

Sobashinski



Water Resources Data for Maryland and Delaware

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT MD-DE-79-1
WATER YEAR 1979

Prepared in cooperation with the States of Maryland
and Delaware and with other agencies

CALENDAR FOR WATER YEAR 1979

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*Crooktree Creek near Swanton
(Savage River Basin), is discontinued as
of 1982.*



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WATER YEAR 1979

Prepared in cooperation with the States of Maryland
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UNITED STATES DEPARTMENT OF THE INTERIOR

CECIL D. ANDRUS, Secretary

GEOLOGICAL SURVEY

H. William Menard, Director

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PREFACE

This report was prepared by personnel of the Maryland, Delaware, District of Columbia district of the Water Resources Division of the U.S. Geological Survey under the supervision of W. F. White, District Chief, and J. E. Biesecker, Regional Hydrologist, Northeastern Region. It was done in cooperation with the States of Maryland and Delaware and with other agencies.

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

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WATER RESOURCES DATA FOR MARYLAND AND DELAWARE, 1979

INTRODUCTION

Water resources data for the 1979 water year for Maryland and Delaware consist of records of stage, discharge, and water quality of streams; stage and contents of lakes and reservoirs; and water levels and water quality of ground-water wells. This volume contains records for water discharge at 102 gaging stations; stage and contents at 1 reservoir; water quality at 44 gaging stations and 40 wells; and water levels at 28 observation wells. Also included are data for 15 crest-stage, 87 low-flow, and 4 tidal crest-stage partial-record stations. Locations of these sites are shown on figures 3 and 4. 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 operated by the U.S. Geological Survey and cooperating State, local, and Federal agencies in Maryland and Delaware.

Records of discharge and 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 the Branch of Distribution, U.S. Geological Survey, 1200 South Eads Street, Arlington, VA 22202.

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

Beginning with the 1975 water year, water data for streamflow, water quality, and ground water are published in official Survey reports 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 MD-DE-79-1." For archiving and general distribution, the reports for water years 1971-74 are also identified as water-data reports. These water-data reports are for sale, in paper copy or in microfiche, by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

Additional information, including current prices, for ordering specific reports may be obtained from the district chief at the address given on the back of the title page or by telephone (301) 828-1535.

COOPERATION

The U.S. Geological Survey and organizations of the State of Maryland have had cooperative agreements for the systematic collection of streamflow records from 1896 to 1909 and since 1924, for ground-water levels since 1943, and for water-quality records since 1958. Similar agreements between the Survey and organizations of the State of Delaware began in 1943 for streamflow records and in 1949 for water-quality records. Organizations that assisted in collecting data through cooperative agreements with the Survey are:

Maryland Geological Survey, K. N. Weaver, director.

Delaware Geological Survey, R. R. Jordan, State geologist.

Maryland State Highway Administration, M. S. Caltrider, administrator.

Maryland Department of Health and Mental Hygiene, Environmental Health Administration, Max Eisenberg, acting director

District of Columbia Department of Environmental Services, H. L. Tucker, director.

Assistance in the form of funds or services was given by the Corps of Engineers, U.S. Army, for 21 gaging stations; by the Water Quality Office, Environmental Protection Agency, for 5 gaging stations; and by the National Park Service, U.S. Department of the Interior, for 1 station.

The following organizations aided in collecting records:

Delaware: State Department of Natural Resources and Environmental Control, and New Castle County.

Maryland: Maryland Water Resources Administration, Washington Suburban Sanitary Commission, Upper Potomac River Commission, Baltimore and Howard Counties, Potomac Electric Power Co., and Virginia Electric Power Co.

Organizations that supplied data are acknowledged in station descriptions.

ACKNOWLEDGMENT

Maryland and Delaware district personnel who contributed significantly to the collection and preparation of the data in this report were: R. W. James, Jr., Chief, Hydrologic Records and Information Section, David Grason, R. H. Simmons, B. M. Helinsky, M. N. Lys, D. F. Gillen, B. F. Strain, L. B. Maclin, and M. E. Walters.

HYDROLOGIC CONDITIONS

Streamflow was in the normal range throughout the bistate area as the 1979 water year began. Streamflow generally increased into the above normal or excessive range (upper 25 percent of record) for most of the remainder of the year. Heavy rains from the remnants of Hurricane David on September 5th caused local flooding throughout the Baltimore and Southern Maryland areas. Record-high peaks occurred at several gaging stations in these areas.

Streamflow at the index station, Potomac River at Paw Paw, W. Va., averaged 4,530 ft³/s (128 m³/s), 154 percent of normal, reference period 1941-70. A record daily high flow was recorded in February. The average flow at the index station, Seneca Creek near Dawsonville, Md., was 210 ft³/s (5.95 m³/s), 257 percent of normal. Record monthly high flows were recorded in January and February. At the index station, Choptank River near Greensboro, Md., streamflow averaged 195 ft³/s (5.52 m³/s), 174 percent of normal, reference period 1949-70. A record daily high flow was recorded in February.

Average fresh-water inflow to the Chesapeake Bay was estimated at 95,600 ft³/s (2,710 m³/s) which is 124 percent of the long-term average, reference period 1952-79. Record-high inflows of 189,000 ft³/s (5,350 m³/s) and 253,000 ft³/s (7,160 m³/s) occurred in January and March respectively. Above-average inflows occurred in all months except April, May, and July.

Monthly flows at the index station, Potomac River near Washington, D.C., adjusted for diversions, were in the excessive range for November through January, March, May, July, and August. The yearly flow averaged 16,630 ft³/s (471 m³/s), 158 percent of normal.

Annual mean discharge is compared with the long-term average discharge for two representative gaging stations in figure 1. Data for the station, Potomac River at Point of Rocks, Md., reflects runoff conditions in the Potomac River basin, excluding the Coastal Plain. Data for the station, Choptank River at Greensboro, Md., reflects runoff from a 113 mi² (293 km²) area, of which 21.6 mi² (34.8 km²) is in Delaware in the central part of the Delmarva peninsula.

The combined storage in the three major water-supply reservoirs in the Baltimore City Municipal System was 116 percent of average on September 30, 1979, or about 85,300,000,000 gal (323 hm³), an increase of 10 percent from the end of last year and 100 percent of the usable capacity of 85,340,000,000 gal (323 hm³).

At the end of the water year, water-level measurements indicated that the water table was generally higher throughout the bistate than it had been the year before. In some wells, the net change amounted to a rise of as much as 8 ft (2.4 m) or 10 ft (3.05 m). In most wells the rise amounted to only a few feet. Record high levels were established in three wells in the Appalachian region and in one Piedmont well. Near-record highs occurred in several other wells in those areas and in the Coastal Plain west of Chesapeake Bay.

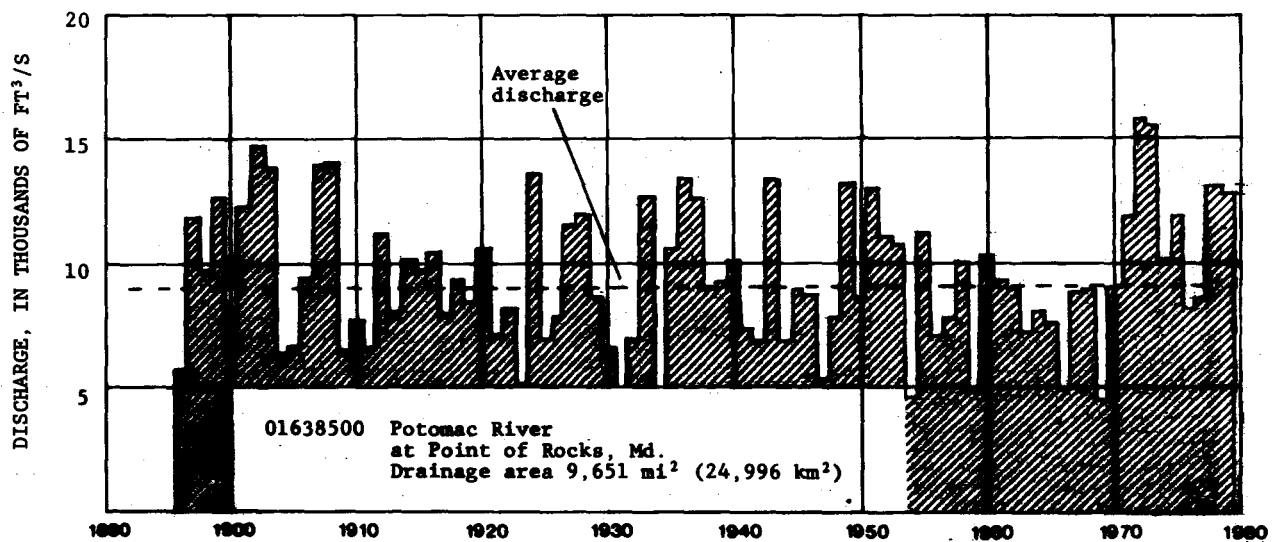
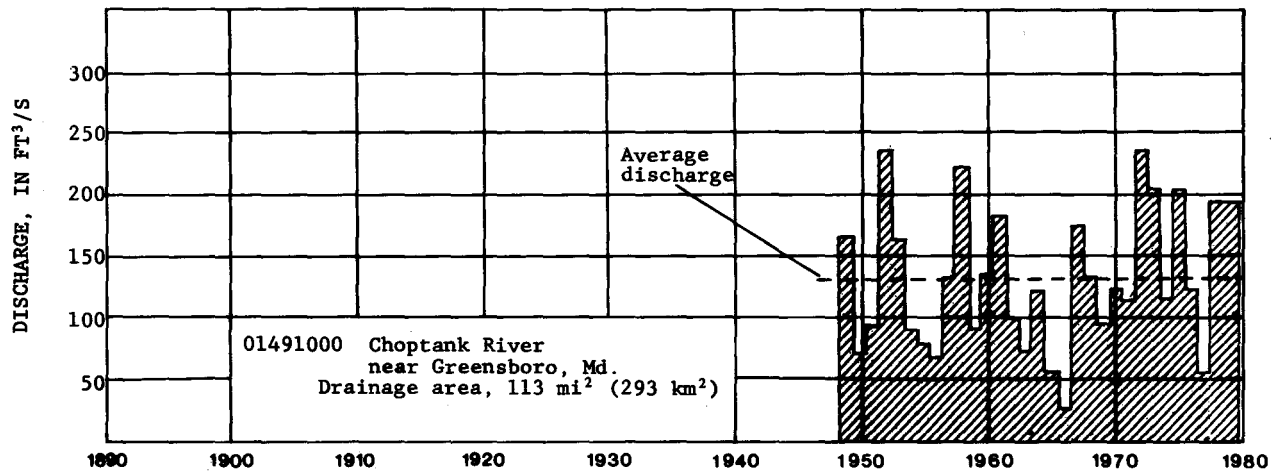


