17.09	22.77	17.95	16.28	16.65	15.57	15.62	15.96
14	15.52	15.73	16.22	17.16	17.19	23.70	18.14	16.48	16.46	15.74	15.76	16.10
15	15.39	15.72	16.73	17.31	17.14	24.01	16.90	16.09	17.63	15.81	15.81	16.27
16	15.30	15.64	16.33	16.99	17.90	23.90	17.25	16.05	17.23	15.80	15.83	16.09
17	15.63	15.60	15.76	16.57	19.29	26.44	17.06	16.38	17.42	15.63	15.91	15.96
18	15.57	15.60	15.91	16.23	21.67	27.05	17.21	16.22	18.26	15.45	16.03	16.06
19	15.80	15.94	15.89	16.72	22.25	26.14	16.63	16.13	17.63	15.56	15.75	16.05
20	16.35	16.42	16.00	16.57	21.29	24.95	16.33	16.55	16.85	15.88	15.72	16.33
21	15.91	16.49	16.09	16.65	21.62	26.25	16.17	16.02	16.42	15.93	15.99	16.31
22	15.55	16.81	15.80	16.47	21.34	25.55	15.86	15.62	16.03	16.01	16.02	16.05
23	15.91	16.64	17.27	19.52	20.43	24.71	15.76	16.10	16.17	15.73	16.30	15.59
24	16.21	16.35	21.04	25.20	20.02	23.54	16.62	16.53	16.02	15.35	15.94	15.12
25	16.15	16.22	22.62	22.88	19.39	22.37	16.58	16.82	15.92	15.31	15.84	15.05
26	16.31	16.07	21.08	18.31	18.74	21.67	15.80	16.10	15.72	15.36	15.92	15.29
27	16.40	16.08	19.78	18.38	17.53	21.39	15.53	16.21	15.69	15.90	15.95	15.54
28	17.18	16.13	18.74	18.17	17.35	20.67	16.26	15.72	15.62	16.03	16.04	15.46
29	18.53	16.60	17.88	17.42	---	19.15	16.63	16.24	15.93	16.22	15.91	15.64
30	18.17	16.28	17.58	17.43	---	18.74	15.98	17.29	16.26	16.11	16.02	15.99
31	17.98	---	17.05	18.32	---	18.33	---	16.84	---	16.27	15.91	---
MEAN	16.17	16.32	17.20	18.08	20.12	21.15	17.69	16.18	16.79	16.13	15.89	15.83
MAX	18.53	17.73	22.62	25.20	26.28	27.05	20.34	17.29	18.76	18.54	16.32	16.33
MIN	15.30	15.60	15.76	16.23	17.09	16.39	15.53	15.45	15.62	15.31	15.61	15.05

WTR YR 1982 MEAN 17.28 MAX 27.05 MIN 15.05

LITTLE KANAWHA RIVER BASIN

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03151400 LITTLE KANAWHA RIVER NEAR WILDCAT, WV

LOCATION.--Lat 38°44'35", long 80°31'36", Braxton County, Hydrologic Unit 05030203, on right bank on State Secondary Route 24/1, 200 ft (61 m) upstream from footbridge at Gregory, 3.9 mi (6.2 km) west of Wildcat, and at mile 138.6 (223.1 km).

DRAINAGE AREA.--112 mi² (290 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 850.00 ft (259.080 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for Apr. 9 to May 19, which are poor. Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--8 years, 235 ft³/s (6.655 m³/s), 28.49 in/yr (724 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,090 ft³/s (201 m³/s) Jan. 26, 1978, gage height, 12.62 ft (3.847 m); minimum, 1.6 ft³/s (0.045 m³/s) Aug. 4, 5, 1975, Aug. 31, 1981; minimum gage height, 3.59 ft (1.094 m) Aug. 31, 1981.

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 23	0700	2360 66.8	8.60 2.621	Mar. 20	1800	*4000 113	10.30 3.139
Jan. 23	1300	2310 65.4	8.54 2.603	July 4	0400	2630 74.5	8.91 2.716
Mar. 12	0800	2430 68.8	8.68 2.646	July 28	2100	3320 94.0	9.62 2.932

Minimum discharge, 7.6 ft³/s (0.22 m³/s) Sept. 20, 21, gage height, 3.74 ft (1.140 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	133	125	125	167	161	281	30	110	190	205	32
2	41	108	145	117	147	149	267	27	88	107	137	83
3	39	93	129	120	571	143	334	25	92	169	104	472
4	23	81	122	212	968	131	477	23	171	1690	75	237
5	18	74	179	270	598	129	358	21	455	588	56	120
6	16	248	248	242	382	120	316	20	778	250	44	78
7	18	326	240	248	255	200	252	19	856	145	74	53
8	22	270	220	267	200	267	210	19	378	99	65	40
9	17	210	217	263	406	295	190	26	242	80	874	33
10	14	165	190	179	648	398	192	33	358	63	543	28
11	12	133	163	159	434	626	180	33	434	47	250	23
12	12	113	137	150	295	1910	170	28	288	36	177	19
13	11	96	117	143	242	1010	155	24	760	30	120	16
14	10	84	117	135	190	754	140	21	682	24	88	14
15	9.0	77	220	128	185	582	125	17	316	21	65	12
16	9.0	71	250	117	434	615	105	15	179	18	47	11
17	9.5	65	225	116	1080	784	90	14	141	15	37	10
18	11	60	326	141	676	505	82	13	107	13	47	9.1
19	15	54	270	127	604	338	79	12	77	16	42	8.1
20	29	53	215	151	682	2220	72	12	63	107	30	8.1
21	23	60	179	706	626	1810	64	16	48	107	43	8.6
22	19	56	892	994	499	856	56	19	38	54	50	14
23	24	49	2050	2040	378	477	49	21	34	34	31	28
24	103	51	904	1030	334	326	41	26	29	27	32	18
25	82	145	461	483	281	255	37	22	24	21	36	13
26	102	167	298	295	227	323	34	19	19	16	30	13
27	1320	171	227	217	200	358	36	29	17	13	30	71
28	874	177	175	232	190	319	39	36	32	1140	72	102
29	442	157	157	187	---	288	37	28	123	1290	49	80
30	255	135	125	149	---	257	33	354	232	309	35	48
31	175	---	114	155	---	248	---	215	---	252	30	---
TOTAL	3769.5	3682	9437	9898	11899	16854	4501	1217	7171	6971	3518	1701.9
MEAN	122	123	304	319	425	544	150	39.3	239	225	113	56.7
MAX	1320	326	2050	2040	1080	2220	477	354	856	1690	874	472
MIN	9.0	49	114	116	147	120	33	12	17	13	30	8.1
CFSM	1.09	1.10	2.71	2.85	3.80	4.86	1.34	.35	2.13	2.01	1.01	.51
IN.	1.25	1.22	3.13	3.29	3.95	5.60	1.49	.40	2.38	2.32	1.17	.57
CAL YR 1981	TOTAL	92642.5	MEAN	254	MAX	3230	MIN	1.9	CFSM	2.27	IN	30.77
WTR YR 1982	TOTAL	80619.4	MEAN	221	MAX	2220	MIN	8.1	CFSM	1.97	IN	26.78

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. Prior to March 1979, reservoir elevations above 770.38 ft (234.812 m) only.

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

REMARKS.--Reservoir is formed by rockfill embankment with impervious core, completed in January 1976. Storage-control operations began Mar. 18, 1979. 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). Figures given herein represent total contents. This is a multipurpose reservoir. Corps of Engineers gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 34,380 acre-ft (42.4 hm³) June 7, 1981 elevation, 805.90 ft (245.638 m); minimum since storage-control operations began, 1,910 acre-ft (2.36 hm³) Dec. 22, 1981, elevation, 770.86 ft (234.958 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 19,170 acre-ft (23.6 hm³) July 29, elevation, 793.69 ft (241.917 m); minimum, 4,258 acre-ft (5.25 hm³) Jan. 29, elevation, 776.02 ft (236.531 m).

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

Date	Elevation (feet)	Contents (acre-feet)	Change in Contents (acre-feet)	Change in Contents (equivalent in cfs)
Sept. 30.....	789.45	14800	-	-
Oct. 31.....	788.29	13680	-1120	-18
Nov. 30.....	776.91	4767	-8913	-150
Dec. 31.....	776.33	4432	-335	-5
CAL YR 1981			-317	0
Jan. 31.....	776.36	4449	+17	0
Feb. 28.....	776.38	4460	+11	0
Mar. 31.....	776.44	4494	+34	+1
Apr. 30.....	779.55	6452	+1958	+33
May 31.....	782.98	9014	+2562	+42
June 30.....	789.44	14790	+5776	+97
July 31.....	790.64	15980	+1190	+19
Aug. 31.....	789.45	14800	-1180	-19
Sept. 30.....	789.44	14790	-10	0
WTR YR 1982			-10	0

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) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for October and November, which are poor. Flow regulated since 1979 by Burnsville Lake (station 03151518). Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--6 years, 305 ft³/s (8.638 m³/s), 25.41 in/yr (645 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,530 ft³/s (71.6 m³/s) Oct. 9, 1976, gage height, 58.81 ft (17.925 m); minimum, 3.6 ft³/s (0.10 m³/s) May 26, 1977, gage height, 50.62 ft (15.429 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,310 ft³/s (65.4 m³/s) Mar. 23, gage height, 58.03 ft (17.678 m); minimum, 6.1 ft³/s (0.17 m³/s) Aug. 25, gage height, 54.40 ft (16.581 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	936	91	145	231	224	380	11	11	255	390	22
2	138	733	215	145	230	169	351	11	11	141	325	32
3	118	184	209	145	587	143	276	11	12	154	150	336
4	50	77	239	320	850	142	420	11	12	1250	106	409
5	34	88	238	430	793	144	602	11	13	1100	96	150
6	77	469	329	360	574	145	474	11	13	545	73	85
7	134	742	379	320	442	242	275	11	33	369	73	55
8	135	593	307	320	348	488	275	11	261	141	85	46
9	131	236	255	321	372	400	275	11	336	110	504	56
10	131	232	214	281	686	473	275	11	328	110	612	47
11	131	322	220	118	694	657	276	11	452	82	387	29
12	106	390	157	90	454	1050	275	12	373	53	243	23
13	82	373	121	170	361	1440	257	12	596	46	158	23
14	78	334	138	202	227	1400	226	12	916	29	120	19
15	76	263	233	148	251	1240	175	11	530	29	101	16
16	76	182	296	124	467	1000	168	11	428	28	78	17
17	78	97	273	104	912	1050	150	12	186	20	52	16
18	78	69	344	93	1190	776	109	12	57	16	31	16
19	82	126	402	142	988	449	41	12	69	13	40	16
20	106	247	346	139	784	286	14	14	76	73	51	16
21	150	281	154	454	704	538	12	14	60	108	52	17
22	153	226	515	904	645	1270	12	13	42	94	52	16
23	208	104	1090	727	452	1950	12	12	42	61	32	16
24	342	23	1230	1880	379	1910	12	12	34	34	16	16
25	292	94	1130	1790	342	1670	11	11	20	30	14	16
26	257	196	1070	1080	251	913	11	11	16	25	18	18
27	522	253	940	540	226	563	11	12	16	16	59	66
28	68	270	421	437	226	542	11	12	16	210	118	66
29	59	267	170	223	---	407	11	12	162	883	65	66
30	168	163	145	187	---	362	11	12	324	1140	36	65
31	566	---	145	232	---	315	---	33	---	782	29	---
TOTAL	4664	8570	12016	12571	14666	22358	5408	383	5445	7947	4166	1791
MEAN	150	286	388	406	524	721	180	12.4	182	256	134	59.7
MAX	566	936	1230	1880	1190	1950	602	33	916	1250	612	409
MIN	34	23	91	90	226	142	11	11	11	13	14	16

CAL YR 1981 TOTAL 118751 MEAN 325 MAX 2200 MIN 17 MEAN# 325 CFSM# 1.99 IN# 27.01
WTR YR 1982 TOTAL 99985 MEAN 274 MAX 1950 MIN 11 MEAN# 274 CFSM# 1.68 IN# 22.80

* Adjusted for change in contents in Burnsville Lake.

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).

PERIOD OF RECORD.--April 1974 to September 1978, October 1978 to current year (gage heights, discharge measurements, and annual maximum discharge only).

REMARKS.--Records good. Flow partially regulated since 1968 by five floodwater-detention reservoirs affecting 49.5 mi² (128.2 km²), and since 1979 by Burnsville Lake (station 03151518). Corps of Engineers gage-height telemeter at station.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,900 ft³/s (110 m³/s) Mar. 20, gage height, 10.81 ft (3.295 m); minimum gage height, 3.40 ft (1.036 m) May 29.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.71	6.11	4.11	4.47	4.99	4.64	5.28	3.55	3.66	4.71	5.34	3.77
2	4.08	5.75	4.55	4.46	4.81	4.49	5.17	3.54	3.55	4.33	5.03	3.81
3	4.20	4.60	4.53	4.47	6.09	4.38	5.16	3.53	3.48	4.24	4.45	4.98
4	3.86	4.23	4.64	5.62	6.75	4.36	5.50	3.52	3.54	7.00	4.21	5.29
5	3.72	4.25	4.82	5.55	6.23	4.38	5.68	3.52	4.30	6.90	4.16	4.46
6	3.88	5.13	5.02	5.22	5.69	4.36	5.48	3.52	4.17	5.56	4.02	4.13
7	4.23	5.78	5.11	5.07	5.30	4.87	4.92	3.53	4.04	5.10	4.01	3.94
8	4.24	5.52	4.89	5.09	5.01	5.53	4.89	3.62	4.58	4.38	4.15	3.83
9	4.23	4.66	4.70	5.04	5.15	5.62	4.92	3.64	4.94	4.29	5.85	3.92
10	4.23	4.54	4.57	4.87	5.96	5.85	4.93	3.60	4.98	4.20	5.86	3.87
11	4.23	4.80	4.55	4.36	5.93	6.44	4.90	3.56	5.28	4.09	5.27	3.72
12	4.15	5.01	4.39	4.17	5.39	8.57	4.86	3.54	5.15	3.86	4.84	3.65
13	4.07	4.94	4.22	4.44	5.14	7.71	4.79	3.52	6.30	3.83	4.47	3.64
14	4.02	4.87	4.27	4.53	4.78	7.36	4.66	3.50	6.75	3.67	4.32	3.62
15	4.01	4.65	4.61	4.37	4.94	7.11	4.52	3.48	5.61	3.66	4.18	3.54
16	4.01	4.45	4.86	4.26	6.05	6.95	4.38	3.47	5.25	3.64	4.08	3.56
17	4.01	4.14	4.80	4.18	7.19	7.05	4.39	3.45	4.66	3.57	3.88	3.59
18	4.03	3.99	5.16	4.11	7.03	6.25	4.24	3.43	4.00	3.55	3.79	3.60
19	4.11	4.14	5.22	4.25	6.68	5.44	3.96	3.42	3.97	3.68	3.76	3.61
20	4.21	4.55	5.03	4.33	6.28	7.94	3.78	3.46	4.00	4.99	3.89	3.60
21	4.34	4.70	4.48	5.89	6.09	7.76	3.73	3.50	3.94	4.60	3.92	3.63
22	4.34	4.58	5.89	6.97	5.90	7.02	3.70	3.46	3.82	4.28	3.90	3.65
23	4.53	4.20	7.96	8.38	5.45	7.98	3.66	3.46	3.84	4.04	3.79	3.64
24	5.02	3.78	7.03	8.36	5.19	7.86	3.64	3.46	3.76	3.81	3.65	3.63
25	4.86	4.29	6.60	7.73	5.06	7.41	3.63	3.75	3.60	3.73	3.48	3.63
26	4.81	4.57	6.41	6.54	4.77	6.48	3.63	3.55	3.52	3.69	3.68	3.65
27	6.82	4.69	6.18	5.44	4.66	5.70	3.64	3.51	3.52	3.54	4.04	4.01
28	5.62	4.73	5.20	5.22	4.66	5.59	3.63	3.47	3.53	5.60	4.37	4.12
29	4.96	4.70	4.52	4.74	---	5.23	3.60	3.43	3.91	6.54	4.06	4.07
30	4.86	4.43	4.39	4.51	---	5.10	3.61	4.00	4.96	6.66	3.85	4.03
31	5.55	---	4.38	4.77	---	5.01	---	3.87	---	6.10	3.74	---
MEAN	4.42	4.69	5.07	5.21	5.61	6.14	4.43	3.54	4.35	4.58	4.26	3.87
MAX	6.82	6.11	7.96	8.38	7.19	8.57	5.68	4.00	6.75	7.00	5.86	5.29
MIN	3.71	3.78	4.11	4.11	4.66	4.36	3.60	3.42	3.48	3.54	3.48	3.54
WTR YR 1982 MEAN 4.68 MAX 8.57 MIN 3.42												

LITTLE KANAWHA RIVER BASIN

129

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). WRD WV-82-1: 1979.

GAGE.--Water-stage recorder. Datum of gage is 697.79 ft (212.686 m) National Geodetic Vertical Datum, adjustment of 1912. Prior to Dec. 14, 1934, nonrecording gage at bridge 300 ft (91 m) upstream at same datum. Auxiliary water-stage recorder 2.7 mi (4.3 km) downstream from base gage at datum 700.23 ft (213.430 m) National Geodetic Vertical Datum of 1929. Prior to May 25, 1971, auxiliary nonrecording gage at same site and datum.

REMARKS.--Records good except those for March, April, and May, which are poor. Flow partially regulated since 1968 by five floodwater detention reservoirs affecting 49.5 mi² (128.2 km²), and since 1979 by Burnsville Lake (station 03151518). National Weather Service and Corps of Engineers gage-height telemeters at station.

AVERAGE DISCHARGE.--54 years, 605 ft³/s (17.13 m³/s), 21.18 in/yr (538 mm/yr), unadjusted.

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, 6,610 ft³/s (187 m³/s) Mar. 21, gage height, 19.45 ft (5.928 m), backwater; minimum, 19 ft³/s (0.54 m³/s) Sept. 19-21, gage height, 1.93 ft (0.588 m).

REVISIONS.--The mean daily discharge for Dec. 9, 1978, has been revised to 9,010 ft³/s (255 m³/s).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	967	138	213	770	303	800	66	84	357	732	92
2	37	1070	198	226	527	278	760	59	52	213	411	206
3	145	432	216	219	1040	213	900	53	36	143	300	509
4	94	152	268	1250	2300	204	1340	49	30	2920	132	811
5	56	144	364	1240	1600	206	1060	45	635	2050	120	282
6	37	318	461	767	1150	202	740	43	454	906	104	165
7	93	909	552	596	740	292	620	40	255	593	88	108
8	129	878	449	609	589	740	520	38	213	250	90	83
9	128	442	318	545	492	990	450	48	440	190	781	70
10	124	210	281	431	811	1260	375	60	483	171	1060	75
11	122	302	210	451	1140	1730	390	66	646	139	573	62
12	117	423	230	308	904	4750	375	60	589	100	362	41
13	94	393	140	327	695	2960	350	50	1490	79	194	32
14	79	405	137	443	573	2610	310	41	2020	68	167	30
15	77	274	192	354	512	2320	280	34	1020	48	117	28
16	76	248	345	196	1460	3240	240	30	646	44	110	23
17	76	146	362	180	2910	4640	200	28	443	41	86	21
18	79	98	463	118	2630	1910	180	26	132	154	78	20
19	82	85	602	107	2380	1000	165	23	100	338	64	20
20	112	168	531	159	2070	3970	160	27	101	1390	54	20
21	138	288	317	851	1530	5330	140	33	99	649	198	20
22	188	281	603	3000	1280	2830	123	40	80	239	113	26
23	152	181	3570	5600	993	1600	110	50	71	143	80	27
24	397	102	2370	3470	691	1050	94	61	66	110	65	24
25	453	137	1600	2420	612	800	80	70	54	75	50	21
26	269	254	1370	1860	466	900	72	62	37	56	60	20
27	1790	292	1230	774	352	1050	70	48	32	46	59	46
28	1180	320	807	635	325	960	78	35	30	859	192	122
29	555	300	261	495	---	860	76	30	64	2200	131	113
30	297	270	174	230	---	770	72	134	536	1520	88	88
31	624	---	161	390	---	700	---	173	---	1270	60	---
TOTAL	7830	10489	18920	28464	31542	50668	11130	1622	10938	17361	6719	3205
MEAN	253	350	610	918	1127	1634	371	52.3	365	560	217	107
MAX	1790	1070	3570	5600	2910	5330	1340	173	2020	2920	1060	811
MIN	30	85	137	107	325	202	70	23	30	41	50	20

CAL YR 1981 TOTAL 238292 MEAN 653 MAX 7490 MIN 28 MEAN± 653 CFSM± 1.69 IN± 22.97
WTR YR 1982 TOTAL 198888 MEAN 545 MAX 5600 MIN 20 MEAN± 545 CFSM± 1.41 IN± 19.17

* Adjusted for change in contents in Burnsville Lake.

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 September 1978. Monthly discharge only October to December 1928, published in WSP 1305. October 1978 to current year (gage heights, discharge measurements, and annual maximum discharge only).

REVISED RECORDS.--WSP 1275: 1929(M), 1932-36.

GAGE.--Water-stage recorder. Datum of gage is 652.83 ft (198.983 m) National Geodetic Vertical Datum, adjustment of 1912. Prior to Nov. 21, 1934, nonrecording gage at same site and datum.

REMARKS.--Records good. Flow partially regulated since 1968 by five floodwater detention reservoirs affecting 49.5 mi² (128.2 km²) and since 1979 by Burnsville Lake (station 03151518).

AVERAGE DISCHARGE.--50 years (water years 1929-1978), 1,328 ft³/s (37.61 m³/s), 19.75 in/yr (502 mm/yr), unadjusted.

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, 14,900 ft³/s (422 m³/s) Mar. 21, gage height, 26.57 ft (8.099 m); minimum gage height, 6.39 ft (1.948 m) Sept. 21.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.55	9.29	7.89	8.19	12.07	8.70	11.93	7.09	8.02	8.67	9.59	---
2	6.61	9.92	7.52	8.68	10.82	8.57	11.15	7.07	7.41	8.11	8.71	*8.98
3	6.59	9.13	7.96	8.66	10.68	8.41	11.67	7.05	7.09	7.63	8.27	9.07
4	7.09	8.04	8.01	11.20	14.98	8.25	13.53	7.01	6.92	11.15	7.71	10.14
5	6.95	7.46	8.36	14.04	13.51	8.22	11.64	6.95	9.96	12.72	7.24	8.86
6	6.76	7.98	9.08	11.22	11.86	8.25	11.48	6.92	13.19	10.52	7.15	7.92
7	6.64	9.67	9.22	10.22	10.43	8.36	10.82	6.89	9.87	9.10	7.02	7.37
8	6.80	9.94	9.05	10.35	9.72	9.71	10.20	6.96	8.68	8.52	6.95	7.13
9	7.13	9.24	8.66	9.97	9.68	10.73	10.15	7.29	8.58	7.85	7.81	6.92
10	7.11	8.27	8.33	9.27	10.81	12.79	10.14	7.32	9.25	7.93	10.09	6.81
11	7.09	7.89	8.09	8.57	11.14	14.43	9.90	7.14	10.44	7.66	9.31	6.82
12	7.08	8.16	7.90	8.79	10.51	21.91	9.66	7.01	9.74	7.49	8.58	6.76
13	7.07	8.36	7.84	8.29	10.02	17.75	9.44	6.93	10.56	7.16	8.07	6.65
14	6.94	8.24	7.53	8.32	9.48	16.08	9.18	6.87	15.29	6.96	7.54	6.58
15	6.85	8.15	7.51	8.54	9.76	14.62	8.86	6.81	11.79	6.87	*7.43	6.54
16	6.82	7.84	7.94	8.28	14.23	16.96	8.58	6.76	9.88	6.75	---	6.51
17	6.80	7.69	8.40	8.80	18.76	21.59	8.34	6.71	9.20	6.69	---	6.46
18	6.83	7.34	8.54	8.89	15.85	15.00	8.40	6.66	8.45	6.65	---	6.43
19	6.85	7.12	9.31	8.49	14.43	12.06	8.18	6.64	7.71	7.61	---	6.41
20	6.88	7.06	9.25	8.39	14.35	18.55	7.86	6.65	7.44	8.45	---	6.40
21	7.02	7.55	8.85	9.42	13.35	25.99	7.68	7.15	7.36	11.10	---	6.41
22	7.17	7.95	8.59	16.02	12.55	18.82	7.55	7.28	7.26	8.96	---	6.44
23	7.48	7.87	16.52	23.94	11.49	14.10	7.43	7.05	7.07	8.00	---	6.45
24	7.57	7.59	16.06	19.64	10.60	13.56	7.33	6.90	6.96	7.52	---	6.50
25	8.43	7.64	12.51	14.07	10.04	12.99	7.28	6.83	6.91	7.24	---	6.53
26	8.33	8.37	11.47	12.79	9.38	16.07	7.28	6.92	6.83	6.99	*6.77	6.54
27	11.33	8.39	10.97	10.42	8.94	14.14	7.35	6.97	6.73	6.83	6.81	6.58
28	12.66	8.33	10.41	9.90	8.82	12.12	7.33	6.89	6.66	7.07	6.93	6.91
29	9.82	8.24	8.95	9.62	---	10.98	7.26	6.81	6.70	12.32	7.62	7.51
30	8.80	8.11	8.32	8.99	---	10.33	7.17	8.26	7.94	11.11	*7.29	7.33
31	8.54	---	8.02	9.40	---	10.52	---	9.27	---	10.57	---	---
MEAN	7.57	8.23	9.26	10.69	11.72	13.57	9.16	7.07	8.66	8.46	---	---
MAX	12.66	9.94	16.52	23.94	18.76	25.99	13.53	9.27	15.29	12.72	---	---
MIN	6.55	7.06	7.51	8.19	8.82	8.22	7.17	6.64	6.66	6.65	---	---

*Partial day.

LITTLE KANAWHA RIVER BASIN

131

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, occasional discharge measurements, and annual maximum discharge only).

REVISED RECORDS.--WSP 953: 1929-31, 1938(M), 1939. WSP 1275: 1950.

GAGE.--Water-stage recorder. Datum of gage is 657.85 ft (200.513 m) National Geodetic Vertical Datum, adjustment of 1912. Prior to June 16, 1966, nonrecording gage, crest-stage gage Nov. 4, 1946, to June 15, 1966, on bridge 800 ft (244 m) upstream at same datum.

REMARKS.--Records good. No gage-height record Apr. 19 to Mar. 18.

AVERAGE DISCHARGE.--41 years (water years 1929-31, 1938-75), 258 ft³/s (7.307 m³/s), 17.09 in/yr (434 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,200 ft³/s (572 m³/s) Apr. 16, 1939, gage height, 30.3 ft (9.24 m), from floodmarks, site then in use, from rating curve extended above 13,000 ft³/s (370 m³/s); no flow at times during 1930, 1931, 1954, 1957, 1959, 1960.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,270 ft³/s (121 m³/s) Mar. 12, gage height, 16.53 ft (5.038 m); minimum gage height, 3.31 ft (1.009 m) Sept. 13.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.54	4.01	3.97	4.77	7.76	4.89	7.31	---	3.95	4.53	3.62	3.50
2	3.54	3.91	3.98	5.07	6.26	4.78	6.41	---	3.75	4.04	3.55	3.50
3	3.52	3.85	3.97	4.93	6.41	4.73	7.63	---	3.64	3.86	3.51	3.58
4	3.76	3.80	3.94	7.58	7.39	4.67	7.65	---	3.60	3.93	3.50	3.65
5	3.71	3.81	4.15	6.97	6.65	4.70	6.43	---	5.34	4.37	3.46	3.63
6	3.66	4.87	4.51	5.90	6.09	4.66	6.29	---	5.18	4.11	3.44	3.54
7	3.62	4.96	4.41	5.57	5.53	5.01	5.95	---	4.35	3.86	3.42	3.47
8	3.72	4.46	4.31	5.46	5.23	5.53	5.71	---	4.03	3.87	3.71	3.42
9	3.85	4.19	4.23	5.20	6.22	6.14	5.80	---	3.87	4.68	3.83	3.40
10	3.73	4.05	4.12	4.77	7.39	7.63	5.84	---	5.34	4.41	3.86	3.37
11	3.66	3.94	3.99	4.80	6.31	8.73	5.72	---	6.37	4.02	3.82	3.36
12	3.62	3.87	3.93	4.51	5.90	13.40	5.57	---	5.19	4.48	3.72	3.36
13	3.59	3.82	3.91	4.40	5.74	9.08	5.42	---	6.14	3.93	3.64	3.33
14	3.60	3.78	3.87	4.42	5.40	8.12	5.24	---	6.65	3.76	3.57	3.34
15	3.56	3.74	3.89	4.35	6.08	7.80	5.01	---	5.41	3.65	3.51	3.37
16	3.49	3.72	4.11	4.27	9.13	9.07	4.87	---	4.70	3.58	3.46	3.37
17	3.49	3.70	4.17	4.19	10.59	8.83	4.78	---	4.38	3.53	3.43	3.37
18	3.47	3.69	4.60	4.01	7.97	7.04	4.77	*3.58	4.17	3.50	3.40	3.37
19	3.48	3.69	5.11	4.02	7.57	6.31	*4.64	3.58	3.98	3.59	3.38	3.37
20	3.59	3.71	4.77	4.12	7.32	10.86	---	3.58	3.86	3.97	3.36	3.37
21	3.91	3.77	4.68	7.04	7.33	9.39	---	3.59	3.78	4.22	3.39	3.39
22	3.76	3.92	5.56	10.30	6.94	7.14	---	3.61	3.72	3.90	3.41	3.48
23	3.75	3.87	10.46	13.11	6.38	6.31	---	3.65	3.66	3.72	3.40	3.47
24	4.03	3.88	6.96	7.97	6.04	5.89	---	3.63	3.62	3.62	3.43	3.44
25	4.13	4.92	5.81	6.21	5.63	5.71	---	3.60	3.61	3.54	3.51	3.43
26	4.00	4.81	5.31	5.71	5.23	8.54	---	3.60	3.62	3.49	3.53	3.44
27	5.93	4.49	4.98	5.27	5.10	7.62	---	3.57	3.71	3.45	3.59	3.56
28	5.70	4.31	4.75	5.40	5.08	6.57	---	3.57	3.60	4.93	3.76	3.59
29	4.85	4.13	4.56	5.21	---	6.10	---	3.57	4.17	4.24	3.81	3.67
30	4.42	4.01	4.36	5.08	---	5.79	---	4.13	5.16	3.91	3.64	3.61
31	4.18	---	4.21	6.06	---	6.27	---	4.57	---	3.74	3.55	---
MEAN	3.90	4.06	4.70	5.70	6.60	7.01	---	---	4.42	3.95	3.56	3.46
MAX	5.93	4.96	10.46	13.11	10.59	13.40	---	---	6.65	4.93	3.86	3.67
MIN	3.47	3.69	3.87	4.01	5.08	4.66	---	---	3.60	3.45	3.36	3.33

* Partial day.

LITTLE KANAWHA RIVER BASIN

03155000 LITTLE KANAWHA RIVER AT PALESTINE, WV
(National stream-quality accounting network station)

LOCATION.--Lat 39°03'35", long 81°23'25", Wirt County, Hydrologic Unit 05030203, on left bank at end of Washington Street in Elizabeth, 1.0 mi (1.6 km) upstream from Tucker Creek, 2.3 mi (3.7 km) northeast of Palestine, 2.4 mi (3.9 km) upstream from old lock 3, and at mile 27.9 (44.9 km).

DRAINAGE AREA.--1,515 mi² (3,924 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1915 to September 1922 (gage heights only), July to September 1939 (fragmentary), October 1939 to current year. Monthly discharge only October 1939 to September 1941, published in WSP 1305.

REVISED RECORDS.--WSP 953: 1940(M).

GAGE.--Water-stage recorder. Datum of gage is 585.51 ft (178.463 m) National Geodetic Vertical Datum of 1929. Prior to Feb. 17, 1950, water-stage recorders or nonrecording gages at old locks 3 and 4 at various datums. Auxiliary water-stage recorder 3.0 mi (4.8 km) upstream from base gage at old lock 4 at datum 596.08 ft (181.685 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. Flow partially regulated since 1968 by five floodwater-detention reservoirs affecting 49.5 mi² (128.2 km²), and since 1979 by Burnsville Lake (station 03151518). Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--43 years, 2,114 ft³/s (59.87 m³/s), 18.95 in/yr (481 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 50,700 ft³/s (1,440 m³/s) Mar. 7, 1967, gage height, 39.14 ft (11.930 m), backwater, from rating curve extended above 39,000 ft³/s (1,100 m³/s); minimum, 0.6 ft³/s (.017 m³/s) July 14, 1959 (filling pool above old lock 3).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 17, 1939, reached a stage of 32.25 ft (9.830 m), from flood-marks at old lock 4, discharge about 53,000 ft³/s (1,500 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 21,100 ft³/s (598 m³/s) Mar. 21, gage height, 24.60 ft (7.498 m); minimum, 43 ft³/s (1.2 m³/s) Sept. 21, 22; minimum gage height, 13.70 ft (4.176 m) Oct. 3, 4, Sept. 21, 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	671	529	613	4890	1000	4130	299	1100	603	1490	239
2	60	940	490	777	3680	928	3620	274	660	786	1070	188
3	55	1250	395	941	2560	860	3320	253	418	621	779	704
4	52	934	362	1500	4480	790	5600	237	310	511	593	845
5	57	596	484	4970	6040	732	4340	223	1820	2920	475	1230
6	92	390	550	3790	4060	716	3160	206	4120	2410	310	800
7	140	532	916	2220	2720	748	2950	191	2590	1410	223	508
8	110	1320	983	1810	1820	860	2240	198	1400	892	198	330
9	89	1330	916	1750	1520	1720	1960	277	858	883	181	227
10	77	976	756	1350	1960	3320	1990	338	1100	681	232	179
11	136	667	627	740	2660	5360	1890	336	1790	543	1180	140
12	161	473	543	654	2430	12800	1720	295	1920	725	969	113
13	154	468	451	733	2000	14100	1560	243	1750	609	706	104
14	146	548	440	662	1650	8910	1400	202	4420	374	541	101
15	140	544	364	605	1550	7120	1210	175	4350	253	389	92
16	129	526	300	644	4520	8480	1030	155	2160	192	288	80
17	113	438	350	599	11400	15000	916	136	1540	159	239	68
18	101	383	597	488	10300	10600	820	122	1150	133	192	57
19	95	315	696	435	6570	5000	810	113	812	122	168	52
20	95	244	1030	398	6470	8220	728	119	545	194	148	48
21	95	194	806	393	5530	19100	632	157	395	1050	127	45
22	101	183	849	1980	4760	16300	538	179	321	1750	120	45
23	143	340	4090	14400	3660	7040	464	227	280	893	247	48
24	198	440	8960	15900	2740	4630	404	276	240	557	348	45
25	253	395	4810	7560	2060	4000	361	227	196	380	229	48
26	475	440	2760	4120	1680	5640	348	183	168	278	169	50
27	651	628	2160	3380	1330	7740	371	154	177	214	148	60
28	2910	689	1860	2100	1100	4650	394	164	156	174	135	65
29	2420	639	1550	1800	---	3140	370	194	314	644	135	74
30	1300	597	954	1560	---	2330	337	502	595	2610	184	107
31	861	---	696	1390	---	2200	---	892	---	1740	293	---
TOTAL	11474	18090	41274	80262	106140	184034	49613	7547	37655	25311	12506	6692
MEAN	370	603	1331	2589	3791	5937	1654	243	1255	816	403	223
MAX	2910	1330	8960	15900	11400	19100	5600	892	4420	2920	1490	1230
MIN	52	183	300	393	1100	716	337	113	156	122	120	45

CAL YR 1981 TOTAL 723188 MEAN 1981 MAX 23400 MIN 48 MEAN# 1981 CFSM# 1.31 IN# 17.76
WTR YR 1982 TOTAL 580598 MEAN 1591 MAX 19100 MIN 45 MEAN# 1591 CFSM# 1.05 IN# 14.26

* Adjusted for change in contents in Burnsville Lake.

LITTLE KANAWHA RIVER BASIN

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03155000 LITTLE KANAWHA RIVER AT PALESTINE, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960-61, 1965-67, 1976 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS NONCAR- BONATE (MG/L AS CAC03)	
OCT 13...	1600	152	120	7.4	16.0	--	--	--	--	--	--	
NOV 17...	1045	435	159	7.0	6.5	4.5	7.7	14	4	40	22	
JAN 18...	1730	455	180	7.0	1.5	--	--	--	--	--	--	
FEB 03...	1300	2430	128	7.3	4.0	45	12.7	670	3200	39	--	
MAR 15...	1630	6740	160	7.3	4.0	--	--	--	--	--	--	
23...	1100	6630	92	6.3	10.0	140	--	1000	840	31	17	
MAY 18...	1250	120	150	--	17.0	--	--	--	--	--	--	
19...	1430	110	200	6.9	25.0	3.5	7.2	K5	K7	63	20	
JUL 20...	1025	161	130	7.4	14.5	--	--	--	--	--	--	
28...	1500	172	141	6.8	26.0	70	7.1	390	1100	50	16	
SEP 13...	1400	126	121	6.4	27.0	34	7.5	62	44	46	6.0	
DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SI02)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)
NOV 17...	12	2.6	5.1	1.8	19	18	9.3	<.1	3.9	80	64	93.9
FEB 03...	11	3.0	5.5	1.3	22	22	7.6	<.1	5.2	79	69	518
MAR 23...	9.0	2.2	2.7	1.2	15	18	2.9	<.1	6.1	60	51	1074
MAY 19...	18	4.6	9.0	1.8	44	31	9.7	<.1	.7	127	101	37.7
JUL 28...	15	3.2	5.9	2.0	35	17	8.3	.1	5.8	92	79	42.7
SEP 13...	13	3.3	7.1	1.9	40	18	8.5	.1	5.2	81	81	27.5
DATE	NITRO- GEN, NO2+N03 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA)
NOV 17...	.22	.020	<.10	.010	<.010	<.010	--	--	--	--	--	--
FEB 03...	.51	.030	.36	.060	.020	<.010	--	1	1	0	100	60
MAR 23...	.29	.030	.46	.050	.050	.020	.06	2	1	1	100	60
MAY 19...	<.10	.010	.32	<.010	<.010	<.010	--	--	--	--	--	--
JUL 28...	.39	.070	.50	.100	.010	<.010	--	2	1	1	100	40
SEP 13...	.21	.070	1.10	.050	<.010	<.010	--	1	0	1	100	30

K Results based on colony count outside the acceptable range (non-ideal colony count).

LITTLE KANAWHA RIVER BASIN

03155000 LITTLE KANAWHA RIVER AT PALESTINE, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)
NOV 17...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 03...	45	<1	1	10	0	10	1	<1	13	7	6	1400
MAR 23...	45	3	<1	40	10	30	5	<1	9	6	3	4900
MAY 19...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 28...	63	1	<1	20	10	10	4	<1	15	10	5	3200
SEP 13...	67	<1	<1	10	0	10	<1	<1	13	12	1	1600
DATE	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)
NOV 17...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 03...	1300	69	13	10	3	80	60	17	.1	--	<.1	6
MAR 23...	4800	140	4	2	2	220	200	19	<.1	--	<.1	9
MAY 19...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 28...	3100	120	10	9	1	330	150	180	.2	.0	.2	11
SEP 13...	1600	11	6	5	1	270	90	180	<.1	--	<.1	4
DATE	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 17...	--	--	--	--	--	--	--	--	--	8	9.4	76
FEB 03...	5	1	<1	<1	<1	<1	20	--	<4	49	321	69
MAR 23...	7	2	<1	<1	<1	1	30	0	32	184	3290	96
MAY 19...	--	--	--	--	--	--	--	--	--	19	5.6	19
JUL 28...	8	3	<1	<1	<1	<1	50	--	<4	79	37	75
SEP 13...	3	1	<1	<1	<1	<1	10	--	<4	34	12	92

LITTLE KANAWHA RIVER BASIN

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03155500 HUGHES RIVER AT CISCO

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) National Geodetic Vertical Datum, adjustment of 1912. Prior to Sept. 30, 1931, nonrecording gage at site 0.9 mi (1.4 km) downstream and Mar. 5, 1939, to Sept. 30, 1945, nonrecording gage at site 1.0 mi (1.6 km) downstream, both at datum 2.56 ft (0.780 m) lower. Oct. 1, 1945, to June 30, 1946, nonrecording gage at bridge across mouth of North Fork at present datum.

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

AVERAGE DISCHARGE.--47 years, 580 ft³/s (16.43 m³/s) 17.43 in/yr (443 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, 10,900 ft³/s (309 m³/s) Mar. 21, gage height, 19.50 ft (5.944 m), no other peak above base of 9,500 ft³/s (270 m³/s); minimum, 1.2 ft³/s (0.034 m³/s) Oct. 13, 14; minimum gage height, 1.65 ft (0.503 m) Oct. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	45	41	115	2900	162	546	90	469	191	29	55
2	4.2	34	39	182	1080	146	576	84	238	106	23	175
3	3.4	27	49	203	679	137	658	78	156	354	21	493
4	2.4	23	79	726	1390	131	1450	73	112	2360	17	402
5	1.4	20	85	1110	1070	138	851	68	1730	691	14	153
6	1.5	24	125	457	626	223	715	63	2620	315	12	80
7	2.1	27	155	294	390	234	772	66	980	184	11	50
8	2.7	50	114	316	257	327	689	71	528	134	11	35
9	2.6	70	88	279	200	441	596	116	444	120	26	27
10	2.6	55	71	195	135	887	550	207	696	119	46	22
11	1.6	42	57	175	140	1580	460	211	796	98	38	18
12	1.4	34	47	135	147	4540	401	167	542	80	43	15
13	1.2	29	39	96	153	2560	355	128	317	68	33	13
14	1.2	25	35	82	166	2320	318	96	580	53	25	11
15	1.4	22	33	72	225	1600	267	72	490	44	20	11
16	1.4	20	32	64	1750	2480	230	56	278	35	18	10
17	1.5	19	33	59	2690	5780	218	40	1700	29	15	8.8
18	1.8	17	35	56	1670	2100	216	33	818	25	13	7.3
19	2.0	16	39	51	1090	960	205	31	328	22	10	6.5
20	2.2	17	45	52	1370	2840	183	41	197	46	8.8	5.8
21	2.4	18	53	63	968	8380	168	172	143	210	19	5.4
22	2.2	21	61	339	707	3390	153	172	106	241	81	5.8
23	5.9	23	966	4830	499	1260	134	123	81	115	63	6.6
24	5.6	28	1290	3620	396	813	120	460	65	67	34	7.6
25	15	42	431	772	319	632	111	461	54	45	27	7.9
26	14	72	246	452	233	1030	112	239	47	33	21	9.1
27	23	110	170	415	187	1270	121	153	60	26	20	19
28	48	78	134	311	175	824	126	117	112	23	23	29
29	105	59	117	262	---	632	118	100	166	33	21	58
30	85	47	106	219	---	522	101	2580	338	39	19	59
31	60	---	93	424	---	480	---	1600	---	37	17	---
TOTAL	409.7	1114	4908	16426	21612	48819	11520	7968	15191	5943	778.8	1805.8
MEAN	13.2	37.1	158	530	772	1575	384	257	506	192	25.1	60.2
MAX	105	110	1290	4830	2900	8380	1450	2580	2620	2360	81	493
MIN	1.2	16	32	51	135	131	101	31	47	22	8.8	5.4
CFSM	.03	.08	.35	1.17	1.71	3.49	.85	.57	1.12	.43	.06	.13
IN.	.03	.09	.40	1.35	1.78	4.02	.95	.66	1.25	.49	.06	.15

CAL YR 1981 TOTAL 176937.4 MEAN 485 MAX 6450 MIN 1.2 CFSM 1.07 IN 14.56
WTR YR 1982 TOTAL 136495.3 MEAN 374 MAX 8380 MIN 1.2 CFSM .83 IN 11.23

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) 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.

AVERAGE DISCHARGE.--8 years, 60,930 ft³/s (1,726 m³/s), 21.05 in/yr (535 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 390,000 ft³/s (11,000 m³/s) Jan. 27, 1978; minimum daily, 5,100 ft³/s (144 m³/s) Sept. 7, 8, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 266,000 ft³/s (7,530 m³/s) Mar. 18; minimum daily, 6,150 ft³/s (174 m³/s) Sept. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13400	68900	30300	49900	189000	51200	84400	19600	50300	53800	21700	8870
2	12600	59000	36200	47600	215000	44800	89500	23300	51600	41100	16000	15400
3	28900	52100	41600	60000	160000	45500	94900	18800	38600	38300	15800	28700
4	33500	40500	48400	95000	138000	46400	99700	16300	29800	78300	15000	18300
5	28800	36800	42400	113000	137000	75800	100000	15900	69800	84300	11500	15600
6	27900	36300	41300	108000	132000	80300	88900	15200	80200	59700	10600	13900
7	28100	41000	41000	89500	114000	71800	88500	13700	84400	50500	8630	12600
8	26500	44500	41500	81300	104000	73600	91700	16200	81500	37500	15400	11800
9	28000	50200	49200	65600	85300	63600	85500	16200	73000	44200	13700	10700
10	29700	50400	55100	53700	81200	58900	80400	23200	68300	30600	22800	6260
11	29100	41700	51300	33100	70600	68500	87100	21200	56400	26400	22800	6340
12	24600	37300	50000	32000	65900	114000	80000	20900	48900	20900	23500	7300
13	23300	32100	43800	35300	61800	221000	68300	19400	42900	21000	11500	7690
14	23300	28700	40600	40000	59400	166000	75200	20200	41500	19800	11700	7320
15	20500	27100	40800	41300	54700	167000	59700	15700	62400	18400	11100	10300
16	14500	24000	40400	28800	71800	170000	56200	13400	55300	18300	7400	9570
17	16400	22000	36300	23300	102000	237000	54000	14700	60500	16300	7760	9230
18	12300	19400	34900	27400	136000	266000	55000	13600	75200	14600	15000	8280
19	12600	20400	31800	25700	141000	207000	50400	14000	67200	12100	9210	6150
20	19500	24900	29500	32400	127000	188000	49300	16100	54600	16500	6750	9120
21	18500	36000	29700	31200	128000	228000	42800	23700	47600	17700	10600	9440
22	16200	40300	27300	29300	125000	213000	40800	19600	41000	19100	6370	23200
23	17800	43800	62500	100000	110000	187000	28800	19800	36800	23500	14600	18500
24	21600	40900	127000	195000	101000	161000	26400	43000	34100	17400	17400	13000
25	23400	40000	144000	162000	94000	131000	30100	54900	28000	14100	17900	11700
26	23800	39600	117000	80600	85900	125000	28500	41100	21500	6850	19800	13900
27	25800	36100	95300	65600	66500	126000	23300	37800	17600	10100	11100	18800
28	78100	31400	84500	61000	57900	111000	26200	35000	15900	11500	12200	20500
29	86900	40500	68400	60000	---	86500	30200	43800	22000	15900	8830	20600
30	79300	39100	56000	64600	---	76400	25300	73800	36200	18100	12000	20800
31	70900	---	52300	81600	---	76700	---	61000	---	25800	10200	---
TOTAL	915800	1145000	1690400	2013800	3014000	3938000	1841100	801100	1493100	882650	418850	393870
MEAN	29540	38170	54530	64960	107600	127000	61370	25840	49770	28470	13510	13130
MAX	86900	68900	144000	195000	215000	266000	100000	73800	84400	84300	23500	28700
MIN	12300	19400	27300	23300	54700	44800	23300	13400	15900	6850	6370	6150

CAL YR 1981 TOTAL 21914420 MEAN 60040 MAX 305000 MIN 8700
WTR YR 1982 TOTAL 18547670 MEAN 50820 MAX 266000 MIN 6150

KANAWHA RIVER BASIN

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03176500 NEW RIVER AT GLEN LYN, VA
(National stream-quality accounting network station)

LOCATION.--Lat 37°22'22", long 80°51'39", Giles County, Hydrologic Unit 05050002, on right bank at upstream side of bridge on U.S. Highway 460 at Glen Lyn, 0.3 mi (0.5 km) upstream from East River, and 6.3 mi (10.1 km) downstream from Wolf Creek.

DRAINAGE AREA.--3,768 mi² (9,759 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1927 to current year.

REVISED RECORDS.--WSP 758: Drainage area. WSP 1305: 1928(M), 1930(M).

GAGE.--Water-stage recorder. Datum of gage is 1,490.24 ft (454.225 m) National Geodetic Vertical Datum of 1929. Aug. 11, 1927, to Oct. 16, 1934, on left bank just upstream from highway bridge at same datum, and Oct. 17, 1934, to June 16, 1939, on left bank 200 ft (61 m) upstream from highway bridge at same datum.

REMARKS.--Records good. Flow regulated since 1939 by Claytor Reservoir (station 03169000) 55 mi (88 km) above station. Corps of Engineers satellite and gage-height telemeters at station.

AVERAGE DISCHARGE.--55 years, 4,986 ft³/s (141.2 m³/s), 17.97 in/yr (456 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 226,000 ft³/s (6,400 m³/s) Aug. 14, 1940, gage height, 27.50 ft (8.382 m), from rating curve extended above 89,000 ft³/s (2,500 m³/s) on basis of slope-area measurement of peak flow; minimum, 717 ft³/s (20.3 m³/s) Jan. 5, 1981, result of freezeup; minimum daily, 820 ft³/s (23.2 m³/s) Sept. 8, 1930; minimum gage height, 2.10 ft (0.640 m) Sept. 8, 1930.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 50,400 ft³/s (1,430 m³/s) Feb. 4, gage height, 12.14 ft (3.700 m); minimum, 905 ft³/s (25.6 m³/s) Oct. 25, Dec. 11, gage height, 3.01 ft (0.917 m); minimum daily, 950 ft³/s (26.9 m³/s) Dec. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1040	1430	1830	3500	3270	3730	4840	7510	3210	4180	1500	1960
2	1110	1170	1680	5000	7570	5180	4410	6570	5540	3620	2000	3460
3	1130	1900	1630	8000	19000	5750	4530	4570	5990	3180	3500	4420
4	1050	1190	1930	15000	40800	8070	2040	5190	4620	1600	4000	3570
5	1040	1280	1730	28000	21700	9550	1870	5670	6260	1490	3600	1240
6	1130	1310	1200	16100	13900	9400	5420	5360	3930	1420	2680	1170
7	1110	1310	1080	11100	11700	11600	3940	3690	3730	2480	3420	1160
8	1050	1040	1900	9470	9080	14800	3570	3070	6120	2310	1820	2130
9	1070	991	1500	6680	9870	13300	5960	1810	4790	2850	1720	1980
10	1130	1140	1500	5530	7130	11600	4050	3210	4810	4080	4770	1980
11	1070	1310	1300	4000	6180	10200	1950	3620	7030	2260	4450	1920
12	991	1200	1200	3000	4910	8810	2540	4380	7720	2610	4040	1300
13	1060	1190	950	1900	4730	6300	4410	4050	14500	4540	3660	1040
14	1060	1280	1400	1800	4620	6500	4170	3010	16100	6020	3910	1580
15	1050	1000	1900	2500	3340	5780	4090	2750	11500	6030	1590	1640
16	1050	1030	3000	2500	6170	11600	5770	1500	8490	7150	1300	1520
17	1110	1190	3500	2700	12700	8390	4410	1420	6150	5930	2390	2060
18	1060	1160	3200	3500	15800	6910	1960	3450	5870	2680	2410	2140
19	1010	1200	2500	4500	13500	6760	2160	3650	4600	1930	2000	1230
20	1130	1220	1300	3800	12000	8720	4060	3380	2260	3470	2420	1050
21	1040	1260	1100	8000	11100	8870	4210	4130	1960	4400	2260	2080
22	981	991	1600	12000	7440	9640	4470	4810	4340	4740	1390	1510
23	981	991	2300	11000	8280	10700	3890	5230	4010	4310	1240	1610
24	1040	1370	3500	3500	6780	8510	3960	3780	3960	3920	2360	1210
25	981	1800	6000	6000	5900	7710	1610	6870	3850	1650	2420	1420
26	952	1800	4500	7000	5710	6280	3480	6130	4020	1680	2130	1290
27	1750	1030	2600	6360	6140	6910	7680	7910	1770	4340	2170	1770
28	8080	1830	2700	5520	7090	4520	13400	7260	1730	3920	2320	2110
29	5990	1130	2900	3700	---	4010	12900	7450	4280	3410	1370	2360
30	8630	1030	3100	4030	---	5300	9580	4900	3670	1970	1290	2240
31	2660	---	3300	4430	---	5720	---	6100	---	4000	2230	---
TOTAL	49940	37753	69836	210520	287210	252520	141360	142630	166810	110170	78360	58150
MEAN	1611	1258	2253	6791	10260	8146	4712	4601	5560	3554	2526	1938
MAX	8080	1900	6000	28000	40800	14800	13400	7910	16100	8030	4770	5460
MIN	982	991	950	1800	3270	3730	1610	1420	1730	1420	1240	1040
(*)	+13	-121	+114	+14	-50	.00	+27	+46	-81	+19	+45	-35
MEAN#	1624	1137	2367	6805	10210	8146	4739	4647	5479	3573	2573	1903
CFSM#	.43	.30	.63	1.81	2.71	2.16	1.26	1.23	1.45	.95	.68	.51
IN#	.50	.34	.72	2.08	2.82	2.49	1.40	1.42	1.62	1.09	.79	.56
CAL YR 1981 TOTAL	1096549			3004		25700	MIN 871	MEAN# 3001	CFSM# 0.80	IN# 10.81		
WTR YR 1982 TOTAL	1695259			4398		40800	MIN 950	MEAN# 4398	CFSM# 1.17	IN# 15.85		

* Change in contents, equivalent in cubic feet per second, in Claytor Reservoir; furnished by Appalachian Power Company.

Adjusted for change in contents.

KANAWHA RIVER BASIN

03176500 NEW RIVER AT GLEN LYN, VA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1931, 1950, 1952, 1955-56, 1965 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April 1968 to current year.

WATER TEMPERATURES: October 1964 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE (water years 1968-71, 1973-82): Maximum, 350 micromhos Nov. 6, 1968; minimum, 70 micromhos Mar. 26, 27, 1979.

WATER TEMPERATURES (water years 1964-71, 1973-82): Maximum, 29.0°C July 10, 1973, July 14, 19, 21, 1977; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 285 micromhos Dec. 13; minimum daily, 102 micromhos June 14.

WATER TEMPERATURES: Maximum daily, 27.5°C July 22; minimum, 1.5°C Jan. 11.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

		STREAM- FLOW, INSTANTANEOUS (CFS)	SPE- CIFIC CON- DUCTANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, U./ UM-MF (COLS./ 100 ML)	STREP- TOCOCCI, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)	
DATE	TIME												
NOV													
03...	1000	3530	197	7.5	14.0	1.5	9.1	570	28	81	20	18	
JAN													
20...	1000	7670	140	7.4	1.0	4.0	12.9	57	510	53	0	13	
MAR													
23...	0920	10400	130	7.3	9.0	3.0	10.8	57	580	57	6	14	
MAY													
12...	1155	5500	135	8.3	19.0	1.0	9.0	24	100	54	0	13	
JUL													
07...	1145	3030	180	8.5	25.5	2.4	8.3	420	390	80	17	19	
SEP													
01...	0900	1930	190	8.1	22.0	2.0	5.4	60	2200	61	21	20	
DATE		MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, DIS- SOLVED (MG/L AS Na)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CaCO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)
NOV													
03...		8.7	4.0	2.4	61	21	5.3	.1	5.8	105	103	.72	.050
JAN													
20...		4.9	4.0	2.0	43	13	7.1	.1	6.2	113	77	.82	.100
MAR													
23...		5.4	3.1	1.4	51	11	4.4	<.1	6.7	84	77	.81	.050
MAY													
12...		5.2	4.4	1.2	48	10	4.0	<.1	5.1	74	72	.39	.030
JUL													
07...		7.0	3.5	1.3	63	16	4.0	.1	5.3	88	95	1.1	.150
SEP													
01...		7.5	4.5	1.7	60	21	5.3	.1	6.2	154	102	1.7	.150

KANAWHA RIVER BASIN

03176500 NEW RIVER AT GLEN LYN, VA--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	216	178	258	220	190	135	143	128	124	125	155	185
2	216	193	250	205	200	143	143	126	132	125	163	150
3	208	188	225	---	---	142	157	124	119	137	120	135
4	208	198	240	205	148	123	157	132	120	135	115	148
5	211	198	240	180	145	124	173	124	130	154	145	157
6	228	189	240	163	165	122	176	120	105	154	145	165
7	221	195	258	170	170	121	139	124	119	172	145	167
8	218	208	250	173	165	117	140	139	117	144	140	171
9	218	218	248	175	160	117	139	150	109	147	160	172
10	214	217	240	180	160	119	135	165	122	138	163	156
11	208	218	245	195	170	125	159	157	124	138	145	153
12	218	216	263	205	165	133	160	130	120	132	140	157
13	218	217	285	200	190	137	149	127	118	120	155	173
14	218	203	280	203	139	142	134	130	102	113	155	180
15	218	203	265	200	140	140	137	157	117	106	160	173
16	218	218	280	223	138	126	142	158	---	109	165	170
17	---	220	240	240	119	125	---	168	125	106	165	170
18	215	218	243	255	109	142	158	160	122	118	175	167
19	218	215	238	220	111	140	161	---	130	130	163	156
20	223	198	220	190	116	---	166	139	---	136	138	176
21	216	200	250	150	116	---	137	140	150	114	163	173
22	218	203	243	150	117	135	137	152	---	114	170	171
23	214	221	205	160	127	136	138	122	131	137	168	173
24	203	221	200	158	122	124	139	157	131	137	197	171
25	216	197	190	165	126	137	162	120	121	139	178	184
26	234	194	183	157	132	138	166	115	141	156	163	---
27	223	198	200	160	129	137	133	110	140	139	165	195
28	173	265	190	170	122	145	127	110	151	112	160	173
29	144	250	200	180	---	159	116	118	146	140	165	166
30	141	265	220	195	---	139	116	116	140	165	183	163
31	176	---	225	200	---	138	---	120	---	143	170	---
MEAN	209	211	236	188	144	133	146	135	126	133	158	167
WTR YR 1982	MEAN	166	MAX	285	MIN	102						

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.0	13.5	7.5	5.0	6.5	6.0	13.0	14.5	21.0	23.0	23.5	22.5
2	18.0	14.0	8.5	5.0	5.5	7.5	14.0	14.5	21.0	23.0	23.5	23.0
3	16.0	14.5	8.0	---	---	8.0	13.0	14.0	22.0	23.5	25.0	23.0
4	14.5	15.0	8.5	5.5	5.0	8.0	11.5	14.5	22.5	23.5	26.0	22.5
5	15.0	15.0	7.5	6.5	5.0	7.5	11.0	16.0	20.0	23.0	26.0	22.0
6	16.0	14.5	6.5	6.0	4.5	7.5	10.5	16.5	22.5	23.5	26.5	21.5
7	16.0	11.5	6.0	7.5	4.0	7.0	8.5	16.5	17.0	25.0	26.0	21.0
8	14.5	9.5	7.5	5.5	4.0	5.0	8.0	17.0	20.5	25.5	26.0	21.5
9	14.5	10.0	6.0	4.0	5.0	6.0	8.5	16.0	21.0	25.0	25.5	21.5
10	14.5	10.0	4.0	2.0	5.0	7.5	8.5	15.5	21.5	25.0	25.0	21.5
11	14.0	10.0	3.5	1.5	5.0	8.0	9.0	16.5	22.0	25.5	24.0	21.5
12	15.0	10.0	4.0	2.0	4.5	9.0	10.0	---	19.0	25.0	24.0	21.5
13	14.5	10.0	5.5	2.0	4.5	10.5	13.0	19.5	17.0	25.0	24.0	22.5
14	15.5	10.5	5.5	2.5	4.0	10.0	12.5	20.0	17.5	24.5	23.5	23.5
15	15.0	10.0	4.5	2.0	5.5	9.0	14.5	21.0	21.5	24.5	23.5	23.5
16	16.0	9.5	5.0	2.0	6.0	8.0	14.5	22.0	---	24.5	24.0	23.0
17	---	11.0	4.5	2.0	7.5	8.0	---	20.5	22.0	25.0	26.5	22.0
18	16.0	11.0	6.0	2.0	7.0	9.5	13.5	22.0	20.5	25.5	25.0	22.5
19	14.0	10.0	4.0	3.0	6.0	10.5	14.0	---	21.0	25.0	25.5	23.0
20	12.0	11.5	3.5	3.0	7.0	---	---	20.0	---	25.5	26.5	21.5
21	11.5	8.5	2.0	4.5	6.5	---	14.5	19.5	22.0	26.5	26.0	20.0
22	13.5	7.5	2.5	4.0	7.0	9.5	13.5	19.5	---	27.5	22.5	19.0
23	15.0	6.0	3.5	4.5	5.5	9.5	12.5	20.5	22.0	26.0	23.5	17.5
24	13.0	6.0	6.0	4.0	8.0	10.0	12.0	19.0	22.0	25.5	23.5	17.5
25	11.5	8.0	6.0	3.0	8.5	10.5	13.0	19.0	23.5	25.5	24.5	18.5
26	12.5	8.5	6.0	3.0	7.0	11.0	14.5	21.0	23.0	25.5	23.0	---
27	14.0	9.0	6.5	2.5	5.5	8.5	15.5	20.5	23.0	26.0	23.0	18.0
28	14.0	9.5	5.5	3.5	4.5	6.0	14.0	20.0	23.0	27.0	22.5	18.5
29	14.5	10.0	6.0	3.5	---	7.5	14.0	20.0	25.0	25.5	21.5	18.5
30	14.5	7.5	4.5	4.5	---	10.0	14.0	20.5	24.0	24.5	21.0	20.0
31	14.0	---	4.5	6.0	---	12.5	---	21.5	---	25.0	24.5	---
MEAN	14.5	10.5	5.5	3.5	5.5	8.5	12.5	18.5	21.5	25.0	24.5	21.0
WTR YR 1982	MEAN	14.5	MAX	27.5	MIN	1.5						

03179000 BLUESTONE RIVER NEAR PIPESTEM, WV

LOCATION (REVISED).--Lat 37°32'38", long 81°00'38", 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 10.6 (17.1 km).

DRAINAGE AREA.--394 mi² (1,020 km²), revised.

PERIOD OF RECORD.--July 1950 to current year.

REVISED RECORDS.--WSP 1705: 1959.

GAGE.--Water-stage and rainfall recorders. Datum of gage is 1,527.35 ft (465.536 m) National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

REMARKS.--Records good except those for January, which are fair. Rainfall records collected at site are contained in files of U.S. Geological Survey with only monthly totals published in this report.

AVERAGE DISCHARGE.--32 years, 472 ft³/s (13.37 m³/s), 16.27 in/yr (413 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,300 ft³/s (547 m³/s) Apr. 5, 1977, gage height, 15.82 ft (4.822 m); minimum, 7.0 ft³/s (0.20 m³/s) Sept. 21-23, 30, 1955, gage height, 1.60 ft (0.488 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1908, that of Apr. 5, 1977.

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	2100	5040 143	9.46 2.883	Feb. 17	2000	5610 159	9.82 2.993
Feb. 3	1600	6300 178	10.18 3.103	June 13	0730	*8400 238	11.13 3.392

Minimum discharge, 36 ft³/s (1.02 m³/s) Oct. 15, gage height, 1.95 ft (0.594 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	78	91	206	240	497	442	364	270	163	291	181
2	43	71	90	398	618	854	400	322	232	138	173	193
3	59	66	85	1600	4190	1120	385	300	195	125	122	140
4	59	62	83	3310	4010	970	364	273	166	150	100	103
5	50	59	86	2210	1880	809	325	237	394	168	88	82
6	46	67	90	1140	1260	686	340	217	590	163	82	70
7	44	76	85	845	895	1270	334	204	421	125	93	63
8	44	71	85	730	638	1920	297	204	302	263	136	58
9	49	63	94	581	741	1350	312	201	394	277	265	54
10	44	58	84	389	1060	1040	307	182	1250	177	263	52
11	41	56	82	222	915	881	287	163	2570	298	166	51
12	42	53	84	210	728	831	275	155	2550	385	120	53
13	41	53	67	170	638	782	266	152	7420	257	99	60
14	40	52	102	150	529	925	254	136	3920	186	85	64
15	37	51	226	130	473	2230	239	123	1840	268	79	61
16	38	50	259	120	716	3140	226	116	1080	193	72	75
17	38	52	215	110	3920	2450	219	110	845	148	105	58
18	38	52	221	100	4110	1550	230	107	543	345	155	50
19	39	52	161	95	2200	1090	208	122	418	210	150	46
20	41	58	120	579	1680	1020	197	125	370	157	96	46
21	45	67	116	3110	1290	1330	201	192	312	177	76	47
22	44	73	501	3090	980	1310	184	163	275	136	63	55
23	44	62	1790	1820	768	1020	175	150	263	172	62	86
24	46	66	1170	1540	674	831	163	735	230	166	68	75
25	57	90	635	1020	594	702	163	832	201	128	88	57
26	71	122	417	715	494	750	827	505	181	109	94	53
27	166	117	318	468	459	674	955	325	234	94	102	76
28	270	125	258	400	466	566	670	275	208	88	77	95
29	177	113	218	330	---	501	529	239	175	122	68	76
30	117	98	182	290	---	459	430	536	163	111	60	60
31	93	---	162	260	---	439	---	385	---	111	76	---
TOTAL	2002	2133	8177	26338	37166	33997	10204	8150	28012	5610	3574	2240
MEAN	64.6	71.1	264	850	1327	1097	340	263	934	181	115	74.7
MAX	270	125	1790	3310	4190	3140	955	832	7420	385	291	193
MIN	37	50	67	95	240	439	163	107	163	88	60	46
CFSM	.16	.18	.67	2.16	3.37	2.78	.86	.67	2.37	.46	.29	.19
IN.†	.19	.20	.77	2.49	3.51	3.21	.96	.77	2.64	.53	.34	.21
IN.*	1.90	.90	2.58	4.24	4.67	1.73	.79	1.97	1.73	1.78	1.53	1.17

CAL YR 1981 TOTAL 134289 MEAN 368 MAX 5360 MIN 34 CFSM .93 IN 12.68
WTR YR 1982 TOTAL 167603 MEAN 459 MAX 7420 MIN 37 CFSM 1.17 IN 15.82

† Runoff.

* Rainfall.

KANAWHA RIVER BASIN

03179800 BLUESTONE LAKE NEAR HINTON, WV

LOCATION (REVISED).--Lat 37°38'26", long 80°53'11", 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 65.7 (105.7 km) and Kanawha River mile 162.3 (261.1 km).

DRAINAGE AREA.--4,608 mi² (11,935 km²), revised.

PERIOD OF RECORD.--July 1949 to current year (monthend contents only). Prior to October 1960 monthend contents published in WSP 1725.

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

REMARKS.--Reservoir is formed by concrete gravity-type dam completed in 1952; closure of dam was made Dec. 18, 1947, and storage began July 1949. Spillway equipped with 21 lift gates 30 ft (9.1 m) wide by 31 ft (9.4 m) high and 16 sluice gates 5.67 ft (1.728 m) wide by 10 ft (3.0 m) high. Total level-pool capacity at elevation 1,520 ft (463.3 m), flood-control pool elevation, is 631,000 acre-ft (778 hm³) of which 600,100 acre-ft (740 hm³) is controlled storage above elevation 1,406 ft (428.5 m), minimum-pool elevation, and 10,000 acre-ft (12.3 hm³) is dead storage below elevation 1,391 ft (424.0 m), stilling-basin weir. Figures given herein represent total contents. This is a multipurpose reservoir.

COOPERATION.--Records were furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 510,900 acre-ft (630 hm³) Apr. 6, 1960, elevation, 1,505.97 ft (459.020 m), results of holding water for cofferdam construction on Ohio River; minimum since initial filling, 16,270 acre-ft (20.1 hm³) Dec. 24, 1979, elevation, 1,396.54 ft (425.665 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 85,420 acre-ft (105 hm³) Feb. 5, elevation, 1,428.54 ft (435.419 m); minimum, 27,530 acre-ft (33.9 hm³) Mar. 1, elevation, 1,404.12 ft (427.976 m).

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)	Change in contents (equivalent in cfs)
Sept. 30.....	1410.06	38460	-	-
Oct. 31.....	1409.98	38310	-150	-2
Nov. 30.....	1406.47	31810	-6500	-109
Dec. 31.....	1405.98	30900	-910	-15
CAL YR 1981			+90	0
Jan. 31.....	1406.50	31860	+960	+16
Feb. 28.....	1405.62	30240	-1620	-29
Mar. 31.....	1408.66	35860	+5620	+91
Apr. 30.....	1410.61	39480	+3620	+61
May 31.....	1410.63	39520	+40	+1
June 30.....	1410.75	39740	+220	+4
July 31.....	1410.77	39780	+40	+1
Aug. 31.....	1410.18	38680	-1100	-18
Sept. 30.....	1410.91	40050	+1370	+23
WTR YR 1982			+1590	+2

KANAWHA RIVER BASIN

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03180000 NEW RIVER AT BLUESTONE DAM, WV

LOCATION (REVISED).--Lat 37°38'43", long 80°53'02", 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.--4,602 mi² (11,919 km²), revised.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1923 to September 1969, October 1975 to current year. Published as "near Hinton" 1923-46. Monthly discharge only October, November 1923, published in WSP 1305.

REVISED RECORDS.--WSP 713: 1925(M). WSP 783: Drainage area. WSP 893: 1930(M), 1935-36(M). WSP 1335: 1929, 1933.

GAGE.--Water-stage recorder. Datum of gage is 1,360.00 ft (414.528 m) National Geodetic Vertical Datum of 1929 (Corps of Engineers datum). Dec. 1, 1923, to Nov. 19, 1934, nonrecording gage and Nov. 20, 1934, to July 1, 1947, water-stage recorder, at site 1.3 mi (2.1 km) upstream at datum 8.49 ft (2.588 m) higher. Auxiliary water-stage recorder 0.7 mi (1.1 km) downstream from present base gage.

REMARKS.--Water-discharge records good. Flow regulated since 1939 by Claytor Lake (station 03169000) and since 1949 by Bluestone Lake (03179800).

AVERAGE DISCHARGE.--53 years, 5,583 ft³/s (158.1 m³/s), 16.47 in/yr (418 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, 35,000 ft³/s (991 m³/s) Feb. 5; maximum gage height, 12.49 ft (3.807 m) Feb. 4 (backwater); minimum daily, 1,140 ft³/s (32.3 m³/s) several days in October.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1160	2400	1840	3080	4260	5400	5600	7780	4350	4440	3360	2370
2	1160	1690	2040	3470	7660	5250	4800	6940	5100	4130	2520	5010
3	1160	1440	2130	5250	18500	6700	4390	5150	5750	3610	3050	4200
4	1160	1480	2160	13300	32400	9680	3920	5450	5050	2370	4050	4000
5	1160	1480	2160	20700	33600	10100	2730	5700	5550	1820	3920	2430
6	1160	1510	1950	29300	28500	9680	4310	5550	5750	1950	3290	1520
7	1180	1510	1620	23000	17500	12100	4900	4480	4310	2590	3120	1200
8	1150	1530	1590	12100	11100	17300	3750	3360	6100	2940	2870	1410
9	1160	1510	1660	9540	9540	16900	4260	2660	5980	2940	2660	1820
10	1160	1510	1870	6460	9820	13900	4530	3290	5700	3820	4530	1980
11	1150	1510	2100	6100	7180	12100	3570	3710	9280	3430	4570	1980
12	1140	1530	1870	3570	6400	10200	3120	3750	11100	2940	4390	1690
13	1140	1530	1590	2870	5300	7240	3220	4050	24300	4350	3960	1530
14	1140	1530	1480	3500	5450	7480	5150	3710	27100	6400	3680	1790
15	1140	1530	1480	3260	3640	9540	4260	3080	18700	7960	2630	1920
16	1140	1510	2310	2980	6940	16000	5860	2560	11500	7840	2130	1640
17	1140	1510	3220	3480	16000	14700	4480	2190	6040	6040	2100	1530
18	1150	1480	3260	1980	22600	10200	3150	2870	6580	3640	2730	1890
19	1150	2520	3680	2840	20600	8140	2840	3640	5550	2280	2400	1870
20	1140	1420	2370	4800	16000	9400	4090	3820	3710	4090	2400	1840
21	1160	1420	2020	7420	13400	11900	4260	4130	2980	4440	2520	1790
22	1160	1440	1620	16100	10200	11100	4530	4570	3960	4310	2190	1820
23	1160	1550	3260	14800	8860	10100	4310	4710	4390	4390	1690	1820
24	1160	1640	6400	11600	7720	10600	4090	5350	4260	4390	1910	1620
25	1160	1920	7240	7000	6700	8560	2560	7300	4260	3190	2130	1510
26	1450	1440	6100	7290	6400	7300	3780	6940	4260	2250	2160	1530
27	2610	1860	4900	6640	6400	7840	8980	7480	3010	3080	2160	1890
28	7620	2230	3430	5550	8200	5650	11400	7000	2250	4180	2410	2070
29	6220	2560	3850	4220	---	4660	13300	7480	3430	3850	2280	2100
30	4310	2340	3430	4050	---	5800	10000	6880	4350	2870	1750	2370
31	3260	---	3260	5000	---	5250	---	5450	---	3430	2010	---
TOTAL	54310	50530	87890	251250	350870	300770	150140	151030	214650	119960	87570	62140
MEAN	1752	1684	2835	8105	12530	9702	5005	4872	7155	3870	2825	2071
MAX	7620	2560	7240	29300	33600	17300	13300	7780	27100	7960	4570	5010
MIN	1140	1420	1480	1980	3640	4660	2560	2190	2250	1820	1690	1200

CAL YR 1981 TOTAL 1349577 MEAN 3697 MAX 24700 MIN 900 MEAN# 3694 CFSM# 0.80 IN# 10.90
WTR YR 1982 TOTAL 1881110 MEAN 5154 MAX 33600 MIN 1140 MEAN# 5156 CFSM# 1.12 IN# 15.21

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

KANAWHA RIVER BASIN
03180000 NEW RIVER AT BLUESTONE DAM, WV--Continued
WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: May 1953 to September 1967, October 1969 to current year.

INSTRUMENTATION.--Temperature recorder since May 24, 1953.

REMARKS.--Interruptions in water-temperature record due to instrument malfunctions.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURES: Maximum, 30.0°C July 17, 1977, July 21, 1980; minimum, 0.0°C on several days during winter months most years.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 27.5°C July 11, 26, 30, 31; minimum recorded, 2.0°C several days in December and January.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

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TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

[illegible]

KANAWHA RIVER BASIN

03180500 GREENBRIER RIVER AT DURBIN, WV

LOCATION (REVISED).--Lat 38°32'37", 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 153.4 (246.8 km).

DRAINAGE AREA.--133 mi² (344 km²), revised.

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

GAGE.--Water-stage recorder. Datum of gage is 2,699.71 ft (822.872 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor.

AVERAGE DISCHARGE.--39 years, 258 ft³/s (7.307 m³/s), 26.34 in/yr (669 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,200 ft³/s (346 m³/s) Mar. 7, 1967, gage height, 9.15 ft (2.789 m), from rating curve extended above 5,000 ft³/s (140 m³/s); maximum gage height, 9.20 ft (2.804 m) Feb. 2, 1956 (ice jam); no flow part of each day Oct. 2, 3, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,800 ft³/s (79 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 17	1700	3210 90.9	5.32 1.622	June 13	1400	3840 109	5.69 1.734
Mar. 20	1330	*11000 312	8.76 2.670				

Minimum discharge, 7.8 ft³/s (0.22 m³/s) Oct. 1, gage height, 0.65 ft (0.198 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.1	90	200	140	350	276	360	240	210	76	230	41
2	32	68	267	160	840	259	368	213	182	48	160	37
3	29	56	260	140	1920	293	505	180	180	69	110	34
4	19	47	239	1700	1910	265	618	155	295	276	80	32
5	15	42	214	1100	1060	268	520	136	624	177	65	29
6	20	40	176	800	645	290	495	123	696	130	120	27
7	23	42	168	600	418	461	384	112	702	96	170	26
8	19	46	265	740	322	479	344	110	520	81	140	24
9	16	42	278	550	531	409	340	100	352	76	180	23
10	14	40	240	350	569	346	292	85	726	74	150	21
11	13	40	210	210	441	371	295	78	1270	71	120	20
12	12	39	180	140	328	1750	282	71	750	69	100	18
13	11	37	224	110	268	1580	328	66	2700	50	80	16
14	11	35	310	95	213	1350	332	60	1750	48	65	15
15	11	33	249	80	198	826	295	56	780	80	55	14
16	11	32	178	72	455	712	261	52	440	170	48	14
17	11	30	140	65	2240	1220	249	47	299	150	42	14
18	11	29	110	60	1690	1330	292	44	222	210	80	14
19	12	29	90	55	860	907	264	42	162	140	55	13
20	12	28	70	50	562	5920	261	46	136	110	48	13
21	13	28	60	180	848	3610	243	62	108	90	42	13
22	14	28	200	600	695	1460	201	78	92	75	160	76
23	16	23	500	550	517	792	175	54	87	65	100	48
24	15	25	950	450	542	515	160	69	65	90	80	26
25	15	29	600	380	819	372	147	94	54	65	65	22
26	20	30	400	330	622	320	222	69	48	47	60	43
27	950	35	300	270	461	264	261	94	45	38	95	316
28	800	130	220	230	346	219	302	83	42	33	70	141
29	400	110	180	200	---	213	299	94	76	45	58	94
30	170	95	150	160	---	225	270	324	102	65	48	71
31	110	---	120	130	---	264	---	292	---	100	44	---
TOTAL	2834.1	1378	7748	10697	20670	27566	9365	3329	13715	2914	2920	1295
MEAN	91.4	45.9	250	345	738	889	312	107	457	94.0	94.2	43.2
MAX	950	130	950	1700	2240	5920	618	324	2700	276	230	316
MIN	9.1	23	60	50	198	213	147	42	42	33	42	13
CFSM	.69	.35	1.88	2.59	5.55	6.68	2.35	.81	3.44	.71	.71	.33
IN.	.79	.39	2.17	2.99	5.78	7.71	2.62	.93	3.84	.82	.82	.36

CAL YR 1981	TOTAL	89599.6	MEAN 245	MAX 3060	MIN 8.5	CFSM 1.84	IN 25.06
WTR YR 1982	TOTAL	104431.1	MEAN 286	MAX 5920	MIN 9.1	CFSM 2.15	IN 29.21

KANAWHA RIVER BASIN

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03182000 KNAPP CREEK AT MARLINTON, WV

LOCATION.--Lat 38°12'40", long 80°04'30", Pocahontas County, Hydrologic Unit 05050003, at city water plant, at Marlinton, 1.0 mi (1.6 km) upstream from mouth, and 2.0 mi (3.2 km) downstream from discontinued gaging station.

DRAINAGE AREA.--108 mi² (280 km²) at discontinued gaging station.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1946 to current year.

COOPERATION.--Records were furnished by Marlinton City Water Plant.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum daily, 28.0°C July 24, 1952, June 2, 1959; minimum daily, -1.0°C several days during winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum daily, 22.0 Sept. 11; minimum daily, -1.0°C Dec. 21, Jan. 10, 11, 17.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.5	9.0	1.5	.5	1.0	.5	4.5	9.0	20.5	20.5	20.5	18.5
2	13.5	10.0	2.0	.5	1.5	1.5	4.5	15.0	20.0	21.0	20.5	19.0
3	13.0	10.0	2.0	1.0	1.5	2.0	5.5	14.5	20.0	20.5	21.0	19.5
4	12.0	10.0	1.5	.5	1.5	1.5	4.5	15.0	20.5	20.5	21.0	18.5
5	11.0	9.5	1.5	.5	1.0	1.5	4.5	15.5	20.5	20.0	21.5	18.5
6	11.0	8.5	.5	1.0	1.5	2.0	3.5	15.5	19.5	21.0	20.5	18.0
7	10.0	6.5	.0	2.0	1.5	.5	2.0	16.5	19.0	21.5	21.0	19.0
8	10.0	4.5	1.0	.5	2.0	1.0	3.5	18.0	19.5	21.0	20.5	19.5
9	9.5	4.5	.5	1.0	1.0	1.0	3.0	15.0	20.0	21.5	21.0	20.5
10	9.0	5.5	.0	-1.0	.5	1.5	4.0	14.5	20.0	21.0	21.0	21.0
11	10.0	4.5	.0	-1.0	1.5	2.0	3.0	15.0	20.5	20.5	20.5	22.0
12	11.0	3.5	.5	.0	1.5	2.0	4.0	15.5	18.5	21.0	21.0	20.5
13	11.0	1.5	.5	1.0	1.0	2.0	5.0	15.5	12.0	21.0	20.0	20.0
14	9.0	1.0	1.0	1.0	.0	1.5	5.5	16.5	13.0	21.5	20.5	19.5
15	9.0	1.5	2.0	.0	.5	1.5	5.5	18.0	14.0	21.0	19.5	19.5
16	10.0	2.0	1.5	.5	1.0	2.0	6.0	19.0	15.5	21.0	20.5	20.0
17	9.0	1.5	1.0	-1.0	1.5	3.5	7.0	20.0	16.5	21.5	21.0	20.0
18	9.0	1.5	.0	.0	2.0	3.5	6.5	20.5	18.5	20.0	20.5	19.5
19	7.0	1.0	.0	.5	2.0	4.5	8.0	20.0	19.5	21.0	21.0	18.0
20	8.0	1.0	.0	1.0	1.5	4.5	8.0	20.5	18.0	20.5	20.0	16.5
21	7.0	.5	-1.0	1.0	1.0	4.5	7.0	20.0	18.5	20.5	21.0	15.5
22	8.0	.0	.0	.5	1.5	3.5	6.5	19.5	18.5	21.0	20.0	14.0
23	7.0	.0	1.0	1.0	2.0	4.5	8.5	19.5	19.0	21.0	21.0	13.5
24	6.5	.5	1.5	.0	3.0	4.5	9.0	19.5	19.5	20.0	20.0	14.0
25	5.5	1.0	1.0	.5	1.5	4.0	10.0	20.0	20.0	20.5	19.5	14.5
26	5.5	.0	1.0	.0	1.0	3.5	9.0	20.0	20.5	21.5	19.0	13.5
27	6.0	1.0	1.0	.5	1.5	3.0	8.5	20.5	20.5	21.5	18.5	13.0
28	6.5	.5	1.5	1.0	2.0	1.0	9.0	20.5	21.0	21.0	18.5	13.5
29	7.0	1.0	.5	1.0	---	.5	8.0	21.0	21.0	21.0	16.5	13.0
30	6.5	1.5	1.0	1.5	---	1.5	8.5	20.0	20.5	20.5	16.5	---
31	8.0	---	1.5	1.0	---	3.5	---	20.5	---	21.0	17.0	---
MEAN	9.0	3.5	1.0	.5	1.5	2.5	6.0	17.5	19.0	21.0	20.0	17.5
WTR YR 1982	MEAN	10.0		MAX	22.0	MIN	-1.0					

KANAWHA RIVER BASIN

03182500 GREENBRIER RIVER AT BUCKEYE, WV

LOCATION (REVISED).--Lat 38°11'09", long 80°07'51", 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 103.2 (166.0 km). Records include flow of Swago Creek.

DRAINAGE AREA.--540 mi² (1,399 km²), includes that of Swago Creek.

PERIOD OF RECORD.--September 1929 to current year.

REVISED RECORDS.--WSP 758: 1933. WSP 953: 1930-32, 1934-35(M), 1936, 1937(M), 1938-39, 1940(M). WSP 1275: 1936.

GAGE.--Water-stage recorder. Datum of gage is 2,085.89 ft (635.779 m) National Geodetic Vertical Datum of 1929. Prior to Feb. 27, 1939, nonrecording gage at same site and datum.

REMARKS.--Records good except those for December and September, which are fair, and those for January, which are poor. Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--53 years, 875 ft³/s (24.78 m³/s), 22.00 in/yr (559 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,500 ft³/s (1,180 m³/s) Feb. 5, 1932, gage height, 17.5 ft (5.33 m), from floodmarks, from rating curve extended above 25,000 ft³/s (710 m³/s); minimum, 3.8 ft³/s (0.11 m³/s) Aug. 13, 1930, gage height, 1.19 ft (0.363 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 11,000 ft³/s (310 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 1	0300	ice jam	10.48 3.194	Mar. 20	1900	*30100 852	15.49 4.721
Feb. 3	1900	11800 334	10.16 3.097	June 13	1400	17400 493	12.07 3.679
Feb. 17	2200	12500 354	10.38 3.164				

Minimum discharge, 31 ft³/s (0.88 m³/s) Oct. 1, gage height, 1.72 ft (0.524 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	400	490	556	1200	1010	952	931	1160	234	784	85
2	44	315	945	628	3540	1030	987	798	833	183	405	82
3	44	270	1010	562	7530	1150	1390	670	616	140	282	79
4	48	230	840	5360	7740	1150	2470	562	735	278	226	74
5	64	202	707	5890	4150	1110	1830	478	2330	450	202	70
6	59	198	592	2870	2560	1140	1620	420	2190	315	538	64
7	55	214	472	2270	1710	2130	1370	380	1710	230	1520	61
8	67	226	538	2920	1330	2860	1190	360	1340	242	1720	58
9	69	198	735	2060	3400	2000	1160	335	994	282	875	55
10	59	194	652	1400	3630	1570	1160	294	1660	210	634	53
11	52	194	560	900	2130	1340	1110	258	4340	370	435	50
12	48	186	480	550	1490	2870	1070	234	3350	440	325	48
13	48	176	440	450	1190	3550	1040	214	12600	282	270	44
14	46	162	400	360	903	3490	1020	198	7130	258	210	42
15	44	152	460	320	805	2680	889	179	2970	460	172	42
16	44	146	598	280	1340	2910	770	169	1710	430	149	40
17	46	143	514	250	8080	5440	700	155	1140	472	137	36
18	48	140	440	230	7550	5020	917	143	847	604	128	34
19	52	134	350	210	3540	3080	917	137	622	455	131	34
20	55	137	280	200	2440	15700	868	143	478	375	134	34
21	57	134	230	700	2770	12000	819	158	390	375	104	36
22	64	140	882	2310	2520	5250	694	230	315	298	165	69
23	69	110	2680	2100	1830	2920	586	286	270	234	169	93
24	69	122	3790	1600	1690	1930	520	258	238	315	128	131
25	72	140	2140	1300	2220	1420	466	274	202	218	116	85
26	110	143	1490	1050	1870	1190	896	340	172	158	113	79
27	3850	165	1140	900	1490	994	1650	490	155	128	134	420
28	3120	604	910	700	1200	805	1660	538	146	113	110	550
29	1310	646	749	580	---	742	1370	450	194	152	101	266
30	784	502	586	500	---	700	1110	1590	222	270	98	179
31	538	---	460	420	---	735	---	2050	---	430	87	---
TOTAL	11068	6723	26560	40426	81848	89916	33201	13722	51059	9401	10602	2993
MEAN	357	224	857	1304	2923	2901	1107	443	1702	303	342	99.8
MAX	3850	646	3790	5890	8080	15700	2470	2050	12600	604	1720	550
MIN	33	110	230	200	805	700	466	137	146	113	87	34
CFSM	.66	.42	1.59	2.42	5.41	5.37	2.05	.82	3.15	.56	.63	.19
IN.	.76	.46	1.83	2.78	5.64	6.19	2.29	.95	3.52	.65	.73	.21

CAL YR 1981	TOTAL	272652	MEAN	747	MAX	7520	MIN	33	CFSM	1.38	IN	18.78
WTR YR 1982	TOTAL	377519	MEAN	1034	MAX	15700	MIN	33	CFSM	1.92	IN	26.01

KANAWHA RIVER BASIN

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03182700 ANTHONY CREEK NEAR ANTHONY, WV

LOCATION.--Lat 37°54'30", long 80°17'30", Greenbrier County, Hydrologic Unit 05050003, on right bank 0.3 mi (0.5 km) downstream from Big Draft, 1.7 mi (2.7 km) downstream from Rocky Run, 2.2 mi (3.5 km) northeast of Anthony, and at mile 3.2 (5.1 km).

DRAINAGE AREA.-- 144 mi² (373 km²).

PERIOD OF RECORD.--Water years 1949, 1951-53, 1957, 1960, 1966, 1968-71 (occasional low-flow discharge measurements only), October 1971 to September 1982 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 1,850 ft (564 m), from topographic map.

REMARKS.--Records poor.

AVERAGE DISCHARGE.--11 years, 207 ft³/s (5.862 m³/s), 19.52 in/yr (496 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 daily, 6.2 ft³/s (0.18 m³/s) Nov. 7, 1978; minimum gage height, 6.16 ft (1.878 m) July 17-19, 23-25, Aug. 8, 9, 10, 12, 13, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,200 ft³/s (91 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 3	1500	4310 122	12.58 3.834	May 30	1600	6610 187	14.06 4.285
Mar. 20	---	Unknown	Unknown	June 13	1145	*7220 204	14.40 4.389

Minimum discharge, 7.9 ft³/s (0.22 m³/s) Oct. 14; minimum gage height, 6.18 ft (1.884 m) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.6	50	59	106	250	200	230	160	444	36	126	23
2	9.9	43	104	93	556	190	290	140	275	32	81	21
3	9.4	36	104	151	2520	210	380	120	192	29	63	20
4	9.4	32	87	2270	1610	190	450	105	147	34	51	19
5	9.0	29	78	590	700	190	300	95	228	32	44	17
6	9.0	28	71	444	464	210	250	85	208	28	68	16
7	9.4	26	66	322	322	250	200	78	173	26	151	15
8	9.0	25	65	281	247	320	170	72	137	24	101	14
9	9.0	22	63	226	311	280	140	66	120	24	111	13
10	9.4	21	52	141	368	250	120	60	135	25	81	12
11	9.0	20	52	100	328	300	105	54	176	127	62	11
12	8.2	19	49	80	242	1300	90	48	498	114	51	11
13	8.2	18	39	65	210	1100	105	44	4730	74	43	10
14	7.9	18	58	55	160	900	120	41	1310	51	37	9.9
15	8.2	18	176	47	139	600	110	38	516	44	32	9.9
16	8.6	17	158	41	202	500	100	35	300	43	29	9.4
17	9.4	17	124	37	1800	800	95	33	223	51	26	9.4
18	10	16	102	33	1300	950	120	31	163	269	25	9.4
19	11	16	80	31	600	650	105	81	126	99	23	9.4
20	11	18	66	29	420	4200	92	100	102	77	21	9.4
21	11	18	80	114	600	2200	85	135	86	70	19	9.4
22	11	18	139	339	500	1000	78	104	76	55	17	16
23	12	18	725	278	380	500	74	231	66	45	16	16
24	13	18	615	440	400	380	70	147	58	63	15	16
25	12	20	356	297	580	280	68	218	51	77	15	14
26	15	20	247	218	420	220	110	151	47	57	15	15
27	561	22	192	141	300	180	180	215	44	45	56	34
28	278	55	147	120	230	160	250	412	40	38	40	40
29	118	63	133	100	---	150	180	247	38	34	35	30
30	78	52	111	90	---	160	190	3180	38	62	29	25
31	60	---	101	80	---	180	---	988	---	106	21	---
TOTAL	1352.6	793	4499	7359	16159	19000	4857	7514	10747	1891	1504	484.2
MEAN	43.6	26.4	145	237	577	613	162	242	358	61.0	48.5	16.1
MAX	561	63	725	2270	2520	4200	450	3180	4730	269	151	40
MIN	7.9	16	39	29	139	150	68	31	38	24	15	9.4
CFSM	.30	.18	1.01	1.65	4.01	4.26	1.13	1.68	2.49	.42	.34	.11
IN.	.35	.20	1.16	1.90	4.17	4.91	1.25	1.94	2.78	.49	.39	.13
CAL YR 1981	TOTAL	43793.3	MEAN 120	MAX 4430	MIN 7.9	CFSM .83	IN 11.31					
WTR YR 1982	TOTAL	76159.8	MEAN 209	MAX 4730	MIN 7.9	CFSM 1.45	IN 19.67					

KANAWHA RIVER BASIN

03183500 GREENBRIER RIVER AT ALDERSON, WV

LOCATION (REVISED).--Lat 37°43'27", 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 29.2 (47.0 km).