Figure 1.-- Annual mean discharge at two gaging stations in Maryland.

DEFINITION OF TERMS

Terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. See also the table for converting inch-pound units to International System of Units (SI) on the inside of the back cover.

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Adenosine triphosphate (ATP) is the primary energy donor in cellular life process. Its central role in living cells makes it an excellent indicator of the presence of living material in water. A measure of ATP therefore provides a sensitive and rapid estimate of biomass. ATP is reported in micrograms per liter of the original water sample.

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

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

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

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

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

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

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

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

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

Biochemical oxygen demand (BOD) is a measure of the quantity of dissolved oxygen, in milligrams per liter, necessary for the decomposition of organic matter by micro-organisms, 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 as for ash mass and dry mass.

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

Bottom material: See Bed material.

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

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

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

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

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

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

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

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

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

Cubic foot per second (FT³/S, ft³/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to approximately 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

Discharge is the volume of water (or more broadly, volume of fluid plus suspended sediment) that passes a given point within a given period of time.

Mean discharge (MEAN) is the arithmetic mean of individual daily mean discharges during a specific period.

Instantaneous discharge is the discharge at a particular instant of time.

Dissolved constitutes that material in a representative water sample which passes through a 0.45 μ m membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate.

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

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

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

Drainage area of a stream at a 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.

Land-surface datum is a datum plane that is approximately at the land surface at the well.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Diatoms are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells/mL of sample.

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

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

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

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.

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 are likely to produce different analytical results.

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

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

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

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

Suspended-sediment discharge (tons/day) is the rate at which dry weight of sediment passes a section of a stream or is the quantity of sediment, as measured by dry weight or volume, that passes a section in a given time. It is computed by multiplying discharge in ft^3/s times mg/L times 0.0027.

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

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

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

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

Specific conductance is a measure of the ability of a water to conduct an electrical current. It is expressed in micromhos per centimeter at 25°C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in micromhos). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

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

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

Substrate is the physical surface upon which an organism lived.

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

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

Surface area of a lake is that area outlined on the latest U.S.G.S. topographic map as the boundary of the lake and measured by a planimeter in acres. In localities not covered by topographic maps, the areas are computed from the best maps available at the time planimeted. All areas shown are those for the stage when the planimeted 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 μm 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 in bottom material is the total amount of a given constituent in a representative sample of bottom material. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total in bottom material."

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

Total 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 ft³/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.

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

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.

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

DOWNSTREAM ORDER AND STATION NUMBER

Since October 1, 1950, the order of listing hydrologic-station records in Survey reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a main-stream station are listed before that station. A station on a tributary that enters between two main-stream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary on which a station is situated with respect to the stream to which it is immediately tributary is indicated by an 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 01477800, which appears just to the left of the station name, includes the 2-digit part number "01" plus the 6-digit downstream order number "477800."

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 2 below.

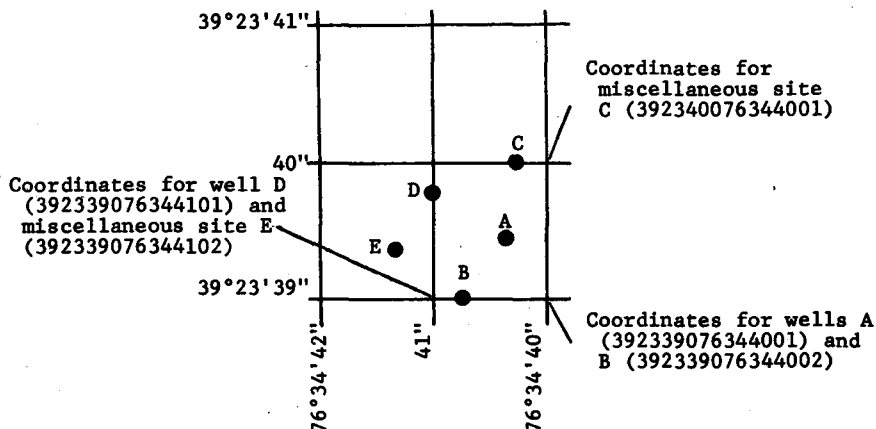


Figure 2. System for numbering wells and miscellaneous sites (latitude and longitude)

A second well-numbering system used in Maryland utilizes the county prefix and a 5-minute grid. The first 2 letters of the identification number are the county prefix; for example, for Charles County the prefix is CH. Each county is divided by 5-minute quadrangles of latitude and longitude. Each quadrangle is identified by 2 uppercase letters; the first designates north to south and the second, west to east. The wells are numbered serially within each quadrangle. A similar system used in Delaware divides the state, rather than the counties, by 5-minute quadrangles of latitude and longitude which are designated as explained above. Each 5-minute quadrangle is further subdivided by 1-minute quadrangles. Each of the 1-minute quadrangles from north to south is designated by a number from 1 to 5, and west to east by a number from 1 to 5. Thus ID 55-1 is the first well inventoried in the southeast 1-minute quad of the ID 5-minute quadrangle of Delaware.

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.

Tritium network is a network of stations which has been established to provide baseline information on the occurrence of tritium in the Nation's surface waters. In addition to the surface-water stations in the network, tritium data are also obtained at a number of precipitation stations. The purpose of the precipitation stations is to provide an estimate sufficient for hydrologic studies of the tritium input to the 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 textbooks, 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 dams 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 hydrologists 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 northern 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 "DEFINITION OF TERMS" on page 6.

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. If 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 discharges 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 discharge measurements, gage-height records, and rating tables is on file in the district office. Also most gaging-station records are available in computer-usable form and many statistical analyses have been made.

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

Records of discharge collected by agencies other than the Geological Survey

The National Water Data Exchange, Water Resources Division, U.S. Geological Survey, National Center, Reston, VA 22902, maintains an index of records of discharge collected by other agencies but not published by the Geological Survey. Information on records available at specific sites can be obtained upon request.

EXPLANATION OF WATER-QUALITY RECORDS

Collection and examination of data

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

The descriptive heading for water-quality records gives 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 discharges.

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

Sediment

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

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

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

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

EXPLANATION OF GROUND-WATER LEVEL RECORDS

Collection of the data

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

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

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 insure that measurements at each well are consistent.

Water-level measurements in this report are given in feet with reference to either National Geodetic Vertical Datum of 1929 (NGVD) or land-surface datum (lsd). National Geodetic Vertical Datum of 1929 (NGVD) is the datum plane on which the national network of precise levels is based; land-surface datum is a datum plane that is approximately at land surface at each well. If known, the altitude of the land-surface datum above NGVD 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 at 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.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

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

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-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-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. Ehlke, G. A. Irwin, B. W. Lium, and K. V. Slack: USGS--TWRI Book 5, Chapter A4. 1977. 332 pages.
- 5-A5. *Methods for determination of radioactive substances in water and fluvial sediments*, by L. L. Thatcher, V. J. Janzer, and K. W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages.
- 5-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.
- 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.