DRAINAGE AREA.--1,364 mi² (3,533 km²), revised.

PERIOD OF RECORD.--July 1895 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 536: 1907-9. WSP 783: Drainage area. WSP 803: 1918(M). WSP 953: 1930-41. WSP 1275: 1897, 1905, 1910, 1914(M), 1915-16, 1917(M), 1919-20(M), 1924-25(M), 1927(M), 1929, 1949.

GAGE.--Water-stage recorder. Datum of gage is 1,529.42 ft (466.167 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 15, 1929, nonrecording gage at bridge 400 ft (122 m) downstream at same datum.

REMARKS.--Records good except those for January and July, which are fair. Corps of Engineers gage-height tele-meter at station.

AVERAGE DISCHARGE.--87 years, 1,994 ft³/s (56.47 m³/s), 19.85 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) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 5	0600	19600 555	9.97 3.039	Mar. 21	1100	*35000 991	14.37 4.380
Feb. 4	0500	25400 719	11.62 3.542	June 13	2300	33000 935	13.80 4.206
Feb. 18	0600	24400 691	11.34 3.456				

Minimum discharge, 98 ft³/s (2.8 m³/s) Sept. 20, gage height, 1.91 ft (0.582 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	109	1090	1020	1190	4000	2140	1880	2510	4800	680	1240	217
2	122	859	1320	1200	9700	2290	2060	2130	2980	600	1580	217
3	124	695	2070	1900	13600	2740	2100	1870	2190	530	966	195
4	118	592	1910	7860	21700	2840	3020	1610	1710	540	600	183
5	120	518	1570	16700	11100	2710	3720	1410	2420	690	460	171
6	122	479	1330	8220	6440	2490	3040	1230	5220	780	390	163
7	147	438	1130	4870	4350	3170	2800	1110	3880	690	816	155
8	141	415	1000	4640	3140	7250	2420	1020	3140	560	3260	148
9	156	410	1050	4450	3060	5460	2280	966	2560	460	3240	148
10	142	415	1270	3240	7850	3990	2370	882	2260	550	2110	138
11	133	376	1100	1700	5280	3210	2350	792	5950	511	1470	129
12	142	357	976	1200	3520	2960	2310	720	7570	896	952	122
13	141	352	921	1000	2710	4990	2220	650	26000	952	650	114
14	131	337	845	880	2200	5370	2150	600	24000	690	511	117
15	120	319	1450	750	1760	6260	1980	570	9460	503	435	114
16	117	304	1790	680	1760	8550	1760	520	5220	680	375	111
17	114	293	1610	620	8970	11100	1580	477	3500	938	327	106
18	113	283	1320	560	21700	10300	1710	452	2600	1170	295	103
19	113	275	1110	520	10400	7060	1950	469	2040	1350	314	100
20	117	281	848	480	6530	7930	1930	494	1660	1120	278	98
21	114	284	627	1330	5130	27500	1840	590	1350	780	240	105
22	118	279	975	4330	5210	13100	1690	670	1090	630	240	110
23	123	266	4840	3540	4050	7650	1480	744	924	620	222	105
24	129	274	9520	4010	3200	5100	1300	1230	768	540	199	120
25	135	284	6520	2990	3150	3780	1200	1690	660	460	273	138
26	165	279	4120	2350	3420	3200	2060	1390	580	480	278	183
27	1730	302	3010	1970	2850	2760	4770	1770	550	390	226	235
28	8700	516	2390	1560	2460	2370	5050	2350	486	321	231	235
29	4050	1110	1920	1330	---	2060	3880	1980	469	295	245	720
30	2260	1220	1620	1190	---	1900	3060	5000	610	301	235	520
31	1500	---	1290	1220	---	1820	---	10100	---	600	213	---
TOTAL	21566	13902	62472	88480	179240	174050	71960	47996	126647	20307	22871	5320
MEAN	696	463	2015	2854	6401	5615	2399	1548	4222	655	738	177
MAX	8700	1220	9520	16700	21700	27500	5050	10100	26000	1350	3260	720
MIN	109	266	627	480	1760	1820	1200	452	469	295	199	98
CFSM	.51	.34	1.48	2.09	4.69	4.12	1.76	1.14	3.10	.48	.54	.13
IN.	.59	.38	1.70	2.41	4.89	4.75	1.96	1.31	3.45	.55	.62	.15

CAL YR 1981	TOTAL	563927	MEAN	1545	MAX	23600	MIN	85	CFSM	1.13	IN	15.38
WTR YR 1982	TOTAL	834811	MEAN	2287	MAX	27500	MIN	98	CFSM	1.68	IN	22.77

KANAWHA RIVER BASIN

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03184000 GREENBRIER RIVER AT HILLDALE, WV

LOCATION (REVISED).--Lat 37°38'24", long 80°48'19", Summers County, Hydrologic Unit 05050003, on left bank 100 ft (30 m) downstream from State Highway 3 bridge 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 5.5 (8.8 km). Records include flow of Howard Creek.

DRAINAGE AREA.--1,619 mi² (4,193 km²), revised, includes that of Howard Creek.

PERIOD OF RECORD.--June 1936 to current year.

REVISED RECORDS.--WSP 1435: 1955.

GAGE.--Water-stage recorder. Datum of gage is 1,388.66 ft (423.264 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

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

AVERAGE DISCHARGE.--46 years, 2,255 ft³/s (63.86 m³/s), 18.91 in/yr (480 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 discharge, 39 ft³/s (1.10 m³/s) Sept. 18-20, 1946, Sept. 16, 1964; minimum gage height, 0.32 ft (0.098 m) Sept. 16, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 18, 1936, reached a stage of 21.85 ft (6.660 m) from data furnished by Corps of Engineers, discharge, 60,800 ft³/s (1,720 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 24,000 ft³/s (680 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 4	0800	27700 784	14.24 4.340	Mar. 21	1500	*35600 1010	16.70 5.090
Feb. 18	0800	26900 762	13.97 4.258	June 14	0200	35300 1000	16.61 5.063

Minimum discharge, 106 ft³/s (3.0 m³/s) Sept. 19, 20, 21, gage height, 0.62 ft (0.189 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	120	1300	1170	1450	3500	2860	2080	2950	6090	720	1320	261
2	128	958	1320	1490	12500	3160	2220	2460	3610	672	1430	266
3	131	778	2200	2430	14300	3720	2310	2100	2510	609	1190	250
4	137	663	2280	7680	25300	3840	2800	1790	1810	609	820	218
5	130	586	1860	19100	14400	3610	4280	1530	1790	770	591	205
6	139	543	1560	11200	8600	3240	3510	1330	5300	810	485	189
7	138	489	1320	6620	6020	4030	3150	1180	4510	909	532	177
8	162	456	1150	5360	4400	8560	2750	1100	3460	681	2200	169
9	155	438	1080	5680	3730	7440	2500	1030	2800	574	3150	158
10	171	443	1320	4300	8460	5510	2540	955	2410	540	2300	158
11	156	423	1260	2180	7010	4390	2630	860	4910	591	1620	147
12	144	389	1110	1600	4810	3870	2560	780	8370	663	1180	140
13	153	379	972	1200	3670	5490	2470	690	25300	870	870	133
14	152	369	957	1000	2980	6460	2350	636	29200	880	672	130
15	140	354	1930	920	2400	8510	2210	583	12300	636	549	127
16	131	337	2440	840	2360	11500	1920	540	6700	500	470	124
17	123	324	2170	750	9860	13000	1700	507	4400	983	412	118
18	119	312	1710	680	24800	12500	1760	470	3200	909	377	115
19	118	301	1420	620	13600	9170	2040	447	2420	1210	350	109
20	117	306	1090	580	8630	7470	2150	492	1910	1240	377	106
21	122	307	780	2000	6710	28100	2020	515	1540	927	311	109
22	119	306	1470	8220	6520	16400	1830	645	1260	780	266	127
23	129	301	6030	5420	5410	9570	1620	663	1020	760	266	124
24	134	307	11100	5580	4300	6450	1410	1060	870	654	241	130
25	137	319	8740	4460	3970	4860	1280	1410	740	540	232	133
26	163	326	5630	3330	4300	4050	2330	1470	654	574	305	158
27	899	350	4060	2520	3730	3470	5590	1440	609	500	266	227
28	9310	477	3160	1870	3170	2940	6090	2260	600	398	250	266
29	5460	1040	2540	1700	---	2490	4870	2180	540	363	255	412
30	2850	1420	2100	1500	---	2190	3720	2100	557	350	288	740
31	1840	---	1760	1400	---	2080	---	12400	---	549	277	---
TOTAL	23927	15301	77689	113680	219440	210930	80690	48573	141390	21771	23852	5726
MEAN	772	510	2506	3667	7837	6804	2690	1567	4713	702	769	191
MAX	9310	1420	11100	19100	25300	28100	6090	12400	29200	1240	3150	740
MIN	117	301	780	580	2360	2080	1280	447	540	350	232	106
CFSM	.48	.32	1.55	2.27	4.84	4.20	1.66	.97	2.91	.43	.48	.12
IN.	.55	.35	1.79	2.61	5.04	4.85	1.85	1.12	3.25	.50	.55	.13

CAL YR 1981	TOTAL	690337	MEAN	1891	MAX	23300	MIN	90	CFSM	1.17	IN	15.86
WTR YR 1982	TOTAL	982969	MEAN	2693	MAX	29200	MIN	106	CFSM	1.66	IN	22.59

KANAWHA RIVER BASIN

03184500 NEW RIVER AT HINTON, WV

LOCATION (REVISED).--Lat 37°40'13", long 80°53'45", 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 160.0 (257.4 km).

DRAINAGE AREA.--6,256 mi² (16,203 km²), revised.

PERIOD OF RECORD.--June 1936 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,355.18 ft (413.059 m) National Geodetic Vertical Datum of 1929. Prior to June 5, 1949, water-stage recorder at site 400 ft (122 m) upstream at same datum.

REMARKS.--Records good. Flow regulated since 1939 by Claytor Lake (station 03169000) and since 1949 by Bluestone Lake (station 03179800). Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--46 years, 7,919 ft³/s (224.3 m³/s), 17.19 in/yr (437 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, 620 ft³/s (17.6 m³/s) Nov. 3, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 59,800 ft³/s (1,690 m³/s) Feb. 4, June 14, gage height, 8.60 ft (2.621 m); minimum daily, 1,220 ft³/s (34.6 m³/s) Oct. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1250	3830	3170	4620	9280	8460	8220	11200	10400	5000	4550	2480
2	1260	2740	3430	5770	20000	8640	7560	9670	8500	4700	3700	5100
3	1260	2270	4320	10800	29100	10600	6680	7620	8160	4050	4150	4650
4	1270	2200	4490	25100	55400	14100	6400	6790	6790	2760	5000	4250
5	1250	2130	4110	44000	48000	14100	6570	7200	6960	2240	4700	2550
6	1240	2100	3540	37200	36300	13400	7680	7140	10700	2480	3750	1710
7	1240	2070	3060	22800	23400	16600	7980	5850	8700	3100	3570	1360
8	1270	2050	2870	15800	15800	25600	6350	4400	9090	3300	4750	1500
9	1280	2020	2850	13400	13500	24200	6680	3480	8700	3180	5520	1850
10	1290	2010	3330	10300	18000	19400	6960	4050	7860	4100	6790	2040
11	1280	2010	3490	6400	14300	16800	5960	4550	13200	3750	6300	2010
12	1270	1990	2990	3620	11300	14500	5300	4500	18400	3220	5640	1770
13	1260	1970	2660	3800	8890	12700	5410	4800	45500	4950	5000	1600
14	1270	1970	2450	4450	8400	14200	7620	4350	56700	6960	4450	1800
15	1250	1960	3510	4000	5960	19200	6400	3480	31700	8280	3220	1940
16	1240	1920	5300	4250	9150	27900	7320	2900	18400	8040	2580	1740
17	1240	1890	5370	3570	24400	27600	6290	2450	10600	6730	2480	1580
18	1240	1860	5570	2800	47700	23400	4750	3020	9350	4300	2980	1880
19	1230	3000	4710	3440	34700	17800	4650	3900	7800	2980	2760	1880
20	1220	1760	3620	5960	24300	17600	6290	4200	5520	5000	2690	1820
21	1230	1770	2450	10200	19900	39100	6400	4550	4150	5100	2790	1800
22	1240	1790	3310	21900	17000	29100	6570	5150	4950	4850	2440	1820
23	1240	1950	9610	20200	14600	20600	6130	5360	5250	4900	1940	1820
24	1240	1970	18600	17500	12200	17800	5630	6290	5000	4800	2070	1680
25	1250	2380	15200	11700	10800	15400	3750	8580	4900	3350	2300	1580
26	1520	1830	12400	10800	10900	13500	6240	8520	4800	2450	2380	1600
27	2920	2310	7980	9020	10900	13400	15200	8640	3480	3180	2380	1940
28	15200	2810	6960	7440	12000	10400	18100	8890	2550	4750	2550	2240
29	12100	3660	6340	5960	---	8040	19100	9560	3620	4350	2480	2270
30	7450	3850	5520	5470	---	8830	15100	8730	4750	3170	1980	2940
31	5130	---	4960	6400	---	8100	---	13000	---	3900	2140	---
TOTAL	75630	68070	168170	358670	566180	531070	233290	192820	346480	133920	110030	65200
MEAN	2440	2269	5425	11570	20220	17130	7776	6220	11550	4320	3549	2173
MAX	15200	3850	18600	44000	55400	39100	19100	13000	56700	8280	6790	5100
MIN	1220	1760	2450	2800	5960	8040	3750	2450	2550	2240	1940	1360

CAL YR 1981 TOTAL 2054750 MEAN 5629 MAX 42600 MIN 1010 MEAN# 5626 CFSM# 0.90 IN# 12.21
WTR YR 1982 TOTAL 2849530 MEAN 7807 MAX 56700 MIN 1220 MEAN# 7809 CFSM# 1.25 IN# 16.95

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

KANAWHA RIVER BASIN

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03184950 SOAK CREEK AT SOPHIA, WV
(Formerly published as Soak Creek near Sophia)

LOCATION.--Lat 37°42'27", long 81°15'00", Raleigh County, Hydrologic Unit 05050004, at end of culvert on Old State Highway 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 1982 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
NOV 24...	1030	1.0	400	7.5	3.5	10.5	76	.21
JAN 04...	1125	17	170	6.4	7.0	10.0	100	4.6
FEB 23...	1110	5.2	160	6.9	4.0	12.0	2	.03
MAR 23...	1335	7.1	120	6.8	14.0	10.0	9	.17
APR 27...	1440	2.9	106	6.9	13.0	9.2	17	.13
MAY 26...	1100	1.1	210	7.1	17.0	7.6	13	.04
AUG 03...	1435	1.5	160	7.0	19.5	7.7	21	.09
27...	1300	2.7	200	7.0	18.0	6.9	388	2.8

KANAWHA RIVER BASIN

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 September 1982 (discontinued).

REVISED RECORDS.--WSP 1435: 1955(M).

GAGE.--Water-stage recorder. Datum of gage is 2,087.24 ft (636.191 m) National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--31 years, 62.6 ft³/s (1.773 m³/s), 16.29 in/yr (414 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,870 ft³/s (81.3 m³/s) Mar. 12, 1963, gage height, 6.49 ft (1.978 m); minimum, 0.2 ft³/s (0.006 m³/s) Sept. 5-18, 21-23, 1964; minimum gage height, 1.07 ft (0.326 m) Sept. 9-12, 16, 17, 1964.

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 22	1900	710 20.1	3.51 1.070	May 30	0900	*735 20.8	3.56 1.085

Minimum discharge, 5.2 ft³/s (0.15 m³/s) several days in October, gage height, 1.29 ft (0.393 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.2	15	19	43	40	89	80	45	127	24	198	122
2	13	13	19	45	58	100	71	47	84	20	92	63
3	11	12	17	103	422	103	80	45	60	79	58	39
4	8.4	11	17	263	390	96	71	38	51	86	42	29
5	7.5	13	20	260	210	89	65	36	56	56	34	24
6	8.1	26	17	148	144	80	74	34	45	35	36	20
7	7.4	20	16	96	100	137	67	34	38	26	35	18
8	6.8	17	16	71	80	158	60	47	35	63	28	17
9	6.7	15	17	56	249	144	67	40	35	189	107	14
10	6.2	13	17	47	259	137	65	36	59	96	367	13
11	6.0	14	28	35	182	130	60	34	73	97	164	12
12	5.8	12	15	30	130	154	58	32	55	59	87	12
13	5.5	11	18	27	103	168	56	31	183	43	59	10
14	5.4	10	27	24	82	165	54	28	193	38	45	11
15	5.2	11	53	22	76	448	49	26	104	32	37	12
16	5.2	10	47	21	89	470	49	25	68	29	32	17
17	5.2	9.6	39	19	242	318	47	23	53	29	29	15
18	6.3	9.2	32	18	310	228	52	22	43	56	27	14
19	7.4	9.0	28	17	235	176	37	22	37	48	26	12
20	6.2	13	22	89	182	162	37	20	33	57	23	11
21	5.5	13	70	314	151	207	40	21	28	46	20	10
22	5.2	12	414	314	124	238	36	38	27	35	19	12
23	10	12	488	210	98	196	33	127	27	30	17	13
24	13	15	278	170	98	151	33	85	24	29	17	13
25	8.9	24	140	140	89	121	32	71	22	27	20	11
26	32	24	85	105	78	118	65	87	23	23	21	12
27	69	23	63	84	74	100	71	89	43	19	22	20
28	46	23	49	70	80	89	67	85	26	46	20	18
29	29	22	40	52	---	80	58	78	24	71	16	15
30	22	20	33	47	---	74	51	539	26	241	15	13
31	18	---	32	42	---	80	---	234	---	377	29	---
TOTAL	399.1	451.8	2176	2982	4375	5006	1685	2119	1702	2106	1742	622
MEAN	12.9	15.1	70.2	96.2	156	161	56.2	68.4	56.7	67.9	56.2	20.7
MAX	69	26	488	314	422	470	80	539	193	377	367	122
MIN	5.2	9.0	15	17	40	74	32	20	22	19	15	10
CFSM	.25	.29	1.35	1.84	2.99	3.08	1.08	1.31	1.09	1.30	1.08	.40
IN.	.28	.32	1.55	2.13	3.12	3.57	1.20	1.51	1.21	1.50	1.24	.44

CAL YR 1981	TOTAL	20666.3	MEAN	56.6	MAX	660	MIN	5.2	CFSM	1.08	IN	14.73
WTR YR 1982	TOTAL	25365.9	MEAN	69.5	MAX	539	MIN	5.2	CFSM	1.33	IN	18.08

KANAWHA RIVER BASIN

155

03185120 LITTLE WHITESTICK CREEK AT BECKLEY, WV

LOCATION.--37°47'23", long 81°10'21", Raleigh County, Hydrologic Unit 05050004, at the downstream end of bridge on U.S. Highway 19 - State Highway 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 1982 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
NOV 24...	1145	5.4	2100	7.6	3.5	9.4	78	1.1
JAN 04...	1245	25	480	6.7	6.5	12.0	99	6.7
FEB 23...	1255	4.1	530	7.4	7.0	11.0	6	.07
MAR 23...	1115	5.9	410	7.5	10.0	11.0	3	.05
APR 27...	1320	1.9	470	7.8	13.5	9.4	6	.03
MAY 26...	1335	64	150	8.1	21.0	6.7	1465	253
26...	1405	60	--	--	--	--	3300	535
AUG 03...	1225	3.1	305	7.2	19.5	7.5	--	--
27...	1310	5.1	173	7.2	18.5	--	--	--

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 State Highway 41 about 800 ft (244 m) north of the intersection of U.S. Highway 19 and State Highway 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 1982 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
NOV								
24...	1300	6.2	670	7.5	3.0	10.5	71	1.2
JAN								
04...	1420	28	325	6.6	5.5	10.9	88	6.7
FEB								
23...	1400	7.7	640	5.6	6.5	12.0	49	1.0
MAR								
23...	1205	7.4	550	4.9	8.5	10.5	26	.52
APR								
27...	1205	3.2	680	7.1	13.5	9.6	17	.15
MAY								
26...	1435	51	300	7.3	20.5	7.8	1410	194
26...	1525	48	--	--	--	--	1500	194
AUG								
03...	1320	5.2	540	6.5	18.5	8.2	34	.48
27...	1230	13	455	7.3	18.0	--	1720	60

KANAWHA RIVER BASIN

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03185400 NEW RIVER AT THURMOND, WV

LOCATION.--Lat 37°57'18", long 81°04'36", Fayette County, Hydrologic Unit 05050004, on right bank at Thurmond, at Chessie System pump house, 0.1 mi (0.2 km) upstream from Dunloup Creek, 0.3 mi (0.5 km) upstream from railroad/highway bridge, at New River mile 25.8 (41.5 km) and Kanawha River mile 122.4 (196.9 km).

DRAINAGE AREA.--6,687 mi² (17,319 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 1,037.71 ft (316.294 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow regulated by Claytor Lake (station 03169000) and Bluestone Lake (station 03179800). National Park Service gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 73,100 ft³/s (2,070 m³/s) Feb. 4, 1982, gage height, 17.26 ft (5.261 m); minimum, 860 ft³/s (24.4 m³/s) Aug. 26, 27, 1981, gage height, 1.45 ft (0.442 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 73,100 ft³/s (2,070 m³/s) Feb. 4, gage height, 17.26 ft (5.261 m); minimum, 1,160 ft³/s (32.9 m³/s) Oct. 1, gage height, 1.89 ft (0.576 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1180	4270	3400	4800	8550	11200	8020	12600	13900	5020	6030	2600
2	1250	3100	3160	5110	20600	8820	8200	10900	8910	4900	4400	3390
3	1200	2270	3640	8620	34700	11500	7070	8510	9140	4580	3820	5780
4	1180	2150	4270	25300	67700	14500	7050	7410	7640	4570	4490	3650
5	1190	2080	4260	48900	59100	15700	6790	7590	6970	2640	4910	3720
6	1210	2090	3910	43700	42500	14400	7230	7520	10400	2810	4130	2140
7	1210	2090	3200	27200	27900	16600	9090	6600	9850	2830	3580	1440
8	1180	2080	2980	17800	18300	25400	6830	5200	8840	3780	4070	1260
9	1200	2060	2870	15200	16800	27100	6880	3950	9850	4720	5270	1510
10	1210	2020	2870	11700	20000	22200	7230	3670	8790	4000	7640	1970
11	1210	2010	3280	8870	18200	18900	6710	4630	11800	4890	7180	2000
12	1210	1990	3240	4760	13700	16800	5620	4600	19300	3520	5780	1980
13	1210	1960	2720	3850	11300	14900	5590	4680	47200	3970	5200	1590
14	1220	1950	2590	4920	9150	15400	7230	4820	67900	6370	4440	1540
15	1210	1940	2920	4770	8870	21600	7060	4020	38800	8150	3970	1900
16	1190	1930	4400	4300	7170	32200	6700	3410	20400	8630	2550	1930
17	1190	1890	5660	3920	24900	32400	7670	2750	13300	7620	2650	1540
18	1190	1870	5120	3090	55700	26900	5330	2710	9160	5720	2600	1520
19	1210	2380	5410	3280	43000	21100	4640	3730	8980	3750	3200	1950
20	1190	2350	3640	5630	28500	18000	5280	4310	6630	3730	2410	1850
21	1180	1800	3140	11300	22900	39000	6810	4420	4390	5730	2710	1800
22	1180	1800	4330	24800	19100	35600	6260	5000	4360	4930	2630	1810
23	1220	1790	12200	23300	16400	23600	6460	6200	5460	5000	2160	1830
24	1240	1970	19000	20500	14300	19600	5670	6250	5000	4930	1760	1810
25	1220	2300	19200	15100	12400	15900	5090	8740	4880	4600	2200	1550
26	1340	2110	14000	11400	11700	13300	4450	9820	4780	2710	2250	1540
27	2420	1930	10400	11700	11600	12400	13500	9180	4690	2680	2340	1670
28	11200	2590	7320	8820	12100	11100	17800	11100	2770	4200	2350	2160
29	14900	3000	7000	7400	---	7660	19900	10600	2930	4880	2610	2220
30	8950	3720	5860	5900	---	8330	16900	14100	4690	5110	2250	2500
31	5610	---	5250	6620	---	8710	---	17500	---	6270	1840	---
TOTAL	74500	67490	181240	402560	657140	580820	239060	216520	381710	147240	113420	64150
MEAN	2403	2250	5846	12990	23470	18740	7969	6985	12720	4750	3659	2138
MAX	14900	4270	19200	48900	67700	39000	19900	17500	67900	8630	7640	5780
MIN	1180	1790	2590	3090	7170	7660	4450	2710	2770	2640	1760	1260

WTR YR 1982 TOTAL 3125850 MEAN 8564 MAX 67900 MIN 1180 MEAN# 8566 CFSM# 1.27 IN# 17.27

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

KANAWHA RIVER BASIN

03186500 WILLIAMS RIVER AT DYER, WV

LOCATION (REVISED).--Lat 38°22'44", long 80°29'03", 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 2.3 (3.7 km).

DRAINAGE AREA.--128 mi² (332 km²).

PERIOD OF RECORD.--September 1929 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 1275: 1930.

GAGE.--Water-stage recorder. Datum of gage is 2,193.46 ft (668.567 m) National Geodetic Vertical Datum, adjustment of 1912. Prior to June 11, 1930, nonrecording gage at same site and datum.

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

AVERAGE DISCHARGE.--53 years, 332 ft³/s (9.402 m³/s), 35.22 in/yr (895 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,000 ft³/s (623 m³/s) July 4, 1932, gage-height, 18.45 ft (5.624 m), from floodmarks, from rating curve extended above 7,000 ft³/s (200 m³/s) on basis of slope-area measurements at gage heights 12.33 ft (3.758 m) and 18.45 ft (5.624 m); minimum daily, 0.5 ft³/s (0.014 m³/s) Oct. 13-16, 21, 1953; minimum gage height, 0.44 ft (0.134 m) Oct. 5, 6, 1953.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,600 ft³/s (130 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Oct. 27	0900	5260 150	8.06 2.457	Mar. 20	1330	5960 169	8.54 2.603
Feb. 3	1230	5020 142	7.88 2.402	June 10	2030	*6210 176	8.71 2.655

Minimum discharge, 10.0 ft³/s (0.28 m³/s), Sept. 20, 21, gage height, 0.90 ft (0.274 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	272	272	290	1910	307	550	247	359	160	314	78
2	110	218	331	270	792	289	418	212	310	96	172	78
3	90	185	286	340	3010	310	468	185	221	77	126	61
4	54	160	237	1800	2040	286	513	157	423	145	94	47
5	45	143	200	1400	1010	318	373	138	1180	120	77	37
6	50	230	180	840	680	324	391	122	888	97	99	31
7	120	254	160	1200	454	565	338	113	1040	70	240	26
8	80	206	314	900	366	508	307	116	620	203	590	23
9	61	195	356	575	1500	401	318	107	441	286	321	23
10	53	187	282	380	1200	370	286	92	1820	136	254	23
11	49	172	240	300	696	409	314	80	3040	101	165	20
12	46	152	210	240	477	1460	307	74	1090	131	128	18
13	43	136	180	200	380	1350	522	66	2190	90	97	16
14	39	120	170	170	286	1090	575	58	1400	78	80	14
15	37	113	363	140	258	1010	398	55	774	472	66	12
16	37	105	307	120	906	1090	321	49	468	318	53	16
17	42	97	258	110	2900	1740	296	44	331	342	45	16
18	47	97	230	120	1530	1070	436	39	251	445	42	14
19	83	96	170	140	906	750	324	35	180	391	42	12
20	75	99	160	250	650	2830	275	39	162	349	34	11
21	66	111	150	900	1040	1860	261	49	122	247	37	11
22	66	97	600	960	690	1100	215	42	97	155	50	57
23	81	83	2500	702	518	702	187	203	83	113	32	70
24	133	103	1500	762	655	504	170	157	67	94	33	37
25	113	103	980	477	852	391	150	167	57	72	56	26
26	137	96	680	363	526	432	307	116	50	57	77	24
27	3100	555	540	268	418	349	423	175	47	49	55	289
28	1450	726	370	220	356	289	468	133	53	118	94	143
29	780	436	330	190	---	300	363	109	160	209	67	88
30	490	324	240	180	---	314	300	1240	261	128	52	61
31	352	---	210	405	---	380	---	685	---	499	77	---
TOTAL	7971	5871	13006	15212	27006	23098	10574	5104	18185	5848	3669	1382
MEAN	257	196	420	491	965	745	352	165	606	189	118	46.1
MAX	3100	726	2500	1800	3010	2830	575	1240	3040	499	590	289
MIN	37	83	150	110	258	286	150	35	47	49	32	11
CFSM	2.01	1.53	3.28	3.84	7.54	5.82	2.75	1.29	4.73	1.48	.92	.36
IN.	2.32	1.71	3.78	4.42	7.85	6.71	3.07	1.48	5.28	1.70	1.07	.40

CAL YR 1981	TOTAL	134707.3	MEAN 369	MAX 6800	MIN 7.8	CFSM 2.88	IN 39.15
WTR YR 1982	TOTAL	136926.0	MEAN 375	MAX 3100	MIN 11	CFSM 2.93	IN 39.79

03187300 NORTH FORK CRANBERRY RIVER NEAR HILLSBORO, WV

LOCATION (REVISED).--Lat 38°15'29", long 80°19'27", Pocahontas County, Hydrologic Unit 05050005, Monongahela National Forest, on right bank at U.S. Forest Service bridge, 100 ft (30 m) upstream from mouth, and 10.5 mi (16.9 km) northwest of Hillsboro.

DRAINAGE AREA.--9.78 mi² (25.33 km²), revised.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1968 to September 1982 (discontinued).

GAGE.--Water-stage and rainfall recorders. Datum of gage is 3,165.40 ft (964.814 m) National Geodetic Vertical Datum of 1929. Rainfall records collected at site (water years 1969-71, 1980-82) are contained in files of U.S. Geological Survey with only monthly totals published in this report.

REMARKS.--Water-discharge records good except those for December, January, February, and May, which are poor. Gage-height data for water years 1972-79 provided by U.S. Forest Service. Tables of discharge for water years 1972-79 are published herein following water year 1982.

AVERAGE DISCHARGE.--14 years (water years 1969-82), 31.5 ft³/s (0.89 m³/s), 43.74 in/yr (1,111 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,930 ft³/s (54.7 m³/s) Mar. 5, 1979, gage height, 4.94 ft (1.506 m), minimum daily discharge, 0.70 ft³/s (0.020) Oct. 3, 1978; minimum gage height, 1.31 ft (0.399 m) Sept. 20, 21, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 350 ft³/s (9.9 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. 27	0300	*505 14.3	3.39 1.033	Aug. 7	1715	493 14.0	3.37 1.029
Mar. 20	1000	412 11.7	3.22 0.981				

Minimum discharge, 1.50 ft³/s (0.04 m³/s) Sept. 18, gage height, 1.40 ft (0.427 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	25	21	18	117	23	37	22	36	13	24	13
2	10	21	25	17	57	22	28	19	28	9.3	15	9.8
3	5.3	18	21	20	195	23	40	16	40	7.9	13	8.1
4	4.6	15	18	131	122	21	36	14	57	9.6	11	6.5
5	4.2	14	15	75	65	31	28	13	103	8.8	10	5.7
6	7.4	21	13	48	50	27	30	11	71	7.3	16	4.9
7	11	19	24	75	37	47	27	10	74	6.3	94	4.2
8	7.8	16	27	56	30	37	21	11	46	6.3	74	3.9
9	6.5	16	23	42	111	29	20	10	34	5.6	45	3.9
10	6.1	16	20	35	71	25	18	8.6	91	5.5	32	3.3
11	5.7	14	12	28	55	32	17	7.6	124	5.3	23	2.8
12	5.3	13	15	22	40	94	20	7.0	64	6.0	18	2.3
13	4.9	12	21	19	30	98	48	6.4	135	4.2	14	1.8
14	4.9	11	19	13	24	69	46	5.6	79	10	12	1.8
15	4.9	10	16	11	20	65	32	5.0	49	30	9.6	1.9
16	4.6	9.6	14	9.4	83	92	26	4.5	34	24	7.9	4.2
17	4.7	9.1	11	8.2	171	139	29	4.2	30	19	6.9	2.8
18	9.2	9.4	9.4	9.0	87	76	36	3.9	24	21	7.2	1.7
19	8.4	8.4	9.0	11	55	58	26	3.5	18	18	5.8	1.8
20	7.1	9.0	15	20	50	195	22	4.6	17	67	5.0	1.9
21	8.0	10	30	60	76	141	22	9.7	13	30	6.6	2.0
22	7.6	10	123	66	47	79	18	9.5	11	19	5.1	15
23	8.8	10	174	52	38	53	16	38	9.0	15	4.2	6.7
24	11	12	82	56	56	40	14	25	7.4	12	4.9	4.7
25	9.4	8.2	51	35	59	33	13	25	6.6	9.5	7.5	3.7
26	21	11	38	24	45	31	29	17	5.9	7.9	6.6	8.2
27	263	47	30	18	32	26	41	18	5.4	6.8	6.6	39
28	103	41	25	15	27	23	42	14	5.1	8.5	11	13
29	59	27	21	14	---	21	31	13	25	8.8	6.3	9.3
30	41	22	16	13	---	22	25	129	19	12	11	6.9
31	32	---	14	50	---	32	---	59	---	49	23	---
TOTAL	689.4	484.7	952.4	1070.6	1850	1704	838	544.1	1261.4	462.6	536.2	194.8
MEAN	22.2	16.2	30.7	34.5	66.1	55.0	27.9	17.6	42.0	14.9	17.3	6.49
MAX	263	47	174	131	195	195	48	129	135	67	94	39
MIN	3.0	8.2	9.0	8.2	20	21	13	3.5	5.1	4.2	4.2	1.7
CFSM	2.27	1.66	3.14	3.53	6.76	5.62	2.85	1.80	4.29	1.52	1.77	.66
IN.†	2.62	1.84	3.62	4.07	7.04	6.48	3.19	2.07	4.80	1.76	2.04	.74
IN.*	5.78	2.59	3.35	4.43	6.25	7.67	4.09	5.29	---	---	5.27	2.64

CAL YR 1981 TOTAL 9904.85 MEAN 27.1 MAX 263 MIN .95 CFSM 2.77 IN 37.67
WTR YR 1982 TOTAL 10588.20 MEAN 29.0 MAX 263 MIN 1.7 CFSM 2.97 IN 40.27

† Runoff.

* Rainfall.

03187300 NORTH FORK CRANBERRY RIVER NEAR HILLSBORO, WV--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	18	37	14	29	150	29	16	14	36	40	6.7
2	18	18	31	27	26	210	26	23	11	30	16	5.8
3	18	22	26	45	23	290	24	139	9.6	39	36	6.0
4	15	22	22	48	20	120	84	107	8.8	61	154	7.0
5	13	19	21	110	19	66	59	69	8.2	226	58	6.1
6	12	17	22	98	17	47	43	47	7.5	95	36	5.6
7	10	16	350	68	16	40	77	37	7.6	55	27	5.0
8	9.2	15	190	45	15	43	116	33	6.3	38	20	4.5
9	8.0	13	82	41	14	38	58	51	5.6	28	18	4.2
10	8.6	12	58	68	13	30	44	53	9.0	22	15	4.2
11	8.8	12	42	63	12	26	44	39	6.5	17	12	3.4
12	8.4	11	35	48	17	24	39	32	5.4	14	10	3.8
13	7.8	10	29	41	22	32	65	27	8.1	12	11	3.7
14	7.0	10	23	36	20	52	106	29	64	11	11	3.3
15	6.2	9.2	20	30	18	58	78	50	39	11	9.0	4.8
16	5.6	8.6	18	23	17	45	77	39	96	8.8	8.4	3.3
17	5.2	8.0	16	17	16	60	88	32	53	9.1	11	2.7
18	4.9	8.0	15	16	15	44	56	29	36	8.6	99	2.6
19	4.6	10	15	25	15	38	45	31	26	11	54	2.8
20	4.4	13	37	50	16	33	37	28	24	7.8	51	2.4
21	4.1	14	46	94	20	30	35	24	184	7.1	32	2.0
22	4.4	12	35	60	27	96	135	21	171	6.1	27	1.8
23	6.8	10	29	54	78	78	76	18	254	5.3	25	1.7
24	12	11	24	66	150	55	62	16	133	4.8	18	1.6
25	30	11	21	58	180	38	46	13	76	4.4	16	1.5
26	47	11	19	45	420	32	37	12	50	4.2	16	1.4
27	39	12	17	46	210	30	30	10	36	9.0	12	5.7
28	28	15	16	70	100	29	25	9.3	28	15	11	8.3
29	24	21	16	60	120	38	21	8.7	26	38	9.5	17
30	20	56	14	52	---	56	18	10	27	62	8.3	23
31	18	---	13	36	---	39	---	25	---	54	7.3	---
TOTAL	427.0	444.8	1339	1554	1665	1967	1680	1078.0	1430.6	950.2	878.5	151.9
MEAN	13.8	14.8	43.2	50.1	57.4	63.5	56.0	34.8	47.7	30.7	28.3	5.06
MAX	47	56	350	110	420	290	135	139	254	226	154	23
MIN	4.1	8.0	13	14	12	24	18	8.7	5.4	4.2	7.3	1.4
CFSM	1.41	1.51	4.42	5.12	5.87	6.49	5.73	3.56	4.88	3.14	2.89	.52
IN.	1.62	1.69	5.09	5.91	6.33	7.48	6.39	4.10	5.44	3.61	3.34	.58
CAL YR 1971	TOTAL	10178.3	MEAN	27.9	MAX	350	MIN	1.5	CFSM	2.85	IN	38.71
WTR YR 1972	TOTAL	13566.0	MEAN	37.1	MAX	420	MIN	1.4	CFSM	3.79	IN	51.60

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	283	24	20	25	28	132	74	47	10	16	5.3
2	10	155	21	17	279	33	119	56	40	12	13	4.9
3	7.8	81	22	17	104	144	90	73	34	11	8.7	5.0
4	7.1	57	48	37	58	164	112	62	51	12	7.6	5.4
5	91	44	71	31	43	187	100	51	116	10	6.3	4.7
6	81	35	142	26	37	145	79	44	66	8.9	5.8	5.1
7	70	31	90	23	38	116	79	38	57	7.5	5.5	5.7
8	45	123	100	21	42	98	139	48	44	6.3	5.2	4.1
9	30	108	232	18	42	75	97	86	37	5.3	4.7	3.3
10	23	72	188	16	40	61	94	59	32	11	40	3.6
11	18	64	106	14	33	54	70	86	27	27	30	2.9
12	37	54	70	13	28	53	59	61	22	12	17	2.5
13	44	43	56	11	25	44	50	51	25	9.0	27	2.2
14	30	93	45	11	30	39	46	43	27	7.2	27	2.2
15	24	91	52	12	45	49	60	38	20	38	23	24
16	23	59	51	13	30	74	87	33	21	22	18	10
17	21	47	41	12	25	141	174	33	37	16	14	7.4
18	18	38	49	11	22	89	120	30	54	12	13	14
19	41	44	29	20	20	68	85	27	44	10	10	12
20	32	100	52	24	17	52	66	31	40	14	10	8.3
21	26	63	71	19	15	58	54	40	32	17	32	7.3
22	22	49	154	55	14	51	46	32	26	33	25	6.8
23	19	40	77	41	13	43	41	38	22	39	17	6.3
24	18	34	55	29	12	41	40	66	19	39	14	5.9
25	16	31	43	26	11	55	45	97	17	26	13	5.4
26	15	58	36	21	11	66	68	68	15	23	11	4.8
27	13	42	30	50	14	82	145	58	14	21	9.8	4.5
28	46	38	25	45	25	72	140	225	15	16	8.8	4.0
29	43	35	22	37	---	58	92	112	13	22	7.7	6.8
30	40	30	20	32	---	43	78	75	11	17	6.7	32
31	34	---	23	33	---	56	---	60	---	14	5.8	---
TOTAL	961.9	2042	2045	755	1098	2339	2607	1895	1025	528.2	452.6	236.2
MEAN	31.0	68.1	66.0	24.4	39.2	75.5	86.9	61.1	34.2	17.0	14.6	7.87
MAX	91	283	232	55	279	187	174	225	116	39	40	32
MIN	7.1	30	20	11	11	28	40	27	11	5.3	4.7	2.2
CFSM	3.17	6.96	6.75	2.50	4.01	7.72	8.89	6.25	3.50	1.74	1.49	.81
IN.	3.66	7.77	7.78	2.87	4.18	8.90	9.92	7.21	3.90	2.01	1.72	.90
CAL YR 1972	TOTAL	16404.1	MEAN	44.8	MAX	420	MIN	1.4	CFSM	4.58	IN	62.39
WTR YR 1973	TOTAL	15984.9	MEAN	43.8	MAX	283	MIN	2.2	CFSM	4.48	IN	60.80

03187300 NORTH FORK CRANBERRY RIVER NEAR HILLSBORO, WV--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	230	35	70	29	38	22	12	158	7.2	15	14
2	98	85	29	54	28	50	38	13	223	7.6	4.0	14
3	60	63	25	81	34	58	33	27	99	15	5.0	38
4	34	44	22	94	30	41	118	26	58	14	7.0	30
5	27	59	33	57	25	37	67	21	41	9.2	6.0	19
6	21	45	30	43	20	37	47	21	31	10	4.5	19
7	17	35	24	35	28	48	37	18	24	23	4.0	38
8	25	29	21	28	31	42	43	17	36	15	3.5	24
9	39	25	24	50	27	34	48	83	33	17	4.5	18
10	40	21	18	222	24	30	37	46	24	14	3.5	16
11	27	18	19	256	22	54	33	35	19	12	3.0	14
12	22	17	40	180	21	162	29	120	16	9.0	2.8	16
13	18	18	16	90	20	91	25	84	13	7.0	3.5	16
14	20	23	17	45	34	55	23	49	12	5.0	3.0	14
15	16	20	15	38	39	43	21	37	11	4.0	3.0	12
16	14	46	15	33	35	45	18	30	77	4.5	2.9	10
17	13	34	18	28	30	41	17	24	72	3.5	3.0	9.3
18	12	28	29	24	24	34	16	29	36	3.0	3.2	8.3
19	11	40	30	23	24	120	14	28	27	2.5	22	7.9
20	10	32	125	26	33	91	13	24	57	3.5	17	7.3
21	9.6	28	140	74	29	81	12	20	46	2.5	8.7	7.5
22	9.0	29	63	50	49	63	11	19	48	2.0	6.2	8.7
23	8.6	24	44	39	58	48	31	33	89	2.5	6.0	7.6
24	8.2	22	36	55	42	39	21	27	67	3.5	6.2	6.9
25	7.8	21	31	97	39	31	19	21	46	7.0	4.7	6.5
26	7.6	22	330	70	29	27	18	18	35	5.0	4.7	5.9
27	7.3	52	280	58	29	23	17	17	27	8.0	4.3	5.6
28	8.8	82	130	48	26	20	15	15	30	6.0	3.9	5.7
29	16	54	80	44	---	18	14	18	53	15	6.1	5.6
30	60	41	96	36	---	20	13	131	33	40	8.9	5.5
31	210	---	70	30	---	23	---	89	---	25	10	---
TOTAL	900.9	1287	1885	2078	859	1544	870	1152	1541	302.5	190.1	410.3
MEAN	29.1	42.9	60.8	67.0	30.7	49.8	29.0	37.2	51.4	9.76	6.13	13.7
MAX	210	230	330	256	58	162	118	131	223	40	22	38
MIN	7.3	17	15	23	20	18	11	12	11	2.0	2.8	5.5
CFSM	2.98	4.39	6.22	6.85	3.14	5.09	2.97	3.80	5.26	1.00	.63	1.40
IN.	3.43	4.89	7.17	7.90	3.27	5.87	3.31	4.38	5.86	1.15	.72	1.56
CAL YR 1973	TOTAL	15008.9	MEAN	41.1	MAX	330	MIN	2.2	CFSM	4.20	IN	57.08
WTR YR 1974	TOTAL	13019.8	MEAN	35.7	MAX	330	MIN	2.0	CFSM	3.65	IN	49.52

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.6	7.8	20	192	133	21	46	64	117	7.2	3.0	78
2	4.3	7.3	20	85	94	19	36	67	68	7.6	2.8	18
3	4.2	6.7	18	57	54	16	35	50	40	15	2.7	12
4	4.2	6.5	16	52	45	15	29	144	31	14	3.1	8.9
5	4.2	8.6	16	38	40	14	26	72	45	9.2	2.6	8.2
6	4.0	12	21	31	61	13	23	50	35	10	3.6	45
7	3.7	10	19	26	44	23	20	40	26	23	3.8	22
8	3.5	9.4	92	22	55	53	19	32	22	15	3.2	17
9	3.3	8.9	86	30	45	35	19	56	18	12	3.1	12
10	3.2	8.5	60	26	43	29	19	45	17	9.0	4.6	9.7
11	3.1	8.2	38	59	25	22	19	35	50	7.2	5.0	8.5
12	3.0	10	33	42	125	42	17	36	60	8.4	4.3	116
13	3.0	16	27	32	70	111	16	45	36	6.2	4.6	70
14	3.0	15	24	26	58	169	14	33	27	5.2	6.8	36
15	3.3	14	21	22	37	60	27	30	24	4.6	9.4	24
16	122	13	28	20	31	48	28	100	18	6.0	12	19
17	51	13	26	18	47	39	26	56	15	7.4	14	15
18	28	13	23	17	68	34	25	45	15	9.2	13	31
19	21	15	26	27	76	256	37	38	24	8.0	7.2	67
20	17	30	17	53	52	187	36	30	20	18	4.9	34
21	15	70	16	44	38	90	28	24	15	11	4.2	40
22	13	52	15	26	30	126	24	20	12	23	3.6	33
23	11	36	19	23	31	110	20	33	10	23	3.2	319
24	10	36	36	21	72	101	31	30	9.4	13	2.9	147
25	8.8	44	180	81	56	93	159	61	11	8.2	2.6	69
26	10	37	84	68	36	60	120	37	22	6.3	2.4	44
27	11	32	74	42	30	41	62	41	20	5.0	2.1	33
28	10	28	116	39	25	37	46	32	21	4.5	1.9	26
29	9.2	19	73	95	---	95	87	25	16	4.0	1.7	20
30	8.2	22	98	86	---	116	51	24	9.3	3.6	1.6	17
31	7.8	---	98	79	---	57	---	24	---	3.3	4.2	---
TOTAL	407.6	608.9	1440	1479	1521	2132	1145	1419	853.7	307.1	144.1	1399.3
MEAN	13.1	20.3	46.5	47.7	54.3	68.8	38.2	45.8	28.5	9.91	4.65	46.6
MAX	122	70	180	192	133	256	159	144	117	23	14	319
MIN	3.0	6.5	15	17	25	13	14	20	9.3	3.3	1.6	8.2
CFSM	1.34	2.08	4.76	4.88	5.55	7.04	3.91	4.68	2.91	1.01	.48	4.77
IN.	1.55	2.32	5.48	5.63	5.78	8.11	4.35	5.40	3.25	1.17	.55	5.32
CAL YR 1974	TOTAL	11403.4	MEAN	31.2	MAX	256	MIN	2.0	CFSM	3.19	IN	43.37
WTR YR 1975	TOTAL	12856.7	MEAN	35.2	MAX	319	MIN	1.6	CFSM	3.60	IN	48.90

KANAWHA RIVER BASIN

03187300 NORTH FORK CRANBERRY RIVER NEAR HILLSBORO, WV--Continued

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	11	10	13	161	25	17	54	8.4	15	6.6	17	3.0
2	8.8	9.5	12	74	22	16	37	11	21	5.7	13	4.2
3	7.5	9.4	11	80	21	14	40	9.2	14	5.1	10	4.7
4	6.2	9.3	11	61	18	13	53	8.1	11	5.5	8.2	3.5
5	5.3	8.9	10	53	30	13	39	7.6	9.0	5.0	6.8	2.4
6	4.8	8.6	11	40	72	12	31	7.1	7.9	5.4	6.2	1.8
7	4.5	8.5	15	30	44	11	26	7.2	7.0	6.1	7.8	1.5
8	4.8	11	13	25	60	10	22	7.1	6.5	6.1	7.8	1.4
9	5.2	9.3	13	20	44	12	19	6.8	5.8	10	6.2	4.8
10	5.9	17	13	18	24	11	17	6.8	5.3	6.5	5.0	13
11	6.9	18	12	20	99	12	15	6.8	4.8	5.4	4.0	11
12	6.6	70	11	20	55	15	14	7.2	4.5	35	3.4	3.9
13	5.7	77	13	30	85	54	12	6.2	5.6	16	2.8	2.8
14	5.0	45	12	55	105	35	12	5.6	4.8	10	3.1	2.1
15	4.5	34	13	31	58	27	11	5.4	4.3	9.2	3.8	2.2
16	4.2	30	34	21	57	36	9.9	66	4.4	24	3.6	3.4
17	26	31	26	19	76	38	9.2	52	5.4	31	2.9	3.7
18	108	36	21	17	80	39	8.7	57	4.4	17	2.4	3.8
19	53	34	19	16	77	31	8.1	62	7.2	13	2.1	4.4
20	34	30	17	17	49	41	7.9	29	14	10	1.9	4.0
21	29	32	15	16	37	78	7.4	20	26	8.7	1.8	8.2
22	24	28	14	15	50	54	6.8	16	20	7.9	1.6	7.6
23	20	23	13	13	40	38	6.8	13	13	25	1.5	5.3
24	17	20	12	15	35	30	6.5	11	8.0	196	1.5	3.9
25	15	18	11	25	30	27	6.2	10	7.5	60	1.4	3.0
26	13	16	88	152	28	23	7.9	9.4	7.2	35	1.6	3.1
27	13	15	49	152	24	22	7.6	8.7	7.0	24	2.1	85
28	11	15	34	69	20	23	6.8	8.2	6.8	24	2.6	69
29	10	13	28	46	19	21	6.6	7.8	6.8	24	3.2	29
30	12	12	53	35	---	37	5.8	24	7.2	22	2.3	66
31	12	---	191	28	---	30	---	20	---	22	1.8	---
TOTAL	493.9	698.5	808	1374	1384	840	514.2	524.6	271.4	681.2	139.4	361.7
MEAN	15.9	23.3	26.1	44.3	47.7	27.1	17.1	16.9	9.05	22.0	4.50	12.1
MAX	108	77	191	161	105	78	54	66	26	196	17	85
MIN	4.2	8.5	10	13	18	10	5.8	5.4	4.3	5.0	1.4	1.4
CFSM	1.63	2.38	2.67	4.53	4.88	2.77	1.75	1.73	.93	2.25	.46	1.24
IN.	1.88	2.66	3.07	5.23	5.26	3.19	1.96	2.00	1.03	2.59	.53	1.38
CAL YR 1975 TOTAL	12400.6	MEAN 34.0	MAX 319	MIN 1.6	CFSM 3.48	IN 47.16						
WTR YR 1976 TOTAL	8090.9	MEAN 22.1	MAX 196	MIN 1.4	CFSM 2.26	IN 30.77						

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	107	80	59	11	8.0	59	22	15	6.4	39	11	23
2	57	50	29	10	8.0	46	20	14	5.1	29	9.6	20
3	43	38	28	9.0	7.0	36	26	14	4.1	21	11	14
4	33	31	28	9.0	6.0	102	148	21	3.5	17	9.2	12
5	28	24	36	8.0	6.0	125	210	50	3.2	15	7.8	10
6	26	21	31	8.0	6.0	84	86	48	14	15	6.8	9.3
7	31	18	141	8.0	5.0	58	56	68	9.2	11	6.3	8.4
8	210	18	68	8.0	5.0	44	50	51	7.1	8.9	6.8	8.4
9	800	26	42	8.0	5.0	40	39	38	32	8.6	6.8	8.1
10	260	17	32	9.0	5.0	47	32	30	21	9.0	6.0	6.5
11	78	16	31	8.0	5.0	58	27	25	14	11	8.1	7.0
12	52	15	73	7.0	6.0	111	23	21	16	7.9	6.7	6.3
13	38	13	68	7.0	10	347	20	18	13	7.3	29	5.6
14	28	26	46	7.0	8.0	104	17	15	30	6.2	44	6.4
15	22	12	34	8.0	7.0	66	17	13	56	5.3	44	7.8
16	20	11	29	8.0	8.0	60	15	12	29	4.7	27	5.9
17	20	15	24	9.0	9.0	44	13	10	22	3.9	41	6.3
18	16	9.9	20	9.0	10	58	12	10	17	3.4	48	5.9
19	16	10	18	9.0	9.0	52	11	9.3	15	2.9	30	8.5
20	66	14	17	8.0	8.0	42	11	8.4	20	2.4	22	15
21	46	12	16	8.0	8.0	38	10	7.1	18	2.4	17	8.9
22	32	13	15	8.0	9.0	83	9.5	6.6	15	3.6	14	7.4
23	35	14	16	7.0	11	60	8.9	6.0	17	2.4	12	6.8
24	70	19	17	7.0	165	45	11	5.8	14	2.2	64	6.3
25	150	16	19	6.0	110	38	11	5.5	24	113	45	6.0
26	140	11	17	6.0	82	33	11	5.3	32	82	29	9.3
27	70	49	16	6.0	157	32	11	5.0	56	31	22	10
28	43	59	15	6.0	106	31	12	4.6	111	20	17	9.3
29	38	53	14	7.0	---	28	25	4.4	96	16	15	8.0
30	110	40	13	9.0	---	27	18	9.4	57	19	58	6.9
31	110	---	12	9.0	---	26	---	11	---	14	40	---
TOTAL	2795	750.9	1024	247.0	789.0	2024	982.4	561.4	777.6	534.1	714.1	273.3
MEAN	90.2	25.0	33.0	7.97	28.2	65.3	32.7	18.1	25.9	17.2	23.0	9.11
MAX	800	80	141	11	165	347	210	68	111	113	64	23
MIN	16	9.9	12	6.0	5.0	26	8.9	4.4	3.2	2.2	6.0	5.6
CFSM	9.22	2.56	3.37	.82	2.88	6.68	3.34	1.85	2.65	1.76	2.35	.93
IN.	10.63	2.86	3.89	.94	3.00	7.70	3.74	2.14	2.96	2.03	2.72	1.04
CAL YR 1976 TOTAL	10660.4	MEAN 29.1	MAX 800	MIN 1.4	CFSM 2.98	IN 40.54						
WTR YR 1977 TOTAL	11472.8	MEAN 31.4	MAX 800	MIN 2.2	CFSM 3.21	IN 43.63						

03187300 NORTH FORK CRANBERRY RIVER NEAR HILLSBORO, WV--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	18	147	15	19	5.6	84	26	10	4.4	21	10
2	57	16	68	13	16	5.4	75	22	8.8	4.5	15	7.0
3	47	16	47	12	15	5.3	56	19	12	18	12	4.0
4	31	16	39	13	13	5.2	46	19	12	16	22	3.5
5	22	17	52	14	12	5.1	48	20	8.3	11	16	3.0
6	18	25	55	16	11	5.0	35	17	7.5	8.3	43	2.9
7	16	37	40	15	10	4.9	37	15	7.1	6.6	99	2.6
8	22	58	40	74	9.2	4.8	29	38	11	5.8	53	2.4
9	109	42	27	157	8.4	9.2	25	42	15	5.7	34	2.2
10	58	36	25	88	7.8	33	21	35	11	6.2	25	2.7
11	38	34	23	40	6.6	16	19	29	8.9	15	21	3.4
12	30	28	21	25	8.6	18	19	25	7.7	7.7	21	3.1
13	24	24	20	19	9.6	28	17	100	31	5.9	35	2.5
14	20	21	68	15	9.6	128	14	107	16	14	22	3.1
15	18	19	80	13	9.1	125	13	60	12	12	16	3.4
16	19	18	46	12	8.7	74	12	54	11	13	12	3.4
17	18	21	37	11	8.3	51	11	46	9.8	16	10	3.6
18	18	21	47	10	8.0	42	11	37	8.3	10	8.0	3.1
19	31	18	39	9.2	7.9	37	12	41	7.1	8.2	6.7	2.5
20	44	16	32	8.4	7.6	58	27	34	6.7	6.9	5.6	2.0
21	35	16	27	8.0	7.4	125	27	28	8.5	6.1	4.9	2.2
22	28	27	22	7.6	7.1	148	27	24	11	5.7	4.4	2.6
23	24	60	20	7.4	6.8	117	36	22	7.3	5.2	4.0	2.7
24	20	46	18	44	6.6	146	35	27	5.8	5.5	3.6	2.4
25	18	40	42	244	6.4	149	32	22	5.2	7.9	3.3	2.2
26	83	35	31	366	6.3	270	60	19	5.3	6.5	3.1	2.0
27	50	31	30	85	5.9	132	57	16	13	23	3.6	1.9
28	37	27	27	56	5.8	83	50	14	7.6	42	3.6	1.8
29	30	47	24	35	---	79	39	12	5.9	16	3.6	1.6
30	25	106	22	26	---	65	32	11	5.1	22	3.6	1.5
31	21	---	17	22	---	57	---	12	---	38	8.0	---
TOTAL	1048	936	1233	1480.6	257.7	2031.5	1006	993	295.9	373.1	543.0	91.3
MEAN	33.8	31.2	39.8	47.8	9.20	65.5	33.5	32.0	9.86	12.0	17.5	3.04
MAX	109	106	147	366	19	270	84	107	31	42	99	10
MIN	16	16	17	7.4	5.8	4.8	11	11	5.1	4.4	3.1	1.5
CFSM	3.46	3.19	4.07	4.89	.94	6.70	3.43	3.27	1.01	1.23	1.79	.31
IN.	3.99	3.56	4.69	5.63	.98	7.73	3.83	3.78	1.13	1.42	2.07	.35

CAL YR 1977 TOTAL 10119.9 MEAN 27.7 MAX 347 MIN 2.2 CFSM 2.83 IN 38.49
WTR YR 1978 TOTAL 10289.1 MEAN 28.2 MAX 366 MIN 1.5 CFSM 2.88 IN 39.13

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	1.6	33	149	13	39	31	25	31	13	36	13
2	.90	1.5	23	201	12	44	41	23	26	48	29	11
3	.70	1.5	26	98	11	56	75	21	31	32	23	17
4	.90	1.4	155	107	10	384	64	30	56	22	18	13
5	1.1	1.3	82	79	9.0	543	62	50	36	83	14	58
6	1.1	1.3	46	28	8.5	143	46	40	29	44	13	155
7	1.1	1.2	41	116	8.5	80	36	30	22	31	12	58
8	1.1	1.3	248	131	8.0	58	31	25	22	23	10	36
9	1.2	1.3	240	69	8.0	49	54	20	22	19	9.2	25
10	1.2	1.2	92	52	7.5	49	49	17	50	18	8.8	20
11	1.1	1.2	50	48	7.5	48	45	20	87	17	7.8	16
12	1.1	1.2	37	27	7.5	40	40	25	56	14	51	13
13	1.0	1.2	29	22	7.0	32	42	90	38	12	24	11
14	1.8	1.2	23	26	7.0	42	46	70	30	13	16	14
15	2.9	1.8	23	24	126	38	80	40	23	25	13	17
16	2.7	4.8	16	22	193	53	55	30	20	36	11	13
17	5.7	4.8	20	25	82	30	42	25	18	29	9.7	10
18	5.2	7.8	16	28	60	24	35	20	24	22	9.2	9.2
19	3.3	5.3	14	25	48	24	29	15	24	18	55	9.7
20	2.5	4.0	73	35	78	29	24	11	19	15	28	8.3
21	2.0	3.1	157	197	35	27	20	10	16	14	22	69
22	1.7	2.7	65	87	45	24	17	11	33	13	17	148
23	1.5	3.4	41	56	81	23	16	30	98	13	16	137
24	1.5	32	38	48	211	138	15	58	79	13	15	56
25	1.4	13	57	42	201	74	14	67	73	14	14	36
26	1.5	8.5	36	35	141	48	20	50	45	13	14	26
27	4.8	23	31	30	67	37	130	50	16	115	13	21
28	3.8	63	27	25	47	32	80	77	13	150	13	24
29	2.5	35	24	20	---	32	65	55	12	73	42	22
30	2.0	63	20	17	---	28	40	38	15	79	20	18
31	1.7	---	108	15	---	26	---	31	---	53	14	---
TOTAL	62.30	293.6	1891	1884	1539.5	2294	1344	1104	1064	1084	597.7	1084.2
MEAN	2.01	9.79	61.0	60.8	55.0	74.0	44.8	35.6	35.5	35.0	19.3	36.1
MAX	5.7	63	248	201	211	543	130	90	98	150	55	155
MIN	.70	1.2	14	15	7.0	23	14	10	12	12	7.8	8.3
CFSM	.21	1.00	6.24	6.22	5.62	7.57	4.58	3.64	3.63	3.58	1.97	3.69
IN.	.24	1.12	7.19	7.17	5.86	8.72	5.11	4.20	4.05	4.12	2.27	4.12

CAL YR 1978 TOTAL 9319.00 MEAN 25.5 MAX 366 MIN .70 CFSM 2.61 IN 35.44
WTR YR 1979 TOTAL 14242.30 MEAN 39.0 MAX 543 MIN .70 CFSM 3.99 IN 54.17

KANAWHA RIVER BASIN

03187300 NORTH FORK CRANBERRY RIVER NEAR HILLSBORO, WV--Continued

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)
OCT									
20...	1145	7.6	21	5.3	3.5	--	--	--	5
DEC									
02...	1215	26	26	4.7	3.5	12.0	K2	K1	6
JAN									
20...	1300	16	26	5.0	.0	12.8	<1	<1	6
FEB									
24...	1340	47	29	4.4	4.5	11.6	--	--	5
APR									
14...	1030	44	29	4.4	5.5	10.8	<1	<1	6
MAY									
20...	0845	3.6	23	4.9	13.0	9.2	--	--	5
JUL									
13...	1030	4.2	22	4.8	15.0	9.0	--	--	5
AUG									
10...	0930	35	26	4.6	14.0	9.0	84	43	5

DATE	HARD- NESS, NONCAR- BONATE (MG/L AS H)	ACIDITY (MG/L AS H)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	ALKA- LINITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
OCT									
20...	5	<.1	1.5	.4	.3	0	4.7	5.2	.7
DEC									
02...	6	.1	1.6	.6	1.0	0	.0	4.4	.5
JAN									
20...	4	.1	1.6	.6	.3	2	38	5.4	.8
FEB									
24...	5	.1	1.4	.4	<.2	0	.0	4.8	.5
APR									
14...	6	.2	1.5	.5	<.6	0	.0	5.0	.5
MAY									
20...	4	.1	1.4	.5	.3	1	20	5.0	.5
JUL									
13...	5	.1	1.3	.4	.3	0	.0	5.0	.3
AUG									
10...	5	.1	1.3	.4	.2	0	.0	6.0	.2

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS P04)
OCT									
20...	--	15	--	.30	--	--	--	--	--
DEC									
02...	6.4	18	18	1.2	<.010	.65	<.010	.060	.18
JAN									
20...	2.7	16	13	.69	<.010	.88	<.010	<.010	--
FEB									
24...	--	16	--	2.0	--	--	--	--	--
APR									
14...	2.7	23	--	2.7	<.010	.75	.020	<.010	--
MAY									
20...	--	12	--	.11	--	--	--	--	--
JUL									
13...	3.4	18	11	.20	--	--	--	--	--
AUG									
10...	3.4	23	12	2.1	<.010	.26	.010	<.010	--

K Results based on colony count outside the acceptable range (non-ideal colony count).

KANAWHA RIVER BASIN

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03187300 NORTH FORK CRANBERRY RIVER NEAR HILLSBORO, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	BARIIUM, DIS- SOLVED (UG/L AS BA)	MERYL- LIUM, DIS- SOLVED (UG/L AS RE)	CADMIUM DIS- SOLVED (UG/L AS CD)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
OCT										
20...	--	--	--	--	--	--	60	50	15	--
DEC										
02...	--	36	<1	<1	<3	<10	180	160	20	<10
JAN										
20...	100	40	<1	<1	<3	<10	70	50	24	<10
FEB										
24...	--	--	--	--	--	--	1500	1500	15	--
APR										
14...	--	39	<0	<1	<3	<10	80	50	34	<10
MAY										
20...	--	--	--	--	--	--	110	100	8	--
JUL										
13...	--	29	<1	<1	<3	<10	70	--	<3	<10
AUG										
10...	--	33	<1	<1	<3	<10	120	70	54	<10

DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
OCT										
20...	--	60	0	70	--	--	--	--	--	--
DEC										
02...	<4	60	0	64	<10	7	<6.0	13	--	--
JAN										
20...	<4	50	0	57	<10	8	<6.0	10	--	--
FEB										
24...	--	60	0	61	--	--	--	--	--	--
APR										
14...	<4	70	6	64	<10	8	<6.0	20	1	.12
MAY										
20...	--	60	5	55	--	--	--	--	1	.00
JUL										
13...	<4	60	2	58	<10	7	<6.0	10	0	.00
AUG										
10...	<4	70	2	68	10	7	<6.0	10	0	.00

KANAWHA RIVER BASIN

03187500 CRANBERRY RIVER NEAR RICHWOOD, WV

LOCATION (REVISED).--Lat 38°17'43", long 80°31'36", Nicholas County, Hydrologic Unit 05050005, Monongahela National Forest, on left bank 30 ft (9 m) downstream from U.S. Forest Service highway bridge, 0.6 mi (1.0 km) upstream from Barrenshe Run, 5.0 mi (8.0 km) north of Richwood, and at mile 5.6 (9.0 km).

DRAINAGE AREA.--80.4 mi² (208 km²), revised.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1944 to December 1951, June 1964 to September 1982 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 2,100 ft (640 m), from topographic map.

REMARKS.--Water-discharge records good except those for December, January, and February, which are poor. Gage-height data for water years 1972-79 provided by U.S. Forest Service. Tables of discharge for water years 1972-79 are provided herein following water year 1982.

AVERAGE DISCHARGE.--25 years (water years 1945-51, 1965-82), 240 ft³/s (6.797 m³/s), 40.54 in/yr (1,030 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,260 ft³/s (234 m³/s) Mar. 7, 1967, from floodmarks, and June 10, 1981, gage height, 9.18 ft (2.798 m), from rating curve extended above 4,000 ft³/s (110 m³/s); minimum, 0.8 ft³/s (0.02 m³/s) Sept. 17, 18, 1967, gage height 1.35 ft (0.411 m).

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Oct. 27	1000	3230 91.5	6.77 2.063	May 30	1230	*3280 92.9	6.78 2.067
Feb. 3	1230	3090 87.5	6.67 2.033	June 10	2330	2920 82.7	6.49 1.978
Mar. 20	1300	3200 90.6	6.72 2.048				

Minimum discharge, 8.6 ft³/s (0.24 m³/s), Sept. 15, 16, 20, 21, gage height, 1.83 ft (0.558 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	190	168	180	1190	201	360	148	336	186	145	92
2	68	154	194	170	494	180	287	126	290	95	79	80
3	61	128	169	250	1940	192	301	110	219	69	59	61
4	39	109	140	1100	1420	180	336	95	376	83	46	48
5	31	98	120	860	720	204	237	84	797	94	41	38
6	35	157	100	540	480	216	240	76	626	66	73	31
7	92	157	96	620	332	343	204	68	699	50	237	27
8	66	133	181	480	269	332	174	72	424	46	436	23
9	52	128	208	340	954	269	183	68	308	61	325	21
10	44	121	171	230	853	240	165	59	938	48	249	20
11	40	110	140	180	500	259	165	52	1690	45	157	17
12	37	98	120	160	350	825	168	47	727	44	115	15
13	34	85	110	130	276	874	329	43	1400	46	86	13
14	31	60	160	110	198	755	368	38	1010	53	66	12
15	28	70	199	90	171	776	262	35	530	71	53	11
16	29	64	168	78	620	804	207	31	328	84	42	13
17	31	60	145	70	1870	1170	183	29	243	98	35	16
18	32	59	134	76	1120	790	276	26	195	60	35	14
19	68	59	110	96	640	530	201	24	128	94	31	12
20	58	63	100	176	430	1840	163	23	112	152	25	11
21	52	69	104	492	540	1440	155	51	84	115	26	11
22	51	61	1020	530	450	860	128	42	68	72	26	30
23	64	52	2210	412	330	525	110	136	56	55	20	45
24	93	67	1030	453	410	372	100	128	46	46	23	25
25	81	65	511	309	530	287	89	121	38	37	36	19
26	115	61	330	243	353	290	183	87	34	30	51	17
27	2320	300	280	180	287	231	276	84	31	25	38	123
28	1060	413	240	150	240	186	283	75	29	25	94	83
29	535	266	210	130	---	183	222	67	207	47	57	50
30	341	201	150	120	---	198	180	1340	252	38	45	37
31	248	---	140	263	---	252	---	699	---	210	123	---
TOTAL	5852	3658	9158	9218	17967	15804	6535	4084	12221	2265	2874	1015
MEAN	189	122	295	297	642	510	218	132	407	73.1	92.7	33.8
MAX	2320	413	2210	1100	1940	1840	368	1340	1690	210	436	123
MIN	16	52	96	70	171	180	89	23	29	25	20	11
CFSM	2.35	1.52	3.67	3.69	7.99	6.34	2.71	1.64	5.06	.91	1.15	.42
IN.	2.71	1.69	4.24	4.26	8.31	7.31	3.02	1.89	5.65	1.05	1.33	.47
CAL YR 1981	TOTAL	91368.6	MEAN	250	MAX	3910	MIN	4.9	CFSM	3.11	IN	42.27
WTR YR 1982	TOTAL	90651.0	MEAN	248	MAX	2320	MIN	11	CFSM	3.09	IN	41.94

03187500 CRANBERRY RIVER NEAR RICHWOOD, WV--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	158	128	330	95	237	1400	290	131	96	520	403	34
2	148	130	250	237	202	1900	250	128	69	347	227	29
3	145	208	204	393	172	2500	220	900	55	355	231	27
4	117	193	181	361	150	1100	640	938	46	352	1770	33
5	101	160	157	1230	129	560	608	696	43	1870	695	31
6	92	143	183	768	122	360	413	458	37	1030	377	27
7	74	139	2970	467	114	330	434	340	35	550	256	22
8	63	118	1510	334	108	380	1100	279	31	349	182	18
9	57	105	775	306	100	330	565	449	26	240	144	15
10	58	98	513	653	96	250	404	573	40	169	122	14
11	64	89	382	508	92	200	366	423	45	131	87	13
12	61	81	292	426	86	190	338	328	28	106	70	12
13	48	75	242	342	181	260	488	261	33	78	133	12
14	42	68	197	295	163	660	816	244	227	58	120	13
15	38	63	172	228	138	420	666	371	173	63	86	15
16	36	59	153	138	139	370	696	337	310	50	71	16
17	37	54	135	132	130	540	764	282	278	46	78	13
18	35	50	120	170	119	370	521	240	192	43	413	10
19	32	50	102	168	110	320	382	243	145	64	414	9.4
20	28	60	289	310	104	270	318	216	119	55	570	8.5
21	26	95	382	779	147	240	306	182	1060	51	326	7.8
22	27	84	267	493	197	840	1050	157	1290	43	238	7.0
23	32	73	212	427	274	660	828	133	3050	33	213	7.3
24	78	79	186	555	1230	440	652	110	1520	26	147	6.8
25	333	78	168	527	1410	310	462	92	786	21	110	6.1
26	396	77	148	409	4020	270	351	77	473	17	117	5.8
27	266	89	135	331	1480	240	275	63	323	17	99	13
28	206	102	130	739	889	230	218	53	241	69	82	31
29	168	144	133	582	780	280	178	47	274	226	66	48
30	144	463	118	403	---	480	152	48	298	559	52	229
31	129	---	108	302	---	350	---	150	---	451	41	---
TOTAL	3239	3355	11144	13108	13119	17050	14751	8949	11343	7989	7940	733.7
MEAN	104	112	359	423	452	550	492	289	378	258	256	24.5
MAX	396	463	2970	1230	4020	2500	1100	938	3050	1870	1770	229
MIN	26	50	102	95	86	190	152	47	26	17	41	5.8
CFSM	1.29	1.39	4.47	5.26	5.62	6.84	6.12	3.60	4.70	3.21	3.18	.31
IN.	1.50	1.55	5.16	6.06	6.07	7.89	6.83	4.14	5.25	3.70	3.67	.34

CAL YR 1971 TOTAL 90171.9 MEAN 247 MAX 2970 MIN 7.9 CFSM 3.07 IN 41.72
WTR YR 1972 TOTAL 112720.7 MEAN 308 MAX 4020 MIN 5.8 CFSM 3.83 IN 52.15

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	153	2610	156	160	175	183	527	499	281	31	42	17
2	75	1750	130	143	1780	209	651	375	214	42	51	14
3	43	739	123	141	940	567	458	495	168	39	39	21
4	35	445	193	310	510	888	517	480	156	42	31	19
5	175	324	356	300	367	877	657	367	544	45	25	26
6	490	249	626	230	320	743	477	291	324	32	20	19
7	408	202	654	180	334	523	448	232	300	24	17	20
8	300	790	551	160	368	437	709	237	212	18	15	19
9	195	1080	2000	140	384	347	626	579	172	15	13	14
10	140	648	1880	110	295	279	600	417	137	14	14	13
11	109	483	1150	102	245	240	450	492	109	78	217	12
12	146	371	698	90	200	230	369	394	93	48	83	10
13	275	272	499	82	184	183	309	308	156	26	120	8.2
14	195	458	360	84	189	158	278	247	163	18	123	35
15	154	679	560	88	322	205	363	205	100	101	115	183
16	138	413	610	88	297	281	536	172	102	112	94	78
17	142	298	410	82	225	799	1190	165	175	68	73	41
18	116	224	340	76	194	579	1030	168	336	45	83	44
19	230	196	270	100	186	417	650	134	248	32	62	67
20	250	489	420	250	159	370	450	139	204	32	52	41
21	197	394	560	180	138	433	342	220	189	54	195	31
22	168	292	1700	355	119	387	273	179	153	106	237	26
23	149	224	840	351	111	314	230	188	120	113	137	23
24	139	177	560	244	97	299	255	297	90	160	94	19
25	119	149	390	194	89	393	231	579	70	87	74	17
26	105	263	310	171	102	551	433	440	56	64	61	14
27	92	238	260	261	158	708	726	340	51	52	47	12
28	203	201	210	311	171	493	1220	1350	59	40	38	11
29	279	195	165	272	---	372	809	931	56	79	32	21
30	287	173	161	203	---	313	595	526	39	62	26	194
31	235	---	182	193	---	264	---	381	---	40	21	---
TOTAL	5742	15026	17324	5651	8659	13042	16409	11827	5077	1719	2251	1069.2
MEAN	185	501	559	182	309	421	547	382	169	55.5	72.6	35.6
MAX	490	2610	2000	355	1780	888	1220	1350	544	160	237	194
MIN	35	149	123	76	89	158	230	134	39	14	13	8.2
CFSM	2.30	6.23	6.95	2.26	3.84	5.24	6.80	4.75	2.10	.69	.90	.44
IN.	2.66	6.95	8.02	2.61	4.01	6.03	7.59	5.47	2.35	.80	1.04	.49

CAL YR 1972 TOTAL 133074.7 MEAN 364 MAX 4020 MIN 5.8 CFSM 4.53 IN 61.57
WTR YR 1973 TOTAL 103796.2 MEAN 284 MAX 2610 MIN 8.2 CFSM 3.53 IN 48.02

KANAWHA RIVER BASIN

03187500 CRANBERRY RIVER NEAR RICHWOOD, WV--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	114	1940	344	596	234	283	160	104	1870	170	51	144
2	534	905	273	459	225	403	299	99	3030	145	36	113
3	410	560	223	598	276	477	319	200	1260	108	30	287
4	218	374	191	988	241	380	1200	242	642	83	41	326
5	157	431	211	658	180	317	866	192	388	71	45	208
6	125	396	272	473	165	286	527	195	269	132	35	151
7	94	300	188	364	231	399	371	168	193	244	26	276
8	112	245	159	280	257	453	374	145	170	130	24	199
9	239	222	166	342	212	366	512	406	211	88	30	147
10	249	177	146	2170	195	316	409	368	151	68	28	123
11	166	149	126	3450	176	374	357	251	114	60	21	101
12	127	135	120	1460	164	1440	300	657	87	48	20	80
13	104	139	142	860	162	1150	259	814	70	37	26	96
14	100	184	282	560	269	662	224	444	56	30	23	94
15	90	176	235	340	331	451	198	324	52	27	26	86
16	73	458	208	310	285	414	166	250	291	28	27	65
17	61	412	181	252	246	429	143	197	417	26	31	53
18	54	321	166	208	199	339	129	247	186	19	20	44
19	48	377	150	193	184	893	113	247	132	17	129	38
20	44	328	550	206	274	989	100	223	257	21	181	33
21	40	272	1500	405	230	805	88	178	266	21	78	31
22	37	257	723	416	406	748	81	152	365	15	46	36
23	35	212	476	309	487	516	290	235	662	14	34	32
24	33	193	372	314	348	386	267	228	637	49	27	25
25	31	185	325	792	307	295	219	175	402	62	22	22
26	28	170	3230	443	243	241	190	149	301	33	19	20
27	27	421	2490	580	235	200	164	127	216	74	17	19
28	28	854	1040	452	197	170	143	106	191	43	15	19
29	88	647	654	427	---	150	126	113	315	90	20	18
30	384	437	842	341	---	155	111	791	222	198	99	17
31	1610	---	597	283	---	189	---	820	---	96	100	---
TOTAL	5460	11877	16582	19729	6959	14676	8705	8837	13423	2247	1327	2903
MEAN	176	396	535	636	249	473	290	285	447	72.5	42.8	96.8
MAX	1610	1940	3230	3450	487	1440	1200	820	3030	244	181	326
MIN	27	135	120	103	162	150	81	99	52	14	15	17
CFSM	2.19	4.93	6.65	7.91	3.10	5.88	3.61	3.55	5.56	.90	.53	1.20
IN.	2.53	5.50	7.67	9.13	3.22	6.79	4.03	4.09	6.21	1.04	.61	1.34

CAL YR 1973	TOTAL	99623.2	MEAN 273	MAX 3230	MIN 8.2	CFSM 3.40	IN 46.09
WTR YR 1974	TOTAL	112725.0	MEAN 309	MAX 3450	MIN 14	CFSM 3.84	IN 52.16

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	57	153	1520	1140	171	520	500	589	52	17	692
2	12	53	152	870	1090	145	375	567	422	41	15	162
3	11	50	134	560	752	124	329	391	296	132	14	74
4	11	48	115	529	524	115	276	1220	242	119	18	46
5	11	69	113	394	411	115	223	762	400	74	15	34
6	11	105	154	310	731	108	190	491	312	82	17	194
7	10	82	145	254	562	175	176	363	245	255	23	152
8	10	75	869	210	394	499	167	277	189	147	15	92
9	9.7	69	788	253	317	320	155	463	148	104	11	63
10	9.7	64	515	244	238	270	150	555	124	74	16	46
11	9.7	60	352	355	226	231	142	392	426	58	34	38
12	9.6	85	300	337	989	315	125	333	505	72	28	473
13	9.6	138	274	274	863	891	110	423	286	56	20	553
14	9.4	116	249	201	502	1830	99	335	210	43	26	233
15	10	120	222	169	377	875	179	285	196	37	50	151
16	724	111	260	140	303	547	241	1070	148	49	55	111
17	578	109	293	125	319	420	215	632	110	64	119	87
18	273	107	240	110	500	348	202	441	89	87	109	85
19	186	133	207	210	703	1880	260	428	235	65	62	395
20	146	408	182	557	498	2270	338	326	140	174	41	224
21	118	609	161	360	354	971	263	253	98	89	33	225
22	99	391	145	294	284	834	217	197	76	197	24	151
23	88	300	125	238	288	1030	184	299	64	203	20	2080
24	79	298	204	205	694	883	194	289	53	112	17	1270
25	73	371	1780	526	529	1070	1200	684	54	82	15	579
26	89	320	1060	811	318	657	1340	487	232	54	12	337
27	82	258	682	476	246	440	673	270	123	39	10	236
28	71	223	1130	386	197	346	446	180	173	31	8.1	179
29	65	184	791	680	---	717	805	175	90	26	6.9	138
30	61	156	763	833	---	1110	674	198	69	23	5.8	109
31	61	---	715	695	---	765	---	205	---	19	20	---
TOTAL	2949.7	5169	13273	13126	14349	20472	10468	13491	6344	2660	876.8	9209
MEAN	95.2	172	428	423	512	660	349	435	211	85.8	28.3	307
MAX	724	609	1780	1520	1140	2270	1340	1220	589	255	119	2080
MIN	9.4	48	113	110	197	108	99	175	53	19	5.8	34
CFSM	1.18	2.14	5.32	5.26	6.37	8.21	4.34	5.41	2.62	1.07	.35	3.82
IN.	1.36	2.39	6.14	6.07	6.64	9.47	4.84	6.24	2.94	1.23	.41	4.26

CAL YR 1974	TOTAL	100197.7	MEAN 275	MAX 3450	MIN 9.4	CFSM 3.42	IN 46.36
WTR YR 1975	TOTAL	112387.5	MEAN 308	MAX 2270	MIN 5.8	CFSM 3.83	IN 52.00

03187500 CRANBERRY RIVER NEAR RICHWOOD, WV--Continued

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	90	86	102	2210	261	183	484	49	122	32	172	8.1
2	80	77	103	1000	231	162	395	101	170	27	125	23
3	69	72	92	821	215	143	361	93	135	23	101	28
4	58	68	85	715	201	125	502	81	108	21	74	19
5	50	63	83	474	195	112	395	73	86	22	58	13
6	42	60	83	370	704	105	313	68	74	20	49	11
7	39	57	130	300	515	86	256	72	64	38	60	8.9
8	37	78	145	250	391	76	234	69	54	45	63	7.5
9	42	80	151	200	295	89	216	62	47	123	52	6.4
10	50	80	163	150	252	95	189	56	40	66	42	95
11	59	215	148	160	766	151	163	56	36	41	33	92
12	59	421	135	150	650	225	144	60	32	246	27	45
13	44	930	134	204	668	380	118	50	44	192	22	25
14	38	561	130	471	977	365	98	45	36	107	24	16
15	35	404	128	357	614	274	81	44	28	75	31	14
16	34	341	316	299	520	278	72	560	26	295	30	15
17	195	345	322	250	641	353	65	420	35	436	27	20
18	899	378	270	200	638	272	58	480	27	250	18	24
19	404	362	241	140	751	291	53	520	48	190	14	21
20	273	315	200	150	475	321	49	340	130	144	12	19
21	220	311	150	130	356	552	46	230	170	111	9.9	20
22	178	280	140	110	437	573	46	190	155	74	8.6	25
23	149	242	120	100	405	393	43	150	90	117	7.7	21
24	126	219	110	120	323	310	39	120	66	1120	7.0	18
25	109	195	100	150	298	264	37	102	62	508	6.4	14
26	101	170	412	973	261	242	60	86	60	260	5.6	11
27	103	153	461	1600	238	220	66	72	45	170	5.7	96
28	91	142	297	797	230	220	50	62	36	132	11	500
29	81	115	240	515	210	195	45	60	31	240	18	180
30	99	98	311	386	---	288	42	200	34	232	15	300
31	95	---	1130	311	---	251	---	155	---	244	10	---
TOTAL	3949	6918	6632	14063	12718	7594	4720	4726	2091	5601	1138.9	1695.9
MEAN	127	231	214	454	439	245	157	152	69.7	181	36.7	56.5
MAX	899	930	1130	2210	977	573	502	560	170	1120	172	500
MIN	34	57	83	100	195	76	37	44	26	20	5.6	6.4
CFSM	1.58	2.87	2.66	5.65	5.46	3.05	1.95	1.89	.87	2.25	.46	.70
IN.	1.83	3.20	3.07	6.51	5.88	3.51	2.18	2.19	.97	2.59	.53	.78

CAL YR 1975 TOTAL 108494.8 MEAN 297 MAX 2270 MIN 5.8 CFSM 3.69 IN 50.20
WTR YR 1976 TOTAL 71846.8 MEAN 196 MAX 2210 MIN 5.6 CFSM 2.44 IN 33.24

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	700	627	227	54	36	566	86	120	23	141	85	172
2	440	427	184	52	35	351	74	110	19	92	67	142
3	340	330	160	50	34	255	87	101	16	70	107	106
4	240	274	158	48	33	509	765	247	15	58	101	90
5	200	215	138	45	32	1000	2110	340	17	50	60	67
6	169	181	125	44	32	693	746	350	22	45	47	62
7	186	167	763	43	32	444	386	425	26	41	42	54
8	1900	154	610	42	31	320	370	363	30	43	45	92
9	5460	137	341	40	31	256	310	240	46	57	42	71
10	1580	142	261	43	31	280	240	168	53	193	39	51
11	778	151	234	41	33	322	200	150	43	188	50	43
12	436	140	463	40	35	509	170	130	37	107	46	35
13	319	118	614	39	40	2350	140	115	41	80	154	30
14	234	103	363	38	38	713	120	100	48	64	551	29
15	189	109	285	43	37	388	110	82	245	48	470	43
16	154	94	224	41	36	310	96	68	114	36	264	37
17	139	79	176	39	36	227	86	60	80	31	450	44
18	136	78	140	38	36	247	78	54	64	28	671	41
19	109	71	116	37	37	286	74	50	60	24	353	34
20	102	82	100	36	38	220	70	44	78	21	237	71
21	337	82	90	36	40	198	64	41	77	21	165	63
22	236	76	80	35	45	374	58	35	77	30	132	44
23	188	69	70	35	160	377	60	40	74	21	107	36
24	215	71	65	35	1650	277	68	39	100	19	632	31
25	834	74	80	35	1200	216	68	33	130	1040	675	27
26	1060	75	75	35	820	173	72	30	180	1110	347	44
27	623	226	70	34	1390	157	78	26	100	369	239	53
28	432	370	65	36	1150	144	90	24	315	210	174	45
29	284	365	60	38	---	126	150	22	312	151	140	37
30	240	271	58	40	---	109	140	21	220	166	176	32
31	735	---	55	38	---	113	---	26	---	136	308	---
TOTAL	18995	5358	6450	1250	7148	12510	7166	3654	2662	4690	6976	1726
MEAN	613	179	208	40.3	255	404	239	118	88.7	151	225	57.5
MAX	5460	627	763	54	1650	2350	2110	425	315	1110	675	172
MIN	102	69	55	34	31	109	58	21	15	19	39	27
CFSM	7.62	2.23	2.59	.50	3.17	5.03	2.97	1.47	1.10	1.88	2.80	.72
IN.	8.79	2.48	2.98	.58	3.31	5.79	3.32	1.69	1.23	2.17	3.23	.80

CAL YR 1976 TOTAL 85150.8 MEAN 233 MAX 5460 MIN 5.6 CFSM 2.90 IN 39.40
WTR YR 1977 TOTAL 78585.0 MEAN 215 MAX 5460 MIN 15 CFSM 2.67 IN 36.36

KANAWHA RIVER BASIN

03187500 CRANBERRY RIVER NEAR RICHWOOD, WV--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	78	137	1240	123	150	40	600	190	84	37	220	110
2	432	121	744	105	130	40	550	160	67	34	140	75
3	343	112	471	100	110	40	450	150	87	227	120	45
4	234	106	367	110	100	40	350	150	82	362	180	30
5	167	102	414	120	90	40	300	160	76	217	140	25
6	135	115	538	130	80	35	275	140	62	145	400	18
7	114	138	380	120	75	35	250	190	54	99	800	15
8	116	342	315	200	70	45	200	280	65	74	450	13
9	880	272	263	1400	65	100	190	330	137	77	300	10
10	693	270	195	900	60	200	170	250	114	64	220	8.0
11	394	308	157	400	60	130	150	200	78	160	180	9.0
12	282	260	138	200	60	150	130	250	63	94	200	10
13	205	217	162	150	70	200	120	800	158	62	240	10
14	167	182	374	120	70	700	110	700	131	136	280	10
15	140	163	931	110	65	1000	100	500	92	206	200	9.0
16	209	152	532	100	60	600	95	450	75	162	140	8.0
17	249	172	378	90	60	400	90	400	73	252	100	16
18	213	194	397	80	55	350	90	320	59	157	80	15
19	303	164	345	75	55	250	100	320	47	108	60	12
20	402	146	273	70	55	450	200	270	39	80	50	9.0
21	334	140	229	65	50	900	210	230	59	64	40	8.0
22	264	206	185	60	50	1100	240	210	115	52	35	9.0
23	209	738	155	55	50	900	260	190	77	46	33	11
24	172	597	146	55	45	1100	260	200	53	42	30	10
25	147	473	285	900	45	1200	260	220	40	90	27	9.0
26	411	428	247	2800	45	1800	400	175	34	76	26	8.0
27	411	336	198	1200	45	1200	430	147	149	51	25	7.5
28	280	284	168	500	40	800	350	125	108	218	29	7.0
29	226	391	149	300	---	550	290	109	67	113	29	6.5
30	196	843	149	200	---	500	220	105	48	147	30	6.0
31	158	---	136	170	---	400	---	103	---	370	50	---
TOTAL	8564	8109	10661	11008	1910	15295	7440	8024	2393	4022	4854	539.0
MEAN	276	270	344	355	68.2	493	248	259	79.8	130	157	18.0
MAX	880	843	1240	2800	150	1800	600	800	158	370	800	110
MIN	78	102	136	55	40	35	90	103	34	34	25	6.0
CFSM	3.43	3.36	4.28	4.42	.85	6.13	3.09	3.22	.99	1.62	1.95	.22
IN.	3.96	3.75	4.93	5.09	.88	7.08	3.44	3.71	1.11	1.86	2.25	.25

CAL YR 1977 TOTAL 75116.0 MEAN 206 MAX 2350 MIN 15 CFSM 2.56 IN 34.75
WTR YR 1978 TOTAL 82819.0 MEAN 227 MAX 2800 MIN 6.0 CFSM 2.82 IN 38.32

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.4	15	294	1170	118	423	192	213	240	90	273	100
2	5.0	14	205	2110	100	437	262	166	210	250	202	70
3	4.6	13	166	940	95	567	448	143	250	170	147	90
4	5.6	12	1340	538	85	1860	545	233	600	200	108	80
5	8.1	12	847	381	80	3430	454	392	400	500	86	80
6	8.0	11	481	296	70	1120	350	304	300	350	74	1400
7	8.2	11	363	684	65	626	267	230	200	200	63	368
8	8.5	12	2990	1510	64	449	218	176	160	150	51	222
9	8.6	12	3080	724	62	350	324	140	190	107	46	166
10	8.7	11	1090	465	60	300	418	119	250	105	37	126
11	7.9	11	596	325	58	349	362	133	350	91	43	100
12	7.1	10	388	251	56	260	314	176	250	74	270	83
13	6.5	10	290	221	54	223	277	661	200	62	209	70
14	7.4	10	224	255	52	249	303	616	150	124	114	73
15	13	11	178	209	300	257	482	384	100	356	91	107
16	17	26	154	191	1170	198	424	273	80	1070	73	81
17	21	38	187	209	824	181	313	194	70	646	57	61
18	25	43	160	314	500	166	244	147	180	320	49	49
19	21	49	146	222	300	150	191	114	170	214	514	48
20	17	35	438	397	250	160	156	90	130	157	364	45
21	14	29	1580	2080	300	152	128	84	80	145	252	143
22	12	26	800	1160	350	133	107	78	150	112	181	1420
23	11	25	469	631	910	118	98	92	250	96	140	1520
24	10	175	362	528	2470	636	99	521	200	160	120	583
25	9.9	139	593	442	2180	620	82	522	150	123	100	312
26	10	85	402	333	1670	408	152	432	130	202	90	214
27	25	137	301	276	791	302	1010	398	100	2090	150	162
28	32	442	228	228	511	235	547	571	80	938	170	175
29	25	285	218	177	---	222	380	448	70	880	250	188
30	19	445	186	147	---	189	282	305	80	755	200	147
31	16	---	851	136	---	166	---	230	---	414	150	---
TOTAL	397.5	2154	19607	17550	13545	14936	9429	8585	5770	11151	4674	8283
MEAN	12.8	71.8	632	566	484	482	314	277	192	360	151	276
MAX	32	445	3080	2110	2470	3430	1010	661	600	2090	514	1520
MIN	4.6	10	146	136	52	118	82	78	70	62	37	45
CFSM	.16	.89	7.86	7.04	6.02	6.00	3.91	3.45	2.39	4.48	1.88	3.43
IN.	.18	1.00	9.07	8.12	6.27	6.91	4.36	3.97	2.67	5.16	2.16	3.83

CAL YR 1978 TOTAL 77643.5 MEAN 213 MAX 3080 MIN 4.6 CFSM 2.65 IN 35.92
WTR YR 1979 TOTAL 116081.5 MEAN 318 MAX 3430 MIN 4.6 CFSM 3.96 IN 53.71

03187500 CRANBERRY RIVER NEAR RICHWOOD, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 1979 to September 1982 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January to April 1980, December 1980 to September 1982 (discontinued).

WATER TEMPERATURES: Oct. 28, 1981 to September 1982 (discontinued).

SUSPENDED-SEDIMENT DISCHARGE: October 1979 to September 1980.

INSTRUMENTATION.--Automatic pumping sediment sampler October 1979 to September 1982. Conductance recorder January 1980 to Oct. 28, 1981. Water-quality monitor Oct. 29, 1981 to September 1982.

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

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 38 micromhos Aug. 7, 19, 1981 (corrected); minimum daily, 21 micromhos May 10, 24-26, 1981, June 23, 25, 1982.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 186 mg/L Mar. 25, 1980; minimum daily mean, 0 mg/L on many days.

SEDIMENT LOADS: Maximum daily, 900 tons (816 metric tons) Mar. 18, 1980; minimum daily, 0 ton (0 metric ton) on many days.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 32 micromhos Dec. 23; minimum daily, 21 micromhos June 23, 25.

WATER TEMPERATURES: Maximum recorded, 25.5°C July 25; minimum recorded, 0.0°C many days during winter period.

REVISIONS.--Specific conductance values for water year 1981, for the period Sept. 5-30, 1981, are incorrect and have been deleted. The maximum daily recorded specific conductance has been revised to 38 micromhos Aug. 7, 19, 1981, superseding value previously published.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)
OCT 08...	1330	62	24	6.3	10.0	--	--	--	--
NOV 19...	1015	60	24	6.0	4.0	12.5	<1	K7	7
JAN 13...	0900	140	26	5.5	0.0	14.2	<1	2	7
FEB 25...	1230	500	26	5.2	2.0	13.3	--	--	6
APR 15...	0830	260	24	5.2	7.0	11.1	<1	<1	8
MAY 20...	1415	24	23	6.3	20.0	8.1	--	--	6
JUN 29...	1500	323	22	6.2	18.5	8.4	--	--	7
JUL 01...	1400	158	23	6.3	16.0	5.0	--	--	--
AUG 12...	1500	112	22	6.0	18.5	8.4	K4	K9	6
24...	0830	19	23	6.7	18.0	8.3	--	--	--

DATE	HARD- NESS, NONCAR- BONATE (MG/L AS CAC03)	ACIDITY (MG/L AS H)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	ALKA- LINITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
OCT 08...	--	<.1	--	--	--	3	2.9	--	--
NOV 19...	5	<.1	2.0	.5	.4	2	3.1	4.2	.6
JAN 13...	6	<.1	2.0	.7	.4	1	5.0	4.1	.7
FEB 25...	5	.1	1.7	.5	.3	1	10	4.8	.8
APR 15...	7	.1	2.0	.7	<.6	1	10	4.0	.7
MAY 20...	4	<.1	1.8	.5	.5	2	1.5	5.0	.6
JUN 29...	5	<.1	2.1	.5	.5	2	2.0	4.0	1.5
JUL 01...	--	--	--	--	--	--	--	--	--
AUG 12...	4	<.1	1.8	.5	.4	2	3.8	5.0	.2
24...	--	--	--	--	--	--	--	--	--

K Results based on colony count outside the acceptable range (non-ideal colony count).

KANAWHA RIVER BASIN

03187500 CRANBERRY RIVER NEAR RICHWOOD, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	SILICA, DIS- SOLVED (MG/L AS SI02)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS P04)	BARIUM, DIS- SOLVED (UG/L AS BA)
NOV 19...	2.5	19	14	3.0	<.010	.54	<.010	.080	.24	30
JAN 13...	2.8	22	15	8.3	<.010	.89	<.010	<.010	--	39
FEB 25...	--	21	--	28.3	--	--	--	--	--	--
APR 15...	2.9	24	--	16.8	<.010	.70	<.010	<.010	--	41
MAY 20...	--	12	--	.77	--	--	--	--	--	--
JUN 29...	2.7	24	13	20.9	--	--	--	--	--	30
AUG 12...	3.6	14	13	4.2	<.010	.27	<.010	<.010	--	33

DATE	PERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM, DIS- SOLVED (UG/L AS CD)	CORALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM, DIS- SOLVED (UG/L AS LI)
NOV 19...	<1	<1	<3	<10	90	70	18	<10	<4
JAN 13...	1	3	3	10	50	40	9	30	4
FEB 25...	--	--	--	--	240	210	27	--	--
APR 15...	<0	<1	<3	<10	70	50	16	<10	<4
MAY 20...	--	--	--	--	100	90	9	--	--
JUN 29...	<1	<1	<3	<10	500	380	120	10	<4
AUG 12...	1	2	3	10	130	80	46	10	4

DATE	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
NOV 19...	10	1	9	<10	9	<6.0	5	--	--
JAN 13...	30	0	33	10	10	6.0	18	--	--
FEB 25...	40	0	41	--	--	--	--	--	--
APR 15...	30	0	33	<10	10	<6.0	7	2	1.4
MAY 20...	10	3	7	--	--	--	--	1	.06
JUN 29...	50	30	24	<10	9	<6.0	5	13	11
AUG 12...	10	0	12	10	9	6.0	4	1	.30

KANAWHA RIVER BASIN

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03187500 CRANBERRY RIVER NEAR RICHWOOD, WV--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	23	25	25	28	25	24	23	23	23	30	28
2	---	23	26	24	26	25	24	23	22	23	29	26
3	---	23	27	25	26	25	24	23	23	23	26	23
4	---	23	27	26	27	25	25	23	24	24	23	22
5	---	23	26	26	26	26	24	23	24	23	24	23
6	---	23	26	24	25	26	24	23	22	23	26	22
7	---	24	26	24	25	26	24	23	23	23	---	23
8	24	24	26	24	24	26	24	23	23	23	---	23
9	25	24	28	23	25	26	24	23	22	23	---	23
10	25	24	28	24	26	25	24	23	23	23	---	23
11	24	24	27	25	26	25	24	23	26	23	---	23
12	23	24	26	25	26	26	24	23	24	23	---	23
13	23	24	26	24	26	25	24	23	24	24	22	23
14	24	24	26	23	25	26	24	23	25	24	22	23
15	24	24	25	24	25	24	24	23	22	26	22	23
16	24	24	25	24	25	25	23	23	23	26	22	25
17	24	24	26	24	26	26	23	23	22	26	22	24
18	23	25	25	25	26	25	23	24	22	26	22	23
19	26	25	26	25	26	24	24	24	22	26	22	23
20	25	25	27	24	27	26	23	24	22	28	22	23
21	24	25	27	24	27	30	23	23	22	29	23	23
22	23	25	27	26	27	26	23	24	22	28	24	24
23	---	25	32	25	26	25	23	24	21	26	23	24
24	---	25	31	25	26	25	23	24	22	26	24	24
25	---	25	27	25	27	24	23	24	21	27	23	24
26	---	25	27	24	26	24	23	25	22	24	23	24
27	---	26	26	24	26	25	24	24	22	24	23	24
28	---	27	26	23	25	24	24	24	22	24	23	27
29	28	27	26	22	---	24	24	25	22	25	24	26
30	26	26	25	23	---	24	23	24	23	24	25	26
31	24	---	24	23	---	24	---	23	---	26	27	---
MEAN	24	24	27	24	26	25	24	23	23	25	24	24
WTR YR 1982	MEAN	24	MAX	32	MIN	21						

03187500 CRANBERRY RIVER NEAR RICHWOOD, WV--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

KANAWHA RIVER BASIN

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03189000 CHERRY RIVER AT FENWICK, WV

LOCATION.--Lat 38°13'45", long 80°35'00", Nicholas County, Hydrologic Unit 05050005, on left bank at downstream side of highway bridge at Fenwick, 1,000 ft (305 m) downstream from Laurel Creek, and at mile 6.4 (10.3 km).

DRAINAGE AREA.--150 mi² (388 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1929 to September 1969, October 1979 to September 1982 (discontinued). Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 973: 1940-42. WSP 1275: 1930-31(M), 1932, 1933-34(M), 1936-39.

GAGE.--Water-stage recorder. Datum of gage is 2,088.94 ft (636.709 m) National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--43 years (water years 1930-69, 1980-82), 412 ft³/s (11.67 m³/s), 37.30 in/yr (947 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,000 ft³/s (1,050 m³/s) July 19, 1954, gage height, 19.80 ft (6.035 m), from floodmarks, from rating curve extended above 19,000 ft³/s (540 m³/s) on basis of contracted-opening measurement of peak flow; minimum, 0.1 ft³/s (0.003 m³/s) Sept. 30, 1930.

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Oct. 27	0530	7460 211	9.03 2.752	May 30	1030	*11000 312	10.58 3.225
Dec. 23	1130	5350 152	7.80 2.377	June 11	0130	5290 150	7.76 2.365
Feb. 3	1100	5920 168	8.18 2.493				

Minimum discharge, 19 ft³/s (0.54 m³/s) Sept. 21, gage height, 0.95 ft (0.290 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	401	377	341	2040	418	699	278	848	267	188	160
2	131	321	423	317	1030	386	575	242	605	142	112	130
3	93	260	357	401	3770	406	610	210	470	105	89	106
4	62	217	320	2170	2390	390	595	181	555	169	72	83
5	51	192	288	1590	1310	446	455	157	1190	210	63	67
6	58	325	238	996	942	450	480	142	978	126	315	56
7	122	309	215	1040	650	738	410	128	1070	94	722	47
8	82	257	453	906	510	683	374	128	721	151	1150	42
9	68	238	489	661	2020	590	386	124	650	414	930	39
10	60	223	394	478	1740	560	366	104	2390	216	600	34
11	57	200	320	329	990	625	398	92	3210	267	362	31
12	53	179	270	290	688	1370	418	83	1450	196	258	28
13	50	159	230	240	535	1560	635	74	2220	138	181	25
14	45	142	220	190	402	1340	580	68	1510	230	145	21
15	42	131	450	170	355	1910	442	62	906	1060	112	20
16	44	120	378	150	1180	1780	366	54	575	490	89	25
17	48	112	313	130	2990	1890	347	49	450	837	75	28
18	56	109	275	140	1850	1260	500	43	355	948	92	24
19	138	101	200	170	1220	924	382	40	245	625	68	21
20	101	103	179	267	948	2240	332	39	218	390	54	20
21	88	114	176	1100	1390	2010	329	52	164	308	49	20
22	87	107	2130	1180	1010	1390	278	68	134	201	47	51
23	105	84	4250	900	788	966	233	312	111	155	39	58
24	164	109	2030	1010	942	710	204	267	91	126	102	34
25	138	110	1150	660	1060	545	183	288	76	97	130	27
26	250	109	788	420	738	580	418	160	65	78	120	26
27	4880	740	590	310	600	455	455	176	59	66	138	140
28	1940	880	450	270	490	382	426	140	56	72	382	92
29	113	569	380	240	---	394	366	132	176	106	169	59
30	760	421	278	230	---	410	318	4430	322	76	118	45
31	535	---	244	683	---	480	---	1670	---	291	191	---
TOTAL	11470	7342	18855	17979	34578	28288	12560	9993	21870	8651	7162	1559
MEAN	370	245	608	580	1235	913	419	322	729	279	231	52.0
MAX	4880	880	4250	2170	3770	2240	699	4430	3210	1060	1150	160
MIN	32	84	176	130	355	382	183	39	56	66	39	20
CFSM	2.47	1.63	4.05	3.87	8.23	6.09	2.79	2.15	4.86	1.86	1.54	.35
IN.	2.84	1.82	4.68	4.46	8.58	7.02	3.11	2.48	5.42	2.15	1.78	.39

CAL YR 1981	TOTAL	183254	MEAN	502	MAX	5990	MIN	13	CFSM	3.35	IN	45.45
WTR YR 1982	TOTAL	180307	MEAN	494	MAX	4880	MIN	20	CFSM	3.29	IN	44.72

KANAWHA RIVER BASIN

03189000 CHERRY RIVER AT FENWICK, WV--Continued

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	ACIDITY (MG/L AS H)
OCT											
16...	1230	45	73	7.2	11.5	10.2	--	--	--	--	.0
NOV											
18...	1100	110	46	7.1	6.0	11.6	94	120	17	10	<.1
JAN											
14...	1430	280	46	6.6	.0	13.9	2600	K2300	15	11	<.1
FEB											
26...	1230	680	40	6.5	.0	14.3	--	--	12	9	<.1
APR											
15...	1700	420	41	6.5	13.0	10.0	K410	K390	14	11	<.1
MAY											
19...	1200	40	78	7.2	21.0	8.6	--	--	23	15	.0
JUL											
07...	1345	93	58	6.9	21.0	8.3	--	--	18	12	<.1
AUG											
19...	1145	64	59	7.2	18.0	8.8	K810	93	18	10	.0

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	ALKA- LITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)
OCT											
16...	--	--	--	9	1.0	--	--	--	--	--	--
NOV											
18...	4.0	1.7	1.6	7	.8	13	1.4	3.5	33	32	9.8
JAN											
14...	3.6	1.5	1.5	4	1.5	8.7	1.8	3.0	32	26	24.1
FEB											
26...	2.9	1.3	1.0	3	1.5	8.3	1.3	--	26	--	47.7
APR											
15...	3.2	1.5	1.7	3	1.5	9.0	1.4	3.1	31	22	35.1
MAY											
19...	5.5	2.3	2.4	8	.9	20	2.4	--	32	--	3.4
JUL											
07...	4.6	1.8	1.9	6	1.2	12	2.0	3.7	38	30	9.5
AUG											
19...	4.7	1.7	1.9	8	.9	13	1.3	3.7	26	31	4.5

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)
OCT											
16...	--	--	--	--	--	--	--	--	--	--	--
NOV											
18...	<.010	.64	.080	<.010	35	1	1	3	10	340	250
JAN											
14...	<.010	.87	.010	<.010	36	<1	2	<3	<10	570	490
FEB											
26...	--	--	--	--	--	--	--	--	--	380	340
APR											
15...	<.010	.75	<.010	<.010	40	<0	<1	<3	<10	240	210
MAY											
19...	--	--	--	--	--	--	--	--	--	260	210
JUL											
07...	--	--	--	--	36	<1	<1	<3	<10	210	160
AUG											
19...	<.010	.30	.020	<.010	39	1	1	3	10	230	170

K Results based on colony count outside the acceptable range (non-ideal colony count).

03189000 CHERRY RIVER AT FENWICK, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
NOV 18...	89	10	4	70	0	70	20	25	6.0	6	--	--
JAN 14...	79	10	<4	50	0	51	20	21	7.0	8	--	--
FEB 26...	39	--	--	50	2	48	--	--	--	--	--	--
APR 15...	35	<10	<4	60	20	45	<10	20	<6.0	3	4	4.5
MAY 19...	47	--	--	130	10	120	--	--	--	--	2	.22
JUL 07...	55	<10	<4	70	6	64	<10	26	<6.0	9	1	.25
AUG 19...	64	10	4	60	9	51	10	27	6.0	4	0	.00

KANAWHA RIVER BASIN

03189100 GAULEY RIVER NEAR CRAIGSVILLE, WV

LOCATION (REVISED).--Lat 38°17'27", long 80°38'57", Nicholas County, Hydrologic Unit 05050005, on right bank at downstream side of highway bridge on State Highway 20, 200 ft (61 m) downstream from Cherry River, 1.8 mi (2.9 km) downstream from Cranberry River, 2.7 mi (4.3 km) south of Craigsville, and at mile 61.5 (99.0 km).

DRAINAGE AREA.--529 mi² (1,370 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) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good except those for December, January, and February, which are poor. Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--18 years, 1,468 ft³/s (41.57 m³/s), 37.76 in/yr (959 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,700 ft³/s (1,150 m³/s) Mar. 7, 1967, gage height, 22.73 ft (6.928 m); minimum, 13 ft³/s (0.37 m³/s) Sept. 27, 1967, gage height, 8.62 ft (2.627 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 12,000 ft³/s (340 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Oct. 27	1215	16500 467	16.98 5.176	Mar. 20	1715	13200 374	15.96 4.865
Dec. 23	1530	15200 430	16.59 5.057	May 30	1230	13400 379	16.04 4.889
Feb. 3	1630	15900 450	16.80 5.121	June 11	0145	*20000 566	17.95 5.471
Feb. 17	1830	13100 371	15.93 4.855				

Minimum discharge, 48 ft³/s (1.4 m³/s) Sept. 21, gage height, 8.94 ft (2.725 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	108	1150	1130	872	5540	1340	2080	998	1880	962	1030	466
2	274	944	1190	908	2920	1230	1770	881	1470	566	550	438
3	333	791	1080	953	9910	1210	1710	764	1080	380	392	356
4	248	670	935	4550	8210	1140	1910	654	1420	543	301	264
5	194	598	926	4880	4090	1170	1450	558	3170	702	239	200
6	194	953	800	2770	2750	1250	1450	501	2900	746	386	161
7	377	1080	710	2820	1900	1810	1300	454	3560	445	836	135
8	363	926	1030	3010	1480	2070	1180	454	2380	438	1970	115
9	281	836	1560	2080	5200	1730	1240	448	1810	1350	1540	103
10	242	782	1250	1200	5440	1640	1240	382	5350	755	1150	93
11	220	710	1000	1000	3070	1770	1290	339	12800	590	719	93
12	204	630	900	900	2110	5060	1280	309	4490	566	515	81
13	188	558	800	800	1690	4900	1680	279	6570	445	404	70
14	173	501	920	670	1240	4490	1900	258	5390	424	322	61
15	161	461	1670	560	1130	4760	1450	237	2980	1290	264	56
16	162	428	1500	470	2580	4760	1170	211	1830	881	217	61
17	168	404	1170	430	9280	5950	1060	190	1300	1140	180	70
18	183	388	900	410	6700	4010	1420	168	1050	1380	230	67
19	335	377	740	500	3720	2750	1170	154	746	1260	165	57
20	352	382	670	640	2750	7370	1030	147	622	890	142	53
21	305	435	620	1400	3640	7110	1020	183	501	881	129	50
22	288	399	4530	3600	2890	4440	890	203	392	550	142	60
23	326	330	13300	3400	2170	2870	755	543	328	404	135	184
24	543	410	7010	3520	2350	2080	678	638	269	317	161	151
25	529	467	3560	2000	3010	1600	614	630	222	253	222	103
26	590	454	2320	1300	2130	1730	899	487	188	200	279	86
27	10700	1720	1730	1000	1730	1520	1390	515	173	173	269	380
28	6390	2920	1340	920	1510	1270	1570	467	158	158	662	522
29	3360	1870	1130	840	---	1170	1340	393	550	710	445	285
30	2140	1360	899	780	---	1300	1140	7110	1240	445	306	196
31	1520	---	773	1060	---	1440	---	3990	---	917	508	---
TOTAL	31451	23934	58093	50243	101140	86940	39076	23545	66819	20761	14810	5025
MEAN	1015	798	1874	1621	3612	2805	1303	760	2227	670	478	168
MAX	10700	2920	13300	4880	9910	7370	2080	7110	12800	1380	1970	522
MIN	108	330	620	410	1130	1140	614	147	158	158	129	50
CFSM	1.92	1.51	3.54	3.06	6.83	5.30	2.46	1.44	4.21	1.27	.90	.32
IN.	2.21	1.68	4.09	3.53	7.11	6.11	2.75	1.66	4.70	1.46	1.04	.35

CAL YR 1981	TOTAL	541660	MEAN	1484	MAX	15800	MIN	32	CFSM	2.81	IN	38.09
WTR YR 1982	TOTAL	521837	MEAN	1430	MAX	13300	MIN	50	CFSM	2.70	IN	36.70

KANAWHA RIVER BASIN

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03189100 GAULEY RIVER NEAR CRAIGSVILLE, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1968-1973, 1975-1977, 1979 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1981 to September 1982 (discontinued).

WATER TEMPERATURES: November 1974 to April 1977, November 1980 to September 1982 (discontinued).

INSTRUMENTATION.--Temperature recorder November 1974 to April 1977, Nov. 5, 1980 to Oct. 20, 1981. Water-quality monitor Oct. 20, 1981 to Sept. 30, 1982 (discontinued).

REMARKS.--Interruptions in the record were due to instrument malfunctions. Monitor data is essentially that of the Gauley River and does not reflect that of the Cherry River.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 31.0°C Aug. 1, 2, 1975; minimum, 0.0°C on many days in 1981, 1982.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 70 micromhos Sept. 22; minimum daily, 28 micromhos Nov. 29, Mar. 17, 23, Apr. 20, June 11.

WATER TEMPERATURES: Maximum recorded, 27.5°C July 25, 27; minimum recorded, 0.0°C many days in December, January, and February.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW- INSTAN- TANEOUS (CFS)	SPF- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)
OCT										
20...	1700	304	60	6.8	8.5	11.0	--	--	16	8
23...	0730	296	48	--	10.5	--	--	--	--	--
NOV										
18...	0815	360	40	7.1	6.5	11.0	--	--	--	--
19...	0945	374	43	6.2	5.5	11.4	--	--	--	--
DEC										
09...	1700	1460	39	6.2	5.0	13.5	58	110	11	8
JAN										
29...	1430	910	37	6.4	.0	13.4	19	14	12	8
MAR										
04...	1000	1130	39	6.3	4.0	10.6	--	--	11	6
APR										
22...	0900	960	39	6.0	10.0	10.6	--	--	11	7
JUL										
22...	1800	492	39	6.2	25.0	--	--	--	12	6
AUG										
19...	1100	163	49	6.8	21.5	8.3	230	110	15	6
SEP										
08...	0900	117	49	6.5	20.5	7.8	--	--	16	7

DATE	ACIDITY (MG/L AS H)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	ALKA- LINITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SILICA, DIS- SOLVED (MG/L AS SI02)
OCT									
20...	<.1	4.3	1.5	2.6	8	2.0	12	1.8	--
23...	--	--	--	--	--	--	--	--	--
NOV									
18...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
DEC									
09...	<.1	2.9	1.0	1.3	3	3.6	6.9	1.7	3.1
JAN									
29...	.1	3.0	1.2	1.4	4	3.0	7.9	1.7	2.9
MAR									
04...	<.1	2.9	1.1	1.1	5	4.8	6.9	1.2	--
APR									
22...	<.1	2.9	1.0	1.3	4	7.7	7.0	1.1	2.9
JUL									
22...	<.1	3.4	.9	1.2	6	7.3	9.0	1.2	--
AUG									
19...	<.1	4.2	1.2	1.7	9	2.7	8.0	1.3	2.9
SEP									
08...	<.1	4.3	1.3	1.9	9	5.5	9.0	1.7	--

KANAWHA RIVER BASIN

03189100 GAULEY RIVER NEAR CRAIGSVILLE, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)
OCT 20...	30	--	24.6	--	--	--	--	--	--	--
DEC 09...	32	--	126	.65	2.8	.030	.09	.68	<.010	.010
JAN 29...	--	--	--	1.00	4.4	1.00	3.2	.87	.100	--
MAR 04...	27	--	82.3	--	--	--	--	--	--	--
APR 22...	20	19	51.8	--	--	<.010	--	.63	<.010	<.010
JUL 22...	38	--	50.4	--	--	--	--	--	--	--
AUG 19...	42	25	18.4	--	--	<.010	--	.18	<.010	<.010
SEP 08...	22	--	6.9	--	--	--	--	--	--	--

DATE	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS P04)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM, DIS- SOLVED (UG/L AS CD)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
OCT 20...	--	--	--	--	--	--	420	350	71	--
DEC 09...	.03	29	<1	<1	<3	<10	200	180	16	10
JAN 29...	--	38	1	1	3	10	180	150	32	60
MAR 04...	--	--	--	--	--	--	510	490	25	--
APR 22...	--	53	<0	<1	<3	<10	160	140	16	20
JUL 22...	--	--	--	--	--	--	450	390	59	--
AUG 19...	--	38	<1	<1	<3	<10	570	500	67	<10
SEP 08...	--	--	--	--	--	--	250	--	<3	--

DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
OCT 20...	--	10	0	12	--	--	--	--	--	--
DEC 09...	<4	20	1	19	<10	15	<6.0	10	--	--
JAN 29...	4	30	1	29	10	18	6.0	12	--	--
MAR 04...	--	30	0	30	--	--	--	--	--	--
APR 22...	<4	20	0	22	<10	15	<6.0	6	3	7.8
JUL 22...	--	40	30	11	--	--	--	--	--	--
AUG 19...	<4	20	9	11	<10	20	<6.0	4	22	9.7
SEP 08...	--	10	1	9	--	--	--	--	1	.32

KANAWHA RIVER BASIN

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03189100 GAULEY RIVER NEAR CRAIGSVILLE, WV--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	34	33	39	40	35	---	30	33	38	34	41
2	---	35	32	40	38	34	---	30	32	40	34	41
3	---	36	34	40	39	33	---	31	33	41	35	40
4	---	36	38	38	43	32	---	32	29	40	36	41
5	---	40	35	33	50	31	---	33	30	40	37	41
6	---	36	36	37	60	31	41	33	31	39	37	44
7	---	33	37	39	57	34	39	34	31	42	35	45
8	---	36	34	36	51	34	38	35	31	39	38	46
9	---	35	33	39	49	33	37	35	32	32	35	47
10	---	35	32	38	60	32	35	36	34	31	37	46
11	---	35	32	41	52	31	31	36	28	32	38	48
12	---	35	32	41	45	33	32	37	29	33	38	50
13	---	36	37	40	43	30	31	37	30	35	38	52
14	---	37	39	40	43	29	30	37	30	35	40	54
15	---	37	38	39	43	30	30	38	32	32	40	60
16	---	37	32	40	43	30	31	38	34	33	42	64
17	---	37	32	42	43	28	31	40	35	30	43	63
18	---	40	34	45	41	29	33	41	35	31	46	63
19	---	43	36	43	44	34	29	41	40	29	46	64
20	52	45	37	41	46	32	28	43	46	30	47	62
21	45	44	41	39	45	29	30	42	51	33	46	64
22	46	44	48	36	51	29	31	40	52	36	46	70
23	45	45	38	32	54	28	32	41	55	37	49	54
24	41	44	45	38	45	29	32	41	61	38	52	54
25	42	42	49	40	40	30	33	35	61	39	51	54
26	40	43	41	42	43	32	33	39	63	42	48	55
27	39	42	37	45	36	32	31	42	64	44	51	53
28	35	33	37	44	35	29	31	41	62	47	44	44
29	35	28	38	46	---	29	30	44	61	49	45	42
30	34	31	40	41	---	35	29	38	44	42	49	41
31	34	---	40	40	---	42	---	32	---	37	43	---
MEAN	41	38	37	40	46	32	32	37	41	37	42	51
WTR YR 1982	MEAN	39		MAX	70	MIN	28					

03189100 GAULEY RIVER NEAR CRAIGSVILLE, WV--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	18.5	15.0	10.0	9.0	4.0	2.5	1.5	1.0	2.0	.5	5.0	3.0
2	17.0	12.0	10.5	9.0	5.0	4.0	1.5	.5	2.0	1.0	5.5	4.0
3	12.5	11.0	12.0	10.0	4.5	4.0	2.5	1.0	4.0	2.0	5.0	4.5
4	12.5	10.5	11.5	10.0	4.0	3.5	4.5	3.0	4.0	3.0	6.5	4.0
5	12.5	11.5	12.5	10.5	3.5	2.0	3.0	2.0	3.5	2.5	6.0	5.0
6	14.5	12.5	11.0	8.0	2.0	1.0	3.0	2.0	3.5	2.0	5.0	4.5
7	13.5	12.0	8.5	6.5	2.0	1.0	4.0	3.0	2.0	.0	4.5	2.5
8	12.5	11.0	7.0	5.5	2.0	1.5	3.0	.5	.5	.0	2.5	1.0
9	12.0	10.5	6.5	5.0	1.5	.0	.5	.0	2.0	.0	4.0	1.5
10	12.0	11.0	8.0	6.0	.0	.0	.0	.0	2.0	1.5	5.0	2.5
11	12.5	11.0	7.5	6.0	.0	.0	.0	.0	1.5	1.0	6.5	4.5
12	13.5	11.5	6.5	5.0	.0	.0	.0	.0	1.0	.0	7.0	6.0
13	13.5	11.5	5.5	4.0	.5	.0	.0	.0	1.0	.5	7.5	6.5
14	13.0	10.0	5.0	3.5	.0	.0	.0	.0	1.5	.0	6.5	5.5
15	11.5	10.0	5.0	3.5	.5	.0	.0	.0	2.0	.0	6.0	5.0
16	13.0	11.0	4.5	3.0	1.5	.5	.0	.0	4.0	2.0	5.5	4.5
17	13.0	10.5	5.5	4.5	.5	.0	.0	.0	4.5	4.0	7.5	5.0
18	13.5	12.0	6.0	5.0	.5	.0	.5	.0	4.0	3.5	8.5	7.0
19	11.5	9.0	6.5	4.5	.0	.0	.0	.0	4.0	3.0	8.0	7.5
20	10.0	7.5	7.0	4.5	.0	.0	.0	.0	4.0	3.0	8.0	7.0
21	9.5	7.5	4.5	2.5	.5	.0	.0	.0	4.5	3.0	8.5	7.0
22	10.5	8.5	2.0	1.0	1.5	.0	.5	.0	3.0	2.0	8.0	5.5
23	12.0	9.0	1.5	.0	4.5	1.5	2.0	.5	3.5	1.5	7.0	5.0
24	9.5	7.5	.5	.5	4.0	3.5	2.0	.0	5.0	3.0	7.0	5.5
25	8.5	7.0	1.5	.5	3.5	3.0	.0	.0	5.0	3.0	8.0	6.0
26	13.0	8.5	2.0	.5	2.5	2.0	.0	.0	3.0	1.5	7.5	4.5
27	13.5	10.5	4.5	2.0	3.0	2.0	.5	.0	1.5	1.0	4.5	2.0
28	11.0	10.0	4.5	4.0	2.5	2.0	.5	.0	4.0	1.5	4.0	1.0
29	10.5	9.0	4.0	3.0	2.5	1.5	.5	.0	---	---	6.0	2.5
30	10.5	9.0	3.0	2.0	1.5	.0	.5	.0	---	---	8.0	5.0
31	10.5	9.0	---	---	1.0	.0	2.0	.0	---	---	9.0	7.5
MONTH	18.5	7.0	12.5	.0	5.0	.0	4.5	.0	5.0	.0	9.0	1.0
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.5	7.5	12.5	10.0	17.5	17.0	20.5	17.0	22.0	20.0	20.0	17.5
2	10.0	7.0	12.5	11.0	19.0	16.0	22.0	17.0	22.0	19.5	21.0	19.0
3	11.5	9.5	15.0	10.0	18.5	16.5	21.0	19.0	24.0	20.5	22.0	19.5
4	9.5	7.5	16.0	11.5	18.0	16.0	21.5	19.5	24.5	21.0	22.0	18.5
5	8.0	6.5	17.5	12.5	16.5	14.0	22.0	19.0	24.5	23.0	22.0	18.0
6	7.0	3.5	18.5	13.5	14.0	13.0	22.5	19.5	23.5	22.0	22.5	18.0
7	5.0	2.0	18.0	16.0	14.5	12.5	23.5	20.0	22.5	20.5	22.5	18.5
8	5.0	3.0	17.5	15.0	15.5	14.0	24.5	21.5	20.5	19.0	23.0	19.5
9	4.5	3.5	17.0	13.5	18.0	15.0	23.0	19.5	19.5	18.5	22.5	20.0
10	5.0	3.0	18.0	13.0	17.5	14.5	23.0	19.0	21.5	18.5	24.0	19.0
11	5.5	3.5	19.0	14.5	14.5	13.0	23.5	20.5	20.5	19.0	24.5	19.5
12	8.0	4.5	20.5	16.0	14.5	14.0	24.5	21.5	21.5	18.5	24.5	19.5
13	9.0	7.0	21.0	17.0	14.0	13.5	23.5	21.0	21.5	18.0	23.0	20.5
14	10.5	7.5	21.5	18.0	15.0	13.0	24.5	21.5	23.0	19.0	23.0	21.0
15	12.5	9.0	23.0	18.5	15.5	13.5	25.0	19.5	24.5	20.0	24.0	21.0
16	13.5	11.0	23.0	19.0	17.5	15.0	24.0	21.0	25.0	20.5	24.5	21.5
17	13.5	12.5	24.0	19.5	18.5	17.0	23.5	21.5	25.5	22.0	24.0	20.0
18	13.5	11.0	24.5	19.5	20.5	16.5	23.0	21.5	25.5	21.5	21.0	19.0
19	13.0	10.0	24.0	21.0	20.0	17.5	22.5	20.5	25.0	21.0	18.5	17.5
20	11.5	10.5	23.0	20.5	21.5	17.5	22.5	20.5	24.0	21.0	18.5	17.0
21	13.5	10.5	22.5	19.5	20.5	17.5	24.0	20.5	24.5	22.0	17.0	15.5
22	13.0	10.0	23.5	20.0	20.5	18.0	25.0	21.0	24.0	20.0	16.0	14.5
23	13.0	8.5	21.5	19.5	22.0	18.5	24.5	22.5	22.0	20.5	14.5	13.5
24	13.5	9.0	20.5	19.0	22.5	18.0	26.5	22.5	24.0	21.0	16.0	13.0
25	13.5	10.0	21.0	18.0	23.5	19.0	27.5	23.0	24.0	21.5	17.0	14.5
26	13.5	12.0	21.0	18.5	23.5	20.0	27.0	23.5	24.0	20.0	16.0	14.5
27	12.5	11.0	20.5	19.0	24.0	21.0	27.5	24.0	22.5	20.0	14.5	14.0
28	12.5	9.5	22.5	19.0	25.5	21.5	26.0	23.5	20.5	19.0	15.0	14.0
29	12.5	9.5	23.0	20.5	24.0	20.5	24.5	22.5	21.5	17.5	16.0	13.0
30	12.5	10.0	21.0	15.5	20.5	18.5	23.5	21.5	19.5	18.0	16.0	14.5
31	---	---	17.5	15.0	---	---	23.5	22.0	18.5	17.5	---	---
MONTH	13.5	2.0	24.5	10.0	25.5	12.5	27.5	17.0	25.5	17.5	24.5	13.0
YEAR	27.5	.0										

KANAWHA RIVER BASIN

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03189590 SUMMERSVILLE LAKE NEAR SUMMERSVILLE, WV

LOCATION (REVISED).--Lat 38°13'21", long 80°53'26", Nicholas County, Hydrologic Unit 05050005, at Summersville Dam on Gauley River, 4.6 mi (7.4 km) southwest of Summersville, and at mile 35.8 (57.6 km).

DRAINAGE AREA.--805 mi² (2,085 km²), revised.

PERIOD OF RECORD.--May 1965 to current year (monthend contents only).

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

REMARKS.--Reservoir is formed by rockfill dam with impervious core, completed in 1971; closure of dam was made and storage began in May 1965. Spillway is uncontrolled saddle spillway 1,250 ft (381.0 m) long. Flow is controlled by three 9 ft (2.7 m) and one 2.5 ft (0.76 m) diameter Howell-Bunger fixed-cone dispersion valves. Total level-pool capacity at elevation 1,710 ft (521.2 m), flood-control pool elevation, is 413,800 acre-ft (510 hm³) of which 390,800 acre-ft (482 hm³) is controlled storage above elevation 1,520 ft (463.3 m), minimum-pool elevation. This is a multipurpose reservoir.

COOPERATION.--Records were furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 421,800 acre-ft (520 hm³) Mar. 5, 1966, elevation, 1,711.7 ft (521.73 m), caused by flood before valves were operational; minimum since initial filling, 6,990 acre-ft (8.62 hm³) Jan. 13, 1967, elevation, 1,464.5 ft (446.38 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 207,600 acre-ft (256 hm³) June 11, elevation, 1,657.57 ft (505.227 m); minimum, 56,820 acre-ft (70.1 hm³) Feb. 19, elevation, 1,573.80 ft (479.694 m).

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

Date	Elevation (feet)	Contents (acre-feet)	Change in Contents (acre-feet)	(equivalent in cfs)
Sept. 30.....	1636.95	153300	-	-
Oct. 31.....	1629.29	136500	-16800	-273
Nov. 30.....	1575.46	58350	-78150	-1310
Dec. 31.....	1575.78	58650	+300	+5
CAL YR 1981			-3400	-5
Jan. 31.....	1575.82	58690	+40	+1
Feb. 28.....	1576.51	59340	+650	+12
Mar. 31.....	1576.71	59530	+190	+3
Apr. 30.....	1634.76	148300	+88770	+1490
May 31.....	1653.33	195300	+47000	+76
June 30.....	1653.00	194300	-1000	-17
July 31.....	1652.56	193100	-1200	-20
Aug. 31.....	1652.76	193700	+600	+10
Sept. 30.....	1613.31	106700	-87000	-1460
WTR YR 1982			-46600	-64

KANAWHA RIVER BASIN

03189600 GAULEY RIVER BELOW SUMMERSVILLE DAM, WV

LOCATION (REVISED).--Lat 38°12'54", long 80°53'18", 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 35.3 (56.8 km).

DRAINAGE AREA.--806 mi² (2,088 km²), revised.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR WV-67: 1966.

GAGE.--Water-stage recorder. Datum of gage is 1,350.00 ft (411.480 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Water-discharge records good. Flow regulated by Summersville Lake (station 03189590).

AVERAGE DISCHARGE.--16 years, 2,154 ft³/s (61.00 m³/s), 36.29 in/yr (922 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, 15,500 ft³/s (439 m³/s) June 11, gage height, 18.50 ft (5.639 m); minimum daily, 130 ft³/s (3.68 m³/s) Apr. 16, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2350	2320	1730	970	3270	2210	1050	134	3980	2260	1530	905
2	2340	2310	1450	1260	5100	1940	291	134	1990	1210	985	806
3	2330	2300	1120	1400	9900	1500	293	137	1700	838	531	486
4	2330	2300	1280	4220	13000	1620	296	137	1890	678	280	239
5	2390	2290	1430	6530	8270	1670	299	137	3820	854	283	239
6	2420	2290	1430	4310	3820	1670	301	137	3940	1190	283	239
7	2410	2280	1220	3040	2690	1900	301	137	3730	1060	346	239
8	2430	2280	1120	3260	2440	2950	266	139	3530	563	1890	239
9	2430	2760	1640	3530	6930	2870	212	139	2370	1360	3340	818
10	2420	3140	2020	2760	9340	2500	207	139	6110	1520	2160	2330
11	1880	3130	1850	2080	5190	2630	207	139	15100	778	940	2450
12	538	3110	1410	638	3420	6040	210	139	12000	642	730	2450
13	229	2610	1150	858	2680	7410	210	139	9210	722	570	2250
14	229	1710	1150	1270	1980	7280	212	139	9170	658	371	2090
15	229	2540	1940	1270	1680	7820	162	137	4170	794	296	2090
16	229	3060	2580	1160	3080	7730	130	137	2600	1420	296	2080
17	231	3030	2580	1000	9700	7870	130	137	2360	1320	296	2100
18	231	3000	1620	722	12500	6180	132	139	1590	1680	299	2130
19	231	2400	950	524	6610	4140	132	139	945	1790	199	2130
20	231	1720	950	634	3860	6350	132	139	766	1150	137	2120
21	231	1580	950	3260	4350	10400	132	139	678	850	137	2110
22	231	1340	3320	6970	4350	7310	132	139	678	1050	137	2110
23	231	1340	11600	6130	3230	3910	132	142	574	762	332	2130
24	231	1340	14000	6280	2670	2660	132	139	377	467	556	2270
25	231	1330	10600	4200	3530	2490	132	137	321	403	556	550
26	231	1320	6280	2700	3560	2180	134	139	321	288	556	2440
27	1370	2250	3280	1690	2910	2360	134	134	321	288	560	2560
28	3500	4780	2010	1240	2370	2290	134	134	321	291	556	2660
29	6100	4750	1520	1640	---	1850	134	134	714	499	556	2650
30	5230	2410	1410	1530	---	2110	134	3100	1970	965	396	2740
31	2320	---	1050	1410	---	2230	---	7760	---	1220	592	---
TOTAL	48014	73020	86640	78486	142430	124070	6503	14851	97246	29570	20696	51080
MEAN	1549	2434	2795	2532	5087	4002	217	479	3242	954	668	1703
MAX	6100	4780	14000	6970	13000	10400	1050	7760	15100	2260	3340	2740
MIN	229	1320	950	524	1680	1500	130	134	321	288	137	239

CAL YR 1981 TOTAL 776463 MEAN 2127 MAX 14800 MIN 184
WTR YR 1982 TOTAL 772606 MEAN 2117 MAX 15100 MIN 130

MEAN# 2122 CFMSM# 2.63 IN# 35.75
MEAN# 2053 CFMSM# 2.55 IN# 34.59

* Adjusted for change in contents in Summersville Lake.

KANAWHA RIVER BASIN

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03189600 GAULEY RIVER BELOW SUMMERSVILLE DAM, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1974 to April 1977, November 1980 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: December 1980 to September 1982 (discontinued).

WATER TEMPERATURES: November 1974 to April 1977, November 1980 to September 1982 (discontinued).

INSTRUMENTATION.--Conductance recorder December 1980 to September 1982. Temperature recorder November 1974 to April 1977, November 1980 to September 1982.

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

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 89 micromhos Oct. 27, 1981; minimum, 43 micromhos June 15, 1981.

WATER TEMPERATURES: Maximum, 23.0°C Aug. 26, Sept. 3, 1975; minimum, 0.5°C Jan. 9, 1975.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily recorded, 89 micromhos Oct. 27; minimum daily recorded, 44 micromhos Dec. 26-31, Jan. 1-4, Feb. 6-9.

WATER TEMPERATURES: Maximum, 20.5°C Sept. 24-30; minimum recorded, 1.0°C Jan. 25-31, Feb. 1-4.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

		STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)
DATE	TIME								
OCT									
14...	0900	260	85	7.1	17.0	9.2	--	--	27
DEC									
04...	1200	1320	60	6.9	6.5	12.7	58	100	18
11...	1630	1630	66	7.2	5.0	--	--	--	--
JAN									
05...	0900	6800	55	6.9	3.5	15.2	90	47	18
MAR									
01...	1700	2260	53	6.9	4.0	13.5	--	--	16
APR									
12...	1600	212	60	6.8	7.0	10.4	<1	K4	19
16...	1400	131	60	7.0	8.0	--	--	--	--
MAY									
17...	1600	130	61	7.2	9.0	11.4	--	--	18
JUN									
15...	1200	3750	47	6.6	15.5	10.2	--	--	15
28...	1800	324	45	6.9	16.0	--	--	--	--
AUG									
17...	1000	299	61	7.0	17.5	9.2	<1	<1	19
26...	1710	555	61	7.0	17.0	--	--	--	--

DATE	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	ACIDITY (MG/L AS H)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	ALKA- LINITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SILICA, DIS- SOLVED (MG/L AS SI02)
OCT										
14...	14	.0	6.8	2.6	3.9	13	1.6	19	2.3	--
DEC										
04...	10	<.1	4.6	1.8	2.1	8	1.6	13	1.8	2.8
JAN										
05...	13	<.1	4.3	1.8	2.0	5	1.0	12	2.3	3.3
MAR										
01...	11	<.1	3.8	1.6	1.6	5	1.0	12	1.7	--
APR										
12...	13	<.1	4.3	2.0	2.0	6	1.5	12	1.7	3.1
MAY										
17...	11	.0	4.3	1.9	1.9	7	.7	13	2.2	--
JUN										
15...	10	<.1	3.7	1.5	1.4	5	1.9	11	1.3	--
AUG										
17...	11	.0	4.6	1.9	2.0	8	1.5	12	1.3	3.6

K Results based on colony count outside the acceptable range (non-ideal colony count).

KANAWHA RIVER BASIN

03189600 GAULEY RIVER BELOW SUMMERSVILLE DAM, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)
OCT 14...	49	--	34.3	--	--	--	--	--	--	--
DEC 04...	40	33	143	--	--	<.010	--	.59	.050	.060
JAN 05...	41	32	753	.90	3.9	.010	.03	.91	.030	<.010
MAR 01...	34	--	207	--	--	--	--	--	--	--
APR 12...	42	29	24.0	--	--	<.010	--	.72	.020	<.010
MAY 17...	32	--	11.2	--	--	--	--	--	--	--
JUN 15...	38	--	385	--	--	--	--	--	--	--
AUG 17...	39	31	31.4	--	--	<.010	--	.54	<.010	<.010

DATE	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)	BARIIUM, DIS- SOLVED (UG/L AS BA)	BERYLLIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM, DIS- SOLVED (UG/L AS CD)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
OCT 14...	--	--	--	--	--	--	290	240	46	--
DEC 04...	.18	33	<1	<1	<3	<10	550	460	89	<10
JAN 05...	--	38	<1	2	<3	<10	260	220	40	<10
MAR 01...	--	--	--	--	--	--	420	390	32	--
APR 12...	--	40	<0	<1	<3	<10	310	280	33	<10
MAY 17...	--	--	--	--	--	--	180	170	15	--
JUN 15...	--	--	--	--	--	--	1900	1900	35	--
AUG 17...	--	41	<1	<1	<3	<10	170	110	59	<10

DATE	LITHIUM, DIS- SOLVED (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)	SEDI- MENT, SUS- PENDED (MG/L)	SFDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
OCT 14...	--	150	20	130	--	--	--	--	--	--
DEC 04...	<4	190	20	170	<10	31	<6.0	9	--	--
JAN 05...	<4	110	0	110	<10	29	8.0	9	4	73
MAR 01...	--	80	20	65	--	--	--	--	--	--
APR 12...	<4	80	8	72	<10	34	<6.0	<3	4	2.3
MAY 17...	--	80	20	64	--	--	--	--	3	1.1
JUN 15...	--	100	50	47	--	--	--	--	9	91
AUG 17...	<4	170	10	160	<10	35	<6.0	<4	0	.00

KANAWHA RIVER BASIN

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03189600 GAULEY RIVER BELOW SUMMERSVILLE DAM, WV--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	56	69	44	55	51	---	61	59	47	56	62
2	---	56	64	44	55	51	---	61	60	48	56	63
3	---	56	64	44	56	51	---	61	62	48	55	64
4	---	56	64	44	55	51	---	62	55	49	56	66
5	---	57	64	48	47	51	---	62	63	48	55	66
6	---	57	63	59	44	52	---	62	65	48	55	66
7	---	57	63	61	44	54	---	62	62	49	56	65
8	---	57	63	61	44	55	---	61	61	49	58	66
9	---	59	64	61	44	55	---	61	61	50	58	66
10	81	64	64	61	47	55	---	62	---	50	58	67
11	82	66	64	61	50	55	---	62	---	49	58	69
12	83	67	63	61	52	56	---	61	---	49	58	71
13	84	68	62	59	52	59	64	61	---	49	59	73
14	85	70	62	58	52	57	66	61	---	50	59	75
15	84	72	62	58	52	57	60	61	---	49	59	74
16	85	72	62	58	52	52	60	61	---	50	59	72
17	85	73	61	58	52	---	60	61	47	51	60	70
18	86	74	61	58	57	---	60	63	45	52	61	69
19	85	74	59	58	55	---	60	63	45	52	62	69
20	82	76	59	58	49	---	60	64	46	52	62	70
21	82	76	59	57	47	---	60	63	45	52	62	70
22	84	75	59	56	47	---	61	61	46	52	62	71
23	87	74	59	62	47	---	60	62	45	52	62	71
24	86	74	55	66	46	---	61	64	---	52	60	72
25	86	75	46	66	47	---	61	62	---	52	61	75
26	87	75	44	66	50	---	61	65	---	52	61	76
27	89	75	44	64	50	---	61	63	---	52	63	82
28	79	75	44	62	50	---	60	59	---	55	62	82
29	56	75	44	62	---	---	61	58	46	53	62	83
30	56	74	44	58	---	---	61	65	48	55	64	88
31	56	---	44	55	---	---	---	56	---	55	63	---
MEAN	80	68	58	58	50	54	61	62	53	51	59	71
WTR YR 1982	MEAN	60		MAX	89	MIN	44					

KANAWHA RIVER BASIN

03189600 GAULEY RIVER BELOW SUMMERSVILLE DAM, WV--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

KANAWHA RIVER BASIN

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03189890 MEADOW RIVER AT MCROSS, WV

LOCATION.--Lat 37°59'37", long 80°44'53", Greenbrier County, Hydrologic Unit 05050005, on right bank on downstream side of highway bridge at McRoss, 1.4 mi (2.3 km) upstream from Sewell Creek, and at mile 32.6 (52.5 km).

DRAINAGE AREA.--163 mi² (422 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1979 to September 1982 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 2,400 ft (732 m), from topographic map.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,060 ft³/s (86.7 m³/s), Feb. 4, 1982, gage height, 12.60 ft (3.840 m); minimum daily, 6.9 ft³/s (0.20 m³/s) Oct. 23, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,060 ft³/s (86.7 m³/s), Feb. 4, gage height, 12.60 ft (3.840 m), no other peak above base of 2,500 ft³/s (71.0 m³/s); minimum, 9.9 ft³/s (0.28 m³/s) Sept. 14, 15, 20, 21, gage height 2.73 ft (0.832 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	279	298	230	996	343	399	212	1010	182	583	46
2	49	219	441	260	1010	385	366	185	638	108	469	46
3	52	184	432	294	1980	449	366	169	337	100	263	38
4	33	153	362	1020	2890	464	351	149	226	329	120	30
5	27	132	305	1710	1930	451	298	130	457	494	84	24
6	26	160	253	1360	1160	410	293	116	503	302	92	20
7	64	167	216	977	720	494	277	108	464	178	294	18
8	53	142	271	700	450	630	260	103	333	143	897	16
9	41	125	360	480	806	632	265	101	322	115	686	15
10	35	115	270	360	1080	596	284	92	609	97	485	14
11	32	106	220	240	900	534	309	81	1420	88	296	13
12	31	97	170	190	672	646	313	73	1110	82	207	11
13	28	89	150	160	485	686	341	65	1470	66	153	11
14	27	82	210	130	353	742	316	59	2060	61	122	9.9
15	25	77	360	110	280	1060	272	53	1570	127	99	9.9
16	25	74	400	98	475	1470	238	49	879	98	81	14
17	26	71	360	92	1110	1550	216	43	529	78	76	21
18	30	68	240	86	1530	1300	258	39	291	349	68	16
19	47	64	180	110	1400	904	245	36	200	224	59	11
20	54	63	140	210	1100	967	218	35	163	169	48	10
21	45	70	130	370	948	1190	212	43	129	140	42	9.9
22	42	65	430	866	803	1000	187	45	108	105	37	11
23	46	52	1690	980	622	776	160	210	96	84	33	21
24	64	69	2200	660	617	601	144	235	81	73	30	17
25	65	78	1690	480	643	444	133	148	68	73	35	13
26	106	74	1060	370	520	393	263	104	59	54	42	13
27	1450	210	698	290	420	355	446	126	56	44	37	31
28	1760	575	484	230	358	298	440	128	67	40	90	42
29	1100	477	356	190	---	290	379	136	80	57	59	27
30	715	362	250	230	---	280	265	1090	133	88	39	16
31	448	---	210	287	---	307	---	1650	---	466	38	---
TOTAL	6564	4499	14836	13770	26258	20647	8514	5813	15468	4614	5664	594.7
MEAN	212	150	479	444	938	666	284	188	516	149	183	19.8
MAX	1760	575	2200	1710	2890	1550	446	1650	2060	494	897	46
MIN	18	52	130	86	280	280	133	35	56	40	30	9.9
CFSM	1.30	.92	2.94	2.72	5.76	4.09	1.74	1.15	3.17	.91	1.12	.12
IN.	1.50	1.03	3.39	3.14	5.99	4.71	1.94	1.33	3.53	1.05	1.29	.14

CAL YR 1981 TOTAL 123701.3 MEAN 339 MAX 2260 MIN 9.5 CFSM 2.08 IN 28.23
WTR YR 1982 TOTAL 127241.7 MEAN 349 MAX 2890 MIN 9.9 CFSM 2.14 IN 29.04

03189890 MEADOW RIVER AT MCROSS, WV-Continued

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)
OCT										
14...	1510	27	119	7.0	11.0	8.3	--	--	44	25
NOV										
18...	1100	69	92	6.9	5.5	11.0	250	100	35	21
JAN										
06...	1400	1830	50	6.5	1.5	12.8	K2100	960	18	12
FEB										
17...	1430	1210	54	6.8	4.0	11.5	--	--	17	10
18...	1120	1620	52	6.9	3.5	--	--	--	--	--
APR										
07...	1430	260	69	7.1	3.5	11.8	K30	140	25	15
MAY										
18...	1045	39	105	7.1	17.5	7.5	--	--	38	19
JUL										
09...	1045	115	91	7.1	19.0	7.2	--	--	35	17
AUG										
17...	1430	68	103	7.0	20.0	7.4	1400	670	39	22

DATE	ACIDITY (MG/L AS H)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	ALKA- LINITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SILICA, DIS- SOLVED (MG/L AS SI02)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT										
14...	.0	11	4.2	2.5	19	3.0	29	1.9	--	68
NOV										
18...	<.1	8.4	3.4	1.9	14	2.8	22	1.5	3.5	56
JAN										
06...	<.1	4.6	1.6	1.5	6	3.0	8.7	2.0	3.8	40
FEB										
17...	<.1	4.5	1.6	1.2	7	1.7	11	1.8	--	36
18...	--	--	--	--	--	--	--	--	--	--
APR										
07...	.0	6.2	2.4	1.4	10	1.2	14	1.5	3.3	48
MAY										
18...	.0	9.6	3.5	1.8	19	2.3	23	1.6	--	86
JUL										
09...	.0	9.3	2.9	1.8	18	2.2	15	.9	4.1	60
AUG										
17...	.0	10	3.5	4.5	17	3.2	23	2.5	1.2	57

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)
OCT									
14...	--	4.9	--	--	--	--	--	--	--
NOV									
18...	51	10.4	--	--	<.010	--	.61	.020	.070
JAN									
06...	29	198	.73	3.2	.030	.09	.76	<.010	<.010
FEB									
17...	--	118	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--
APR									
07...	35	33.6	--	--	<.010	--	.79	<.010	<.010
MAY									
18...	--	9.0	--	--	--	--	--	--	--
JUL									
09...	45	18.6	--	--	--	--	--	--	--
AUG									
17...	55	10.5	--	--	<.010	--	.54	<.010	<.010

K Results based on colony count outside the acceptable range (non-ideal colony count).

KANAWHA RIVER BASIN

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03189890 MEADOW RIVER AT MCROSS, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS P04)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
OCT 14...	--	--	--	--	--	--	360	250	110	--
NOV 18...	.21	39	<1	<1	<3	<10	430	340	88	<10
JAN 06...	--	31	<1	1	<3	<10	460	380	76	10
FEB 17...	--	--	--	--	--	--	110	60	47	--
APR 07...	--	37	<0	<3	<3	<10	580	460	120	<10
MAY 18...	--	--	--	--	--	--	470	370	99	--
JUL 09...	--	46	<1	<1	<3	<10	1000	820	180	<10
AUG 17...	--	44	<1	<1	<3	<10	170	110	60	<10

DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	STRON- TIUM, DIS- SOLVED (UG/L AS SP)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
OCT 14...	--	60	0	60	--	--	--	--	--	--
NOV 18...	<4	150	50	100	<10	56	<6.0	36	--	--
JAN 06...	<4	50	10	40	10	23	<6.0	22	--	--
FEB 17...	--	90	50	42	--	--	--	--	48	157
APR 07...	<4	90	10	79	<10	42	<6.0	3	8	5.6
MAY 18...	--	90	20	73	--	--	--	--	3	.32
JUL 09...	<4	70	20	52	<10	59	<6.0	9	24	7.5
AUG 17...	<4	10	1	9	<10	74	6.0	<4	10	1.9

KANAWHA RIVER BASIN

03190400 MEADOW RIVER NEAR MT. LOOKOUT, WV

LOCATION (REVISED).--Lat 38°11'23", long 80°56'49", 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).

WATER-DISCHARGE RECORDS

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.--Water-discharge records good except those below 30 ft³/s (0.85 m³/s), and those for December, January, and February, which are poor. Corps of Engineers gage-height telemeter at station. Rainfall records collected at site are contained in files of U.S. Geological Survey with only monthly totals published in this report.

AVERAGE DISCHARGE.--16 years, 774 ft³/s (21.92 m³/s), 28.80 in/yr (732 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 discharge, 11 ft³/s (0.31 m³/s) Oct. 13, 26, 1978; minimum gage height, 2.51 ft (0.765 m) Sept. 12, 13, 1966.

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 3	2100	6260 177	9.17 2.795	May 30	1100	*11700 331	11.40 3.475

Minimum discharge, 21.5 ft³/s (0.61 m³/s) Sept. 16, gage height, 2.90 ft (0.884 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	565	666	460	1660	910	913	524	2230	600	1330	102
2	63	430	762	520	1880	931	968	457	1430	376	822	105
3	116	360	804	636	4230	988	908	405	875	246	575	100
4	107	313	720	1920	5310	987	868	365	580	762	340	82
5	77	281	642	3070	3500	945	745	325	684	1760	210	67
6	69	368	540	2430	2280	873	675	293	903	1030	192	56
7	87	396	475	1850	1500	997	657	270	816	600	295	47
8	127	348	500	1430	900	1430	600	279	672	445	861	43
9	111	306	714	1110	3070	1410	592	276	666	348	1090	38
10	87	278	654	820	3230	1490	647	251	1600	278	903	36
11	75	253	450	700	2140	1460	689	222	3350	292	585	34
12	69	230	390	500	1570	1690	731	197	2370	267	396	30
13	61	206	350	350	1200	1860	731	178	2780	203	299	28
14	56	189	400	270	780	2010	723	161	3280	166	234	26
15	51	175	756	240	620	2630	664	146	2590	226	182	23
16	50	166	903	220	1060	3750	581	133	1700	320	145	24
17	50	160	798	200	3160	3170	519	122	1130	196	145	25
18	54	151	732	190	3700	2660	491	112	744	360	210	27
19	72	142	490	230	2780	2000	498	103	485	648	157	33
20	89	142	360	350	2290	2030	487	96	384	435	116	31
21	102	151	300	1790	1970	2580	458	100	316	420	93	26
22	85	148	1670	2660	1760	2350	414	103	260	295	80	24
23	107	125	4840	2120	1420	1860	365	366	218	218	72	26
24	185	166	4350	1980	1490	1440	332	619	185	178	66	25
25	163	368	2990	1300	1520	1100	310	571	157	148	69	30
26	189	348	2040	900	1270	982	351	402	135	130	82	33
27	2160	495	1440	600	1050	927	762	935	120	105	85	36
28	2860	1360	1040	520	931	829	826	717	118	102	140	49
29	1870	1160	798	450	---	760	771	627	127	148	163	72
30	1210	861	642	480	---	720	651	6060	360	140	113	56
31	834	---	510	555	---	780	---	4300	---	828	94	---
TOTAL	11275	10641	32726	30851	58271	48549	18927	19715	31265	12270	10144	1334
MEAN	364	355	1056	995	2081	1566	631	636	1042	396	327	44.5
MAX	2860	1360	4840	3070	5310	3750	968	6060	3350	1760	1330	105
MIN	39	125	300	190	620	720	310	96	118	102	66	23
CFSM	1.00	.97	2.89	2.73	5.70	4.29	1.73	1.74	2.86	1.09	.90	.12
IN.†	1.15	1.08	3.34	3.14	5.94	4.95	1.93	2.01	3.19	1.25	1.03	.14
IN.‡	3.92	1.95	3.50	2.94	5.23	4.99	1.46	4.69	6.20	4.90	5.27	1.53

CAL YR 1981 TOTAL 265875 MEAN 728 MAX 4840 MIN 18 CFSM 2.00 IN 27.10
WTR YR 1982 TOTAL 285968 MEAN 783 MAX 6060 MIN 23 CFSM 2.15 IN 29.15

† Runoff.

‡ Rainfall.

KANAWHA RIVER BASIN

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03190400 MEADOW RIVER NEAR MT. LOOKOUT, WV--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: February 1981 to August 1982 (discontinued).

INSTRUMENTATION.--Conductance recorder Feb. 26, 1981 to Aug. 30, 1982 (discontinued).

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

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 182 micromhos Sept. 4, 1981; minimum, 34 micromhos Aug. 9, 1982.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 150 micromhos July 26; minimum, 34 micromhos Aug. 9.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)
OCT									
22...	1145	80	137	7.4	8.5	11.2	--	--	45
DEC									
03...	1415	792	68	7.2	4.8	12.5	260	460	23
JAN									
21...	0930	2300	83	6.7	.0	14.1	400	5300	24
MAR									
03...	1230	973	72	6.8	5.5	12.1	--	--	23
APR									
21...	1415	465	79	7.0	14.0	9.6	26	K7	25
JUN									
03...	1445	854	72	6.7	20.0	8.8	--	--	24
JUL									
08...	1130	436	75	7.0	22.0	--	--	--	24
AUG									
24...	1330	67	118	7.6	22.5	8.5	K11	440	40

DATE	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	ACIDITY (MG/L AS H)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	ALKA- LINITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
OCT									
22...	21	.0	11	4.5	6.9	24	1.5	33	3.7
DEC									
03...	13	.0	5.9	2.0	1.8	10	1.0	13	2.3
JAN									
21...	14	<.1	6.0	2.4	4.9	10	3.8	14	6.7
MAR									
03...	8	<.1	5.6	2.2	2.1	15	4.6	15	2.7
APR									
21...	5	.0	6.4	2.4	2.6	20	3.8	14	2.8
JUN									
03...	15	<.1	6.0	2.3	2.0	9	3.4	15	1.8
JUL									
08...	0	.0	6.4	2.1	2.5	38	7.3	15	2.3
AUG									
24...	16	.0	9.9	3.7	1.8	24	1.1	25	1.1

K Results based on colony count outside the acceptable range (non-ideal colony count).

KANAWHA RIVER BASIN

03190400 MEADOW RIVER NEAR MT. LOOKOUT, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	SILICA, DIS- SOLVED (MG/L AS SI02)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS P04)
OCT 22...	--	70	--	15.1	--	--	--	--	--
DEC 03...	3.3	43	36	91.9	<.010	.61	<.010	.070	.21
JAN 21...	3.7	54	--	335	<.010	.67	<.010	<.010	--
MAR 03...	--	44	--	116	--	--	--	--	--
APR 21...	1.8	48	42	60.2	<.010	.35	.010	<.010	--
JUN 03...	--	48	--	111	--	--	--	--	--
JUL 08...	--	53	--	62.3	--	--	--	--	--
AUG 24...	4.5	63	61	11.5	<.010	<.10	<.010	<.010	--

DATE	BARIIUM, DIS- SOLVED (UG/L AS BA)	BERYLLIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM, DIS- SOLVED (UG/L AS CD)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOVERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM, DIS- SOLVED (UG/L AS LI)
OCT 22...	--	--	--	--	--	150	80	72	--	--
DEC 03...	29	<1	<1	<3	<10	600	530	67	<10	<4
JAN 21...	51	<1	<1	<3	<10	1600	1500	81	<10	<4
MAR 03...	--	--	--	--	--	70	30	44	--	--
APR 21...	42	<1	1	<3	<10	310	240	72	<10	<4
JUN 03...	--	--	--	--	--	1100	950	150	--	--
JUL 08...	--	--	--	--	--	--	--	460	--	--
AUG 24...	46	<1	<1	<3	<10	710	560	150	<10	<4

DATE	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUS- PENDED RECOVERABLE (UG/L AS MN)	MANGANESE, DIS- SOLVED (UG/L AS MN)	MOLYBDENUM, DIS- SOLVED (UG/L AS MO)	STRONTIUM, DIS- SOLVED (UG/L AS SR)	VANADIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)	SEDIMENT, SUS- PENDED (MG/L)	SEDIMENT, DIS- CHARGE, SUS- PENDED (T/DAY)
OCT 22...	<10	--	5	--	--	--	--	--	--
DEC 03...	30	20	11	<10	39	<6.0	<4	--	--
JAN 21...	200	150	50	<10	45	7.0	<4	--	--
MAR 03...	30	10	17	--	--	--	--	--	--
APR 21...	30	20	6	<10	44	<6.0	<3	5	6.3
JUN 03...	90	80	14	--	--	--	--	31	71
JUL 08...	--	--	34	--	--	--	--	--	--
AUG 24...	100	10	89	<10	67	<6.0	<4	--	--

KANAWHA RIVER BASIN

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03190400 MEADOW RIVER NEAR MT. LOOKOUT, WV--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	138	84	70	74	73	69	65	71	56	97	70	
2	143	88	67	76	74	69	63	73	59	109	75	
3	139	96	69	76	67	70	59	74	70	107	72	
4	138	110	67	74	63	68	64	76	78	100	72	
5	138	115	68	67	60	67	67	78	84	69	74	
6	141	101	69	62	61	68	74	80	81	69	78	
7	142	101	71	61	64	66	79	82	76	71	83	
8	138	108	73	64	67	66	79	85	79	76	69	
9	137	116	77	66	70	62	81	86	75	84	48	
10	135	117	73	71	69	60	80	88	74	88	61	
11	136	121	70	75	66	56	78	90	62	91	52	
12	136	127	70	76	68	56	71	91	58	88	58	
13	134	129	73	76	72	54	69	95	64	94	73	
14	133	131	74	77	74	55	69	95	58	95	85	
15	132	132	76	79	73	52	70	99	59	101	90	
16	130	133	77	79	67	49	71	101	61	108	94	
17	132	134	72	85	64	53	73	104	67	92	81	
18	136	136	74	83	65	56	77	110	78	100	88	
19	140	138	75	83	64	58	79	113	85	121	92	
20	140	139	76	81	66	59	82	119	95	99	121	
21	136	142	78	81	66	56	90	122	99	101	99	
22	133	142	74	76	67	57	87	122	106	92	98	
23	132	140	64	71	68	59	87	115	108	107	110	
24	122	138	64	69	69	61	85	108	112	99	115	
25	108	129	66	70	68	64	84	92	115	100	120	
26	102	117	66	68	68	66	83	92	120	114	122	
27	90	111	66	70	68	69	85	94	122	124	121	
28	75	93	68	72	69	70	73	97	123	105	127	
29	73	82	71	72	---	68	71	95	126	96	136	
30	77	77	74	73	---	66	69	76	120	97	133	
31	81	---	74	74	---	64	---	51	---	92	---	
MEAN	125	118	71	74	68	62	75	93	86	96	91	
WTR YR 1982	MEAN	87		MAX	143	MIN	48					

KANAWHA RIVER BASIN

03191500 PETERS CREEK NEAR LOCKWOOD, WV

LOCATION.--Lat 38°15'45", long 81°01'24", Nicholas County, Hydrologic Unit 05050005, on left bank, 0.9 mi (1.4 km) downstream from Tate Run, 1.5 mi (2.4 km) upstream from Line Creek and Lockwood, and at mile 5.2 (8.4 km).

DRAINAGE AREA.--40.2 mi² (104 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1945 to September 1971, November 1979 to September 1982 (discontinued).

REVISED RECORDS.--WRD WV-80-1: Drainage area,

GAGE.--Water-stage recorder. Altitude of gage is 1,070 ft (326 m), from topographic map. Prior to Sept. 30, 1971, at site 0.5 mi (0.8 km) downstream at datum 1,059.52 ft (322.942 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 2, 1945, nonrecording gage and Nov. 2, 1945, to Aug. 2, 1955, water-stage recorder near present site at datum 1,072.19 ft (326.804 m) National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--28 years (water years 1946-1971, 1981-82) 62.6 ft³/s (1.773 m³/s), 21.15 in/yr (537 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,500 ft³/s (184 m³/s) Aug. 2, 1958, Aug. 30, 1959, from rating curve extended above 2,100 ft³/s (59 m³/s) on basis of slope-area measurement of peak flow; maximum gage height, 14.43 ft (4.398 m) Aug. 2, 1958; no flow Sept. 6-9, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,180 ft³/s (175 m³/s) May 30, gage height, 13.98 ft (4.261 m), from floodmarks, no other peak above base of 1,200 ft³/s (34 m³/s); minimum discharge, 5.5 ft³/s (0.16 m³/s) Oct. 14, 15; minimum gage height, 2.81 ft (0.856 m) Oct. 14, 15, Sept. 25, 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.8	62	39	40	64	96	155	18	129	59	21	70
2	21	42	42	34	57	82	115	17	74	32	16	53
3	11	31	29	60	225	73	105	17	46	24	14	32
4	7.6	25	27	144	248	60	80	16	48	58	12	22
5	7.2	21	34	128	137	53	67	15	139	42	11	17
6	13	40	29	93	96	46	70	15	98	25	11	14
7	16	43	25	84	66	90	54	15	69	20	15	13
8	9.4	35	23	71	49	95	49	23	50	38	22	12
9	8.1	30	24	69	680	107	57	19	58	155	36	10
10	7.2	26	29	55	323	137	58	16	604	54	32	9.0
11	7.2	23	32	57	160	143	58	14	456	48	22	8.6
12	6.5	21	26	40	103	380	58	13	175	193	20	7.9
13	6.2	19	23	35	82	308	55	13	237	71	15	7.9
14	5.8	18	32	31	65	240	50	13	169	42	13	7.6
15	5.8	16	58	29	60	559	42	12	96	29	11	7.2
16	6.5	15	50	26	180	415	37	11	61	23	9.3	8.6
17	7.2	14	38	24	447	293	35	9.3	71	19	8.3	7.6
18	8.9	13	31	23	290	167	35	9.0	48	16	22	6.5
19	17	12	25	27	197	115	30	9.0	35	16	11	6.5
20	11	13	22	81	170	127	29	10	29	17	9.8	6.9
21	9.4	15	51	644	167	147	28	9.3	24	18	8.6	6.9
22	8.1	17	488	335	147	131	25	12	21	16	7.6	9.0
23	23	13	590	317	127	100	23	17	19	14	6.5	7.9
24	32	11	208	192	111	80	23	22	17	13	28	7.2
25	26	16	116	115	88	73	22	62	15	12	18	6.5
26	34	15	82	80	70	107	23	227	14	11	14	6.9
27	68	49	66	67	78	109	23	137	14	13	57	18
28	150	110	50	58	103	93	22	55	26	33	60	13
29	210	78	44	52	---	80	20	202	41	34	25	9.3
30	130	58	35	48	---	67	19	2160	129	21	30	7.9
31	84	---	34	58	---	102	---	334	---	25	73	---
TOTAL	96.9	901	2402	3117	4590	4675	1467	3521.6	3012	1191	659.1	419.9
MEAN	31.1	30.0	77.5	101	164	151	48.9	114	100	38.4	21.3	14.0
MAX	210	110	590	644	680	559	155	2160	604	193	73	70
MIN	5.8	11	22	23	49	46	19	9.0	14	11	6.5	6.5
CFSM	.77	.75	1.93	2.51	4.08	3.76	1.22	2.84	2.49	.96	.53	.35
IN.	.89	.83	2.22	2.88	4.25	4.33	1.36	3.26	2.79	1.10	.61	.39
CAL YR 1981	TOTAL	23980.7	MEAN	65.7	MAX	956	MIN	5.0	CFSM	1.63	IN	22.19
WTR YR 1982	TOTAL	26919.5	MEAN	73.8	MAX	2160	MIN	5.8	CFSM	1.84	IN	24.91

03191500 PETERS CREEK NEAR LOCKWOOD, WV--Continued

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)
OCT										
20...	1115	13	305	7.4	8.0	10.8	--	--	--	--
23...	1100	28	400	7.4	12.0	10.0	--	--	105	22
DEC										
10...	0930	29	215	7.1	.0	14.3	560	540	57	25
JAN										
19...	1545	28	280	8.0	.0	13.4	700	210	79	31
MAR										
02...	1700	59	155	7.4	9.0	10.0	--	--	48	9
APR										
20...	1715	28	212	7.5	14.5	9.5	380	100	65	11
JUN										
24...	1500	16	395	7.8	22.5	8.1	--	--	103	49
JUL										
30...	1200	21	237	7.5	22.5	8.0	--	--	75	30
AUG										
18...	1900	14	340	7.3	23.5	6.5	K1400	K1300	97	44

DATE	ACIDITY (MG/L AS H)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	ALKA- LINEITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SILICA, DIS- SOLVED (MG/L AS SI02)
OCT									
20...	--	--	--	--	--	--	--	--	--
23...	.0	27	9.2	41	83	5.2	77	9.4	--
DEC									
10...	.0	13	6.0	16	32	4.0	47	5.6	4.5
JAN									
19...	.0	19	7.6	22	48	.9	54	13	5.4
MAR									
02...	.0	10	5.6	7.7	39	3.0	38	3.2	--
APR									
20...	.0	15	6.7	12	54	3.3	40	4.0	3.8
JUN									
24...	.0	25	9.9	29	54	1.6	78	17	--
JUL									
30...	.0	19	6.8	15	45	2.7	39	5.3	--
AUG									
18...	.0	24	9.0	26	53	5.1	86	7.9	5.0

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)
OCT									
20...	--	--	--	--	--	--	--	--	--
23...	230	--	17.3	--	--	--	--	--	--
DEC									
10...	145	112	11.3	--	--	<.010	--	.89	.030
JAN									
19...	168	--	12.7	.92	4.0	.010	.03	.93	.120
MAR									
02...	94	--	14.9	--	--	--	--	--	--
APR									
20...	125	114	9.4	.52	2.3	.010	.03	.53	.020
JUN									
24...	242	--	10.4	--	--	--	--	--	--
JUL									
30...	151	--	8.5	--	--	--	--	--	--
AUG									
18...	233	190	8.8	1.10	4.8	.030	.09	1.1	<.010

K Results based on colony count outside the acceptable range (non-ideal colony count).

KANAWHA RIVER BASIN

03191500 PETERS CREEK NEAR LOCKWOOD, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	BARIUM, DIS- SOLVED (UG/L AS RA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
OCT 23...	--	--	--	--	--	--	5900	5800	110	--
DEC 10...	<.010	39	<1	<1	<3	<10	240	200	38	<10
JAN 19...	<.010	55	<1	2	<3	<10	1700	1700	17	<10
MAR 02...	--	--	--	--	--	--	360	330	27	--
APR 20...	<.010	43	<0	1	<3	<10	160	110	51	<10
JUN 24...	--	--	--	--	--	--	260	230	27	--
JUL 30...	--	--	--	--	--	--	630	590	41	--
AUG 18...	<.010	62	<1	<1	<3	<10	670	620	53	<10

DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
OCT 23...	--	200	150	55	--	--	--	--	147	11
DEC 10...	5	160	0	160	<10	130	<6.0	5	--	--
JAN 19...	<4	290	30	260	20	200	<6.0	<4	--	--
MAR 02...	--	210	20	190	--	--	--	--	--	--
APR 20...	7	110	20	93	<10	160	<6.0	<3	--	--
JUN 24...	--	70	20	55	--	--	--	--	1	.04
JUL 30...	--	90	40	53	--	--	--	--	5	.28
AUG 18...	10	40	10	29	<10	240	<6.0	10	19	.72

KANAWHA RIVER BASIN

199

03192000 GAULEY RIVER ABOVE BELVA, WV

LOCATION (REVISED).--Lat 38°14'00", long 81°10'52", 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 6.3 (10.1 km).

DRAINAGE AREA.--1,317 mi² (3,411 km²), revised.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 783: Drainage area. WSP 873: 1938. WSP 1275: 1929-30.

GAGE.--Water-stage recorder. Datum of gage is 669.00 ft (203.911 m) National Geodetic Vertical Datum, adjustment of 1912.

REMARKS.--Water-discharge records good except those for October, which are fair. Flow regulated since 1965 by Summersville Lake (station 03189590). Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--54 years, 2,735 ft³/s (77.46 m³/s), 28.20 in/yr (716 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, 22,100 ft³/s (626 m³/s) Feb. 3, gage height, 11.68 ft (3.560 m); minimum daily, 222 ft³/s (6.29 m³/s) Aug. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2430	3030	2390	1450	3810	3500	3280	684	7100	3410	3250	1060
2	2460	2840	2450	1830	6970	3410	1720	616	4200	2170	1980	1070
3	2500	2750	1970	2140	12800	2780	1590	570	2530	1160	1420	793
4	2500	2680	1960	4660	19900	2800	1460	528	2910	1320	713	486
5	2450	2640	2150	10000	13300	2840	1260	492	4150	2740	540	351
6	2560	2810	2040	7580	6960	2740	1200	456	5770	2320	480	330
7	2560	2830	1860	5180	4560	3030	1120	334	4630	1930	528	315
8	2570	2750	1620	4830	3930	4280	1030	456	4680	1290	1720	305
9	2620	2920	2040	4910	10500	4960	951	456	3590	1340	4410	295
10	2570	3520	2780	4050	15100	4360	990	417	7350	2360	4080	1930
11	2540	3470	2590	2630	8470	4580	1010	390	19700	1390	1870	2510
12	1700	3430	2140	1260	5700	7360	1050	368	16000	1180	1260	2500
13	460	3290	1620	1170	4390	9800	1040	346	11700	1100	1000	2390
14	295	1930	1570	1840	3480	9960	1030	325	13900	970	745	2090
15	285	2350	2350	1760	2610	11800	924	310	7940	810	528	2080
16	285	3310	3670	1700	3730	13700	753	295	4610	1570	492	2080
17	285	3270	3550	1370	11900	11400	684	282	3920	1690	462	2080
18	285	3240	3080	1500	18000	10100	677	270	2920	1650	516	2140
19	310	2990	1650	885	11200	6470	677	262	1710	2620	492	2140
20	320	1880	1450	958	6910	7280	649	254	1310	1890	325	2140
21	326	1860	1360	4990	6260	13500	629	250	1060	1310	258	2120
22	344	1490	3950	10600	6900	10300	602	266	980	1230	234	2110
23	356	1460	17100	8950	5270	6600	558	310	906	1290	222	2150
24	462	1550	19400	8410	4470	4340	522	721	705	729	540	2180
25	448	1900	15000	6770	5050	3970	492	761	534	663	663	2240
26	475	1870	9100	4320	5060	3570	492	616	504	510	656	1660
27	2250	2230	5350	3330	4490	3590	729	1110	492	433	713	2600
28	6190	5610	3540	2130	3770	3690	951	970	510	480	836	2780
29	7590	6340	2610	2380	---	2940	897	810	558	596	761	2780
30	7340	3920	2170	2360	---	3050	810	10500	2180	933	721	2780
31	3360	---	1910	2130	---	3390	---	14600	---	1410	486	---
TOTAL	61126	86160	126420	118073	215490	186090	29777	39025	139049	44494	32901	52485
MEAN	1972	2872	4078	3809	7696	6003	993	1259	4635	1435	1061	1750
MAX	7590	6340	19400	10600	19900	13700	3280	14600	19700	3410	4410	2780
MIN	285	1460	1360	885	2610	2740	492	250	492	433	222	295

CAL YR 1981 TOTAL 1106362 MEAN 3031 MAX 19400 MIN 245 MEAN# 3026 CFSM# 2.30 IN# 31.20
WTR YR 1982 TOTAL 1131090 MEAN 3099 MAX 19900 MIN 222 MEAN# 3035 CFSM# 2.30 IN# 31.29

* Adjusted for change in contents in Summersville Lake.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1978 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January 1981 to September 1982 (discontinued).

INSTRUMENTATION.--Conductance recorder January 1981 to September 1982.

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

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 159 micromhos Feb. 6, 1982 (corrected); minimum daily, 45 micromhos Sept. 6, 1981.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 159 micromhos Feb. 6; minimum daily, 47 micromhos Feb. 9.

REVISIONS.--Specific conductance values for water year 1981 for the period July 23 to Aug. 8, 1981 are incorrect and have been deleted. The maximum daily specific conductance has been revised to 120 micromhos Sept. 18, 1981, superseding value previously published.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	ACIDITY (MG/L AS H)
NOV											
02...	1600	3820	61	6.4	10.5	11.0	--	--	19	13	.1
17...	1600	3270	76	6.8	11.5	10.9	--	--	--	--	--
DEC											
10...	1045	28	74	6.5	3.5	12.8	27	32	22	13	<.1
JAN											
28...	1430	2030	70	7.3	1.5	14.0	38	22	20	11	.0
MAR											
02...	1500	3430	65	6.9	6.0	11.8	--	--	20	10	<.1
APR											
20...	1600	629	82	7.3	15.0	9.8	69	K6	26	4	.0
JUN											
24...	1300	504	68	6.6	21.0	8.2	--	--	21	13	<.1
JUL											
30...	1600	970	80	6.6	24.0	7.4	--	--	26	12	<.1
AUG											
18...	1700	581	78	7.3	26.0	7.8	67	170	25	13	.0
SEP											
07...	1555	314	92	--	24.0	--	--	--	--	--	--

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	ALKA- LINITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)
NOV											
02...	4.8	1.8	2.1	6	3.7	13	1.9	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
DEC											
10...	5.3	2.2	3.1	9	4.5	14	2.3	3.5	42	38	3.1
JAN											
28...	4.8	2.1	2.7	9	.8	15	3.1	3.7	42	--	230
MAR											
02...	4.6	2.1	2.1	10	2.4	14	2.2	--	38	--	352
APR											
20...	6.3	2.7	2.5	22	2.1	18	2.2	2.2	53	41	90.0
JUN											
24...	5.2	2.1	2.0	8	.0	16	1.4	--	50	--	68.0
JUL											
30...	6.6	2.4	2.9	14	6.8	16	2.1	--	54	--	--
AUG											
18...	6.3	2.4	2.9	12	1.1	15	2.1	3.0	58	39	90.9
SEP											
07...	--	--	--	--	--	--	--	--	--	--	--

K Results based on colony count outside the acceptable range (non-ideal colony count).

KANAWHA RIVER BASIN

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03192000 GAULEY RIVER ABOVE BELVA, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)
NOV 02...	--	--	--	--	--	--	--	--	--	380	310
17...	--	--	--	--	--	--	--	--	--	--	--
DEC 10...	<.010	.57	<.010	<.010	30	<1	<1	<3	<10	340	300
JAN 28...	<.010	.73	.030	<.010	36	<1	<1	<3	<10	500	450
MAR 02...	--	--	--	--	--	--	--	--	--	7900	7900
APR 20...	<.010	.42	.010	<.010	36	<0	1	<3	<10	90	40
JUN 24...	--	--	--	--	--	--	--	--	--	360	310
JUL 30...	--	--	--	--	--	--	--	--	--	780	740
AUG 18...	<.010	.40	<.010	<.010	38	<1	<1	<3	<10	240	210
SFP 07...	--	--	--	--	--	--	--	--	--	--	--

DATE	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
NOV 02...	67	--	--	70	40	26	--	--	--	--	--	--
DEC 10...	41	<10	<4	60	30	30	<10	38	<6.0	5	--	--
JAN 28...	55	<10	<4	60	6	54	<10	39	<6.0	5	--	--
MAR 02...	25	--	--	50	20	33	--	--	--	--	--	--
APR 20...	50	<10	5	30	20	11	<10	52	<6.0	15	2	3.4
JUN 24...	55	--	--	30	20	13	--	--	--	--	5	6.8
JUL 30...	44	--	--	50	40	6	--	--	--	--	2	5.2
AUG 18...	35	20	<4	30	10	16	<10	47	<6.0	9	10	16

KANAWHA RIVER BASIN

03192000 GAULEY RIVER ABOVE BELVA, WV--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	58	73	71	82	58	63	70	---	62	78	96
2	---	55	71	72	80	62	---	68	71	61	74	82
3	---	66	70	70	66	67	---	70	69	67	73	78
4	---	71	69	72	---	64	---	71	69	67	71	80
5	---	---	67	64	---	66	---	72	75	73	73	83
6	---	---	68	66	---	---	---	74	72	66	76	87
7	---	---	69	70	60	---	---	75	71	60	76	90
8	---	---	70	71	54	---	---	79	71	61	76	93
9	---	---	71	71	56	---	---	82	73	71	69	92
10	89	---	73	71	83	---	---	87	77	65	69	81
11	88	---	72	71	84	---	---	85	72	63	72	70
12	86	---	73	75	68	---	82	84	72	75	73	72
13	86	---	74	79	61	---	84	84	79	81	72	75
14	87	---	74	79	64	---	88	84	80	73	73	77
15	92	---	77	76	61	64	117	85	77	71	75	79
16	92	---	75	73	57	57	109	85	75	69	76	78
17	90	78	73	76	51	55	100	85	74	68	79	77
18	94	77	73	76	60	56	99	86	74	61	79	75
19	101	77	76	75	62	90	100	86	79	64	82	74
20	104	77	77	79	59	70	88	87	86	69	84	74
21	105	81	76	83	57	51	117	89	87	66	85	75
22	107	82	79	72	58	61	96	91	81	67	88	75
23	111	83	70	72	57	80	83	91	72	64	89	76
24	108	83	68	80	62	53	84	91	70	64	95	77
25	117	88	61	90	64	52	83	95	69	74	93	78
26	109	85	61	82	68	65	83	96	73	70	79	81
27	106	81	63	70	67	62	84	91	76	70	77	84
28	77	81	62	71	61	57	82	79	77	74	86	89
29	66	80	66	73	---	56	80	79	81	80	85	91
30	62	77	68	77	---	58	70	83	77	83	83	92
31	62	---	69	80	---	60	---	---	---	70	88	---
MEAN	93	77	71	74	64	62	90	83	75	69	79	81
WTR YR 1982	MEAN	76		MAX	117	MIN	51					

KANAWHA RIVER BASIN

203

03193000 KANAWHA RIVER AT KANAWHA FALLS, WV

LOCATION (REVISED).--Lat 38°08'17", long 81°12'52", Fayette County, Hydrologic Unit 05050006, on right bank 150 ft (46 m) downstream from 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 94.3 (151.7 km).

DRAINAGE AREA.--8,371 mi² (21,681 km²), revised.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1877 to current year. October 1916 to September 1918 and October 1927 to October 1928, published as "at Lock 2, Montgomery".

REVISED RECORDS.--WSP 783: Drainage area. WSP 923: 1878, 1886, 1897, 1899, 1901-3. WSP 1305: 1902(M), 1940. WSP 1335: 1931.

GAGE.--Water-stage recorder. Datum of gage is 621.20 ft (189.342 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 27, 1928, nonrecording gages at several sites within 9.0 mi (14.5 km) of present site at various datums. Oct. 27, 1928, to Sept. 30, 1964, water-stage recorder at present site at datum 2.00 ft (0.610 m) higher.

REMARKS.--Water-discharge records good. Flow regulated since 1939 by Claytor Lake (station 03169000), since 1949 by Bluestone Lake (station 03179800), and since 1965 by Summersville Lake (station 03189590). Corps of Engineers gage-height telemeter and Appalachian Power Co. remote sender at station.

AVERAGE DISCHARGE.--105 years, 12,556 ft³/s (355.6 m³/s), 20.37 in/yr (517 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 320,000 ft³/s (9,060 m³/s) Sept. 14, 1878, gage height, 37.8 ft (11.52 m), site and datum then in use, from gage-height relation and rating curve extended above 150,000 ft³/s (4,200 m³/s); minimum, 640 ft³/s (18.1 m³/s) Aug. 15, 1930, gage height, -0.95 ft (-0.290 m), datum then in use; minimum daily, 690 ft³/s (19.5 m³/s) Oct. 29, 1921.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 89,000 ft³/s (2,520 m³/s) Feb. 4, gage height, 16.05 ft (4.892 m); minimum, 1,010 ft³/s (28.6 m³/s) Aug. 31, gage height, 1.51 ft (0.460 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3950	7800	6250	7280	12300	17100	12200	13900	24400	8960	10400	3950
2	3890	6330	6250	6860	26300	12400	11300	11500	14200	7610	7060	4720
3	3760	5470	5650	9780	44900	14700	9880	10000	12500	6420	6150	6790
4	3730	5280	6730	28200	83500	16800	9230	8330	11600	6880	5620	4720
5	3750	4960	6710	56100	73800	19900	9060	7940	12300	6680	5870	4670
6	3910	5100	6220	53600	52300	17900	9120	8190	16300	5670	5350	3110
7	3990	5190	5450	36100	36600	19800	10300	7880	15700	5480	4920	2020
8	4010	5030	4850	24600	24700	29900	9100	6060	13500	5650	5130	1900
9	4070	5000	5080	21700	31100	34900	8480	5320	14400	6020	9850	1790
10	3940	5700	5980	16700	38400	29400	8240	4190	17300	7420	12400	3440
11	3890	5670	6120	12800	30900	25900	8840	5220	32500	6690	9940	4830
12	2680	5350	5780	6990	21600	26900	7390	5490	37600	5840	7590	4630
13	1780	5510	4730	5640	17500	27500	7580	5390	53300	5520	6980	4400
14	1500	4060	4420	7320	13900	27700	7860	5650	79800	6660	5780	3520
15	1600	4240	5500	7250	12900	35600	9140	4780	52900	8840	5170	4100
16	1690	5320	8040	6210	10000	48700	8140	3990	28100	10300	3580	4430
17	1640	5280	9740	5950	34900	47300	8620	3570	20500	9740	3580	4060
18	1490	5320	8990	5430	72900	40600	6870	2920	12000	8150	3600	3850
19	1780	5230	8030	4380	59000	30900	6010	4080	11500	7490	3210	4130
20	1730	4730	5840	6440	39700	26800	6560	4750	9480	5740	3360	4240
21	1740	3810	5120	16000	32200	48700	7580	4930	6250	6910	3530	4140
22	1340	3470	7490	36900	28800	51200	7190	5390	5710	6880	3480	4190
23	1750	3670	31200	35800	24200	34200	7750	6740	6840	6750	2260	4190
24	2020	3570	39400	31900	20400	26000	6670	7220	6330	6090	2520	4170
25	1860	4320	37300	25000	18700	22200	6450	8550	6100	6110	3040	4230
26	1900	4600	24900	16100	17500	18100	5050	10500	5890	4200	3080	3170
27	4780	4280	17800	15800	17100	16600	11500	10500	5360	3360	3380	4490
28	14800	8450	11700	11700	16100	16600	19000	12600	4380	4560	3660	4940
29	24800	10000	10400	10800	---	11800	21900	11200	3480	6100	3580	5230
30	18200	8210	9260	9240	---	11400	19300	29500	7440	6170	3430	4830
31	9940	---	7370	8650	---	13400	---	34500	---	7720	2450	---
TOTAL	141910	160950	328300	547220	912200	820900	286310	270780	547660	206610	159950	122880
MEAN	4578	5365	10590	17650	32580	26480	9544	8735	18260	6665	5160	4096
MAX	24800	10000	39400	56100	83500	51200	21900	34500	79800	10300	12400	6790
MIN	1340	3470	4420	4380	10000	11400	5050	2920	3480	3360	2260	1790
CAL YR 1981	TOTAL	3545740	MEAN	9714	MAX	68300	MIN	1340				
WTR YR 1982	TOTAL	4505670	MEAN	12340	MAX	83500	MIN	1340				

KANAWHA RIVER BASIN

03193000 KANAWHA RIVER AT KANAWHA FALLS, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: December 1957 to September 1966, July 1968 to current year.