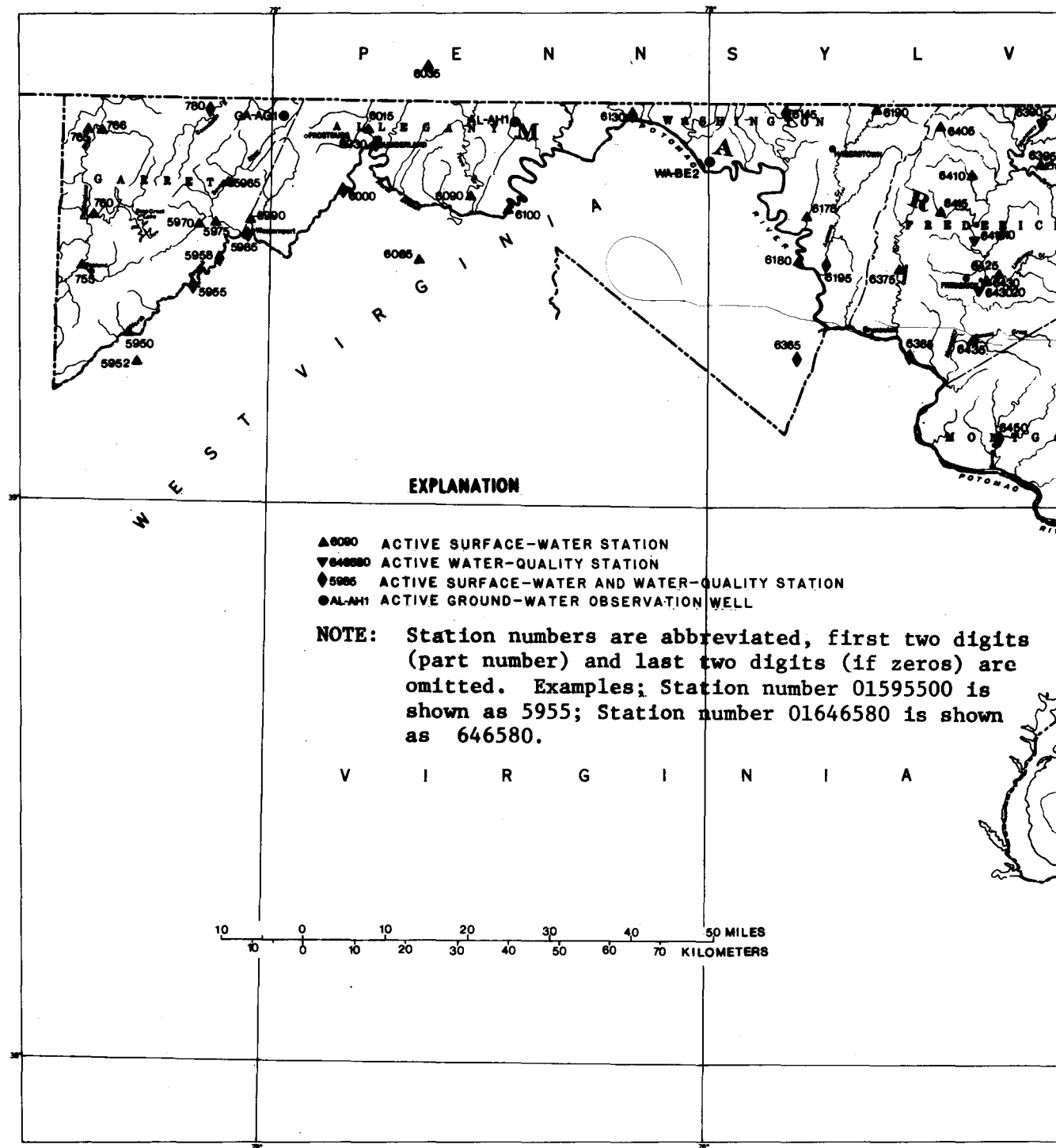
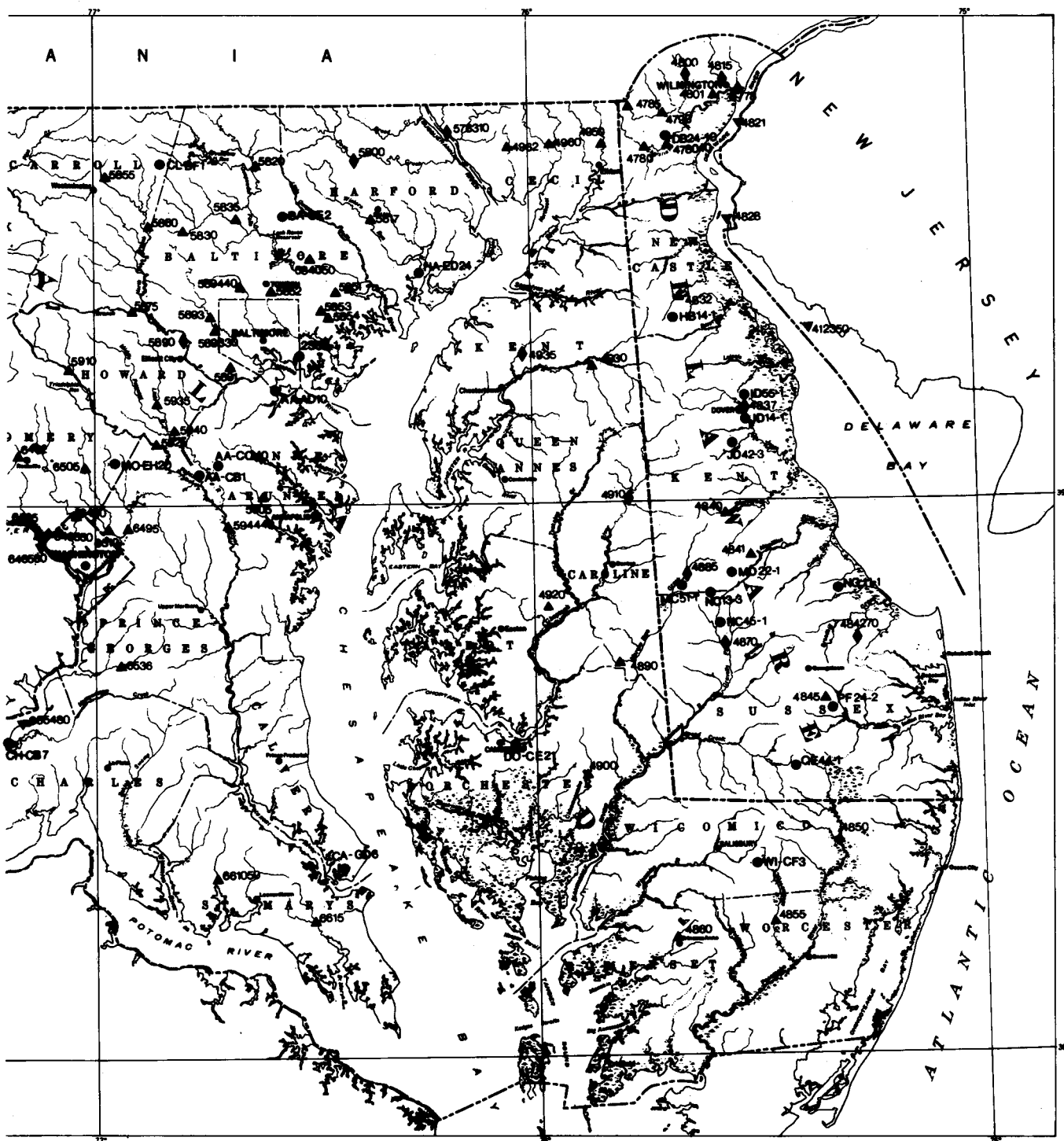


Figure 3. Location of surface-water and water-quality stations and ground-water observation wells in Maryland and Delaware.