INSTRUMENTATION.--Temperature recorder since Dec. 7, 1957.

REMARKS.--Interruptions in water temperature record due to instrument malfunctions.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 29.0°C Aug. 1-7, 1975; minimum, 0.0°C on several days during 1958-60, 1963, 1971, 1978.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 23.0°C May 20-23; minimum recorded, 1.0°C many days in January.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

[illegible]

KANAWHA RIVER BASIN

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 km²).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: July 1977 to current year.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum daily, 30°C Aug. 21, 1978, Aug. 3, 1981; minimum daily, -0.5°C Jan. 27, 1982.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum daily recorded, 28.5°C Aug. 1, 3; minimum daily recorded, -0.5°C Jan. 27.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.0	11.0	7.0	---	3.0	5.0	---	15.5	---	---	28.5	24.5
2	19.0	16.5	7.0	---	3.5	4.0	10.0	---	---	23.5	26.0	24.0
3	18.5	13.5	7.0	---	3.0	4.5	10.5	15.5	---	23.5	28.5	24.0
4	18.0	13.5	---	---	5.5	7.0	11.0	16.0	20.5	24.5	24.5	24.0
5	18.0	13.0	---	5.5	6.0	7.0	10.0	15.5	---	24.0	23.5	23.5
6	17.0	---	---	5.0	---	7.0	---	---	---	24.0	26.0	---
7	18.0	---	5.5	5.0	1.5	8.0	---	16.5	16.5	23.5	25.0	23.5
8	18.0	---	4.5	---	3.0	---	---	---	19.5	23.5	25.5	23.5
9	18.0	11.5	4.5	---	3.5	---	9.0	---	18.5	23.5	25.5	23.5
10	18.0	10.5	4.5	---	3.5	8.0	---	16.5	20.5	23.5	23.5	23.5
11	17.0	10.5	4.5	---	2.0	6.0	---	---	17.0	---	25.0	---
12	18.0	10.5	---	---	1.5	---	9.0	18.5	---	24.0	25.0	---
13	16.5	10.5	---	1.0	---	9.0	9.0	19.0	---	25.0	24.5	23.5
14	17.0	---	2.0	.0	---	9.0	16.5	---	17.0	24.5	---	23.0
15	16.5	---	10.0	.0	---	---	---	---	17.0	25.0	---	22.0
16	18.5	10.0	10.0	---	---	8.0	11.5	20.5	18.0	25.5	25.5	22.0
17	18.0	11.0	1.5	---	---	8.0	---	21.0	---	---	---	22.0
18	18.5	11.0	1.5	.5	5.5	---	---	22.0	---	---	26.0	22.0
19	16.0	10.0	1.5	1.0	---	---	14.0	23.5	18.5	25.5	26.0	23.5
20	---	11.0	3.0	.5	---	---	---	23.5	18.5	24.5	26.5	---
21	15.5	9.5	.5	.0	4.5	11.0	---	---	20.5	---	25.5	21.5
22	15.5	9.0	3.5	19.0	4.5	---	---	---	21.5	25.0	26.0	21.0
23	15.5	8.0	3.5	---	---	9.5	15.0	---	23.0	25.5	25.5	20.5
24	13.5	6.5	4.0	3.5	---	10.0	---	---	23.0	24.0	25.5	19.5
25	13.5	8.0	4.0	2.0	8.0	---	---	---	22.0	24.5	25.5	---
26	14.0	7.0	4.0	.5	---	10.5	---	---	22.0	26.0	25.5	---
27	14.5	7.0	4.0	-0.5	---	---	15.5	22.0	23.5	27.0	25.5	19.5
28	14.0	8.0	3.0	1.5	---	---	15.0	22.0	24.5	28.0	25.5	19.5
29	13.0	8.0	4.5	.5	---	8.5	---	23.0	25.0	28.0	25.5	19.5
30	13.0	7.0	4.5	---	---	8.5	15.5	---	24.5	27.0	25.5	20.0
31	13.0	---	3.0	---	---	---	---	---	---	28.0	25.0	---
MEAN	16.5	10.0	4.5	2.5	4.0	8.0	12.5	19.5	20.5	25.0	25.5	22.0
WTR YR 1982	MEAN	15.0		MAX	28.5		MIN	-0.5				

KANAWHA RIVER BASIN

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03193778 LITTLE CREEK NEAR CHELYAN, WV

LOCATION.--Lat 38°10'57", long 81°30'45", Kanawha County, Hydrologic Unit 05050006, on right bank 500 ft (150 m) above end of State Highway 72/1, 1.0 mi (1.6 km) upstream from mouth, and 1.8 mi (2.9 km) southwest of Chelyan.

DRAINAGE AREA.--1.44 mi² (3.73 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May to September 1982.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 750 ft (229 m), from topographic map.

REMARKS.--Water-discharge records good except those above 100 ft³/s (2.8 m³/s), which are poor.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period May to September, 415 ft³/s (11.8 m³/s) May 30, gage height, 5.00 ft (1.524 m), from rating curve extended above 150 ft³/s (4.2 m³/s) on basis of slope-area measurement of peak flow; minimum, 0.07 ft³/s (0.002 m³/s) Sept. 17, 18, 21, 23, 24, 25, gage height, 1.10 ft (0.335 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								---	5.8	.72	.24	.80
2								---	3.2	.53	.20	.32
3								---	2.1	.79	.20	.24
4								---	8.2	4.2	.17	.17
5								---	45	1.8	.14	.14
6								---	8.8	.80	.14	.14
7								---	6.9	.72	.18	.11
8								---	2.9	.72	.17	.11
9								---	2.4	.59	1.7	.11
10								---	11	.42	1.2	.11
11								---	6.6	.42	.35	.11
12								---	3.8	.32	.24	.09
13								---	3.8	.28	.20	.09
14								---	2.6	.28	.20	.09
15								---	2.1	.24	.17	.32
16								---	2.1	.20	.17	.11
17								---	5.2	.20	1.2	.07
18								.20	3.0	.52	.32	.14
19								.28	2.1	.28	.20	.11
20								.28	1.6	.24	.17	.09
21								.24	1.2	.20	.20	.17
22								.53	.88	.30	.17	.14
23								.47	.80	.82	.14	.09
24								.28	.59	.59	.14	.07
25								.47	.53	.28	.17	.09
26								.37	.65	.20	.14	.14
27								1.2	.59	.17	1.3	.32
28								1.1	.53	.26	.28	.24
29								3.2	.64	.20	.17	.14
30								100	1.8	.17	.20	.11
31								11	---	.83	.65	---
TOTAL								---	137.41	18.29	11.12	4.98
MEAN								---	4.58	.59	.36	.17
MAX								---	45	4.2	1.7	.80
MIN								---	.53	.17	.14	.07
CFSM								---	3.18	.41	.25	.12
IN.								---	3.55	.47	.29	.13

KANAWHA RIVER BASIN

03193778 LITTLE CREEK NEAR CHELYAN, WV.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April to September 1982.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	NITRO- GEN DIS- SOLVED (MG/L AS N)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	ACIDITY (MG/L AS H)
APR 26...	1130	.70	170	6.0	11.0	10.6	.61	65	63	<.1
MAY 17...	1030	.24	186	6.5	18.5	8.6	--	67	61	<.1
JUN 05...	0200	150	102	5.0	15.0	8.5	1.7	31	30	.3
JUL 20...	1000	.23	241	6.9	22.0	--	.63	103	--	--
SEP 02...	1100	.33	280	6.6	21.0	8.5	.99	113	103	<.1

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY FIELD (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
APR 26...	9.8	10	1.6	2.2	2	62	1.5	<.1	7.9	101
MAY 17...	11	9.7	1.4	2.3	6	66	1.5	<.1	7.7	128
JUN 05...	5.4	4.3	.8	2.3	1	39	2.2	<.1	6.1	86
JUL 20...	18	14	1.8	3.0	--	92	1.7	<.1	9.1	173
SEP 02...	19	16	1.6	3.4	10	100	2.1	<.1	8.3	173

DATE	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)
APR 26...	97	.19	.43	.230	.00	.20	.02	.18	<.010	<.010
MAY 17...	104	.08	.41	.010	--	<.10	--	<.10	.040	.040
JUN 05...	62	34.8	.59	.150	.95	.90	.00	1.1	.030	<.010
JUL 20...	--	.10	.22	.010	.39	30.0	30	.40	.030	.020
SEP 02...	159	.15	.39	.030	.57	.70	.10	.60	<.010	<.010

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[illegible]

03194700 ELK RIVER BELOW WEBSTER SPRINGS, WV

LOCATION (REVISED).--Lat 38°35'50", long 80°29'26", Webster County, Hydrologic Unit 05050007, on right bank 200 ft (61 m) upstream from bridge on County Highway 7, 6.5 mi (10.5 km) upstream from town of Centralia, 8.9 mi (14.3 km) southwest of Salisbury Station, 8.9 mi (14.3 km) northwest of Webster Springs, and at mile 125.2 (201.4 km).

DRAINAGE AREA.--266 mi² (689 km²), revised.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1959 to current year.

GAGE.--Water-stage and rainfall recorders. Altitude of gage is 1,020 ft (311 m), by barometer.

REMARKS.--Water-discharge records good except those for December, January, and April, which are poor. Corps of Engineers gage-height telemeter at station. Rainfall records collected at site are contained in files of U.S. Geological Survey with only monthly totals published in this report.

AVERAGE DISCHARGE.--23 years, 704 ft³/s (19.94 m³/s), 35.94 in/yr (913 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, 3.00 ft (0.914 m) Oct. 13, 1978.

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)
Dec. 23	1500	8600	244	9.25	2.819	June 10	2400	9460	268	9.60	2.926
Mar. 20	1400	*15800	447	11.76	3.584						

Minimum discharge, 25 ft³/s (0.71 m³/s) Sept. 20, 21, gage height, 2.96 ft (0.902 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	486	540	455	700	650	1160	470	650	603	878	108
2	80	403	528	492	1440	589	1000	430	528	373	516	159
3	121	353	465	516	5360	561	923	381	435	284	381	150
4	103	309	486	2860	3450	534	1070	337	445	3470	294	138
5	85	284	435	2260	1900	498	842	301	1310	1360	231	106
6	80	412	394	1420	1260	504	797	277	1630	1410	193	88
7	181	528	582	1750	851	754	730	259	2310	754	369	75
8	199	475	950	1520	682	1020	658	256	1350	480	547	65
9	140	435	746	1100	2300	860	722	259	932	398	534	59
10	117	403	603	690	1980	824	754	231	2740	345	435	67
11	105	373	510	568	1460	941	788	200	5870	287	329	62
12	97	337	435	500	995	3740	779	179	2280	259	284	51
13	91	305	400	420	788	2820	941	162	3560	228	231	46
14	85	277	806	360	575	2420	1040	147	3240	182	179	41
15	74	256	762	310	510	1910	806	135	1730	193	147	36
16	74	238	634	270	950	1870	626	121	1010	301	124	35
17	74	221	560	230	4580	2580	534	111	674	365	104	31
18	83	214	480	210	3670	1930	666	100	510	389	96	29
19	148	210	420	190	2120	1310	596	92	385	486	104	27
20	169	214	390	407	1550	6970	522	88	321	470	83	26
21	145	249	369	1760	2100	4900	492	96	273	403	81	28
22	138	221	2150	1800	1760	2600	460	108	231	298	86	33
23	154	242	7380	2600	1220	1580	400	102	207	231	83	104
24	248	294	3990	1970	1250	1050	350	147	186	186	75	116
25	248	287	2040	1170	1430	779	310	179	150	150	96	74
26	252	806	1290	797	1060	905	450	210	127	121	182	60
27	3110	1420	932	568	869	806	750	333	121	102	162	203
28	2890	932	706	480	738	666	850	245	121	106	172	369
29	1580	642	589	400	---	674	642	200	361	1030	165	273
30	968	528	486	360	---	722	540	1560	722	486	124	182
31	650	---	435	320	---	770	---	1400	---	746	104	---
TOTAL	12549	12354	31493	28753	47548	48737	21198	9116	34409	16496	7389	2841
MEAN	405	412	1016	928	1698	1572	707	294	1147	532	238	94.7
MAX	3110	1420	7380	2860	5360	6970	1160	1560	5870	3470	878	369
MIN	60	210	369	190	510	498	310	88	121	102	75	26
CFSM	1.52	1.55	3.82	3.49	6.38	5.91	2.66	1.11	4.31	2.00	.90	.36
IN.†	1.75	1.73	4.40	4.02	6.65	6.82	2.96	1.27	4.81	2.31	1.03	.40
IN.‡	4.41	1.96	3.03	2.94	4.14	6.43	1.86	2.59	6.95	6.63	3.57	2.70

CAL YR 1981 TOTAL 253291 MEAN 694 MAX 7380 MIN 25 CFSM 2.61 IN 35.42
WTR YR 1982 TOTAL 272883 MEAN 748 MAX 7380 MIN 26 CFSM 2.81 IN 38.16

† Runoff.

‡ Rainfall.

KANAWHA RIVER BASIN

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03194700 ELK RIVER BELOW WEBSTER SPRINGS, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1968 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: February 1974 to June 1977, November 1977 to current year.

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

REMARKS.--Interruptions in water-temperature record due to instrument malfunctions.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 31.0°C Aug. 1, 2, 1975; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 28.0°C July 25, 26, 27; minimum recorded, 0.5°C several days in January.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

KANAWHA RIVER BASIN

03194700 ELK RIVER BELOW WEBSTER SPRINGS, WV--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

KANAWHA RIVER BASIN

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03195100 RIGHT FORK HOLLY RIVER AT GUARDIAN, WV

LOCATION.--Lat 38°38'07" (revised), 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.--51.9 mi² (134.4 km²), revised.

PERIOD OF RECORD.--March 1974 to September 1978. October 1978 to September 1982 (discontinued; gage heights, occasional discharge measurements, and annual maximum discharge only).

GAGE.--Water-stage recorder. Datum of gage is 1,078.00 ft (328.574 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records for winter periods not adjusted for ice effect. Corps of Engineers gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,400 ft³/s (181 m³/s) July 16, 1979, gage height, 14.50 ft (4.420 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.--Maximum discharge, 1,790 ft³/s (50.7 m³/s) Mar. 20, gage height, 8.74 ft (2.664 m); minimum gage height, 3.12 ft (0.951 m) Sept. 17, 18, 20, 21.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.27	3.90	4.04	3.85	4.03	4.16	4.25	3.85	4.35	4.15	4.06	3.51
2	3.47	3.81	4.00	3.78	4.05	4.15	4.21	3.83	4.09	3.86	3.78	3.62
3	3.44	3.75	3.90	3.81	5.47	4.10	4.29	3.78	3.89	3.98	3.62	3.53
4	3.34	3.69	3.86	4.30	5.56	4.01	4.29	3.73	3.80	5.26	3.52	3.45
5	3.30	3.66	4.00	4.57	4.85	3.96	4.23	3.69	4.48	4.57	3.45	3.37
6	3.33	4.10	4.03	4.41	4.47	3.89	4.24	3.65	4.73	4.25	3.40	3.33
7	3.63	4.27	4.05	4.39	4.21	4.18	4.08	3.63	5.22	3.91	3.47	3.29
8	3.48	4.19	4.14	4.38	4.07	4.31	4.07	3.65	4.67	3.75	3.71	3.26
9	3.41	4.09	4.49	4.39	4.94	4.40	4.22	3.64	4.26	3.68	4.25	3.24
10	3.37	3.98	4.43	4.16	5.37	4.58	4.36	3.58	5.23	3.59	4.19	3.22
11	3.35	3.90	4.27	4.15	4.83	4.91	4.44	3.55	6.50	3.59	3.89	3.20
12	3.33	3.82	4.11	4.08	4.45	6.88	4.38	3.52	4.98	3.59	3.77	3.18
13	3.31	3.76	3.99	4.06	4.27	5.61	4.28	3.50	5.60	3.50	3.63	3.16
14	3.30	3.71	4.00	3.93	4.09	5.24	4.14	3.47	6.34	3.44	3.54	3.15
15	3.29	3.67	4.48	3.83	4.02	5.09	4.02	3.45	4.97	3.40	3.47	3.14
16	3.31	3.65	4.60	3.78	4.33	5.13	3.93	3.42	4.33	3.36	3.41	3.15
17	3.34	3.62	4.42	3.69	5.67	5.01	3.87	3.39	4.06	3.34	3.38	3.14
18	3.40	3.62	4.44	3.73	5.47	4.69	3.93	3.36	3.86	3.34	3.39	3.12
19	3.60	3.58	4.30	3.71	4.99	4.45	3.85	3.35	3.73	3.37	3.34	3.14
20	3.50	3.57	4.15	3.92	4.85	6.83	3.84	3.35	3.64	3.64	3.29	3.13
21	3.45	3.62	4.06	5.43	5.08	5.99	3.85	3.38	3.56	3.52	3.32	3.14
22	3.42	3.58	5.99	5.68	4.92	5.10	3.79	3.33	3.51	3.41	3.33	3.27
23	3.58	3.53	7.24	6.42	4.61	4.64	3.75	3.44	3.50	3.35	3.26	3.30
24	3.89	3.66	5.51	5.54	4.62	4.35	3.72	4.05	3.44	3.31	3.32	3.21
25	3.79	4.04	4.78	4.79	4.54	4.18	3.70	3.77	3.38	3.27	3.45	3.16
26	3.81	4.07	4.42	4.39	4.36	4.30	3.74	3.67	3.35	3.23	3.45	3.18
27	6.45	4.31	4.22	4.11	4.25	4.29	3.78	4.18	3.33	3.21	3.37	3.51
28	5.32	4.51	4.06	4.11	4.22	4.28	3.86	3.89	3.33	3.51	3.49	3.47
29	4.65	4.30	3.96	3.98	---	4.30	3.87	3.74	3.93	3.99	3.39	3.40
30	4.27	4.13	3.85	3.93	---	4.28	3.87	6.27	4.32	3.62	3.35	3.31
31	4.05	---	3.82	3.97	---	4.27	---	5.05	---	4.28	3.34	---
MEAN	3.69	3.87	4.37	4.30	4.66	4.70	4.03	3.75	4.28	3.69	3.54	3.28
MAX	6.45	4.51	7.24	6.42	5.67	6.88	4.44	6.27	6.50	5.26	4.25	3.62
MIN	3.27	3.53	3.82	3.69	4.02	3.89	3.70	3.33	3.33	3.21	3.26	3.12

WTR YR 1982 MEAN 4.01 MAX 7.24 MIN 3.12

KANAWHA RIVER BASIN

03195250 LEFT FORK HOLLY RIVER NEAR REPLETE, WV

LOCATION (REVISED).--Lat 38°41'19", long 80°25'57", 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 12.3 (19.8 km).

DRAINAGE AREA.--46.5 mi² (120.4 km²), revised.

PERIOD OF RECORD.--March 1974 to September 1978. October 1978 to September 1982 (discontinued; gage heights, occasional discharge measurements, and annual maximum discharge only).

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

REMARKS.--No gage-height record July 22-28 due to instrument malfunction. Records for winter periods not adjusted for ice effect. Corps of Engineers gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,240 ft³/s (91.8 m³/s) July 16, 1979, gage height, 11.71 ft (3.569 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.--Maximum discharge, 2,430 ft³/s (68.8 m³/s) Mar. 20, gage height, 10.79 ft (3.289 m); minimum gage height, 4.58 ft (1.396 m) Sept. 18, 19, 20.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.73	5.83	5.87	5.65	5.93	5.95	6.30	5.37	6.09	5.25	6.37	5.24
2	5.16	5.67	5.77	5.61	5.92	5.90	6.23	5.37	6.02	5.05	5.88	5.48
3	5.01	5.56	5.65	5.64	7.04	5.84	6.32	5.31	5.93	5.68	5.60	5.49
4	4.87	5.46	5.62	6.08	7.30	5.74	6.35	5.26	5.78	8.52	5.38	5.38
5	4.80	5.43	5.82	6.31	6.76	5.69	6.22	5.22	6.54	6.89	5.24	5.26
6	4.84	6.07	5.82	6.21	6.40	5.60	6.18	5.18	6.92	6.45	5.13	5.14
7	5.06	6.24	5.82	6.24	6.10	5.94	5.99	5.17	7.39	5.95	5.21	5.04
8	4.94	6.17	6.29	6.26	5.92	6.04	5.96	5.28	6.70	5.65	5.49	4.96
9	4.87	6.03	6.59	6.23	6.67	6.12	6.13	5.22	6.28	5.51	6.99	4.89
10	4.83	5.87	6.34	5.90	7.04	6.26	6.26	5.13	6.71	5.35	6.67	4.83
11	4.81	5.74	6.11	5.77	6.65	6.67	6.32	5.08	7.55	5.30	6.17	4.78
12	4.79	5.63	5.93	5.82	6.31	8.16	6.27	5.04	6.77	5.23	5.90	4.73
13	4.76	5.52	5.78	5.82	6.11	7.42	6.23	5.00	7.34	5.04	5.63	4.69
14	4.73	5.45	5.86	5.66	5.91	7.08	6.12	4.96	7.34	5.00	5.43	4.66
15	4.70	5.39	6.38	5.52	5.83	6.90	5.96	4.91	6.60	4.94	5.27	4.64
16	4.71	5.34	6.40	5.46	6.40	6.91	5.82	4.86	6.08	4.86	5.14	4.63
17	4.75	5.30	6.24	5.56	7.41	6.87	5.75	4.82	5.83	4.75	5.04	4.61
18	4.78	5.27	6.22	5.94	7.09	6.57	5.82	4.78	5.60	4.79	5.64	4.59
19	5.24	5.22	6.06	5.46	6.91	6.32	5.72	4.74	5.41	4.80	5.33	4.58
20	5.18	5.24	5.91	6.00	6.89	8.78	5.71	4.73	5.30	5.24	5.17	4.59
21	5.11	5.28	5.79	7.25	7.11	8.26	5.69	4.73	5.17	5.43	5.12	4.61
22	5.07	5.23	7.52	7.40	6.89	7.27	5.59	4.70	5.07	---	5.01	4.94
23	5.35	5.18	8.77	8.21	6.54	6.68	5.52	4.83	5.01	---	4.92	4.85
24	5.78	5.38	7.48	7.45	6.52	6.30	5.48	5.70	4.92	---	5.07	4.72
25	5.69	5.71	6.77	6.75	6.47	6.08	5.44	5.27	4.84	---	5.14	4.67
26	5.72	5.73	6.36	6.30	6.26	6.29	5.48	5.15	4.79	---	5.14	4.67
27	8.14	6.13	6.11	5.98	6.13	6.26	5.46	5.75	4.75	---	5.08	5.29
28	7.61	6.31	5.91	5.98	6.05	6.20	5.46	5.47	4.77	---	5.27	5.27
29	6.91	6.14	5.80	5.79	---	6.21	5.40	5.33	5.41	6.08	5.13	5.14
30	6.39	5.96	5.65	5.72	---	6.24	5.37	7.17	5.30	5.77	5.02	4.99
31	6.05	---	5.60	5.80	---	6.26	---	6.56	---	6.63	4.99	---
MEAN	5.33	5.65	6.20	6.12	6.52	6.54	5.89	5.23	5.94	---	5.44	4.91
MAX	8.14	6.31	8.77	8.21	7.41	8.78	6.35	7.17	7.55	---	6.99	5.49
MIN	4.70	5.18	5.60	5.46	5.83	5.60	5.37	4.70	4.75	---	4.92	4.58

KANAWHA RIVER BASIN

215

03195400 SUTTON LAKE AT SUTTON, WV

LOCATION (REVISED).--Lat 38°39'43", long 80°41'36", Braxton County, Hydrologic Unit 05050007, at Sutton Dam on Elk River, 1.0 mi (1.6 km) upstream from Sutton, and at mile 103.0 (165.7 km).

DRAINAGE AREA.--538 mi² (1,393 km²), revised.

PERIOD OF RECORD.--October 1960 to current year (monthend contents only).

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

REMARKS.--Reservoir is formed by concrete gravity-type dam completed in 1961; closure of dam was made in April 1959 and storage above minimum-pool elevation began Feb. 26, 1961. Spillway equipped with 6 radial 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, 66,640 acre-ft (82.2 hm³) June 11, elevation, 926.62 ft (282.434 m); minimum, 29,430 acre-ft (36.3 hm³) Mar. 5, 6, elevation 895.33 ft (272.897 m).

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

Date	Elevation (feet)	Contents (acre-feet)	Change in Contents (acre-feet)	(equivalent in cfs)
Sept. 30.....	920.42	57450	-	-
Oct. 31.....	909.81	43970	-13480	-219
Nov. 30.....	897.61	31470	-12500	-210
Dec. 31.....	896.69	30640	-830	-14
CAL YR 1981			+670	+1
Jan. 31.....	895.64	29700	-940	-15
Feb. 28.....	895.82	29860	+160	+3
Mar. 31.....	896.35	30330	+470	+8
Apr. 30.....	923.56	61980	+31650	+532
May 31.....	922.66	60660	-1320	-21
June 30.....	923.56	61980	+1320	+22
July 31.....	923.75	62260	+280	+5
Aug. 31.....	922.71	60730	-1530	-25
Sept. 30.....	922.79	60850	+120	+2
WTR YR 1982			+3400	+5

KANAWHA RIVER BASIN

03195500 ELK RIVER AT SUTTON, WV

LOCATION (REVISED).--Lat 38°39'47", 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 102.1 (164.3 km).

DRAINAGE AREA.--542 mi² (1,404 km²), revised.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1938 to current year. Monthly discharge only October 1938 to February 1939, published in WSP 1305.

REVISED RECORDS.--WSP 1305: 1942(M), 1948-50(M).

GAGE.--Water-stage recorder. Datum of gage is 800.00 ft (243.840 m) National Geodetic Vertical Datum of 1929. Prior to Apr. 5, 1940, nonrecording gage and Apr. 5, 1940, to Sept. 30, 1960, water-stage recorder at site 150 ft (46 m) downstream at datum 8.03 ft (2.448 m) higher.

REMARKS.--Water-discharge records good. Flow regulated since 1960 by Sutton Lake (station 03195400).

AVERAGE DISCHARGE.--44 years, 1,142 ft³/s (32.34 m³/s), 28.61 in/yr (727 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, 8,000 ft³/s (227 m³/s) June 11, gage height, 20.44 ft (6.230 m); minimum daily, 91 ft³/s (2.58 m³/s) Sept. 11-20, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	200	3150	1380	853	1590	1080	703	808	1190	1460	1960	193
2	199	1720	1030	849	2340	892	189	806	789	1060	1100	327
3	197	106	940	847	4020	1030	211	768	723	597	633	367
4	196	103	881	1230	5780	1060	210	566	835	4820	447	319
5	195	315	805	2400	4800	899	208	445	1770	2990	362	202
6	199	840	802	2470	2880	739	212	392	2300	2040	267	164
7	198	1140	799	2250	1630	1080	203	383	3220	1670	251	144
8	190	1080	866	2250	1320	1480	201	377	2500	907	1050	112
9	186	1060	1320	2120	2490	1580	209	374	1480	611	2840	112
10	197	1050	1610	1600	3750	1660	209	331	2320	528	1490	108
11	202	1050	1250	924	3200	2080	211	275	7540	372	592	91
12	200	934	995	698	2060	4020	606	237	5190	271	377	91
13	361	723	802	766	1530	5430	1080	201	4830	272	375	91
14	624	697	605	881	1330	5070	1430	201	6370	272	373	91
15	723	626	1040	772	911	4690	1220	201	3500	187	373	91
16	845	593	1340	592	997	4470	951	173	1840	129	304	91
17	834	591	1340	513	2920	4100	784	127	1030	253	161	91
18	827	564	1340	385	5350	3190	657	120	771	390	107	91
19	813	513	1340	343	4780	2130	657	120	605	678	164	91
20	827	514	1160	410	3720	3320	724	119	352	678	195	91
21	871	513	906	1670	3730	6440	756	119	364	635	195	92
22	860	513	2230	3730	3850	6190	755	119	360	488	152	92
23	874	510	6040	4520	2510	5160	704	122	258	289	125	92
24	862	535	6850	5090	2000	3760	596	121	234	237	144	92
25	855	659	5490	4080	2000	2850	596	204	204	215	143	91
26	408	718	4060	2680	1620	2420	513	286	142	125	297	93
27	602	811	2720	1380	1280	2180	478	637	99	117	445	94
28	2020	1460	1940	1040	1280	1640	591	831	116	208	204	183
29	3270	1700	1450	1050	---	1330	759	503	665	825	127	267
30	3880	1570	1050	863	---	1330	809	2800	1540	1050	127	267
31	3780	---	855	659	---	1330	---	2710	---	1200	128	---
TOTAL	26495	26358	55236	49915	75668	84630	17432	15476	53137	25574	15508	4321
MEAN	855	879	1782	1610	2702	2730	581	499	1771	825	500	144
MAX	3880	3150	6850	5090	5780	6440	1430	2800	7540	4820	2840	367
MIN	186	103	605	343	911	739	189	119	99	117	107	91

CAL YR 1981 TOTAL 450815 MEAN 1235 MAX 6850 MIN 78 MEAN# 1236 CFSM# 2.28 IN# 30.97
WTR YR 1982 TOTAL 449750 MEAN 1232 MAX 7540 MIN 91 MEAN# 1237 CFSM# 2.28 IN# 30.99

* Adjusted for change in contents in Sutton Lake.

KANAWHA RIVER BASIN

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03195500 ELK RIVER AT SUTTON, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: March 1960 to current year.

TURBIDITY: January 1974 to March 1975.

INSTRUMENTATION.--Temperature recorder since Mar. 3, 1960.

REMARKS.--Interruptions in water-temperature record due to instrument malfunctions.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 29.0°C Aug. 30, Sept. 1, 1960, July 27, 1982; minimum, 0.0°C many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 29.0°C July 27; minimum, 1.0°C Jan. 23-25, Feb. 1-4.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

KANAWHA RIVER BASIN

03195500 ELK RIVER AT SUTTON, WV--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

[illegible]

KANAWHA RIVER BASIN

219

03196500 BIRCH RIVER AT HEROLD, WV

LOCATION.--Lat 38°34'29", long 80°48'04", Braxton County, Hydrologic Unit 05050007, on left bank at downstream side of bridge on County Route 40, 100 ft (30 m) downstream from Long Run, 0.8 mi (1.3 km) northeast of Herold and at mile 11.5 (18.5 km) (revised).

DRAINAGE AREA.--124 mi² (321 km²).

PERIOD OF RECORD.--October 1929 to December 1931 (gage heights only). Water years 1930-31, 1939, 1941, 1960-61, 1964, and 1967 (occasional low-flow measurements only). January 1974 to September 1975 and October 1978 to current year.

REVISED RECORDS.--WDR WV-81-1: 1980.

GAGE.--Water-stage recorder. Datum of gage is 934.46 ft (284.823 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,000 ft³/s (283 m³/s), July 10, 1980, gage height, 13.55 ft (4.130 m); minimum, 4.0 ft³/s (0.11 m³/s) Aug. 2, 1975, gage height, 1.62 ft (0.494 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,530 ft³/s (100 m³/s) Dec. 22, gage height, 9.24 ft (2.816 m); minimum daily, 6.5 ft³/s (0.18 m³/s) Sept. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	34	273	135	200	220	304	55	128	358	107	99
2	38	30	220	118	400	200	270	54	89	196	60	78
3	30	47	180	131	1200	180	380	52	67	163	43	53
4	20	62	140	271	900	160	436	48	69	500	33	39
5	16	45	150	366	600	150	343	45	338	314	27	28
6	16	40	130	304	300	140	250	42	225	199	24	22
7	31	300	110	310	220	260	210	42	180	127	32	18
8	26	230	150	339	170	317	180	51	134	93	233	16
9	21	189	250	250	1200	370	200	49	106	122	256	14
10	18	160	230	170	1000	482	220	40	861	91	173	13
11	16	203	180	140	600	636	243	36	1060	70	96	12
12	14	158	150	115	383	2230	237	33	451	62	72	11
13	13	130	120	100	290	1160	218	31	669	52	52	10
14	13	115	140	85	228	877	186	28	795	42	40	10
15	12	131	210	75	210	865	154	26	418	36	31	9.0
16	11	117	180	68	395	928	134	24	228	30	26	8.5
17	12	108	160	60	1070	744	123	21	169	26	22	8.0
18	12	98	140	54	778	500	123	19	123	25	19	7.5
19	14	90	120	48	608	369	104	17	88	40	20	7.0
20	22	85	100	45	617	524	99	16	70	61	16	6.5
21	17	84	90	600	614	789	97	19	55	73	19	9.0
22	15	181	1180	1140	513	637	82	17	47	42	23	13
23	31	160	2320	1690	406	435	75	19	46	35	15	17
24	100	130	920	891	365	316	71	21	37	33	14	13
25	88	110	487	665	305	254	69	67	31	25	25	12
26	75	92	324	450	245	492	69	50	27	20	23	11
27	66	119	246	300	210	507	71	113	25	17	21	37
28	56	250	189	230	239	399	68	67	49	20	44	43
29	50	350	161	160	---	337	60	48	442	77	30	30
30	44	239	126	120	---	291	57	516	656	40	22	21
31	38	---	118	100	---	289	---	280	---	305	22	---
TOTAL	948	4087	9494	9530	14266	16058	5133	1946	7683	3294	1640	675.5
MEAN	30.6	136	306	307	510	518	171	62.8	256	106	52.9	22.5
MAX	100	350	2320	1690	1200	2230	436	516	1060	500	256	99
MIN	11	30	90	45	170	140	57	16	25	17	14	6.5
CFSM	.25	1.10	2.47	2.48	4.11	4.18	1.38	.51	2.07	.86	.43	.18
IN.	.28	1.23	2.85	2.86	4.28	4.82	1.54	.58	2.30	.99	.49	.20

CAL YR 1981 TOTAL 92299.0 MEAN 253 MAX 4000 MIN 11 CFMS 2.04 IN 27.69
WTR YR 1982 TOTAL 74754.5 MEAN 205 MAX 2320 MIN 6.5 CFMS 1.65 IN 22.43

KANAWHA RIVER BASIN

03196600 ELK RIVER NEAR FRAMETOWN, WV

LOCATION (REVISED).--Lat 38°35'32", long 80°53'05", 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 82.6 (132.9 km). Records include flow of Birch River.

DRAINAGE AREA.--751 mi² (1,945 km²), revised, includes that of Birch River.

PERIOD OF RECORD.--October 1958 to September 1981. October 1981 to current year (gage heights and annual maximum discharge only).

GAGE.--Water-stage recorder. Datum of gage is 775.51 ft (236.375 m) National Geodetic Vertical Datum of 1929. Prior to Mar. 25, 1959, nonrecording gage at same site and datum.

REMARKS.--Records good. Flow regulated since 1960 by Sutton Lake (station 03195400). Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--23 years (water years 1958-81), 1,572 ft³/s (44.52 m³/s), 28.39 in/yr (721 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 discharge, 9.0 ft³/s (0.25 m³/s) Sept. 28, 29, 1959; minimum gage height, 1.37 ft (0.418 m) Sept. 20, 21, 1982.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,550 ft³/s (270 m³/s) Dec. 23, gage height, 9.56 ft (2.914 m); minimum gage height, 1.37 ft (0.418 m) Sept. 20, 21.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.89	5.34	3.77	3.11	3.38	3.56	3.65	2.90	3.69	4.01	4.17	1.87
2	1.98	4.53	3.38	3.08	4.51	3.20	2.58	2.90	3.10	3.47	3.45	2.21
3	1.96	2.14	3.20	3.11	5.72	3.34	2.80	2.88	2.67	2.95	2.92	2.29
4	1.91	1.72	3.18	3.52	8.11	3.38	2.99	2.67	3.04	6.00	2.43	2.20
5	1.89	1.71	3.15	4.65	7.29	3.30	2.70	2.38	4.33	5.58	2.21	1.94
6	1.94	2.82	3.15	4.88	5.62	2.98	2.63	2.23	4.66	4.24	2.07	1.73
7	2.02	3.52	3.12	4.63	4.18	3.38	2.47	2.22	4.98	4.05	2.18	1.68
8	1.95	3.44	3.13	4.66	3.69	3.95	2.37	2.24	4.87	3.29	2.79	1.57
9	1.88	3.33	3.41	4.60	4.89	4.20	2.44	2.22	3.78	2.88	5.10	1.50
10	1.88	3.29	3.94	4.10	6.69	4.44	2.48	2.18	4.73	2.61	4.10	1.50
11	1.90	3.26	3.67	3.47	5.89	4.85	2.47	1.99	8.72	2.41	3.00	1.46
12	1.89	3.23	3.29	2.96	4.77	7.62	2.63	1.96	7.72	2.16	2.34	1.40
13	1.88	2.86	3.13	2.96	3.98	8.20	3.29	1.80	6.53	2.06	2.27	1.39
14	2.66	2.82	2.76	3.14	3.81	7.63	3.73	1.78	8.53	2.03	2.23	1.39
15	2.77	2.71	3.16	3.08	3.45	7.28	3.58	1.77	6.29	1.98	2.21	1.38
16	3.04	2.62	3.78	2.78	3.58	7.29	3.26	1.76	4.38	1.69	2.19	1.39
17	3.04	2.61	3.75	2.57	5.34	6.79	3.08	1.61	3.47	1.65	1.86	1.38
18	3.03	2.60	3.87	2.50	7.54	5.84	2.84	1.52	3.02	2.15	1.60	1.39
19	3.03	2.48	3.78	2.29	7.22	4.73	2.80	1.51	2.73	2.53	1.53	1.39
20	2.94	2.48	3.65	2.40	6.20	5.63	2.83	1.49	2.45	2.76	1.77	1.38
21	3.13	2.49	3.19	4.51	6.11	8.27	2.91	1.49	2.17	2.79	1.79	1.39
22	3.05	2.48	4.61	6.58	6.27	8.18	2.89	1.50	2.19	2.56	1.78	1.44
23	3.11	2.46	9.21	8.28	5.18	7.36	2.86	1.64	2.10	2.18	1.60	1.41
24	3.15	2.53	8.95	7.57	4.43	6.01	2.65	1.57	1.91	1.93	1.58	1.41
25	3.10	2.94	7.72	6.60	4.35	5.16	2.64	1.82	1.89	1.90	1.66	1.39
26	3.12	3.04	6.33	5.19	4.12	4.89	2.58	1.98	1.74	1.71	1.87	1.39
27	3.73	3.02	5.24	4.02	3.63	4.88	2.46	2.35	1.59	1.54	2.14	1.56
28	4.35	3.49	4.34	3.36	3.65	4.29	2.55	2.96	1.55	1.63	2.14	1.61
29	5.20	4.05	3.89	3.43	---	3.83	2.77	2.70	2.60	2.55	1.73	1.95
30	5.83	3.81	3.43	3.26	---	3.76	2.90	4.25	4.30	3.29	1.60	1.93
31	5.69	---	3.09	2.99	---	3.80	---	5.58	---	3.74	1.61	---
MEAN	2.87	2.99	4.14	4.01	5.13	5.23	2.83	2.25	3.86	2.78	2.32	1.60
MAX	5.83	5.34	9.21	8.28	8.11	8.27	3.73	5.58	8.72	6.00	5.10	2.29
MIN	1.88	1.71	2.76	2.29	3.38	2.98	2.37	1.49	1.55	1.54	1.53	1.38

WTR YR 1982 MEAN 3.32 MAX 9.21 MIN 1.38

KANAWHA RIVER BASIN

221

03196800 ELK RIVER AT CLAY, WV

LOCATION (REVISED).--Lat 38°27'38", long 81°05'16", 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 53.7 (86.4 km).

DRAINAGE AREA.--992 mi² (2,569 km²), revised.

PERIOD OF RECORD.--October 1958 to September 1978. October 1978 to current year (gage heights, occasional discharge measurements, and annual maximum discharge only). Gage-height records collected at same site since 1915 are contained in reports of National Weather Service.

GAGE.--Water-stage recorder. Datum of gage is 677.46 ft (206.490 m) National Geodetic Vertical Datum of 1929. Prior to Mar. 27, 1959, nonrecording gage at same site and datum.

REMARKS.--Records for winter periods not adjusted for ice effect. Flow regulated since 1960 by Sutton Lake (station 03195400). Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--20 years (water years 1959-78), 1,926 ft³/s (54.54 m³/s), 26.31 in/yr (668 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,000 ft³/s (1,360 m³/s) Mar. 15, 1967, gage height, 22.80 ft (6.949 m); minimum, 1.5 ft³/s (0.042 m³/s) Sept. 22, 1959, gage height, -0.13 ft (-0.040 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 14, 1918, reached a stage of 32.4 ft (9.88 m), from reports of National Weather Service.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,500 ft³/s (354 m³/s) Jan. 23, gage height, 11.06 ft (3.371 m); minimum gage height, 0.74 ft (0.226 m) Sept. 18.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.49	5.86	3.67	2.93	3.04	3.88	4.42	2.61	4.36	4.71	4.07	1.64
2	2.77	5.02	3.27	2.89	4.70	3.46	2.98	2.56	3.14	3.77	3.68	1.97
3	2.88	2.67	2.92	2.97	5.84	3.40	2.84	2.46	2.49	3.08	2.83	1.76
4	2.87	1.22	2.82	3.77	9.03	3.50	3.58	2.41	2.59	5.01	2.08	1.70
5	2.79	1.08	2.88	4.96	8.48	3.49	3.04	2.05	5.96	7.25	1.76	1.60
6	2.72	1.73	2.92	5.59	6.94	3.09	2.86	1.88	5.78	4.83	1.52	1.22
7	2.71	3.22	2.86	5.32	4.92	3.41	2.61	1.83	5.26	4.48	1.33	1.06
8	2.67	3.28	2.81	5.41	4.05	4.41	2.40	1.84	5.82	3.60	1.98	1.03
9	2.57	3.07	2.93	5.33	5.97	4.87	2.46	1.75	4.25	4.57	4.89	.94
10	2.48	2.98	3.76	4.76	8.40	5.55	2.59	1.66	6.32	2.90	4.88	.86
11	2.40	2.92	3.66	4.00	7.22	5.89	2.53	1.58	9.80	2.35	3.20	.86
12	2.35	2.88	3.08	3.03	5.92	9.26	2.46	1.32	9.47	1.88	2.17	.83
13	2.28	2.54	2.81	2.86	4.58	9.59	3.03	1.29	7.32	1.58	1.81	.78
14	2.23	2.28	2.42	2.94	4.23	9.09	3.70	1.16	9.51	1.47	1.76	.76
15	2.43	2.18	2.57	2.92	3.88	8.88	3.81	1.16	7.91	1.46	1.72	.76
16	2.51	2.04	3.76	2.61	4.01	9.10	3.35	1.16	5.33	1.40	1.63	.77
17	2.61	1.97	3.78	2.44	6.49	8.49	3.01	1.15	4.04	1.06	1.45	.76
18	2.64	1.96	4.09	2.44	8.38	7.26	2.77	1.00	3.05	1.04	1.22	.75
19	2.63	1.88	3.96	2.28	8.45	5.87	2.54	.97	2.60	1.58	1.09	.76
20	2.65	1.81	3.74	2.23	7.63	5.95	2.52	.93	2.27	2.20	1.02	.76
21	2.80	1.84	3.16	5.03	7.36	8.91	2.65	.93	1.76	2.39	1.20	.78
22	2.79	1.82	4.36	7.73	7.48	9.23	2.61	.94	1.67	2.15	1.19	.89
23	2.89	1.78	10.25	10.24	6.65	8.46	2.56	1.02	1.66	1.85	1.14	.90
24	3.31	1.92	9.91	8.89	5.31	7.11	2.45	1.07	1.45	1.59	1.02	.88
25	3.18	2.66	8.74	7.83	4.96	6.07	2.30	1.00	1.30	1.20	1.02	.87
26	4.31	2.83	7.26	6.23	4.73	5.82	2.31	1.30	1.23	1.14	1.09	.85
27	8.48	2.74	6.11	4.77	3.98	5.91	2.13	1.55	1.10	.97	1.36	1.00
28	7.86	2.94	4.79	3.50	3.96	5.19	2.07	2.24	1.11	1.01	1.79	1.11
29	6.89	4.02	4.15	3.54	---	4.39	2.29	2.62	1.99	1.29	1.39	1.09
30	6.22	3.72	3.48	3.34	---	4.10	2.56	4.92	5.08	2.55	1.19	1.31
31	6.09	---	2.96	3.10	---	4.13	---	6.84	---	3.64	1.21	---
MEAN	3.44	2.63	4.19	4.38	5.95	6.06	2.78	1.85	4.19	2.58	1.93	1.04
MAX	8.48	5.86	10.25	10.24	9.03	9.59	4.42	6.84	9.80	7.25	4.89	1.97
MIN	2.23	1.08	2.42	2.23	3.04	3.09	2.07	.93	1.10	.97	1.02	.75

WTR YR 1982 MEAN 3.40 MAX 10.25 MIN .75

KANAWHA RIVER BASIN

03197000 ELK RIVER AT QUEEN SHOALS, WV

LOCATION (REVISED).--Lat 38°28'15", long 81°17'03", 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 26.2 (42.2 km). Records include flow of Queen Shoals Creek.

DRAINAGE AREA.--1,145 mi² (2,966 km²), includes that of Queen Shoals Creek.

PERIOD OF RECORD.--October 1928 to current year. Monthly discharge only October, November 1928, published in WSP 1305.

REVISED RECORDS.--WSP 783: Drainage area. WSP 1335: 1929-32, 1935(M), 1936, 1939, 1943(M).

GAGE.--Water-stage recorder. Datum of gage is 604.09 ft (184.127 m) National Geodetic Vertical Datum of 1929. Prior to June 19, 1932, nonrecording gage and June 19, 1932, to Sept. 30, 1946, water-stage recorder, at bridge 100 ft (30 m) upstream at same datum.

REMARKS.--Records good except those for January, which are poor. Flow regulated since 1960 by Sutton Lake (station 03195400). Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--54 years, 2,043 ft³/s (57.86 m³/s), 24.23 in/yr (615 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, 13,200 ft³/s (374 m³/s) Jan. 23, gage height, 10.18 ft (3.103 m); minimum discharge, 109 ft³/s (3.09 m³/s) Sept. 19, gage height, 3.85 ft (1.173 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	215	4420	1900	1210	1100	2140	2800	930	3270	3590	2340	333
2	255	3570	1740	1210	2400	1930	1900	930	1660	2390	2350	728
3	307	2160	1340	1220	3880	1620	1220	920	1120	1590	1380	590
4	289	512	1190	1930	8060	1710	1900	890	1060	2080	930	536
5	260	271	1200	3270	8090	1720	1660	755	6240	6700	582	467
6	244	283	1210	4070	6140	1490	1430	566	4640	3760	467	379
7	244	1100	1200	3970	3860	1450	1240	494	3700	2730	428	284
8	283	1570	1180	3990	2640	2340	1030	508	4240	2040	670	227
9	301	1420	1210	3840	4780	3050	1010	515	2960	3500	2220	209
10	260	1310	1690	3000	8370	4180	1080	480	5380	1610	3850	176
11	229	1260	1990	2000	6570	4600	1040	454	8550	1010	2040	153
12	224	1220	1570	1300	4900	9470	1010	385	9160	746	1110	150
13	229	1130	1230	1000	3470	8460	1170	344	6500	543	606	139
14	229	832	1060	1100	2640	8220	1710	306	8260	448	522	122
15	260	802	872	1200	2320	7890	1980	262	7360	403	474	119
16	681	718	1620	1000	2390	8350	1720	251	4280	373	441	119
17	802	654	2000	800	5180	7670	1400	241	2660	300	428	122
18	924	645	2190	650	7250	6130	1240	227	1590	227	350	115
19	935	636	2250	560	7750	4610	1020	188	1160	328	241	109
20	924	585	2030	500	6910	3990	970	176	881	598	176	112
21	862	576	1650	2210	6360	6960	1000	160	686	782	168	119
22	1000	576	2130	7460	6360	8020	1020	160	494	782	241	146
23	1000	560	10700	11300	5650	7100	980	214	487	638	232	164
24	1110	576	10900	9170	4050	5800	950	232	454	529	236	157
25	1270	903	8810	7280	3450	4610	800	227	355	367	205	132
26	2290	1200	6570	5350	3110	4260	791	218	322	306	196	129
27	2720	1190	5040	3880	2470	4350	755	422	306	273	232	157
28	3860	1190	3550	2240	2210	3900	670	536	311	262	515	236
29	4710	1880	2640	1780	---	3090	686	1010	827	422	522	256
30	4290	2100	1940	1690	---	2530	836	4120	3500	638	322	278
31	4600	---	1410	1300	---	2370	---	5290	---	1670	262	---
TOTAL	35807	35849	86012	91480	132360	144010	37018	22411	92413	41635	24736	6963
MEAN	1155	1195	2775	2951	4727	4645	1234	723	3080	1343	798	232
MAX	4710	4420	10900	11300	8370	9470	2800	5290	9160	6700	3850	728
MIN	215	271	872	500	1100	1450	670	160	306	227	168	109

CAL YR 1981 TOTAL 836814 MEAN 2293 MAX 14800 MIN 122 MEAN# 2294 CFSM# 2.00 IN# 27.21
WTR YR 1982 TOTAL 750694 MEAN 2057 MAX 11300 MIN 109 MEAN# 2062 CFSM# 1.80 IN# 24.46

* Adjusted for change in contents in Sutton Lake.

KANAWHA RIVER BASIN

223

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) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Auxiliary water-stage recorder 2.3 mi (3.7 km) upstream from base gage at datum 547.00 ft (166.726 m) Corps of Engineers datum. Prior to Oct. 1, 1955, auxiliary gages at different sites and datum.

REMARKS.--Water-discharge records good above 10,000 ft³/s (283 m³/s) and poor below. Since 1939, flow regulated by increasing number of reservoirs upstream from station. Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--43 years, 15,000 ft³/s (424.8 m³/s), 19.55 in/yr (497 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 216,000 ft³/s (6,120 m³/s) Aug. 15, 1940; maximum gage height, 39.72 ft (12.107 m) Mar. 7, 1955; minimum discharge, less than 1,030 ft³/s (29.2 m³/s) during period Oct. 1-5, 1953; minimum gage height, 16.79 ft (5.118 m) Aug. 7, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 29, 1861, reached a stage of about 54.3 ft (16.55 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 96,700 ft³/s (2,740 m³/s) Feb. 4, gage height, 28.38 ft (8.650 m); minimum daily, 1,810 ft³/s (51.3 m³/s) Oct. 14; minimum gage height, 17.48 ft (5.328 m) Oct. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4250	11800	8140	8880	15200	22000	17500	15500	31100	13100	16000	4740
2	4260	10200	8530	8860	27700	16100	15100	12700	17100	10400	10800	5830
3	4210	7180	7240	11800	42200	18300	15000	11800	13900	8400	8310	7710
4	4150	4610	8740	29200	88900	19400	14400	9580	13100	11400	7140	6110
5	4130	5440	8820	56800	77600	23100	12500	9170	27500	17500	6250	5020
6	4270	6360	7480	61600	61900	21400	14400	9240	24700	11600	6110	3800
7	4370	6340	6780	43500	44600	22300	12600	8720	20800	9390	5590	2570
8	4410	5440	6150	30000	29400	30900	11600	6850	17900	8520	5410	2360
9	4660	4690	6410	27800	39600	39300	11400	6400	20900	10400	10300	2210
10	4610	7760	7780	22800	54600	36200	10800	5170	23500	10300	15900	3820
11	4660	7160	8210	15100	43000	33300	11500	5640	42600	8400	12100	5040
12	2970	7130	7450	8540	30900	39600	9530	5980	47900	7210	9200	4720
13	2090	5460	6060	6870	24400	42100	10000	5720	52900	6650	7490	4790
14	1810	5310	5590	8630	18500	40700	10400	5680	86000	7580	5920	4150
15	1930	5120	6490	8640	18600	48500	11800	5140	63600	9650	6060	4320
16	2450	6120	9830	7390	15600	66500	10500	4470	35800	11100	4680	4970
17	2530	6010	12000	6920	37100	62900	10500	4020	25200	10300	4460	4390
18	2520	6050	12300	6240	79100	53100	9260	3360	14400	8680	4410	4650
19	2830	5950	9610	5090	75700	38900	7990	4540	14300	8150	3740	4220
20	2760	5390	8230	7320	51600	31400	7770	5200	10200	6680	3800	4930
21	2680	4470	6940	20200	40600	50300	8640	5370	7750	8180	3930	5030
22	2410	4140	9430	45300	37800	67000	9110	5850	6550	8050	3940	4860
23	2830	4320	39400	52600	31600	46200	9340	7240	7280	7800	2690	4730
24	3250	4250	50000	45900	27300	33300	7790	7820	6860	7140	2950	4200
25	3310	5330	49300	36200	24400	29200	7540	9300	6050	6920	3420	4410
26	4380	5950	33200	23100	22600	25900	6680	11200	6110	4860	3490	3970
27	7750	5650	25800	21000	21700	24100	10400	11400	5380	3920	3850	5400
28	19000	9810	17100	14900	20100	23500	19600	13900	5020	5120	4660	5450
29	27200	12100	13500	14800	---	17300	22300	13200	5260	6960	4430	5510
30	22100	10400	11600	12500	---	15400	20800	46600	10700	7360	3990	5060
31	15100	---	9130	11300	---	17600	---	47100	---	11300	2940	---
TOTAL	179880	195940	427240	679780	1102300	1055800	356750	323860	670360	273020	193960	138970
MEAN	5803	6531	13780	21930	39370	34060	11890	10450	22350	8807	6257	4632
MAX	27200	12100	50000	61600	88900	67000	22300	47100	86000	17500	16000	7710
MIN	1810	4140	5590	5090	15200	15400	6680	3360	5020	3920	2690	2210
CAL YR 1981	TOTAL	4686580	MEAN	12840	MAX	82800	MIN	1810				
WTR YR 1982	TOTAL	5597860	MEAN	15340	MAX	88900	MIN	1810				

KANAWHA RIVER BASIN

03198000 KANAWHA RIVER AT CHARLESTON, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: March 1953 to August 1970, October 1971 to current year.

INSTRUMENTATION.--Temperature recorder since Mar. 13, 1953.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 35.0°C Aug. 25, 26, 1959; minimum, 0.5°C several days in 1969, 78, 79, 82.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 29.0°C July 26; minimum recorded, 0.5°C Jan. 18, 19.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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

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TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

[illegible]

KANAWHA RIVER BASIN

03198020 TRACE FORK AT RUTH, WV

LOCATION.--Lat 38°18'30", long 81°43'40", Kanawha County, Hydrologic Unit 05050008, on right bank 200 ft (61 m) upstream from Dryden Hollow at Ruth.

DRAINAGE AREA.--2.82 mi² (7.30 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Altitude of gage is 700 ft (213 m), from topographic map.

REMARKS.--Water-discharge records for period July to September 1980 fair. Water-discharge records for water year 1981 good except those for January, February, and those below 0.2 ft³/s (0.006 m³/s), which are poor. Water-discharge records for water year 1982 good except those for January, June, July, August, September, and those below 0.2 ft³/s (0.006 m³/s), which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 260 ft³/s (7.36 m³/s) May 30, 1982, gage height, 10.70 ft (3.261 m); minimum daily, 0.02 ft³/s (<0.001 m³/s) Aug. 23, 1982; minimum gage height, 6.90 ft (2.103 m) July 8, 1980.

EXTREMES FOR CURRENT PERIOD.--July to September 1980: Maximum discharge during period, 223 ft³/s (6.32 m³/s) July 10, gage height, 10.21 ft (3.112 m); minimum, 0.04 ft³/s (0.001 m³/s) July 8, gage height, 6.90 ft (2.103 m).

Water year 1981: Maximum discharge, 108 ft³/s (3.06 m³/s) June 4, gage height, 8.97 ft (2.734 m); minimum daily, 0.04 ft³/s (0.001 m³/s) Aug. 25-27, Sept. 12, 13.

Water year 1982: Maximum discharge, 260 ft³/s (7.36 m³/s) May 30, gage height 10.70 ft (3.261 m); minimum daily, 0.02 ft³/s (<0.001 m³/s) Aug. 23; minimum gage height, 7.01 ft (2.137 m) Oct. 3, 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										.24	.34	2.0
2										.23	.27	11
3										.31	.25	5.2
4										.47	.83	2.1
5										.20	.48	1.2
6										.10	.25	1.9
7										.05	.30	2.0
8										1.2	.30	1.1
9										1.9	.52	1.3
10										32	.38	6.9
11										8.6	.23	2.5
12										7.1	.18	1.5
13										28	.15	1.1
14										4.4	.13	.82
15										1.7	.53	.71
16										.91	4.2	.63
17										.61	.72	.57
18										.45	1.3	.49
19										.34	2.0	.42
20										.24	.80	.40
21										.21	4.9	.52
22										.19	23	1.5
23										.25	34	3.5
24										.17	7.5	1.6
25										.14	4.0	1.5
26										.13	2.6	.99
27										1.4	1.8	.71
28										8.2	1.4	.59
29										1.0	2.0	.51
30										.52	4.9	.50
31										.38	3.1	---
TOTAL										101.64	103.36	55.76
MEAN										3.28	3.33	1.86
MAX										32	34	11
MIN										.05	.13	.40
CFSM										1.16	1.18	.66
IN.										1.34	1.36	.74

KANAWHA RIVER BASIN

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03198020 TRACE FORK AT RUTH, WV--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.47	.52	1.6	4.3	3.7	9.8	1.8	12	1.5	1.3	.11	.17
2	.52	.37	1.8	3.8	30	6.4	1.5	6.3	3.2	.61	.14	.11
3	.48	.34	1.4	3.4	11	4.5	1.4	4.2	4.0	.50	.14	.08
4	.40	.52	1.2	2.3	6.0	3.8	1.3	3.2	33	1.3	.08	.23
5	.36	.44	1.2	2.5	4.0	8.3	11	2.5	16	1.9	.08	.14
6	.32	.34	1.0	2.3	2.5	7.0	6.1	2.6	29	4.1	2.0	.06
7	.30	.28	.89	1.9	1.8	5.1	4.1	2.9	14	1.8	2.2	.06
8	.28	.32	.85	1.6	1.7	3.8	3.3	2.5	6.7	1.1	2.3	.33
9	.28	.75	4.9	1.3	1.6	3.1	2.9	1.4	4.1	.76	.64	.11
10	.23	.59	5.0	1.1	2.7	2.6	3.1	1.2	4.8	7.1	.35	.06
11	.33	.38	3.5	1.0	6.6	2.2	3.3	1.5	3.4	4.3	.35	.05
12	.37	.29	2.7	.90	6.2	1.8	5.1	1.2	2.3	1.9	.51	.04
13	.34	.22	2.1	.84	5.4	1.7	12	.97	13	1.2	.21	.04
14	.28	.19	1.5	.74	4.4	1.4	6.9	.97	15	.95	.14	.17
15	.22	.20	1.3	.76	3.6	1.2	4.8	1.6	6.1	.72	.21	2.0
16	.18	.22	1.6	.74	2.8	2.4	3.9	.95	4.2	.61	.21	1.5
17	.16	10	1.1	.70	5.5	2.2	31	.78	3.0	.54	.11	.62
18	.63	12	.95	.68	5.8	2.7	15	2.5	1.8	.42	.09	.48
19	.39	4.1	.84	.66	7.2	2.7	9.1	19	1.3	.35	.08	.62
20	.22	2.2	.75	.58	13	2.6	9.9	18	3.7	.33	.08	.44
21	.20	1.4	.75	5.3	9.9	2.4	7.1	6.5	2.2	.75	.08	.28
22	.19	.95	.75	5.5	6.6	2.4	5.5	3.6	2.1	.55	.07	.18
23	.18	.82	.78	4.0	26	2.5	4.7	2.3	1.3	.32	.06	.13
24	.18	19	1.4	3.1	13	2.2	3.9	1.5	.93	.27	.05	.10
25	2.8	8.0	1.8	2.4	7.7	1.9	3.2	1.0	1.3	.22	.04	.08
26	1.2	4.1	1.8	2.1	4.9	1.8	2.7	.79	.90	.19	.04	.08
27	.73	4.2	1.7	1.8	3.6	2.4	2.3	.69	.64	.20	.04	.06
28	1.3	3.8	1.2	1.4	4.6	2.3	1.9	.74	.55	1.5	.05	.06
29	1.3	3.0	.92	1.1	---	2.1	3.9	.69	.46	.98	.05	.04
30	.87	2.0	1.8	.84	---	2.4	11	.64	1.1	.35	.07	.04
31	.75	---	2.8	.84	---	2.0	---	.69	---	.14	.08	---
TOTAL	16.46	81.54	51.88	60.48	201.8	99.7	183.7	105.41	181.58	37.26	10.66	8.36
MEAN	.53	2.72	1.67	1.95	7.21	3.22	6.12	3.40	6.05	1.20	.34	.28
MAX	2.8	.19	5.0	5.5	30	9.8	31	.19	33	7.1	2.3	2.0
MIN	.16	.19	.75	.58	1.6	1.2	1.3	.64	.46	.14	.04	.04
CFSM	.19	.97	.59	.69	2.56	1.14	2.17	1.21	2.15	.43	.12	.10
IN.	.22	1.08	.68	.80	2.66	1.31	2.42	1.39	2.39	.49	.14	.11

WTR YR 1981 TOTAL 1038.83 MEAN 2.85 MAX 33 MIN .04 CFSM 1.01 IN 13.70

KANAWHA RIVER BASIN

03198020 TRACE FORK AT RUTH, WV--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	.06	.10	1.1	4.9	1.4	7.7	.45	10	.85	.19	.29
2	.04	.06	.10	.90	3.0	1.2	5.9	.40	6.9	.43	.13	.15
3	.03	.06	.09	5.0	3.6	1.2	8.9	.37	4.2	.35	.11	.10
4	.03	.04	.12	12	5.6	1.1	7.1	.34	6.1	6.8	.09	.06
5	.04	.29	.15	5.0	4.2	1.1	5.6	.32	20	3.0	.07	.04
6	.06	.46	.12	2.3	3.2	1.0	5.1	.28	6.9	1.2	.08	.04
7	.05	.21	.11	4.0	2.1	2.8	3.4	.27	3.6	.70	.11	.03
8	.05	.17	.11	2.7	2.0	2.7	2.8	.85	2.7	7.0	.11	.03
9	.05	.13	.11	2.0	39	7.4	3.0	.50	2.5	4.0	.34	.04
10	.04	.12	.11	1.5	9.2	7.1	2.4	.35	18	2.0	.40	.03
11	.04	.10	.11	1.2	4.4	13	2.1	.26	18	1.2	.19	.03
12	.04	.09	.11	1.0	2.7	23	1.9	.21	7.4	.90	.17	.03
13	.04	.09	.11	.85	2.0	16	1.7	.18	6.4	.49	.09	.03
14	.04	.08	.20	.75	1.7	9.5	1.5	.16	3.6	.34	.07	.03
15	.04	.08	.40	.65	2.7	36	1.4	.14	2.1	.27	.05	.10
16	.04	.08	.40	.55	10	24	1.3	.12	1.3	.21	.04	.09
17	.04	.08	.70	.50	22	13	1.2	.11	1.6	.17	.04	.03
18	.09	.07	1.8	.45	10	7.7	1.0	.10	.96	.19	.03	.03
19	.09	.07	1.5	.45	5.4	5.6	.96	.65	.65	.15	.03	.03
20	.07	.11	1.3	.40	3.6	4.6	.96	.52	.52	.13	.03	.03
21	.06	.10	1.1	21	2.8	4.4	.90	.80	.37	.15	.03	.09
22	.06	.09	4.5	12	2.4	13	.80	1.7	.29	.29	.03	.11
23	.25	.08	8.0	15	1.9	2.8	.70	1.3	.23	.31	.02	.04
24	.13	.19	4.0	7.4	1.5	2.4	.70	.65	.19	.15	.05	.03
25	.09	.17	1.5	3.8	1.1	2.7	.65	.43	.13	.10	.07	.03
26	.56	.12	1.0	2.8	.90	7.4	.96	.37	1.0	.07	.05	.06
27	.34	.12	.75	2.0	1.1	5.1	.75	.46	5.0	.05	.90	.37
28	.19	.11	.55	1.7	1.5	3.6	.65	.31	1.2	1.9	.27	.29
29	.11	.10	.45	1.4	---	3.0	.55	2.1	.96	.80	.10	.09
30	.09	.10	.40	1.3	---	2.4	.50	78	1.2	.34	.15	.06
31	.07	---	.70	3.4	---	7.7	---	17	---	.27	.29	---
TOTAL	2.91	3.63	30.70	115.10	154.50	233.9	73.08	109.70	134.00	34.81	4.33	2.41
MEAN	.094	.12	.99	3.71	5.52	7.55	2.44	3.54	4.47	1.12	.14	.080
MAX	.56	.46	8.0	21	39	36	8.9	78	20	7.0	.90	.37
MIN	.03	.04	.09	.40	.90	1.0	.50	.10	.13	.05	.02	.03
CFSM	.03	.04	.35	1.32	1.96	2.68	.87	1.26	1.59	.40	.05	.03
IN.	.04	.05	.40	1.52	2.04	3.08	.96	1.45	1.77	.46	.06	.03
CAL YR 1981	TOTAL	926.19	MEAN	2.54	MAX	33	MIN	.03	CFSM	.90	IN	12.21
WTR YR 1982	TOTAL	899.07	MEAN	2.46	MAX	78	MIN	.02	CFSM	.87	IN	11.86

KANAWHA RIVER BASIN

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03198020 TRACE FORK AT RUTH, WV--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1980 to current year.

WATER TEMPERATURES: July 1980 to current year.

SUSPENDED-SEDIMENT DISCHARGE: July 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 460 micromhos July 8, 1980; minimum daily, 71 micromhos Mar. 12, 1982.

WATER TEMPERATURES: Maximum daily, 25.0°C Aug. 7, 21, 1980, July 31, 1981; minimum daily, 0.0°C several days in 1981 and 1982.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,020 mg/L July 28, 1981; minimum daily mean, 0 mg/L Jan. 27, 28, 1981, Mar. 1, 4, 1982.

SEDIMENT LOADS: Maximum daily, 343 tons (311 metric tons) May 30, 1982; minimum daily, 0 ton (0 metric ton) many days during each year.

EXTREMES FOR PERIOD JULY TO SEPTEMBER 1980.--

SPECIFIC CONDUCTANCE: Maximum daily, 460 micromhos July 8; minimum daily, 86 micromhos Aug. 23.

WATER TEMPERATURES: Maximum daily, 25.0°C Aug. 7, 21; minimum daily, 13.0°C Sept. 27.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 852 mg/L July 10; minimum daily mean, 1 mg/L July 26.

SEDIMENT LOADS: Maximum daily, 74 tons (67 metric tons) July 10; minimum daily, 0 ton (0 metric ton) many days during period.

EXTREMES FOR 1981 WATER YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 405 micromhos Sept. 14; minimum daily, 77 micromhos June 6.

WATER TEMPERATURES: Maximum daily, 24.5°C July 28; minimum daily, 0.0°C several days in January and February.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,020 mg/L July 28; minimum daily mean, 0 mg/L Jan. 27, 28.

SEDIMENT LOADS: Maximum daily, 73 tons (66 metric tons) Apr. 17; minimum daily, 0 ton (0 metric ton) many days during the year.

EXTREMES FOR 1982 WATER YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 435 micromhos Oct. 9; minimum daily, 71 micromhos Mar. 12.

WATER TEMPERATURES: Maximum daily, 25.0°C July 31; minimum daily recorded, 0.0°C Jan. 26, 27, 29, Feb. 7, 8.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 996 mg/L May 30; minimum daily mean, 0 mg/L Mar. 1, 4.

SEDIMENT LOADS: Maximum daily, 343 tons (311 metric tons) May 30; minimum daily, 0 ton (0 metric ton) many days during the year.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										442	242	192
2										---	245	152
3										441	263	128
4										380	234	159
5										340	225	169
6										420	266	190
7										440	287	157
8										460	280	182
9										355	268	204
10										120	245	114
11										114	292	142
12										150	319	158
13										91	325	171
14										120	340	188
15										142	354	206
16										170	172	2.6
17										180	229	234
18										205	213	245
19										215	159	262
20										230	209	274
21										245	138	289
22										260	106	233
23										275	86	170
24										280	110	199
25										310	132	201
26										320	151	216
27										340	170	226
28										151	190	232
29										186	215	248
30										203	164	261
31										220	170	---
MEAN										260	219	201

KANAWHA RIVER BASIN

03198020 TRACE FORK AT RUTH, WV--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	263	203	122	136	130	99	118	117	153	186	235	350
2	278	209	126	158	96	100	122	96	140	196	246	333
3	262	220	130	124	100	104	125	101	138	196	235	375
4	283	231	134	128	104	106	122	104	81	206	298	260
5	294	224	136	---	120	108	100	106	89	179	268	297
6	322	235	137	128	110	102	101	118	77	140	200	314
7	316	242	138	151	116	102	102	116	86	162	206	354
8	340	237	142	138	132	104	106	118	95	179	164	322
9	347	242	144	135	132	108	108	119	112	192	190	305
10	347	258	115	144	150	110	131	126	128	154	190	345
11	309	247	117	154	130	114	111	130	125	129	198	332
12	291	259	119	148	115	113	110	126	136	155	193	334
13	291	253	117	144	121	119	90	138	89	173	231	351
14	309	256	122	149	117	117	96	138	90	181	243	405
15	305	265	125	162	112	120	100	144	104	210	252	258
16	293	265	132	168	115	134	99	141	114	199	245	235
17	---	203	132	166	128	117	82	167	123	196	253	270
18	283	106	132	174	117	124	86	162	132	208	273	296
19	257	122	134	178	132	115	92	95	142	205	294	286
20	275	128	145	167	104	120	94	85	121	221	289	284
21	269	134	153	205	102	115	96	96	138	217	291	304
22	283	140	169	122	104	115	98	104	143	209	291	318
23	281	149	134	120	90	128	103	112	145	225	326	337
24	201	91	137	122	97	116	106	117	162	238	390	346
25	200	97	152	122	98	118	112	126	151	247	339	380
26	190	106	150	140	102	117	114	131	162	252	360	318
27	215	144	134	132	108	157	117	139	173	270	320	328
28	214	114	138	130	110	119	117	144	178	221	352	343
29	186	114	139	130	---	117	124	146	191	159	349	342
30	201	119	204	138	---	118	134	151	199	193	351	341
31	195	---	152	148	---	116	---	151	---	212	338	---
MEAN	270	187	137	145	114	115	107	125	131	197	271	322
WTR YR 1981	MEAN	177		MAX	405	MIN	77					

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	343	324	340	227	160	122	99	175	116	177	233	237
2	350	339	352	218	140	119	101	167	133	214	233	264
3	345	350	372	215	158	126	109	175	147	209	240	268
4	340	340	330	113	135	128	198	185	157	115	250	294
5	340	345	300	137	130	127	102	186	88	139	260	293
6	340	246	330	156	135	131	105	189	102	167	220	292
7	389	276	330	174	155	114	107	196	114	180	280	308
8	360	283	342	167	157	144	110	195	123	192	255	310
9	435	300	338	173	102	120	112	190	128	112	270	304
10	365	310	357	197	102	100	122	210	87	131	207	330
11	370	322	370	235	112	101	120	210	88	148	234	308
12	370	330	352	214	119	71	125	205	102	157	232	318
13	380	330	350	189	122	109	121	210	122	170	247	338
14	390	330	347	187	142	96	122	218	121	179	264	310
15	380	335	317	203	130	84	130	220	131	190	260	315
16	375	350	318	220	120	86	127	235	142	202	260	273
17	370	380	322	245	139	93	132	245	153	213	297	297
18	295	370	283	245	101	98	130	260	154	218	282	315
19	380	348	266	226	112	105	135	206	162	223	284	312
20	380	348	303	240	111	114	141	230	170	230	296	313
21	375	320	355	117	116	116	145	201	180	212	297	327
22	400	340	348	128	123	111	145	165	188	235	382	268
23	312	358	174	129	120	117	157	186	195	225	304	287
24	325	290	158	118	116	113	156	195	203	229	302	292
25	375	290	193	125	124	168	162	197	215	239	307	346
26	270	310	213	140	125	102	165	215	224	245	310	311
27	289	318	232	178	128	102	177	230	220	258	333	272
28	305	350	235	164	124	106	166	210	162	152	238	250
29	320	340	238	148	---	110	175	227	195	182	262	280
30	320	335	254	120	---	111	210	76	196	205	310	293
31	345	---	250	160	---	128	---	99	---	214	258	---
MEAN	353	327	299	178	127	112	137	197	151	192	271	298
WTR YR 1982	MEAN	221		MAX	435	MIN	71					

03198020 TRACE FORK AT RUTH, WV--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										23.5	22.5	20.0
2										---	24.0	23.5
3										23.0	23.0	20.0
4										---	23.0	24.0
5										---	21.0	21.0
6										---	22.0	23.0
7										19.0	25.0	21.0
8										23.0	21.0	19.0
9										22.0	23.5	19.0
10										22.0	22.0	19.0
11										18.0	24.0	15.0
12										21.0	23.0	15.0
13										20.0	20.0	18.0
14										19.0	20.0	21.0
15										20.0	22.0	21.0
16										23.0	22.0	18.0
17										23.0	20.0	20.0
18										20.0	21.5	20.0
19										20.0	22.0	17.0
20										23.0	21.0	19.0
21										24.0	25.0	20.0
22										24.0	20.0	20.0
23										22.0	20.0	20.0
24										21.0	20.0	20.0
25										21.0	20.0	20.0
26										22.0	20.0	18.0
27										24.0	19.0	13.0
28										24.0	19.0	15.0
29										21.0	22.0	15.0
30										20.0	22.0	14.0
31										21.0	21.0	---
MEAN										21.5	21.5	19.0

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.0	9.0	7.0	5.0	3.0	4.0	12.0	15.0	16.0	20.0	17.0	21.0
2	19.0	6.0	8.0	3.0	3.5	6.0	7.0	13.0	20.0	20.0	22.0	21.0
3	15.0	5.0	5.0	2.0	2.0	7.0	12.0	10.0	19.0	20.0	21.0	21.0
4	11.0	10.0	3.0	.0	1.0	9.0	8.0	9.0	19.0	20.0	22.0	22.0
5	11.0	10.0	6.0	.0	1.0	5.0	11.0	11.0	16.0	21.0	24.0	20.0
6	10.0	7.0	10.0	3.0	2.0	5.0	8.0	14.0	17.0	19.0	23.5	18.0
7	11.0	9.0	11.0	1.0	2.0	5.0	5.0	12.0	16.0	20.0	23.0	19.0
8	10.0	13.0	9.0	1.0	3.0	4.0	9.0	12.0	16.0	21.0	19.0	20.0
9	14.0	14.0	10.0	1.0	.0	6.0	11.0	10.0	19.0	23.0	22.0	15.0
10	16.0	9.0	10.0	1.0	2.0	5.0	11.5	11.0	20.0	23.5	20.0	15.0
11	17.0	6.0	6.0	.0	4.5	6.0	12.0	15.0	18.0	20.0	22.0	15.0
12	14.0	5.0	6.0	.0	1.0	4.0	16.0	12.0	19.0	20.0	20.0	18.0
13	8.0	5.0	6.0	1.0	1.0	6.0	16.0	10.0	18.0	20.0	19.0	18.0
14	9.0	6.0	5.0	.0	2.0	4.0	13.0	18.0	19.0	22.0	19.0	15.0
15	10.0	10.0	4.0	2.0	2.0	4.0	8.0	15.0	18.0	19.0	20.0	20.0
16	9.0	6.0	6.0	2.0	2.0	6.0	12.0	12.0	19.0	21.0	22.0	17.0
17	17.0	6.5	4.0	1.0	5.0	2.0	12.0	15.0	20.0	20.0	18.0	15.0
18	---	6.0	4.0	1.0	4.0	5.0	14.0	13.5	18.0	20.0	15.0	13.0
19	16.0	6.0	5.0	.0	9.0	3.0	12.0	12.5	19.0	23.0	17.0	14.0
20	10.0	3.0	1.0	1.0	7.0	3.0	12.0	12.0	19.0	24.0	16.0	14.0
21	11.0	3.0	1.0	1.0	9.0	5.0	7.0	12.0	20.0	23.0	15.0	14.0
22	11.0	4.0	1.0	3.0	7.0	5.0	10.0	12.0	21.0	20.0	17.0	14.0
23	9.0	5.0	2.0	4.0	7.0	5.0	14.0	13.0	18.0	17.0	19.0	10.0
24	11.0	10.0	2.0	4.0	6.0	4.0	11.0	16.0	17.0	20.0	17.0	11.0
25	10.0	9.0	.0	5.0	5.0	4.0	10.0	15.0	20.0	21.0	15.0	---
26	8.0	4.0	3.0	9.0	3.0	3.0	9.0	19.0	18.0	23.0	16.0	12.0
27	8.0	7.0	1.0	5.0	2.0	8.0	15.0	19.0	15.0	23.0	19.0	16.0
28	12.0	7.0	3.0	3.0	2.0	3.0	14.0	17.0	19.0	24.5	19.0	12.0
29	9.0	6.0	1.0	3.0	---	7.0	15.0	15.0	20.0	20.0	19.0	14.0
30	7.0	6.0	4.0	3.0	---	11.0	14.5	19.0	20.0	18.0	21.0	14.0
31	7.0	---	4.0	---	---	7.0	---	17.0	---	17.0	22.0	---
MEAN	11.5	7.0	5.0	2.0	3.5	5.0	11.5	13.5	18.5	20.5	19.5	16.0
WTR YR 1981	MEAN	11.0		MAX	24.5		MIN	.0				

KANAWHA RIVER BASIN

03198020 TRACE FORK AT RUTH, WV--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.0	12.0	9.0	---	3.0	7.0	7.0	10.0	19.0	15.0	22.0	21.0
2	12.0	10.0	8.0	---	2.0	4.0	8.0	14.0	17.0	15.0	19.0	20.0
3	11.0	10.0	7.0	---	5.0	5.0	14.0	11.0	17.0	19.0	20.0	19.0
4	9.0	10.0	7.0	---	4.0	9.0	8.0	12.0	18.0	21.0	21.0	14.0
5	13.0	13.0	5.0	---	3.0	6.0	6.0	10.0	16.0	18.0	21.0	16.0
6	11.0	12.0	5.0	---	4.0	5.0	4.0	13.0	15.0	18.0	22.0	14.0
7	11.0	10.0	4.0	---	.0	3.0	5.0	15.0	17.0	20.0	23.0	15.0
8	8.0	8.0	---	---	.0	3.0	6.0	16.0	16.0	21.0	23.0	17.0
9	8.0	9.0	---	---	4.0	5.0	7.0	15.0	17.0	19.0	22.5	20.0
10	11.0	9.0	---	---	1.0	5.0	6.0	13.0	17.0	21.0	21.0	18.0
11	12.5	8.0	---	---	2.0	10.0	8.0	14.0	15.0	22.0	20.0	17.0
12	---	7.0	---	---	2.0	9.0	8.0	13.0	17.0	20.0	19.0	18.0
13	8.0	4.0	---	---	2.0	9.0	12.0	19.0	17.0	20.0	17.0	20.0
14	7.0	4.0	---	---	1.0	8.0	8.0	15.0	15.0	20.0	16.0	21.0
15	10.0	7.0	---	---	1.0	8.0	12.0	16.0	15.0	20.0	20.0	22.0
16	14.0	4.0	---	1.0	6.0	9.0	16.0	18.0	20.0	20.0	18.0	21.0
17	8.0	8.0	---	.0	9.5	9.0	16.0	17.0	19.0	22.0	19.0	15.0
18	14.0	7.0	---	1.0	7.0	7.0	11.0	15.0	17.0	24.0	19.0	17.0
19	9.0	4.0	---	1.0	7.0	9.0	10.0	18.0	19.0	21.0	15.0	16.0
20	5.0	9.0	---	1.0	6.0	10.0	13.0	18.0	17.0	22.0	17.0	15.0
21	6.0	4.0	---	3.0	7.0	15.0	11.0	20.5	17.0	21.0	21.0	15.0
22	10.0	4.0	---	5.0	5.0	7.0	10.0	17.0	16.0	21.0	18.0	13.0
23	11.0	2.0	---	6.0	4.0	5.0	9.0	18.0	14.0	22.0	12.0	10.0
24	6.0	7.0	---	3.0	8.0	5.0	10.0	18.0	15.0	22.0	21.0	11.0
25	6.0	4.0	---	1.0	4.0	7.0	11.0	18.0	15.0	22.0	22.0	14.0
26	12.0	5.0	---	.0	3.0	7.0	14.0	17.0	20.0	21.0	19.0	16.0
27	13.0	10.0	---	.0	4.0	5.0	13.0	19.0	20.0	22.0	19.0	15.0
28	12.0	6.0	---	1.0	5.0	3.0	7.0	21.0	19.0	22.0	20.0	16.0
29	10.0	7.0	---	.0	---	5.0	10.0	19.5	20.0	20.0	16.0	15.0
30	9.0	3.0	---	5.0	---	10.0	11.0	17.0	20.0	20.0	17.0	13.0
31	9.0	---	---	8.0	---	11.5	---	17.0	---	25.0	20.0	---
MEAN	10.0	7.0	6.5	2.0	4.0	7.0	9.5	16.0	17.0	20.5	19.5	16.5
WTR YR 1982	MEAN	12.0	MAX	25.0	MIN	.0						

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1							20	.01	8	.00	5	.03
2							17	.01	12	.00	204	19
3							35	.03	12	.00	34	.48
4							51	.08	116	.31	23	.13
5							21	.01	20	.03	9	.03
6							20	.00	8	.00	90	.81
7							27	.00	14	.01	37	.20
8							69	.62	14	.01	7	.02
9							398	2.9	80	.22	40	.83
10							852	74	27	.03	85	2.2
11							141	3.3	18	.01	5	.03
12							172	8.7	53	.03	9	.04
13							115	15	26	.01	12	.04
14							17	.20	25	.00	7	.02
15							15	.07	132	.46	7	.01
16							27	.07	91	1.6	6	.01
17							14	.02	7	.01	11	.02
18							12	.01	76	.73	14	.02
19							10	.00	42	.31	10	.01
20							7	.00	18	.04	11	.01
21							7	.00	133	2.9	7	.00
22							13	.00	228	32	103	.61
23							13	.00	146	19	65	.77
24							12	.00	13	.26	16	.07
25							2	.00	7	.08	14	.06
26							1	.00	5	.04	12	.03
27							97	1.1	5	.02	13	.02
28							58	2.3	4	.02	9	.01
29							2	.00	23	.12	6	.00
30							3	.00	53	.71	6	.00
31							4	.00	6	.05	---	---
TOTAL							---	108.43	---	59.01	---	25.51

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MEAN CONCEN- TRATION (MG/L)		LOADS (T/DAY)		MEAN CONCEN- TRATION (MG/L)		LOADS (T/DAY)		MEAN CONCEN- TRATION (MG/L)		LOADS (T/DAY)		MEAN CONCEN- TRATION (MG/L)		LOADS (T/DAY)	
	OCTOPER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH					
1	7	.00	24	.03	3	.01	11	.13	4	.04	30	.79				
2	27	.04	12	.01	35	.19	9	.09	73	5.3	7	.12				
3	17	.02	14	.01	13	.05	8	.07	31	.92	3	.04				
4	15	.02	13	.02	7	.02	10	.06	20	.32	12	.12				
5	22	.02	10	.01	6	.02	7	.05	5	.05	36	.76				
6	17	.01	6	.00	6	.02	10	.06	4	.03	7	.13				
7	8	.00	5	.00	7	.02	9	.05	7	.03	3	.04				
8	14	.01	6	.00	7	.02	12	.05	13	.06	1	.01				
9	12	.00	7	.01	77	1.3	7	.02	7	.03	2	.02				
10	20	.01	8	.01	17	.23	8	.02	46	.57	8	.06				
11	7	.00	7	.00	7	.07	22	.06	33	.58	7	.04				
12	5	.00	5	.00	6	.04	7	.02	9	.15	6	.03				
13	5	.00	3	.00	4	.02	7	.02	7	.10	6	.03				
14	6	.00	30	.02	3	.01	4	.00	12	.14	8	.03				
15	7	.00	40	.02	2	.00	5	.01	7	.07	5	.02				
16	7	.00	22	.01	3	.01	5	.00	15	.11	53	.42				
17	9	.00	174	10	3	.00	5	.00	17	.25	2	.01				
18	49	.09	52	2.2	2	.00	5	.00	12	.19	8	.06				
19	31	.03	9	.10	1	.00	5	.00	126	4.0	5	.04				
20	19	.01	8	.05	3	.00	9	.01	61	2.3	4	.03				
21	17	.00	3	.01	2	.00	55	.79	12	.32	4	.03				
22	27	.01	1	.00	3	.00	17	.25	10	.18	5	.03				
23	15	.00	13	.03	2	.00	4	.04	215	18	6	.04				
24	18	.00	143	7.3	46	.24	3	.03	39	1.4	3	.02				
25	147	.88	13	.28	11	.05	2	.01	8	.17	5	.03				
26	33	.11	4	.04	6	.03	1	.00	5	.07	5	.02				
27	17	.03	7	.08	49	.22	0	.00	2	.02	42	.27				
28	31	.15	4	.04	9	.03	0	.00	47	1.0	8	.05				
29	12	.04	2	.02	3	.00	1	.00	---	---	6	.03				
30	7	.02	2	.01	23	.11	1	.00	---	---	5	.03				
31	9	.02	---	---	8	.06	2	.00	---	---	3	.02				
TOTAL	---	1.52	---	20.31	---	2.77	---	1.84	---	36.40	---	3.37				
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER						
1	4	.02	74	2.7	50	.41	41	.14	57	.02	136	.06				
2	5	.02	22	.37	121	1.2	21	.03	23	.00	27	.00				
3	5	.02	16	.18	128	2.9	18	.02	63	.02	114	.02				
4	7	.02	9	.08	277	41	90	.41	16	.00	103	.06				
5	116	4.4	5	.03	87	3.8	131	.85	48	.01	25	.00				
6	19	.31	28	.20	140	12	136	1.6	625	2.9	45	.00				
7	9	.10	33	.26	67	2.5	14	.07	491	5.6	23	.00				
8	7	.06	12	.08	23	.42	7	.02	48	.30	129	.11				
9	10	.08	7	.03	12	.13	7	.01	17	.03	23	.00				
10	42	.41	7	.02	83	1.1	317	2.5	16	.02	23	.00				
11	15	.13	6	.02	17	.16	146	1.7	70	.07	33	.00				
12	106	3.2	5	.02	7	.04	24	.12	23	.03	16	.00				
13	87	3.3	7	.02	166	8.6	20	.06	50	.03	27	.00				
14	25	.47	11	.03	83	3.4	21	.05	67	.03	90	.04				
15	17	.22	22	.10	17	.28	27	.05	179	.10	182	.98				
16	10	.11	7	.02	27	.37	15	.02	38	.02	40	.16				
17	521	73	3	.00	17	.14	14	.02	39	.01	28	.05				
18	60	2.4	87	.76	10	.05	16	.02	17	.00	29	.04				
19	12	.29	122	8.5	7	.02	10	.00	12	.00	77	.13				
20	30	.80	62	3.0	79	1.1	6	.00	12	.00	16	.02				
21	17	.33	28	.49	17	.10	73	.15	17	.00	20	.02				
22	9	.13	18	.17	14	.08	33	.05	22	.00	35	.02				
23	24	.30	14	.09	13	.05	20	.02	34	.00	69	.02				
24	17	.18	12	.05	15	.04	22	.02	36	.00	51	.01				
25	9	.08	10	.03	98	.48	15	.00	22	.00	45	.01				
26	5	.04	7	.01	17	.04	36	.02	14	.00	47	.01				
27	7	.04	8	.01	10	.02	73	.04	13	.00	54	.01				
28	5	.03	9	.02	11	.02	1020	8.4	33	.00	63	.01				
29	29	.37	12	.02	9	.01	254	.67	24	.00	47	.01				
30	363	20	12	.02	110	.52	21	.02	18	.00	104	.01				
31	---	---	10	.02	---	---	36	.01	17	.00	---	---				
TOTAL	---	110.86	---	17.35	---	80.98	---	17.09	---	9.19	---	1.80				
TOTAL LOAD FOR YEAR:		303.48		TONS.												

03198020 TRACE FORK AT RUTH, WV--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)
OCTOBER			NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	48	.00	8	.00	2	.00	12	.04	13	.17	0	.00
2	18	.00	5	.00	1	.00	2	.00	4	.03	1	.00
3	17	.00	6	.00	7	.00	26	.35	24	.23	1	.00
4	40	.00	24	.00	51	.02	103	3.3	17	.26	0	.00
5	45	.00	76	.12	7	.00	12	.16	5	.06	1	.00
6	128	.02	25	.03	2	.00	8	.05	3	.03	2	.00
7	60	.00	7	.00	3	.00	37	.40	7	.04	7	.05
8	17	.00	19	.00	10	.00	4	.03	5	.03	2	.01
9	13	.00	13	.00	13	.00	2	.01	212	28	92	2.8
10	60	.00	7	.00	11	.00	3	.01	48	1.2	19	.36
11	43	.00	17	.00	7	.00	2	.00	12	.14	174	28
12	87	.00	16	.00	3	.00	2	.00	7	.05	166	12
13	46	.00	30	.00	7	.00	5	.01	9	.05	163	7.5
14	29	.00	19	.00	5	.00	2	.00	9	.04	26	.67
15	17	.00	10	.00	2	.00	2	.00	16	.12	460	58
16	7	.00	5	.00	4	.00	3	.00	104	4.3	122	8.7
17	30	.00	10	.00	8	.02	4	.00	207	12	37	1.3
18	77	.02	6	.00	5	.02	5	.00	32	.86	18	.37
19	46	.01	17	.00	4	.02	3	.00	12	.17	17	.26
20	42	.00	40	.01	2	.00	23	.02	7	.07	16	.20
21	62	.01	63	.02	12	.04	159	12	7	.05	20	.24
22	53	.00	72	.02	151	1.8	17	.55	9	.06	11	.39
23	122	.09	7	.00	42	.91	101	3.6	12	.06	9	.07
24	22	.00	12	.00	5	.05	43	.86	8	.03	6	.04
25	12	.00	3	.00	2	.00	5	.05	3	.00	25	.18
26	166	.34	17	.00	2	.00	7	.05	1	.00	33	.66
27	7	.00	10	.00	2	.00	5	.03	4	.01	14	.19
28	5	.00	8	.00	2	.00	2	.00	1	.00	12	.12
29	7	.00	10	.00	4	.00	4	.02	---	---	12	.10
30	5	.00	5	.00	3	.00	4	.01	---	---	10	.06
31	10	.00	---	---	63	.12	48	.77	---	---	144	3.6
TOTAL	---	0.49	---	0.20	---	3.00	---	22.32	---	48.06	---	125.87
APRIL			MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	16	.33	18	.02	25	.68	21	.05	16	.00	21	.02
2	7	.11	18	.02	15	.28	17	.02	16	.00	15	.00
3	95	2.3	10	.00	10	.11	17	.02	11	.00	15	.00
4	17	.33	14	.01	132	3.9	119	2.2	19	.00	16	.00
5	7	.11	18	.02	85	4.6	35	.28	17	.00	18	.00
6	6	.08	15	.01	17	.32	17	.06	13	.00	20	.00
7	2	.02	19	.01	12	.12	16	.03	12	.00	20	.00
8	4	.03	26	.06	11	.08	95	1.8	24	.00	15	.00
9	5	.04	17	.02	100	.68	43	.46	75	.07	7	.00
10	4	.03	21	.02	166	7.7	12	.06	67	.07	8	.00
11	3	.02	15	.01	50	2.4	12	.04	27	.01	10	.00
12	4	.02	20	.01	20	.40	17	.04	31	.01	7	.00
13	2	.00	25	.01	24	.41	16	.02	18	.00	5	.00
14	4	.02	20	.00	16	.16	16	.01	46	.00	89	.00
15	7	.03	34	.01	12	.07	9	.00	23	.00	157	.04
16	5	.02	24	.00	28	.10	12	.00	46	.00	49	.01
17	7	.02	33	.00	15	.06	18	.00	40	.00	30	.00
18	2	.00	50	.01	13	.03	17	.00	17	.00	36	.00
19	1	.00	52	.09	14	.02	7	.00	26	.00	54	.00
20	2	.00	77	.11	12	.02	6	.00	46	.00	13	.00
21	4	.00	142	.31	14	.01	27	.01	107	.00	64	.02
22	7	.02	98	.45	16	.01	114	.09	37	.00	55	.02
23	15	.03	17	.06	13	.00	48	.04	17	.00	48	.00
24	7	.01	11	.02	12	.00	19	.00	63	.00	33	.00
25	29	.05	7	.00	13	.00	23	.00	50	.00	34	.00
26	37	.10	8	.00	14	.04	23	.00	27	.00	67	.01
27	38	.08	14	.02	13	.18	17	.00	124	.30	216	.22
28	28	.05	17	.01	45	.15	170	.87	22	.02	37	.03
29	34	.05	442	11	33	.09	33	.07	16	.00	12	.00
30	32	.04	996	343	100	.32	27	.02	102	.04	15	.00
31	---	---	54	2.5	---	---	15	.01	86	.07	---	---
TOTAL	---	3.94	---	357.81	---	22.94	---	6.20	---	0.59	---	0.37
TOTAL LOAD FOR YEAR:			591.79		TONS.							

KANAWHA RIVER BASIN

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03198022 TRACE FORK D/S DRYDEN HOLLOW AT RUTH, WV

LOCATION.--Lat 38°18'55", long 81°43'42", Kanawha County, Hydrologic Unit 05050008, on right upstream wingwall of private bridge, 100 ft (30 m) west of intersection of State Highways 214 and 16/1, and 0.4 mi (0.6 km) north of Ruth.

DRAINAGE AREA.--4.72 mi² (12.22 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Altitude of gage is 680 ft (207 m), from topographic map.

REMARKS.--Water-discharge records for period July to September 1980 fair. Water-discharge records for water year 1981 good except those for January and February, which are poor. Water-discharge records for water year 1982 good except those for January, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 430 ft³/s (12.2 m³/s) July 10, 1980, gage height, 9.31 ft (2.838 m); minimum daily, 0.06 ft³/s (0.002 m³/s) Aug. 24-27, Sept. 10-13, 1981; minimum gage height, 4.41 ft (1.344 m) July 26, 27, 1980, Sept. 13, 1982.

EXTREMES FOR CURRENT PERIOD.--July to September 1980: Maximum discharge during period, 430 ft³/s (12.2 m³/s) July 10, gage height, 9.31 ft (2.838 m); minimum, 0.17 ft³/s (0.005 m³/s) July 26, 27, gage height, 4.41 ft (1.344 m).

Water year 1981: Maximum discharge, 310 ft³/s (8.78 m³/s) July 10, gage height, 7.38 ft (2.249 m); minimum daily, 0.06 ft³/s (0.002 m³/s) Aug. 24-27, Sept. 10-13.

Water year 1982: Maximum discharge, 400 ft³/s (11.3 m³/s) May 30, gage height 8.65 ft (2.637 m); minimum, 0.09 ft³/s (0.003 m³/s) Sept. 13, gage height, 4.41 ft (1.344 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										.33	.30	2.5
2										.31	.25	12
3										.81	.24	6.8
4										.89	1.8	2.7
5										.43	.71	1.6
6										.25	.26	2.7
7										.21	.51	2.3
8										2.8	.33	1.5
9										4.2	.67	1.9
10										92	.33	8.2
11										18	.27	2.7
12										16	.24	1.9
13										63	.22	1.4
14										7.0	.20	1.1
15										2.7	.54	.94
16										1.3	4.5	.86
17										.70	.90	.75
18										.42	4.5	.60
19										.28	2.7	.52
20										.23	1.7	.50
21										.23	19	.82
22										.23	46	2.3
23										.27	29	5.5
24										.21	5.5	2.0
25										.21	2.7	2.5
26										.20	2.0	1.7
27										6.9	1.7	1.2
28										15	1.8	.94
29										1.8	2.2	.80
30										.77	6.0	.76
31										.41	3.6	---
TOTAL										238.09	140.67	71.99
MEAN										7.68	4.54	2.40
MAX										92	46	12
MIN										.20	.20	.50

KANAWHA RIVER BASIN

03198022 TRACE FK D/S DRYDEN HOLLOW AT RUTH WV

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.73	.54	3.1	7.5	6.8	15	3.0	21	2.8	2.0	.21	.25
2	.85	.54	3.5	6.3	51	10	2.6	13	8.1	1.2	.20	.09
3	.73	.45	2.9	5.3	18	6.9	2.4	7.6	13	.93	.17	.13
4	.67	.67	2.4	3.8	12	6.0	2.2	5.2	58	4.3	.14	.18
5	.60	.57	2.4	4.0	8.0	13	19	3.8	30	5.0	2.3	.11
6	.45	.44	2.1	3.7	6.0	11	10	4.7	48	9.3	4.0	.10
7	.42	.43	2.0	3.3	4.5	8.1	6.9	3.9	28	2.6	6.7	.10
8	.42	.50	1.9	2.7	4.0	5.9	5.4	2.7	12	1.9	2.3	.33
9	.42	.97	11	2.3	3.8	4.6	4.9	2.3	5.8	1.3	.68	.12
10	.36	.71	9.4	2.0	5.9	4.0	5.9	2.0	8.1	20	.30	.06
11	.38	.50	6.3	1.8	12	3.5	6.0	2.2	4.8	8.9	.67	.06
12	.52	.40	4.8	1.6	11	2.7	10	1.8	3.3	2.9	.32	.06
13	.37	.34	3.8	1.5	10	2.4	21	1.4	23	2.0	.21	.06
14	.35	.33	2.8	1.4	8.4	2.2	12	1.4	27	1.6	.20	.36
15	.29	.30	2.4	1.5	6.2	1.9	8.2	2.5	9.6	1.2	.47	5.1
16	.23	.33	2.9	1.3	5.7	3.7	6.8	1.3	6.3	.96	.19	2.6
17	.25	18	2.2	1.2	11	3.3	48	.95	4.0	.76	.15	.80
18	.94	22	2.0	1.1	11	4.1	24	5.7	2.8	.60	.13	.33
19	.62	7.3	1.8	1.0	12	4.0	13	40	2.3	.60	.12	1.5
20	.40	4.0	1.6	3.5	21	3.8	15	39	6.6	.47	.12	.43
21	.33	2.7	1.6	11	17	3.6	10	13	3.4	1.3	.12	.33
22	.27	2.0	1.6	10	12	3.4	7.7	5.9	3.3	.70	.11	.28
23	.27	1.8	1.7	7.5	45	3.5	6.6	3.4	2.2	.35	.10	.25
24	.27	30	3.0	5.6	21	3.5	5.8	2.4	1.7	.33	.06	.23
25	4.2	14	3.8	4.3	13	3.2	4.6	1.9	2.1	.29	.06	.21
26	1.6	6.6	3.8	4.2	8.2	2.9	3.5	1.6	1.5	.23	.06	.20
27	.79	7.7	3.7	3.7	5.9	4.0	2.9	1.5	1.0	.20	.06	.18
28	1.4	6.5	3.5	2.8	7.5	3.8	2.6	1.3	.80	4.6	.08	.43
29	1.4	4.8	2.7	2.3	---	3.5	5.2	1.4	.77	2.4	.08	.43
30	1.0	3.6	3.4	1.9	---	3.8	18	1.2	1.7	.49	.11	.60
31	.64	---	4.9	1.8	---	3.3	---	1.5	---	.24	.12	---
TOTAL	22.17	139.02	105.0	111.9	357.9	154.6	293.2	197.55	321.97	79.65	20.54	15.91
MEAN	.72	4.63	3.39	3.61	12.8	4.99	9.77	6.37	10.7	2.57	.66	.53
MAX	4.2	30	11	11	51	15	48	40	58	20	6.7	5.1
MIN	.23	.30	1.6	1.0	3.8	1.9	2.2	.95	.77	.20	.06	.06
CFSM	.15	.98	.72	.77	2.71	1.06	2.07	1.35	2.27	.54	.14	.11
IN.	.17	1.10	.83	.88	2.82	1.22	2.31	1.56	2.54	.63	.16	.13
WTR YR 1981	TOTAL	1819.41	MEAN	4.98	MAX	58	MIN	.06	CFSM	1.06	IN	14.34

KANAWHA RIVER BASIN

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03198022 TRACE FK D/S DRYDEN HOLLOW AT RUTH WV--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.72	.36	.19	2.3	10	4.7	14	.72	4.1	1.8	.58	.87
2	.87	.26	.36	1.8	6.9	4.3	10	.72	2.8	.87	.36	.46
3	.58	.26	.36	5.4	8.6	4.1	18	.72	2.1	.58	.36	.36
4	.58	.26	.72	27	11	3.6	13	.58	5.7	11	.26	.26
5	.72	3.6	.87	8.2	8.2	3.6	9.4	.58	23	5.4	.26	.23
6	1.2	3.1	.72	4.7	6.5	3.1	8.6	.46	7.8	2.1	.26	.21
7	1.0	.87	.58	9.0	5.0	9.4	5.7	.46	4.3	1.2	.46	.20
8	.80	.58	.58	5.7	4.7	9.9	4.7	1.0	5.4	12	.36	.19
9	.65	.46	.58	4.3	95	20	5.0	.58	4.3	8.2	2.3	.18
10	.55	.36	.58	3.5	30	22	4.1	.46	51	3.3	1.0	.18
11	.48	.36	.58	2.8	16	41	3.8	.36	34	1.8	.46	.17
12	.40	.36	.58	2.3	9.9	40	3.6	.36	11	1.4	.46	.17
13	.35	.36	.58	2.0	7.3	27	3.3	.36	9.0	.72	.26	.16
14	.30	.26	.72	1.7	7.3	19	3.1	.26	5.0	.58	.26	.36
15	.27	.26	.87	1.5	11	73	2.6	.26	3.1	.46	.18	1.2
16	.24	.26	.87	1.3	46	35	2.3	.26	3.3	.36	.18	.58
17	.22	.26	2.6	1.2	79	19	2.1	.18	3.1	.26	.18	.18
18	1.8	.18	3.8	1.1	35	12	1.8	.18	1.6	.72	.18	.18
19	1.0	.18	3.2	1.0	19	8.6	1.6	.72	1.0	.36	.12	.26
20	.72	.46	2.7	.90	13	6.9	1.6	1.0	.87	.46	.12	.26
21	.58	.46	2.3	28	11	7.8	1.6	1.6	.58	.58	.18	.72
22	.58	.46	12	20	9.9	5.7	1.4	4.1	.58	2.1	.18	.72
23	3.1	.35	18	27	8.2	4.3	1.0	3.1	.36	1.0	.18	.36
24	1.0	.80	6.1	13	5.4	4.3	1.0	1.0	.36	.46	.26	.26
25	.58	.55	3.1	8.2	3.8	7.3	1.0	.58	.26	.36	.46	.26
26	5.0	.45	2.1	6.1	3.1	14	1.8	.46	.26	.26	.26	.46
27	1.6	.35	1.6	4.6	4.3	9.4	1.4	.58	8.2	.18	4.7	1.8
28	.87	.30	1.2	3.7	5.7	6.9	1.0	.46	4.3	10	.72	.87
29	.58	.25	1.0	3.2	---	5.4	.87	9.9	3.6	2.6	.36	.36
30	.46	.22	.87	2.8	---	4.7	.87	122	4.1	.87	.87	.26
31	.36	---	1.6	9.0	---	15	---	10	---	.87	.87	---
TOTAL	28.16	17.24	71.91	213.30	480.8	451.0	130.24	164.00	205.07	72.85	17.64	12.73
MEAN	.91	.57	2.32	6.88	17.2	14.5	4.34	5.29	6.84	2.35	.57	.42
MAX	5.0	3.6	18	28	95	73	18	122	51	12	4.7	1.8
MIN	.22	.18	.19	.90	3.1	3.1	.87	.18	.26	.18	.12	.16
CFSM	.19	.12	.49	1.46	3.64	3.07	.92	1.12	1.45	.50	.12	.09
IN.	.22	.14	.57	1.68	3.79	3.55	1.03	1.29	1.62	.57	.14	.10
CAL YR 1981	TOTAL	1670.53	MEAN	4.58	MAX	58	MIN	.06	CFSM	.97	IN	13.16
WTR YR 1982	TOTAL	1864.94	MEAN	5.11	MAX	122	MIN	.12	CFSM	1.08	IN	14.70

KANAWHA RIVER BASIN

03198022 TRACE FORK D/S DRYDEN HOLLOW AT RUTH, WV--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1980 to current year.

WATER TEMPERATURES: July 1980 to current year.

SUSPENDED-SEDIMENT DISCHARGE: July 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily recorded, 982 micromhos July 23, 1982; minimum daily recorded, 47 micromhos Dec. 16, 1980.

WATER TEMPERATURES: Maximum daily recorded, 28.0°C July 25, Aug. 30, Sept. 1, 1981, July 25, 1982; minimum daily recorded, 0.0°C several days in 1981.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,500 mg/L July 10, 1980; minimum daily mean, 0 mg/L several days in 1982.

SEDIMENT LOADS: Maximum daily, 621 tons (563 metric tons) July 10, 1980; minimum daily, 0 ton (0 metric ton) many days during each year.

EXTREMES FOR PERIOD JULY TO SEPTEMBER 1980.--

SPECIFIC CONDUCTANCE: Maximum daily recorded, 459 micromhos July 1; minimum daily recorded, 108 micromhos Aug. 23.

WATER TEMPERATURES: Maximum daily recorded, 27.5°C July 19, 20; minimum daily recorded, 11.0°C Sept. 11.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,500 mg/L July 10; minimum daily mean, 2 mg/L Aug. 3.

SEDIMENT LOADS: Maximum daily, 621 tons (563 metric tons) July 10; minimum daily, 0 ton (0 metric ton) several days during the period.

EXTREMES FOR 1981 WATER YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily recorded, 538 micromhos Aug. 22; minimum daily recorded, 47 micromhos Dec. 16.

WATER TEMPERATURES: Maximum daily recorded, 28.0°C July 25, Aug. 30, Sept. 1; minimum daily recorded, 0.0°C several days in January and February.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,840 mg/L July 28; minimum daily mean, 1 mg/L July 18, 20.

SEDIMENT LOADS: Maximum daily, 188 tons (171 metric tons) Apr. 17; minimum daily, 0 ton (0 metric ton) many days during the year.

EXTREMES FOR 1982 WATER YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily recorded, 982 micromhos July 23; minimum daily recorded, 121 micromhos Mar. 15.

WATER TEMPERATURES: Maximum daily recorded, 28.0°C July 25; minimum daily recorded, 1.0°C Jan. 13.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,150 mg/L May 29; minimum daily mean, 0 mg/L Dec. 4, 7, Apr. 23, 28, May 11-14.

SEDIMENT LOADS: Maximum daily, 556 tons (504 metric tons) May 30; minimum daily, 0 ton (0 metric ton) many days during the year.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										459	290	240
2										---	294	---
3										451	320	150
4										---	315	217
5										---	---	250
6										---	306	235
7										447	305	203
8										450	323	230
9										306	353	---
10										195	353	165
11										155	384	197
12										195	384	203
13										112	380	219
14										160	---	240
15										192	---	---
16										210	220	280
17										235	269	292
18										285	367	---
19										290	234	---
20										300	258	326
21										300	144	---
22										360	146	281
23										360	108	234
24										360	151	---
25										380	216	251
26										362	218	---
27										368	218	268
28										259	233	---
29										281	---	---
30										265	---	301
31										284	---	---
MEAN										297	272	240

03198022 TRACE FORK D/S DRYDEN HOLLOW AT RUTH, WV--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	311	271	202	191	185	---	183	---	---	325	408	477
2	327	272	190	183	135	175	179	---	220	323	435	483
3	310	277	182	184	143	183	173	---	216	349	435	486
4	348	318	185	190	138	196	176	---	144	356	438	425
5	361	296	180	188	142	179	136	---	144	322	515	468
6	335	---	185	208	160	---	137	---	---	305	379	518
7	348	293	185	168	325	150	145	---	143	226	379	520
8	365	---	194	185	322	160	---	---	185	300	311	482
9	375	318	151	186	185	162	166	---	182	---	374	410
10	---	290	153	201	191	164	---	---	---	---	418	412
11	---	311	71	209	220	165	---	---	---	---	361	460
12	---	309	63	208	---	181	---	---	256	---	379	460
13	---	---	75	244	214	190	141	---	---	---	384	464
14	352	---	64	244	199	195	152	---	271	---	423	500
15	355	---	56	235	225	---	---	---	294	---	425	480
16	357	---	47	226	282	195	---	---	224	---	427	395
17	375	126	63	---	221	178	100	---	340	---	455	438
18	336	142	72	---	228	255	125	269	305	---	462	439
19	331	179	71	---	223	206	---	140	330	---	508	405
20	339	178	---	226	193	---	---	---	281	---	481	464
21	352	182	---	209	193	---	---	---	---	---	524	468
22	350	184	---	187	206	---	---	---	---	339	538	485
23	350	200	---	178	138	---	---	---	---	340	520	452
24	375	155	214	188	148	170	---	---	278	395	525	464
25	319	132	208	175	192	172	---	---	276	400	526	480
26	---	189	189	206	190	172	---	221	289	380	530	480
27	---	159	194	---	187	213	---	---	295	422	455	490
28	309	156	198	---	216	168	---	---	318	347	460	520
29	253	163	193	192	---	166	---	---	343	320	431	530
30	258	202	347	192	---	204	---	---	429	350	510	495
31	262	---	203	198	---	173	---	---	---	390	535	---
MEAN	334	221	153	200	200	182	151	210	262	344	450	468
WTR YR 1981	MEAN	279		MAX	538	MIN	47					

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	540	490	492	353	250	244	162	288	---	314	480	500
2	570	520	---	382	250	242	143	283	---	350	508	564
3	515	530	---	---	310	258	173	297	---	395	517	568
4	520	530	---	193	249	260	168	307	336	423	543	609
5	515	555	---	290	239	258	177	327	152	252	586	650
6	605	430	---	292	279	257	182	325	210	292	587	665
7	565	440	---	282	285	277	197	355	152	330	579	680
8	615	435	---	295	265	301	207	355	245	368	562	697
9	670	470	---	304	146	234	196	343	250	199	586	682
10	665	520	---	---	---	168	222	371	163	255	438	654
11	700	522	---	---	214	165	217	372	155	297	478	670
12	710	522	---	---	226	122	223	372	191	314	470	667
13	650	525	---	473	334	220	218	400	200	370	518	722
14	590	525	---	525	336	163	225	400	232	385	559	722
15	570	540	---	527	284	121	229	440	263	430	575	600
16	575	---	---	518	229	156	233	440	470	503	603	585
17	575	550	---	520	288	161	240	440	329	507	601	650
18	590	540	---	538	187	180	244	480	365	498	660	633
19	590	550	---	437	225	197	257	430	384	400	663	646
20	550	580	---	455	227	216	260	830	396	543	644	666
21	550	530	474	185	242	217	260	478	409	508	663	576
22	550	510	501	183	246	224	267	330	425	495	640	611
23	560	540	322	220	243	225	273	325	432	982	705	614
24	465	588	---	240	252	237	287	362	490	489	703	618
25	485	460	411	240	274	243	274	420	517	550	670	558
26	552	440	412	310	249	187	315	---	499	570	646	555
27	481	460	430	351	257	---	274	---	297	587	536	579
28	480	470	445	366	250	177	268	---	---	441	485	591
29	495	475	---	300	---	204	288	---	---	411	578	652
30	480	480	412	300	---	208	306	---	247	422	598	572
31	500	---	448	420	---	278	---	---	---	439	454	---
MEAN	564	508	435	352	253	213	233	391	316	429	576	625
WTR YR 1982	MEAN	410		MAX	982	MIN	121					

KANAWHA RIVER BASIN

03198022 TRACE FORK D/S DRYDEN HOLLOW AT RUTH, WV--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										19.5	24.0	21.0
2										---	22.5	---
3										24.0	24.5	20.5
4										---	---	22.0
5										---	21.0	22.0
6										---	21.0	21.5
7										21.5	24.5	22.0
8										24.5	26.0	19.5
9										21.5	---	---
10										22.5	---	19.0
11										19.5	24.0	11.0
12										20.5	23.0	17.0
13										19.0	21.5	24.0
14										22.0	23.0	20.0
15										20.0	22.0	---
16										21.0	20.5	24.0
17										26.0	21.5	---
18										25.0	22.5	22.0
19										27.5	20.5	---
20										27.5	22.0	20.0
21										27.0	22.0	---
22										25.0	20.0	23.0
23										23.0	19.5	21.0
24										20.0	22.0	---
25										21.0	19.5	19.0
26										21.0	20.0	---
27										24.0	19.0	13.0
28										22.0	19.5	---
29										24.0	---	---
30										21.0	---	17.0
31										22.5	---	---
MEAN										22.5	22.0	20.0

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.5	7.0	10.0	5.0	4.0	---	13.0	---	---	22.0	---	28.0
2	17.0	12.0	10.0	3.0	---	8.0	14.0	---	---	23.0	---	21.0
3	13.0	13.0	5.0	3.0	1.0	9.0	11.0	---	---	24.0	---	25.0
4	12.0	13.0	6.0	.0	.0	7.0	14.0	---	---	24.0	---	22.0
5	11.0	12.0	8.0	.0	1.0	7.0	12.0	---	---	21.0	---	22.0
6	9.0	---	12.0	1.0	3.0	---	8.0	---	---	20.5	---	23.5
7	16.0	15.0	13.0	3.0	4.0	5.0	6.0	---	---	24.0	---	25.5
8	18.0	---	11.0	2.0	2.0	4.0	---	---	---	23.5	---	23.0
9	13.5	14.0	12.0	1.0	3.0	6.0	13.0	---	---	---	---	18.0
10	---	10.0	7.0	.0	4.0	9.0	---	---	---	---	---	24.0
11	---	9.0	8.0	.0	4.0	9.0	---	---	---	---	25.0	17.0
12	---	8.0	6.0	.0	.0	10.0	---	---	---	---	23.5	24.0
13	---	---	7.0	2.0	2.0	12.0	---	---	---	---	22.5	26.0
14	14.0	---	5.0	2.0	3.0	9.0	17.0	---	---	---	25.0	19.0
15	17.0	---	6.0	2.0	6.0	---	---	---	---	---	25.0	20.5
16	18.0	---	4.0	1.0	6.0	7.0	---	---	---	---	24.0	22.0
17	19.0	9.0	5.0	---	9.0	9.0	---	---	---	---	24.0	18.0
18	16.0	8.0	6.0	---	11.0	6.0	16.0	8.0	---	---	24.0	15.0
19	18.0	9.0	5.0	---	9.0	7.0	---	12.0	---	---	23.0	14.0
20	13.0	7.0	---	1.0	10.0	---	---	---	---	---	26.0	17.5
21	17.0	6.0	---	3.0	8.0	---	14.0	---	---	---	21.0	22.0
22	15.0	3.0	---	5.0	9.0	---	---	---	---	23.5	22.0	17.5
23	16.0	9.0	---	4.0	9.0	---	---	---	---	21.0	25.0	21.0
24	15.0	9.0	1.0	5.0	---	3.0	---	---	---	21.0	23.0	22.0
25	12.0	8.0	2.0	7.0	7.0	5.0	---	---	---	28.0	27.0	20.5
26	---	7.0	2.0	9.0	7.0	6.0	---	---	---	---	24.0	21.5
27	---	7.0	6.0	---	8.0	12.0	---	---	23.0	---	24.0	19.5
28	12.0	7.0	6.0	---	11.0	18.0	---	---	18.5	---	25.0	21.0
29	12.0	6.0	4.0	3.0	---	17.0	---	---	24.0	---	24.0	14.0
30	11.0	9.0	5.0	4.0	---	15.0	---	---	---	---	28.0	15.5
31	5.0	---	4.0	2.0	---	10.0	---	---	---	---	27.5	---
MEAN	14.0	9.0	6.5	2.5	5.5	9.0	12.5	10.0	22.0	23.0	24.5	20.5
WTR YR 1981	MEAN	12.0		MAX	28.0		MIN	.0				

03198022 TRACE FORK D/S DRYDEN HOLLOW AT RUTH, WV--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.0	17.0	---	2.0	5.0	9.0	10.0	17.0	---	21.5	23.0	23.0
2	13.5	13.0	---	2.5	3.0	9.0	11.5	17.0	---	16.0	23.0	22.0
3	16.0	13.0	---	---	6.0	7.0	13.0	19.5	---	18.0	18.0	22.0
4	19.0	19.0	---	9.5	7.0	9.0	13.0	21.0	17.0	19.0	26.0	21.0
5	16.5	14.5	---	7.0	5.0	7.5	9.5	23.0	15.0	19.0	20.0	20.0
6	19.0	13.0	---	6.0	6.5	7.0	7.0	23.5	15.0	24.0	22.0	23.0
7	14.5	9.0	---	7.0	2.5	4.0	7.0	20.0	17.0	19.0	22.0	22.0
8	11.5	9.0	---	4.0	2.0	7.5	8.0	16.0	20.5	21.5	20.0	16.0
9	12.0	8.0	---	2.0	5.0	10.0	6.5	18.0	20.0	18.0	21.5	22.0
10	14.0	9.0	---	---	5.0	11.0	8.0	23.0	16.5	25.0	24.0	21.0
11	14.0	11.0	---	---	4.5	11.0	13.0	22.0	17.0	20.0	20.5	24.0
12	18.0	7.0	---	---	2.5	9.5	7.0	21.0	16.0	20.0	21.0	24.0
13	13.0	8.0	---	1.0	2.5	11.5	13.0	21.0	18.0	24.0	20.5	25.0
14	12.0	---	---	2.0	6.0	10.5	15.0	22.0	20.0	24.0	20.0	18.0
15	10.0	---	---	2.0	6.0	9.0	16.0	22.0	12.0	23.0	25.0	22.0
16	14.0	---	---	3.5	7.5	8.5	17.5	22.0	19.5	21.0	23.0	23.0
17	15.0	---	---	2.0	8.5	14.0	17.0	20.0	19.5	21.0	23.0	21.0
18	16.0	---	---	4.0	8.0	6.0	19.0	22.0	19.0	24.0	25.0	17.0
19	12.0	---	---	4.0	7.0	12.0	19.5	20.0	18.0	20.5	25.0	20.0
20	8.0	---	---	3.0	8.0	13.0	13.0	19.0	20.0	24.0	23.0	17.0
21	12.0	---	2.0	4.5	9.5	17.0	18.0	18.0	21.0	20.0	24.0	14.0
22	15.0	---	1.5	4.5	6.0	12.0	13.0	22.0	23.0	23.0	23.0	15.5
23	13.0	---	7.0	8.0	9.0	13.0	19.0	21.0	21.0	22.5	16.0	23.0
24	13.0	---	---	6.5	10.0	10.0	16.0	20.0	21.0	22.0	18.0	15.0
25	8.0	---	8.0	5.0	8.0	11.0	12.0	21.0	22.5	28.0	22.0	15.0
26	12.0	---	7.0	2.5	8.0	9.0	14.0	---	20.0	21.0	15.0	15.0
27	15.5	---	4.0	3.0	8.0	---	12.5	---	16.0	21.0	17.0	13.0
28	12.5	---	5.0	3.5	8.5	7.0	17.0	---	---	22.0	21.0	17.0
29	12.0	---	---	4.0	---	12.0	16.0	---	20.5	24.0	21.0	19.0
30	16.0	---	2.0	5.0	---	9.0	16.0	---	20.0	24.5	18.5	19.0
31	15.0	---	3.0	7.0	---	12.0	---	---	---	23.0	22.0	---
MEAN	14.0	11.5	4.5	4.5	6.0	10.0	13.0	20.5	18.5	21.5	21.5	19.5
WTR YR 1982	MEAN	14.5	MAX	28.0	MIN	1.0						

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)	MEAN CONCENTRATION (MG/L)	LOADS (T/DAY)
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1							15	.01	6	.00	13	.09
2							10	.01	5	.00	475	15
3							83	.23	2	.00	360	6.6
4							96	.28	59	.29	172	1.3
5							36	.04	181	.35	45	.19
6							16	.01	38	.03	85	1.2
7							10	.00	65	.09	60	.37
8							62	2.1	38	.03	24	.10
9							359	5.9	60	.11	75	1.2
10							2500	621	60	.05	194	5.4
11							173	8.4	27	.02	32	.23
12							334	14	39	.03	7	.04
13							893	250	38	.02	7	.03
14							73	1.4	43	.02	11	.03
15							27	.20	49	.07	12	.03
16							12	.04	176	2.1	22	.05
17							7	.01	32	.08	11	.02
18							43	.05	157	1.9	6	.00
19							14	.01	117	1.0	5	.00
20							6	.00	32	.15	5	.00
21							4	.00	169	17	21	.05
22							4	.00	754	311	226	1.8
23							3	.00	361	28	229	2.2
24							3	.00	26	.39	71	.38
25							3	.00	3	.02	107	.83
26							3	.00	4	.02	13	.06
27							45	5.6	5	.02	10	.03
28							584	35	8	.04	10	.03
29							35	.17	14	.08	7	.02
30							12	.02	92	1.4	13	.03
31							8	.00	62	.62	---	---
TOTAL							---	944.48	---	364.93	---	37.31

KANAWHA RIVER BASIN

03198022 TRACE FORK D/S DRYDEN HOLLOW AT RUTH, WV--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MEAN CONCEN- TRATION (MG/L)		LOADS (T/DAY)		MEAN CONCEN- TRATION (MG/L)		LOADS (T/DAY)		MEAN CONCEN- TRATION (MG/L)		LOADS (T/DAY)		MEAN CONCEN- TRATION (MG/L)		LOADS (T/DAY)	
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH					
1	21	.04	6	.00	20	.17	16	.32	96	1.8	65	2.6				
2	7	.02	6	.00	48	.45	12	.20	236	41	14	.38				
3	31	.06	5	.00	73	.57	10	.14	30	1.5	7	.13				
4	5	.00	12	.02	37	.24	11	.11	18	.58	18	.29				
5	6	.00	8	.01	7	.05	12	.13	17	.37	72	2.7				
6	4	.00	7	.00	17	.10	11	.11	12	.19	12	.36				
7	5	.00	7	.00	5	.03	12	.11	12	.15	6	.13				
8	12	.01	6	.00	2	.01	8	.06	10	.11	4	.06				
9	27	.03	39	.17	131	4.7	7	.04	7	.07	5	.06				
10	7	.00	23	.04	35	.89	9	.05	18	.40	5	.05				
11	7	.00	11	.01	27	.46	9	.04	88	2.9	6	.06				
12	6	.00	6	.00	25	.32	7	.03	14	.42	5	.04				
13	5	.00	4	.00	12	.12	8	.03	17	.46	6	.04				
14	3	.00	3	.00	18	.14	9	.03	8	.18	8	.05				
15	8	.00	4	.00	23	.15	7	.03	7	.12	12	.06				
16	9	.00	4	.00	56	.44	8	.03	37	.57	43	.44				
17	6	.00	506	6.2	21	.12	8	.03	107	3.2	7	.06				
18	16	.06	191	15	23	.12	9	.03	45	1.3	13	.14				
19	12	.02	23	.45	17	.08	10	.03	91	4.0	7	.08				
20	7	.00	11	.12	9	.04	7	.07	107	6.5	6	.06				
21	6	.00	7	.05	5	.02	96	3.5	32	1.5	7	.07				
22	6	.00	4	.02	6	.03	34	.92	10	.32	8	.07				
23	5	.00	6	.03	6	.03	13	.26	461	75	8	.08				
24	5	.00	250	22	20	.16	7	.11	55	3.1	8	.08				
25	153	9.3	32	1.2	7	.07	4	.05	22	.77	8	.07				
26	47	.20	17	.30	5	.05	25	.28	12	.27	4	.03				
27	23	.05	73	1.5	5	.05	10	.10	27	.43	48	.55				
28	16	.06	23	.40	4	.04	7	.05	60	1.8	7	.07				
29	62	.23	7	.09	8	.06	4	.02	---	---	7	.07				
30	8	.02	12	.12	52	.48	2	.01	---	---	9	.09				
31	6	.01	---	---	21	.28	3	.01	---	---	5	.04				
TOTAL	---	10.11	---	47.73	---	10.47	---	6.93	---	149.01	---	9.01				
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER						
1	3	.02	66	3.7	114	1.6	32	.17	33	.02	207	.14				
2	3	.02	8	.28	146	4.5	11	.04	13	.00	43	.01				
3	4	.03	10	.21	523	42	12	.03	14	.00	35	.01				
4	27	.17	8	.11	861	159	34	.39	16	.00	68	.03				
5	95	4.8	6	.06	66	6.4	782	8.6	101	1.3	13	.00				
6	24	.65	15	.19	173	26	54	1.4	845	5.6	8	.00				
7	12	.22	15	.16	63	4.8	13	.09	864	14	10	.00				
8	12	.17	10	.07	47	1.5	21	.11	37	.23	193	.17				
9	25	.33	10	.06	53	.83	11	.04	17	.03	55	.02				
10	17	.27	7	.04	227	5.2	436	72	15	.01	27	.00				
11	11	.18	5	.03	101	1.3	55	1.3	102	.18	20	.00				
12	75	4.1	4	.02	45	.40	18	.14	51	.04	35	.00				
13	86	5.1	3	.01	162	15	10	.05	28	.02	41	.00				
14	56	1.8	70	.41	125	11	5	.02	19	.01	63	.06				
15	47	1.0	57	1.7	25	.65	3	.00	20	.03	1170	30				
16	37	.68	9	.03	27	.46	2	.00	40	.02	72	.51				
17	733	188	6	.02	19	.21	2	.00	28	.01	15	.03				
18	87	5.6	210	9.3	16	.12	1	.00	27	.00	32	.03				
19	43	1.5	417	52	27	.17	2	.00	17	.00	99	.40				
20	72	3.1	82	12	211	5.0	1	.00	26	.00	9	.01				
21	14	.38	10	.35	27	.25	100	.35	15	.00	13	.01				
22	13	.27	9	.14	22	.20	38	.07	10	.00	12	.01				
23	13	.23	7	.06	17	.10	28	.03	7	.00	26	.02				
24	12	.19	8	.05	16	.07	18	.02	6	.00	28	.02				
25	10	.12	7	.04	67	.38	56	.04	6	.00	23	.01				
26	9	.09	5	.02	22	.09	56	.03	16	.00	25	.01				
27	8	.06	5	.02	27	.07	52	.03	14	.00	20	.01				
28	7	.05	5	.02	37	.08	1840	55	15	.00	23	.03				
29	47	.86	4	.02	11	.02	679	4.3	15	.00	7	.01				
30	92	9.7	3	.00	700	9.4	32	.04	12	.00	29	.05				
31	---	---	4	.02	---	---	27	.02	27	.00	---	---				
TOTAL	---	229.69	---	81.14	---	296.80	---	144.31	---	21.50	---	31.60				
TOTAL LOAD FOR YEAR:		1038.30		TONS.												

03198022 TRACE FORK D/S DRYDEN HOLLOW AT RUTH, WV--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)	MEAN CONCEN- TRATION (MG/L)	LOADS (T/DAY)
OCTOBER			NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	18	.03	52	.05	3	.00	8	.05	7	.19	3	.04
2	7	.02	23	.02	2	.00	3	.01	2	.04	3	.03
3	4	.00	16	.01	1	.00	16	.44	14	.41	4	.04
4	6	.00	19	.01	0	.00	146	16	22	.70	2	.02
5	9	.02	421	19	1	.00	5	.11	2	.04	3	.03
6	38	.12	38	.32	2	.00	3	.04	2	.04	5	.04
7	7	.02	8	.02	0	.00	92	2.9	7	.09	17	.43
8	3	.00	3	.00	1	.00	6	.09	3	.04	54	1.7
9	4	.00	5	.00	3	.00	10	.12	215	66	85	6.8
10	5	.00	5	.00	2	.00	8	.08	20	1.6	14	.83
11	13	.02	5	.00	2	.00	5	.04	7	.30	503	146
12	47	.05	3	.00	4	.00	4	.02	7	.19	109	12
13	56	.05	3	.00	2	.00	5	.03	18	.35	118	10
14	17	.01	2	.00	2	.00	4	.02	18	.35	16	.82
15	40	.03	2	.00	3	.00	3	.01	45	2.8	249	75
16	17	.01	2	.00	2	.00	2	.00	199	28	214	26
17	94	.06	2	.00	52	.93	5	.02	333	76	28	1.4
18	147	.71	2	.00	13	.13	7	.02	30	2.8	7	.23
19	20	.05	2	.00	5	.04	24	.06	13	.67	4	.09
20	6	.01	4	.00	4	.03	240	.58	7	.25	5	.09
21	5	.00	2	.00	7	.04	229	17	7	.21	5	.11
22	6	.00	3	.00	493	20	111	8.3	5	.13	5	.08
23	71	.71	5	.00	47	2.3	152	12	4	.09	7	.08
24	7	.02	16	.03	12	.20	4	.14	4	.06	2	.02
25	12	.02	7	.01	2	.02	2	.04	3	.03	111	4.0
26	538	12	5	.00	2	.01	4	.07	2	.02	41	1.5
27	25	.11	5	.00	2	.00	7	.09	3	.03	6	.15
28	9	.02	4	.00	2	.00	5	.05	3	.05	7	.13
29	8	.01	3	.00	3	.00	2	.02	---	---	11	.16
30	19	.02	4	.00	5	.01	3	.02	---	---	7	.09
31	31	.03	---	---	71	.55	198	9.4	---	---	393	23
TOTAL	---	14.15	---	19.47	---	24.26	---	67.77	---	181.48	---	310.91
APRIL			MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	35	1.3	2	.00	9	.10	7	.03	25	.04	8	.02
2	16	.43	3	.00	6	.05	3	.00	22	.02	7	.00
3	404	26	3	.00	7	.04	7	.01	13	.01	7	.00
4	11	.39	4	.00	315	7.5	1250	72	12	.00	6	.00
5	4	.10	4	.00	66	4.1	262	3.8	14	.00	6	.00
6	4	.09	2	.00	14	.29	12	.07	19	.01	10	.00
7	4	.06	1	.00	33	.38	4	.01	18	.02	9	.00
8	2	.03	1	.00	16	.23	713	62	18	.02	6	.00
9	1	.01	1	.00	66	.77	106	2.3	811	5.0	10	.00
10	4	.04	1	.00	1260	211	10	.09	53	.14	7	.00
11	2	.02	0	.00	514	73	9	.04	24	.03	38	.02
12	2	.02	0	.00	22	.65	12	.05	37	.05	13	.00
13	5	.04	0	.00	13	.32	7	.01	32	.02	14	.00
14	4	.03	0	.00	7	.09	7	.01	29	.02	40	.04
15	5	.04	5	.00	7	.06	11	.01	31	.02	73	.24
16	5	.03	1	.00	58	.52	12	.01	33	.02	23	.04
17	3	.02	1	.00	30	.25	15	.01	23	.01	12	.00
18	6	.03	8	.00	5	.02	92	.18	12	.00	8	.00
19	7	.03	27	.05	26	.07	14	.01	20	.00	3	.00
20	7	.03	315	.85	13	.03	7	.00	32	.01	3	.00
21	13	.06	38	.16	7	.01	6	.00	22	.01	23	.04
22	2	.00	14	.15	20	.03	992	5.6	24	.01	9	.02
23	0	.00	10	.08	31	.03	820	2.2	7	.00	5	.00
24	1	.00	3	.00	17	.02	21	.03	7	.00	3	.00
25	2	.00	3	.00	17	.01	20	.02	4	.00	5	.00
26	4	.02	7	.00	19	.01	15	.01	4	.00	6	.00
27	2	.00	10	.02	497	67	26	.01	419	5.3	7	.03
28	0	.00	25	.03	37	.43	1210	54	11	.02	8	.02
29	1	.00	2150	277	57	.55	105	.74	7	.00	12	.01
30	2	.00	1040	556	193	2.1	25	.06	40	.09	19	.01
31	---	---	12	.32	---	---	17	.04	17	.04	---	---
TOTAL	---	28.82	---	834.66	---	369.66	---	203.35	---	10.91	---	0.49

TOTAL LOAD FOR YEAR: 2065.93 TONS.

KANAWHA RIVER BASIN

03198500 BIG COAL RIVER AT ASHFORD, WV

LOCATION (REVISED).--Lat 38°10'47", long 81°42'42", 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 30.2 (48.6 km) upstream from Kanawha River.

DRAINAGE AREA.--391 mi² (1,013 km²), revised.

PERIOD OF RECORD.--June 1908 to September 1916, May 1930 to current year. Published as Coal River at Brushton, June 1908 to September 1916 and as Coal River at Ashford, May 1930 to September 1960.

REVISED RECORDS.--WSP 783: Drainage area. WSP 1305: 1913-14(M). WSP 1335: 1912, 1916(M).

GAGE.--Water-stage recorder. Datum of gage is 622.46 ft (189.726 m) National Geodetic Vertical Datum of 1929. Prior to Aug. 9, 1916, nonrecording gage at site 1.0 mi (1.6 km) upstream at different datum. May 7, 1930, to Feb. 10, 1939, nonrecording gage at present site and datum.

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

AVERAGE DISCHARGE.--60 years, 519 ft³/s (14.70 m³/s), 18.03 in/yr (458 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 35,800 ft³/s (1,010 m³/s) Aug. 9, 1916, gage height, 36.3 ft (11.06 m), from floodmark, site and datum then in use, or 35.66 ft (10.869 m), from floodmark, present site and datum, from rating curve extended above 25,000 ft³/s (710 m³/s); no flow Sept. 18-21, 24, Oct. 6-12, 1930.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,500 ft³/s (160 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 9	1800	8230 233	13.48 4.109	May 30	1130	*10600 300	15.68 4.779
Mar. 16	0030	5770 163	10.71 3.264	June 5	0500	7420 210	12.63 3.850

Minimum discharge, 28 ft³/s (0.79 m³/s) Oct. 1, gage height, 1.59 ft (0.485 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	52	61	184	414	853	866	278	1020	192	1590	306
2	46	49	57	236	458	924	788	270	661	158	633	575
3	70	43	55	284	655	898	769	258	460	258	391	262
4	55	39	57	1300	1670	775	715	238	667	1240	282	190
5	47	36	66	1660	1070	679	622	223	4320	1240	216	150
6	47	52	66	853	814	595	611	209	1330	661	186	130
7	64	71	66	589	625	685	555	198	769	430	189	110
8	52	57	64	425	511	905	495	195	555	310	242	100
9	43	51	59	329	4570	996	500	198	515	611	282	92
10	41	47	57	229	4020	1260	510	179	1050	679	1220	84
11	37	43	55	200	1840	1340	485	161	2450	373	970	78
12	31	37	52	160	1220	1550	465	149	1560	328	505	74
13	31	36	55	140	957	1640	440	140	1480	250	341	70
14	33	36	55	120	757	1810	420	131	1560	198	254	70
15	31	33	71	110	673	3340	386	123	1020	170	209	90
16	31	31	137	100	840	4390	355	114	685	149	173	82
17	40	30	157	90	1570	2610	337	112	775	131	152	74
18	50	31	166	83	2740	1820	341	104	733	140	146	72
19	47	30	137	80	1820	1340	314	99	535	149	149	68
20	42	31	115	100	1390	1310	290	104	425	161	123	66
21	39	34	91	1300	1210	1290	290	104	341	173	109	68
22	33	35	481	2400	1100	1170	274	104	282	143	99	72
23	43	36	2210	1900	944	1020	250	117	246	155	89	70
24	70	37	1170	1300	898	859	234	158	212	173	84	62
25	68	46	613	1100	853	745	226	341	189	149	92	59
26	85	66	398	850	715	879	226	189	179	120	101	59
27	115	97	300	600	679	840	266	179	170	104	131	80
28	127	97	240	447	794	733	319	219	198	104	209	99
29	120	85	196	381	---	655	319	346	226	314	128	80
30	83	75	169	329	---	595	294	5950	223	286	106	66
31	64	---	151	320	---	673	---	2370	---	1570	123	---
TOTAL	1718	1443	7627	18199	35807	39179	12962	13560	24836	11119	9524	3458
MEAN	55.4	48.1	246	587	1279	1264	432	437	828	359	307	115
MAX	127	97	2210	2400	4570	4390	866	5950	4320	1570	1590	575
MIN	31	30	52	80	414	595	226	99	170	104	84	59
CFSM	.14	.12	.63	1.50	3.27	3.23	1.11	1.12	2.12	.92	.79	.29
IN.	.16	.14	.73	1.73	3.41	3.73	1.23	1.29	2.36	1.06	.91	.33

CAL YR 1981	TOTAL	156527	MEAN 429	MAX 5860	MIN 30	CFSM 1.10	IN 14.89
WTR YR 1982	TOTAL	179432	MEAN 492	MAX 5950	MIN 30	CFSM 1.26	IN 17.07

KANAWHA RIVER BASIN

245

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 21.0 (33.8 km), upstream from Kanawha River (revised).

DRAINAGE AREA.--445 mi² (1,153 km²), revised.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1974 to June 1982 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 588.75 ft (179.451 m) National Geodetic Vertical Datum of 1929. Prior to Apr. 14, 1976, nonrecording gage at same site. Prior to Jan. 30, 1976, at datum 0.50 ft (0.152 m) lower and Jan. 30 to Apr. 13, 1976, at same datum.

REMARKS.--Water-discharge records fair except those for October, November, December, and January, which are poor.

AVERAGE DISCHARGE.--7 years (water years 1975-81), 704 ft³/s (19.94 m³/s), 21.63 in/yr (549 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,600 ft³/s (810 m³/s) Jan. 26, 1978, gage height, 32.24 ft (9.827 m), observed, from rating curve extended above 6,700 ft³/s (190 m³/s); minimum daily, 31 ft³/s (0.88 m³/s) Oct. 11, Nov. 3, 1978, Sept. 14, 1981.

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 9	1830	9670 274	18.47 5.630	May 30	1330	*11900 337	21.30 6.492
Mar. 15	2330	8240 233	16.68 5.084	June 5	0900	8500 241	17.00 5.182

Minimum daily discharge, 34 ft³/s (0.96 m³/s) Nov. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	60	60	201	456	918	1090	289	1290			
2	50	56	53	253	519	1020	992	283	811			
3	78	49	50	293	618	997	962	271	542			
4	66	44	53	1290	1840	860	903	245	543			
5	54	41	62	1800	1270	741	764	231	5860			
6	54	58	62	909	937	643	745	210	1780			
7	70	80	62	629	718	727	665	197	962			
8	60	65	58	473	589	982	585	202	669			
9	47	57	55	380	5440	1140	570	202	639			
10	45	52	52	297	5740	1560	570	195	1170			
11	40	46	50	230	2220	1640	554	172	2780			
12	35	42	47	200	1440	2110	535	155	1870			
13	36	41	50	170	1100	2060	508	148	1770			
14	37	41	52	150	860	2250	490	137	1940			
15	35	38	68	130	755	4950	445	130	1180			
16	40	36	140	120	967	6280	413	130	778			
17	45	35	168	110	1860	3470	389	128	811			
18	60	35	178	100	3650	2230	396	128	816			
19	54	34	164	92	2150	1640	365	137	581			
20	47	35	134	110	1640	1550	333	128	456			
21	40	37	128	1500	1420	1520	327	132	369			
22	35	39	325	2850	1280	1380	314	157	302			
23	50	41	2400	2400	1080	1200	296	152	268			
24	76	45	1280	1800	1000	982	268	172	234			
25	76	56	673	1400	942	870	263	341	210			
26	95	70	447	1100	792	1030	266	226	192			
27	120	96	341	850	727	997	286	202	205			
28	140	96	276	650	879	879	343	223	234			
29	152	75	235	460	---	778	330	483	240			
30	100	67	197	399	---	700	311	8160	263			
31	78	---	178	379	---	797	---	3500	---			
TOTAL	1952	1567	8098	21725	42889	48901	15278	17466	29765			
MEAN	63.0	52.2	261	701	1532	1577	509	563	992			
MAX	152	96	2400	2850	5740	6280	1090	8160	5860			
MIN	35	34	47	92	456	643	263	128	192			
CFSM	.14	.12	.59	1.58	3.44	3.54	1.14	1.27	2.23			
IN.	.16	.13	.68	1.82	3.59	4.09	1.28	1.46	2.49			

CAL YR 1981 TOTAL 177070 MEAN 485 MAX 8310 MIN 31 CFSM 1.09 IN 14.80

KANAWHA RIVER BASIN

03198550 BIG COAL RIVER NEAR ALUM CREEK, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to June 1982 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1974 to June 1982 (discontinued).

WATER TEMPERATURES: October 1974 to June 1982 (discontinued).

SUSPENDED-SEDIMENT DISCHARGE: October 1974 to June 1982 (discontinued).

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 806 micromhos Oct. 3, 1975; minimum daily, 70 micromhos Jan. 13, 1979.

WATER TEMPERATURES: Maximum daily, 30.0°C several days during summer periods 1975, 1977, 1978; minimum daily, 0.0°C many days during winter periods.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,050 mg/L Jan. 26, 1978; minimum daily mean, 0 mg/L several days in 1981.

SEDIMENT LOADS: Maximum daily, 137,000 tons (124,000 metric tons) Jan. 26, 1978; minimum daily, 0 ton (0 metric ton) many days in 1981, 1982.

EXTREMES FOR PERIOD OCTOBER 1981 TO JUNE 1982.

SPECIFIC CONDUCTANCE: Maximum daily, 663 micromhos Oct. 14; minimum daily, 127 micromhos June 5.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,480 mg/L May 30; minimum daily mean, 0 mg/L many days during year.

SEDIMENT LOADS: Maximum daily, 64,500 tons (58,500 metric tons) May 30; minimum daily, 0 ton (0 metric ton) many days during year.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	658	562	634	362	318	272	254	364	---			
2	630	---	---	---	319	243	256	353	---			
3	632	520	600	180	289	240	254	350	250			
4	625	542	---	180	140	243	260	---	---			
5	613	---	---	179	163	---	255	---	127			
6	635	518	---	196	202	258	265	379	---			
7	660	562	569	223	227	---	287	---	---			
8	---	502	---	245	---	280	---	---	272			
9	640	505	---	---	207	---	292	392	260			
10	647	525	565	---	150	213	308	403	223			
11	630	518	569	---	179	204	318	412	---			
12	618	522	---	---	---	188	317	420	161			
13	622	540	582	---	233	190	315	---	---			
14	663	565	---	---	---	192	---	---	158			
15	564	---	555	---	272	173	---	---	208			
16	---	572	600	---	265	262	331	---	---			
17	494	565	580	---	226	163	328	465	263			
18	---	557	---	---	---	290	342	471	---			
19	382	617	---	---	187	---	350	466	---			
20	354	---	---	---	---	248	357	491	---			
21	359	623	---	---	224	---	365	---	313			
22	360	590	---	158	235	258	---	442	---			
23	---	---	---	169	245	260	---	---	---			
24	473	---	---	190	263	263	---	412	---			
25	---	---	---	196	264	---	390	---	---			
26	---	630	---	---	270	---	388	277	---			
27	---	---	---	232	---	---	386	365	---			
28	476	---	---	252	---	270	408	---	---			
29	570	622	---	271	---	277	388	---	---			
30	575	---	---	290	---	---	---	128	---			
31	---	---	420	304	---	287	---	138	---			
MEAN	560	558	567	227	232	240	322	374	224			
WTR YR 1982	MEAN	367		MAX	663	MIN	127					

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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	2	.20	0	.00	2	.32	63	34	17	21	20	50								
2	2	.27	0	.00	3	.43	147	100	27	38	23	63								
3	1	.21	0	.00	6	.81	288	228	67	112	57	153								
4	0	.00	1	.12	5	.72	690	2760	420	2100	46	107								
5	1	.15	1	.11	4	.67	483	2350	237	814	10	20								
6	2	.29	1	.16	5	.84	132	324	89	225	5	8.7								
7	3	.57	0	.00	6	1.0	52	88	45	87	23	45								
8	4	.65	0	.00	5	.78	23	29	28	45	43	114								
9	4	.51	2	.31	3	.45	17	17	1730	38600	60	185								
10	3	.36	0	.00	5	.70	11	8.8	2370	36700	387	1630								
11	1	.11	0	.00	5	.68	12	7.5	620	3720	298	1320								
12	0	.00	0	.00	9	1.1	11	5.9	370	1440	362	2060								
13	0	.00	2	.22	13	1.8	10	4.6	224	666	223	1240								
14	2	.20	2	.22	11	1.5	10	4.1	144	334	195	1190								
15	0	.00	2	.21	7	1.3	10	3.5	89	181	865	15100								
16	0	.00	1	.10	37	14	10	3.2	111	290	778	13200								
17	1	.12	0	.00	42	19	10	3.0	472	2370	217	2040								
18	0	.00	1	.09	48	23	12	3.2	412	4060	83	501								
19	0	.00	1	.09	20	8.8	32	7.9	142	824	26	115								
20	0	.00	2	.19	10	3.6	82	24	88	391	187	780								
21	3	.32	1	.10	10	3.5	620	3490	61	233	177	728								
22	2	.19	0	.00	159	299	493	3790	38	132	162	603								
23	0	.00	1	.11	741	4820	304	1970	23	67	122	395								
24	0	.00	2	.24	260	898	202	982	23	62	72	191								
25	0	.00	2	.30	78	142	158	597	24	61	75	176								
26	2	.51	2	.38	45	54	97	288	17	36	142	396								
27	4	1.3	2	.52	32	29	41	94	17	33	34	92								
28	5	1.9	1	.26	20	15	23	40	51	121	7	17								
29	4	1.6	0	.00	14	8.9	15	19	---	---	17	36								
30	2	.54	3	.54	12	6.4	11	12	---	---	18	34								
31	0	.00	---	---	10	4.8	9	9.2	---	---	93	200								
TOTAL	---	10.00	---	4.27	---	6362.10	---	17296.9	---	93763	---	42789.7								
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER										
1	147	433	3	2.3	173	603														
2	27	72	5	3.8	83	182														
3	42	109	3	2.2	67	98														
4	35	85	0	.00	178	494														
5	18	37	0	.00	1150	19600														
6	18	36	0	.00	93	447														
7	13	23	3	1.6	27	70														
8	7	11	5	2.7	43	78														
9	7	11	2	1.1	105	181														
10	5	7.7	12	6.3	293	926														
11	4	6.0	8	3.7	908	7000														
12	3	4.3	2	.84	247	1250														
13	3	4.1	5	2.0	195	932														
14	4	5.3	5	1.8	196	1030														
15	5	6.0	5	1.8	93	296														
16	5	5.6	6	2.1	34	71														
17	5	5.3	7	2.4	136	298														
18	5	5.3	17	5.9	134	295														
19	3	3.0	15	5.5	36	56														
20	6	5.4	10	3.5	19	23														
21	5	4.4	14	5.0	11	11														
22	5	4.2	34	14	9	7.3														
23	5	4.0	16	6.6	10	7.2														
24	5	3.6	47	22	10	6.3														
25	4	2.8	291	333	8	4.5														
26	3	2.2	133	81	7	3.6														
27	10	7.7	25	14	10	5.5														
28	24	22	8	4.8	24	15														
29	11	9.8	61	138	42	27														
30	10	8.4	2480	64500	32	23														
31	---	---	650	7170	---	---														
TOTAL	---	944.1	---	72337.94	---	34040.4														
TOTAL LOAD FOR YEAR: 267548.41 TONS.																				

KANAWHA RIVER BASIN

03199000 LITTLE COAL RIVER AT DANVILLE, WV

LOCATION (REVISED).--Lat 38°04'47", long 81°50'11", 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 25.5 (41.0 km).

DRAINAGE AREA.--269 mi² (697 km²), revised.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1930 to current year. Prior to October 1941, published as "at Madison."

REVISED RECORDS.--WSP 1725: 1951(M), 1955(M).

GAGE.--Water-stage recorder. Datum of gage is 661.09 ft (201.500 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1941, nonrecording gage at site 1.5 mi (2.4 km) upstream at datum 6.80 ft (2.073 m) higher.

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

AVERAGE DISCHARGE.--52 years, 357 ft³/s (10.11 m³/s), 18.02 in/yr (458 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 42,800 ft³/s (1,210 m³/s) Feb. 3, 1939, gage height, 30.2 ft (9.20 m), from floodmarks, present site and datum, from rating curve extended above 12,000 ft³/s (340 m³/s) on basis of slope-area measurement of peak flow; no flow at times July to October 1930.

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 9	1300	*8030	227	June 5	0630	5780	164
May 30	1115	5790	164				
			11.68				3.554

Minimum discharge, 21 ft³/s (0.59 m³/s) Oct. 16, 17; gage height, 1.82 ft (0.555 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	35	32	122	254	557	730	147	620	80	534	810
2	57	35	35	113	222	528	660	144	438	60	320	595
3	57	33	32	178	307	483	670	142	292	300	238	288
4	39	35	30	977	446	415	590	134	478	1400	180	192
5	35	42	33	775	445	376	526	127	4360	1800	155	130
6	39	66	38	424	410	332	542	122	1410	655	140	105
7	42	62	35	309	336	475	454	119	820	382	120	92
8	39	45	34	226	292	514	406	139	558	270	110	80
9	32	39	34	184	4570	619	422	124	434	222	130	72
10	29	33	32	150	2570	897	378	110	1110	192	506	70
11	29	32	27	130	1110	880	346	105	2180	179	254	70
12	24	30	27	110	728	1050	323	98	950	228	195	67
13	24	28	27	95	594	1180	313	90	995	187	150	62
14	25	26	29	85	459	1260	288	84	870	154	120	60
15	24	26	41	75	429	2290	267	80	620	136	105	94
16	23	25	63	70	626	2800	250	74	474	124	95	65
17	23	24	75	62	1360	2260	238	76	670	114	85	58
18	31	26	93	58	1790	1350	238	76	500	110	78	56
19	31	24	92	55	1100	975	211	107	320	105	72	54
20	33	29	60	70	823	860	203	88	230	251	67	52
21	30	33	50	700	714	775	206	76	180	180	62	55
22	27	32	307	973	611	685	182	76	140	134	58	70
23	44	28	707	795	525	615	169	154	120	342	55	62
24	70	33	393	729	486	550	164	137	100	257	52	54
25	47	47	249	526	422	518	159	195	85	179	58	49
26	65	53	177	394	368	745	164	114	75	139	74	47
27	102	50	140	296	406	715	177	330	70	117	179	58
28	76	45	113	210	567	620	182	562	68	119	134	70
29	53	39	97	170	---	546	164	595	80	228	82	55
30	44	33	82	150	---	490	154	3920	95	390	68	48
31	39	---	79	130	---	610	---	1200	---	1420	390	---
TOTAL	1264	1088	3263	9341	22970	26970	9776	9545	19342	10454	4866	3640
MEAN	40.8	36.3	105	301	820	870	326	308	645	337	157	121
MAX	102	66	707	977	4570	2800	730	3920	4360	1800	534	810
MIN	23	24	27	55	222	332	154	74	68	60	52	47
CFSM	.15	.14	.39	1.12	3.05	3.23	1.21	1.15	2.40	1.25	.58	.45
IN.	.17	.15	.45	1.29	3.18	3.73	1.35	1.32	2.67	1.45	.67	.50
CAL YR 1981	TOTAL	106543	MEAN 292	MAX 4120	MIN 23	CFSM 1.09	IN 14.73					
WTR YR 1982	TOTAL	122519	MEAN 336	MAX 4570	MIN 23	CFSM 1.25	IN 16.94					

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, 75 micromhos June 22, 1979.

WATER TEMPERATURES: Maximum, 34.5°C July 18, 19, 1977; minimum, 0.0°C Jan. 14-18, 1975, Jan. 21, 26-28, 1982.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 4,230 mg/L Nov. 27, 1973; minimum daily mean, 0 mg/L several days in 1974, 1979, July 3, 1980, 1981, 1982.

SEDIMENT LOADS: Maximum daily, 110,000 tons (99,800 metric tons) Jan. 26, 1978; minimum daily, 0 ton (0 metric ton) several days in 1974, 1979, July 3, 1980, 1981, 1982.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,290 micromhos Oct. 1; minimum daily, 154 micromhos Feb. 9.

WATER TEMPERATURES: Maximum, 29.5°C July 18; minimum, 0.0°C Jan. 21, 26-28.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,490 mg/L Feb. 9; minimum daily mean, 0 mg/L several days in April, May, and June.

SEDIMENT LOADS: Maximum daily, 37,300 tons (33,800 metric tons) Feb. 9; minimum daily, 0 ton (0 metric ton) several days in April, May, and June.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1290	885	845	382	478	321	315	650	293	605	245	216
2	1250	940	779	555	433	323	320	660	358	678	318	257
3	1180	950	---	550	420	330	330	660	410	407	396	378
4	1020	985	630	---	340	358	340	690	437	177	478	466
5	921	980	908	192	330	386	360	725	162	208	502	555
6	930	925	---	250	322	405	370	725	208	303	556	612
7	1080	880	585	235	355	254	390	730	288	380	575	645
8	1140	805	---	285	380	323	419	710	348	434	600	704
9	1140	820	875	425	154	305	419	700	397	488	610	528
10	1080	840	---	---	184	245	430	650	315	515	343	758
11	1120	880	692	---	240	252	419	755	238	557	380	795
12	1160	910	730	---	292	240	460	840	268	502	468	818
13	1180	960	---	---	324	233	475	845	286	542	525	830
14	1210	975	---	---	358	222	475	850	278	629	580	837
15	1190	972	---	---	363	190	500	855	342	644	652	791
16	1200	1050	---	---	318	170	520	900	405	684	652	765
17	1220	1000	---	---	223	197	520	900	392	680	672	840
18	1220	1010	---	---	197	254	520	850	368	710	696	859
19	1230	990	---	---	234	298	560	850	395	630	740	874
20	1170	1000	---	235	263	315	580	760	450	585	750	870
21	1210	975	---	328	292	344	580	765	506	480	775	785
22	1160	975	---	220	313	360	590	797	570	560	800	850
23	1060	965	---	235	352	329	625	808	600	353	826	847
24	1050	930	---	---	369	400	625	572	611	407	847	873
25	925	958	---	269	385	410	625	413	640	428	827	880
26	788	955	185	320	408	342	600	577	662	527	810	878
27	820	840	349	382	418	325	600	383	668	605	682	873
28	758	850	415	398	337	335	600	297	675	643	553	820
29	734	855	470	419	---	360	625	308	670	495	---	823
30	795	850	491	470	---	395	645	164	650	537	729	890
31	842	---	530	485	---	385	---	227	---	157	444	---
MEAN	1070	930	606	349	324	310	495	665	430	502	601	731
WTR YR 1982	MEAN	593	MAX	1290	MIN	154						

KANAWHA RIVER BASIN

03199000 LITTLE COAL RIVER AT DANVILLE, WV--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	21.5	15.5	14.0	9.5	9.5	5.5	4.0	2.5	7.0	4.5	8.0	6.5
2	18.5	15.5	14.0	11.5	9.0	7.0	4.0	2.5	4.5	3.0	8.0	6.5
3	15.5	13.5	15.5	10.5	8.0	6.5	5.0	3.5	5.5	3.5	8.0	6.5
4	19.0	12.5	15.5	10.5	7.0	6.5	7.5	5.0	5.5	4.5	9.0	6.0
5	19.0	14.0	13.0	12.0	6.5	5.0	7.0	4.5	4.5	4.0	9.5	7.5
6	18.0	15.5	13.0	11.5	7.0	6.5	5.0	4.0	5.0	3.0	8.0	7.0
7	16.0	13.0	12.0	10.5	7.5	6.5	6.0	5.0	3.0	1.5	7.0	5.0
8	18.0	12.0	11.0	8.5	7.5	5.0	5.5	3.0	2.5	2.0	6.0	4.5
9	17.0	11.5	10.5	8.5	5.0	3.5	3.0	1.0	5.0	2.5	7.5	5.5
10	14.5	12.5	10.5	9.5	3.5	3.0	2.0	1.0	5.0	4.5	8.5	6.5
11	17.5	13.0	11.5	8.5	3.0	2.5	1.5	.5	4.5	3.0	9.5	8.0
12	19.0	13.5	10.5	6.5	3.0	2.5	.5	.5	4.5	3.0	10.5	9.0
13	17.0	11.5	10.0	5.0	4.5	2.5	.5	.5	3.5	3.5	11.0	10.0
14	17.0	9.5	10.0	4.5	4.0	3.0	.5	.5	3.5	2.5	10.5	7.5
15	13.0	11.0	9.5	4.5	4.0	4.0	.5	.5	4.5	3.5	9.0	8.5
16	15.5	13.0	8.5	5.0	4.0	3.5	.5	.5	6.5	4.5	9.5	8.5
17	14.5	10.5	9.5	7.5	4.0	3.0	1.5	.5	7.5	6.5	13.0	9.5
18	15.0	12.0	9.5	7.0	4.0	3.0	.5	.5	7.5	6.5	13.0	10.0
19	12.5	9.5	10.5	6.0	3.0	2.5	.5	.5	7.0	6.0	12.5	10.5
20	13.5	7.0	10.5	6.5	3.0	2.5	.5	.5	8.0	6.0	12.0	11.5
21	14.5	7.5	6.5	4.5	2.5	2.0	2.5	.0	8.5	6.5	13.0	12.0
22	13.0	9.5	5.0	4.0	2.5	2.0	3.5	2.5	6.5	5.0	13.0	10.0
23	12.0	10.5	6.0	3.0	6.0	1.5	5.0	3.5	7.0	5.0	11.0	9.0
24	10.5	9.0	6.5	6.0	6.0	5.5	5.0	2.0	9.0	7.0	11.0	9.5
25	11.0	9.0	7.0	6.0	5.5	4.5	2.0	.5	9.0	6.5	11.5	10.5
26	11.0	10.5	7.0	5.5	4.5	4.0	1.0	.0	6.5	5.0	11.5	8.5
27	12.0	11.0	8.5	7.0	5.0	4.0	.0	.0	5.0	5.0	8.5	7.0
28	12.5	12.0	8.0	7.0	4.5	3.5	1.0	.0	7.0	5.0	8.0	5.5
29	12.5	11.0	7.5	5.0	4.5	4.0	2.5	1.0	---	---	10.0	8.0
30	14.5	11.5	5.5	4.0	4.0	2.0	4.0	2.0	---	---	12.5	10.0
31	15.0	9.5	---	---	2.5	1.5	6.5	4.0	---	---	14.0	12.5
MONTH	21.5	7.0	15.5	3.0	9.5	1.5	7.5	.0	9.0	1.5	14.0	4.5
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	13.5	11.0	18.5	15.5	21.5	20.5	25.5	21.5	23.0	21.5	22.5	22.0
2	13.0	11.0	19.0	16.5	21.5	19.5	26.0	21.0	23.0	22.0	22.5	22.0
3	15.0	13.0	20.5	16.5	21.5	20.0	24.0	21.5	25.5	23.0	23.5	21.0
4	14.0	10.5	21.0	16.5	21.0	19.0	21.5	20.0	26.5	24.0	23.5	21.0
5	11.5	10.0	21.5	16.5	19.0	17.5	21.5	19.0	25.0	24.0	23.5	20.5
6	11.0	8.0	22.5	17.5	18.0	17.0	22.5	20.5	26.5	24.0	24.5	20.5
7	9.0	6.0	21.5	19.0	20.0	17.5	24.0	22.5	27.0	24.5	24.5	21.5
8	9.5	9.0	21.0	19.0	21.0	19.5	25.5	23.0	26.5	25.0	24.5	22.0
9	9.5	8.5	21.0	17.5	22.0	20.0	24.5	23.5	26.0	24.5	25.5	22.5
10	9.5	8.0	22.0	18.0	22.0	19.5	26.5	23.0	25.0	23.0	25.5	22.5
11	10.5	8.5	23.5	18.0	20.0	18.0	27.0	24.5	23.5	22.0	26.0	22.0
12	13.5	9.5	24.5	19.0	20.0	18.0	25.5	24.0	23.5	21.5	26.0	22.5
13	15.5	13.0	25.0	20.0	19.5	18.0	25.5	23.5	24.5	21.0	26.0	23.0
14	16.5	13.5	25.5	20.5	20.5	18.5	27.5	23.5	25.5	21.5	25.5	23.5
15	17.5	14.0	26.0	21.0	20.5	18.5	28.5	24.5	26.5	22.0	26.5	24.0
16	18.0	16.0	25.5	21.0	22.0	20.5	29.0	25.0	26.0	23.0	26.0	24.0
17	17.5	16.5	27.0	22.0	21.5	20.5	29.0	25.5	27.0	23.0	24.5	21.5
18	18.0	14.5	27.0	21.0	22.0	20.0	29.5	25.5	27.0	23.5	23.0	20.5
19	18.0	14.5	26.5	22.5	22.0	20.5	28.5	25.5	26.5	22.5	22.0	20.0
20	17.0	16.0	24.5	22.5	22.5	20.5	27.0	24.5	27.0	23.0	22.0	20.0
21	18.0	15.0	24.0	22.0	23.0	20.0	26.5	23.5	27.0	24.0	21.0	18.5
22	17.0	14.0	24.5	22.5	23.5	20.5	28.5	24.5	26.5	22.0	19.0	17.5
23	17.0	12.0	24.5	22.5	24.5	21.0	26.0	24.0	24.0	22.0	19.5	16.5
24	17.5	13.0	23.5	22.5	24.5	20.5	26.5	23.5	27.0	23.0	19.5	16.5
25	17.0	14.0	23.5	22.0	25.0	20.5	28.0	24.5	27.0	24.5	20.0	17.5
26	17.0	15.5	24.0	22.5	25.5	22.0	28.5	25.5	27.0	23.0	19.5	18.5
27	17.0	15.5	23.5	22.0	26.5	22.5	28.5	25.5	25.5	22.5	19.5	18.0
28	17.0	13.5	22.0	21.0	27.5	24.0	27.5	25.5	24.0	22.0	20.5	18.5
29	18.5	14.0	22.5	21.5	26.0	24.5	27.0	24.0	25.0	21.0	21.5	18.5
30	19.5	15.0	21.5	18.5	25.0	23.5	27.0	24.5	23.5	21.5	22.0	18.5
31	---	---	21.0	18.5	---	---	25.5	21.0	23.0	22.5	---	---
MONTH	19.5	6.0	27.0	15.5	27.5	17.0	29.5	19.0	27.0	21.0	26.5	16.5
YEAR	29.5	.0										

03199000 LITTLE COAL RIVER AT DANVILLE, WV--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN CONCEN- TRATION (MG/L)		MEAN CONCEN- TRATION (MG/L)		MEAN CONCEN- TRATION (MG/L)		MEAN CONCEN- TRATION (MG/L)		MEAN CONCEN- TRATION (MG/L)		MEAN CONCEN- TRATION (MG/L)						
	LOADS (T/DAY)		LOADS (T/DAY)		LOADS (T/DAY)		LOADS (T/DAY)		LOADS (T/DAY)		LOADS (T/DAY)						
OCTOBER			NOVEMBER			DECEMBER			JANUARY			FEBRUARY			MARCH		
1	6	.50	3	.28	4	.35	35	12	78	53	50	75					
2	10	1.5	4	.37	11	1.0	27	8.2	23	14	57	81					
3	6	.92	5	.45	44	3.8	65	38	94	78	34	44					
4	5	.53	5	.47	37	3.0	421	1210	160	193	35	39					
5	17	1.6	6	.68	16	1.4	156	326	44	53	39	40					
6	45	4.7	15	2.7	13	1.3	78	89	28	31	12	11					
7	29	3.3	9	1.5	13	1.7	37	31	32	29	1070	1440					
8	6	.63	13	1.6	31	2.8	17	10	11	8.7	264	366					
9	6	.52	6	.63	28	2.6	12	6.0	2490	37300	70	117					
10	5	.39	3	.27	20	1.7	10	4.1	1080	7490	221	535					
11	3	.23	3	.26	17	1.2	8	2.8	300	899	215	511					
12	4	.26	4	.32	29	2.1	6	1.8	122	240	297	842					
13	4	.26	4	.30	13	.95	6	1.5	110	176	267	851					
14	3	.20	4	.28	7	.55	4	.92	55	68	234	796					
15	2	.13	5	.35	2	.22	6	1.2	37	43	910	5630					
16	1	.06	5	.34	2	.34	6	1.1	124	210	660	4990					
17	3	.19	4	.26	34	6.9	6	1.0	551	2120	365	2220					
18	5	.42	4	.28	23	5.8	12	1.9	475	2300	375	1370					
19	6	.50	4	.26	14	3.5	40	5.9	400	1190	172	453					
20	8	.71	4	.31	8	1.3	152	29	171	380	635	1470					
21	6	.49	4	.36	7	.95	547	1030	105	202	157	329					
22	5	.36	4	.35	218	289	305	801	73	120	67	124					
23	18	2.1	4	.30	234	447	154	331	42	60	37	61					
24	10	1.9	4	.36	114	121	83	163	41	54	42	62					
25	5	.63	3	.38	61	41	40	57	36	41	75	105					
26	15	2.6	3	.43	26	12	28	30	29	29	183	368					
27	17	4.7	3	.40	17	6.4	48	44	48	53	50	97					
28	10	2.0	3	.36	12	3.7	53	30	131	201	47	79					
29	2	.28	3	.32	14	3.7	14	6.4	---	---	41	60					
30	4	.47	4	.36	14	3.1	12	4.9	---	---	37	49					
31	4	.42	---	---	35	7.5	24	8.4	---	---	83	137					
TOTAL	---	33.50	---	15.53	---	977.86	---	4287.12	---	53635.7	---	23352					
APRIL			MAY			JUNE			JULY			AUGUST			SEPTEMBER		
1	68	134	2	.79	253	424	6	1.3	213	307	878	2030					
2	31	55	0	.00	73	86	3	.49	37	32	247	397					
3	57	103	1	.38	35	28	1240	1000	15	9.6	47	37					
4	43	68	2	.72	47	61	2260	8540	13	6.3	29	15					
5	41	58	2	.68	1740	23400	1140	5540	12	5.0	15	5.3					
6	64	94	0	.00	470	1790	110	195	11	4.2	7	2.0					
7	17	21	0	.00	145	321	33	34	5	1.6	18	4.5					
8	10	11	1	.38	113	170	17	12	7	2.1	11	2.4					
9	11	13	1	.33	50	59	11	6.6	25	8.8	5	.97					
10	13	13	2	.59	270	809	10	5.2	486	765	7	1.3					
11	10	9.3	2	.57	382	2250	22	11	112	77	3	.57					
12	11	9.6	0	.00	109	280	134	82	17	8.9	3	.54					
13	2	1.7	0	.00	109	293	18	9.1	8	3.2	4	.67					
14	1	.78	0	.00	63	148	13	5.4	7	2.3	9	1.5					
15	2	1.4	1	.22	111	186	12	4.4	7	2.0	14	3.6					
16	4	2.7	1	.20	38	49	10	3.3	9	2.3	32	5.6					
17	12	7.7	1	.21	198	371	12	3.7	9	2.1	17	2.7					
18	2	1.3	17	3.5	88	119	16	4.8	7	1.5	2	.30					
19	2	1.1	43	12	40	35	33	9.4	9	1.7	1	.15					
20	3	1.6	33	7.8	18	11	298	214	8	1.4	5	.70					
21	35	19	12	2.5	11	5.3	156	76	7	1.2	32	4.8					
22	12	5.9	32	6.6	7	2.6	53	19	5	.78	35	6.6					
23	2	.91	118	49	13	4.2	766	712	4	.59	4	.67					
24	2	.89	112	41	7	1.9	272	189	6	.84	2	.29					
25	1	.43	157	83	5	1.1	55	27	10	1.6	3	.40					
26	7	3.1	52	16	2	.41	23	8.6	8	1.6	3	.38					
27	5	2.4	1240	1240	1	.19	13	4.1	163	103	6	.94					
28	2	.98	1080	1690	0	.00	55	18	68	25	10	1.9					
29	0	.00	711	1180	0	.00	137	84	31	6.9	5	.74					
30	0	.00	1480	16400	5	1.3	95	100	14	2.6	2	.26					
31	---	---	630	2040	---	---	1110	4040	701	1140	---	---					
TOTAL	---	640.79	---	22776.47	---	30907.00	---	20959.39	---	2528.11	---	2528.78					

TOTAL LOAD FOR YEAR: 162642.25 TONS.

KANAWHA RIVER BASIN

03199300 ROCK CREEK NEAR DANVILLE, WV

LOCATION.--Lat 38°06'01, long 81°49'48", Boone County, Hydrologic Unit 05050009, 1.5 mi (2.4 km) north of Danville and at mile 1.15 (1.9 km), 0.6 mi (1.0 km) north of intersection of U.S. Route 119 and State Route 3.

DRAINAGE AREA.--12.2 mi² (31.6 km²).

PERIOD OF RECORD.--December 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 675.47 ft (205.88 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for periods of no gage-height record Dec. 14 to Jan. 29, July 24 to Sept. 14, and those for June, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,750 ft³/s (49.6 m³/s) June 5, 1982, from rating curve extended above 1,400 ft³/s (40 m³/s), gage height, 9.41 ft (2.868 m); minimum daily, 0.21 ft³/s (0.006 m³/s) Aug. 26, 27, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 400 ft³/s (11 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. 9	0615	518 14.7	6.38 1.945	June 10	2245	445 12.6	6.13 1.868
May 30	0645	1300 36.8	8.48 2.585	July 3	1730	431 12.2	6.08 1.853
June 5	0045	*1750 49.6	9.41 2.868				

Minimum daily discharge, 0.23 ft³/s (0.007 m³/s) Sept. 15, 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.52	.67	.62	3.5	6.3	38	52	3.7	14	1.4	16	35
2	.95	.62	.67	4.5	4.9	36	40	3.7	9.0	1.0	8.0	15
3	.39	.57	.67	5.2	9.0	33	36	3.2	5.5	6.0	5.5	6.0
4	.31	.52	.67	52	18	28	28	2.9	6.5	80	4.0	3.5
5	.30	.67	.95	40	24	24	24	2.9	300	90	3.0	2.2
6	.80	2.3	.80	25	27	22	23	2.7	30	15	2.2	1.6
7	.95	1.5	.67	17	17	33	17	2.5	14	8.0	1.8	1.3
8	.43	1.1	.67	12	14	34	14	3.2	9.0	5.0	1.6	1.0
9	.35	.95	.67	9.0	251	46	16	2.7	7.0	3.8	2.5	.80
10	.35	.80	.67	6.5	101	64	12	2.3	25	2.9	23	.65
11	.35	.67	.62	5.5	59	68	11	2.3	120	2.5	10	.55
12	.39	.62	.57	4.1	41	104	11	2.1	35	3.1	5.0	.45
13	.48	.57	.57	3.5	35	92	9.9	2.0	18	2.3	2.5	.38
14	.48	.57	.70	3.0	28	78	9.0	1.8	13	2.2	1.8	.32
15	.48	.52	1.2	2.7	28	176	8.2	1.6	9.0	1.7	1.5	.28
16	.52	.52	1.9	2.3	47	107	7.5	1.5	6.5	1.5	1.3	.23
17	.52	.48	3.0	2.1	84	68	6.9	1.3	39	1.3	1.1	.28
18	.57	.48	4.8	1.9	68	45	6.3	2.0	15	1.2	1.0	.35
19	.57	.43	3.7	1.7	54	35	5.8	3.2	8.0	1.3	.85	.56
20	.57	.57	2.6	3.0	46	64	5.8	2.5	5.5	1.2	.75	.56
21	.57	.62	2.0	20	41	50	5.3	1.8	4.0	1.5	.70	1.1
22	.52	.52	9.0	54	35	35	4.9	1.8	3.2	1.1	.65	.80
23	1.6	.48	40	46	30	28	4.6	2.9	2.5	13	.60	.45
24	.80	.95	22	40	28	23	4.3	1.8	2.0	8.0	.55	.35
25	.52	1.1	14	30	23	20	4.3	6.3	1.7	4.0	.60	.35
26	5.8	.80	10	20	18	27	4.6	5.8	1.4	2.5	.80	.35
27	2.9	.80	7.0	13	23	27	4.3	8.2	1.2	1.9	3.8	.93
28	2.0	.80	5.2	9.0	36	23	4.6	9.0	1.0	1.6	2.5	1.2
29	1.6	.67	4.2	7.5	---	18	4.3	28	1.5	5.0	1.5	.56
30	1.1	.62	3.4	6.3	---	16	4.0	240	2.5	15	1.0	.35
31	.80	---	2.5	7.5	---	38	---	30	---	65	6.0	---
TOTAL	28.49	22.49	146.02	457.8	1196.2	1500	388.6	385.7	710.0	350.0	112.10	77.45
MEAN	.92	.75	4.71	14.8	42.7	48.4	13.0	12.4	23.7	11.3	3.62	2.58
MAX	5.8	2.3	40	54	251	176	52	240	300	90	23	35
MIN	.30	.43	.57	1.7	4.9	16	4.0	1.3	1.0	1.0	.55	.23
CFSM	.08	.06	.39	1.21	3.50	3.97	1.07	1.02	1.94	.93	.30	.21
IN.	.09	.07	.45	1.40	3.65	4.57	1.18	1.18	2.16	1.07	.34	.24
CAL YR 1981	TOTAL	4955.48	MEAN	13.6	MAX	275	MIN	.21	CFSM	1.12	IN	15.11
WTR YR 1982	TOTAL	5374.85	MEAN	14.7	MAX	300	MIN	.23	CFSM	1.21	IN	16.39

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.--318 mi² (824 km²), revised.

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

GAGE.--Water-stage recorder. Datum of gage is 634.13 ft (193.283 m) National Geodetic Vertical Datum of 1929. Prior to Apr. 21, 1976, nonrecording gage at same site and datum.

REMARKS.--Records good except those for October through January, period of no gage-height record, Jan. 28 to Mar. 24, and those above 2,000 ft³/s (57 m³/s), which are poor.

AVERAGE DISCHARGE.--8 years, 531 ft³/s (15.04 m³/s), 22.68 in/yr (576 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,900 ft³/s (535 m³/s) Dec. 9, 1978, gage height, 28.86 ft (8.797 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)
Feb. 9	Unknown	*a9480 268	Unknown	June 5	Unknown	a7360 208	Unknown
May 30	Unknown	a6990 198	Unknown				

a Estimated from runoff comparison with nearby stations.

Minimum daily discharge, 28 ft³/s (0.79 m³/s) Oct. 13, 16-17, Nov. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	43	39	132	240	640	1130	178	912	91	937	661
2	50	42	40	141	290	620	587	174	575	68	428	639
3	63	39	43	168	270	580	920	170	369	356	285	310
4	45	38	35	1050	450	510	800	159	709	1690	216	204
5	43	43	37	1170	520	450	670	152	4500	2200	184	154
6	44	61	45	560	500	400	681	146	1980	904	163	130
7	48	77	43	380	400	520	545	141	1000	491	146	110
8	45	55	41	273	350	600	482	155	600	335	137	94
9	40	48	40	216	5400	700	494	152	434	265	152	87
10	35	43	38	190	3000	1050	458	134	1020	222	516	83
11	35	40	36	150	1300	1050	413	123	1810	190	313	83
12	29	37	33	130	800	1200	389	113	1110	250	210	80
13	28	34	32	115	620	1350	375	108	1090	200	168	73
14	30	32	32	100	550	1450	353	100	984	166	146	73
15	29	31	40	92	500	2600	323	95	618	146	132	95
16	28	31	66	85	800	3300	303	92	419	127	113	74
17	28	28	70	78	1400	2600	291	92	800	117	98	69
18	36	31	110	72	2000	1700	293	87	660	117	95	65
19	38	29	106	66	1300	1100	260	130	401	113	87	65
20	40	34	80	80	950	1000	248	122	298	216	77	62
21	36	39	60	800	840	900	248	97	214	208	74	64
22	33	38	297	1120	720	800	226	94	166	146	69	87
23	47	34	1050	980	620	720	204	178	148	334	64	73
24	70	43	548	850	560	640	198	157	120	280	62	63
25	55	49	315	650	500	590	196	233	100	202	68	59
26	67	55	222	503	450	928	196	163	90	154	74	57
27	110	53	178	330	480	916	202	443	87	130	78	71
28	95	50	146	270	660	775	224	685	78	123	164	85
29	66	45	122	210	---	670	198	722	98	245	95	66
30	55	43	101	180	---	581	186	4300	113	164	73	58
31	46	---	91	170	---	784	---	2020	---	1890	135	---
TOTAL	1458	1265	4136	11311	26470	31724	12093	11715	21503	12140	5559	3894
MEAN	47.0	42.2	133	365	945	1023	403	378	717	392	179	130
MAX	110	77	1050	1170	5400	3300	1130	4300	4500	2200	937	661
MIN	28	28	32	66	240	400	186	87	78	68	62	57
CFSM	.15	.13	.42	1.15	2.97	3.22	1.27	1.19	2.26	1.23	.56	.41
IN.	.17	.15	.48	1.32	3.10	3.71	1.41	1.37	2.52	1.42	.65	.46
CAL YR 1981	TOTAL	129542	MEAN 355	MAX 5020	MIN 28	CFSM 1.12	IN 15.15					
WTR YR 1982	TOTAL	143268	MEAN 393	MAX 5400	MIN 28	CFSM 1.24	IN 16.76					

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.--862 mi² (2,233 km²), revised, includes that of Falls Creek.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1908 to September 1911, October 1911 to June 1912 (gage heights only), November 1928 to September 1931, August 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 570.46 ft (173.876 m) National Geodetic Vertical Datum of 1929. Aug. 1, 1971, to Jan. 9, 1973, nonrecording gage at same site and datum. Prior to Aug. 1, 1961, nonrecording gage at same site at different datum.

REMARKS.--Water-discharge records good except those for October and January, which are poor. Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--26 years (water years 1909-11, 1930-31, 1962-82), 1,244 ft³/s (35.23 m³/s), 19.60 in/yr (498 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.--Maximum discharge, 17,900 ft³/s (507 m³/s) May 30, gage height, 20.25 ft (6.172 m), no other peak above base of 16,000 ft³/s (450 m³/s); minimum discharge, 59 ft³/s (1.67 m³/s) Oct. 22, 23; minimum gage height, 10.25 ft (3.124 m) Sept. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	90	110	115	370	750	1730	2240	480	2590	480	3150	670
2	110	100	105	456	850	1800	2060	480	1690	410	1280	1340
3	135	91	100	504	1380	1750	1970	456	1130	370	745	730
4	122	86	105	1910	2660	1560	1950	432	922	2280	566	480
5	110	95	110	3470	2370	1360	1600	400	10300	3940	456	360
6	110	138	115	1910	1970	1190	1490	380	4780	2040	400	292
7	132	176	121	1300	1670	1360	1380	360	2410	1120	360	256
8	110	156	115	956	1360	1820	1150	380	1580	790	390	221
9	95	121	110	730	7780	2060	1100	390	1340	805	420	200
10	90	110	105	468	9150	2840	1130	360	1800	1190	1280	193
11	93	100	95	283	4180	3130	1030	320	4270	670	1620	179
12	70	86	91	240	2740	4050	939	292	3490	592	837	165
13	72	82	95	220	2170	3820	905	265	2750	566	592	158
14	74	79	100	200	1690	4160	837	246	3110	444	456	158
15	70	75	110	180	1490	7050	760	228	2130	390	390	172
16	75	71	162	170	1930	9910	715	214	1470	340	350	200
17	81	71	249	160	3690	5860	685	200	1470	311	302	172
18	100	71	275	150	5340	4250	685	200	1820	283	274	158
19	115	71	233	140	3980	3100	631	256	1230	311	274	152
20	105	75	169	360	3020	2790	592	256	956	320	246	146
21	75	79	162	1100	2570	2660	592	265	775	468	221	139
22	65	82	354	5400	2300	2390	540	283	644	370	207	165
23	71	82	3440	3490	1930	2040	492	274	566	390	186	179
24	110	91	2330	2930	1750	1780	468	350	516	492	179	152
25	169	100	1230	2190	1640	1530	456	492	480	420	172	133
26	176	138	805	1560	1360	1910	480	432	480	330	200	127
27	241	169	618	1200	1250	1970	492	516	480	274	228	158
28	241	162	516	950	1640	1750	566	760	504	283	456	214
29	225	144	432	750	---	1510	540	990	456	420	311	207
30	169	126	370	640	---	1360	516	12400	605	528	228	158
31	138	---	330	600	---	1380	---	6920	---	1800	214	---
TOTAL	3639	3137	13267	34987	74610	85870	28991	30277	56744	23427	16990	8034
MEAN	117	105	428	1129	2665	2770	966	977	1891	756	548	268
MAX	241	176	3440	5400	9150	9910	2240	12400	10300	3940	3150	1340
MIN	65	71	91	140	750	1190	456	200	456	274	172	127
CFSM	.14	.12	.50	1.31	3.09	3.21	1.12	1.13	2.19	.88	.64	.31
IN.	.16	.14	.57	1.51	3.22	3.71	1.25	1.31	2.45	1.01	.73	.35

CAL YR 1981	TOTAL	333997	MEAN	915	MAX	12500	MIN	56	CFSM	1.06	IN	14.41
WTR YR 1982	TOTAL	379973	MEAN	1041	MAX	12400	MIN	65	CFSM	1.21	IN	16.40

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.