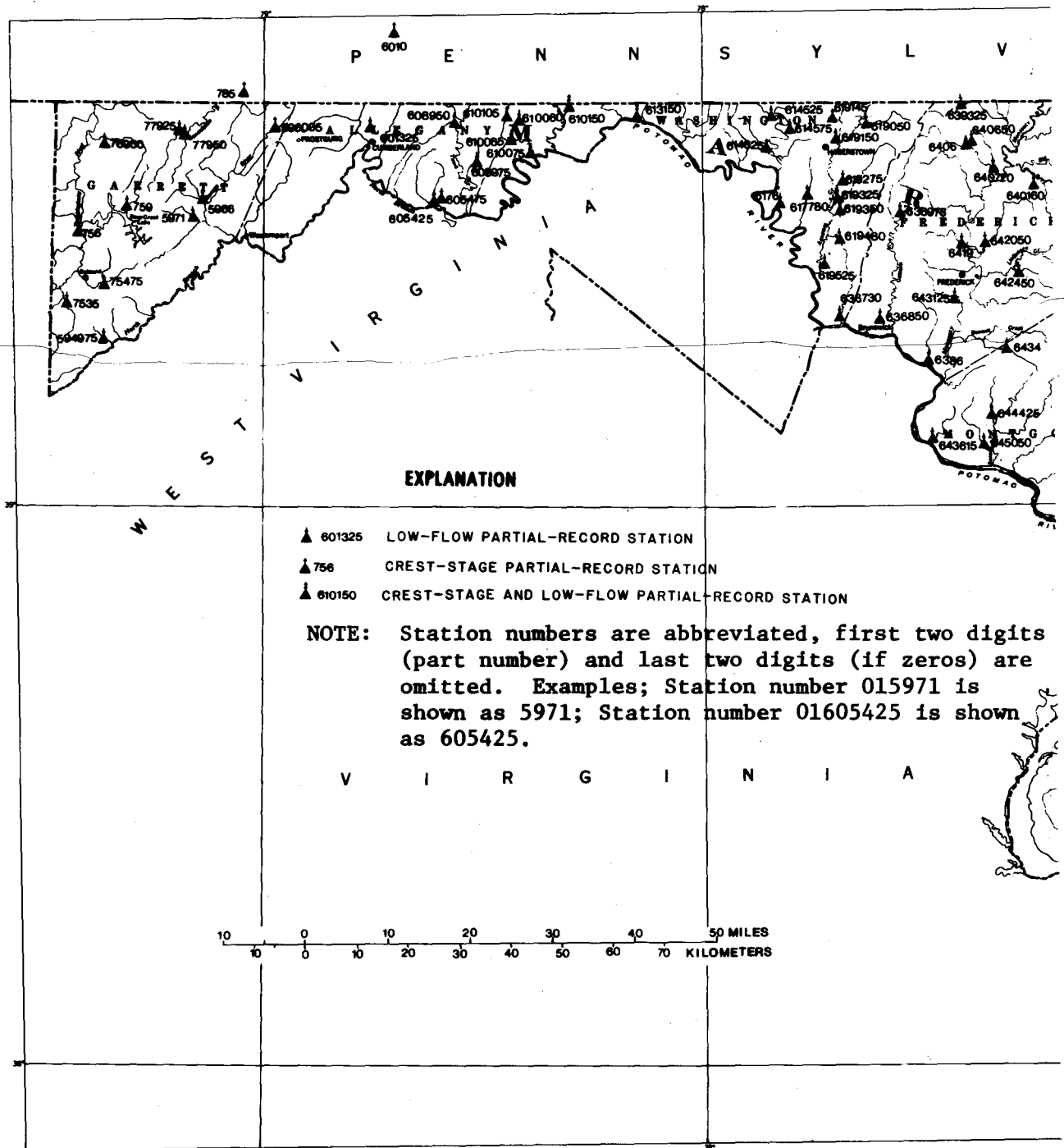
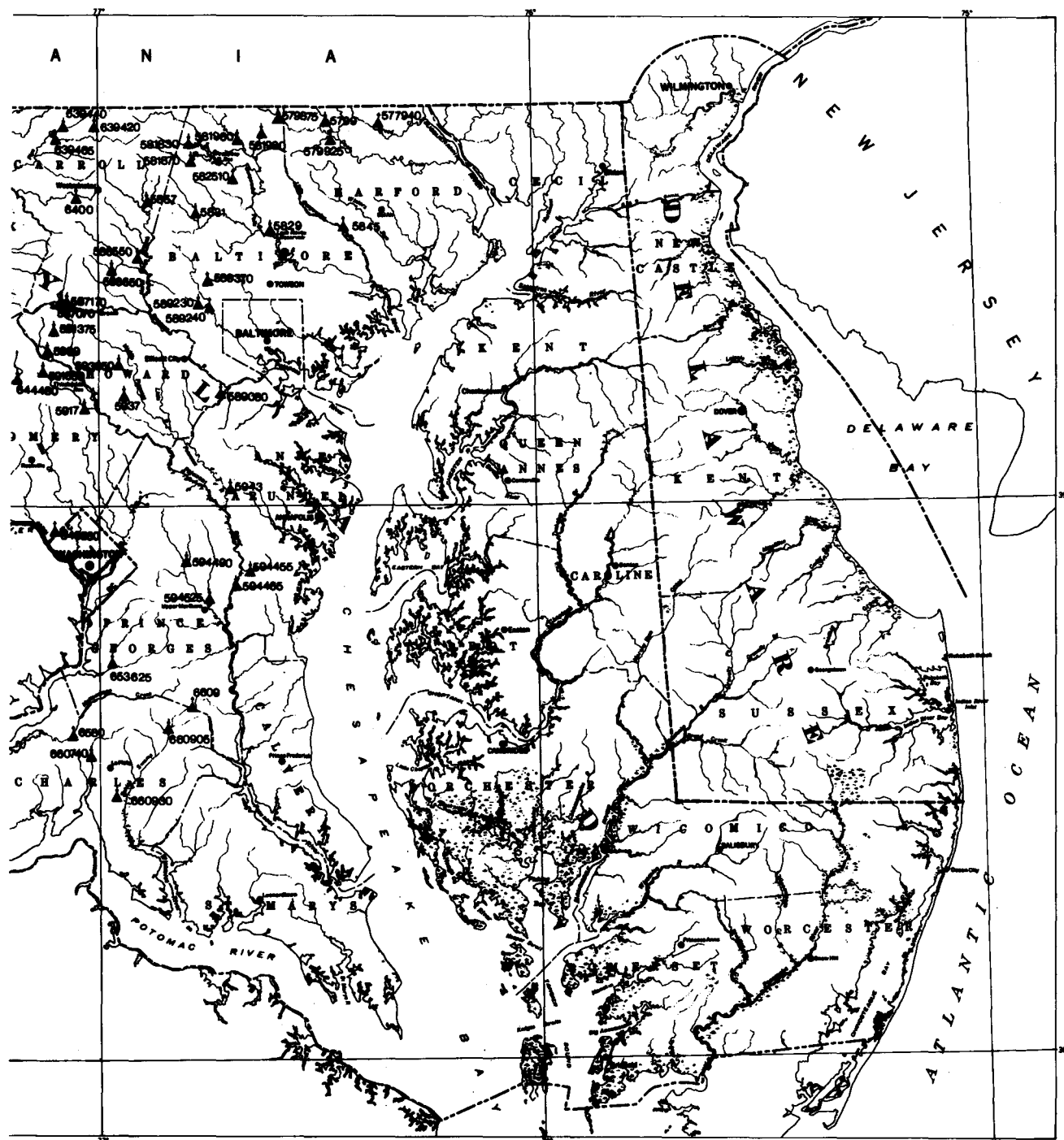


Figure 4. Location of low-flow and crest-stage partial record stations in Maryland and Delaware.



HYDROLOGIC-DATA STATION RECORDS

23

NORTH ATLANTIC SLOPE BASINS

DELAWARE RIVER BASIN

01477800 SHELLPOT CREEK AT WILMINGTON, DE

LOCATION.--Lat 39°45'39", long 75°31'10", New Castle County, Hydrologic Unit 02040205, on right bank 100 ft (30 m) east of intersection of 44th and Pine Streets in Clifton Park, 700 ft (213 m) downstream from bridge on North Market Street in Wilmington, 0.2 mi (0.3 km) downstream from Matson Run, and 2.3 mi (3.7 km) upstream from mouth.

DRAINAGE AREA.--7.46 mi² (19.32 km²).

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

REVISED RECORDS.--WSP 1382: 1948(m).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 15.16 ft (4.621 m) National Vertical Datum of 1929.

REMARKS.--Water-discharge records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--33 years (water years 1947-79), 9.78 ft³/s (0.277 m³/s), 17.80 in/yr (452 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,850 ft³/s (194 m³/s) Sept. 13, 1971, gage height, 11.91 ft (3.630 m), from rating curve extended above 620 ft³/s (17.6 m³/s) on basis of computation of flow over dam at gage height 6.52 ft (1.987 m); contracted-opening measurements at gage heights 6.52 ft (1.987 m), 7.87 ft (2.429 m), and 8.6 ft (2.62 m), from floodmarks; type V culvert measurement at 9.10 ft (2.774 m); and contracted opening measurement of peak flow; minimum daily, 0.09 ft³/s (0.003 m³/s) Oct. 2, 4, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1940, that of Sept. 13, 1971. Flood of

Aug. 1, 1945, reached a stage of about 8.5 ft (2.59 m), from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 550 ft³/s (15 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. 25	0115	674 19.1	3.81 1.161	Feb. 26	0310	1140 32.3	4.63 1.411
Jan. 7	2345	779 22.1	3.97 1.210	Apr. 26	2300	608 17.2	3.70 1.128
Jan. 21	0310	936 26.5	4.27 1.301	June 11	0940	591 16.7	3.67 1.119
Jan. 24	1830	1500 42.5	5.34 1.628	Sept. 6	0405	810 22.9	4.02 1.225
Feb. 24	2350	952 27.0	4.30 1.311	Sept. 30	0440	*2020 57.2	6.30 1.920

Minimum daily discharge, 0.69 ft³/s (0.020 m³/s) Oct. 12.