TURBIDITY: October 1980 to current year.

SUSPENDED-SEDIMENT DISCHARGE: December 1972 to current year.

INSTRUMENTATION.--Temperature recorder since Nov. 13, 1973. Turbidity recorder since Oct. 30, 1981.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,020 micromhos Oct. 23, 24, 1973; minimum daily, 88 micromhos Dec. 9, 1978, June 22, 1979.

WATER TEMPERATURES: Maximum recorded, 31.5°C July 8, 19, 20, 1977; minimum recorded, -0.5°C Dec. 31, 1980, Jan. 1, 2, 1981.

TURBIDITY: Maximum, 1,500 NTU May 30, 1982; minimum, 0.99 NTU Feb. 19, 1982.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 4,000 mg/L Mar. 17, 1973; minimum daily mean, 0 mg/L on several days in April 1978, Feb. 5, Mar. 21, 22, 1979, Jan. 17, Apr. 29, 1982.

SEDIMENT LOADS: Maximum daily, 263,000 tons (239,000 metric tons) Jan. 26, 1978; minimum daily, 0 ton (0 metric ton) on several days in April 1978, Feb. 5, Mar. 21, 22, 1979, Jan. 17, Apr. 29, 1982.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily recorded, 887 micromhos Oct. 4; minimum daily recorded, 141 micromhos Mar. 16.

TEMPERATURE: Maximum, 29.5°C July 18, 27; minimum, 1.0°C Dec. 23, Jan. 21, 22, 28, 29.

TURBIDITY: Maximum recorded, 1,500 NTU May 30; minimum recorded, 0.99 NTU Feb. 19.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,700 mg/L May 30; minimum daily mean, 0 mg/L Jan. 17, Apr. 29.

SEDIMENT LOADS: Maximum daily, 106,000 tons (96,200 metric tons) May 30; minimum daily, 0 ton (0 metric ton) Jan. 17, Apr. 29.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	793	633	724	408	345	278	259	425	298	282	248	294
2	729	635	710	444	353	289	262	420	300	283	244	295
3	880	632	670	332	337	286	256	420	297	282	245	295
4	887	648	668	327	234	287	258	470	145	279	322	293
5	818	647	675	215	272	268	288	473	146	285	324	475
6	706	643	685	211	270	259	289	470	172	280	358	475
7	---	641	686	232	271	302	294	475	267	278	---	476
8	750	682	680	---	273	220	362	476	268	---	470	474
9	800	690	682	---	198	218	351	540	280	279	472	475
10	663	685	678	---	148	217	355	545	277	283	282	540
11	822	673	672	---	217	172	358	563	204	278	278	543
12	800	670	682	---	220	174	343	548	202	530	276	---
13	795	660	686	---	265	180	339	560	273	535	298	596
14	884	649	695	---	268	178	340	575	373	540	478	618
15	865	658	650	---	245	157	342	614	272	538	475	620
16	884	660	643	---	246	141	358	612	269	---	473	656
17	866	700	653	---	245	264	---	610	364	---	475	---
18	867	707	644	---	213	258	394	615	361	---	478	644
19	---	704	---	---	187	256	396	593	382	---	479	653
20	---	705	---	---	213	258	390	645	384	466	494	650
21	---	725	307	---	228	284	423	507	373	337	617	652
22	658	732	303	176	272	278	416	642	500	334	637	715
23	650	750	301	202	274	287	414	652	470	538	633	714
24	730	761	311	204	272	288	445	650	502	453	622	718
25	725	770	307	208	287	278	440	652	498	433	622	674
26	672	757	304	225	279	292	439	310	493	435	630	670
27	658	740	308	270	281	278	440	308	503	430	329	675
28	607	738	348	272	277	293	438	382	500	544	297	674
29	608	722	345	---	---	289	418	605	508	547	295	704
30	600	735	---	327	---	295	420	264	285	542	304	705
31	---	---	---	330	---	287	---	297	---	250	296	---
MEAN	758	692	556	274	257	252	363	513	339	395	415	570
WTR YR 1982	MEAN	452		MAX	887		MIN	141				

03200500 COAL RIVER AT TORNADO, WV--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	19.5	18.5	14.5	13.0	6.0	5.5	4.0	3.0	6.5	5.5	8.0	6.0
2	18.5	17.0	15.0	13.5	6.0	5.5	4.0	4.0	5.5	5.0	8.5	7.0
3	18.0	16.5	15.5	13.5	7.0	6.0	4.5	4.0	5.5	5.0	8.5	7.5
4	17.0	15.0	16.0	14.0	7.0	6.5	7.5	4.5	6.0	5.5	8.5	7.0
5	16.0	15.5	15.5	15.0	6.5	6.0	7.5	6.5	6.0	5.5	9.0	8.5
6	18.0	16.0	15.0	13.5	6.0	5.5	6.0	5.5	6.0	5.0	8.5	7.5
7	17.0	15.5	13.5	12.0	6.0	5.5	6.0	6.0	5.0	4.0	7.5	5.0
8	17.5	16.0	12.0	10.5	6.0	5.0	6.0	5.0	3.5	2.5	5.0	4.5
9	16.0	15.0	11.0	10.0	5.0	4.5	5.0	3.0	5.5	3.0	7.0	4.5
10	15.5	14.5	10.0	10.0	5.0	4.0	3.0	2.5	5.5	4.0	8.0	6.5
11	16.0	14.5	10.5	9.5	4.0	2.5	2.5	2.0	4.0	3.5	9.5	8.0
12	16.5	15.0	10.0	9.5	2.5	2.0	2.5	2.0	4.0	3.5	11.0	9.0
13	16.5	15.0	10.0	9.0	2.5	1.5	2.0	2.0	3.5	3.5	11.5	11.0
14	16.5	15.0	9.0	8.0	2.0	1.5	2.0	2.0	3.5	3.0	11.0	9.5
15	15.5	14.5	8.5	7.5	2.5	2.0	2.0	2.0	4.0	3.0	9.0	9.0
16	15.5	14.5	7.5	7.0	3.0	2.0	2.0	2.0	6.0	4.0	10.0	9.0
17	15.5	13.5	8.0	7.5	2.5	2.0	2.0	2.0	8.0	6.5	11.5	10.0
18	15.5	14.5	8.0	7.5	2.0	1.5	2.0	2.0	8.5	8.0	13.0	11.5
19	14.5	13.5	9.0	7.0	1.5	1.5	2.0	2.0	8.0	7.0	12.5	11.5
20	13.5	12.5	9.0	8.0	1.5	1.5	2.0	2.0	8.0	7.0	12.5	12.0
21	13.0	11.5	8.0	7.5	1.5	1.5	2.0	1.0	8.5	8.0	13.5	12.5
22	12.5	11.5	7.5	6.5	1.5	1.5	5.0	1.0	8.0	6.5	13.0	11.5
23	12.5	11.5	6.5	6.0	5.5	1.0	6.5	5.0	6.5	5.5	11.0	10.0
24	12.0	11.0	6.0	5.5	6.5	5.5	6.0	4.0	9.0	6.5	11.0	9.5
25	11.5	10.5	6.0	5.5	6.0	5.5	4.0	2.0	9.0	8.0	11.0	10.0
26	10.0	9.5	6.0	5.5	5.5	5.0	2.0	1.5	8.0	6.0	11.0	10.0
27	12.5	10.5	6.5	6.0	5.0	4.5	1.5	1.5	6.0	5.0	9.5	6.5
28	14.0	12.5	7.0	6.5	5.0	4.5	1.5	1.0	6.5	5.0	6.5	5.5
29	14.0	13.0	7.0	6.0	5.0	4.5	1.5	1.0	---	---	8.5	5.5
30	14.5	12.5	6.0	5.5	5.0	4.0	3.5	1.5	---	---	11.5	8.5
31	14.5	12.5	---	---	4.0	3.5	6.0	3.5	---	---	13.5	11.5
MONTH	19.5	9.5	16.0	5.5	7.0	1.0	7.5	1.0	9.0	2.5	13.5	4.5
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	13.0	12.0	17.0	16.5	20.5	19.5	24.5	23.5	22.5	21.0	23.0	21.5
2	13.5	11.5	17.0	16.5	21.0	19.5	24.0	23.5	23.5	21.5	22.5	22.0
3	14.5	13.0	18.0	17.0	21.0	20.0	25.0	24.0	24.5	23.0	22.5	22.0
4	14.0	12.5	18.5	18.0	20.5	20.0	24.0	21.0	25.5	24.0	22.5	21.5
5	12.0	10.5	19.5	18.5	20.0	17.0	21.0	19.5	25.5	25.0	22.0	21.0
6	10.5	8.0	20.0	19.0	17.0	16.5	23.5	20.0	25.0	25.0	22.5	21.5
7	8.0	7.0	20.5	20.0	18.0	16.0	24.5	23.0	25.5	25.0	23.5	21.5
8	8.0	7.0	20.5	19.5	20.5	18.0	25.5	24.0	25.5	25.0	23.0	21.5
9	8.0	7.5	19.5	19.0	21.5	20.0	25.5	24.0	25.5	25.5	24.5	21.0
10	7.5	7.0	20.0	19.0	21.5	20.5	25.0	24.0	25.5	23.5	25.0	22.0
11	8.5	6.5	20.5	19.0	20.0	18.5	26.0	24.5	23.5	22.0	26.0	22.5
12	11.0	8.0	22.0	19.5	19.0	18.5	26.5	25.5	22.0	21.0	26.5	23.0
13	13.5	11.0	24.5	21.0	18.5	17.5	26.5	25.5	22.0	21.0	25.5	23.5
14	15.0	13.0	25.0	21.5	19.5	18.0	26.5	25.5	22.5	21.5	26.0	24.0
15	16.5	14.0	26.0	22.0	20.5	18.5	27.5	26.5	23.5	22.5	27.5	24.5
16	18.0	16.5	26.5	23.0	21.0	20.0	28.5	27.5	24.5	23.5	27.0	24.5
17	18.0	17.5	27.5	23.0	22.0	21.0	29.0	28.0	25.5	24.0	25.5	24.0
18	17.5	16.0	27.0	23.5	22.0	20.5	29.5	28.0	26.0	24.5	24.0	22.0
19	17.0	16.0	26.5	23.5	21.5	21.0	28.5	28.0	26.0	24.0	22.0	21.0
20	17.0	16.5	26.0	23.5	22.0	20.5	28.5	26.5	26.0	24.0	21.0	20.5
21	17.0	16.0	24.0	23.0	22.5	21.0	26.5	26.0	26.5	24.0	21.0	19.5
22	16.5	15.0	24.5	22.5	23.0	22.0	27.0	26.5	26.5	24.0	19.5	17.5
23	15.5	14.5	25.0	23.0	23.0	22.5	27.0	26.5	24.5	23.0	17.5	16.5
24	15.5	14.5	24.5	24.0	23.0	22.5	27.0	26.0	25.0	23.0	17.0	15.5
25	16.0	15.0	25.0	24.0	23.5	23.0	27.5	26.5	26.5	24.0	17.5	16.0
26	16.5	16.0	24.5	23.5	24.5	23.5	28.5	27.5	26.5	24.5	17.5	17.0
27	16.5	15.0	24.5	23.0	24.5	24.0	29.5	27.5	24.5	23.0	18.0	17.0
28	15.5	14.0	24.5	22.5	25.5	24.5	29.0	27.0	23.0	21.5	18.5	17.0
29	16.0	15.0	24.0	23.0	26.0	25.5	27.5	26.5	22.0	20.5	19.5	17.5
30	17.0	15.5	23.0	17.5	26.0	24.5	27.0	26.0	22.0	20.5	20.5	17.5
31	---	---	19.5	18.0	---	---	26.5	22.0	22.5	21.0	---	---
MONTH	18.0	6.5	27.5	16.5	26.0	16.0	29.5	19.5	26.5	20.5	27.5	15.5
YEAR	29.5	1.0										

TURBIDITY (NTU), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	30	9.0	10	6.0	20	7.0	85	10	130	20
2	---	---	45	10	10	5.0	20	15	55	10	45	10
3	---	---	95	10	10	7.0	80	20	35	10	35	9.0
4	---	---	100	10	10	7.0	320	10	240	10	30	9.0
5	---	---	100	9.0	10	7.0	450	25	180	25	40	10
6	---	---	85	7.0	10	6.0	170	20	65	15	25	9.0
7	---	---	85	8.0	30	6.0	65	20	30	8.0	50	6.0
8	---	---	60	8.0	50	5.0	55	1.0	25	15	90	1.0
9	---	---	30	6.0	20	6.0	30	10	850	9.0	110	20
10	---	---	15	8.0	10	7.0	20	15	500	15	150	15
11	---	---	50	5.0	25	6.0	15	10	150	30	400	10
12	---	---	70	9.0	15	5.0	10	8.0	100	6.0	360	15
13	---	---	85	5.0	25	5.0	10	8.0	55	10	210	15
14	---	---	10	5.0	15	5.0	9.0	7.0	60	7.0	210	30
15	---	---	20	6.0	25	4.0	8.0	7.0	30	7.0	400	15
16	---	---	20	6.0	130	5.0	10	6.0	160	8.0	800	40
17	---	---	10	6.0	170	6.0	7.0	6.0	340	10	370	10
18	---	---	10	6.0	30	7.0	9.0	6.0	290	10	130	35
19	---	---	25	7.0	35	30	500	6.0	140	.99	75	20
20	---	---	55	8.0	35	30	370	5.0	110	10	250	10
21	---	---	40	8.0	35	15	700	10	60	10	170	25
22	---	---	35	9.0	65	8.0	450	10	55	15	90	30
23	---	---	25	6.0	750	50	200	35	75	15	45	15
24	---	---	9.0	6.0	240	25	130	10	45	15	30	10
25	---	---	10	6.0	90	9.0	70	15	35	10	30	7.0
26	---	---	10	6.0	35	9.0	30	9.0	25	8.0	130	10
27	---	---	45	6.0	20	9.0	20	10	25	10	160	25
28	---	---	10	1.0	500	10	30	10	160	9.0	35	10
29	---	---	25	8.0	15	10	25	2.0	---	---	30	8.0
30	55	5.0	10	4.0	10	8.0	20	9.0	---	---	35	10
31	25	6.0	---	---	10	7.0	95	7.0	---	---	120	8.0
MONTH	55	5.0	100	1.0	750	4.0	700	1.0	850	.99	800	1.0
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	170	20	15	6.0	160	20	210	30	700	140	95	10
2	55	15	15	5.0	130	15	45	10	210	30	550	35
3	180	10	9.0	6.0	70	20	25	10	50	10	220	20
4	90	15	9.0	6.0	45	10	950	9.0	35	10	75	20
5	35	10	9.0	6.0	900	9.0	950	120	25	9.0	45	15
6	45	5.0	35	6.0	240	40	240	15	35	9.0	45	10
7	25	9.0	15	6.0	85	10	65	20	30	7.0	45	10
8	20	7.0	15	7.0	75	1.0	70	15	35	9.0	110	15
9	15	5.0	30	7.0	240	15	270	10	50	10	30	10
10	15	6.0	20	3.0	360	15	210	20	400	9.0	25	10
11	15	7.0	20	3.0	400	65	180	35	450	50	25	9.0
12	10	6.0	20	8.0	260	40	65	15	120	35	40	9.0
13	15	9.0	20	8.0	120	15	35	15	65	25	30	10
14	25	6.0	25	7.0	200	20	45	15	50	15	25	9.0
15	15	8.0	15	7.0	90	10	40	8.0	30	15	20	10
16	10	9.0	10	4.0	35	10	25	9.0	120	3.0	25	8.0
17	15	4.0	20	7.0	95	15	50	10	30	10	20	9.0
18	25	4.0	15	7.0	130	35	30	5.0	30	10	25	9.0
19	15	8.0	10	6.0	350	10	25	6.0	25	10	20	8.0
20	50	7.0	95	2.0	160	1.0	130	7.0	30	5.0	15	8.0
21	15	7.0	110	10	25	10	60	1.0	25	10	20	9.0
22	25	7.0	100	15	35	8.0	65	10	25	10	20	10
23	20	6.0	60	15	25	8.0	95	15	25	10	15	10
24	20	6.0	25	6.0	20	9.0	55	8.0	30	10	250	9.0
25	7.0	5.0	30	6.0	20	8.0	190	20	45	10	15	9.0
26	10	3.0	390	9.0	25	6.0	80	20	30	10	40	9.0
27	7.0	5.0	400	50	15	6.0	50	10	35	10	20	10
28	7.0	5.0	450	30	180	6.0	60	6.0	160	2.0	35	6.0
29	15	5.0	450	60	65	10	190	15	80	9.0	30	6.0
30	20	6.0	1500	40	150	9.0	45	8.0	35	10	35	10
31	---	---	700	65	---	---	850	20	35	9.0	---	---
MONTH	180	3.0	1500	2.0	900	1.0	950	1.0	700	2.0	550	6.0
YEAR	1500	.99										

KANAWHA RIVER BASIN

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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, 37.0°C July 27, 1982; minimum daily, 0.0°C Jan. 18, 1977.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum daily recorded, 37.0°C July 27; minimum daily recorded, 10.0°C Nov. 1, Dec. 21.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27.0	10.0	26.5	---	16.5	19.0	---	23.5	---	25.0	27.0	30.5
2	25.5	21.0	27.0	---	20.0	20.0	21.5	22.0	---	25.0	26.0	29.0
3	21.0	22.0	21.0	---	26.5	20.5	22.0	23.0	27.0	31.5	32.0	31.0
4	20.0	23.5	---	---	21.0	25.0	22.0	23.5	28.5	33.5	29.5	26.5
5	30.0	26.5	---	18.5	21.0	25.5	21.0	23.5	30.5	31.0	32.0	25.0
6	30.5	---	---	24.0	---	25.5	---	26.0	26.5	27.0	---	---
7	24.0	---	20.5	22.0	14.5	23.5	15.5	29.0	26.5	33.0	33.5	30.5
8	21.0	---	21.0	---	13.0	---	---	29.0	30.5	31.5	28.0	29.0
9	22.0	14.5	16.5	---	15.0	---	16.0	26.0	30.5	31.5	34.0	30.5
10	24.0	20.5	15.0	---	15.5	25.5	18.0	25.0	31.0	32.0	34.0	30.5
11	24.5	19.0	14.5	---	15.5	24.0	12.0	---	27.0	34.0	31.0	---
12	24.5	16.0	---	---	18.0	---	19.5	26.0	27.0	32.0	22.0	---
13	23.0	21.0	---	15.0	---	27.0	26.0	26.5	27.0	30.0	27.0	29.0
14	21.0	---	---	17.0	---	19.0	21.5	---	26.5	32.0	---	31.0
15	24.0	---	18.5	16.0	---	---	---	24.5	26.5	33.5	---	29.0
16	29.5	18.0	18.0	---	---	26.0	26.0	22.0	30.0	33.0	29.5	29.5
17	28.0	18.5	15.0	---	---	29.5	---	25.5	26.0	---	31.5	29.0
18	26.5	20.0	14.0	14.5	25.0	---	---	---	28.0	---	---	25.5
19	24.0	20.0	10.5	19.5	---	---	17.0	29.5	26.5	35.5	28.0	26.5
20	---	21.0	15.5	21.5	---	---	---	30.5	28.0	33.5	28.0	23.5
21	22.0	15.5	10.0	19.0	22.0	29.5	---	---	29.5	---	26.5	25.0
22	22.0	14.0	18.0	---	22.0	---	---	---	29.0	26.5	26.0	21.0
23	22.0	14.5	28.5	---	---	19.0	21.0	---	28.0	32.0	26.5	19.0
24	18.5	20.0	15.5	17.0	26.5	19.5	---	31.0	26.5	30.5	28.0	20.5
25	18.5	20.0	19.5	---	16.5	---	---	---	28.0	31.5	26.5	22.0
26	25.5	18.0	19.0	13.0	---	20.5	---	29.0	29.0	29.5	28.5	23.5
27	---	28.5	22.0	15.5	---	---	30.0	30.5	30.0	37.0	31.0	24.0
28	24.5	18.5	20.5	25.5	---	---	21.0	30.5	31.0	33.5	30.0	24.0
29	21.5	16.5	17.0	24.0	---	23.5	---	30.0	31.5	29.5	26.5	22.0
30	23.0	16.0	14.5	---	---	24.0	23.5	---	32.0	29.5	29.0	24.5
31	20.0	---	19.0	---	---	---	---	---	---	28.5	32.0	---
MEAN	23.5	19.0	18.5	19.0	19.5	23.5	21.0	26.5	28.5	31.0	29.0	26.5
WTR YR 1982	MEAN	24.5		MAX	37.0		MIN	10.0				

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 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 1957 to September 1970, January 1974 to September 1980.

pH: October 1974 to September 1980.

WATER TEMPERATURES: October 1956 to September 1970, January 1974 to September 1980.

DISSOLVED OXYGEN: October 1974 to September 1980.

REMARKS.--Discharges in water-quality tables are estimated.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 2,700 micromhos Apr. 21, 1961; minimum 76 micromhos Mar. 17, 1978.

pH: Maximum daily, 8.6 units May 14, 1977; minimum daily, 5.3 units July 16, 1979.

WATER TEMPERATURES: Maximum daily, 33.0°C July 24, 1964; minimum daily, 0.0°C Feb. 14, 1958, Mar. 12, 1960, Jan. 30, 1978.

DISSOLVED OXYGEN: Maximum daily, 16.0 mg/L Feb. 19, 20, 1977; minimum daily, 3.1 mg/L July 28, 1977.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS NONCAR- BONATE (MG/L AS CAC03)
NOV											
17...	0930	2080	185	6.8	11.0	30	9.3	180	69	46	23
FEB											
02...	1500	32900	175	7.1	3.0	21	12.7	110	180	55	27
MAR											
10...	1200	39800	150	7.5	7.0	18	11.7	740	190	50	19
APR											
28...	1330	17400	223	7.2	13.0	7.9	10.3	270	25	68	27
JUN											
29...	1245	7060	205	6.8	23.0	2.7	9.2	1000	170	62	24
AUG											
20...	1000	7020	205	7.0	26.0	7.6	6.4	470	130	58	21

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAR (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)
NOV											
17...	12	3.9	13	1.6	23	27	11	.1	4.3	93	87
FEB											
02...	15	4.4	11	1.5	29	28	16	<.1	5.3	107	99
MAR											
10...	13	4.5	6.4	1.2	32	22	7.7	<.1	5.6	85	80
APR											
28...	18	5.7	15	1.4	41	33	15	<.1	2.3	85	115
JUN											
29...	16	5.4	12	1.3	38	35	8.5	.1	5.8	142	107
AUG											
20...	15	5.1	13	1.5	38	32	11	.1	5.9	133	107

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS PC4)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)
NOV											
17...	.62	.320	.60	.120	.020	.030	.09	--	--	1	--
FEB											
02...	.77	.140	.31	.060	.030	.010	.03	4	3	1	100
MAR											
10...	.72	.070	.54	.050	.010	<.010	--	--	--	--	--
APR											
28...	.40	.090	.63	.060	<.010	<.010	--	2	1	1	<100
JUN											
29...	.52	.110	.70	.050	.030	.010	.03	--	--	--	--
AUG											
20...	.56	.170	1.30	.060	.030	.020	.06	1	0	1	100

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

[illegible]

03201300 KANAWHA RIVER AT WINFIELD DAM, AT WINFIELD, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)
NOV 17...	--	17	--	<.1	--	3.0	--	1.5	--	<.1	--	--
FEB 02...	<.10	--	<.01	--	<.10	--	<.01	--	<.01	--	<.01	<.01
MAR 10...	--	--	--	--	--	--	--	--	--	--	--	--
APR 28...	<.10	14	<.01	<.1	<.10	2.0	<.01	2.4	<.01	<.1	<.01	.01
JUN 29...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 20...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- ELDRIN TOTAL (UG/L)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDO- SULFAN, TOTAL (UG/L)	ENDO- SULFAN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)
NOV 17...	<.1	--	<.1	--	<.1	--	<.1	--	--	<.1	--	<.1
FEB 02...	--	<.01	--	<.01	--	<.01	--	<.01	<.01	--	<.01	--
MAR 10...	--	--	--	--	--	--	--	--	--	--	--	--
APR 28...	<.1	<.01	.2	<.01	<.1	<.01	<.1	<.01	<.01	<.1	<.01	<.1
JUN 29...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 20...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	PCN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
NOV 17...	--	<.1	--	--	<.1	--	--	--	<.1	--	--	<1.0
FEB 02...	<.01	--	<.01	<.01	--	<.01	<.01	<.01	--	<.10	<.01	--
MAR 10...	--	--	--	--	--	--	--	--	--	--	--	--
APR 28...	<.01	<.1	<.01	<.01	<.1	<.01	<.01	<.01	<.1	<.10	<.01	<1.0
JUN 29...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 20...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	PER- THANE TOTAL (UG/L)	PER- THANE IN BOT- TOM MA- TERIAL (UG/KG)	TOX- APHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 17...	--	<.10	--	<1.0	--	--	--	--	--	67	376	43
FEB 02...	<.01	--	<0	--	<.01	<.01	<.01	<.01	<.01	20	1780	48
MAR 10...	--	--	--	--	--	--	--	--	--	43	4620	81
APR 28...	<.10	<1.00	<1	<10	<.01	.09	<.01	<.01	<.01	19	893	84
JUN 29...	--	--	--	--	--	--	--	--	--	14	267	68
AUG 20...	--	--	--	--	--	--	--	--	--	12	227	91

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.

PERIOD OF RECORD.--March 1940 to September 1977, (since October 1952, no low-flow records). October 1977 to current year (gage heights only). Records of gage heights collected in this vicinity since 1889 are in reports of National Weather Service.

REMARKS.--Corps of Engineers gage-height telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1896, 62.8 ft (19.14 m) Mar. 30, 1913. Flood of Jan. 27, 1937, reached a stage of 62.7 ft (19.11 m).

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 36.24 ft (11.046 m) Mar. 18; minimum gage height, 23.44 ft (7.145 m) Oct. 20.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24.27	24.77	24.17	24.83	27.24	24.88	25.91	24.32	25.08	24.87	24.87	24.69
2	24.23	24.65	24.34	24.65	29.92	24.64	25.73	24.56	24.67	24.48	24.81	24.78
3	24.42	24.58	24.34	24.62	29.67	24.76	26.01	24.52	24.84	24.30	25.00	24.57
4	25.03	24.18	24.77	25.12	28.99	25.12	26.38	24.69	24.52	24.97	24.78	24.20
5	25.36	24.22	24.58	26.66	29.76	25.51	25.99	24.71	25.79	25.69	24.92	24.35
6	24.62	24.34	24.68	27.97	29.38	25.93	25.75	24.58	26.04	24.94	24.79	24.57
7	24.69	24.23	24.54	27.64	27.83	25.38	25.70	24.38	25.55	24.62	24.73	24.57
8	24.50	24.53	24.67	26.26	26.73	25.88	25.58	24.58	25.64	24.35	24.97	24.62
9	24.41	24.83	24.71	25.64	26.23	26.08	25.55	24.81	25.58	25.01	24.79	24.86
10	24.53	24.87	24.83	25.47	27.03	25.59	25.22	24.62	25.65	24.78	24.84	24.84
11	24.90	24.53	24.95	24.74	26.27	25.86	25.32	24.79	25.84	24.24	24.78	25.03
12	24.73	24.42	24.74	24.72	25.41	27.50	25.29	24.66	25.59	24.48	24.84	24.84
13	24.13	24.38	24.44	24.76	25.20	29.09	25.03	24.76	25.42	24.38	24.72	24.81
14	24.37	24.52	24.55	24.89	24.88	29.67	25.04	24.90	25.85	24.59	24.80	24.71
15	24.81	24.22	24.44	25.18	24.86	29.97	24.74	24.44	26.50	24.60	24.77	24.79
16	24.12	24.52	24.66	24.85	25.22	31.81	24.71	24.41	25.43	25.02	24.70	25.00
17	24.10	24.15	24.82	25.09	25.98	34.61	24.84	24.76	25.18	24.91	24.69	24.96
18	24.36	24.17	24.46	25.04	28.38	36.02	24.93	24.74	25.10	24.62	24.68	24.92
19	24.11	24.23	24.73	24.88	30.90	34.60	24.77	24.74	25.57	24.76	24.58	24.85
20	23.87	24.36	24.26	25.06	29.05	31.53	24.86	24.92	24.61	24.50	24.80	24.85
21	23.66	24.44	24.71	25.40	27.85	31.87	24.67	24.84	24.48	24.40	24.82	24.92
22	24.09	24.25	24.68	24.78	27.98	35.06	24.67	24.67	24.52	24.59	24.74	25.08
23	24.21	24.45	25.20	26.87	27.12	33.33	24.61	24.33	24.29	24.63	24.64	24.65
24	24.30	24.14	27.37	30.76	26.56	29.98	24.67	24.34	24.21	24.46	24.73	24.46
25	24.13	24.59	28.79	30.70	26.12	27.99	24.88	25.00	24.35	24.51	24.79	24.13
26	24.61	24.92	27.55	26.05	25.72	27.41	24.45	24.52	24.65	24.70	24.49	24.11
27	24.65	24.76	26.23	25.01	25.17	27.47	24.66	25.14	24.23	24.67	24.91	24.06
28	25.09	24.27	25.51	25.10	24.89	27.01	24.83	25.03	24.62	24.94	24.73	24.46
29	25.57	24.76	25.11	25.19	---	25.92	24.63	24.56	24.51	24.97	24.66	24.71
30	25.56	24.44	24.70	25.23	---	25.11	24.77	26.07	24.48	24.67	24.84	24.53
31	24.83	---	24.72	25.20	---	25.69	---	26.32	---	24.66	24.43	

GUYANDOTTE RIVER BASIN

03202260 BLACK FORK ABOVE BLACK FORK FALLS NEAR MULLENS, WV

LOCATION.--Lat 37°37'08", long 81°26'57", Wyoming County, Hydrologic Unit 05070101, on right bank 200 ft (61 m) downstream from the confluence of Dixon Branch and Black Fork and 4.5 mi (7.2 km) northwest of Mullens.

DRAINAGE AREA.--2.68 mi² (6.94 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1980 to January 1983 (discontinued).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,932.95 ft (589.163 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 224 ft³/s (6.34 m³/s) Aug. 9, 1982, gage height 3.67 ft (1.119 m); no flow many days in 1981-82.

EXTREMES FOR CURRENT PERIOD.--December 1980 to September 1981: Maximum discharge, 190 ft³/s (5.38 m³/s) June 6, gage height, 3.34 ft (1.018 m); no flow several days in August and September.

Water year 1982: Maximum discharge, 224 ft³/s (6.34 m³/s) Aug. 9, gage height, 3.67 ft (1.119 m); no flow many days in October and several days in November, July, August, and September.

October 1982 to January 1983: Maximum discharge, 30 ft³/s (0.85 m³/s) Nov. 29, gage height, 1.90 ft (0.579 m); no flow several days in October.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			1.3	1.3	1.8	15	9.7	1.6	55	.88	.10	.00
2			1.4	1.3	15	12	14	1.2	58	.31	.08	.00
3			1.4	1.3	11	6.6	7.8	.96	26	.18	.09	.00
4			1.2	1.2	5.6	5.2	4.9	.84	35	.13	.05	.05
5			1.2	1.1	3.1	20	8.3	.80	23	.25	.03	.00
6			1.1	1.0	2.4	17	8.3	.75	55	13	.35	.13
7			1.0	1.3	2.0	8.3	6.2	.67	55	4.6	.28	.15
8			.81	.75	2.0	4.7	4.4	.56	11	1.7	1.3	.11
9			2.2	.68	1.2	3.2	4.7	.50	5.6	.92	.19	.07
10			2.7	.52	1.7	2.5	5.2	.50	6.9	.70	.06	.01
11			2.5	.41	2.7	2.1	5.6	2.8	7.3	.42	.04	.00
12			2.2	.41	2.2	1.6	4.9	1.1	4.6	.29	.46	.00
13			1.8	.45	2.4	1.5	3.6	.94	3.3	.16	.15	.00
14			1.2	.52	2.1	1.1	2.3	1.9	2.4	1.5	.07	.05
15			1.0	.52	1.9	.93	1.6	11	1.6	.38	.13	.13
16			1.0	.39	2.1	2.7	1.3	5.9	1.1	8.1	1.7	.09
17			.81	.32	4.2	2.5	7.0	2.5	.98	3.4	.29	.00
18			.65	.27	5.2	3.0	12	2.4	.70	1.5	.11	.00
19			.60	.28	6.2	2.8	7.0	81	.60	.81	.04	.00
20			.41	.33	10	2.3	11	58	.49	1.3	.01	.00
21			.33	1.3	9.7	2.1	9.7	14	.43	1.4	.00	.00
22			.30	2.0	7.4	1.9	6.6	6.2	.36	1.2	.00	.00
23			.41	2.7	11	3.0	5.9	3.4	.25	.73	.00	.00
24			1.3	3.3	11	4.9	5.2	2.1	.15	.48	.00	.00
25			1.0	4.2	7.4	9.7	4.2	1.5	.98	.34	.00	.00
26			.96	6.0	4.7	10	3.1	1.4	.57	.35	.00	.00
27			.90	8.1	3.0	9.7	2.6	4.4	.15	.73	.00	.00
28			1.2	6.3	4.4	6.6	2.1	5.6	.07	.48	.00	.00
29			1.2	3.5	---	4.7	2.0	5.6	.04	.37	.00	.00
30			1.7	2.2	---	4.7	1.8	13	1.1	.19	.00	.00
31			1.2	1.5	---	3.4	---	47	---	.12	.00	---
TOTAL			36.98	55.45	143.4	175.73	173.0	280.12	357.67	46.92	5.53	.79
MEAN			1.19	1.79	5.12	5.67	5.77	9.04	11.9	1.51	.18	.026
MAX			2.7	8.1	15	20	14	81	58	13	1.7	.15
MIN			.30	.27	1.2	.93	1.3	.50	.04	.12	.00	.00
CFSM			.44	.67	1.91	2.12	2.15	3.37	4.44	.56	.07	.01
IN.			.51	.77	1.99	2.44	2.40	3.89	4.96	.65	.08	.01

GUYANDOTTE RIVER BASIN

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03202260 BLACK FORK ABOVE BLACK FORK FALLS NEAR MULLENS, WV--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.06	.00	.07	3.4	2.5	3.5	2.1	2.4	8.3	.15	.41	12
2	.03	.00	.08	3.2	3.0	6.0	1.8	2.1	3.9	.02	.09	4.1
3	.04	.00	.05	11	35	6.4	2.2	1.8	1.7	.02	.00	1.9
4	.00	.00	.26	15	13	5.0	1.9	1.6	1.7	.23	.00	.87
5	.00	.20	.42	9.7	7.6	4.0	1.6	1.4	1.7	.26	.00	.55
6	.00	.47	.17	6.3	5.0	3.4	1.8	1.3	1.1	.06	.00	.29
7	.00	.08	.15	3.9	3.4	9.4	1.4	1.2	.81	.02	.00	.15
8	.00	.02	.39	2.4	2.8	11	1.2	1.1	1.2	1.0	2.5	.08
9	.00	.00	.22	2.0	16	9.7	1.6	.95	.93	.70	41	.03
10	.00	.00	.15	1.5	13	8.7	1.5	.60	4.1	.09	13	.01
11	.00	.00	.13	1.2	8.4	7.5	1.4	.50	12	.01	3.4	.00
12	.00	.00	.11	1.0	5.0	6.4	1.3	.41	8.7	.00	1.8	.00
13	.00	.00	.08	.93	4.0	6.4	1.3	.33	8.7	.00	1.0	.00
14	.00	.00	1.6	1.0	3.1	6.0	1.2	.29	8.7	.02	.65	.00
15	.00	.00	1.9	.93	3.0	45	1.2	.26	5.2	.00	.46	.23
16	.00	.00	1.2	.75	5.4	20	1.1	.20	2.5	.00	.26	.00
17	.00	.00	.84	.60	19	9.0	1.3	.17	1.6	.00	.15	.00
18	.07	.00	.79	.55	14	5.4	1.4	.15	1.0	.00	.07	.00
19	.00	.00	.59	1.1	11	4.7	1.0	.13	.75	.00	.02	.00
20	.00	.00	.63	4.4	8.0	5.4	1.4	.20	.55	.60	.00	.00
21	.00	.00	.35	32	6.0	18	1.5	.33	.37	.03	.00	.00
22	.00	.00	29	19	4.4	14	1.4	.50	.29	.93	.00	.02
23	.13	.00	14	15	3.4	7.0	1.3	.75	.26	.55	.00	.20
24	.01	.46	7.8	13	3.1	4.8	1.2	.26	.17	.06	.00	.02
25	.00	.50	3.9	8.7	2.4	4.0	1.4	.20	.11	.00	.75	.00
26	.75	.26	2.5	4.0	2.0	3.5	4.3	.11	.09	.00	.04	.00
27	.75	.23	1.8	2.6	2.2	3.4	4.6	.70	.37	.00	.00	.13
28	.29	.13	1.3	2.1	2.9	3.1	3.9	.93	.26	.29	.00	.02
29	.04	.08	.95	1.8	---	2.8	3.4	9.7	.15	.01	.00	.00
30	.00	.04	.62	1.7	---	2.6	2.6	34	.11	.29	.00	.00
31	.00	---	2.2	2.3	---	2.4	---	7.8	---	2.1	3.2	---
TOTAL	2.17	2.47	74.25	173.06	208.6	248.5	55.3	72.37	77.32	7.44	68.80	20.60
MEAN	.070	.082	2.40	5.58	7.45	8.02	1.84	2.33	2.58	.24	2.22	.69
MAX	.75	.50	.29	.32	.35	.45	4.6	.34	.12	2.1	.41	.12
MIN	.00	.00	.05	.55	2.0	2.4	1.0	.11	.09	.00	.00	.00
CFSM	.03	.03	.90	2.08	2.78	2.99	.69	.87	.96	.09	.83	.26
IN.	.03	.03	1.03	2.40	2.89	3.45	.77	1.00	1.07	.10	.95	.29

CAL YR 1981 TOTAL 1317.50 MEAN 3.61 MAX 81 MIN .00 CFSM 1.35 IN 18.28
WTR YR 1982 TOTAL 1010.88 MEAN 2.77 MAX 45 MIN .00 CFSM 1.03 IN 14.03

GUYANDOTTE RIVER BASIN

03202260 BLACK FORK ABOVE BLACK FORK FALLS NEAR MULLENS, WV--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.08	16	1.8								
2	.00	.07	12	1.6								
3	.00	.06	5.7	1.4								
4	.00	1.9	4.2	1.0								
5	.00	1.1	3.1	.87								
6	.00	.70	2.4	.87								
7	.00	.46	1.6	.87								
8	.00	.33	1.3	.75								
9	1.0	.26	1.1	.75								
10	.87	.20	.99	.81								
11	.93	.15	1.0	1.4								
12	.17	1.1	1.2	.87								
13	3.0	1.7	.90	.69								
14	1.2	1.2	.86	.69								
15	.60	1.0	1.2	.87								
16	.29	.70	8.3	.75								
17	.11	.65	6.2	.77								
18	.08	.65	3.9	.67								
19	.08	.65	2.8	.50								
20	.26	.55	2.8	.55								
21	.37	.55	2.7	.69								
22	.17	2.8	2.2	1.3								
23	.08	3.6	2.8	2.4								
24	.06	2.8	3.9	2.9								
25	.06	2.2	4.1	3.1								
26	.06	1.9	5.9	2.8								
27	.07	1.8	7.4	2.6								
28	.08	5.9	5.9	2.3								
29	.08	21	3.9	2.2								
30	.08	6.2	2.7	2.9								
31	.08	---	2.2	2.8								
TOTAL	9.78	62.26	121.25	44.47								
MEAN	.32	2.08	3.91	1.43								
MAX	3.0	21	16	3.1								
MIN	.00	.06	.86	.50								
CFSM	.12	.78	1.46	.53								
IN.	.14	.86	1.68	.62								

CAL YR 1982 TOTAL 1125.28 MEAN 3.08 MAX 45 MIN .00 CFSM 1.15 IN 15.61

GUYANDOTTE RIVER BASIN

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03202260 BLACK FORK ABOVE BLACK FORK FALLS NEAR MULLENS, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1980 to January 1983 (discontinued).

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
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03202260 - BLACK FORK ABOVE BLACK FORK FALLS NR MULLENS, WV (LAT 37 37 08 LONG 081 26 57)

DEC , 1980					
30...	1320	1.7	20	--	1.5
APR , 1981					
10...	0910	4.9	40	5.8	9.0
23...	1205	5.0	--	--	13.0
24...	0830	4.9	--	--	10.0
JUL					
09...	1300	.92	40	--	22.5
JAN , 1982					
07...	1350	3.5	37	6.8	5.5
FEB					
03...	1300	64	32	7.3	9.0
04...	1000	17	30	7.1	5.0
MAR					
10...	1130	8.9	32	--	8.5
MAY					
10...	1345	.59	39	7.2	16.5
JUN					
18...	1620	.94	39	6.8	23.0
DEC					
01...	1200	16	41	6.3	11.0
JAN , 1983					
12...	1145	.89	24	7.3	2.0

GUYANDOTTE RIVER BASIN

03202262 BLACK FORK AT MOUTH NEAR MULLENS, WV

LOCATION.--Lat 37°37'01", long 81°27'11", Wyoming County, Hydrologic Unit 05070101, on right bank 50 ft (15 m) upstream from mouth, and 4.6 mi (7.4 km) northwest of Mullens.

DRAINAGE AREA.--2.76 mi² (7.15 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1980 to January 1983 (discontinued).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,808.48 ft (551.225 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 242 ft³/s (6.85 m³/s) Aug. 9, 1982, gage height 3.54 ft (1.079 m); minimum, 0.09 ft³/s (0.003 m³/s) Aug. 27, 28, 1981, gage height, 1.19 ft (0.363 m).

EXTREMES FOR CURRENT PERIOD.--December 1980 to September 1981: Maximum discharge, 170 ft³/s (4.81 m³/s) June 6, gage height, 3.12 ft (0.951 m); minimum, 0.09 ft³/s (0.003 m³/s) Aug. 27, 28, gage height, 1.19 ft (0.363 m).

Water year 1982: Maximum discharge, 242 ft³/s (6.85 m³/s) Aug. 9, gage height, 3.54 ft (1.079 m); minimum daily, 0.10 ft³/s (0.003 m³/s) Oct. 16, 17, Nov. 14-16, 19.

October 1982 to January 1983: Maximum discharge, 32 ft³/s (0.91 m³/s) Nov. 29, gage height, 2.09 ft (0.637 m); minimum, 0.12 ft³/s (0.003 m³/s) Oct. 1, 2, gage height, 1.20 ft (0.366 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			1.7	1.8	2.0	16	9.5	1.9	56	1.4	.30	.12
2			2.0	1.8	16	13	15	1.7	60	.67	.27	.12
3			2.0	1.8	11	7.2	8.3	1.4	30	.48	.27	.13
4			1.7	1.6	5.8	5.5	5.5	1.3	37	.41	.24	.45
5			1.7	1.4	3.3	20	8.7	1.3	24	.52	.22	.24
6			1.6	1.3	2.5	18	9.1	1.2	56	17	.69	.37
7			1.4	1.6	2.1	9.0	6.6	1.2	58	4.8	.47	.68
8			1.3	1.4	2.1	5.3	5.0	1.1	12	2.2	1.5	.71
9			2.5	1.3	1.5	3.9	5.3	.99	6.3	1.5	.43	.52
10			3.5	1.2	1.8	3.1	6.0	.93	8.7	1.1	.28	.31
11			3.3	1.1	2.7	2.8	6.3	3.0	7.7	.97	.22	.24
12			2.7	.99	2.1	2.4	5.8	1.6	5.1	.75	.82	.22
13			2.2	.99	3.0	2.1	4.8	1.4	3.7	.60	.32	.19
14			1.8	.99	2.4	2.0	3.7	1.8	2.9	2.0	.23	.24
15			1.5	.99	2.1	1.6	3.0	9.4	2.1	.82	.27	.55
16			1.5	.99	2.2	3.3	2.5	5.6	1.7	8.8	2.3	.80
17			1.4	.90	3.7	3.3	8.3	3.5	1.8	3.1	.55	.37
18			1.1	.81	4.5	3.7	14	2.9	1.3	1.8	.31	.26
19			1.1	.90	5.5	3.5	8.7	84	1.1	1.3	.23	.30
20			.81	.99	11	3.0	13	60	1.1	1.7	.19	.27
21			.76	1.7	10	2.8	12	16	.97	1.8	.16	.23
22			.72	2.7	7.6	2.7	7.3	6.4	.84	1.7	.16	.19
23			1.2	3.1	12	3.5	6.0	3.7	.70	1.2	.13	.21
24			1.6	3.9	12	5.5	5.5	2.5	.54	.97	.12	.27
25			1.5	4.5	8.0	10	4.2	2.0	1.3	.73	.12	.27
26			1.4	6.4	4.8	10	3.6	1.6	1.1	.71	.12	.27
27			1.7	8.6	3.7	10	3.1	4.3	.53	.94	.11	.23
28			1.8	6.6	4.3	6.9	2.7	5.0	.41	.85	.11	.22
29			1.7	3.7	---	5.3	2.5	5.0	.36	.68	.14	.16
30			2.4	2.4	---	5.3	2.2	15	1.3	.45	.14	.14
31			1.7	1.8	---	4.1	---	48	---	.35	.13	---
TOTAL			53.29	70.25	149.7	194.8	198.2	295.72	384.55	62.30	11.55	9.28
MEAN			1.72	2.27	5.35	6.28	6.61	9.54	12.8	2.01	.37	.31
MAX			3.5	8.6	16	20	15	84	60	17	2.3	.80
MIN			.72	.81	1.5	1.6	2.2	.93	.36	.35	.11	.12
CFSM			.62	.82	1.94	2.28	2.40	3.46	4.64	.73	.13	.11
IN.			.72	.95	2.02	2.62	2.67	3.98	5.18	.84	.16	.13

GUYANDOTTE RIVER BASIN

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03202262 BLACK FORK AT MOUTH NEAR MULLENS, WV--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.50	.19	.26	2.9	2.3	3.9	2.6	2.7	4.2	.42	.71	14
2	.25	.16	.25	2.9	3.7	6.9	2.4	2.4	2.4	.26	.33	4.3
3	.35	.14	.21	15	41	6.8	2.7	2.0	1.7	.27	.25	1.8
4	.26	.13	.43	21	16	5.3	2.3	1.8	1.5	.51	.19	.99
5	.23	.39	.68	9.8	7.8	4.2	2.0	1.6	1.6	.52	.14	.54
6	.21	.82	.35	5.1	5.2	3.4	2.2	1.4	1.2	.28	.14	.41
7	.19	.31	.33	3.4	3.6	9.7	1.8	1.3	1.0	.23	.12	.36
8	.18	.23	.61	2.4	2.9	11	1.6	1.3	1.5	1.4	2.5	.27
9	.16	.20	.46	2.0	20	10	2.0	1.2	1.6	1.2	48	.27
10	.15	.17	.36	1.7	16	8.7	1.9	1.1	8.0	.40	15	.23
11	.14	.15	.35	1.5	8.7	7.6	1.8	1.0	16	.27	4.1	.23
12	.13	.12	.31	1.3	5.3	6.5	1.8	.96	8.7	.26	2.1	.20
13	.12	.11	.26	1.2	4.3	6.7	1.8	.90	14	.23	1.4	.20
14	.12	.10	1.7	1.2	3.3	6.4	1.8	.78	8.8	.33	1.4	.27
15	.11	.10	2.3	1.1	3.2	44	1.7	.72	4.5	.22	1.2	.31
16	.10	.10	1.7	.96	5.7	22	1.6	.62	2.7	.17	1.2	.27
17	.10	.11	1.2	.69	22	12	1.7	.56	1.9	.15	1.2	.20
18	.20	.11	.92	.62	17	7.4	1.8	.49	1.5	.12	1.2	.16
19	.15	.10	.72	1.2	11	5.5	1.6	.61	1.2	.12	.99	.16
20	.11	.15	.84	3.7	9.0	6.3	1.7	.63	1.0	1.4	.71	.16
21	.14	.16	.70	36	7.2	20	1.8	.72	.79	.31	.71	.20
22	.28	.15	32	20	5.0	15	1.6	.83	.68	1.1	.54	.20
23	.70	.12	19	16	3.7	8.3	1.6	1.2	.61	.99	.54	.27
24	.32	.77	8.2	12	3.4	5.5	1.6	.61	.46	.38	.47	.23
25	.50	.81	6.6	6.5	2.7	4.8	1.7	.49	.39	.27	1.8	.16
26	1.4	.52	2.3	4.1	2.3	4.3	4.5	.39	.38	.19	1.1	.20
27	1.9	.50	1.8	2.6	2.4	3.9	5.0	1.2	.86	.15	.99	.31
28	.92	.34	1.4	2.4	3.3	3.8	4.3	1.5	.61	.41	.99	.31
29	.64	.26	1.1	1.9	---	3.4	3.7	9.9	.41	.27	.90	.23
30	.39	.20	.84	1.9	---	3.1	3.3	40	.36	.92	.81	.14
31	.22	---	1.9	2.6	---	3.2	---	9.1	---	1.9	5.3	---
TOTAL	11.17	7.72	90.08	185.67	238.0	269.6	67.9	90.01	90.55	15.65	97.03	27.58
MEAN	.36	.26	2.91	5.99	8.50	8.70	2.26	2.90	3.02	.50	3.13	.92
MAX	1.9	.82	32	36	41	44	5.0	40	16	1.9	48	14
MIN	.10	.10	.21	.62	2.3	3.1	1.6	.39	.36	.12	.12	.14
CFSM	.13	.09	1.05	2.17	3.08	3.15	.82	1.05	1.09	.18	1.13	.33
IN.	.15	.10	1.21	2.50	3.21	3.63	.91	1.21	1.22	.21	1.31	.37
CAL YR 1981	TOTAL	1485.32	MEAN	4.07	MAX	84	MIN	.10	CFSM	1.48	IN	20.01
WTR YR 1982	TOTAL	1190.96	MEAN	3.26	MAX	48	MIN	.10	CFSM	1.18	IN	16.05

GUYANDOTTE RIVER BASIN

03202262 BLACK FORK AT MOUTH NEAR MULLENS, WV--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.12	.21	16	2.4								
2	.12	.19	13	2.1								
3	.15	1.2	6.1	1.8								
4	.16	1.5	3.8	1.5								
5	.16	.94	2.9	1.3								
6	.16	.70	2.2	1.3								
7	.21	.56	1.7	1.3								
8	.36	.45	1.4	1.2								
9	1.0	.41	1.3	1.2								
10	.90	.39	1.2	1.1								
11	1.1	.36	1.3	1.7								
12	.39	1.5	1.5	1.3								
13	2.7	.77	1.1	1.1								
14	1.3	.75	1.1	1.1								
15	.78	1.2	1.4	1.2								
16	.52	.99	11	1.1								
17	.38	.90	8.4	1.1								
18	.31	.90	5.1	.90								
19	.30	.99	4.0	.90								
20	.37	.90	4.1	.90								
21	.56	.90	3.6	.95								
22	.37	3.0	3.1	1.5								
23	.29	3.7	4.2	2.4								
24	.27	3.0	5.8	3.0								
25	.27	2.0	5.6	3.1								
26	.25	1.9	8.4	2.9								
27	.23	1.7	10	2.6								
28	.23	7.9	7.8	2.3								
29	.23	21	5.1	2.2								
30	.23	6.9	3.5	2.9								
31	.23	---	2.9	2.8								
TOTAL	14.65	67.81	148.6	53.15								
MEAN	.47	2.26	4.79	1.71								
MAX	2.7	21	16	3.1								
MIN	.12	.19	1.1	.90								
CFSM	.17	.82	1.74	.62								
IN.	.20	.91	2.00	.72								

CAL YR 1982 TOTAL 1313.05 MEAN 3.60 MAX 48 MIN .12 CFSM 1.30 IN 17.69

GUYANDOTTE RIVER BASIN

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03202262 BLACK FORK AT MOUTH NEAR MULLENS, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1980 to January 1983 (discontinued).

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
03202262 - BLACK FORK AT MOUTH NR MULLENS, WV (LAT 37 37 30 LONG 081 27 12)					
DEC , 1980					
30...	1615	2.3	20	--	1.5
FEB , 1981					
19...	1600	6.5	--	--	6.0
APR					
10...	1005	4.1	40	5.6	10.0
23...	1515	4.4	--	--	13.0
24...	0935	5.0	--	--	10.0
MAY					
26...	1545	1.6	--	--	17.0
JUL					
09...	1400	1.3	36	--	--
29...	1650	.53	49	7.3	--
AUG					
27...	1505	.05	79	7.3	--
DEC					
02...	1400	.12	53	4.2	--
JAN , 1982					
07...	1510	3.4	36	7.3	5.0
FEB					
03...	1600	30	42	7.1	5.5
MAR					
10...	1445	8.6	31	--	8.0
MAY					
10...	1225	.85	39	6.9	11.0
JUN					
18...	1640	1.2	--	--	19.0
AUG					
04...	0940	.16	--	--	17.5
DEC					
01...	1045	16	25	6.2	10.5
03...	1025	6.0	30	--	10.5
JAN , 1983					
11...	1600	1.5	50	6.9	5.5

GUYANDOTTE RIVER BASIN

03202400 GUYANDOTTE RIVER NEAR BAILEYSVILLE, WV

LOCATION (REVISED).--Lat 37°36'14", long 81°38'43", Wyoming County, Hydrologic Unit 05070101, on right bank 75 ft (23 m) upstream from Doublecamp Branch, 3.1 mi (5.0 km) east of Baileysville; and at mile 130.8 (210.5 km).

DRAINAGE AREA.--306 mi² (793 km²), revised.

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

GAGE.--Water-stage recorder. Datum of gage is 1,140.00 ft (347.472 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 10, 1969, at site 25 ft (8 m) upstream at same datum.

REMARKS.--Records good except those for November, December, and January, which are poor. Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--14 years, 457 ft³/s (12.94 m³/s), 20.28 in/yr (515 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.--Maximum discharge, 3,860 ft³/s (109 m³/s) Mar. 15, gage height, 8.69 ft (2.649 m), no peak above base of 4,400 ft³/s (1.20 m³/s); minimum, 42 ft³/s (1.19 m³/s) Oct. 22, 23, gage height, 2.83 ft (0.863 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	72	60	309	240	572	505	295	486	174	255	774
2	68	65	64	334	319	671	437	272	360	155	164	473
3	76	59	62	817	1960	732	449	263	277	143	135	239
4	68	61	68	1660	2010	677	409	243	251	183	122	164
5	63	61	72	1400	1180	622	370	231	286	212	125	127
6	66	82	75	840	876	531	403	212	263	155	110	105
7	61	108	65	608	671	767	365	208	235	138	101	97
8	56	82	58	467	551	1000	329	212	219	132	95	93
9	55	70	54	392	1020	934	334	212	247	334	622	93
10	55	63	50	281	1370	883	339	194	511	215	1250	97
11	55	65	45	190	1020	840	309	194	1150	158	449	85
12	49	59	50	150	803	832	295	183	855	152	259	83
13	47	53	45	120	711	832	290	167	1930	149	187	73
14	49	55	120	100	579	890	290	158	1230	141	149	82
15	50	55	220	90	524	2340	272	146	745	127	135	91
16	52	55	250	80	637	2510	259	141	518	122	120	82
17	50	49	210	72	1450	1860	255	146	414	115	110	78
18	52	56	170	65	1860	1360	277	138	349	227	115	70
19	52	59	140	60	1360	1080	251	149	295	170	105	68
20	52	51	110	80	1150	949	247	146	263	167	101	64
21	52	60	90	1400	1020	1130	259	167	231	164	97	62
22	44	64	978	1900	847	1300	243	149	223	132	95	68
23	52	55	1890	1370	704	1060	227	231	215	164	87	68
24	72	57	1160	1180	645	869	219	247	201	135	93	70
25	68	86	645	847	579	745	212	204	183	115	120	65
26	70	107	443	622	505	788	277	170	190	103	127	68
27	115	100	360	426	511	725	381	215	215	103	97	75
28	206	90	304	280	505	645	370	235	208	110	95	80
29	142	80	272	230	---	579	339	259	187	132	89	68
30	106	68	239	200	---	538	314	1630	180	170	78	61
31	84	---	231	180	---	524	---	926	---	197	201	---
TOTAL	2142	2047	8600	16750	25607	29785	9526	8343	12917	4894	5888	3723
MEAN	69.1	68.2	277	540	915	961	318	269	431	158	190	124
MAX	206	108	1890	1900	2010	2510	505	1630	1930	334	1250	774
MIN	44	49	45	60	240	524	212	138	180	103	78	61
CFSM	.23	.22	.91	1.77	2.99	3.14	1.04	.88	1.41	.52	.62	.41
IN.	.26	.25	1.05	2.04	3.11	3.62	1.16	1.01	1.57	.59	.72	.45

CAL YR 1981 TOTAL 142206 MEAN 390 MAX 7780 MIN 44 CFSM 1.28 IN 17.29
WTR YR 1982 TOTAL 130222 MEAN 357 MAX 2510 MIN 44 CFSM 1.17 IN 15.83

03202750 CLEAR FORK AT CLEAR FORK, WV

LOCATION.--Lat 37°37'23", long 81°42'27", Wyoming County, Hydrologic Unit 05070101, on left bank 0.2 mi (0.3 km) downstream from Walls Branch, 0.7 mi (1.1 km) upstream from Spratt Branch, 1.4 mi (2.3 km) southwest of Clear Fork, and at mile 2.6 (4.2 km).

DRAINAGE AREA.--126 mi² (326 km²).

REVISED RECORDS.--WDR WV-81-1: Drainage area.

PERIOD OF RECORD.--June 1974 to current year. Prior to October 22, 1974, partial record station.

GAGE.--Water-stage recorder. Altitude of gage is 1,150 ft (351 m), from topographic map. June 28, 1974 to Oct. 22, 1974, non-recording gage; Oct. 23, 1974 to Oct. 26, 1977, digital recorder at site 0.9 mi (1.4 km) upstream at different datum; Oct. 27, 1977 to Dec. 31, 1980, digital recorder at site 0.2 mi (0.3 km) upstream at different datum.

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

AVERAGE DISCHARGE.--8 years, 211 ft³/s (5.976 m³/s), 22.74 in/yr (578 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,900 ft³/s (280 m³/s) Apr. 5, 1977, gage height, 18.64 ft (5.681 m), site and datum then in use, from rating curve extended above 3,000 ft³/s (85 m³/s) on basis of slope-area measurement of peak flow; minimum, 5.0 ft³/s (0.14 m³/s), Oct. 2, 1981, gage height, 1.48 ft (0.451 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)
Dec. 22	1800	1720 48.7	6.28 1.914	Mar. 15	1800	*2980 84.4	8.18 2.493
Jan. 21	1600	1890 53.5	6.57 2.003	May 30	1100	1820 51.5	6.45 1.966
Feb. 9	1500	1950 55.2	6.66 2.030	Sept. 1	1300	1920 54.4	6.61 2.015

Minimum discharge, 5.0 ft³/s (0.14 m³/s) Oct. 2, gage height, 1.48 ft (0.451 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.5	15	16	111	100	301	182	116	221	39	270	1260
2	14	13	16	129	145	316	179	111	143	32	145	563
3	14	12	14	338	633	292	195	107	100	28	96	239
4	11	10	14	1130	835	248	177	92	85	92	72	138
5	9.1	9.5	17	711	445	215	152	83	126	107	60	96
6	10	14	18	335	301	182	164	77	100	66	51	75
7	8.7	16	18	224	218	313	148	72	83	46	44	63
8	8.0	17	18	159	174	408	136	73	70	39	49	51
9	7.3	13	16	122	892	388	157	72	80	361	371	46
10	7.3	12	15	83	777	405	172	58	264	162	863	40
11	7.7	10	12	60	541	377	172	51	351	113	329	36
12	8.0	9.1	14	50	358	416	174	46	278	96	174	33
13	8.0	8.7	12	42	287	497	159	43	298	70	116	30
14	7.3	8.7	19	37	218	582	148	39	298	57	92	37
15	6.7	8.4	61	33	187	1860	126	36	206	46	73	41
16	6.2	8.0	72	30	239	1480	118	33	150	39	63	32
17	5.7	8.0	53	27	526	854	109	32	129	34	54	26
18	6.7	7.7	46	25	831	559	124	29	98	37	50	25
19	12	7.3	33	23	559	391	109	39	78	36	43	23
20	13	8.0	25	30	441	341	101	36	67	159	35	22
21	10	9.5	20	1130	384	877	101	33	57	101	32	21
22	8.7	9.1	817	1000	310	854	94	33	49	100	28	21
23	8.7	8.7	1170	657	253	501	87	35	45	172	26	21
24	18	14	515	605	239	341	82	34	40	92	25	20
25	18	22	242	377	215	264	80	28	36	66	36	18
26	32	28	155	258	185	242	96	27	46	49	37	18
27	61	27	116	187	201	193	136	90	88	39	33	23
28	53	24	92	120	248	164	143	64	53	41	34	23
29	37	20	75	95	---	150	136	96	41	46	29	21
30	25	17	60	80	---	140	126	1210	39	131	24	18
31	19	---	61	72	---	159	---	490	---	323	209	---
TOTAL	466.6	394.7	3832	8280	10742	14310	4083	3385	3719	2819	3563	3080
MEAN	15.1	13.2	124	267	384	462	136	109	124	90.9	115	103
MAX	61	28	1170	1130	892	1860	195	1210	351	361	863	1260
MIN	5.5	7.3	12	23	100	140	80	27	36	28	24	18
CFSM	.12	.11	1.00	2.15	3.10	3.73	1.10	.88	1.00	.73	.93	.83
IN.	.14	.12	1.15	2.48	3.22	4.29	1.22	1.02	1.12	.85	1.07	.92
CAL YR 1981	TOTAL	60145.7	MEAN 165	MAX 3300	MIN 5.5	CFSM 1.33	IN 18.04					
WTR YR 1982	TOTAL	58674.3	MEAN 161	MAX 1860	MIN 5.5	CFSM 1.30	IN 17.60					

GUYANDOTTE RIVER BASIN

03202913 R. D. BAILEY LAKE AT JUSTICE, WV

LOCATION.--Lat 37°35'57", long 81°49'13", Mingo and Wyoming Counties, Hydrologic Unit 05070101, at R. D. Bailey Dam on Guyandotte River 1.0 mi (1.6 km) northeast of Justice.

DRAINAGE AREA.--535 mi² (1386 km²).

PERIOD OF RECORD.--February to September 1980 (monthend contents only).

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

REMARKS.--Reservoir is formed by rock and random fill dam with concrete face. Spillway is uncontrolled, broad-crested saddle, elevation 1,155 ft (352.0 m). Outflow controlled by two 6.0 ft (1.83 m) by 12.0 ft (3.66 m) gates, elevation 938.0 ft (285.9 m), discharging through an 18.0 ft (5.49 m) diameter tunnel in left abutment. Selective withdrawals can be made from five 10.0 ft (3.05 m) by 8.0 ft (2.44 m) intake gates at elevations 966.0 ft (294.4 m), 986.0 ft (300.5 m), 1,000 ft (304.8 m), and two at 1,020 ft (310.9 m). Total level-pool capacity at elevation 1,155 ft (352.0 m), spillway crest, is 203,700 acre-ft (251 hm³) of which 181,700 acre-ft (224 hm³) is controlled storage above elevation 1,012 ft (308.0 m), minimum-pool elevation. This is a multipurpose reservoir.

COOPERATION.--Records were furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 73,680 acre-ft (90.8 hm³) June 8, 1981, elevation, 1,081.66 ft (329.690 m); minimum since initial filling, 354 acre-ft (0.436 hm³) Feb. 4, 1980, elevation, 908.50 ft (276.911 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents 34,300 acre-ft (42.3 hm³) Aug. 13, 14, elevation, 1,035.13 ft (315.508 m); minimum, 13,680 acre-ft (16.9 hm³) Dec. 20, elevation, 989.91 ft (301.725 m).

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

Date	Elevation (feet)	Contents (acre-feet)	Change in Contents (acre-feet)	(equivalent in cfs)
Sept. 30.....	1028.57	30340	-	-
Oct. 31.....	1004.82	19060	-11280	-183
Nov. 30.....	990.23	13790	-5270	-89
Dec. 31.....	990.41	13850	+60	+1
CAL YR 1981			-8340	-12
Jan. 31.....	990.47	13870	+20	0
Feb. 28.....	1013.98	22920	+9050	+163
Mar. 31.....	1012.35	22200	-720	-12
Apr. 30.....	1015.15	23450	+1250	+21
May 31.....	1026.94	29410	+5960	+97
June 30.....	1016.02	23850	-5560	-93
July 31.....	1017.61	24600	+750	+12
Aug. 31.....	1016.85	24240	-360	-6
Sept. 30.....	1015.30	23520	-720	-12
WTR YR 1982			-6820	-9

GUYANDOTTE RIVER BASIN

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03202915 GUYANDOTTE RIVER BELOW R. D. BAILEY DAM, WV

LOCATION.--Lat 37°35'53", long 81°49'46", Mingo County, Hydrologic Unit 05070101, on right bank, 500 ft (152 m) upstream from Little Huff Creek, 2,500 ft (762 m) downstream from R. D. Bailey Dam and 0.5 mi (0.8 km) northeast of Justice, and at river mile 111.6 (179.6 km).

DRAINAGE AREA.--535 mi² (1,390 km²).

PERIOD OF RECORD.--November 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 880.00 ft (268.224 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor. Flow regulated since February 1980 by R. D. Bailey Lake (station 03202913) at mile 112 (180 km).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,800 ft³/s (476 m³/s) June 22, 1979, gage height, 13.90 ft (4.237 m); minimum discharge, 2.1 ft³/s (0.06 m³/s) Dec. 18, 1978, gage height, 2.05 ft (0.625 m); minimum daily, 38 ft³/s (1.08 m³/s) Nov. 22, 23, 1978; no flow part of June 28, 1982 (gates closed).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,730 ft³/s (134 m³/s) Mar. 16, gage height, 9.02 ft (2.749 m); minimum daily, 72 ft³/s (2.04 m³/s) Nov. 20-24; no flow part of June 28 (gates closed).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	253	341	95	362	632	1170	796	524	1990	272	240	611
2	282	341	95	482	564	1340	754	470	1760	272	272	1080
3	279	373	92	1200	1670	1360	694	422	1010	218	318	1260
4	282	337	89	3400	2730	1090	694	377	352	153	322	1420
5	282	164	90	3100	2720	914	685	337	462	243	283	1330
6	288	144	99	2100	2650	854	642	337	486	269	294	738
7	256	144	100	1500	1870	886	442	310	430	250	347	206
8	199	181	96	1000	1020	1580	164	294	327	240	347	148
9	199	191	90	700	1970	2030	442	330	366	232	360	146
10	196	220	90	174	3450	1900	604	264	790	243	325	146
11	196	220	90	540	2640	1570	546	212	1410	243	223	148
12	196	217	90	400	1190	1470	474	212	1950	245	225	148
13	186	169	90	450	709	1480	450	215	1750	264	315	146
14	174	137	96	400	714	1700	524	215	2490	303	748	148
15	174	137	196	324	714	3250	446	186	1620	341	1010	148
16	174	176	291	303	734	4370	407	146	840	318	1160	146
17	174	176	288	280	806	4640	384	164	625	283	1260	142
18	174	128	239	260	1850	4490	384	209	510	275	1110	114
19	220	85	209	244	3030	2810	627	215	395	283	446	97
20	220	72	150	373	1910	1630	614	212	357	289	328	97
21	181	72	140	1420	1560	2100	135	212	312	291	300	97
22	181	72	800	2720	1790	2640	186	204	300	300	300	90
23	228	72	2500	3200	1220	2310	267	191	243	294	300	74
24	250	72	2400	3130	1120	1570	297	344	204	297	315	74
25	250	89	1100	2850	936	1240	300	327	218	297	233	74
26	253	113	700	1890	724	1250	355	250	243	283	184	74
27	313	169	614	948	642	1080	806	313	364	186	228	74
28	355	131	426	749	959	909	729	486	204	167	173	106
29	568	128	359	632	---	790	685	438	184	197	116	118
30	486	106	273	546	---	790	591	1210	240	250	110	102
31	341	---	267	524	---	838	---	2030	---	243	275	---
TOTAL	7810	4977	12254	36201	42524	56051	15124	11656	22432	8041	12467	9302
MEAN	252	166	395	1168	1519	1808	504	376	748	259	402	310
MAX	568	373	2500	3400	3450	4640	806	2030	2490	341	1260	1420
MIN	174	72	89	174	564	790	135	146	184	153	110	74

CAL YR 1981 TOTAL 244809 MEAN 671 MAX 4650 MIN 72 MEAN# 659 CFSM# 1.23 IN# 16.73
WTR YR 1982 TOTAL 238839 MEAN 654 MAX 4640 MIN 72 MEAN# 645 CFSM# 1.21 IN# 16.37

* Adjusted for change in contents in R. D. Bailey Lake.

GUYANDOTTE RIVER BASIN

03203600 GUYANDOTTE RIVER AT LOGAN, WV

LOCATION (REVISED).--Lat 37°50'32", 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 81.0 (130.3 km).

DRAINAGE AREA.--833 mi² (2,157 km²), revised.

PERIOD OF RECORD.--October 1960 to September 1962 (annual maximum only), October 1962 to current year. Gage-height records collected in this vicinity since November 1915 are contained in reports of National Weather Service.

GAGE.--Water-stage recorder. Datum of gage is 640.00 ft (195.072 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1962, at datum 1.32 ft (0.402 m) lower.

REMARKS.--Records good except those for January, which are poor. Flow regulated since February 1980 by R. D. Bailey Lake (station 03202913) at mile 112 (180 km). Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--20 years, 1,205 ft³/s (34.13 m³/s), 19.64 in/yr (499 mm/yr), unadjusted.

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, 10,500 ft³/s (297 m³/s) Mar. 15, gage height, 13.83 ft (4.215 m); minimum, 108 ft³/s (3.06 m³/s) Nov. 23, gage height, 4.40 ft (1.341 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	314	366	157	517	780	1780	1350	802	2550	408	474	3320
2	319	366	146	659	912	1820	1310	737	2290	384	341	1910
3	323	355	142	1310	1690	1850	1270	659	1580	408	346	1430
4	314	415	140	4890	3640	1590	1200	611	1030	346	350	1530
5	323	293	153	3840	3400	1360	1150	517	3330	366	341	1440
6	323	221	153	2790	3180	1220	1160	503	1500	408	289	1210
7	319	191	160	1770	2590	1540	984	495	1140	384	328	390
8	254	188	151	1080	1580	2050	595	474	811	337	390	269
9	224	224	146	821	5410	2800	619	495	802	563	710	221
10	221	237	137	693	5480	2870	984	447	1820	402	1220	211
11	221	250	133	434	4180	2490	912	361	2010	361	532	205
12	221	250	133	450	2190	2350	861	332	2810	440	346	202
13	215	243	133	410	1310	2470	755	328	2300	355	297	197
14	202	188	151	370	1200	2680	802	319	3260	366	474	230
15	197	176	218	350	1160	6820	764	314	2370	361	1020	243
16	200	178	346	330	1300	7200	693	269	1410	350	1060	208
17	200	215	421	310	2420	6880	643	247	1170	350	1220	194
18	208	208	390	290	3630	5870	651	273	994	350	1210	188
19	224	160	310	270	3900	4350	668	427	746	361	764	178
20	265	135	277	350	3480	2530	1040	355	668	540	341	157
21	230	119	243	2340	2020	3210	540	332	532	415	332	157
22	208	113	1130	3770	2500	3890	310	350	488	467	328	162
23	247	109	3520	4220	1820	3480	390	861	481	563	323	155
24	314	126	3410	4100	1580	2500	467	627	332	427	328	135
25	297	142	2110	3620	1390	1920	474	595	332	378	341	133
26	384	153	1200	2730	1240	1940	517	488	350	355	250	138
27	384	176	901	1420	1040	1740	841	659	603	310	230	153
28	427	221	635	1070	1470	1490	1280	901	659	250	269	142
29	427	183	474	840	---	1280	1010	984	302	332	197	153
30	702	178	427	720	---	1250	912	4960	346	293	164	164
31	427	---	337	700	---	1370	---	3240	---	651	1180	---
TOTAL	9134	6379	18384	47464	66492	86590	25152	22962	39016	12281	15995	15425
MEAN	295	213	593	1531	2375	2793	838	741	1301	396	516	514
MAX	702	415	3520	4890	5480	7200	1350	4960	3330	651	1220	3320
MIN	197	109	133	270	780	1220	310	247	302	250	164	133

CAL YR 1981 TOTAL 364768 MEAN 999 MAX 10000 MIN 109 MEAN# 987 CFMS# 1.18 IN# 16.09
WTR YR 1982 TOTAL 365274 MEAN 1001 MAX 7200 MIN 109 MEAN# 992 CFMS# 1.19 IN# 16.17

* Adjusted for change in contents in R. D. Bailey Lake.

03204000 GUYANDOTTE RIVER AT BRANCHLAND, WV
(National stream-quality accounting network station)

LOCATION.--Lat 38°13'15", long 82°12'10", Lincoln County, Hydrologic Unit 05070102, on right bank at upstream side of highway bridge at Branchland, opposite mouth of Fourmile Creek, and at mile 35.3 (56.8 km) (revised). Records include flow of Fourmile Creek.

DRAINAGE AREA.--1,224 mi² (3,170 km²), includes that of Fourmile Creek, revised.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1915 to September 1917, October 1917 to September 1922 (gage heights only), December 1928 to current year. Prior to October 1959, published as Guyandot River at Branchland. Monthly discharge only for July to September 1916, published in WSP 1305.

REVISED RECORDS.--WSP 803: Drainage area. WSP 853: 1918(M). WSP 1335: 1916-17, 1929-30, 1932-35.

GAGE.--Water-stage recorder. Datum of gage is 547.91 ft (167.003 m) National Geodetic Vertical Datum, adjustment of 1912. Prior to June 20, 1932, nonrecording gage and June 20, 1932, to Oct. 24, 1968, water-stage recorder at site 20 ft (6 m) downstream at same datum. Oct. 1, 1942, to Jan. 23, 1969, auxiliary nonrecording gage and since Jan. 24, 1969, auxiliary water-stage recorder 4.0 mi (6.4 km) upstream from base gage at datum 4.99 ft (1.521 m) higher.

REMARKS.--Water-discharge records good except those for January, which are poor. Flow regulated since February 1980 by R. D. Bailey Lake (station 03202913) at mile 112 (180 km). Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--55 years (water years 1916-17, 1930-82), 1,648 ft³/s (46.67 m³/s), 18.28 in/yr (464 mm/yr), unadjusted.

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, 10,900 ft³/s (309 m³/s) Mar. 16, gage height, 20.97 ft (6.392 m), backwater; minimum, 151 ft³/s (4.28 m³/s) Nov. 23, gage height, 3.08 ft (0.939 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	188	461	220	530	1210	2190	3020	966	4230	526	1030	3150
2	331	417	209	662	1120	2410	2480	898	3360	546	687	4280
3	370	412	188	816	1080	2460	2590	864	2680	769	514	2350
4	360	401	182	3470	2710	2380	2330	775	1800	1690	484	1800
5	350	461	182	5320	3920	2010	1940	721	8210	2040	484	1800
6	365	417	192	4320	3750	1690	1880	639	5750	1000	460	1650
7	375	304	195	3190	3480	1730	1660	626	2770	748	418	1220
8	360	251	195	1890	2510	2330	1390	653	1820	633	460	565
9	304	241	192	1190	3480	3190	1070	612	1310	578	520	430
10	259	263	185	900	6330	4300	1150	612	3060	707	905	328
11	255	263	176	750	6960	4380	1300	552	4280	559	1180	295
12	255	287	170	650	4570	4820	1210	460	3460	612	639	285
13	255	287	168	570	2830	4350	1130	424	3700	660	460	275
14	248	279	170	520	1880	4660	1040	406	3820	514	383	275
15	241	244	192	470	1750	7380	1050	394	3890	502	533	345
16	230	216	255	430	2130	10600	979	383	2710	484	1000	323
17	230	216	395	390	3430	9740	932	339	2220	466	1100	270
18	241	241	536	360	5350	8200	911	301	2010	466	1200	250
19	244	244	494	330	5430	7160	877	389	1470	460	1150	245
20	259	227	401	420	5470	4870	945	559	1150	572	721	226
21	287	185	360	2890	3830	3790	1140	454	1000	816	424	199
22	283	168	686	5650	3100	4780	701	430	843	612	400	217
23	263	153	3290	5740	3110	4710	526	721	762	741	389	226
24	317	156	4300	5680	2340	3840	585	911	707	741	389	199
25	365	162	3570	4830	2050	3060	646	1170	559	578	412	177
26	380	179	1980	3980	1710	2930	667	898	514	502	418	174
27	560	188	1150	2600	1480	2700	714	898	552	466	378	188
28	478	199	920	1590	1710	2300	1200	1410	755	424	436	213
29	489	255	712	1220	---	1960	1250	1350	789	442	356	199
30	530	227	578	1060	---	1710	1110	7840	546	472	260	184
31	656	---	530	1050	---	2300	---	6230	---	605	514	---
TOTAL	10328	8004	22973	63468	88720	124930	38423	33885	70727	20931	18704	22338
MEAN	333	267	741	2047	3169	4030	1281	1093	2358	675	603	745
MAX	656	461	4300	5740	6960	10600	3020	7840	8210	2040	1200	4280
MIN	188	153	168	330	1080	1690	526	301	514	424	260	174

CAL YR 1981 TOTAL 509673 MEAN 1396 MAX 13300 MIN 153 MEAN# 1384 CFSM# 1.13 IN# 15.36
WTR YR 1982 TOTAL 523431 MEAN 1434 MAX 10600 MIN 153 MEAN# 1425 CFSM# 1.16 IN# 15.81

* Adjusted for change in contents in R. D. Bailey Lake.

GUYANDOTTE RIVER BASIN

03204000 GUYANDOTTE RIVER AT BRANCHLAND, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961, 1965, 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.

SUSPENDED SEDIMENT DISCHARGE: March 1976 to September 1977.

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 metric tons) Apr. 5, 1977; minimum daily, 2.3 tons (2.1 metric tons) July 20, 1977.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	ACIDITY (MG/L AS H)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT 29...	38	--	29	13	52	3.5	88	140	11	.1
JAN 07...	26	--	10	4.7	11	.8	18	34	2.7	<.1
FEB 25...	44	--	16	8.0	17	1.9	29	69	7.0	<.1
APR 29...	43	--	19	9.3	27	2.2	43	82	6.6	.1
JUN 30...	50	--	24	11	31	2.9	55	100	13	.1
AUG 23...	38	.0	29	12	44	3.2	79	120	13	.2

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS P)
OCT 29...	4.2	327	306	418	.38	.050	<.10	.080	.130	.150
JAN 07...	2.3	82	76	658	.66	.060	.33	.070	<.010	<.010
FEB 25...	6.8	154	143	923	.59	.020	.29	.040	<.010	<.010
APR 29...	5.4	140	178	363	.36	<.010	.45	.020	<.010	<.010
JUN 30...	5.7	275	221	377	.30	.030	.50	.040	<.010	<.010
AUG 23...	6.0	309	276	319	.33	.490	.80	.020	<.010	<.010

03204000 GUYANDOTTE RIVER AT BRANCHLAND, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS P04)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
OCT 29...	.46	13	12	1	100	30	72	<1	--	<1	10
FEB 25...	--	1	0	1	100	50	55	1	--	<1	20
APR 29...	--	2	1	1	100	40	56	1	--	<1	150
JUN 30...	--	--	--	--	--	--	--	--	--	--	--
AUG 23...	--	1	0	1	<100	--	75	2	0	2	10

DATE	CHRO- MIUM, SUS- PENDE RECOV- (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDE RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)
OCT 29...	0	10	1	--	<1	7	4	3	520	490	26
FEB 25...	10	10	<1	--	<1	9	8	1	1900	1900	17
APR 29...	140	10	3	1	2	6	4	2	1000	--	<3
JUN 30...	--	--	--	--	--	--	--	--	--	--	--
AUG 23...	0	10	2	--	1	5	--	4	940	920	22

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI)
OCT 29...	5	4	1	50	40	14	<.1	--	.1	4	2
FEB 25...	8	--	<1	90	70	22	.1	.0	.1	7	4
APR 29...	3	0	3	50	40	12	.4	--	<.1	70	66
JUN 30...	--	--	--	--	--	--	--	--	--	--	--
AUG 23...	5	--	3	70	50	24	.2	.0	.3	4	--

DATE	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 29...	2	<1	<1	<1	<1	40	--	<4	10	13	93
FEB 25...	3	<1	<1	<1	<1	30	9	21	70	420	43
APR 29...	4	<1	<1	<1	<1	20	20	4	17	44	41
JUN 30...	--	--	--	--	--	--	--	--	33	45	91
AUG 23...	1	<1	<1	<1	<1	20	0	25	55	57	90

OHIO RIVER MAIN STEM

03206000 OHIO RIVER AT HUNTINGTON, WV

LOCATION.--Lat 38°24'48", long 82°30'02", Lawrence County, Ohio, Hydrologic Unit 05090101, on right bank at lock 28 at Sybene, Ohio, 0.1 mi (0.2 km) upstream from Fourpole Creek, 3.0 mi (4.8 km) downstream from Symmes Creek, and at mile 311.6 (501.4 km), measured downstream from Pittsburgh, Pa.

DRAINAGE AREA.--55,900 mi² (144,800 km²), approximately.

PERIOD OF RECORD.--August 1934 to current year (since October 1968, no low-flow records). Gage-height records collected at same site since 1913 are in reports of National Weather Service.

REVISED RECORDS.--WSP 853: 1934, 1936. WSP 893: Drainage area. WSP 1305: 1935(M), 1939(M).

GAGE.--Water-stage recorder. Datum of gage is 490.263 ft (149.432 m) Sandy Hook datum. Prior to July 8, 1942, at datum 1.737 ft (0.529 m) higher. Auxiliary water-stage recorder 4.7 mi (7.6 km) upstream from base gage at datum 490.102 ft (149.383 m) Sandy Hook datum.

REMARKS.--Records good except those for period of no-gage-height record at auxiliary gage, Mar. 16-19, which are poor. Discharges less than 50,000 ft³/s (1,420 m³/s) not published. Flow regulated by Ohio River system of locks, dams, and reservoirs upstream. Corps of Engineers gage-height telemeter and data platform at station.

AVERAGE DISCHARGE.--34 years (water years 1935-68), 75,240 ft³/s (2,131 m³/s), 18.28 in/yr (464 mm/yr).

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 daily discharge, 312,000 ft³/s (8,840 m³/s) Mar. 18, estimated based on Ohio River summary; gage height, 42.14 ft (12.844 m) Mar. 18; minimum discharge, not determined; minimum gage height, 24.64 ft (7.510 m) May 4, Sept. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	82500	---	60600	154000	83700	127000	---	113000	64000		
2	---	70500	---	56200	219000	71300	128000	---	82300	54000		
3	---	57000	---	55600	225000	63800	131000	---	60200	---		
4	---	---	---	79300	212000	68800	143000	---	51200	72000		
5	---	---	---	136000	230000	82800	137000	---	95200	100000		
6	---	---	---	170000	222000	116000	132000	---	147000	92000		
7	---	---	---	171000	191000	113000	125000	---	126000	64000		
8	---	---	---	148000	156000	110000	119000	---	121000	52000		
9	---	---	---	123000	137000	117000	120000	---	120000	50000		
10	---	53700	56800	113000	163000	118000	106000	---	129000	52000		
11	---	---	57100	81000	156000	114000	102000	---	130000	---		
12	---	---	54700	---	122000	157000	104000	---	133000	---		
13	---	---	---	---	104000	179000	88800	---	110000	---		
14	---	---	---	---	88100	228000	85200	---	119000	---		
15	---	---	---	---	80500	233000	84600	---	145000	---		
16	---	---	---	51700	84600	260000	70800	---	135000	---		
17	---	---	---	---	139000	290000	73100	---	108000	---		
18	---	---	---	---	193000	312000	59900	---	93600	---		
19	---	---	---	---	216000	308000	64600	---	91500	---		
20	---	---	---	---	198000	256000	55100	---	81900	---		
21	---	---	---	---	196000	256000	56300	---	68300	---		
22	---	---	---	79200	177000	287000	---	---	---	---		
23	---	---	74500	128000	178000	273000	---	---	---	---		
24	---	---	160000	187000	157000	241000	---	---	---	---		
25	---	---	197000	247000	143000	201000	---	68900	---	---		
26	---	---	181000	159000	136000	178000	---	59700	---	---		
27	---	---	144000	95600	115000	170000	---	---	---	---		
28	---	---	116000	90700	89300	166000	---	56500	---	---		
29	102000	---	90500	80800	---	141000	55800	---	---	---		
30	119000	50900	85100	75700	---	109000	---	126000	---	---		
31	88400	---	65700	82600	---	110000	---	164000	---	---		
TOTAL	---	---	---	---	4481500	5413400	---	---	---	---		
MEAN	---	---	---	---	160100	174600	---	---	---	---		
MAX	---	---	---	---	230000	312000	---	---	---	---		
MIN	---	---	---	---	80500	63800	---	---	---	---		

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, and at mile 60.2 (96.9 km).

DRAINAGE AREA.--38.5 mi² (99.7 km²), revised.

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

GAGE.--Water-stage recorder. Datum of gage is 710.00 ft (216.408 m) National Geodetic Vertical Datum of 1929. Prior to Dec. 22, 1964, nonrecording gage at same site and datum.

REMARKS.--Records fair except those for December, January, and February, which are poor. Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--18 years, 54.7 ft³/s (1.549 m³/s), 19.29 in/yr (490 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,040 ft³/s (143 m³/s) Dec. 9, 1978, gage height, 15.84 ft (4.828 m), from rating curve extended above 1,300 ft³/s (37 m³/s) on basis of slope-area measurement of peak flow; minimum discharge, 0.01 ft³/s (<0.001 m³/s) July 2-13, 1966, Sept. 18-28, 1967, Sept. 8, 9, 1973; minimum gage height, 4.44 ft (1.353 m) Sept. 26, 27, 1967.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 840 ft³/s (24 m³/s) and maximum(*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 9	1300	1400 39.6	10.74 3.274
June 5	0930	*1540 43.6	11.07 3.374

Minimum discharge, 0.81 ft³/s (0.023 m³/s) Oct. 16; minimum gage height, 4.59 ft (1.399 m) Sept. 13, 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	2.6	2.6	12	71	58	151	13	62	5.4	11	272
2	1.9	2.3	2.7	17	54	56	112	13	40	3.8	5.9	76
3	3.6	2.1	2.9	34	60	53	144	14	26	58	3.8	38
4	1.9	2.0	3.0	364	57	46	125	12	22	47	2.9	22
5	1.3	3.2	4.0	167	52	41	98	11	800	39	3.0	15
6	1.3	13	3.8	94	50	36	97	11	174	19	3.0	12
7	1.3	8.3	3.2	63	30	59	72	10	81	12	6.1	9.2
8	1.3	5.1	3.0	42	27	62	62	14	48	10	8.9	7.1
9	1.3	4.0	2.9	33	918	103	62	12	39	13	6.6	6.4
10	1.2	3.4	2.6	17	367	153	49	9.7	244	8.6	9.8	5.1
11	1.1	3.0	1.8	13	169	149	44	8.6	144	7.7	5.6	4.2
12	1.1	2.6	1.5	11	109	220	39	7.7	88	13	3.6	3.6
13	1.0	2.3	1.3	9.0	85	234	37	7.4	85	7.1	2.7	4.6
14	.96	2.1	2.9	8.0	66	199	32	6.1	58	5.1	2.1	9.5
15	.85	2.0	5.8	7.0	69	560	29	5.4	42	4.0	1.9	8.9
16	.92	2.0	3.6	6.4	145	447	27	4.6	34	3.2	9.8	4.9
17	1.3	2.0	2.0	5.6	300	400	29	4.2	140	2.9	11	3.4
18	1.3	1.9	2.2	5.2	238	199	28	3.8	82	2.7	4.6	3.8
19	1.2	1.8	1.5	5.0	166	130	25	6.1	49	3.4	2.6	4.4
20	1.2	2.4	1.3	20	130	96	25	5.6	35	7.7	2.0	3.8
21	1.1	2.7	2.0	252	106	81	23	3.6	25	14	1.9	4.2
22	1.1	2.6	100	185	80	62	20	5.4	19	7.4	1.7	5.9
23	5.4	2.1	173	231	61	52	18	7.7	15	10	1.5	8.0
24	6.6	3.6	89	178	52	46	18	5.6	11	7.1	1.5	4.4
25	4.0	4.4	52	111	41	46	17	13	9.2	4.4	2.6	3.6
26	11	3.6	36	68	33	57	20	14	8.0	3.0	2.4	3.6
27	17	3.2	28	43	37	46	18	16	8.0	2.4	20	8.6
28	8.9	3.2	23	63	61	39	17	95	6.4	4.0	16	7.1
29	5.9	2.9	19	42	---	35	15	43	6.6	4.0	6.4	4.6
30	4.2	2.6	12	32	---	33	14	408	6.9	2.4	4.2	3.4
31	3.2	---	11	51	---	183	---	108	---	25	122	---
TOTAL	95.63	99.0	599.6	2189.2	3634	3981	1467	898.5	2408.1	356.3	287.1	567.3
MEAN	3.08	3.30	19.3	70.6	130	128	48.9	29.0	80.3	11.5	9.26	18.9
MAX	17	13	173	364	918	560	151	408	800	58	122	272
MIN	.85	1.8	1.3	5.0	27	33	14	3.6	6.4	2.4	1.5	3.4
CFSM	.08	.09	.50	1.83	3.38	3.33	1.27	.75	2.09	.30	.24	.49
IN.	.09	.10	.58	2.12	3.51	3.85	1.42	.87	2.33	.34	.28	.55
CAL YR 1981	TOTAL	16420.84	MEAN	45.0	MAX	1010	MIN	.62	CFSM	1.17	IN	15.87
WTR YR 1982	TOTAL	16582.73	MEAN	45.4	MAX	918	MIN	.85	CFSM	1.18	IN	16.02

TWELVEPOLE CREEK BASIN

03206780 EAST LYNN LAKE NEAR EAST LYNN, WV

LOCATION (REVISED).--Lat 38°08'42", long 82°23'02", 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 41.6 (66.9 km).

DRAINAGE AREA.--133 mi² (344 km²).

PERIOD OF RECORD.--March 1972 to current year (monthend contents only).

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

REMARKS.--Reservoir is formed by rockfill dam with impervious core, completed in 1972; closure of dam was made and storage began in March 1972. Spillway is uncontrolled saddle spillway, crest elevation, 701.0 ft (213.66 m). Flow is controlled by one 2.5 ft (0.76 m) diameter bypass valve and three 5.67 ft (1.728 m) wide by 10.0 ft (3.05 m) high sluice 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, 48,230 acre-ft (59.5 hm³) Dec. 12, 1978, elevation, 684.32 ft (208.581 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, 20,000 acre-ft (24.7 hm³) May 30, elevation, 664.68 ft (202.594 m); minimum, 11,800 acre-ft (14.5 hm³) Jan. 20, elevation, 656.11 ft (199.982 m).