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	8.9	.81	3.1	21	5.2	10	2.8	4.1	3.1	32	1.7	1.1
2	1.9	.81	2.1	153	4.2	9.0	4.4	3.6	4.0	3.8	21	.98
3	.97	.81	2.3	19	3.7	6.2	6.3	3.6	19	2.9	35	1.0
4	1.2	.82	33	4.9	3.6	5.4	8.5	3.8	34	4.6	6.2	.94
5	1.1	.82	40	3.8	2.8	7.7	11	3.3	7.4	4.0	1.8	48
6	3.3	.83	4.3	3.8	2.5	93	4.0	2.8	4.6	1.9	1.4	124
7	1.1	.89	2.7	93	2.2	17	2.8	2.6	3.1	1.7	1.2	2.7
8	.75	.81	4.5	143	2.3	7.4	2.7	2.3	2.5	1.6	1.2	1.6
9	.70	1.1	124	10	2.0	5.7	46	2.2	2.1	1.6	1.1	1.2
10	.75	.81	14	5.3	2.1	5.1	15	2.1	2.1	1.5	1.2	1.1
11	.75	.83	4.3	3.8	2.2	32	5.1	2.1	86	1.6	4.0	1.0
12	.69	.81	3.3	3.5	2.1	6.7	4.3	2.0	8.5	1.5	25	.95
13	.88	.81	3.0	14	2.3	5.1	4.0	11	4.3	1.6	4.9	.87
14	1.0	.80	3.2	16	2.0	5.4	39	6.7	3.3	1.7	1.6	7.0
15	1.0	1.3	3.1	4.6	2.0	4.0	8.2	3.0	2.7	1.9	1.3	2.9
16	2.2	3.0	3.1	3.6	2.0	2.8	5.2	3.8	2.7	3.5	1.1	.97
17	14	5.2	3.2	3.2	1.9	2.8	4.2	1.9	3.3	9.7	1.1	.88
18	1.4	19	2.1	2.7	2.1	2.8	3.7	7.8	2.7	49	2.6	.86
19	1.0	1.9	2.1	7.5	2.6	2.7	3.3	13	2.0	3.7	3.5	.85
20	.95	1.3	3.9	34	2.8	2.7	3.3	4.4	1.9	2.0	1.4	.74
21	.95	1.1	21	322	6.0	2.7	3.3	2.8	1.8	3.0	1.8	10
22	.95	1.1	3.8	15	20	2.5	2.9	2.3	2.0	1.8	1.5	46
23	.88	1.6	2.8	6.1	19	2.5	2.8	7.0	4.8	3.4	.97	19
24	.75	4.3	72	212	296	52	2.6	28	5.7	5.6	20	2.0
25	.75	1.5	101	25	276	18	10	30	1.6	1.8	3.1	1.4
26	.88	1.1	6.1	8.5	242	5.4	74	8.8	1.3	1.9	3.5	1.3
27	4.3	7.9	3.9	6.7	28	4.0	58	3.5	1.3	2.5	2.0	1.1
28	1.3	17	2.8	10	14	3.3	11	2.8	1.3	1.9	3.6	1.1
29	.88	14	2.3	10	---	3.5	8.4	7.4	4.4	1.7	3.0	3.5
30	.88	19	2.3	7.9	---	3.1	4.9	4.4	25	2.2	7.1	186
31	.88	---	6.4	6.4	---	2.8	---	2.5	---	1.9	1.5	---
TOTAL	57.94	112.06	485.7	1174.3	953.6	333.3	361.7	185.6	248.5	159.5	166.37	471.04
MEAN	1.87	3.74	15.7	37.9	34.1	10.8	12.1	5.99	8.28	5.15	5.37	15.7
MAX	14	19	124	322	296	93	74	30	86	49	35	186
MIN	.69	.80	2.1	2.5	1.9	2.5	2.6	1.9	1.3	1.5	.97	.74
CFSM	.25	.50	2.11	5.08	4.57	1.45	1.62	.80	1.11	.69	.72	2.11
IN.	.29	.56	2.42	5.85	4.75	1.66	1.80	.93	1.24	.80	.83	2.35

CAL YR 1978 TOTAL 4782.16 MEAN 13.1 MAX 351 MIN .69 CFSM 1.76 IN 23.84
WTR YR 1979 TOTAL 4709.61 MEAN 12.9 MAX 322 MIN .69 CFSM 1.73 IN 23.48

01478000 CHRISTINA RIVER AT COOCHS BRIDGE, DE

LOCATION.--Lat 39°38'14", long 75°43'43", New Castle County, Hydrologic Unit 02040205, on right bank 60 ft (18 m) downstream from highway bridge, 0.5 mi (0.8 km) southeast of Coochs Bridge, 3.6 mi (5.8 km) upstream from Belltown Run, 3.3 mi (5.3 km) south of Newark, and 22.6 mi (36.4 km) upstream from mouth.

DRAINAGE AREA.--20.5 mi² (53.1 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 25.54 ft (7.78 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 14, 1944, nonrecording gage on upstream side of bridge at same datum. Sept. 14, 1944, to May 13, 1969, recording gage at site on left bank at downstream side of highway bridge at same datum. May 26, 1969, to Dec. 5, 1973, recording gage on left bank 82 ft (25 m) downstream from highway bridge at same datum.

REMARKS.--Water-discharge records fair. Low and medium flow regulated by mill above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--36 years, 28.5 ft³/s (0.807 m³/s), 18.88 in/yr (480 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,320 ft³/s (94.0 m³/s) June 22, 1972, gage height, 11.35 ft (3.459 m); maximum gage height, 12.41 ft (3.783 m) May 2, 1947; minimum daily discharge, 0.2 ft³/s (0.006 m³/s) Aug. 7, 14, 18, 21, 27, 28, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28 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. 25	0215	1340 37.9	10.04 3.060	Feb. 25	0200	*2670 75.6	10.87 3.313
Jan. 8	0330	1480 41.9	10.16 3.097	Feb. 26	0700	1540 43.6	10.70 3.261
Jan. 21	0615	2270 64.3	10.62 3.237	Sept. 6	0400	1120 31.7	9.80 2.987
Jan. 24	1730	1950 55.2	10.45 3.185	Sept. 30	0530	1200 34.0	9.89 3.014

Minimum daily discharge, 1.8 ft³/s (0.051 m³/s) Nov. 7.

REVISIONS.--Peak discharges and annual maximum (*) for water years 1943-70 have been revised as shown in the following table. They supersede figures published in WSP's 1672, 1902, and 2102 and the reports for 1961-70.

Water year	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Water year	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
1943	Apr. 19, 1943	1600	1060 30.0	9.75 2.972	1957	Nov. 2, 1956	1630	*1310 37.1	10.01 3.051
1943	May 21, 1943	0830	*2150 60.9	10.55 3.216	1957	Apr. 2, 1957	1230	1010 28.6	9.69 2.954
1944	Apr. 24, 1944	2100	*1280 36.2	9.98 3.042	1958	Jan. 25, 1958	1230	1010 28.6	9.68 2.950
1945	July 18, 1945	1430	1570 44.5	10.22 3.115	1958	Feb. 28, 1958	1600	*1390 39.4	10.09 3.075
1945	July 19, 1945	1730	1010 28.6	9.68 2.950	1958	Apr. 6, 1958	1800	1350 38.2	10.05 3.063
1945	July 29, 1945	1330	1040 29.5	9.72 2.963	1959	Sept. 3, 1959	1000	*955 27.0	9.59 2.923
1945	Aug. 1, 1945	1230	*2620 74.2	10.84 3.304	1960	Sept. 12, 1960	1400	*3300 93.5	11.33 3.453
1945	Sept. 18, 1945	1000	1350 38.2	10.05 3.063	1961	Apr. 13, 1961	0830	*1220 34.6	9.92 3.024
1946	July 23, 1946	1600	*1680 47.6	10.29 3.136	1962	Mar. 12, 1962	1215	*1250 35.4	9.95 3.033
1947	May 1, 1947	1430	*4330 123	12.41 3.783	1963	Mar. 6, 1963	1630	*638 18.1	8.65 2.637
1947	May 22, 1947	1245	1190 33.7	9.89 3.014	1964	Jan. 9, 1964	1830	*1570 44.5	10.22 3.115
1948	Jan. 2, 1948	1230	*1170 33.1	9.87 3.008	1965	Feb. 8, 1965	0315	*978 27.7	9.63 2.935
1948	Feb. 14, 1948	1000	1000 28.3	9.67 2.947	1966	Feb. 13, 1966	1845	*1650 46.7	10.27 3.130
1949	Dec. 30, 1948	Unknown	*1680 47.6	10.29 3.136	1967	Oct. 19, 1966	1300	1170 33.1	9.87 3.008
1950	Mar. 23, 1950	0515	*1000 28.3	9.67 2.947	1967	Mar. 7, 1967	1030	2190 62.0	10.57 3.222
1951	Nov. 25, 1950	Unknown	*1500 42.5	10.17 3.100	1967	Aug. 10, 1967	0330	*2610 73.9	10.83 3.301
1951	Mar. 20, 1951	0330	1100 31.2	9.80 2.987	1967	Aug. 28, 1967	0245	1230 34.8	9.93 3.027
1952	Dec. 21, 1951	0700	2400 68.0	10.70 3.261	1968	Dec. 3, 1967	1515	1260 35.7	9.96 3.036
1952	Feb. 4, 1952	0930	1620 45.9	10.25 3.124	1968	Jan. 14, 1968	1830	*2190 62.0	10.57 3.222
1952	Mar. 11, 1952	1200	1320 37.4	10.02 3.054	1968	Mar. 13, 1968	0230	1280 36.2	9.98 3.042
1952	May 26, 1952	0300	1340 37.9	10.04 3.060	1968	Mar. 18, 1968	1015	1070 30.3	9.76 2.975
1952	July 9, 1952	1130	*2730 77.3	10.91 3.325	1968	May 28, 1968	1845	1160 32.9	9.86 3.005
1953	Nov. 22, 1952	0300	1250 35.4	9.95 3.033	1969	June 3, 1969	0715	*1190 33.7	9.89 3.014
1953	Dec. 11, 1952	0930	1300 36.8	10.00 3.048	1969	July 28, 1969	2030	1070 30.3	9.76 2.975
1953	Jan. 24, 1953	1520	*1590 45.0	10.23 3.118	1969	Sept. 3, 1969	1330	1050 29.7	9.74 2.969
1954	Dec. 14, 1953	1030	*1170 33.1	9.87 3.008	1970	Apr. 2, 1970	2030	*1680 47.6	10.29 3.136
1955	Aug. 13, 1955	0730	1590 45.0	10.23 3.118	1970	Apr. 14, 1970	2130	1190 33.7	9.89 3.014
1955	Aug. 18, 1955	1000	*3250 92.0	11.29 3.441	1970	July 31, 1970	1700	1470 41.6	10.15 3.094
1956	Mar. 14, 1956	1430	1170 33.1	9.87 3.008					
1956	July 21, 1956	0900	*1950 55.2	10.44 3.182					

01478000 CHRISTINA RIVER AT COOCHS BRIDGE, DE--Continued

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	7.0	5.0	15	99	16	50	17	17	17	21	5.8	5.5
2	7.5	2.2	9.2	517	15	47	23	16	15	8.9	26	5.0
3	6.0	3.7	9.0	149	12	34	26	15	116	9.2	100	5.6
4	6.7	2.6	161	20	11	30	33	16	246	8.3	65	5.6
5	6.4	3.2	189	10	17	66	52	16	82	9.4	9.9	27
6	11	5.5	24	10	7.3	237	26	15	74	6.5	7.6	406
7	5.7	1.8	16	133	4.8	92	20	15	24	6.0	6.6	20
8	3.6	5.9	16	747	8.1	49	20	14	36	5.7	6.8	9.8
9	7.1	2.1	390	83	6.4	37	113	14	17	5.9	5.7	8.0
10	5.0	4.7	135	21	5.5	34	123	13	17	5.1	5.5	9.4
11	7.4	2.5	22	13	5.2	133	31	12	57	5.8	19	6.2
12	4.0	2.4	16	9.3	4.3	54	29	20	28	5.7	77	6.6
13	4.9	6.1	15	50	5.4	40	29	70	16	4.5	33	4.7
14	5.8	2.2	12	138	5.9	46	108	63	13	8.5	9.1	28
15	7.1	5.3	11	24	7.8	39	42	22	12	12	5.8	18
16	12	7.7	11	8.0	6.8	34	28	28	12	12	5.5	6.5
17	26	9.8	10	7.5	5.3	32	24	14	12	7.4	6.1	7.3
18	5.1	90	11	7.6	4.5	30	21	15	12	9.7	6.9	4.3
19	2.1	9.5	8.5	7.6	6.7	28	17	20	11	8.0	12	7.3
20	5.1	9.1	13	34	8.3	26	16	15	9.9	8.4	6.9	2.7
21	2.1	6.4	103	1340	12	24	15	15	9.4	8.2	7.8	25
22	2.7	5.3	18	152	107	23	15	13	9.4	12	5.9	172
23	3.8	5.3	8.5	49	134	22	15	19	11	11	6.7	83
24	1.9	12	84	783	999	54	15	187	13	11	5.7	13
25	4.3	6.4	482	293	1600	43	42	151	9.4	8.6	11	8.0
26	2.7	5.0	39	101	1100	25	65	64	8.3	10	11	9.3
27	7.8	40	16	69	136	20	161	21	7.7	7.6	26	6.9
28	4.7	52	10	74	68	19	52	17	7.4	4.4	17	8.1
29	2.3	31	8.7	85	---	18	26	16	7.4	6.6	9.4	11
30	5.5	115	7.3	48	---	18	20	15	12	13	61	280
31	1.9	---	12	24	---	18	---	14	---	7.9	10	---
TOTAL	185.2	459.7	1882.2	5110.0	4319.3	1422	1224	962	921.9	268.3	591.7	1209.8
MEAN	5.97	15.3	60.7	165	154	45.9	40.8	31.0	30.7	8.65	19.1	40.3
MAX	26	115	482	1340	1600	237	161	187	246	21	100	406
MIN	1.9	1.8	7.3	7.5	4.3	18	15	12	7.4	4.4	5.5	2.7
CFSM	.29	.75	2.96	8.05	7.51	2.24	1.99	1.51	1.50	.42	.93	1.97
IN.	.34	.83	3.42	9.27	7.84	2.58	2.22	1.75	1.67	.49	1.07	2.20
CAL YR 1978 TOTAL	17813.8			MEAN 48.8	MAX 1520	MIN 1.8	CFSM 2.38	IN 32.32				
WTR YR 1979 TOTAL	18556.1			MEAN 50.8	MAX 1600	MIN 1.8	CFSM 2.48	IN 33.67				

DELAWARE RIVER BASIN

01478040 CHRISTINA RIVER NEAR BEAR, DE

LOCATION.--Lat 39°38'12", long 75°40'53", New Castle County, Hydrologic Unit 02040205, on right bank 500 ft (152 m) upstream from highway bridge, 1.3 mi (2.1 km) northwest of Bear, 1.6 mi (2.6 km) downstream from Belltown Run, and 17.7 mi (28.5 km) upstream from mouth.

DRAINAGE AREA.--40.6 mi² (105.2 km²).

PERIOD OF RECORD.--October 1978 to September 1979.

GAGE.--Water-stage recorder. Altitude of gage is 12 ft (3.7 m), from topographic map.

REMARKS.--Water-discharge records good except those for Oct. 24 to Dec. 12, which are fair. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,360 ft³/s (95.2 m³/s) Feb. 25, 1979, gage height, 10.95 ft (3.338 m); minimum daily, 3.5 ft³/s (0.099 m³/s) Nov. 7, 1978.

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. 8	1045	1570 44.5	8.24 2.512	Feb. 25	0745	*3360 95.2	10.95 3.338
Jan. 21	1300	2860 81.0	10.30 3.139	Feb. 26	1030	2720 77.0	10.05 3.063
Jan. 25	0015	2250 63.7	9.41 2.868				

Minimum daily discharge, 3.5 ft³/s (0.099 m³/s) Nov. 7.

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	11	8.0	35	89	48	115	31	38	35	70	8.1	13
2	12	4.5	26	454	43	97	41	30	41	26	26	9.3
3	10	6.2	17	589	41	80	45	25	83	22	68	10
4	11	5.0	200	79	41	71	57	24	432	16	195	11
5	9.0	5.5	230	46	44	84	86	23	152	33	25	12
6	15	10	60	43	47	332	53	22	93	17	13	660
7	11	3.5	26	91	34	292	33	21	51	14	10	92
8	7.2	6.2	32	1110	34	93	32	21	49	13	9.5	25
9	9.7	5.0	600	275	32	72	87	21	35	13	7.8	15
10	7.9	8.0	160	74	30	57	318	22	32	11	7.7	16
11	10	4.5	45	50	22	169	76	22	118	12	12	12
12	7.1	4.2	37	40	19	101	52	30	89	13	65	11
13	8.0	10	35	56	23	63	58	69	38	11	75	9.1
14	5.7	7.6	25	156	25	61	145	109	25	12	18	12
15	8.7	10	25	85	26	52	97	50	23	23	11	35
16	8.7	13	23	47	28	44	56	48	21	16	8.5	12
17	33	20	21	40	27	40	44	28	20	10	8.7	12
18	16	160	22	36	25	40	30	26	20	12	7.6	8.1
19	8.7	20	19	36	34	39	20	37	19	10	16	11
20	11	19	21	40	41	35	18	31	17	11	11	7.8
21	8.6	15	86	1430	45	35	17	30	18	9.0	11	9.2
22	6.7	12	52	501	97	33	16	23	14	13	10	200
23	7.8	9.0	26	101	145	32	15	36	23	21	9.2	106
24	4.0	18	41	608	716	55	14	152	25	46	9.7	46
25	7.0	14	764	993	2530	81	50	163	17	16	14	19
26	5.3	11	121	132	1990	51	90	100	15	14	16	17
27	13	70	56	91	449	36	270	48	14	11	26	16
28	9.0	90	36	84	160	33	100	35	13	8.0	118	14
29	5.0	50	29	98	---	32	52	32	15	8.8	26	17
30	9.0	180	24	79	---	33	45	26	15	13	72	245
31	4.2	---	31	59	---	33	---	25	---	11	29	---
TOTAL	300.3	799.2	2925	8012	6796	2391	2048	1367	1562	535.8	943.8	1682.5
MEAN	9.69	26.6	94.4	258	243	77.1	68.3	44.1	52.1	17.3	30.4	56.1
MAX	33	180	764	1830	2530	332	318	163	432	70	195	660
MIN	4.0	3.5	17	36	19	32	14	21	13	8.0	7.6	7.8

WTR YR 1979 TOTAL 29362.6 MEAN 80.4 MAX 2530 MIN 3.5

01478500 WHITE CLAY CREEK ABOVE NEWARK; DE

LOCATION.--Lat 39°42'52", long 75°45'34", New Castle County, Hydrologic Unit 02040205, on right bank at downstream wingwall of abandoned bridge, 0.9 mi (1.4 km) downstream from small tributary, 1.7 mi (2.7 km) southeast of Delaware-Maryland-Pennsylvania State corner, 2.1 mi (3.4 km) downstream from Pennsylvania-Delaware State line, 2.2 mi (3.5 km) north of Newark, and 12.8 mi (20.6 km) upstream from mouth.