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

Date	Elevation (feet)	Contents (acre-feet)	Change in Contents (acre-feet)	(equivalent in cfs)
Sept. 30.....	662.01	17200	-	-
Oct. 31.....	661.68	16870	-330	-5
Nov. 30.....	657.09	12620	-4250	-71
Dec. 31.....	656.18	11860	-760	-12
CAL YR 1981			-460	-1
Jan. 31.....	656.39	12030	+170	+3
Feb. 28.....	656.76	12340	+310	+6
Mar. 31.....	658.82	14150	+1810	+29
Apr. 30.....	662.26	17450	+3300	+55
May 31.....	663.12	18340	+890	+14
June 30.....	662.66	17860	-480	-8
July 31.....	662.83	18040	+180	+3
Aug. 31.....	662.94	18150	+110	+2
Sept. 30.....	662.13	17320	-830	-14
WTR YR 1982			+120	0

TWELVEPOLE CREEK BASIN

283

03206790 EAST FORK TWELVEPOLE CREEK BELOW EAST LYNN DAM, WV

LOCATION.--Lat 38°08'52", long 82°23'00", Wayne County, Hydrologic Unit 05090102, on left bank 800 ft (244 m) downstream from Laurel Creek, 1,700 ft (518 m) downstream from East Lynn Dam, 1.4 mi (2.3 km) south of East Lynn, and at mile 41.7 (67.1 km).

DRAINAGE AREA.--138 mi² (357 km²).

PERIOD OF RECORD.--June 1962 to current year. Prior to October 1967 published as "near East Lynn."

GAGE.--Water-stage recorder. Datum of gage is 610.00 ft (185.928 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Oct. 1, 1981, at datum 10.00 ft (3.048 m) lower. Prior to Oct. 1, 1967, water-stage recorder at site 0.7 mi (1.1 km) downstream.

REMARKS.--Records good below 300 ft³/s (8.50 m³/s) and fair above. Flow regulated since March 1972 by East Lynn Lake (station 03206780).

AVERAGE DISCHARGE.--20 years, 177 ft³/s (5.013 m³/s), 17.42 in/yr (442 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) datum then in use, 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) datum then in use, 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) datum then in use, from floodmarks, discharge, about 12,000 ft³/s (340 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,660 ft³/s (47.0 m³/s) Mar. 17; maximum gage height, 9.97 ft (3.039 m) Mar. 15, backwater; minimum daily, 11 ft³/s (0.31 m³/s) many days October through December.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	11	84	38	240	207	153	45	705	18	16	135
2	11	45	83	37	427	360	29	45	218	17	40	176
3	11	60	72	38	451	341	50	23	124	159	58	178
4	11	55	28	446	308	148	194	15	84	1130	58	174
5	11	52	12	577	193	104	277	12	580	869	59	170
6	11	49	12	538	108	103	382	18	587	210	58	158
7	11	55	11	341	107	177	420	27	250	107	33	103
8	11	54	12	154	107	252	417	27	137	72	22	45
9	11	51	12	107	847	273	355	27	75	70	22	29
10	11	66	11	60	1250	449	218	27	610	67	22	23
11	11	73	11	35	1350	557	156	26	987	38	20	19
12	11	73	11	35	1120	860	74	26	520	25	17	19
13	11	86	11	35	585	1010	40	21	248	23	16	19
14	11	91	11	35	270	975	40	18	224	22	16	20
15	11	88	11	35	117	1360	63	17	163	22	16	20
16	11	87	11	35	530	1460	75	17	74	22	16	20
17	11	85	11	35	1100	1550	109	17	121	16	16	20
18	11	84	12	34	1080	1340	155	17	178	15	16	20
19	11	83	20	34	777	787	168	17	208	15	16	20
20	11	114	25	36	507	517	168	17	190	17	16	20
21	11	119	24	384	360	297	115	17	138	17	16	20
22	11	110	75	707	405	242	56	17	73	18	16	20
23	12	104	432	830	233	182	40	17	45	17	26	20
24	12	99	473	780	106	108	40	19	41	16	31	20
25	11	97	299	760	104	120	40	18	27	16	17	20
26	11	93	152	422	104	184	35	27	20	16	17	20
27	11	90	110	148	104	255	63	32	18	16	19	21
28	11	88	60	103	107	248	70	69	17	17	18	21
29	11	87	37	146	---	244	61	126	21	17	18	20
30	11	85	37	103	---	242	48	872	20	16	17	20
31	11	---	37	141	---	337	---	1180	---	16	41	---
TOTAL	343	2334	2207	7209	12997	15289	4111	2853	6703	3116	789	1590
MEAN	11.1	77.8	71.2	233	464	493	137	92.0	223	101	25.5	53.0
MAX	12	119	473	830	1350	1550	420	1180	987	1130	59	178
MIN	11	11	11	34	104	103	29	12	17	15	16	19

CAL YR 1981 TOTAL 56411 MEAN 155 MAX 1650 MIN 11 MEAN# 154 CFSM# 1.12 IN# 15.15
WTR YR 1982 TOTAL 59541 MEAN 163 MAX 1550 MIN 11 MEAN# 163 CFSM# 1.18 IN# 16.04

* Adjusted for change in contents in East Lynn Lake.

03207020 TWELVEPOLE CREEK BELOW WAYNE, WV

LOCATION (REVISED).--Lat 38°14'56", long 82°26'04", Wayne County, Hydrologic Unit 05090102, on left bank just downstream from bridge on State Highway 52/43, 1.9 mi (3.1 km) northeast of Wayne, and at mile 26.5 (42.6 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. WDR WV-79-1: 1978(m).

GAGE.--Water-stage recorder. Datum of gage is 560.00 ft (170.688 m) National Geodetic Vertical Datum of 1929. Prior to Aug. 29, 1957, nonrecording gage, and Aug. 29, 1957, to Sept. 30, 1966, water-stage recorder at site 2.0 mi (3.2 km) upstream at datum 16.53 ft (5.038 m) higher. Oct. 1, 1966, to Dec. 15, 1966, non-recording gage at present site and datum.

REMARKS.--Records good except those for December and January, which are fair. Flow regulated since March 1972 by East Lynn Lake (station 03206780). Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--40 years (water years 1916-17, 1929-31, 1947-54, 1956-82), 348 ft³/s (9.855 m³/s), 15.75 in/yr (400 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), discharge, 14,000 ft³/s (396 m³/s); flood of Feb. 4, 1939, reached a stage of 31.03 ft (9.458 m), discharge, 22,000 ft³/s (623 m³/s), both at former site and datum, from readings by National Weather Service.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,590 ft³/s (102 m³/s) Mar. 15, gage height, 15.72 ft (4.791 m); minimum discharge, 14 ft³/s (0.40 m³/s) Oct. 1, 4; minimum gage height, 3.59 ft (1.094 m) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	21	106	100	767	297	1080	98	1150	99	74	570
2	16	21	103	117	533	395	545	93	492	70	73	868
3	15	76	99	241	602	452	733	88	325	238	96	440
4	14	76	83	1130	485	320	670	61	250	1630	89	327
5	15	83	31	909	379	262	607	56	567	1230	93	262
6	19	106	23	640	284	246	592	50	1480	487	91	236
7	20	82	22	481	255	327	595	60	580	264	121	178
8	17	92	22	324	232	450	542	65	360	162	124	105
9	16	81	21	230	1790	557	527	64	256	139	139	70
10	16	76	20	160	2580	742	402	63	1590	135	264	60
11	16	97	19	117	1940	943	335	57	1560	114	123	47
12	16	96	19	100	1480	1720	268	55	961	79	78	44
13	15	97	18	90	883	1710	196	52	570	78	60	41
14	15	113	20	84	567	1580	178	43	450	64	50	44
15	15	109	21	78	407	2710	171	40	357	57	44	50
16	16	108	22	75	1170	2960	190	39	260	52	40	47
17	16	106	25	72	1940	2600	220	37	262	48	40	41
18	21	104	26	70	1970	2250	262	35	412	40	63	38
19	20	103	28	68	1400	1260	274	35	343	45	47	39
20	17	117	45	84	1040	910	266	39	315	65	39	38
21	16	140	49	894	643	706	242	46	248	162	36	39
22	16	130	216	1140	613	505	172	48	182	160	33	40
23	28	123	797	1950	485	437	126	61	119	234	32	44
24	29	128	775	1340	214	315	117	65	96	133	49	50
25	23	124	434	1030	272	327	113	59	84	92	38	42
26	30	118	283	707	268	583	114	51	365	70	32	42
27	37	116	205	332	232	505	116	156	375	58	68	51
28	43	112	155	272	252	432	141	208	127	67	86	48
29	37	109	100	268	---	397	127	310	129	136	70	44
30	28	106	89	236	---	375	110	2670	188	67	49	40
31	24	---	87	504	---	697	---	1870	---	85	105	---
TOTAL	641	2970	3963	13843	23683	27970	10031	6674	14453	6360	2346	3985
MEAN	20.7	99.0	128	447	846	902	334	215	482	205	75.7	133
MAX	43	140	797	1950	2580	2960	1080	2670	1590	1630	264	868
MIN	14	21	18	68	214	246	110	35	84	40	32	38

CAL YR 1981 TOTAL 111243 MEAN 305 MAX 3500 MIN 14 MEAN# 304 CFSM# 1.01 IN# 13.76
WTR YR 1982 TOTAL 116919 MEAN 320 MAX 2960 MIN 14 MEAN# 320 CFSM# 1.07 IN# 14.49

* Adjusted for change in contents in East Lynn Lake.

TWELVEPOLE CREEK BASIN

285

03207055 BEECH FORK LAKE NEAR LAVALETTE, WV

LOCATION.--Lat 38°18'14", long 82°24'58", Wayne County, Hydrologic Unit 05090102, at Beech Fork Dam on Beech Fork 2.1 mi (3.4 km) southeast of Lavalette and at mile 3.4 (5.5 km).

DRAINAGE AREA.--79.0 mi² (205 km²), revised.

PERIOD OF RECORD.--January 1978 to current year (monthend contents only).

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

REMARKS.--Reservoir is formed by random earth and rockfill dam with impervious core, completed in 1977. Closure of dam was made and storage began in January 1978. Spillway is uncontrolled, broad-crested, crest elevation 614.5 ft (187.30 m). Low flow is controlled by two 2.5 ft (0.76 m) wide by 3.0 ft (0.91 m) high gates and high flows are controlled by two 4.5 ft (1.37 m) wide by 10 ft (3.05 m) high gates. Total level-pool capacity at elevation 614.5 ft (187.30 m), spillway crest, is 37,500 acre-ft (46.2 hm³) of which 33,300 acre-ft (41.1 hm³) is controlled storage above elevation 583.5 ft (177.85 m), minimum-pool elevation. This is a multipurpose reservoir.

COOPERATION.--Records were furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 19,760 acre-ft (24.4 hm³) Dec. 12, 1978, elevation 602.94 ft (183.78 m), minimum since initial filling, 3,446 acre-ft (4.25 hm³), elevation 581.75 ft (177.32 m) Dec. 17, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 12,510 acre-ft (15.4 hm³) May 30, elevation 596.17 ft (181.713 m), minimum, 4,087 acre-ft (5.04 hm³) Mar. 23, elevation 583.24 ft (177.772 m).

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)	(equivalent in cfs)
Sept. 30.....	590.01	7815	-	-
Oct. 31.....	589.16	7271	-544	-9
Nov. 30.....	587.35	6188	-1083	-18
Dec. 31.....	584.45	4655	-1533	-25
CAL YR 1981			+282	0
Jan. 31.....	584.74	4797	+142	+2
Feb. 28.....	583.49	4200	-597	-11
Mar. 31.....	584.46	4660	+460	+7
Apr. 30.....	589.21	7302	+2642	+44
May 31.....	593.68	10440	+3138	+51
June 30.....	592.25	9360	-1080	-18
July 31.....	592.37	9447	+87	+1
Aug. 31.....	592.53	9565	+118	+2
Sept. 30.....	591.71	8972	-593	-10
WTR YR 1982			+1157	+2

TWELVEPOLE CREEK BASIN

03207057 BEECH FORK BELOW BEECH FORK DAM, WV

LOCATION.--Lat 38°18'18", long 82°25'28", Wayne County, Hydrologic Unit 05090102, on left bank 2,500 ft (762 m) downstream from Beech Fork Dam, and 1.7 mi (2.7 km) southeast of Lavalette and at mile 3.0 (4.8 km).

DRAINAGE AREA.--79.2 mi² (205 km²), revised.

PERIOD OF RECORD.--July 1976 to current year.

GAGE.--Water-stage recorder. Datum of gage is 549.54 ft (167.500 m), National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to June 12, 1979, at datum 0.46 ft (0.140 m) higher.

REMARKS.--Records fair except October to January, which are poor. Flow regulated since January 1978 by Beech Fork Lake (station 03207055).

AVERAGE DISCHARGE.--6 years, 91.3 ft³/s (2.586 m³/s), 15.65 in/yr (398 mm/yr), unadjusted.

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 (0.046 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,100 ft³/s (31.2 m³/s) May 30, gage height, 7.14 ft (2.176 m); minimum daily, 8.0 ft³/s (0.23 m³/s) Oct. 24, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	8.2	17	79	368	31	121	13	508	37	14	67
2	23	8.2	17	79	362	24	14	13	168	15	14	97
3	23	8.2	17	80	244	37	19	13	103	15	12	42
4	23	11	17	89	90	32	15	13	33	18	10	14
5	15	19	17	85	130	23	15	13	34	87	10	14
6	8.9	19	17	85	90	31	15	14	62	67	12	14
7	9.2	17	17	87	89	67	14	16	52	39	12	14
8	9.2	16	17	85	40	192	14	15	23	39	13	13
9	9.2	16	17	85	587	204	13	15	16	39	13	13
10	9.2	32	17	85	701	204	12	14	554	39	186	12
11	9.2	57	57	84	198	210	12	11	484	39	174	12
12	9.2	49	89	84	121	649	12	11	76	39	39	12
13	9.2	46	87	84	84	618	12	12	67	38	14	13
14	9.2	46	86	83	82	407	12	12	42	36	14	13
15	9.2	45	84	83	81	748	12	12	33	36	13	13
16	9.6	26	85	83	271	794	12	12	21	36	12	13
17	12	16	89	80	580	486	13	12	16	36	11	13
18	12	16	88	52	572	171	13	12	16	36	12	13
19	9.2	16	86	21	275	123	13	12	16	25	12	13
20	9.2	17	77	20	177	46	13	14	16	14	12	12
21	9.2	17	77	105	112	134	13	15	16	14	11	12
22	9.2	17	83	262	52	431	13	16	15	22	11	13
23	9.5	17	86	664	41	134	14	15	14	144	11	12
24	8.0	17	83	794	48	44	13	15	14	70	12	12
25	8.0	37	83	693	42	71	13	15	15	12	13	12
26	8.2	50	83	233	33	212	13	12	16	12	13	13
27	8.2	50	82	49	31	156	13	12	44	12	57	13
28	8.2	50	81	37	31	74	13	14	61	16	61	13
29	8.2	50	81	25	---	149	13	16	42	15	13	13
30	8.2	29	79	25	---	79	13	366	146	14	14	13
31	8.2	---	79	142	---	257	---	1080	---	14	14	---
TOTAL	334.8	822.6	1895	4542	5532	6838	507	1835	2723	1075	839	553
MEAN	10.8	27.4	61.1	147	198	221	16.9	59.2	90.8	34.7	27.1	18.4
MAX	23	57	89	794	701	794	121	1080	554	144	186	97
MIN	8.0	8.2	17	20	31	23	12	11	14	12	10	12

CAL YR 1981 TOTAL 21674.0 MEAN 59.4 MAX 991 MIN 7.9 MEAN# 59.4 CFSM# 0.75 IN# 10.18
WTR YR 1982 TOTAL 27496.4 MEAN 75.3 MAX 1080 MIN 8.0 MEAN# 77.3 CFSM# 0.98 IN# 13.25

* Adjusted for change in contents in Beech Fork Lake near Lavalette.

BIG SANDY RIVER BASIN

287

03212558 PUNCHEONCAMP BRANCH AT LECKIE, WV

LOCATION.--Lat 37°20'37", long 81°24'42", McDowell County, Hydrologic Unit 05070201, on right bank at Leckie, 1,500 ft (457 m) upstream from mouth and Little Creek, and 1.5 mi (2.4 km) northeast of Anawalt.

DRAINAGE AREA.--1.36 mi² (3.52 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1980 to September 1982 (discontinued).

GAGE.--Water-stage and rainfall recorders. Datum of gage is 1,780.00 ft (542.544 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good except those for December and January, which are poor. Rainfall records collected at site are contained in files of U.S. Geological Survey with only monthly totals published in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26 ft³/s (0.74 m³/s) Feb. 3, 1982, gage height, 2.48 ft (0.756 m), from rating curve extended above 10 ft³/s (0.28 m³/s); minimum daily, 0.05 ft³/s (0.001 m³/s) Jan. 6, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 26 ft³/s (0.74 m³/s) Feb. 3, gage height, 2.48 ft (0.756 m), from rating curve extended as explained above; minimum, 0.12 ft³/s (0.003 m³/s) Sept. 12, gage height, 1.60 ft (0.488 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.24	.21	.20	.71	.90	1.8	1.6	.99	1.5	.64	.27	1.1
2	.29	.21	.19	.64	1.2	2.4	1.5	1.1	1.1	.60	.16	.40
3	.20	.21	.18	4.7	11	2.1	1.4	1.1	.89	.66	.24	.30
4	.18	.18	.24	3.2	4.1	1.8	1.3	1.0	1.2	.65	.21	.27
5	.19	.21	.24	1.6	2.8	1.7	1.3	1.0	1.7	.60	.30	.24
6	.21	.26	.21	1.1	2.3	1.5	1.3	.97	1.3	.52	.30	.21
7	.21	.20	.21	1.1	2.0	3.3	1.1	.94	1.1	.52	.27	.18
8	.18	.18	.20	.90	1.8	3.0	1.1	1.0	1.1	.48	.57	.16
9	.18	.18	.19	.75	2.9	2.7	1.1	.89	2.8	.48	.48	.16
10	.18	.18	.18	.65	2.8	2.4	1.0	.83	9.2	.44	.36	.15
11	.18	.18	.16	.57	2.4	2.5	.97	.79	3.5	.57	.30	.15
12	.18	.18	.15	.50	2.0	2.4	.94	.77	4.2	.48	.27	.14
13	.18	.18	.14	.46	1.8	2.9	.96	.73	7.7	.44	.27	.14
14	.18	.17	.34	.42	1.6	3.0	.92	.71	4.9	.43	.24	.38
15	.18	.18	.45	.39	1.6	5.6	.88	.66	3.8	.38	.21	.25
16	.18	.18	.42	.36	3.3	5.3	.85	.65	3.1	.40	.21	.18
17	.18	.20	.39	.33	7.8	4.8	.90	.62	2.6	.40	.21	.16
18	.19	.18	.35	.32	5.4	4.3	.83	.60	2.1	.40	.24	.16
19	.19	.17	.28	.90	4.0	4.2	.79	.70	1.8	.44	.18	.16
20	.18	.28	.24	2.4	3.5	4.8	.84	1.3	1.4	.48	.18	.16
21	.17	.20	.30	7.0	3.3	5.6	.78	1.0	1.3	.40	.18	.19
22	.17	.18	.50	3.2	2.8	4.9	.70	.76	1.2	.48	.16	.18
23	.35	.17	1.4	2.5	2.5	4.2	.66	1.1	1.1	.40	.18	.16
24	.24	.33	.80	1.8	2.3	3.7	.67	1.6	.97	.36	.18	.14
25	.21	.27	.58	1.5	1.9	3.3	.77	1.3	.89	.33	.36	.14
26	.27	.24	.48	1.1	1.6	2.9	2.0	1.0	.88	.30	.21	.21
27	.52	.25	.42	.90	1.6	2.5	1.6	1.0	.85	.30	.18	.21
28	.36	.22	.36	.80	1.5	2.2	1.3	.96	.77	.36	.18	.16
29	.28	.19	.32	.70	---	2.0	1.1	1.0	.75	.33	.16	.16
30	.24	.18	.28	.70	---	1.8	1.0	.96	.71	.36	.16	.14
31	.21	---	.49	.98	---	1.8	---	1.0	---	.44	.52	---
TOTAL	6.90	6.15	10.89	43.18	82.70	97.4	32.16	29.03	66.41	14.07	7.94	6.74
MEAN	.22	.21	.35	1.39	2.95	3.14	1.07	.94	2.21	.45	.26	.22
MAX	.52	.33	1.4	7.0	11	5.6	2.0	1.6	9.2	.66	.57	1.1
MIN	.17	.17	.14	.32	.90	1.5	.66	.60	.71	.30	.16	.14
CFSM	.16	.15	.26	1.02	2.17	2.31	.79	.69	1.63	.33	.19	.16
IN.†	.19	.17	.30	1.18	2.26	2.66	.88	.79	1.82	.38	.22	.18
IN.‡	2.55	1.11	2.61	3.81	4.08	3.71	1.83	4.14	4.54	2.83	3.57	2.51

CAL YR 1981 TOTAL 368.10 MEAN 1.01 MAX 12 MIN .05 CFSM .74 IN 10.06
WTR YR 1982 TOTAL 403.57 MEAN 1.11 MAX 11 MIN .14 CFSM .82 IN 11.03

† Runoff.

‡ Rainfall.

03212558 PUNCHEONCAMP BRANCH AT LECKIE, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1980 to September 1982, discontinued.

PERIOD OF DAILY RECORD.--

SUSPENDED SEDIMENT DISCHARGE: October 1980 to September 1981.

EXTREMES FOR PERIOD OF RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 841 mg/L July 14, 1981; minimum daily mean, 1 mg/L many days during year.

SEDIMENT LOADS: Maximum daily, 17 tons (15 metric tons) July 14, 1981; minimum daily, 0 ton (0 metric ton) many days during year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

[illegible]

BIG SANDY RIVER BASIN

289

03212567 FREEMAN BRANCH NEAR SKYGUSTY, WV

LOCATION.--Lat 37°16'28", long 81°29'15", McDowell County, Hydrologic Unit 05070201, on right bank 1,000 ft (305 m) upstream from mouth, 0.5 mi (0.8 km) north of Monson, and 8 mi (13 km) southeast of Gary.

DRAINAGE AREA.--0.30 mi² (0.78 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1980 to September 1982 (discontinued).

GAGE.--Water-stage and rainfall recorders. Datum of gage is 1,960.00 ft (597.408 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good except those for December and January, which are poor. Rainfall records collected at site are contained in files of U.S. Geological Survey with only monthly totals published in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 90 ft³/s (2.55 m³/s) June 9, 1982, gage height, 3.02 ft (0.920 m), on basis of slope area measurement of peak flow; no flow several days during 1981 and 1982.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 90 ft³/s (2.55 m³/s) June 9, gage height 3.02 ft (0.920 m), on basis of slope area measurement of peak flow; no flow several days during year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	.03	.01	.12	.14	.28	.20	.18	.39	.12	.08	.35
2	.04	.01	.01	.08	.23	.28	.19	.18	.19	.12	.08	.18
3	.03	.01	.01	.77	1.9	.27	.18	.18	.14	.14	.06	.07
4	.03	.02	.01	.68	.70	.24	.18	.15	.26	.26	.05	.05
5	.03	.02	.02	.34	.40	.24	.18	.13	.56	.25	.07	.04
6	.03	.02	.02	.21	.30	.22	.18	.12	.30	.16	.06	.04
7	.03	.01	.02	.20	.24	.53	.16	.12	.21	.12	.06	.04
8	.03	.01	.01	.16	.21	.46	.15	.12	.22	.15	.08	.02
9	.03	.01	.01	.12	.38	.40	.15	.11	5.2	.19	.21	.02
10	.04	.01	.01	.10	.39	.35	.15	.10	3.9	.14	.14	.02
11	.04	.01	.01	.09	.32	.31	.15	.08	.87	.12	.08	.01
12	.03	.01	.01	.07	.28	.29	.14	.07	1.7	.11	.07	.01
13	.04	.00	.01	.06	.26	.35	.15	.06	1.4	.40	.08	.01
14	.04	.00	.04	.05	.22	.36	.15	.06	.79	.52	.05	.06
15	.03	.01	.07	.04	.22	.62	.14	.05	.49	.21	.04	.04
16	.03	.01	.06	.04	.45	.57	.12	.05	.39	.16	.04	.01
17	.04	.01	.06	.03	1.1	.42	.12	.04	.32	.28	.03	.01
18	.03	.00	.04	.02	.79	.35	.12	.04	.30	.60	.03	.01
19	.03	.01	.03	.20	.54	.33	.11	.07	.28	.40	.03	.01
20	.02	.02	.02	.36	.45	.39	.12	.17	.24	.37	.03	.01
21	.01	.01	.02	.86	.39	.44	.11	.20	.21	.25	.03	.01
22	.04	.01	.31	.52	.34	.42	.09	.12	.21	.19	.02	.02
23	.05	.01	.24	.39	.29	.36	.09	.70	.18	.16	.03	.01
24	.02	.03	.15	.28	.27	.30	.09	1.0	.18	.14	.01	.00
25	.01	.02	.12	.21	.23	.28	.11	.35	.16	.12	.08	.01
26	.03	.01	.09	.15	.21	.28	.32	.22	.13	.12	.04	.03
27	.06	.01	.07	.12	.24	.25	.25	.20	.15	.10	.02	.01
28	.05	.01	.05	.10	.26	.22	.26	.15	.15	.09	.02	.01
29	.03	.01	.04	.08	---	.21	.22	.14	.15	.10	.01	.01
30	.02	.01	.04	.07	---	.21	.19	.11	.14	.09	.01	.00
31	.03	---	.10	.15	---	.21	---	.13	---	.10	.18	---
TOTAL	1.01	.36	1.71	6.67	11.75	10.44	4.77	5.40	19.81	6.28	1.82	1.12
MEAN	.033	.012	.055	.22	.42	.34	.16	.17	.66	.20	.059	.037
MAX	.06	.03	.31	.86	1.9	.62	.32	1.0	5.2	.60	.21	.35
MIN	.01	.00	.01	.02	.14	.21	.09	.04	.13	.09	.01	.00
CFSM	.11	.04	.18	.73	1.40	1.13	.53	.57	2.20	.67	.20	.12
IN.†	.12	.04	.21	.82	1.45	1.29	.59	.67	2.45	.78	.22	.14
IN.‡	2.21	1.18	2.51	3.69	4.50	3.25	1.84	4.62	7.84	4.39	2.91	1.76

CAL YR 1981 TOTAL 57.50 MEAN .16 MAX 2.1 MIN .00 CFSM .53 IN 7.11
WTR YR 1982 TOTAL 71.14 MEAN .19 MAX 5.2 MIN .00 CFSM .63 IN 8.79

† Runoff.
‡ Rainfall.

BIG SANDY RIVER BASIN

03212567 FREEMAN BRANCH NEAR SKYGUSTY, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1980 to September 1982, discontinued.

PERIOD OF DAILY RECORD.--

SUSPENDED SEDIMENT DISCHARGE: October 1980 to September 1981.

EXTREMES FOR PERIOD OF RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 629 mg/L July 14, 1981; minimum daily mean detected, 1 mg/L Mar. 9, 1981.

SEDIMENT LOADS: Maximum daily, 3.9 tons (3.5 metric tons) July 14, 1981; minimum daily, 0 ton (0 metric ton) many days during year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

						STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)					
DATE						TIME								
OCT														
06...						1615	.03	590	7.4	15.0				
07...						0910	.02	--	--	10.5				
DEC														
09...						1320	.01	518	7.6	2.0				
30...						1230	.03	545	7.5	--				
JAN														
20...						1402	.36	420	7.2	3.5				
FEB														
03...						1415	2.1	290	6.8	6.0				
10...						1050	.40	430	7.2	2.5				
MAR														
01...						1010	.28	520	7.4	5.5				
22...						1420	.40	500	7.3	10.5				
APR														
12...						1300	.12	670	7.6	14.0				
MAY														
03...						1355	.18	520	7.8	16.5				
24...						1540	.72	395	6.9	15.0				
JUN														
14...						1410	.79	410	7.5	16.0				
JUL														
06...						1400	.15	500	9.2	20.0				
26...						1400	.12	560	7.0	20.5				
AUG														
17...						1000	.02	580	9.0	--				
SEP														
07...						1500	.02	400	8.1	17.5				
21...						0910	.01	550	7.2	14.5				

DATE	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	ACIDITY (MG/L AS H)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	ALKA- LITY FIELD (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT										
06...	9.2	267	237	.0	51	34	8.1	30	2.2	220

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT									
06...	.7	402	.03	200	200	5	20	20	5

BIG SANDY RIVER BASIN

291

03212580 LEFT FORK SANDLICK CREEK AT ELBERT, WV

LOCATION.--Lat 37°20'08", long 81°31'39", McDowell County, Hydrologic Unit 05070201, on right bank 0.7 mi (1.1 km) upstream from mouth, and 0.7 (1.1 km) east of Elbert.

DRAINAGE AREA.--1.78 mi² (4.61 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1980 to September 1982 (discontinued).

GAGE.--Water-stage and rainfall recorders. Datum of gage is 1,610.00 ft (490.728 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good except those for December, January, and March, which are poor. Rainfall records collected at site are contained in files of U.S. Geological Survey with only monthly totals published in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15 ft³/s (0.42 m³/s) June 1, 1981, gage height, 2.45 ft (0.747 m) from rating curve extended above 12 ft³/s (0.34 m³/s); minimum daily, 0.05 ft³/s (0.001 m³/s) Jan. 6, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14 ft³/s (0.40 m³/s) Feb. 3, gage height, 2.41 ft (0.735 m) from rating curve extended as explained above; minimum daily, 0.14 ft³/s (0.004 m³/s) Dec. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.30	.30	.22	.54	1.8	3.1	2.9	1.2	2.4	1.2	.85	2.0
2	.40	.30	.23	.46	2.0	2.8	2.7	1.3	1.4	1.1	.53	1.1
3	.29	.30	.22	3.9	8.9	2.7	2.6	1.3	1.2	1.4	.48	.69
4	.26	.30	.28	4.2	5.2	2.6	2.4	1.3	1.4	3.4	.44	.54
5	.26	.34	.27	2.1	4.4	2.6	2.3	1.3	2.0	2.6	.68	.48
6	.45	.42	.22	1.3	4.3	2.5	2.3	1.3	1.4	1.4	2.0	.45
7	.50	.32	.22	1.5	3.9	4.1	2.1	1.3	1.2	1.2	3.2	.43
8	.32	.29	.22	1.2	3.6	3.3	2.0	1.4	1.2	1.2	2.9	.43
9	.30	.26	.21	1.0	4.5	3.0	2.0	1.3	1.3	1.1	4.1	.43
10	.26	.26	.19	.80	3.8	2.9	1.8	1.2	4.0	.99	1.9	.39
11	.26	.26	.17	.65	3.4	2.9	1.7	1.2	2.2	1.6	1.2	.38
12	.26	.26	.16	.55	3.2	3.2	1.6	1.1	2.9	1.4	.96	.38
13	.26	.26	.14	.48	3.2	3.8	1.5	1.1	4.5	1.1	.78	.36
14	.26	.26	.35	.43	3.0	3.5	1.5	1.1	3.3	1.2	.68	1.3
15	.26	.26	.45	.37	3.0	6.0	1.4	1.3	3.0	.89	.62	.71
16	.26	.25	.41	.34	4.4	5.7	1.4	1.0	2.9	.79	.59	.48
17	.25	.28	.37	.30	6.8	5.6	1.3	.96	2.8	.75	.55	.42
18	.24	.26	.30	.27	6.0	5.5	1.3	.90	2.5	.70	.70	.40
19	.29	.27	.25	.87	6.1	5.7	1.2	1.2	2.3	.69	.54	.40
20	.24	.34	.22	1.3	5.7	6.0	1.2	1.7	2.1	.93	.50	.40
21	.21	.29	.19	.79	5.4	6.5	1.2	1.6	1.9	.66	.50	.40
22	.19	.25	.84	3.6	5.0	5.8	1.1	1.2	1.9	.72	.48	.40
23	.57	.22	1.1	2.9	4.4	5.4	1.0	1.2	1.7	.80	.45	.36
24	.43	.37	.81	2.3	4.1	4.8	1.0	1.4	1.6	.59	.45	.34
25	.30	.30	.59	1.9	3.6	4.5	1.1	1.1	1.5	.53	.93	.35
26	.49	.26	.51	1.5	3.3	4.2	1.9	1.2	1.6	.49	.64	.39
27	1.1	.27	.48	1.3	3.5	3.9	1.5	1.5	1.9	.48	.48	.43
28	.69	.25	.45	1.2	3.3	3.7	1.5	1.3	1.3	.54	.45	.37
29	.46	.22	.40	1.0	---	3.6	1.3	1.1	1.4	.56	.43	.33
30	.38	.22	.35	.90	---	3.3	1.3	1.0	1.4	.57	.40	.30
31	.33	---	.54	1.9	---	3.3	---	1.1	---	1.2	1.2	---
TOTAL	11.07	8.44	11.36	41.85	119.8	126.5	50.1	38.16	62.2	32.78	30.61	15.84
MEAN	.36	.28	.37	1.35	4.28	4.08	1.67	1.23	2.07	1.06	.99	.53
MAX	1.1	.42	1.1	4.2	8.9	6.5	2.9	1.7	4.5	3.4	4.1	2.0
MIN	.19	.22	.14	.27	1.8	2.5	1.0	.90	1.2	.48	.40	.30
CFSM	.20	.16	.21	.76	2.40	2.29	.94	.69	1.16	.60	.56	.30
IN.†	.23	.18	.24	.87	2.50	2.64	1.05	.80	1.30	.68	.64	.33
IN.‡	3.07	1.02	2.43	3.88	3.63	3.43	1.86	3.72	4.32	5.05	5.28	1.90

CAL YR 1981 TOTAL 464.68 MEAN 1.27 MAX 12 MIN .05 CFSM .71 IN 9.71
WTR YR 1982 TOTAL 548.71 MEAN 1.50 MAX 8.9 MIN .14 CFSM .84 IN 11.46

† Runoff.
‡ Rainfall.

BIG SANDY RIVER BASIN

03212580 LEFT FORK SANDLICK CREEK AT ELBERT, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1980 to September 1982, discontinued.

PERIOD OF DAILY RECORD.--

SUSPENDED SEDIMENT DISCHARGE: October 1980 to September 1981.

EXTREMES FOR PERIOD OF RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 98 mg/L Sept. 3, 1981; minimum daily mean, 0 mg/L several days during year.

SEDIMENT LOADS: Maximum daily, 1.3 tons (1.2 metric tons) June 1, 1981; minimum daily, 0 ton (0 metric ton) many days during year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

		DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)			
		OCT								
		01...	1230	.26	890	5.2	15.0			
		06...	1315	.18	860	5.8	15.0			
		20...	1240	.18	850	5.8	9.5			
		20...	1300	.22	850	5.8	9.5			
		NOV								
		09...	1500	.26	840	6.2	9.5			
		DEC								
		02...	1045	.26	870	6.2	6.0			
		22...	1050	.70	710	--	--			
		JAN								
		12...	1040	.55	740	5.6	.0			
		FEB								
		03...	1140	12	605	5.1	5.5			
		22...	1230	4.7	840	4.6	6.5			
		MAR								
		15...	1335	7.1	750	4.8	9.5			
		APR								
		05...	1320	2.2	900	4.5	--			
		26...	1415	1.6	830	4.6	15.0			
		MAY								
		17...	1355	.90	1010	4.4	22.0			
		JUN								
		07...	1425	1.2	862	4.6	20.0			
		28...	1330	1.4	920	4.4	23.0			
		JUL								
		19...	1440	.62	890	4.6	24.0			
		AUG								
		09...	1450	2.5	580	6.0	21.0			
		31...	1010	1.5	690	5.4	18.0			
		SEP								
		20...	1330	.38	780	5.0	16.0			

DATE	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	ACIDITY (MG/L AS H)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	ALKA- LINITY FIELD (MG/L AS CAC03)	CARRON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT										
06...	9.5	388	386	1.7	81	45	6.9	2	7.5	400
20...	--	388	385	--	83	44	6.9	3	8.8	400

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT									
06...	.3	668	.32	930	210	720	3300	200	3100
20...	.8	673	.40	1400	570	830	4200	1000	3200

BIG SANDY RIVER BASIN

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03212585 RIGHT FORK SANDLICK CREEK NEAR GARY, WV

LOCATION.--Lat 37°20'51", long 81°34'01", McDowell County, Hydrologic Unit 05070201, on left bank 1.3 mi (2.1 km) upstream from mouth and 1.5 mi (2.4 km) southwest of Gary.

DRAINAGE AREA.--1.21 mi² (3.13 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1980 to September 1982 (discontinued).

GAGE.--Water-stage and rainfall recorders. Datum of gage is 1,640.00 ft (499.872 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good except those for January, which are poor. Rainfall records collected at site are contained in files of U.S. Geological Survey with only monthly totals published in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 26 ft³/s (0.03 m³/s) June 6, 1981, gage height, 2.49 ft (0.759 m) from rating curve extended above 14 ft³/s (0.40 m³/s); no flow many days during 1981 and 1982.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 25 ft³/s (0.71 m³/s) Feb. 3, gage height, 2.47 ft (0.753 m), from rating curve extended as explained above; no flow many days during year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.11	.49	.83	.64	.85	.23	.01	.03	.12
2	.00	.00	.00	.10	.74	.91	.60	.78	.11	.00	.00	.01
3	.00	.00	.00	2.1	10	.93	.57	.68	.07	.14	.00	.00
4	.00	.00	.00	2.5	5.4	.90	.48	.61	.16	.49	.00	.00
5	.00	.00	.00	1.0	3.2	.84	.47	.53	.24	.20	.08	.00
6	.00	.00	.00	.56	2.3	.78	.46	.49	.16	.06	.01	.00
7	.00	.00	.00	.48	1.6	1.8	.37	.45	.11	.01	.01	.00
8	.00	.00	.00	.34	1.2	1.7	.37	.45	.12	.01	.33	.00
9	.00	.00	.00	.22	1.8	1.5	.37	.38	.12	.00	.36	.00
10	.00	.00	.00	.16	1.6	1.4	.30	.32	.84	.12	.20	.00
11	.00	.00	.00	.12	1.5	1.5	.28	.29	.49	.11	.08	.00
12	.00	.00	.00	.08	1.3	1.4	.27	.28	.65	.05	.02	.00
13	.00	.00	.00	.06	1.2	1.6	.25	.25	1.3	.96	.01	.00
14	.00	.00	.00	.04	1.0	1.6	.22	.22	1.1	1.1	.00	.03
15	.00	.00	.00	.03	.98	3.7	.20	.19	.82	.32	.00	.00
16	.00	.00	.00	.02	2.1	4.5	.18	.17	.66	.18	.00	.00
17	.00	.00	.00	.02	4.5	3.6	.18	.14	.53	.10	.00	.00
18	.00	.00	.00	.01	4.3	2.8	.16	.12	.41	.10	.06	.00
19	.00	.00	.00	.15	3.5	2.5	.14	.23	.33	.05	.00	.00
20	.00	.00	.00	1.6	2.8	2.5	.14	.34	.27	.12	.00	.00
21	.00	.00	.00	6.1	2.3	2.8	.12	.25	.22	.02	.00	.00
22	.00	.00	.19	5.7	1.8	2.7	.09	.20	.22	.01	.00	.00
23	.00	.00	.54	2.3	1.4	2.4	.07	.15	.16	.01	.00	.00
24	.00	.00	.28	1.6	1.2	2.0	.06	.12	.12	.00	.00	.00
25	.00	.00	.17	1.2	.96	1.7	.10	.08	.09	.00	.01	.00
26	.00	.00	.11	.88	.81	1.4	.47	.22	.12	.00	.00	.00
27	.00	.00	.07	.60	.83	1.2	.70	.54	.10	.00	.00	.00
28	.00	.00	.03	.50	.79	1.0	1.2	.36	.05	.00	.00	.00
29	.00	.00	.01	.47	---	.85	.96	.24	.05	.00	.00	.00
30	.00	.00	.00	.44	---	.77	.90	.18	.04	.02	.00	.00
31	.00	---	.08	.56	---	.75	---	.15	---	.14	.05	---
TOTAL	.00	.00	1.48	30.05	61.60	54.86	11.32	10.26	9.89	4.33	1.25	.16
MEAN	.000	.000	.048	.97	2.20	1.77	.38	.33	.33	.14	.040	.005
MAX	.00	.00	.54	6.1	10	4.5	1.2	.85	1.3	1.1	.36	.12
MIN	.00	.00	.00	.01	.49	.75	.06	.08	.04	.00	.00	.00
CFSM	.000	.000	.04	.80	1.82	1.46	.31	.27	.27	.12	.03	.004
IN.†	.00	.00	.05	.92	1.89	1.69	.35	.32	.30	.13	.04	.00
IN.*	2.83	1.12	2.70	4.07	4.30	3.70	2.10	3.67	4.15	6.31	4.17	1.91

CAL YR 1981 TOTAL 185.89 MEAN .51 MAX 16 MIN .00 CFSM .42 IN 5.71
WTR YR 1982 TOTAL 185.20 MEAN .51 MAX 10 MIN .00 CFSM .42 IN 5.69

† Runoff.
* Rainfall.

BIG SANDY RIVER BASIN

03212585 RIGHT FORK SANDLICK CREEK NEAR GARY, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1980 to September 1982, discontinued.

PERIOD OF DAILY RECORD.--

SUSPENDED SEDIMENT DISCHARGE: October 1980 to September 1981.

EXTREMES FOR PERIOD OF RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 529 mg/L May 19, 1981; minimum daily mean detected, 0 mg/L Feb. 1, 9, 1981

SEDIMENT LOADS: Maximum daily, 13 tons (12 metric tons) June 6, 1981; minimum daily, 0 ton (0 metric ton) many days during year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
JAN					
21...	1020	8.0	89	7.9	--
FEB					
03...	1255	14	93	7.2	5.5
09...	1525	1.8	215	7.5	6.0
MAR					
01...	1430	.83	265	7.7	8.0
22...	1150	2.6	250	7.7	--
APR					
12...	1120	.26	320	8.1	10.5
MAY					
03...	1155	.71	300	8.0	13.0
24...	1400	.10	338	7.2	17.5
JUN					
14...	1150	1.2	180	8.5	15.0
JUL					
06...	1150	.06	270	9.0	18.0

BIG SANDY RIVER BASIN

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03212703 ELKHORN CREEK TRIBUTARY AT WELCH, WV

LOCATION.--Lat 37°25'45", long 81°34'02", McDowell County, Hydrologic Unit 05070201, on left bank 0.1 mi (0.2 km) southeast of Stevens Clinic Hospital, and 0.2 mi (0.3 km) upstream from mouth and Elkhorn Creek.

DRAINAGE AREA.--0.63 mi² (1.63 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1980 to September 1982 (discontinued).

GAGE.--Water-stage and rainfall recorders. Datum of gage is 1,360.00 ft (414.528 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good except those for December and January, which are poor. Rainfall records collected at site are contained in files of U.S. Geological Survey with only monthly totals published in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 79 ft³/s (2.24 m³/s) July 6, 1981, gage height, 2.84 ft (0.866 m), from rating curve extended above 58 ft³/s (1.64 m³/s); no flow many days during 1981 and 1982.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17 ft³/s (0.48 m³/s) July 17, gage height, 2.31 ft (0.704 m); no flow many days during year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.00	.00	.13	.33	.42	.42	.05	.06	.02	.10	3.0
2	.03	.00	.00	.06	.35	.42	.35	.06	.03	.01	.03	.44
3	.01	.00	.00	1.1	2.7	.42	.35	.10	.03	.04	.02	.17
4	.01	.00	.01	.73	.79	.37	.32	.05	.07	.05	.02	.08
5	.00	.01	.00	.33	.60	.35	.29	.04	.19	.06	.60	.07
6	.00	.00	.00	.27	.56	.35	.28	.04	.05	.02	.19	.07
7	.00	.00	.00	.27	.50	.58	.25	.04	.04	.01	.41	.07
8	.00	.00	.00	.24	.50	.45	.24	.04	.03	.01	1.4	.07
9	.00	.00	.00	.20	.68	.42	.25	.04	.03	.01	.79	.06
10	.00	.00	.00	.17	.51	.42	.24	.04	.37	.00	.68	.06
11	.00	.00	.00	.15	.49	.42	.20	.04	.08	.10	.15	.06
12	.00	.00	.00	.15	.43	.42	.19	.03	.11	.09	.09	.06
13	.00	.00	.00	.12	.42	.49	.18	.03	.24	.01	.05	.05
14	.00	.00	.01	.09	.42	.50	.15	.03	.10	.01	.05	.23
15	.00	.00	.02	.07	.41	.96	.15	.03	.05	.01	.05	.10
16	.00	.00	.01	.06	1.3	2.4	.12	.02	.04	.00	.05	.05
17	.00	.00	.03	.05	1.9	1.2	.12	.02	.04	1.5	.05	.04
18	.00	.00	.01	.04	1.1	.98	.09	.02	.03	.96	.05	.04
19	.00	.00	.00	.16	.85	.90	.08	.03	.03	.06	.05	.03
20	.00	.01	.00	.38	.75	.81	.07	.05	.03	.53	.05	.03
21	.00	.00	.02	3.8	.66	.76	.06	.08	.03	.05	.05	.03
22	.00	.00	.10	.80	.58	.70	.05	.03	.03	.08	.05	.03
23	.01	.00	.38	.61	.52	.60	.05	.03	.03	.12	.04	.03
24	.00	.01	.20	.45	.47	.56	.05	.03	.03	.03	.04	.03
25	.00	.00	.11	.40	.42	.52	.06	.03	.03	.02	.31	.02
26	.01	.00	.07	.32	.42	.52	.21	.04	.03	.02	.05	.02
27	.19	.00	.05	.27	.41	.49	.13	.30	.02	.01	.04	.02
28	.06	.00	.04	.23	.49	.42	.08	.10	.02	.05	.03	.01
29	.02	.00	.03	.20	---	.42	.07	.13	.02	.07	.03	.01
30	.01	.00	.03	.17	---	.40	.06	.09	.02	.02	.02	.00
31	.01	---	.08	.35	---	.43	---	.04	---	.68	1.4	---
TOTAL	.37	.03	1.20	12.37	19.56	19.10	5.16	1.70	1.91	4.65	6.94	4.98
MEAN	.012	.001	.039	.40	.70	.62	.17	.055	.064	.15	.22	.17
MAX	.19	.01	.38	3.8	2.7	2.4	.42	.30	.37	1.5	1.4	3.0
MIN	.00	.00	.00	.04	.33	.35	.05	.02	.02	.00	.02	.00
CFSM	.02	.002	.06	.64	1.11	.98	.27	.09	.10	.24	.35	.27
IN.†	.02	.00	.07	.73	1.15	1.13	.30	.10	.11	.27	.41	.29
IN.‡	2.23	1.15	2.28	3.55	4.31	4.08	1.48	3.31	2.94	6.19	5.47	2.40
CAL YR 1981 TOTAL	115.69											
WTR YR 1982 TOTAL	77.97											
MEAN	.32											
MAX	6.8											
MIN	.00											
CFSM	.51											
IN	6.82											
IN	4.60											

† Runoff.
‡ Rainfall.

BIG SANDY RIVER BASIN

03212703 ELKHORN CREEK TRIBUTARY AT WELCH, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1980 to September 1982, discontinued.

PERIOD OF DAILY RECORD.--

SUSPENDED SEDIMENT DISCHARGE: October 1980 to September 1981.

EXTREMES FOR PERIOD OF RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 5,350 mg/L July 14, 1981; minimum daily mean detected, 0 mg/L several days during year.

SEDIMENT LOADS: Maximum daily, 312 tons (283 metric tons) June 6, 1981; minimum daily, 0 ton (0 metric ton) many days during year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
OCT					
02...	0910	.02	480	7.2	12.0
DEC					
21...	1250	.02	460	7.3	.0
JAN					
11...	1250	.15	520	8.0	.0
FEB					
02...	1155	.29	650	8.0	7.5
03...	0940	5.8	330	7.4	6.5
22...	1520	.58	560	7.9	7.0
MAR					
15...	1650	.85	530	7.7	9.0
APR					
05...	1200	.29	650	8.1	9.0
26...	1210	.29	830	7.9	12.0
MAY					
17...	1230	.02	544	8.2	16.0
JUN					
07...	1140	.04	629	8.0	15.5
28...	1200	.02	610	8.0	18.0
JUL					
19...	1250	.04	660	7.8	19.5
AUG					
10...	1500	.57	470	7.9	19.0
30...	1555	.02	800	8.1	17.5
SEP					
21...	1030	.02	800	8.1	14.5

BIG SANDY RIVER BASIN

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03213000 TUG FORK AT LITWAR, WV

LOCATION (REVISED).--Lat 37°29'08", long 81°50'38", 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 106.1 (170.7 km).

DRAINAGE AREA.--504 mi² (1,305 km²), revised.

PERIOD OF RECORD.--May 1930 to current year.

REVISED RECORDS.--WSP 728: 1931. WSP 1335: 1930, 1931-35(M), 1937, 1943-46, 1947(M), 1948, 1949(P), 1950, 1952-53.

GAGE.--Water-stage recorder. Datum of gage is 936.36 ft (285.403 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 16, 1942, nonrecording gage at highway bridge 0.5 mi (0.8 km) upstream at same datum.

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

AVERAGE DISCHARGE.--52 years, 556 ft³/s (15.75 m³/s), 14.99 in/yr (381 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, 6,820 ft³/s (193 m³/s) Feb. 3, gage height, 6.64 ft (2.024 m), no other peak above base of 6,000 ft³/s (170 m³/s); minimum daily, 68 ft³/s (1.93 m³/s) Dec. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	110	120	108	309	498	1000	800	646	453	280	360	818
2	162	113	99	360	478	1130	693	565	435	231	231	594
3	149	100	92	1630	3530	1110	669	531	371	244	200	294
4	123	90	82	2610	3060	965	609	472	355	339	178	211
5	120	96	102	1870	1710	862	565	429	587	388	178	168
6	120	100	97	994	1240	792	573	417	580	271	211	149
7	129	110	95	750	955	1250	531	399	441	227	236	137
8	126	120	93	616	818	1730	511	394	371	227	266	129
9	115	120	85	500	1060	1530	511	371	453	231	677	131
10	110	110	80	360	1690	1420	504	334	1290	211	478	120
11	106	105	76	280	1350	1300	485	319	1180	275	329	110
12	104	105	70	240	1080	1190	472	319	758	324	240	108
13	99	100	68	210	965	1140	453	309	2000	223	200	104
14	95	100	95	190	835	1270	447	285	1790	453	182	146
15	95	105	149	180	775	2180	429	240	1110	324	178	203
16	99	105	178	160	965	2890	417	236	792	231	165	146
17	99	100	178	150	3020	2500	399	231	669	215	175	123
18	104	100	192	140	3270	1950	394	231	531	766	196	106
19	118	108	178	140	2190	1610	388	366	435	646	196	110
20	108	115	118	150	1780	1600	377	371	388	638	155	108
21	106	123	110	3640	1560	1790	377	531	360	504	137	106
22	108	108	382	2910	1240	1790	371	388	339	329	129	110
23	126	102	994	1930	1020	1550	339	324	324	334	126	118
24	152	115	693	1570	927	1270	309	709	304	289	140	104
25	140	129	453	1100	827	1100	294	654	253	219	223	106
26	143	123	334	844	701	1100	350	453	240	192	211	110
27	162	120	262	565	750	984	631	775	371	182	159	126
28	207	123	219	500	827	890	1170	587	355	185	137	120
29	185	113	185	450	---	844	975	504	299	215	120	120
30	152	108	159	420	---	800	775	466	314	211	115	113
31	134	---	162	430	---	792	---	394	---	304	339	---
TOTAL	3906	3286	6188	26198	39121	42329	15818	13250	18148	9708	6867	5148
MEAN	126	110	200	845	1397	1365	527	427	605	313	222	172
MAX	207	129	994	3640	3530	2890	1170	775	2000	766	677	818
MIN	95	90	68	140	478	792	294	231	240	182	115	104
CFSM	.25	.22	.40	1.68	2.77	2.71	1.05	.85	1.20	.62	.44	.34
IN.	.29	.24	.46	1.93	2.89	3.12	1.17	.98	1.34	.72	.51	.38

CAL YR 1981 TOTAL 171698 MEAN 470 MAX 7630 MIN 68 CFSM .93 IN 12.67
WTR YR 1982 TOTAL 189967 MEAN 520 MAX 3640 MIN 68 CFSM 1.03 IN 14.02

BIG SANDY RIVER BASIN

03213495 CRANE CREEK NEAR PANTHER, WV

LOCATION.--Lat 37°25'28", long 81°51'39", McDowell County, Hydrologic Unit 05070201, on left bank 100 ft (30 m) upstream from culvert on State Route 3/1, 200 ft (61 m) upstream from mouth and Panther Creek, and 4 mi (6.4 km) southwest of Iaeger.

DRAINAGE AREA.--0.54 mi² (1.40 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1980 to September 1982 (discontinued).

GAGE.--Water-stage and rainfall recorders. Datum of gage is 1,160.00 ft (353.568 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good except those for December and January, which are poor. Rainfall records collected at site are contained in files of U.S. Geological Survey with only monthly totals published in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 72 ft³/s (2.04 m³/s) June 6, 1981, gage height, 3.12 ft (0.951 m); minimum, less than 0.01 ft³/s (<0.001 m³/s) Oct. 14-16, 21-24, 1980, Sept. 28-30, Oct. 1, 1981; minimum gage height 1.66 ft (0.506 m) Oct. 1, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 24 ft³/s (0.68 m³/s) Jan. 21, gage height, 2.63 ft (0.802 m); minimum, less than 0.01 ft³/s (<0.001 m³/s) Oct. 1, gage height, 1.66 ft (0.506 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	.03	.03	.47	.49	2.4	.49	.71	.42	.13	.10	1.7
2	.12	.03	.03	.38	.59	1.7	.51	.59	.36	.09	.06	.42
3	.04	.03	.03	3.5	4.9	1.0	.57	.49	.30	.28	.04	.23
4	.02	.03	.05	3.0	2.4	.77	.50	.41	.44	.35	.03	.15
5	.02	.04	.08	1.0	1.2	.62	.45	.37	1.1	.32	.03	.10
6	.05	.14	.06	.54	.74	.54	.47	.34	.74	.21	.03	.08
7	.13	.08	.06	.42	.52	3.2	.37	.31	.54	.15	.02	.06
8	.07	.06	.07	.31	.45	2.5	.38	.32	.38	.18	.17	.05
9	.04	.04	.06	.22	2.0	1.9	.43	.26	.31	.19	.26	.04
10	.04	.03	.05	.17	2.2	2.1	.37	.23	.55	.13	.26	.04
11	.04	.03	.04	.14	1.2	1.5	.36	.21	.49	.19	.13	.05
12	.03	.02	.03	.12	.77	1.1	.36	.20	.43	.18	.07	.06
13	.02	.02	.03	.10	.62	1.1	.37	.17	.81	.13	.05	.06
14	.01	.02	.26	.09	.49	1.2	.35	.16	.65	.11	.04	.28
15	.01	.01	.30	.08	.50	6.8	.33	.15	.45	.08	.03	.12
16	.01	.01	.21	.06	2.4	4.0	.30	.12	.33	.06	.03	.08
17	.02	.02	.22	.06	4.5	2.9	.35	.12	.27	.06	.03	.07
18	.05	.02	.17	.05	2.6	1.8	.32	.12	.21	.08	.02	.06
19	.08	.01	.13	.24	1.8	1.4	.32	.34	.18	.07	.01	.03
20	.04	.04	.10	1.1	1.5	2.4	.33	.45	.16	.14	.01	.03
21	.02	.08	.08	9.8	1.1	2.4	.32	.51	.12	.07	.01	.04
22	.02	.07	1.1	2.5	.76	1.8	.29	.35	.14	.04	.01	.03
23	.15	.06	.70	1.8	.58	1.1	.27	.32	.10	.03	.01	.03
24	.13	.11	.37	1.0	.55	.82	.27	.58	.08	.03	.02	.04
25	.06	.06	.27	.60	.44	.66	.31	.78	.06	.03	.18	.04
26	.16	.04	.20	.40	.39	.57	.47	.50	.06	.02	.05	.09
27	.15	.04	.16	.33	.56	.48	11	1.0	.06	.03	.03	.10
28	.10	.05	.13	.27	1.1	.42	4.9	.74	.07	.24	.03	.05
29	.07	.03	.10	.23	---	.42	1.8	.70	.16	.16	.02	.04
30	.05	.03	.08	.22	---	.42	1.0	.63	.34	.16	.03	.04
31	.04	---	.25	.39	---	.49	---	.44	---	.16	.62	---
TOTAL	1.82	1.28	5.45	29.59	37.35	50.51	28.56	12.62	10.31	4.10	2.43	4.21
MEAN	.059	.043	.18	.95	1.33	1.63	.95	.41	.34	.13	.078	.14
MAX	.16	.14	1.1	9.8	4.9	6.8	11	1.0	1.1	.35	.62	1.7
MIN	.01	.01	.03	.05	.39	.42	.27	.12	.06	.02	.01	.03
CFSM	.11	.08	.33	1.76	2.46	3.02	1.76	.76	.63	.24	.14	.26
IN.†	.13	.09	.37	2.03	2.57	3.47	1.96	.87	.71	.28	.17	.29
IN.‡	2.77	1.07	3.12	4.25	4.21	4.80	3.13	4.30	4.71	4.82	4.35	2.61

CAL YR 1981 TOTAL 159.25 MEAN .44 MAX 11 MIN .01 CFSM .82 IN 10.95
WTR YR 1982 TOTAL 188.23 MEAN .52 MAX 11 MIN .01 CFSM .96 IN 12.94

† Runoff.

‡ Rainfall.

BIG SANDY RIVER BASIN
03213495 CRANE CREEK NEAR PANTHER, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1980 to September 1982, discontinued.

PERIOD OF DAILY RECORD.--

SUSPENDED SEDIMENT: October 1980 to September 1981.

EXTREMES FOR PERIOD OF RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 254 mg/L June 6, 1981; minimum daily mean, 0 mg/L many days during year.

SEDIMENT LOADS: Maximum daily, 27 tons (24 metric tons) June 6, 1981; minimum daily, 0 ton (0 metric ton) many days during year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)				
OCT									
01...	1540	.01	142	7.1	15.0				
20...	1610	.04	138	7.2	9.0				
NOV									
09...	1245	.03	118	7.2	7.0				
DEC									
01...	1340	.03	120	7.2	6.5				
21...	1450	.08	85	7.1	.0				
JAN									
11...	1510	.22	77	7.2	.0				
FEB									
02...	0950	.53	58	7.0	2.5				
22...	1000	.72	54	7.3	5.0				
MAR									
15...	1030	12	45	7.0	7.5				
APR									
05...	1015	.45	53	7.3	7.0				
26...	1000	.45	64	7.3	10.5				
MAY									
17...	1050	.12	89	7.1	14.0				
JUN									
07...	0945	.53	52	7.2	14.0				
28...	1015	.08	112	7.1	17.0				
JUL									
19...	1040	.06	102	7.1	18.5				
AUG									
10...	1100	.22	80	7.1	18.0				
31...	1240	.67	70	7.1	17.0				
SEP									
21...	1255	.03	125	7.1	14.0				
DATE	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	ALKA- LINITY FIELD (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)
OCT									
01...	7.6	42	18	9.5	4.6	9.8	24	3.6	30
20...	8.0	36	--	8.0	4.0	9.6	--	--	28
DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT									
01...	.5	85	.00	120	110	9	10	0	14
20...	.7	85	.00	80	--	<3	10	6	4

BIG SANDY RIVER BASIN

03213500 PANTHER CREEK NEAR PANTHER, WV

LOCATION (REVISED).--Lat 37°26'42", 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 4.2 (6.8 km).

DRAINAGE AREA.--31.0 mi² (80.3 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 poor.

AVERAGE DISCHARGE.--36 years, 36.3 ft³/s (1.028 m³/s), 15.90 in/yr (404 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.--Maximum discharge, 864 ft³/s (24.5 m³/s) Jan. 21, gage height, 5.98 ft (1.823 m), no other peak above base of 700 ft³/s (20 m³/s); minimum, 0.28 ft³/s (0.008 m³/s) Sept. 25, 26, gage height, 2.34 ft (0.713 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	2.3	1.4	30	33	52	22	48	23	7.4	5.6	58
2	3.0	2.0	1.8	27	36	51	22	36	23	7.4	4.3	25
3	2.1	1.9	1.6	219	250	34	23	27	16	10	3.9	12
4	1.7	1.9	1.5	226	128	24	19	21	32	30	3.6	7.1
5	1.6	1.9	2.3	93	76	21	17	18	62	43	3.3	4.8
6	1.4	4.1	2.1	48	52	17	18	15	53	21	3.3	3.7
7	4.8	3.3	1.7	35	36	72	14	12	28	14	4.3	3.0
8	2.4	2.0	1.8	27	30	82	14	11	20	15	9.6	2.5
9	1.9	1.5	1.7	21	71	61	16	10	18	12	16	2.4
10	1.6	2.5	1.5	17	97	71	14	10	42	9.6	15	3.3
11	1.4	3.9	1.7	14	75	53	13	9.2	40	14	8.5	3.1
12	1.3	3.7	2.3	12	51	39	13	9.2	29	23	5.9	3.0
13	1.2	4.6	1.9	11	41	35	12	7.7	62	12	4.6	4.9
14	1.3	3.7	5.6	10	32	46	12	6.4	54	8.1	4.1	8.1
15	1.2	3.5	17	9.0	30	182	11	6.0	39	5.6	3.5	6.8
16	1.2	3.5	14	8.0	90	295	10	5.8	27	3.9	3.1	3.7
17	1.2	3.5	12	7.4	212	272	10	5.4	21	3.7	2.8	3.1
18	1.5	3.3	17	6.8	118	148	11	5.2	16	5.6	3.1	2.3
19	2.3	3.5	14	14	85	104	12	21	12	4.5	3.0	1.8
20	2.0	3.7	14	45	71	120	12	24	12	6.0	2.8	1.2
21	1.7	3.7	14	489	58	164	12	34	11	3.7	2.6	2.3
22	1.5	3.5	52	180	39	134	10	21	10	2.4	2.4	1.8
23	2.5	3.7	63	94	28	93	9.6	17	8.5	2.1	2.4	1.7
24	5.1	5.6	35	85	24	66	8.8	14	7.0	1.9	2.7	2.2
25	3.0	2.5	23	62	17	51	8.1	16	6.2	1.8	11	1.9
26	4.1	2.2	16	44	13	44	12	13	7.4	1.7	5.9	3.1
27	5.9	2.0	13	36	19	35	295	31	8.1	2.0	4.3	2.5
28	4.6	1.9	11	34	34	29	258	28	10	4.1	5.9	2.1
29	3.7	1.7	8.5	23	---	27	113	27	9.6	4.3	3.9	2.3
30	2.8	1.4	6.2	21	---	27	66	23	18	3.9	3.7	1.7
31	2.5	---	12	26	---	31	---	22	---	7.7	32	---
TOTAL	73.8	88.5	370.6	1974.2	1846	2480	1087.5	553.9	724.8	291.4	187.1	181.4
MEAN	2.38	2.95	12.0	63.7	65.9	80.0	36.3	17.9	24.2	9.40	6.04	6.05
MAX	5.9	5.6	63	489	250	295	295	48	62	43	32	58
MIN	1.2	1.4	1.4	6.8	13	17	8.1	5.2	6.2	1.7	2.4	1.2
CFSM	.08	.10	.39	2.06	2.13	2.58	1.17	.58	.78	.30	.20	.20
IN.	.09	.11	.44	2.37	2.22	2.98	1.30	.66	.87	.35	.22	.22
CAL YR 1981	TOTAL	9589.8	MEAN	26.3	MAX	602	MIN	1.1	CFSM	.85	IN	11.51
WTR YR 1982	TOTAL	9859.2	MEAN	27.0	MAX	489	MIN	1.2	CFSM	.87	IN	11.83

BIG SANDY RIVER BASIN

301

03213700 TUG FORK AT WILLIAMSON, WV

LOCATION (REVISED).--Lat 37°40'23", long 82°16'49", 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 56.5 (90.9 km).

DRAINAGE AREA.--936 mi² (2,424 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) 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 those for October through February, which are fair. Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--15 years, 1,194 ft³/s (33.81 m³/s), 17.32 in/yr (440 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.--Maximum discharge, 8,920 ft³/s (253 m³/s) Mar. 15, gage height, 16.54 ft (5.041 m), no peak above base of 9,000 ft³/s (250 m³/s); minimum, 94 ft³/s (2.66 m³/s) Dec. 13, gage height, 2.15 ft (0.655 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	129	165	137	351	860	1790	1510	1020	789	421	357	2320
2	151	149	133	527	852	1980	1360	880	880	354	386	1950
3	167	135	127	1420	1980	1910	1290	793	720	316	283	843
4	171	127	117	5040	5980	1660	1160	716	609	428	241	498
5	141	137	123	3840	3120	1460	1040	639	2980	744	230	357
6	135	159	133	1990	2200	1280	1050	583	1740	587	236	283
7	153	173	133	1330	1670	1820	984	550	1110	399	249	241
8	151	177	125	1050	1330	3130	888	579	814	380	310	217
9	145	157	119	800	3510	2910	888	554	701	505	701	202
10	139	145	112	560	4100	2940	880	487	1080	418	959	194
11	127	135	110	400	2920	2740	797	437	2130	380	616	187
12	121	131	103	310	2160	2430	760	415	1340	565	408	175
13	117	129	97	270	1800	2290	740	396	1790	487	313	163
14	112	125	119	240	1490	2710	712	373	2620	348	260	370
15	109	129	210	220	1330	6080	677	348	1650	505	233	444
16	108	125	309	200	1480	6780	639	319	1130	383	275	344
17	109	123	300	190	3790	5210	609	307	1010	307	255	238
18	117	123	330	170	6240	3820	620	298	830	307	225	212
19	133	123	330	160	4190	2900	583	457	673	847	230	187
20	151	129	262	190	3270	2700	550	561	579	654	238	172
21	137	137	220	4000	2810	3260	550	624	519	693	197	170
22	123	139	523	5880	2290	3590	522	704	467	598	175	175
23	161	137	1490	3440	1840	2920	477	579	434	543	165	168
24	180	137	1290	2820	1600	2360	464	512	405	405	163	165
25	197	149	804	2100	1420	1990	441	926	367	344	222	161
26	270	159	569	1570	1210	1950	487	704	332	286	322	156
27	262	159	444	1110	1180	1750	989	1010	451	249	278	182
28	238	151	369	1010	1650	1550	2050	1180	484	233	230	197
29	242	149	306	909	---	1390	1730	1080	444	249	194	184
30	230	141	262	773	---	1290	1270	1670	418	310	182	170
31	192	---	247	744	---	1400	---	1160	---	344	1100	---
TOTAL	4918	4254	9953	43614	68272	81990	26717	20861	29496	13589	10233	11325
MEAN	159	142	321	1407	2438	2645	891	673	983	438	330	378
MAX	270	177	1490	5880	6240	6780	2050	1670	2980	847	1100	2320
MIN	108	123	97	160	852	1280	441	298	332	233	163	156
CFSM	.17	.15	.34	1.50	2.61	2.83	.95	.72	1.05	.47	.35	.40
IN.	.20	.17	.40	1.73	2.71	3.26	1.06	.83	1.17	.54	.41	.45
CAL YR 1981	TOTAL	313251	MEAN	858	MAX	21100	MIN	97	CFSM	.92	IN	12.45
WTR YR 1982	TOTAL	325222	MEAN	891	MAX	6780	MIN	97	CFSM	.95	IN	12.93

BIG SANDY RIVER BASIN

03214000 TUG FORK NEAR KERMIT, WV

LOCATION (REVISED).--Lat 37°49'03", 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 38.1 (61.3 km).

DRAINAGE AREA.--1,188 mi² (3,077 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) National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--48 years, 1,419 ft³/s (40.19 m³/s), 16.22 in/yr (412 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 FOR CURRENT YEAR.--Maximum discharge, 11,900 ft³/s (337 m³/s) Mar. 15, gage height, 21.14 ft (6.443 m), no other peak above base of 10,000 ft³/s (280 m³/s); minimum, 129 ft³/s (3.65 m³/s) Dec. 13, 14, gage height 1.58 ft (0.482 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	149	201	160	483	1000	2200	2370	1190	1080	515	649	6220
2	177	183	163	694	1030	2380	2150	1030	1040	441	587	3650
3	183	160	157	1460	1250	2350	2040	932	936	380	459	1710
4	204	149	154	6350	5920	2120	1830	851	765	428	356	957
5	180	149	157	5090	3650	1860	1580	769	3590	966	336	653
6	160	186	163	2710	2610	1630	1560	698	2600	789	333	494
7	180	186	169	1870	2050	2120	1450	657	1660	533	317	400
8	180	195	163	1300	1610	3500	1290	679	1150	438	346	336
9	170	183	154	900	6370	3620	1260	690	970	533	724	307
10	160	172	146	660	6590	3720	1230	605	1180	544	1240	278
11	160	163	137	500	4000	3600	1140	537	2410	508	919	265
12	150	151	137	400	2930	3260	1060	494	1900	864	587	250
13	140	146	132	350	2400	3050	1010	473	2000	720	435	231
14	140	143	143	310	2030	3450	957	445	3140	494	353	512
15	130	140	204	280	1790	7120	906	421	2280	529	304	728
16	130	143	346	260	2150	10100	856	390	1530	504	469	529
17	130	140	383	240	4040	7660	818	370	1410	383	1060	380
18	140	143	459	220	7340	5080	814	356	1220	377	417	300
19	150	140	441	210	5390	3710	781	459	949	789	333	281
20	180	151	346	230	4020	3340	732	675	785	1430	317	243
21	160	154	262	5000	3440	3920	720	623	668	1110	281	237
22	140	157	1090	7400	2890	4480	698	893	580	919	243	250
23	170	157	2170	4500	2370	3720	642	814	519	1550	225	231
24	210	160	2000	3500	2050	3040	605	698	494	810	219	222
25	230	166	1270	2600	1800	2570	591	974	448	598	250	222
26	340	175	889	2000	1530	2560	609	902	414	466	343	219
27	330	180	690	1500	1440	2370	785	906	487	373	366	243
28	294	177	558	1300	1980	2090	2030	1320	572	333	313	256
29	265	169	455	1110	---	1850	2060	1210	602	343	253	246
30	265	166	373	979	---	1680	1530	2260	501	424	231	225
31	222	---	353	910	---	1900	---	1780	---	889	2110	---
TOTAL	5819	4885	14424	55316	85670	106050	36104	25101	37880	19980	15375	21075
MEAN	188	163	465	1784	3060	3421	1203	810	1263	645	496	703
MAX	340	201	2170	7400	7340	10100	2370	2260	3590	1550	2110	6220
MIN	130	140	132	210	1000	1630	591	356	414	333	219	219
CFSM	.16	.14	.39	1.50	2.58	2.88	1.01	.68	1.06	.54	.42	.59
IN.	.18	.15	.45	1.73	2.68	3.32	1.13	.79	1.19	.63	.48	.66
CAL YR 1981	TOTAL	426946	MEAN	1170	MAX	27200	MIN	130	CFSM .99	IN	13.37	
WTR YR 1982	TOTAL	427679	MEAN	1172	MAX	10100	MIN	130	CFSM .99	IN	13.39	

BIG SANDY RIVER BASIN

303

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 10.0 (16.1 km) (revised).

DRAINAGE AREA.--1,507 mi² (3,903 km²).

PERIOD OF RECORD.--March 1976 to current year.

REVISED RECORDS.--WDR WV-78-1: 1977.

GAGE.--Water-stage and rainfall recorders. Datum of gage is 536.57 ft (163.547 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good, except those for January, February, and March, which are poor. Rainfall records collected at site are contained in files of U.S. Geological Survey with only monthly totals published in this report.

AVERAGE DISCHARGE.--6 years, 1,967 ft³/s (55.71 m³/s), 17.73 in/yr (450 mm/yr).

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 discharge, 125 ft³/s (3.54 m³/s) Sept. 9, 1976; minimum gage height, 2.17 ft (0.661 m) Sept. 30, Oct. 17, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,600 ft³/s (329 m³/s) Mar. 16, gage height, 21.63 ft (6.592 m), no other peak above base of 11,000 ft³/s (310 m³/s); minimum, 145 ft³/s (4.11 m³/s) Oct. 17, gage height, 2.17 ft (0.661 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	153	263	199	595	1300	2700	3440	1520	1760	636	1020	6880
2	172	232	190	731	1400	2900	3090	1290	1400	599	714	6150
3	197	214	187	1070	1460	3000	2920	1140	1290	639	624	3190
4	197	194	179	5310	4540	2800	2740	1030	1050	560	484	1920
5	211	188	174	7160	4910	2500	2350	933	3820	955	447	1390
6	197	293	174	4200	3250	2200	2240	833	4070	1120	468	1040
7	184	259	182	2600	2520	2600	2050	763	2500	825	416	818
8	197	231	188	1910	2040	3700	1850	738	1780	617	404	685
9	182	235	181	1560	6270	4400	1770	778	1570	756	704	588
10	178	217	173	1200	9400	4490	1690	704	1980	755	1310	526
11	172	198	166	900	5990	4520	1560	619	2860	663	1360	476
12	165	187	159	520	4180	4460	1460	561	2780	858	854	439
13	159	177	157	450	3290	4130	1370	526	2410	1140	592	408
14	154	176	156	400	2720	4360	1300	505	3270	785	464	404
15	152	172	183	370	2430	6430	1210	472	3030	580	389	1080
16	150	171	282	340	2810	11200	1140	448	2130	680	370	793
17	146	168	425	320	4660	10800	1100	420	2060	590	2160	605
18	150	165	523	290	7610	7660	1070	402	1850	609	1190	468
19	153	164	548	280	7090	5410	1010	405	1470	654	605	427
20	158	165	420	290	5350	4370	955	598	1200	2100	472	381
21	171	172	310	2000	4450	4490	912	713	1010	2050	427	344
22	176	177	1300	9400	3770	5220	864	837	863	1640	366	366
23	192	179	2870	6400	3090	4800	798	1000	754	2020	309	362
24	252	189	2640	4700	2620	3960	733	838	680	1520	282	316
25	263	192	1910	3800	2300	3320	714	942	627	1020	294	297
26	286	197	1350	2900	2000	3120	709	1170	593	758	351	294
27	634	205	1020	2200	1900	2930	763	1000	635	610	526	309
28	458	208	832	1800	2300	2590	1490	1580	700	522	488	332
29	359	206	691	1600	---	2310	2300	1580	750	522	351	316
30	320	201	575	1400	---	2110	1890	2520	717	472	297	297
31	307	---	498	1200	---	2570	---	2690	---	773	2240	---
TOTAL	6845	5995	18842	67896	105650	132050	47488	29555	51609	28028	20978	31901
MEAN	221	200	608	2190	3773	4260	1583	953	1720	904	677	1063
MAX	634	293	2870	9400	9400	11200	3440	2690	4070	2100	2240	6880
MIN	146	164	156	280	1300	2110	709	402	593	472	282	294
CFSM	.15	.13	.40	1.45	2.50	2.83	1.05	.63	1.14	.60	.45	.71
IN.†	.17	.15	.47	1.68	2.61	3.26	1.17	.73	1.27	.69	.52	.79
IN.*	2.85	1.23	3.10	4.45	3.45	5.93	1.64	5.74	4.65	8.13	7.11	2.49

CAL YR 1981 TOTAL 514646 MEAN 1410 MAX 19900 MIN 146 CFSM .94 IN 12.70
WTR YR 1982 TOTAL 546837 MEAN 1498 MAX 11200 MIN 146 CFSM .99 IN 13.50

† Runoff.

* Rainfall.

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	ALKA- LITY FIELD (MG/L AS CAC03)
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POTOMAC RIVER BASIN

01595300 - ABRAM CREEK AT OAKMONT, WV (LAT 39 22 00 LONG 079 10 45)

OCT , 1981							
20...	1145	10	675	4.5	5.0	--	--
DEC							
08...	1145	97	315	4.5	2.0	--	--
MAR , 1982							
23...	1125	236	180	5.3	6.0	--	--
MAY							
17...	1330	26	480	--	18.0	--	--
JUL							
12...	1605	36	320	4.6	17.0	--	--
AUG							
07...	1215	5.8	673	4.3	16.0	--	--

01604500 - PATTERSON CREEK NEAR HEADSVILLE, WV (LAT 39 26 35 LONG 078 49 20)

OCT , 1981							
14...	1430	11	338	7.0	13.0	9.6	--
DEC							
16...	1245	41	330	7.0	.0	14.1	--
JAN , 1982							
19...	1530	54	330	7.2	.5	--	--
MAR							
10...	0930	376	134	6.9	4.0	--	--
MAY							
04...	1430	125	275	7.1	16.0	10.2	--
JUN							
29...	1410	58	224	7.2	24.0	--	--
AUG							
25...	1130	18	279	7.0	23.0	5.8	--

01605500 - SOUTH BRANCH POTOMAC RIVER AT FRANKLIN, WV (LAT 38 38 14 LONG 079 20 14)

OCT , 1981							
05...	1430	26	217	7.7	16.5	--	--
DEC							
17...	1510	74	357	7.0	.0	--	--
JAN , 1982							
21...	0935	100	220	8.5	.0	--	--
MAR							
10...	1430	305	200	8.0	5.0	--	--
MAY							
07...	0820	126	182	7.4	13.5	--	--
JUN							
30...	1520	81	200	7.7	25.0	--	--
AUG							
26...	1555	42	202	7.9	22.5	8.8	--

01606500 - SO. BRANCH POTOMAC RIVER NEAR PETERSBURG, WV (LAT 38 59 34 LONG 079 10 26)

OCT , 1981							
15...	1110	84	200	7.7	10.0	--	--
DEC							
18...	0840	356	228	6.0	.0	--	--
MAR , 1982							
11...	1530	1180	200	7.2	7.0	--	--
MAY							
05...	1630	499	200	7.5	14.0	--	--
JUL							
01...	0835	259	210	7.4	24.0	--	--
AUG							
25...	1650	126	228	7.9	24.5	7.8	--

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	ALKA- LITY FIELD (MG/L AS CACO3)
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POTOMAC RIVER BASIN--Continued

01607500 - SO FK SO BR POTOMAC R AT BRANDYWINE, WV (LAT 38 37 53 LONG 079 14 38)

OCT , 1981							
05...	1540	5.4	235	7.4	16.0	--	--
DEC							
17...	1230	23	213	6.2	.0	14.6	--
JAN , 1982							
21...	1135	35	273	8.2	.5	--	--
MAR							
10...	1305	223	200	7.5	5.0	--	--
MAY							
06...	1400	56	140	7.9	18.0	10.0	--
JUN							
30...	1255	24	175	7.5	25.0	--	--
AUG							
26...	1420	10	182	7.5	25.0	7.9	--

01608000 - SO FK SOUTH BRANCH POTOMAC R NR MOOREFIELD, WV (LAT 39 00 44 LONG 078 57 23)

OCT , 1981							
15...	0900	20	240	7.2	9.0	--	--
DEC							
17...	0955	55	254	6.0	.0	--	--
JAN , 1982							
20...	1145	77	212	8.4	.0	--	--
MAR							
11...	1030	510	120	6.7	5.5	15.4	--
MAY							
06...	0945	161	141	6.9	16.0	9.6	--
JUN							
30...	0940	65	170	7.0	25.0	--	--
AUG							
26...	0930	34	231	7.2	20.5	7.1	--

01608500 - SOUTH BRANCH POTOMAC RIVER NEAR SPRINGFIELD, WV (LAT 39 26 49 LONG 078 39 16)

OCT , 1981							
14...	1245	145	309	7.4	10.0	--	--
DEC							
16...	1440	490	243	6.4	.0	--	--
MAR , 1982							
09...	1640	3130	195	7.3	5.0	--	--
MAY							
05...	0930	968	134	7.5	25.0	--	--
JUN							
29...	1105	487	165	7.0	27.0	--	--
AUG							
25...	0825	223	256	6.9	23.5	6.3	--
SEP							
16...	1145	122	--	--	24.0	--	--

01611500 - CACAPON RIVER NEAR GREAT CACAPON, WV (LAT 39 34 43 LONG 078 18 34)

OCT , 1981							
13...	1200	62	208	6.8	11.0	--	--
DEC							
15...	1215	127	215	7.1	.0	--	--
JAN , 1982							
19...	1015	180	203	6.4	.0	--	--
MAR							
08...	1200	880	170	6.8	3.5	--	--
MAY							
03...	1240	657	145	7.1	9.0	--	--
JUN							
28...	1155	193	150	7.0	25.0	--	--
AUG							
23...	1245	73	178	7.0	21.5	6.5	--

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	ALKA- LITY FIELD (MG/L AS CAC03)
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POTOMAC RIVER BASIN--Continued

01616500 - OPEQUON CREEK NEAR MARTINSBURG, WV (LAT 39 25 25 LONG 077 56 20)

OCT . 1981							
13...	1530	46	565	7.5	11.0	--	--
DEC							
15...	1600	57	825	7.4	.0	--	--
JAN . 1982							
18...	1400	93	780	6.9	.0	--	--
MAY							
04...	0825	182	520	7.7	13.5	--	--
AUG							
23...	1815	98	600	7.6	26.0	--	--

MONONGAHELA RIVER BASIN

03050500 - TYGART VALLEY RIVER NEAR ELKINS, WV (LAT 38 55 30 LONG 079 52 45)

OCT . 1981							
14...	1315	35	125	6.9	12.0	--	--
DEC							
03...	1200	362	100	7.1	13.0	--	--
JAN . 1982							
20...	1335	151	110	7.4	1.0	--	--
MAR							
16...	1400	1670	80	7.3	5.5	--	--
MAY							
12...	0920	107	110	6.8	16.0	--	--
JUL							
07...	0915	373	100	6.7	14.5	--	--

03051000 - TYGART VALLEY RIVER AT BELINGTON, WV (LAT 39 01 45 LONG 079 56 10)

OCT . 1981							
14...	1010	58	210	7.5	10.0	--	--
DEC							
10...	1430	1010	150	6.7	1.0	--	--
JAN . 1982							
20...	1000	287	155	7.4	.0	--	--
MAR							
18...	1035	2710	90	7.3	7.0	--	--
MAY							
12...	1115	154	175	6.8	18.0	--	--
JUL							
08...	1300	441	140	7.1	14.0	--	--

03052500 - SAND RUN NEAR BUCKHANNON, WV (LAT 38 57 50 LONG 080 09 10)

OCT . 1981							
15...	1415	1.4	190	6.8	14.0	--	--
DEC							
10...	1640	26	160	6.5	2.0	--	--
JAN . 1982							
20...	1350	14	200	6.1	.5	--	--
MAR							
19...	1300	43	170	6.3	3.5	--	--
MAY							
20...	1330	2.7	160	--	13.5	--	--
JUL							
06...	1630	18	150	6.0	13.0	--	--

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

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DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	ALKA- LITY FIELD (MG/L AS CAC03)
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MONONGAHELA RIVER BASIN--Continued

03053500 - BUCKHANNON RIVER AT HALL, WV (LAT 39 03 05 LONG 080 06 50)

OCT , 1981							
13...	1350	66	250	8.0	13.5	--	--
DEC							
10...	1500	566	230	7.4	3.0	--	--
JAN , 1982							
19...	1305	184	150	7.5	1.0	--	--
MAR							
17...	1330	3060	80	7.3	9.0	--	--
MAY							
10...	1120	119	185	7.1	17.5	--	--

03054500 - TYGART VALLY RIVER AT PHILIPPI, WV (LAT 39 09 00 LONG 080 02 25)

OCT , 1981							
13...	1150	180	200	6.7	13.0	--	--
DEC							
10...	1130	2300	110	6.5	2.0	--	--
MAR , 1982							
17...	1035	10500	70	7.8	7.5	--	--
MAY							
10...	1340	450	--	7.0	19.0	--	--
JUL							
06...	1310	2860	120	6.7	14.0	--	--

03057000 - TYGART VALLEY RIVER AT COLFAX, WV (LAT 39 26 15 LONG 080 07 55)

DEC , 1981							
02...	1230	2690	158	7.0	4.0	--	--
MAR , 1982							
17...	1410	7980	110	7.4	7.0	--	--
MAY							
24...	1240	349	160	--	19.0	--	--
JUL							
12...	1205	790	130	--	22.0	--	--
SEP							
07...	1130	1440	140	--	19.0	--	--

03058000 - WEST FORK RIVER AT BROWNSVILLE, WV (LAT 39 00 10 LONG 080 28 35)

OCT , 1981							
15...	0800	3.4	185	6.9	15.0	--	--
DEC							
10...	0750	72	160	7.2	3.5	--	--
JAN , 1982							
20...	0900	33	210	6.5	1.0	--	--
MAR							
19...	0845	265	175	6.6	3.5	--	--
MAY							
20...	0830	7.2	200	--	15.0	--	--
JUL							
22...	1050	112	160	6.8	16.5	--	--

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	ALKA- LITY FIELD (MG/L AS CAC03)
MONONGAHELA RIVER BASIN--Continued							
03058500	- W. F. RIVER AT BUTCHERVILLE, WV (LAT 39 05 25 LONG 080 28 05)						
OCT , 1981							
15...	1230	38	150	7.0	16.0	--	--
DEC							
10...	1300	116	160	7.1	3.0	--	--
JAN , 1982							
20...	1220	121	170	6.9	--	--	--
MAR							
19...	1130	487	200	6.8	4.5	--	--
MAY							
20...	1210	94	180	--	16.5	--	--
JUL							
22...	1400	210	150	7.2	--	--	--
03059000	- WEST FORK RIVER AT CLARKSBURG, WV (LAT 39 16 15 LONG 080 21 20)						
DEC , 1981							
03...	0945	188	495	7.0	3.0	--	--
JAN , 1982							
19...	1200	155	500	--	.0	--	--
MAR							
19...	1100	1130	260	7.0	9.5	--	--
MAY							
17...	1050	34	320	--	15.5	--	--
JUL							
13...	1100	84	310	--	25.0	--	--
SEPT							
09...	1215	92	300	--	20.0	--	--
03061000	- WEST FORK RIVER AT ENTERPRISE, WV (LAT 39 25 20 LONG 080 16 40)						
DEC , 1981							
03...	1215	423	500	7.1	3.0	--	--
JAN , 1982							
19...	1440	291	650	--	.5	--	--
MAR							
19...	1400	2200	380	6.8	10.0	--	--
MAY							
21...	1110	657	1200	--	21.0	--	--
JUL							
13...	1340	185	290	--	26.0	--	--
03061500	- BUFFALO CREEK AT BARRACKVILLE, WV (LAT 39 30 15 LONG 080 10 20)						
OCT , 1981							
09...	1300	7.8	4200	7.5	11.0	8.4	151
DEC							
02...	1000	189	750	6.8	3.5	--	--
07...	1400	93	1100	7.3	.0	12.8	--
JAN , 1982							
18...	1225	38	700	--	.0	--	--
MAR							
17...	1100	800	700	6.9	8.5	--	--
MAY							
21...	1420	278	400	--	19.5	--	--
JUL							
12...	1355	30	820	--	24.0	--	--
SEPT							
07...	1305	12	1050	--	20.0	--	--

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

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DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	ALKA- LITY FIELD (MG/L AS CAC03)
MONONGAHELA RIVER BASIN--Continued							
03062400	- COBUN CREEK AT MORGANTOWN, WV (LAT 39 36 30 LONG 079 57 20)						
NOV , 1981							
30...	1140	6.2	311	6.7	.5	--	--
MAR , 1982							
22...	1430	33	160	--	6.0	--	--
MAY							
19...	1025	1.2	260	7.4	17.0	--	--
JUL							
14...	1320	2.0	160	--	24.0	--	--
SEP							
10...	1030	.08	370	--	18.0	--	--
03065000	- DRY FORK AT HENDRICKS, WV (LAT 39 04 20 LONG 079 37 20)						
OCT , 1981							
21...	1330	123	75	6.8	11.0	--	--
DEC							
09...	1030	1090	87	5.7	.0	--	--
MAR , 1982							
24...	1415	1320	70	7.3	6.5	--	--
MAY							
18...	1540	103	100	--	19.5	--	--
JUL							
15...	0905	153	78	6.8	--	--	--
SEP							
08...	1430	177	64	6.4	19.0	8.5	--
03066000	- BLACKWATER RIVER AT DAVIS, WV (LAT 39 07 35 LONG 079 28 10)						
OCT , 1981							
22...	1105	49	140	6.7	6.0	--	--
MAR , 1982							
23...	1620	406	--	--	3.0	--	--
MAY							
17...	1740	37	140	--	21.5	--	--
JUL							
13...	1020	73	120	6.3	21.0	--	--
SEP							
07...	1430	62	89	5.8	18.0	7.6	--
03066630	- TUB RUN NR DOUGLAS, WV (LAT 39 06 53 LONG 079 33 00)						
OCT , 1981							
22...	1105	.62	60	4.5	8.0	--	--
DEC							
01...	1115	2.6	34	6.5	3.0	--	--
MAR , 1982							
25...	1040	1.2	35	5.5	6.5	--	--
MAY							
18...	0945	.00	<50	--	13.0	--	--
JUL							
13...	1215	.25	280	4.4	19.0	--	--
SEP							
08...	1020	.26	22	3.9	16.0	7.5	--

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	ALKA- LINITY FIELD (MG/L AS CAC03)
MONONGAHELA RIVER BASIN--Continued							
03066720 - BIG RUN NR DOUGLAS, WV (LAT 39 06 44 LONG 079 34 22)							
OCT , 1981							
22...	1230	1.0	78	4.1	8.0	--	--
DEC							
01...	1240	5.6	60	4.5	4.0	--	--
MAR , 1982							
25...	1210	3.0	65	7.0	5.0	--	--
MAY							
18...	1130	.51	75	--	14.0	--	--
SEP							
08...	0820	1.3	62	3.4	13.0	9.0	--
03066730 - WEST FORK BIG RUN NR DOUGLAS, WV (LAT 39 06 55 LONG 079 34 47)							
OCT , 1981							
22...	1330	.85	55	4.2	10.0	--	--
DEC							
01...	1420	5.3	50	4.3	4.0	--	--
MAY , 1982							
18...	1315	.37	<50	--	17.5	--	--
JUL							
13...	1515	.66	38	3.8	20.0	--	--
SEP							
08...	1235	1.4	47	4.1	13.0	6.3	--
03069000 - SHAVERS FORK AT PARSONS, WV (LAT 39 05 45 LONG 079 40 40)							
OCT , 1981							
22...	1445	117	73	6.7	12.0	--	--
DEC							
09...	1245	692	65	5.8	.0	--	--
MAR , 1982							
25...	1405	628	46	7.3	9.0	--	--
MAY							
19...	0900	76	80	--	19.5	--	--
JUL							
15...	1205	160	75	7.1	21.0	--	--
SEP							
09...	0845	135	58	6.1	18.5	7.4	--
03069500 - CHEAT RIVER NEAR PARSONS, WV (LAT 39 07 20 LONG 079 40 50)							
OCT , 1981							
21...	1525	346	--	7.0	10.0	--	--
DEC							
09...	1530	2230	90	6.7	.0	--	--
MAR , 1982							
24...	1150	2980	75	7.3	6.0	--	--
MAY							
19...	1110	227	105	--	20.5	--	--
JUL							
15...	1415	462	90	6.8	22.0	--	--
SEP							
09...	1100	374	78	5.7	19.0	7.0	--
03070000 - CHEAT RIVER AT ROWLESBURG, WV (LAT 39 20 50 LONG 079 40 00)							
OCT , 1981							
08...	1130	572	105	6.8	11.0	--	--
MAR , 1982							
18...	1150	10400	70	--	8.0	--	--
MAY							
19...	1330	303	105	--	23.0	--	--
SEP							
08...	1130	558	135	--	18.5	--	--