DRAINAGE AREA.--66.7 mi² (172.8 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1952 to September 1959, July 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 78.6 ft (24.0 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good except those for period Jan. 18 to Feb. 23, which are poor. Records do not include a negligible diversion above station by plant of E. I. du Pont de Nemours & Co. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--24 years (water years 1953-59, 1963-79), 87.1 ft³/s (2.467 m³/s), 17.73 in/yr (450 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,200 ft³/s (289 m³/s) June 22, 1972, gage height, 13.77 ft (4.197 m), from rating curve extended above 1,800 ft³/s (51.0 m³/s) on basis of contracted-opening measurements at gage heights 9.97 ft (3.039 m) and 13.77 ft (4.197 m); minimum, 4.6 ft³/s (0.13 m³/s) Dec. 7, 1954, gage height, 0.55 ft (0.168 m), result of freezeup; minimum daily, 5.6 ft³/s (0.16 m³/s) Sept. 10, 1966.

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)
a	Unknown	*5150 146	10.65 3.246	Feb. 26	0515	3830 108	9.01 2.746
a	Unknown	4330 123	9.70 2.957	Sept. 6	0730	2440 69.1	6.94 2.115
Feb. 25	0230	3210 90.9	8.13 2.478	Sept. 22	0515	2980 84.4	7.79 2.374

a Sometime during period January 20-25.

Minimum daily discharge, 31 ft³/s (0.88 m³/s) Oct. 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	50	37	56	112	130	209	116	87	74	99	48	55
2	50	36	46	508	125	201	125	84	76	63	56	52
3	50	35	43	215	120	178	132	84	118	58	65	51
4	50	36	93	110	110	164	137	87	239	59	99	49
5	48	37	171	101	100	184	140	84	118	67	53	59
6	48	36	67	81	97	285	103	80	101	56	48	1060
7	48	36	54	124	95	195	94	79	89	55	45	123
8	48	36	55	781	93	161	92	77	80	53	46	83
9	45	35	522	146	88	146	137	76	74	52	44	71
10	45	34	178	107	82	141	184	75	72	53	42	67
11	34	34	86	90	78	209	110	74	96	54	48	64
12	32	34	74	100	74	147	105	75	83	53	135	62
13	31	35	69	101	76	136	102	118	68	51	111	60
14	41	36	65	167	78	137	159	136	64	60	58	66
15	42	38	61	100	80	128	123	91	61	99	52	111
16	35	46	59	82	47	125	106	81	60	61	49	62
17	59	47	60	80	46	127	100	73	60	56	47	59
18	40	89	59	78	50	126	95	76	60	55	48	58
19	38	44	58	110	58	125	90	87	57	55	57	56
20	37	37	57	150	60	127	88	81	54	52	50	54
21	35	35	93	3000	65	127	86	76	53	68	49	68
22	35	34	67	300	300	127	85	74	55	63	49	981
23	35	34	60	140	280	126	86	77	60	56	45	154
24	36	42	75	1800	965	153	84	375	77	58	54	96
25	37	37	408	700	1850	156	92	189	58	54	53	83
26	39	34	95	230	1610	132	102	120	54	54	72	78
27	50	42	78	200	343	123	172	91	52	54	114	74
28	43	56	68	180	250	120	123	82	53	51	124	72
29	40	56	66	170	---	120	100	80	62	50	64	84
30	38	116	81	150	---	120	91	75	57	53	182	251
31	38	---	68	140	---	118	---	70	---	50	64	---
TOTAL	1297	1284	3092	10353	7350	4673	3359	3014	2285	1822	2071	4263
MEAN	41.8	42.8	99.7	334	263	151	112	97.2	76.2	58.8	66.8	142
MAX	59	116	522	3000	1850	285	184	375	239	99	182	1060
MIN	31	34	43	78	46	118	84	70	52	50	42	49
CFSM	.63	.64	1.50	5.01	3.94	2.26	1.68	1.46	1.14	.88	1.00	2.13
IN.	.72	.72	1.72	5.77	4.10	2.61	1.87	1.68	1.27	1.02	1.16	2.38
CAL YR 1978 TOTAL	42670		MEAN 117	MAX 3160	MIN 31	CFSM 1.75	IN 23.80					
WTR YR 1979 TOTAL	44863		MEAN 123	MAX 3000	MIN 31	CFSM 1.84	IN 25.02					

DELAWARE RIVER BASIN

01478500 WHITE CLAY CREEK ABOVE NEWARK, DE--Continued

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
NOV 27...	1230	40	236	7.7	1.0	2.0	14.0	85	35	21	7.9

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	ALKA- LINITY (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 27...	7.5	16	.4	3.0	61	50	21	14	.0	12	135

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, NITRATE TOTAL (MG/L AS N)	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)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)
NOV 27...	117	.18	14.6	2.6	.46	3.1	.02	.18	.20	3.3	15

DATE	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
NOV 27...	.06	.06	2	0	0	0	50	20	0	20	.00

01478500 WHITE CLAY CREEK ABOVE NEWARK, DE--Continued

BENTHIC INVERTEBRATE ANALYSES, OCTOBER 1978 TO NOVEMBER 1978

DATE	NOV 27,78
TIME	1230
TOTAL COUNT	87
DIVERSITY: PHYLUM	0.4
..CLASS	0.4
...ORDER	1.7
....FAMILY	2.7
.....GENUS	3.3
.....GENUS-INSECTA	3.1

ORGANISM	COUNT
ANNELIDA	
..OLIGOCHAETA	
...PLESIOPORA	
....NAIDIDAE	
.....UNKNOWN GENUS	5
ARTHROPOD (ARTHROPODS)	
..INSECTA	
...ODONATA	
....AGRIIDAE	
.....AGRION	1
...COLEOPTERA	
....ELMIDAE	
.....OPTIOSERVUS	1
...DIPTERA	
....CHIRONOMIDAE	
.....CRICOTOPUS	7
....EUKIEFFERIELLA	2
.....RHEOTANYTARSUS	19
....THIENEMANNIELLA	2
...EMPIIDAE	
....HEMERODROMIA	2
...SIMULIIDAE	
....SIMULIUM	11
...TIPULIDAE	
....ANTOCHA	8
..EPHEMEROPTERA	
...EPHEMERELLIDAE	
....EPHEMERELLA	1
...HEPTAGENIIDAE	
....STENONEMA	4
..MEGALOPTERA	
...CORYDALIDAE	
....CORYDALUS	1
...TRICHOPTERA	
....HYDROPSYCHIDAE	
.....SYMPHITOPSYCHE	20
....HYDROPSYCHE	2
MOLLUSCA (MOLLUSCS)	
..GASTROPODA	
...BASOMMATOPHORA	
....PHYSIDAE	
.....PHYSA	1

DELAWARE RIVER BASIN

01479000 WHITE CLAY CREEK NEAR NEWARK, DE

LOCATION.--Lat 39°41'57", long 75°40'33", New Castle County, Hydrologic Unit 02040205, on left bank 35 ft (11 m) downstream from bridge on private road owned by Delaware Racing Association, 0.4 mi (0.6 km) downstream from the Baltimore and Ohio Railroad bridge, 1.1 mi (1.8 km) downstream from Pike Creek, 3.8 mi (6.1 km) east of Newark, and 5.0 mi (8.0 km) upstream from mouth. Prior to April 8, 1976, at site 0.5 mi (0.8 km) upstream.

DRAINAGE AREA.--89.1 mi² (230.8 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1931 to September 1936, June 1943 to September 1957, October 1959 to current year.

Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 1051: 1933(M). WSP 1382: 1932, 1934.

GAGE.--Water-stage recorder. Datum of gage is 9.00 ft (2.74 m) National Geodetic Vertical Datum of 1929. Nov. 17, 1931, to Sept. 30, 1936, June 4, 1943, to Sept. 30, 1957, and Oct. 1, 1959, to Apr. 7, 1976, at site 0.5 mi (0.8 km) upstream at datum 2.6 ft (0.792 m) higher.