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	ALKA- LITY FIELD (MG/L AS CAC03)
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MONONGAHELA RIVER BASIN--Continued

03070500 - BIG SANDY CREEK AT ROCKVILLE, WV (LAT 39 37 15 LONG 079 42 20)

OCT . 1981							
08...	1415	51	160	6.3	10.0	--	--
NOV							
30...	1410	153	173	5.1	.0	--	--
MAR , 1982							
18...	1505	1210	150	--	7.0	--	--
MAY							
17...	1130	54	180	7.1	19.0	--	--
JUL							
14...	1110	93	160	--	21.0	--	--
SEP							
08...	1400	29	205	--	20.0	--	--

03075650 - HAYES RUN NR CRANESVILLE, WV (LAT 39 31 55 LONG 079 29 16)

FER . 1982							
02...	1040	3.4	70	6.6	.5	--	--
26...	1400	2.5	--	--	1.0	--	--
MAR							
23...	1340	3.2	60	--	4.0	--	--
MAY							
10...	1230	.59	<50	--	10.5	--	--
JUN							
14...	1400	2.3	40	--	12.0	--	--
JUL							
02...	1045	.69	34	--	12.0	--	--
27...	1120	1.0	34	--	15.0	--	--
SEP							
02...	1030	.46	38	--	14.5	--	--

03075670 - MUDDY CREEK NR CRANESVILLE, WV (LAT 39 31 29 LONG 079 28 54)

DEC . 1981							
31...	1025	8.1	65	5.7	.5	--	--
FEB , 1982							
02...	1200	30	80	5.8	.0	--	--
26...	1240	12	--	--	.5	--	--
MAR							
23...	1110	19	75	--	3.5	--	--
MAY							
10...	1100	1.6	<50	--	14.5	--	--
JUN							
14...	1145	19	52	--	10.5	--	--
JUL							
02...	1150	3.2	48	--	16.0	--	--
27...	1145	3.1	47	--	20.0	--	--
SEP							
02...	1215	2.2	50	--	18.0	--	--

03075680 - CUPP RUN NR CRANESVILLE, WV (LAT 39 30 45 LONG 079 30 05)

DEC . 1981							
31...	1130	1.6	75	5.1	.5	--	--
FEB , 1982							
02...	1330	6.8	90	6.3	.5	--	--
MAR							
23...	1215	5.1	75	--	4.5	--	--
JUL							
02...	1340	.44	45	--	18.0	--	--
27...	1400	.57	40	--	20.0	--	--
SEP							
02...	1320	.45	46	--	17.0	--	--

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	ALKA- LITY FIELD (MG/L AS CAC03)
OHIO RIVER MAIN STEM							
03111534	- OHIO RIVER AT MARTINS FERRY OH (LAT 40 06 18 LONG 080 42 31)						
NOV . 1981							
18...	1015	18700	313	6.5	8.0	11.5	--
MAR . 1982							
24...	1200	51300	238	6.2	9.0	--	--
JUL							
29...	1330	19100	385	7.9	28.5	8.1	--
SEP							
15...	0930	32800	518	6.4	25.0	6.4	--
WHEELING CREEK BASIN							
03112000	- WHEELING CREEK AT ELM GROVE, WV (LAT 40 02 40 LONG 080 39 40)						
OCT . 1981							
26...	1550	59	390	7.2	9.0	--	--
NOV							
18...	1315	57	390	7.5	5.0	--	--
DEC							
22...	1615	131	320	7.7	.0	--	--
FEB . 1982							
03...	1400	708	242	6.4	3.0	--	--
APR							
14...	0805	336	273	7.7	8.5	--	--
MAY							
18...	1500	41	362	7.5	27.0	--	--
JUN							
15...	1550	43	309	8.0	26.0	--	--
JUL							
28...	1510	21	490	7.6	27.0	6.9	--
SEP							
14...	1530	5.9	350	7.5	22.5	6.5	--
MIDDLE ISLAND CREEK BASIN							
03114500	- MIDDLE ISLAND CREEK AT LITTLE, WV (LAT 39 28 30 LONG 080 59 50)						
OCT . 1981							
27...	1055	33	200	6.6	11.0	--	--
NOV							
17...	1550	42	330	6.7	5.5	--	--
FEB . 1982							
02...	1155	1210	150	7.0	3.5	--	--
MAR							
23...	1610	1160	165	7.0	10.0	--	--
APR							
13...	1100	391	165	7.0	9.0	--	--
MAY							
18...	1130	43	190	7.2	24.0	--	--
JUN							
16...	1050	218	150	6.9	22.5	7.5	--
JUL							
28...	1110	32	176	6.3	27.0	5.3	--
SEP							
14...	0925	8.7	295	6.3	23.0	5.5	--
LITTLE KANAWHA RIVER BASIN							
03151400	- L KANAWHA RIVER NR WILDCAT, WV (LAT 38 44 35 LONG 080 31 36)						
OCT . 1981							
15...	1830	8.8	70	7.1	13.0	8.6	11
DEC							
09...	1330	221	60	7.2	2.5	--	--
JAN . 1982							
14...	1145	135	--	--	.5	--	--
MAR							
18...	1545	458	75	7.0	3.0	--	--
MAY							
19...	1520	12	60	--	14.0	--	--
JUL							
21...	1505	102	55	7.3	15.5	--	--

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	ALKA- LITY FIELD (MG/L AS CAC03)
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LITTLE KANAWHA RIVER BASIN--Continued

03151520 - LITTLE KANAWHA RIVER BELOW BURNSVILLE DAM, WV (LAT 38 50 41 LONG 080 37 45)

OCT , 1981							
09...	1130	131	--	--	16.5	--	--
DEC							
09...	1030	252	60	6.8	4.0	--	--
JAN , 1982							
13...	1530	193	--	--	1.5	--	--
MAR							
18...	1130	791	50	6.9	4.0	--	--
MAY							
19...	1805	11	<50	--	16.0	--	--
JUL							
21...	1820	108	55	7.2	21.0	--	--

03151600 - LITTLE KANAWHA RIVER AT BURNSVILLE, WV (LAT 38 51 55 LONG 080 40 32)

OCT , 1981							
14...	1645	78	90	7.1	16.0	--	--

03152000 - LITTLE KANAWHA RIVER AT GLENVILLE, WV (LAT 38 56 00 LONG 080 50 20)

OCT , 1981							
14...	1400	76	150	7.1	16.0	--	--
DEC							
08...	1510	471	160	7.0	5.0	--	--
JAN , 1982							
19...	1500	103	180	6.9	1.5	--	--
MAR							
16...	1500	2480	165	7.0	4.0	--	--
MAY							
19...	0840	23	150	--	15.0	--	--
JUL							
21...	0900	794	180	7.3	14.5	--	--

03153500 - LITTLE KANAWHA RIVER AT GRANTSVILLE, WV (LAT 38 55 20 LONG 081 05 50)

MAR , 1982							
17...	1150	11100	175	7.2	4.0	--	--

03154000 - W. FORK LITTLE KANAWHA RIVER AT ROCKSDALE, WV (LAT 38 50 48 LONG 081 13 26)

JUL , 1982							
20...	1500	40	150	7.1	15.5	--	--

03155500 - HUGHES RIVER AT CISCO, WV (LAT 39 07 10 LONG 081 16 40)

OCT , 1981							
13...	1315	1.2	205	7.2	16.0	--	--
DEC							
07...	1345	156	180	6.9	5.0	--	--
JAN , 1982							
18...	1435	67	240	6.5	.5	--	--
MAY							
17...	1450	40	200	--	16.0	--	--
18...	1000	36	210	--	15.5	--	--
JUL							
19...	1430	21	190	6.8	15.5	--	--

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	ALKA- LINITY FIELD AS CAC03)
KANAWHA RIVER BASIN							
03179000	- BLUESTONE RIVER NEAR PIPESTEM, WV (LAT 37 32 38 LONG 081 00 38)						
DEC , 1981							
02...	1110	92	--	8.3	5.0	--	--
APR , 1982							
14...	1320	266	230	9.1	15.0	--	--
MAY							
17...	1335	114	310	8.2	22.0	--	--
JUL							
13...	1020	278	268	7.9	22.0	--	--
SEP							
07...	1610	63	320	--	23.0	--	--
03180000	- NEW RIVER AT BLUESTONE DAM, WV (LAT 37 38 43 LONG 080 53 02)						
OCT , 1981							
07...	1200	1140	165	8.6	17.0	--	--
DEC							
02...	1530	2120	--	7.7	7.0	--	--
APR , 1982							
16...	1015	5580	160	7.8	14.0	--	--
MAY							
17...	2000	2160	175	7.3	21.0	--	--
JUL							
12...	1605	2810	159	7.7	27.0	--	--
SEP							
08...	1100	1560	156	--	23.0	--	--
03180500	- GREENBRIER RIVER AT DURRIN, WV (LAT 38 32 37 LONG 079 50 00)						
OCT , 1981							
06...	1700	21	810	7.0	16.0	--	--
DEC							
01...	1030	180	--	6.7	1.0	--	--
JAN , 1982							
25...	0920	396	--	--	5.0	--	--
MAY							
20...	1200	47	206	7.2	18.0	--	--
JUL							
14...	0845	48	217	6.9	20.0	--	--
SEP							
09...	1415	24	545	--	21.0	--	--
03182500	- GREENBRIER RIVER AT BUCKEYE, WV (LAT 38 11 09 LONG 080 07 51)						
OCT , 1981							
06...	1130	57	305	7.5	15.5	--	--
DEC							
04...	0940	841	--	7.7	3.0	--	--
MAR , 1982							
25...	1200	1440	--	--	6.0	--	--
MAY							
20...	0845	151	151	7.2	19.0	--	--
JUL							
15...	1335	410	150	8.0	21.0	--	--

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	ALKA- LITY FIELD (MG/L AS CACO3)
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KANAWHA RIVER BASIN--Continued

03182700 - ANTHONY CREEK NEAR ANTHONY, WV (LAT 37 54 30 LONG 080 17 30)

OCT , 1981							
15...	1315	8.0	162	7.7	12.0	--	--
DEC							
01...	1425	51	--	6.8	3.0	--	--
APR , 1982							
14...	1705	118	55	7.2	--	--	--
MAY							
19...	1110	96	73	6.9	17.5	--	--
JUL							
14...	1145	52	61	7.7	21.0	--	--
SEP							
09...	1055	12	152	--	20.0	--	--

03183500 - GREENBRIER RIVER AT ALDERSON, WV (LAT 37 43 27 LONG 080 38 30)

OCT , 1981							
08...	0830	136	--	--	13.5	--	--
DEC							
03...	1010	2120	--	7.7	6.0	--	--
APR , 1982							
15...	0910	2000	100	7.2	--	--	--
MAY							
19...	0815	451	183	7.3	21.0	--	--
JUL							
15...	1010	515	152	7.9	24.0	--	--
SEP							
09...	0830	152	220	--	21.0	--	--

03184000 - GREENBRIER RIVER AT HILLDALE, WV (LAT 37 38 24 LONG 080 48 19)

OCT , 1981							
08...	1000	159	190	8.0	14.0	--	--
APR , 1982							
15...	1150	2260	100	7.3	13.0	--	--
MAY							
18...	1340	457	192	7.7	23.0	--	--
JUL							
13...	1210	840	155	8.1	--	--	--
SEP							
08...	1430	167	157	--	24.0	--	--

03184500 - NEW RIVER AT HINTON, WV (LAT 37 40 13 LONG 080 53 45)

OCT , 1981							
07...	1700	1250	180	8.9	18.0	--	--
APR , 1982							
15...	1515	6290	110	7.5	15.5	--	--
MAY							
18...	1135	3360	175	7.7	23.0	--	--

03185000 - PINEY CREEK AT RALEIGH, WV (LAT 37 45 40 LONG 081 09 50)

OCT , 1981							
07...	1040	7.2	410	7.7	12.0	--	--
DEC							
02...	0815	16	--	7.5	5.0	--	--
JAN , 1982							
28...	0840	67	--	--	.0	--	--
APR							
14...	1020	36	>800	7.2	13.0	--	--
MAY							
17...	1005	18	320	7.7	18.0	--	--
JUL							
12...	1300	41	222	7.4	21.0	--	--

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	ALKA- LITY FIELD (MG/L AS CAC03)
KANAWHA RIVER BASIN--Continued							
03186500	- WILLIAMS RIVER AT DYER, WV (LAT 38 22 44 LONG 080 29 03)						
OCT , 1981							
07...	1900	108	35	7.1	12.0	--	--
DEC							
10...	1330	273	28	7.5	.0	13.8	--
JAN , 1982							
07...	1425	1560	30	6.6	4.0	--	--
FEB							
18...	1645	1200	28	6.8	3.5	--	--
APR							
13...	1330	520	30	7.0	8.0	--	--
JUN							
02...	1430	318	31	6.6	16.0	--	--
JUL							
13...	1545	85	39	6.9	22.0	--	--
AUG							
23...	1700	28	43	7.1	20.5	8.4	--
03193000	- KANAWHA RIVER AT KANAWHA FALLS, WV (LAT 38 08 17 LONG 081 12 52)						
OCT , 1981							
15...	1100	1630	--	--	15.5	--	--
MAY , 1982							
18...	1315	3000	160	7.5	23.0	7.6	--
03194700	- ELK RIVER BELOW WEBSTER SPRINGS, WV (LAT 38 35 50 LONG 080 29 26)						
OCT , 1981							
22...	1330	150	76	7.0	11.0	--	--
DEC							
21...	1510	369	--	--	.5	--	--
APR , 1982							
07...	1535	724	70	7.1	4.0	--	--
JUN							
03...	1315	398	70	--	19.0	--	--
JUL							
29...	1320	935	63	6.5	21.0	--	--
SEP							
01...	1430	129	95	7.6	23.0	--	--
03195500	- ELK RIVER AT SUTTON, WV (LAT 38 39 47 LONG 080 42 35)						
OCT , 1981							
23...	0845	857	--	--	14.0	--	--
DEC							
22...	0925	1360	--	--	3.0	--	--
FEB , 1982							
11...	1040	3650	--	--	3.0	--	--
APR							
08...	0930	206	--	--	6.5	--	--
JUN							
04...	0900	841	70	--	21.0	--	--
JUL							
30...	1010	1070	67	7.2	24.5	--	--
SEP							
02...	1240	379	72	7.2	23.0	--	--

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

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DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	ALKA- LITY FIELD (MG/L AS CAC03)
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KANAWHA RIVER BASIN--Continued

03196500 - BIRCH RIVER AT HEROLD, WV (LAT 38 34 29 LONG 080 48 04)

OCT , 1981							
22...	1035	14	75	7.3	13.0	--	--
DEC							
21...	1105	90	--	--	.5	--	--
FEB , 1982							
10...	1135	1018	48	6.5	2.0	--	--
APR							
07...	1100	216	--	--	7.0	--	--
JUN							
03...	1050	57	70	--	18.0	--	--
JUL							
29...	1115	98	125	6.4	22.5	--	--
SEP							
03...	1110	57	95	7.5	20.0	--	--

03197000 - ELK RIVER AT QUEEN SHOALS, WV (LAT 38 28 15 LONG 081 17 03)

OCT , 1981							
21...	1340	798	64	6.8	13.0	--	--
DEC							
16...	1330	1680	78	6.9	1.5	--	--
FEB , 1982							
08...	1445	2450	63	6.8	2.0	--	--
JUL							
28...	1130	218	77	7.8	26.5	--	--

03198020 - TRACE FK # RUTH WV (LAT 38 18 30 LONG 081 43 40)

OCT , 1981							
29...	1310	.10	290	--	15.5	--	--
DEC							
01...	1200	.11	310	7.3	9.0	--	--
MAR , 1982							
15...	1235	52	81	--	9.0	--	--
22...	1510	2.9	138	6.5	10.5	--	--
MAY							
26...	1415	.35	230	--	19.5	--	--
JUL							
20...	1500	.18	--	--	24.0	--	--
SEP							
13...	1300	.05	320	7.8	24.0	--	--

03198022 - TRACE FK D/S DRYDEN HOLLOW # RUTH WV (LAT 38 18 55 LONG 081 43 42)

OCT , 1981							
29...	1405	.31	500	--	15.0	--	--
DEC							
01...	1040	.19	--	--	7.5	--	--
MAR , 1982							
15...	1445	67	128	--	8.5	--	--
24...	1530	4.1	--	--	11.0	--	--
MAY							
27...	1400	.49	375	--	19.5	--	--
JUL							
20...	1545	.64	--	--	24.5	--	--
SEP							
13...	1210	.16	>500	8.5	21.0	--	--

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DFG C)	OXYGEN, DIS- SOLVED (MG/L)	ALKA- LITY FIELD (MG/L AS CAC03)
KANAWHA RIVER BASIN--Continued							
03198500	- BIG COAL RIVER AT ASHFORD, WV (LAT 38 10 47 LONG 081 42 42)						
OCT , 1981							
29...	1440	129	500	--	13.5	--	--
DEC							
04...	1230	57	595	7.4	5.5	--	--
MAR , 1982							
24...	1140	885	--	--	11.0	--	--
MAY							
26...	1045	176	330	--	22.5	--	--
JUL							
22...	1100	134	460	7.8	26.0	--	--
SEP							
15...	1430	94	500	7.5	25.0	--	--
03198550	- BIG COAL RIVER NEAR ALUM CREEK, (LAT 38 15 00 LONG 081 47 54)						
OCT , 1981							
28...	1145	126	490	--	13.0	--	--
DEC							
03...	1540	62	--	--	6.0	--	--
JAN , 1982							
28...	0915	557	--	--	1.0	--	--
03199000	- LITTLE COAL RIVER AT DANVILLE, WV (LAT 38 03 45 LONG 081 50 11)						
OCT , 1981							
29...	0820	53	720	--	11.0	--	--
DEC							
02...	1140	36	>500	8.5	7.0	--	--
MAR , 1982							
23...	1215	595	392	7.2	10.0	--	--
MAY							
24...	1130	142	580	7.1	22.5	--	--
JUL							
21...	1240	170	525	7.8	25.5	--	--
SEP							
10...	1245	80	>500	8.0	22.5	--	--
03199300	- ROCK CREEK NEAR DANVILLE WV (LAT 38 06 01 LONG 081 49 48)						
OCT , 1981							
29...	0940	1.5	260	--	9.5	--	--
DEC							
02...	1440	67	305	7.5	7.5	--	--
JAN , 1982							
29...	1030	7.1	--	--	1.0	--	--
MAR							
23...	1200	26	128	6.4	10.5	--	--
MAY							
27...	1045	7.2	147	--	19.5	--	--
JUL							
21...	1345	1.5	242	8.4	27.0	--	--
SEP							
15...	1745	.27	360	7.0	26.0	--	--

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	ALKA- LINITY FIELD (MG/L AS CAC03)
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KANAWHA RIVER BASIN--Continued

03199400 - LITTLE COAL RIVER AT JULIAN, WV (LAT 38 09 17 LONG 081 51 10)

OCT . 1981							
29...	1140	63	710	--	12.0	--	--
DEC							
03...	0945	43	920	8.2	6.0	--	--
MAR . 1982							
25...	1130	574	440	7.2	13.0	--	--
MAY							
24...	1315	154	520	7.0	23.0	--	--
JUL							
21...	1040	205	598	7.7	24.0	--	--
SEP							
14...	1330	72	>500	7.8	24.0	--	--

03200500 - COAL RIVER AT TORNADO, WV (LAT 38 20 20 LONG 081 50 29)

OCT . 1981							
30...	1205	182	--	--	13.0	--	--
DEC							
01...	1530	117	>500	7.8	8.0	--	--
JAN . 1982							
25...	1315	2150	--	--	1.0	--	--
MAR							
22...	1145	2380	--	6.8	11.5	--	--
MAY							
28...	1030	703	550	--	22.5	--	--
JUL							
20...	1000	313	--	6.7	27.5	--	--
SEP							
09...	1300	201	460	7.4	21.5	--	--
14...	1100	158	>500	7.7	24.0	--	--

GUYANDOTTE RIVER BASIN

03202400 - GUYANDOTTE RIVER NEAR BAILEYSVILLE, WV (LAT 37 36 14 LONG 081 38 43)

OCT . 1981							
07...	1245	58	700	8.1	15.5	--	--
NOV							
19...	0905	55	640	8.4	6.0	--	--
JAN . 1982							
26...	1535	569	220	7.5	1.5	--	--
MAR							
18...	1410	1370	200	7.2	11.5	--	--
APR							
29...	1000	324	315	8.3	13.5	--	--
JUN							
10...	1225	536	410	7.9	21.5	--	--
JUL							
29...	1525	134	625	8.1	26.0	--	--

03202750 - CLEAR FORK AT CLEAR FORK WV (LAT 37 37 23 LONG 081 42 27)

OCT . 1981							
05...	1550	9.0	800	7.9	16.5	--	--
NOV							
19...	1450	7.8	730	7.8	9.0	--	--
JAN . 1982							
25...	1425	372	190	6.8	3.5	--	--
MAR							
16...	1315	1300	135	6.7	8.0	--	--
APR							
30...	1030	121	280	7.6	13.5	10.9	--
JUN							
10...	0940	263	305	7.3	20.5	--	--
JUL							
30...	1225	100	350	7.1	22.5	--	--
SEP							
14...	1430	38	490	7.9	23.0	--	--

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	ALKA- LITY FIELD (MG/L AS CAC03)
GUYANDOTTE RIVER BASIN--Continued							
03202915	- GUYANDOTTE RIVER BELOW R.D. BAILEY DAM (LAT 37 35 53 LONG 081 49 46)						
NOV . 1981							
20...	0820	73	500	7.5	12.5	--	--
JAN . 1982							
27...	1110	1390	160	7.4	3.5	--	--
MAR							
24...	1100	2210	185	7.2	10.5	--	--
APR							
29...	1615	632	260	7.5	12.0	--	--
JUN							
11...	0955	1170	305	7.3	20.5	--	--
JUL							
28...	1010	175	450	7.6	25.5	--	--
SEP							
16...	1020	146	330	7.6	22.5	--	--
03203600	- GUYANDOTTE RIVER AT LOGAN, WV (LAT 37 50 32 LONG 081 58 34)						
DEC . 1981							
02...	1035	146	575	8.1	8.0	--	--
JAN . 1982							
27...	1515	1420	200	7.3	2.5	--	--
MAR							
19...	0945	5320	180	7.1	10.0	--	--
MAY							
12...	1530	319	425	8.9	22.5	--	--
JUN							
23...	0950	517	360	7.9	22.0	--	--
AUG							
11...	1255	487	320	7.5	23.5	--	--
TWELVEPOLE CREEK BASIN							
03206600	- EAST FORK TWELVEPOLE CREEK NEAR DUNLOW, WV (LAT 38 01 02 LONG 082 17 46)						
OCT . 1981							
09...	1005	1.3	120	6.9	9.5	--	--
DEC							
04...	0955	3.0	105	7.2	5.5	--	--
JAN . 1982							
28...	1555	54	60	6.6	2.0	--	--
MAR							
26...	1320	57	60	6.4	9.0	--	--
MAY							
13...	1725	6.2	80	7.4	24.5	--	--
JUN							
25...	1010	9.1	81	7.2	18.0	--	--
AUG							
11...	1550	4.8	97	7.2	22.0	--	--
03206790	- EAST FORK TWELVEPOLE CREEK BELOW EAST LYNN DAM (LAT 38 08 52 LONG 082 23 00)						
OCT . 1981							
30...	0725	11	82	6.1	12.0	--	--
JAN . 1982							
08...	1125	109	68	6.7	4.0	12.8	--
FEB							
25...	1800	102	53	6.7	5.5	12.2	--
APR							
30...	1040	47	64	6.6	16.0	--	--
MAY							
24...	1830	18	61	6.3	18.5	--	--
JUL							
01...	1025	18	60	6.2	20.5	--	--
AUG							
24...	1030	41	64	6.1	24.5	--	--

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

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DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	ALKA- LINITY FIELD (MG/L AS CAC03)
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TWELVEPOLE CREEK BASIN--Continued

03207020 - TWELVEPOLE CREEK BELOW WAYNE, WV (LAT 38 14 56 LONG 082 26 04)

OCT , 1981							
30...	1150	26	180	6.5	11.5	--	--
JAN , 1982							
08...	1400	320	105	6.1	5.5	--	--
FEB							
26...	1345	229	88	6.8	5.0	12.0	--
APR							
30...	1145	117	102	6.8	19.0	--	--
MAY							
25...	1015	58	160	7.0	21.5	--	--
JUL							
01...	1240	95	131	6.8	21.0	--	--
AUG							
24...	1210	57	165	6.4	22.5	--	--

03207057 - BEECH FK BELOW BEECH FK. DAM, WV (LAT 38 18 18 LONG 082 25 28)

OCT , 1981							
30...	1310	8.3	--	--	14.5	--	--
JAN , 1982							
08...	1630	81	165	7.4	4.0	12.9	--
FEB							
26...	1350	32	105	7.0	6.0	11.6	--
APR							
30...	1430	12	126	7.0	18.0	--	--
MAY							
25...	1240	15	135	6.9	19.5	--	--
JUL							
01...	1450	16	115	6.7	23.0	--	--
AUG							
24...	1645	13	148	6.4	--	--	--

BIG SANDY RIVER BASIN

03213000 - TUG FORK AT LITWAR, WV (LAT 37 29 08 LONG 081 50 38)

NOV , 1981							
18...	1330	109	1100	8.6	8.5	--	--
JAN , 1982							
26...	1110	800	370	7.9	1.5	--	--
MAR							
18...	1005	1840	300	7.6	10.5	--	--
APR							
28...	0915	1280	300	8.0	11.5	--	--
MAY							
12...	1020	312	660	8.1	18.5	--	--
JUN							
22...	1515	344	650	8.3	22.0	--	--
JUL							
27...	1420	185	660	8.4	27.0	--	--

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	ALKA- LITY FIELD (MG/L AS CAC03)
BIG SANDY RIVER BASIN--Continued							
03213500	- PANTHER CREEK NEAR PANTHER, WV				(LAT 37 26 42 LONG 081 52 15)		
OCT , 1981							
06...	1025	1.5	540	--	14.0	--	--
NOV							
18...	1220	3.4	760	8.5	6.5	--	--
JAN , 1982							
20...	1030	75	105	--	.5	--	--
21...	1030	796	60	7.3	5.5	--	--
22...	1145	157	70	7.2	6.0	--	--
MAR							
17...	1020	269	75	7.3	9.5	--	--
APR							
28...	1500	206	62	7.2	13.0	--	--
MAY							
11...	1330	10	158	8.3	17.0	--	--
JUN							
09...	1310	17	131	8.0	19.0	--	--
JUL							
29...	1240	3.6	145	7.6	22.5	--	--
SEP							
15...	1030	6.6	275	7.8	21.0	--	--
03213700	- TUG FORK AT WILLIAMSON, WV				(LAT 37 40 23 LONG 082 16 49)		
OCT , 1981							
02...	1115	148	850	8.2	18.0	--	--
NOV							
04...	1700	130	820	6.5	16.0	--	--
17...	1730	133	980	8.2	8.5	--	--
DEC							
03...	1535	133	900	8.3	7.0	--	--
JAN , 1982							
28...	1330	1000	360	7.6	1.5	--	--
MAR							
25...	1105	2010	320	7.6	11.5	--	--
MAY							
13...	1245	402	575	8.0	22.5	--	--
JUN							
23...	1540	441	590	8.3	25.0	--	--
AUG							
12...	1225	400	430	7.8	24.5	--	--
03214000	- TUG FORK NEAR KERMIT, WV				(LAT 37 49 03 LONG 082 24 35)		
OCT , 1981							
01...	0905	141	900	8.2	18.5	--	--
NOV							
17...	1300	153	1020	8.1	7.5	--	--
DEC							
03...	1100	158	990	8.2	6.5	--	--
FEB , 1982							
03...	1115	1050	450	7.7	5.0	--	--
MAR							
25...	1400	2560	325	7.4	11.5	--	--
MAY							
13...	1535	454	680	8.0	23.5	--	--
JUN							
24...	1040	524	570	8.0	23.0	--	--
AUG							
12...	1440	565	420	7.7	24.0	--	--

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

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DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	ALKA- LINITY FIELD (MG/L AS CAC03)
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BIG SANDY RIVER BASIN--Continued

03214900 - TUG FORK AT GLENHAYES WV (LAT 38 00 20 LONG 082 30 53)

OCT . 1981							
08...	1245	189	900	8.1	15.0	--	--
DEC							
03...	1605	183	1000	8.3	7.0	--	--
FEB , 1982							
04...	0930	5510	425	7.8	5.5	--	--
MAR							
26...	0925	3170	310	7.4	10.5	--	--
MAY							
14...	1000	510	580	7.9	22.0	--	--
JUN							
24...	1500	640	530	7.9	25.0	--	--
AUG							
13...	1100	594	450	7.7	22.5	--	--

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited stream-flow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations and the second is a table of annual maximum stage and discharge at crest-stage stations. Discharge measurements made at miscellaneous sites for both low flow and high flow are given in a third table.

Low-flow partial-record stations

Measurements of streamflow in the area covered by this report made at low-flow partial-record stations are given in the following table. These measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements, when correlated with the simultaneous discharge of a nearby stream when continuous records are available, will give a picture of the low-flow potentiality of a stream. The column headed "Period of record" shows the water years in which measurements were made at the same, or practically the same, site.

Discharge measurements at low-flow partial-record stations during water year 1980

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Measurement	
					Date	Discharge (ft ³ /s)
		Monongahela River basin				
03070200	Salt Lick Creek at Rowlesburg, WV	Lat 39°21'00", long 79°39'50", Preston County, Hydrologic Unit 05020004, at timber railroad and highway bridge at Rowlesburg, and 0.2 mile upstream from mouth.	34.6	1942-69, 1973, 1975-76, 1978-82	12-3-81 9-8-82	105 1.6

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 1980

						Annual maximum	
Station No.	Station name	Location	Drainage area (mi ²)	Period of Record	Date	Gage height (feet)	Dis-charge (ft ³ /s)
Monongahela River basin							
03057500	Skin Creek near Browns-ville, WV	Lat 38°58'30", long 80°26'40", Lewis County, Hydrologic Unit 05020002, 2.6 miles southeast of Brownsville, 4.7 miles southeast of Weston, and at mile 3.0	25.7	1946-60*, 1961-82a	3-21-82	5.76	1,050
Guyandotte River basin							
03203000	Guyandotte River at Man, WV	Lat 37°44'25", long 81°52'37", revised, Logan County, Hydrologic Unit 05070101, on right bank at downstream side of highway bridge at Man, 500 feet upstream from Buffalo Creek, and 0.7 mile downstream from Huff Creek, and at mile 93.4.	758	1928-62*, 1963-82a	3-15-82	10.56	8,810

* Not detected.

* Operated as a continuous-record gaging station.

a Recorder chart on file in district office.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1982

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Date	Discharge (ft ³ /s)
Potomac River basin						
Varner Hollow	South Fork South Branch Potomac River	Lat 38°27'19", long 79°20'42", Pendleton County, Hydrologic Unit 02070001, 1,000 feet above SCS Dam No. 35, 2.0 miles south of Sugar Grove.	--	--	10-5-81	0
Varner Hollow	South Fork South Branch Potomac River	Lat 38°27'28", long 79°20'52", Pendleton County, Hydrologic Unit 02070001, 300 feet upstream from mouth, 4.0 miles south of Sugar Grove.	0.54	--	10-5-81	0
South Fork South Branch Potomac River	Potomac River	Lat 38°27'29", long 79°20'55", Pendleton County, Hydrologic Unit 02070001, 50 feet above Varner Hollow, 4.0 miles south of Sugar Grove.	10.81	--	10-5-81	*1.7
Brushy Fork	South Fork South Branch Potomac River	Lat 38°28'06", long 79°19'17", Pendleton County, Hydrologic Unit 02070001, out- flow culvert from SCS Dam No. 19, 3.0 miles south of Sugar Grove.	15.15	--	10-5-81	0.03
Tributary to South Fork	South Fork South Branch Potomac River	Lat 38°28'26", long 79°19'05", Pendleton County, Hydrologic Unit 02070001, above SCS Dam No. 33, 2.5 miles south of Sugar Grove.	--	--	10-5-81	0
Tributary to South Fork	South Fork South Branch Potomac River	Lat 38°28'29", long 79°19'23", Pendleton County, Hydrologic Unit 02070001, below SCS Dam No. 33, 2.5 miles south of Sugar Grove.	0.85	--	10-5-81	0
Panther Run	South Fork South Branch Potomac River	Lat 38°28'56", long 79°19'10", Pendleton County, Hydrologic Unit 02070001, above SCS Dam No. 32, 2.0 miles south of Sugar Grove.	--	--	10-5-81	0
Panther Run	South Fork South Branch Potomac River	Lat 38°28'57", long 79°19'22", Pendleton County, Hydrologic Unit 02070001, below SCS Dam No. 32, 2.0 miles south of Sugar Grove.	0.38	--	10-5-81	0
Stony Run	South Fork South Branch Potomac River	Lat 38°29'22", long 79°18'44", Pendleton County, Hydrologic Unit 02070001, 5.0 feet above SCS Dam No. 18, 1.5 miles south of Sugar Grove.	--	--	10-5-81	*0.02
Stony Run	South Fork South Branch Potomac River	Lat 38°29'39", long 79°19'02", Pendleton County, Hydrologic Unit 02070001, outflow culvert from SCS Dam No. 18, 1.5 miles south of Sugar Grove.	4.39	--	10-5-81	0.02
Little Stony Run	South Fork South Branch Potomac River	Lat 38°29'50", long 79°18'36", Pendleton County, Hydrologic Unit 02070001, 200 feet above SCS Dam No. 36, 1.4 miles south of Sugar Grove.	--	--	10-5-81	0
Little Stony Run	South Fork South Branch Potomac River	Lat 38°29'55", long 79°18'59", Pendleton County, Hydrologic Unit 02070001, below SCS Dam No. 36, 1.4 miles south of Sugar Grove.	2.93	--	10-5-81	0
South Fork South Branch Potomac River	Potomac River	Lat 38°30'48", long 79°18'38", Pendleton County, Hydrologic Unit 02070001, 100 feet above W. Va. Route 21 bridge, 0.6 mile east of Sugar Grove.	--	--	10-5-81	*2.6
Little Fork	South Fork South Branch Potomac River	Lat 38°33'03", long 79°16'27", Pendleton County, Hydrologic Unit 02070001, 0.6 mile above SCS Dam No. 17 at ford, 4.0 miles northeast of Sugar Grove.	--	--	10-6-81	*0.21
Lick Run	Little Fork	Lat 38°33'04", long 79°16'31", Pendleton County, Hydrologic Unit 02070001, 200 feet above mouth, 4.0 miles northeast of Sugar Grove.	--	--	10-6-81	0
Thorny Run	Little Fork	Lat 38°33'13", long 79°16'13", Pendleton County, Hydrologic Unit 02070001, 2,000 feet above mouth, 4.0 miles northeast of Sugar Grove.	--	--	10-6-81	0

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1982--Continued

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Date	Discharge (ft ³ /s)
Potomac River basin						
Little Fork	South Fork South Branch Potomac River	Lat 38°33'33", long 79°16'42", Pendleton County, Hydrologic Unit 02070001, 150 feet below SCS Dam No. 17, 4.0 miles northeast of Sugar Grove.	17.27	--	10-6-81	0.49
George Run	South Fork South Branch Potomac River	Lat 38°34'44", long 79°15'08", Pendleton County, Hydrologic Unit 02070001, above SCS Dam No. 16, 3.2 miles south of Brandywine.	--	--	10-6-81	0
George Run	South Fork South Branch Potomac River	Lat 38°35'09", long 79°15'15", Pendleton County, Hydrologic Unit 02070001, below SCS Dam No. 16, 2.8 miles south of Brandywine.	3.78	--	10-6-81	0
Miller Run	South Fork South Branch Potomac River	Lat 38°35'38", long 79°14'59", Pendleton County, Hydrologic Unit 02070001, above SCS Dam No. 15, 2.2 miles south of Brandywine.	--	--	10-6-81	0
Miller Run	South Fork South Branch Potomac River	Lat 38°35'40", long 79°15'01", Pendleton County, Hydrologic Unit 02070001, out- flow culvert of SCS Dam No. 15, 2.0 miles south of Brandywine.	5.58	--	10-6-81	0.09
Hawes Run	South Fork South Branch Potomac River	Lat 38°35'55", long 79°12'08", Pendleton County, Hydrologic Unit 02070001, 300 feet above Brandywine Lake, 2.5 miles southeast of Brandywine.	--	--	10-6-81	0
Hawes Run	South Fork South Branch Potomac River	Lat 38°36'06", long 79°12'23", Pendleton County, Hydrologic Unit 02070001, below SCS Dam No. 13, 2.2 miles southeast of Brandywine.	3.69	--	10-6-81	0.01
Dry River Hollow	South Fork South Branch Potomac River	Lat 38°36'22", long 79°12'11", Pendleton County, Hydrologic Unit 02070001, above SCS Dam No. 27, 1.1 miles southeast of Brandywine.	--	--	10-6-81	0
Dry River Hollow	South Fork South Branch Potomac River	Lat 38°36'24", long 79°12'29", Pendleton County, Hydrologic Unit 02070001, below SCS Dam No. 27, 0.9 mile southeast of Brandywine.	2.20	--	10-6-81	0.03
Broad Run	South Fork South Branch Potomac River	Lat 38°36'22", long 79°13'55", Pendleton County, Hydrologic Unit 02070001, above SCS Dam No. 14, 1.1 miles south of Brandywine.	--	--	10-6-81	*0.06
Broad Run	South Fork South Branch Potomac River	Lat 38°36'34", long 79°14'12", Pendleton County, Hydrologic Unit 02070001, below SCS Dam No. 14, 0.9 mile south of Brandywine.	5.55	--	10-6-81	0.06
Hawes Run	South Fork South Branch Potomac River	Lat 38°37'21", long 79°14'13", Pendleton County, Hydrologic Unit 02070001, 20 feet below U.S. Route 33 bridge, at Brandywine.	--	--	10-6-81	0.03
Long Pasteur Run	Patterson Creek	Lat 39°30'24", long 78°46'06", Mineral County, Hydrologic Unit 02070002, 0.2 mile northeast of W. Va. Route 28 crossing at Fort Ashby.	--	--	11-4-81 5-5-82 6-29-82 8-25-82	*0.17 0.66 *0.07 0
Monongahela River basin						
Blackwater River	Cheat River	Lat 39°04'35", long 79°37'40", Tucker County, Hydrologic Unit 05020004, W. Va. Route 72 bridge at Hendricks.	140	1912-18+ 1963,1965 1966,1982	7-15-82	87.
Whetstone Run	Buffalo Creek	Lat 39°31'03", long 80°22'17", Marion County, Hydrologic Unit 05020003, 40 feet above mouth of Little Whetstone Run, 0.5 mile above mouth, 1.5 miles west of Mannington.	1.98	--	9-13-82	*0.01

* Base flow.

+ Discharge and supplemental records published in water-supply papers.

POTOMAC RIVER BASIN

01605005 - MILL RACE AT FORT ASHBY, WV (LAT 39°30'24" LONG 78°46'06")

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STRFAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-WF (COLS./ 100 ML)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)
NOV 04...	0920	.17	241	6.6	6.0	10.0	370	1300	1600	32	1.7
MAY 05...	1050	.66	114	6.9	13.0	11.9	460	930	400	40	8.1
JUN 29...	1230	.07	171	7.1	23.0	5.8	--	--	--	--	--

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SILICA, DIS- SOLVED (MG/L AS SiO2)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	PHOS- PHORUS, ORTH0, TOTAL (MG/L AS P)	BARIIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)
NOV 04...	6.9	6.6	6.8	<.010	.05	.180	.010	41	<1	<1
MAY 05...	5.0	4.3	5.6	<.010	<.10	.030	<.010	30	<0	<1
JUN 29...	--	--	--	--	--	--	--	--	--	--

DATE	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 04...	<3	<10	43	<10	<4	17	<10	83	<6.0	11
MAY 05...	<3	<10	51	<10	<4	48	<10	41	<6.0	9
JUN 29...	--	--	--	--	--	--	--	--	--	--

MONONGAHELA RIVER BASIN

03061430 - WHETSTONE RUN NR MANNINGTON, WV (LAT 39°31'03" LONG 80°22'17")

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
SEP 13...	1000	.01	2200	7.0	20.0	5.0	668	662	180	53	1000

DATE	ALKA- LINITY FIELD (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM DIS- SOLVED (UG/L AS CD)
SEP 13...	6	2600	120	.6	4490	.12	<.10	3	100	1

DATE	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDEd RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDEd RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)
SEP 13...	30	1100	1000	90	3	510	480	30	<.1	<1

GROUND-WATER RECORDS

GROUND-WATER LEVELS

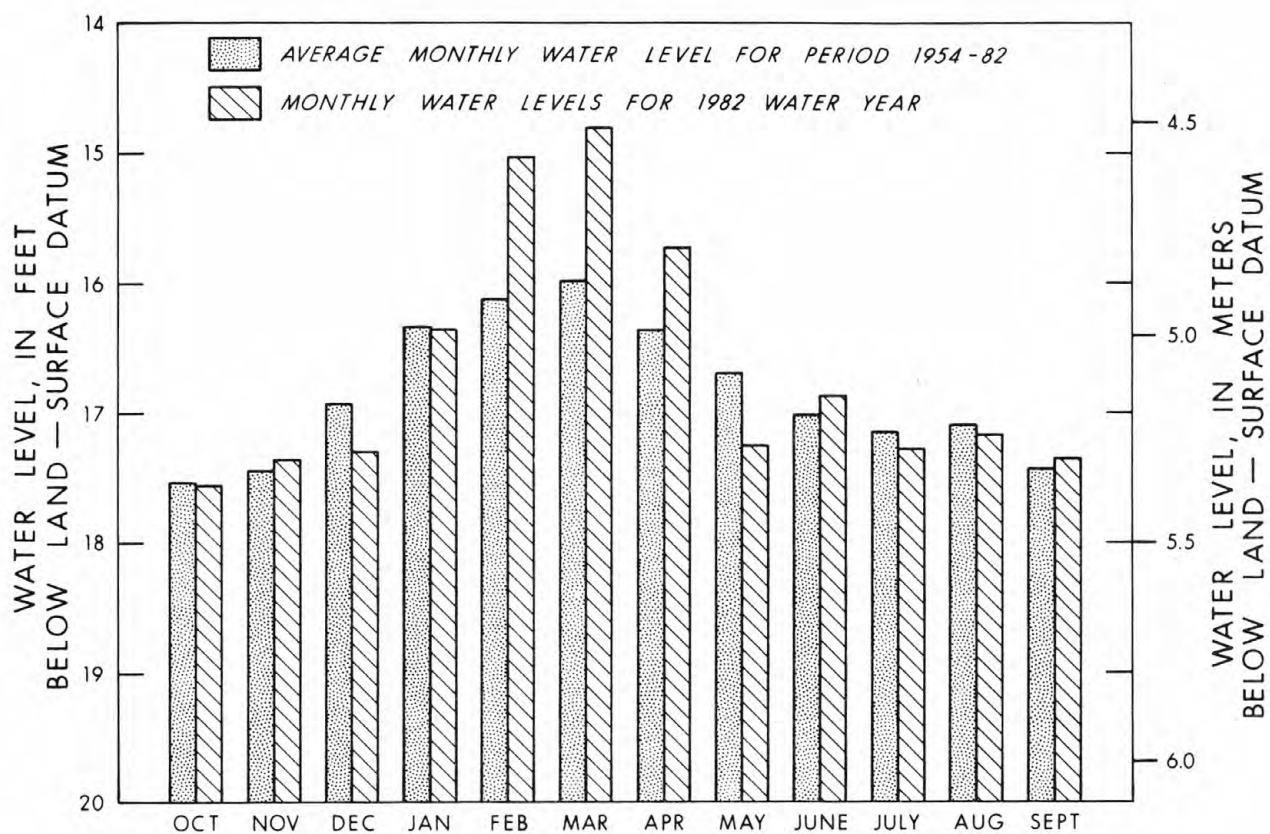


Figure 5.--Water levels at the Glenville index well during the 1982 water year compared to average monthly water levels for the period 1954-82.

GROUND-WATER RECORDS

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GROUND-WATER LEVELS

BERKELEY COUNTY

392725077582401. Local number, 20-5-7.

LOCATION.--Lat 39°27'35", long 77°58'24", Hydrologic Unit 02070004, at John Street and Porter Avenue, Martinsburg.

Owner: Martinsburg Mills, Inc.

AQUIFER.--Beekmantown Group of Lower Ordovician Age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 8 in (0.20 m), depth 250 ft (76.2 m), cased with steel to 10 ft (3.05 m).

DATUM.--Land-surface datum is about 445 ft (136 m) National Geodetic Vertical Datum of 1929. Measuring point:

Top edge of recorder shelter base, 3.3 ft (1.01 m) above land-surface datum.

REMARKS.--Doubtful-or-no water-level record Feb. 5 to Mar. 8, May 28 to June 28, and Aug. 8 to Sept. 30.

Records fair.

PERIOD OF RECORD.--November 1956 to current year (water-level recorder).

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 23.00 ft (7.01 m), estimated, 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 1981 TO SEPTEMBER 1982
NOON VALUES FROM DIGITAL RECORDER

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	49.16	51.02	54.04	50.04	*46.80	*39.30	34.27	35.54	36.25	34.68	39.47	*45.25
10	50.38	51.35	54.51	50.26	*41.20	38.42	34.43	36.01	37.07	34.97	*40.40	*46.05
15	51.61	52.95	54.21	51.73	*41.40	36.74	35.12	36.27	31.49	34.09	*41.40	*46.80
20	52.67	53.44	53.93	52.84	*41.60	34.08	35.42	36.44	32.53	36.00	*42.40	*47.40
25	53.41	54.10	53.62	53.02	*40.60	33.38	35.42	36.46	34.58	37.37	*43.40	*48.00
EGM	48.69	54.70	54.30	53.11	*40.00	33.92	35.42	37.55	35.54	38.55	*44.50	*48.60

WTR YR 1982 HIGH 31.24 JUN 14 LOW 55.12 DEC 14

* Estimated.

BRAXTON COUNTY

384003080462601. Local number, 34-2-15.

LOCATION.--Lat 38°40'03", long 80°46'26", Hydrologic Unit 05050007, at Kanawha Street, Gassaway.

Owner: Claude Cunningham.

AQUIFER.--Conemaugh Group of Upper Pennsylvanian Age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in (0.15 m), depth 100 ft (30.5 m), cased with steel.

DATUM.--Land-surface datum is about 1,100 ft (335 m) National Geodetic Vertical Datum of 1929. Measuring point:

Top of casing, 1.92 ft (0.59 m) above land-surface datum.

PERIOD OF RECORD.--August 1971 to current year (weekly water-level measurements).

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 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1981	73.76	JAN 06, 1982	73.61	APR 07, 1982	73.26	JUL 07, 1982	73.57
14	73.78	13	73.60	14	73.34	14	73.61
21	73.78	20	73.58	21	73.44	21	73.64
29	73.78	27	73.52	28	73.50	28	73.68
NOV 04	73.75	FEB 03	73.48	MAY 05	73.58	AUG 04	73.69
11	73.73	10	73.43	12	73.65	11	73.71
18	73.70	17	73.36	19	73.68	18	73.72
25	73.70	24	73.30	26	73.68	25	73.73
DEC 02	73.70	MAR 03	73.28	JUN 02	73.63	SEP 01	73.75
09	73.70	10	73.23	09	73.60	08	73.77
16	73.68	17	73.18	16	73.48	15	73.79
23	73.65	24	73.21	23	73.43	22	73.80
30	73.63	31	73.23	30	73.50	29	73.81

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.--Conemaugh Formation of Upper Pennsylvanian Age.

WELL CHARACTERISTICS.--Dug unused water-table well, diameter 3 ft (0.91 m), depth 25 ft (7.62 m), cased with concrete tile.

DATUM.--Land-surface datum is about 820 ft (250 m) National Geodetic Vertical Datum of 1929. Measuring point:

Top of concrete cover at land-surface datum.

REMARKS.--West Virginia index well.

PERIOD OF RECORD.--October 1953 to current year (weekly water-level measurements).

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.58 (414 m) below land-surface datum, Jan. 26, 1958; lowest measured, 18.75 ft (5.72 m) below land-surface datum, Nov. 30, 1953.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1981	17.36	JAN 11, 1982	16.15	APR 05, 1982	15.05	JUL 05, 1982	17.15
12	17.49	18	16.22	12	15.31	12	17.19
20	17.56	22	16.35	20	15.72	20	17.29
26	17.64	25	15.57	26	16.13	26	17.21
NOV 02	17.32	FEB 01	15.78	MAY 03	16.50	AUG 09	17.17
09	17.26	08	15.60	10	16.80	16	17.09
16	17.29	15	15.30	17	17.08	23	17.18
23	17.38	22	15.01	24	17.26	30	17.13
30	17.44	MAR 01	15.44	31	17.37	SEP 06	17.02
DEC 07	17.36	08	15.41	JUN 07	17.21	13	17.11
14	17.37	15	14.88	14	16.87	20	17.34
21	17.30	22	14.80	21	16.87	27	17.43
JAN 04, 1982	16.49	29	15.00	28	17.04		

GROUND-WATER LEVELS

GRANT COUNTY

391652079181401.

LOCATION.--Lat 39°16'52", long 79°18'14", Hydrologic Unit 02070002, about 200 ft (61.0 m) north of U.S. Route 50, about 3.5 miles (5.6 km) west of Mt. Storm.

Owner: Buffalo Coal Company.

AQUIFER.--Thin bed of coal in the Conemaugh Group of Upper Pennsylvanian Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in (0.15 m), depth 24 ft (7.32 m), cased with plastic to 23 ft (7.01 m).

DATUM.--Land-surface datum is about 2,890 ft (881 m) National Geodetic Vertical Datum of 1929. Measuring point: Top edge of recorder shelter base, 1.5 ft (0.46 m) above land-surface datum.

REMARKS.--Well is near active surface mine.

PERIOD OF RECORD.--June 1978 to current year (water-level recorder).

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.33 ft (1.93 m) below land-surface datum, Mar. 11-15, 1979; lowest, 19.83 ft (6.04 m) below land-surface datum, Sept. 30, 1982.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
NOON VALUES FROM DIGITAL RECORDER

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	14.33	16.40	16.64	16.00	13.54	13.01	12.79	14.07	15.46	15.03	15.69	16.72
10	14.59	16.70	16.07	15.13	13.07	13.28	12.84	14.24	14.75	15.05	15.89	16.93
15	15.30	16.52	15.66	15.42	14.46	13.13	13.00	14.47	13.46	15.09	16.05	17.11
20	16.32	16.65	16.55	16.33	14.37	12.48	13.29	14.76	13.33	15.16	16.18	18.70
25	16.64	17.09	16.56	16.63	12.85	12.40	13.77	15.02	13.79	15.34	16.32	19.50
EOM	16.63	17.12	16.03	16.82	13.01	12.57	14.01	15.31	14.70	15.52	16.54	19.81

WTR YR 1982 HIGH 12.04 MAR 23 LOW 19.81 SEP 30

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 Harrell Shale of Middle Devonian Age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in (0.15 m), depth 61 ft (18.6 m), cased with steel.

DATUM.--Land-surface datum is about 1,875 ft (572 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.9 ft (0.27 m) above land-surface datum.

PERIOD OF RECORD.--November 1953 to current year (weekly water-level measurements).

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.80 ft (0.85 m) below land-surface datum, Mar. 16, 1955; lowest measured, 14.82 ft (4.52 m) below land-surface datum, Aug. 29, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 03, 1981	9.61	JAN 02, 1982	5.47	APR 03, 1982	5.33	JUL 03, 1982	5.53
10	9.78	09	5.30	10	5.43	10	5.55
17	10.11	16	5.30	17	5.45	17	5.47
24	10.05	23	5.10	24	5.43	24	5.44
31	6.15	30	5.45	MAY 01	5.22	31	5.27
NOV 07	5.15	FEB 06	5.08	08	5.42	AUG 07	5.20
14	7.60	13	5.30	15	5.52	14	5.42
21	8.30	20	5.02	22	5.60	21	6.10
28	7.95	27	5.30	29	5.46	28	6.25
DEC 05	6.20	MAR 06	5.20	JUN 05	5.36	SEP 04	6.44
12	5.80	13	5.05	12	5.36	11	7.43
19	5.52	20	5.05	19	5.20	18	10.55
26	5.25	27	5.25	26	5.40	25	6.60

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 24 ft (7.32 m) (revised), cased with tile.

DATUM.--Land-surface datum is about 1,400 ft (427 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing at land-surface datum.

REMARKS.--Well depth 24 ft (7.32 m) Mar. 9, 1982. Plastic liner inserted in well Mar. 9, 1982, to eliminate float hanging. No water-level record Oct. 25-30, Nov. 2 to Dec. 15, Dec. 17-19, 23-28, Jan. 4-10, Jan. 24 to Mar. 8, Mar. 29 to Apr. 3, Apr. 17, July 1 to Aug. 23. Records poor.

PERIOD OF RECORD.--February 1972 to current year (water-level recorder).

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), estimated, below land surface datum, July 15, 1973.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
NOON VALUES FROM GRAPHIC RECORDER

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.72	---	---	---	---	---	.75	10.78	11.61	---	---	13.84
10	12.89	---	---	---	---	.81	5.80	11.31	11.38	---	---	13.96
15	13.22	---	---	11.93	---	.72	9.78	11.67	.79	---	---	14.03
20	13.32	---	12.10	11.79	---	.56	8.61	11.96	10.23	---	---	14.12
25	---	---	---	---	---	1.35	10.61	12.04	11.41	---	13.49	14.17
EOM	6.93	---	10.83	---	---	---	7.50	12.18	11.93	---	13.72	14.11

WTR YR 1982 HIGH .41 MAR 17 LOW 14.18 SEP 24

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 (595 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of well casing, 0.9 ft (0.27 m) above land-surface datum.

PERIOD OF RECORD.--March 1968 to November 1976 (water-level recorder), November 1976 to current year (periodic water-level measurements).

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 263.00 ft (80.16 m), estimated, below land-surface datum, July 15, 1972; lowest, 274.15 ft (83.56 m), estimated, below land-surface datum Nov. 6, 1970.

NOTE.--Water-level measurement Oct. 14, 1981, 272.60 ft (83.09 m) below land-surface datum. Water-level measurement May 4, 1982, 271.95 ft (82.89 m) below land-surface datum.

LEWIS COUNTY

390553080280802. Local number, 16-1-9.

LOCATION.--Lat 39°05'53", long 80°28'08", Hydrologic Unit 05020002, at Jackson's Mill State 4-H Camp, Jackson's Mill.

Owner: West Virginia University.

AQUIFER.--Conemaugh Group and Allegheny Formation of Upper and Middle Pennsylvanian Age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 12 in (0.30 m), depth 122 ft (37.2 m), cased.

DATUM.--Land-surface datum is about 1,020 ft (311 m) National Geodetic Vertical Datum of 1929. Measuring point:

Drilled hole in steel plate covering casing at land-surface datum.

REMARKS.--Water level affected by stage of West Fork River.

PERIOD OF RECORD.--May 1961 to May 1976 (weekly water-level measurements), October 1977 to current year (periodic water-level measurements).

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.88 ft (2.71 m) below land-surface datum, Dec. 30, 1969; lowest measured, 24.80 ft (7.56 m) below land-surface datum, Oct. 6, 1977.

NOTE.--Water-level measurement Oct. 15, 1981, 23.16 ft (7.06 m) below land-surface datum. Water-level measurement Mar. 19, 1982, 20.05 ft (6.11 m) below land-surface datum.

390008080283401. Project number, SJ4.

LOCATION.--Lat 39°00'08", long 80°28'34", Hydrologic Unit 05020002, about 75 ft (22.9 m) northeast of county route 30 bridge across West Fork River at Brownsville, WV.

Owner: U.S. Geological Survey.

AQUIFER.--Monongahela Formation of the Upper Pennsylvanian Age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in (0.15 m), depth 102 ft (31.1 m), cased with galvanized iron to 18 ft (5.49 m).

DATUM.--Land-surface datum is about 1,026 ft (313 m) National Geodetic Vertical Datum of 1929. Measuring point:

Three hacksaw marks on top of casing.

REMARKS.--Digital water-stage recorder installed May 27, 1982.

PERIOD OF RECORD.--March to May 1982 (periodic water-level measurements), May 1982 to current year (water-level recorder).

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.54 ft (1.99 m) below land-surface datum, July 29, 1982; lowest, 10.18 ft (3.10 m) below land-surface datum, Sept. 20, 21, 1982.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
NOON VALUES FROM DIGITAL RECORDER

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5								---	9.44	8.81	10.02	9.71
10								---	9.52	9.70	9.48	10.09
15								---	9.17	10.10	10.05	10.14
20								---	10.00	7.34	10.09	10.17
25								---	10.12	9.90	9.85	10.17
EOM								9.63	9.77	9.63	10.03	10.00

WTR YR 1982 HIGH 6.86 JUL 29 LOW 10.18 SEP 21

MARION COUNTY

393101080150501.

LOCATION.--Lat 39°31'01", long 80°15'05", Hydrologic Unit 05020003, about 1,250 ft (381 m) north of State Route 91 and 100 ft (30.5 m) west of State Route 15 in Farmington.

Owner: State of W. Va.

AQUIFER.--Open to a mine in Pittsburgh Coal, Member of Monongahela Group of Upper Pennsylvanian Age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in (0.15 m), depth 266 ft (81.1 m), cased with steel to 252 ft (76.8 m).

DATUM.--Land-surface datum is about 970 ft (296 m) National Geodetic Vertical Datum of 1929. Measuring point:

Top of steel plate at land-surface datum.

REMARKS.--Well formerly used by U.S. Bureau of Mines to back fill abandoned mine with shale slurry. Water level

affected by mine pumpage. No water-level record Oct. 15, 31, Nov. 15, Dec. 20, 25, Jan. 10, 15, 20, 25, 31,

Feb. 15, Mar. 20, May 10, 31, June 20, and July 5, 25. Some unpublished daily values also missing.

PERIOD OF RECORD.--April to December 1978 (periodic water-level measurements), December 1978 to current year (daily water-level measurements).

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 171.19 ft (52.18 m) below land-surface datum, Sept. 20, 1982; lowest measured, 219.47 ft (66.89 m) below land-surface datum, May 12, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
DAILY WATER-LEVEL MEASUREMENTS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	173.52	173.14	173.28	173.52	173.57	173.35	173.09	172.59	172.18	*171.98	171.64	171.48
10	173.46	173.41	173.28	*173.20	173.57	173.24	172.79	*172.48	171.99	171.72	171.49	171.38
15	*173.45	*173.15	173.11	*173.15	*173.30	173.27	172.94	172.36	171.88	171.88	171.49	171.29
20	173.64	172.94	*173.70	173.51	172.96	*173.00	172.66	*171.94	171.62	171.62	171.41	171.19
25	173.32	173.45	*173.45	*173.40	173.83	172.99	172.60	172.19	171.98	*171.75	171.37	171.23
EOM	*173.46	173.44	173.32	*173.72	173.46	172.99	172.81	*172.14	171.84	171.58	171.46	171.46

WTR YR 1982 HIGH 171.19 SEP 20 LOW 174.07 DEC 22

* Estimated.

GROUND-WATER LEVELS
MARION COUNTY--Continued

393057080161901.

LOCATION.--Lat 39°30'57", long 80°16'19", Hydrologic Unit 05020003, on State Route 250/9, 1.2 miles (1.9 km) west of Farmington.
Owner: Richard White.

AQUIFER.--Dunkard Group of Pennsylvanian and Permian Age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in (0.15 m), depth 74 ft (22.6 m), cased with steel to 6 ft (1.83 m).

DATUM.--Land-surface datum is about 1,140 ft (347 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, flush with instrument shelf 0.3 ft (0.09 m) above land-surface datum.

REMARKS.--Doubtful-or-no water-level record Oct. 1-9, May 3-21, and July 12 to Sept. 7. Records fair.

PERIOD OF RECORD.--June to December 1977 (periodic water-level measurements), December 1977 to current year (water-level recorder).

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.89 ft (3.93 m) below land-surface datum, Jan. 26, 1978; lowest, 54.20 ft (16.52 m) below land-surface datum, Oct. 26, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 to SEPTEMBER 1982
NOON VALUES FROM DIGITAL RECORDER

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	*52.90	48.61	41.05	26.65	33.38	36.50	41.57	*48.40	48.71	35.01	*51.30	*52.50
10	53.20	49.16	41.11	39.09	40.85	35.57	40.23	*48.40	43.19	45.24	*49.60	52.76
15	53.54	49.18	42.86	42.23	43.27	36.39	41.60	*50.00	44.60	*48.00	*49.60	53.07
20	53.87	49.49	43.77	44.92	33.45	37.98	43.46	*49.20	42.13	*48.60	*48.80	53.44
25	54.11	50.05	33.27	31.78	40.50	39.67	45.78	48.16	44.21	*49.00	*47.20	53.77
EOM	44.51	47.35	41.91	40.95	42.20	40.97	47.24	48.33	46.45	*48.20	*51.60	53.92

WTR YR 1982 HIGH 17.25 JAN 23 LOW 54.20 OCT 26

* Estimated.

MARSHALL COUNTY

395610080452501. Local number, 4-3-7.

LOCATION.--Lat 39°56'10", long 80°45'25", Hydrologic Unit 05030106, on U.S. Highway 250, Glendale.

Owner: Triangle PWC, Inc. (Plant Well #1).

AQUIFER.--Alluvium.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 10 in (0.25 m), depth 98 ft (29.9 m), cased.

DATUM.--Land-surface datum is about 640 ft (195 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing at land-surface datum.

REMARKS.--Well depth 94 ft (28.7 m), Apr. 30, 1980. Well discontinued May 25, 1982.

PERIOD OF RECORD.--February 1977 to May 1982 (discontinued) (weekly water-level measurements).

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 52.53 ft (16.01 m) below land-surface datum, Aug. 27 and Sept. 2, 1980; lowest measured, 59.37 ft (18.10 m) below land-surface datum, Feb. 23, 1977.

REVISED RECORDS.--WDR WV-80-1: 1977-79 (water levels, published in error as well number 395608080452301, Marshall County).

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1981	54.14	NOV 25, 1981	53.90	JAN 13, 1982	53.45	MAY 04, 1982	54.31
14	53.89	DEC 02	54.02	20	53.10	11	54.09
21	53.60	09	54.11	27	53.08	18	53.76
28	53.90	16	53.99	APR 06	53.50	25	53.52
NOV 05	53.95	23	53.85	13	53.79		
12	54.01	30	53.80	20	54.07		
19	54.00	JAN 06, 1982	53.78	27	54.30		

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.--Alluvium.

WELL CHARACTERISTICS.--Drilled water-table irrigation well, diameter 12 in (0.30 m), depth 73 ft (22.3 m), cased with steel to 61 ft (18.6 m), screened 61-73 ft (18.6 m-22.3 m).

DATUM.--Land-surface datum is about 600 ft (183 m) National Geodetic Vertical Datum of 1929. Measuring point: Edge of pump housing above hole on east side of pump, 1.4 ft (0.43 m) above land-surface datum.

REMARKS.--Well discontinued June 24, 1982.

PERIOD OF RECORD.--May 1958 to June 1982 (discontinued) (weekly water-level measurements).

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 35.60 ft (10.85 m) below land-surface datum, Apr. 27, 1979; 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 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1981	39.54	DEC 10, 1981	40.27	FEB 18, 1982	40.93	APR 29, 1982	40.68
08	39.59	17	40.33	25	40.97	MAY 06	40.63
15	39.66	24	40.38	MAR 04	40.99	13	40.57
22	39.78	31	40.45	11	40.99	20	40.71
29	39.84	JAN 07, 1982	40.56	18	41.01	27	40.80
NOV 05	39.90	14	40.62	25	40.99	JUN 03	40.87
12	39.94	21	40.76	APR 01	40.92	10	40.90
19	39.96	28	40.83	08	40.86	17	40.81
26	40.06	FEB 04	40.92	15	40.75	24	40.80
DEC 03	40.13	11	40.82	22	40.75		

GROUND-WATER LEVELS

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MASON COUNTY--Continued

385451082062001. Local number, 38-3-54.

LOCATION.--Lat 38°54'51", long 82°06'20", Hydrologic Unit 05030202, about 0.5 mile (0.8 km) east of intersection of State Route 62 and Secondary State Route 13.

Owner: West Virginia University, Ohio Valley Agricultural Experiment Station.

AQUIFER.--Conemaugh Group of Upper Pennsylvanian Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in (0.15 m), depth 131 ft (39.9 m), cased with steel to 60 ft (18.3 m).

DATUM.--Land-surface datum is about 615 ft (187 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.0 ft (0.91 m) above land-surface datum.

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, 23.26 ft (7.09 m) below land-surface datum, Aug. 22-25, 1980; 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 1981 TO SEPTEMBER 1982
NOON VALUES FROM GRAPHIC RECORDER

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	24.84	24.91	25.07	25.08	25.10	25.08	24.73	24.79	24.70	24.67	24.95	25.14
10	24.86	24.95	25.09	25.11	25.08	25.09	24.71	24.82	24.67	24.67	24.95	25.19
15	24.89	24.98	25.09	25.12	25.08	25.01	24.70	24.86	24.64	24.73	24.99	25.22
20	24.90	24.99	25.11	25.16	25.05	24.91	24.70	24.90	24.60	24.77	25.03	25.19
25	24.90	25.00	25.10	25.10	25.06	24.86	24.75	24.78	24.61	24.80	25.07	25.22
EOM	24.91	25.06	25.12	25.12	25.09	24.81	24.76	24.73	24.64	24.90	25.10	25.23

WTR YR 1982 HIGH 24.60 JUN 19 AND OTHERS LOW 25.23 SEP 30

MERCER COUNTY

372149081055001. Local number, 48-5-1.

LOCATION.--Lat 37°21'49", long 81°05'50", Hydrologic Unit 05050002, at Princeton Water Service, Company No. 1 well, Princeton.

Owner: West Virginia Service Company.

AQUIFER.--Hinton Formation of Upper Mississippian Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in (0.15 m), depth 249 ft (75.9 m), cased.

DATUM.--Land-surface datum is about 2,387 ft (728 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing extension, 5.50 ft (1.68 m) above land-surface datum. Prior to Sept. 1975 measuring point was top of casing at land-surface datum.

REMARKS.--Water level affected by nearby pumping. Well flows at times.

PERIOD OF RECORD.--March 1960 to current year (weekly water-level measurements).

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.

REVISED RECORDS.--WDR WV-79-1: 1977-78 (water levels).

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1981	1.84	JAN 06, 1982	0.06	APR 07, 1982	0.00	JUL 07, 1982	0.00
14	1.62	13	0.00	14	0.00	14	0.00
21	1.58	20	0.00	21	0.00	21	0.00
28	1.69	27	0.00	28	0.00	28	0.00
NOV 04	1.84	FEB 03	0.00	MAY 05	0.00	AUG 04	0.00
11	1.90	10	0.00	12	0.00	11	0.00
18	1.92	17	0.00	19	0.00	18	0.00
25	1.92	24	0.00	26	0.00	25	0.00
DEC 02	1.90	MAR 03	0.00	JUN 02	0.00	SEP 01	0.00
09	1.86	10	0.00	09	0.00	08	0.00
16	1.86	17	0.00	16	0.00	15	0.19
23	1.84	24	0.00	23	0.00	22	0.30
30	1.15	31	0.00	30	0.00	29	0.54

MINERAL COUNTY

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 Group of Upper Pennsylvanian Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in (0.15 m), depth 37 ft (11.3 m), cased with steel.

DATUM.--Land-surface datum is about 2,480 ft (756 m) National Geodetic Vertical Datum of 1929. Measuring point:

Top of casing, 0.7 ft (0.21 m) above land-surface datum.

REMARKS.--Well flows at times. Water level affected by nearby pumpage at times. Well depth 6 ft (1.8 m), Oct. 24, 1980.

PERIOD OF RECORD.--August 1968 to October 1976 (weekly water-level measurements), May 1977 to current year (periodic water-level measurements).

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.69 ft (0.21 m) above land-surface datum, many days since 1968; lowest measured, 10.81 ft (3.29 m) below land-surface datum, Oct. 29, 1968.

NOTE.--Water-level measurement Oct. 20, 1981, 3.94 ft (1.20 m) below land-surface datum. Water-level measurement Mar. 23, 1982, 0.05 ft (0.02 m) above land-surface datum.

GROUND-WATER LEVELS

MINGO COUNTY

373554081493401.

LOCATION.--Lat 37°35'54", long 81°49'34", Hydrologic Unit 05070101, downstream of toe of R.D. Bailey Dam northeast of Justice.

Owner: U.S. Army Corps of Engineers.

AQUIFER.--New River Formation of Lower Pennsylvanian Age.

WELL CHARACTERISTICS.--Drilled unused water-table well, 8 in (0.20 m), depth 66 ft (20.1 m), cased with steel.

DATUM.--Land-surface datum is about 920 ft (280 m) National Geodetic Vertical Datum of 1929. Measuring point: Top edge of recorder shelter base, flush with top of casing, 1.0 ft (0.30 m) above land-surface datum.

PERIOD OF RECORD.--March to June 1980 (periodic water-level measurements), June 1980 to current year (water-level recorder).

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 31.30 ft (9.54 m) below land-surface datum, June 8, 1981; lowest, 43.46 ft (13.25 m) below land-surface datum, Sept. 29, 1982.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
NOON VALUES FROM DIGITAL RECORDER

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	37.53	38.85	39.40	35.22	34.94	36.39	36.85	37.65	37.15	37.49	39.66	35.09
10	38.00	38.79	39.53	38.47	34.70	34.79	36.97	37.76	35.95	37.37	39.12	40.02
15	38.16	39.21	38.89	38.60	37.22	34.05	37.30	38.00	34.92	37.73	36.27	40.75
20	38.01	39.67	39.17	38.27	36.05	35.44	36.72	37.96	37.32	38.09	38.53	41.31
25	38.12	39.39	36.22	34.93	36.25	36.00	37.79	37.57	38.04	38.49	38.98	42.07
EOM	38.05	39.47	38.78	37.86	36.09	36.31	37.16	34.64	37.78	39.10	38.78	43.31

WTR YR 1982 HIGH 33.11 MAR 16 LOW 43.31 SEP 30

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 Pennsylvanian and Permian Age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in (0.15 m), depth 65 ft (19.8 m), cased with steel.

DATUM.--Land-surface datum is about 1,060 ft (323 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.2 ft (0.37 m) above land-surface datum.

PERIOD OF RECORD.--July 1971 to current year (weekly water-level measurements).

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.66 ft (1.73 m) below land-surface datum, Feb. 24, 1981; 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 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06, 1981	7.19	JAN 05, 1982	6.46	APR 06, 1982	6.24	JUL 06, 1982	6.83
13	7.28	12	6.33	13	6.19	13	6.68
20	7.47	19	6.30	20	6.38	20	6.62
27	6.83	26	6.48	27	6.64	27	6.79
NOV 03	6.68	FEB 02	6.26	MAY 04	6.75	AUG 03	7.36
10	6.55	09	5.76	11	6.72	10	7.38
17	6.44	16	6.12	18	6.78	17	7.45
24	6.56	23	6.13	25	6.88	23	7.55
DEC 01	6.06	MAR 02	6.06	JUN 01	6.85	31	7.48
08	6.08	09	5.99	08	6.84	SEP 07	7.73
15	6.10	16	5.73	15	6.76	14	7.76
22	6.14	23	5.71	22	7.08	21	7.80
29	6.78	30	6.18	29	6.86	28	7.82

392923079571801. 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 Member of Conemaugh Group of Upper Pennsylvanian Age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in (0.15 m), depth 141 ft (43.0 m), cased with steel to 21 ft (6.40 m).

DATUM.--Land-surface datum is about 1,850 ft (564 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, flush with shelter floor, 0.35 ft (0.11 m) above land-surface datum.

REMARKS.--Doubtful-or-no water-level record Oct. 1 to Nov. 20 and June 26 to July 22. Records fair.

PERIOD OF RECORD.--March 1953 to May 1961 (monthly water-level measurements), May 1961 to May 1962 (water-level recorder), May 1962 to September 1978 (monthly water-level measurements), September 1978 to current year (water-level recorder).

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 1981 TO SEPTEMBER 1982
NOON VALUES FROM DIGITAL RECORDER

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	*75.15	*71.40	49.78	46.33	46.50	47.56	48.74	64.85	63.85	*70.80	72.70	70.15
10	*75.30	*71.40	49.60	47.99	51.83	48.37	48.81	67.48	55.62	*71.20	73.10	70.13
15	*75.40	*72.20	53.86	55.92	55.79	47.87	51.48	69.34	52.28	*71.50	72.77	69.86
20	*75.50	72.73	51.48	61.41	48.31	47.95	53.64	70.72	54.47	*71.40	72.57	70.10
25	*74.00	64.49	47.74	46.95	48.90	50.88	56.25	70.67	63.72	73.19	72.25	70.69
EOM	*70.20	60.58	53.33	46.82	49.31	49.66	62.27	71.59	*68.00	72.66	71.02	71.21

WTR YR 1982 HIGH 45.71 FEB 4 LOW 75.50 OCT 17 AND OTHERS

* Estimated.

GROUND-WATER LEVELS

335

MORGAN COUNTY

393043078174001. Local number, 19-5-14.

LOCATION.--Lat 39°30'43", long 78°17'40", Hydrologic Unit 02070004, on Cacapon State Park south of Berkeley Springs on U.S. Route 522.

Owner: West Virginia Department of Natural Resources.

AQUIFER.--Tonoloway Formation of Upper Silurian Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in (0.20 m), reported depth 250 ft (76.2 m), cased with steel to 33 ft (10.1 m).

DATUM.--Land-surface datum is about 875 ft (267 m) National Geodetic Vertical Datum of 1929. Measuring point: Top edge of recorder shelter base, 1.1 ft (0.34 m) above land-surface datum. Prior to Aug. 16, 1977 measuring point was 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, 29.14 ft (8.88 m) below land-surface datum, May 21, 1980; 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 1981 TO SEPTEMBER 1982
NOON VALUES FROM DIGITAL RECORDER

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	35.27	33.67	33.65	33.27	32.86	33.26	33.25	33.63	32.88	33.33	33.80	34.73
10	35.61	33.64	34.82	33.69	33.18	33.08	33.24	33.55	33.03	33.61	33.47	33.83
15	35.74	33.68	33.54	33.44	33.35	32.86	33.35	33.66	32.96	33.50	34.16	34.32
20	34.20	34.09	33.70	34.15	32.84	32.85	33.43	33.69	33.23	33.65	34.40	34.88
25	34.47	34.98	33.47	33.60	32.92	33.18	33.58	33.67	33.48	33.78	33.97	33.37
EOM	33.29	35.00	33.79	33.69	33.16	33.30	33.53	33.75	33.56	33.78	35.12	33.90

WTR YR 1982 HIGH 29.17 JUN 13 LOW 35.81 OCT 18

POCAHONTAS COUNTY

380634080164801.

LOCATION.--Lat 38°06'53", long 80°15'53", 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 86 ft (26.2 m), cased with steel.

DATUM.--Land-surface datum is about 3,000 ft (914 m) National Geodetic Vertical Datum of 1929. Measuring point: Top edge of recorder shelter base, 0.65 ft (0.20 m) above land-surface datum. Prior to May 28, 1980 measuring point was top of casing at land-surface datum.

REMARKS.--No water-level record Jan. 31 to May 21. Records doubtful May 21 to Sept. 30 due to reversed float line.

PERIOD OF RECORD.--December 1970 to January 1976 (weekly water-level measurements), April 1978 to May 1980 (periodic water-level measurements), May 1980 to January 1982 (water-level recorder). May 1982 to current year (water-level recorder). Published as local well number "44-4-1", 1973-78.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 62.86 ft (19.16 m) below land-surface datum, May 30, 1982; lowest measured, 79.23 ft (24.15 m) below land-surface datum, Oct. 1, 1970.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
NOON VALUES FROM DIGITAL RECORDER

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	69.78	68.97	68.34	67.45				---	64.26	67.57	68.18	68.51
10	69.76	69.23	68.17	67.31				---	64.28	67.70	68.21	68.60
15	69.78	69.19	68.44	67.94				---	64.90	67.90	68.21	68.62
20	69.90	69.22	68.45	68.35				---	65.60	67.80	68.18	68.66
25	69.70	69.44	67.64	67.24				64.64	66.40	68.10	68.34	68.70
EOM	68.80	68.47	68.22	67.98				65.32	66.92	68.13	68.38	68.59

WTR YR 1982 HIGH 63.02 MAY 30 LOW 69.90 OCT 20

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.--Pottsville Group of Lower Pennsylvanian Age.

WELL CHARACTERISTICS.--Drilled domestic artesian well, diameter 8 in (0.20 m), depth 785 ft (239 m), cased to 350 ft (107 m), perforated at or near Upper Freeport Coal.

DATUM.--Land-surface datum is about 1,770 ft (539 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of extended casing, 3.53 ft (1.08 m) above land-surface datum. Prior to July 1978 measuring point was 3.0 ft (0.91 m) below land-surface datum.

PERIOD OF RECORD.--July 1941 to July 1946 (weekly water-level measurements), July 1946 to October 1948 (water-level recorder), October 1948 to October 1950 (weekly water-level measurements), October 1950 to current year (monthly water-level measurements).

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.15 ft (2.18 m) below land-surface datum, Jan. 20, 1947; lowest measured, 108 ft (32.9 m) below land-surface datum, Feb. 3, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 1981	67.26	JAN 27, 1982	66.67	APR 28, 1982	75.87	JUL 22, 1982	68.27
NOV 20	65.92	FEB 22	66.07	MAY 24	76.07	AUG 30	67.42
DEC 21	66.37	MAR 25	65.37	JUN 29	65.57	SEP 20	67.00

GROUND-WATER LEVELS

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 Member of Kanawha Formation of Early Pennsylvanian Age.

WELL CHARACTERISTICS.--Drilled exploratory water-table well, diameter 6 in (0.15 m), depth 155 ft (47.2 m), cased to 18 ft (5.49 m).

DATUM.--Land-surface datum is 2,171 ft (662 m) National Geodetic Vertical Datum of 1929. Measuring point: Floor of shelter box, 2.45 ft (0.75 m) above land-surface datum.

REMARKS.--Water level affected by nearby pumping.

PERIOD OF RECORD.--December 1966 to October 1967 (monthly water-level measurements), July 1968 to January 1977 (water-level recorder), January 1977 to current year (periodic water-level measurements).

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.85 ft (3.31 m) below land-surface datum, Dec. 12, 1966; lowest, 23.35 ft (7.12 m) below land-surface datum, Oct. 28, 1971.

NOTE.--Water-level measurement Oct. 14, 1981, 17.54 ft (5.35 m) below land-surface datum. Water-level measurement Mar. 16, 1982, 11.79 ft (3.59 m) below land-surface datum.

385100079522901. Project number, H-63.

LOCATION.--Lat 38°51'00", long 79°52'29", Hydrologic Unit 05020001, 1,800 ft (549 m) west of U.S. Route 250 and 0.6 mile (1.0 km) north of intersection of State Route 33 and U.S. Route 250, at Beverly.

Owner: Edsel Lucas.

AQUIFER.--Shale of Upper-Middle Devonian Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in (0.15 m), depth 98 ft (29.9 m), cased with plastic to 14 ft (4.27 m).

DATUM.--Land-surface datum is about 1,940 ft (591 m) National Geodetic Vertical Datum of 1929. Measuring point: Top edge of recorder shelter base, flush with top of casing 3.0 ft (0.91 m) above land-surface datum.

REMARKS.--U.S. Geological Survey Test Well No. 2. Geologic log and aquifer test data available. At times, water level affected by stage of Tygart Valley River. Well probably overflowed top of casing Mar. 20, river stage 0.1 ft (0.03 m) above top of casing. Doubtful-or-no water-level record Oct. 1-15, Dec. 24 to Jan. 20, Feb. 27 to Mar. 5, and Mar. 20-24, 26-29. Records fair.

PERIOD OF RECORD.--November 1978 to November 1979 (periodic water-level measurements), November 1979 to current year (water-level recorder).

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.00 ft (0.91 m) above land-surface datum, Mar. 20, 1982; lowest, 2.70 ft (0.82 m) below land surface datum, May 29, 1982.

WATER LEVEL, IN FEET ABOVE OR BELOW (-) LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
NOON VALUES FROM DIGITAL RECORDER

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	*-1.64	-1.14	-0.59	*.32	-0.50	*-1.24	-0.94	-1.81	-1.04	-0.70	-1.19	-0.60
10	*-1.60	-0.92	-0.71	*-0.60	-0.55	-0.53	-0.72	-1.90	-1.10	-1.23	-0.65	-1.15
15	-1.56	-1.20	-0.64	*-0.84	-0.99	-0.47	-1.04	-2.21	-0.59	-1.34	-1.19	-1.59
20	-1.39	-1.18	-0.77	-1.10	-0.55	.51	-1.32	-2.48	-1.19	-1.23	-1.66	-1.71
25	-1.28	-1.01	*.60	-0.74	-0.91	-0.87	-1.37	-2.34	-1.64	-1.68	-0.78	-1.20
EOM	-0.86	-0.96	*-0.70	-0.78	*-1.12	-0.91	-1.35	-1.57	-1.20	-1.08	-1.00	-0.72

WTR YR 1982 MAX 1.36 DEC 24 MIN -2.65 MAY 29

* Estimated.

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 Group of Pennsylvanian and Permian Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in (0.15 m), depth 118 ft (36.0 m), cased with steel.

DATUM.--Land-surface datum is about 840 ft (256 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.2 ft (0.37 m) above land-surface datum.

REMARKS.--Formerly public-supply well.

PERIOD OF RECORD.--August 1966 to October 1966 (weekly water-level measurements), April 1968 to September 1975 (water-level recorder), October 1975 to July 1976 (monthly water-level measurements), July 1976 to current year (water-level recorder).

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 17.46 ft (5.32 m) below land-surface datum, Jan. 25, 1978, lowest measured, 21.80 ft (6.64 m) below land-surface datum, Sept. 7, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
NOON VALUES FROM DIGITAL RECORDER

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	19.79	19.48	19.33	18.73	18.46	19.03	18.69	19.61	18.94	18.74	19.65	19.20
10	19.84	19.53	19.15	18.86	18.83	18.45	18.89	19.53	18.75	18.94	19.81	19.32
15	19.95	19.33	19.13	19.10	18.79	18.21	19.11	19.56	18.97	19.31	19.79	19.47
20	20.20	19.36	19.35	19.33	18.20	18.06	19.15	19.67	18.82	19.35	19.98	19.62
25	19.84	19.40	18.71	18.41	19.00	18.32	19.31	19.48	19.22	19.52	19.47	19.54
EOM	19.63	19.39	18.71	18.32	18.89	18.43	19.56	19.04	19.10	19.34	19.53	19.57

WTR YR 1982 HIGH 17.95 MAR 21 LOW 20.20 OCT 20

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.--Pocahontas Group of Lower Mississippian Age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in (0.20 m) depth 281 ft (85.6 m), cased with steel.

DATUM.--Land-surface datum is about 3,275 ft (998 m) National Geodetic Vertical Datum of 1929. Measuring point:

Top of recorder shelter base, 1.6 ft (0.49 m) above land-surface datum. Prior to May 29, 1980 measuring point was top of casing, 1.55 ft (0.47 m) above land-surface datum.

REMARKS.--Doubtful-or-no water-level record Oct. 17 to Jan. 27 and Mar. 15-25. Records fair.

PERIOD OF RECORD.--June 1971 to December 1975 (weekly water-level measurements), April 1978 to May 1980 (periodic water-level measurements), May 1980 to current year (water-level recorder).

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.72 ft (2.05 m) below land-surface datum, June 6, 7, 1981; lowest measured, 11.54 ft (3.52 m) below land-surface datum, July 19, 1971.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
NOON VALUES FROM DIGITAL RECORDER

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.87	*9.70	*9.60	*8.90	8.77	9.80	9.14	9.93	9.40	9.72	10.20	9.24
10	9.87	*9.70	*9.59	*9.60	9.50	9.79	9.33	10.05	9.31	9.90	9.96	9.60
15	9.98	*9.82	*9.59	*9.77	10.02	8.63	9.15	10.19	8.27	9.93	10.12	9.83
20	*9.94	*9.88	*9.77	*9.82	8.87	*7.95	9.55	10.31	9.36	9.94	10.15	10.01
25	*9.90	*9.80	*9.40	*9.05	9.16	8.89	9.85	10.25	9.80	10.06	9.85	10.01
EOM	*9.62	*9.68	*9.66	9.74	9.60	9.40	9.66	9.89	9.78	10.07	9.93	9.88

WTR YR 1982 HIGH 7.50 MAR 17 LOW 10.35 MAY 19

* Estimated.

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.--Kanawha Formation 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 to 10 ft (3.05 m).

DATUM.--Land-surface datum is about 740 ft (226 m) National Geodetic Vertical Datum of 1929. Measuring point:

Top of casing cover, 1.33 ft (0.41 m) above land-surface datum. Prior to Nov. 27, 1979 measuring point was top of casing, 1.30 ft (0.40 m) above land-surface datum.

PERIOD OF RECORD.--May 1971 to current year (weekly water-level measurements).

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, 32.17 ft (9.81 m) below land-surface datum, July 21, 1982.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1981	30.07	JAN 13, 1982	28.77	APR 21, 1982	28.77	JUL 21, 1982	32.17
14	29.77	20	28.57	MAY 05	29.17	AUG 04	31.17
21	29.87	FEB 03	28.82	12	29.67	11	30.07
NOV 04	29.57	10	28.57	19	31.57	18	30.07
11	29.47	17	28.47	24	31.52	24	29.97
18	29.47	23	28.27	JUN 02	29.07	SEP 01	29.37
24	29.47	MAR 03	28.27	09	29.17	08	29.77
DEC 02	29.47	10	28.17	16	29.27	15	29.67
09	29.42	17	28.27	23	29.17	22	29.37
16	29.37	23	28.37	30	30.17		
23	29.37	APR 07	28.47	JUL 07	31.27		
JAN 06, 1982	29.07	14	28.67	14	31.87		

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 Pennsylvanian and Permian Age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in (0.15 m) depth 76 ft (23.2 m), cased with steel.

DATUM.--Land-surface datum is about 890 ft (271 m) National Geodetic Vertical Datum of 1929. Measuring point:

Top of casing, 1.1 ft (0.34 m) above land-surface datum.

PERIOD OF RECORD.--September 1971 to current year (weekly water-level measurements).

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.10 ft (1.86 m) below land-surface datum, Nov. 28, 1973; lowest measured, 20.90 ft (6.37 m) below land-surface datum, Oct. 5, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1981	11.50	JAN 13, 1982	14.87	APR 21, 1982	16.30	JUL 21, 1982	16.80
14	11.90	20	14.10	29	16.90	28	18.70
21	12.90	27	15.60	MAY 05	17.60	AUG 04	18.90
28	17.70	FEB 03	13.70	12	17.40	11	10.90
NOV 04	17.70	10	12.30	19	17.20	18	11.50
11	16.30	17	14.10	26	13.90	30	9.30
18	18.70	24	16.50	JUN 02	18.30	SEP 01	9.40
DEC 02	12.40	MAR 03	13.50	09	19.90	08	11.60
09	14.30	10	10.70	16	16.30	15	11.60
16	15.20	17	10.90	23	19.30	29	10.80
23	16.30	25	16.30	30	9.40		
29	14.80	APR 07	11.70	JUL 07	11.80		
JAN 06, 1982	14.90	14	13.30	14	13.30		

GROUND-WATER LEVELS

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.--New River Formation of Lower Pennsylvanian Age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in (0.15 m), depth 80 ft (24.4 m), cased with steel to 28 ft (8.53 m).

DATUM.--Land-surface datum is about 2,015 ft (615 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder shelter floor, 2.62 ft (0.80 m) above land-surface datum.

REMARKS.--Aquifer test data available. Water-level record affected by nearby pumping at times. Doubtful water-level record Oct. 1-19 because float and counter weight were reversed on the recorder. Records fair.

PERIOD OF RECORD.--December 1976 to February 1977 (periodic water-level measurements), February 1977 to current year (water-level recorder).

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 19.19 ft (5.85 m) below land-surface datum, Mar. 13, 1980; lowest, 41.12 ft (12.53 m) below land-surface datum, Nov. 14, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
NOON VALUES FROM DIGITAL RECORDER

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	33.88	33.78	33.61	25.89	23.24	21.74	21.62	27.20	25.40	27.79	31.81	29.84
10	34.11	34.25	32.98	25.14	22.75	21.77	21.87	27.81	24.94	29.73	32.34	29.68
15	34.68	33.99	32.09	24.71	22.50	21.31	22.03	26.04	24.43	31.54	31.87	30.52
20	34.23	34.20	30.49	24.47	22.16	21.10	22.77	26.43	24.40	31.59	29.94	30.72
25	34.01	34.29	28.63	23.75	22.46	21.32	23.30	26.07	25.55	31.83	30.49	32.20
EOM	34.04	33.64	26.95	23.25	22.11	21.34	25.25	26.66	26.31	32.03	31.18	32.67

WTR YR 1982 HIGH 20.97 MAR 21 LOW 35.37 OCT 14

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FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI). This report contains both the inch-pound and SI unit equivalents in the station manuscript descriptions.

Multiply inch-pound units	By	To obtain SI units
<i>Length</i>		
inches (in)	2.54×10^1	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^0	kilometers (km)
<i>Area</i>		
acres	4.047×10^3	square meters (m ²)
	4.047×10^{-1}	square hectometers (hm ²)
	4.047×10^{-3}	square kilometers (km ²)
square miles (mi ²)	2.590×10^0	square kilometers (km ²)
<i>Volume</i>		
gallons (gal)	3.785×10^0	liters (L)
	3.785×10^0	cubic decimeters (dm ³)
	3.785×10^{-3}	cubic meters (m ³)
million gallons	3.785×10^3	cubic meters (m ³)
	3.785×10^{-3}	cubic hectometers (hm ³)
cubic feet (ft ³)	2.832×10^1	cubic decimeters (dm ³)
	2.832×10^{-2}	cubic meters (m ³)
cfs-days	2.447×10^3	cubic meters (m ³)
	2.447×10^{-3}	cubic hectometers (hm ³)
acre-feet (acre-ft)	1.233×10^3	cubic meters (m ³)
	1.233×10^{-3}	cubic hectometers (hm ³)
	1.233×10^{-6}	cubic kilometers (km ³)
<i>Flow</i>		
cubic feet per second (ft ³ /s)	2.832×10^1	liters per second (L/s)
	2.832×10^1	cubic decimeters per second (dm ³ /s)
	2.832×10^{-2}	cubic meters per second (m ³ /s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (L/s)
	6.309×10^{-2}	cubic decimeters per second (dm ³ /s)
	6.309×10^{-5}	cubic meters per second (m ³ /s)
million gallons per day	4.381×10^1	cubic decimeters per second (dm ³ /s)
	4.381×10^{-2}	cubic meters per second (m ³ /s)
<i>Mass</i>		
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons

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