REMARKS.--Water-discharge records good except those for February, which are fair. Slight diurnal fluctuation at low flow caused by mills above station. Records do not include a negligible diversion above station by plant of E. I. du Pont de Nemours & Co. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--39 years (water years 1932-36, 1944-57, 1960-79), 115 ft³/s (3.257 m³/s), 17.53 in/yr (445 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,080 ft³/s (257 m³/s) June 22, 1972, gage height, 15.91 ft (4.849 m), present datum, from rating curve extended above 6,000 ft³/s (170 m³/s) on basis of contracted-opening and flow-over-road measurement of peak flow; minimum, 4.7 ft³/s (0.13 m³/s) Sept. 11, 1966; minimum daily, 5.0 ft³/s (0.14 m³/s) Sept. 10, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 23 ft (7 m), previous site and datum, in July 1937 (probably affected by backwater from railroad bridge which has since been raised and widened), from information by Baltimore & Ohio Railroad.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (56 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. 9	1445	2190 62.0	10.99 3.350	Feb. 25	0115	5950 169	14.41 4.392
Jan. 8	0615	2460 69.7	11.32 3.450	Feb. 26	0445	5710 162	14.24 4.340
Jan. 21	1200	6000 170	14.45 4.404	Sept. 6	0700	4010 114	12.92 3.938
Jan. 24	2230	*6310 179	14.67 4.471	Sept. 22	0815	4150 118	13.04 3.975
Feb. 24	1100	3370 95.4	12.29 3.746	Sept. 30	0500	3860 109	12.78 3.895

Minimum daily discharge, 48 ft³/s (1.36 m³/s) Nov. 22, 26.

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	73	57	75	120	149	305	95	86	92	131	58	60
2	68	57	61	924	141	279	101	81	90	86	119	57
3	67	58	58	347	135	247	106	80	186	79	172	55
4	68	57	163	100	125	224	114	82	316	84	133	53
5	71	58	290	90	117	248	122	81	144	92	69	110
6	77	57	93	81	120	509	98	77	126	77	59	2040
7	70	55	70	208	125	278	90	75	106	74	55	159
8	68	55	69	1540	120	203	89	73	100	73	55	106
9	66	53	926	177	110	176	172	72	91	72	51	90
10	66	53	293	110	108	161	214	70	88	70	50	83
11	67	51	95	90	104	258	111	69	117	71	61	80
12	65	52	77	120	108	159	107	76	104	71	150	77
13	66	52	72	140	110	141	104	114	84	71	150	75
14	72	51	67	176	114	137	168	136	78	74	67	93
15	76	51	64	109	116	126	124	90	76	117	58	126
16	69	60	63	80	100	116	107	84	74	89	54	78
17	102	64	63	77	90	116	100	71	75	73	50	73
18	72	128	59	79	80	115	94	76	73	79	54	71
19	68	61	58	120	90	111	90	86	70	70	66	70
20	66	51	60	199	100	109	87	79	68	66	55	67
21	63	49	105	4260	120	107	86	74	67	84	54	82
22	63	48	71	406	439	104	85	72	68	85	53	1590
23	61	49	62	163	420	103	84	76	81	73	49	212
24	60	56	143	2870	2890	133	82	572	105	76	58	122
25	61	51	750	1390	4480	133	93	246	76	67	59	106
26	61	48	108	297	3630	109	136	144	72	65	79	99
27	70	66	84	243	582	101	183	111	69	65	83	94
28	65	80	72	222	359	98	127	101	70	61	165	91
29	61	82	70	201	---	98	102	97	80	60	70	106
30	58	174	68	181	---	97	90	93	86	67	252	791
31	58	---	73	162	---	96	---	87	---	60	73	---
TOTAL	2098	1884	4382	15282	15182	5197	3361	3331	2932	2382	2581	6916
MEAN	67.7	62.8	141	493	542	168	112	107	97.7	76.8	83.3	231
MAX	102	174	926	4260	4480	509	214	572	316	131	252	2040
MIN	58	48	58	77	80	96	82	69	67	60	49	53
CFSM	.76	.71	1.58	5.53	6.08	1.89	1.26	1.20	1.10	.86	.94	2.59
IN.	.88	.79	1.83	6.38	6.34	2.17	1.40	1.39	1.22	.99	1.08	2.89

CAL YR 1978 TOTAL 65798 MEAN 180 MAX 5220 MIN 48 CFSM 2.02 IN 27.47
WTR YR 1979 TOTAL 65528 MEAN 180 MAX 4480 MIN 48 CFSM 2.02 IN 27.36

DELAWARE RIVER BASIN

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01479000 WHITE CLAY CREEK NEAR NEWARK, DE--Continued

WATER-QUALITY RECORDS

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

WATER QUALITY DATA. WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	
NOV 27...	1040	68	210	7.6	.5	2.0	13.8	80	34	20	7.4	
DATE	TIME	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	ALKA- LINITY (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 27...	7.5	16	.4	3.4	57	47	20	14	.0	12	129	
DATE	TIME	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	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)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)
NOV 27...	113	.18	23.7	2.7	.01	2.7	.03	.14	.17	2.9	13	
DATE	TIME	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPHOS- PHATE TOTAL (MG/L AS P)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
NOV 27...	.04	.04	1	0	1	1	80	40	0	670	.00	

BENTHIC INVERTEBRATE ANALYSES, OCTOBER 1978 TO NOVEMBER 1978

DATE	NOV 27.78
TIME	1040
TOTAL COUNT	11
DIVERSITY: PHYLUM	0.0
..CLASS	0.0
...ORDER	1.3
....FAMILY	1.9
.....GENUS	2.7
.....GENUS-INSECTA	2.7
ORGANISM	COUNT
ARTHROPODA (ARTHROPODS)	
..INSECTA	
...DIPTERA	
....CHIRONOMIDAE	
.....CRICOTOPUS	1
.....DIAMESA	1
.....RHEOTANYTARSUS	1
....EMPIDIDAE	
.....HEMERODROMIA	3
...EPHEMEROPTERA	
....HEPTAGENIIDAE	
.....STENONEMA	1
...TRICHOPTERA	
....HYDROPSYCHIDAE	
.....CHEUMATOPSYCHE	2
....SYMPHITOPSYCHE	2

DELAWARE RIVER BASIN

01480000 RED CLAY CREEK AT WOODDALE, DE

LOCATION.--Lat 39°45'52", long 75°38'08", New Castle County, Hydrologic Unit 02040205, on right bank 12 ft (4 m) upstream from bridge on State Highway 48, 0.3 mi (0.5 km) south of Wooddale, 2.3 mi (3.7 km) north of Marshallton, and 4.9 mi (7.9 km) upstream from mouth.

DRAINAGE AREA.--47.0 mi² (121.7 km²).

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1141: 1948. WSP 1272: 1951(M). WSP 1432: 1944(M), 1945, 1946(M), 1948, 1949(M). WSP 2102: 1960(M), 1964(M), 1966-67(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 81.46 ft (24.829 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 21, 1950, nonrecording gage at site 10 ft (3 m) downstream at same datum.

REMARKS.--Water-discharge records good. Some diurnal fluctuation at low flow caused by mills above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--36 years, 65.5 ft³/s (1.855 m³/s), 18.93 in/yr (481 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,010 ft³/s (142 m³/s) July 21, 1975, gage height, 10.32 ft (3.146 m); minimum, 2.9 ft³/s (0.082 m³/s) Sept. 4, 1966; minimum daily, 4.5 ft³/s (0.13 m³/s) Sept. 4, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	0915	*3270 92.6	7.77 2.368	Feb. 26	0715	3220 91.2	7.70 2.347
Jan. 24	2115	3220 91.2	7.70 2.347	Sept. 6	0645	1830 51.8	5.77 1.759
Feb. 25	0300	2880 81.6	7.21 2.198	Sept. 30	0615	2880 81.6	7.20 2.195

Minimum discharge, 4.1 ft³/s (0.12 m³/s) Nov. 1, gage height, 2.19 ft (0.668 m), result of regulation; minimum daily, 24 ft³/s (0.68 m³/s) Sept. 4.

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	33	26	51	90	105	180	73	63	72	98	30	32
2	36	28	42	322	93	170	78	60	76	52	37	28
3	34	29	38	190	90	153	85	60	125	47	43	30
4	37	29	98	82	90	141	87	62	252	46	60	24
5	38	29	159	70	83	152	98	60	118	54	33	31
6	47	29	61	69	77	282	76	56	103	43	30	653
7	38	29	49	105	83	181	70	55	84	43	26	74
8	35	29	51	532	82	138	69	54	74	36	27	48
9	34	29	371	144	78	123	119	53	69	38	26	40
10	34	29	160	102	72	117	166	52	66	38	28	37
11	33	29	71	90	72	186	84	51	95	38	24	36
12	33	29	58	82	70	122	79	51	80	38	99	34
13	33	29	54	94	75	112	76	79	62	37	84	32
14	43	29	49	159	74	112	145	93	58	36	33	39
15	42	29	45	97	80	102	97	64	56	36	31	67
16	34	36	44	80	79	94	81	57	55	33	28	34
17	77	37	44	78	75	95	76	51	54	44	27	31
18	37	90	40	75	97	93	71	54	54	41	29	30
19	35	39	39	66	118	88	67	71	54	37	36	30
20	33	33	39	86	178	87	65	63	47	34	29	27
21	31	32	73	1810	191	85	64	55	48	72	29	37
22	31	31	49	195	187	83	63	54	49	45	29	424
23	30	31	43	121	126	82	63	57	51	39	26	94
24	29	40	52	1230	869	124	61	446	56	49	38	53
25	29	32	259	385	1520	119	68	229	48	37	37	45
26	29	30	77	174	1460	86	80	141	45	36	47	42
27	39	36	61	152	293	79	150	88	44	36	35	39
28	32	53	52	142	208	76	90	79	44	32	65	38
29	30	53	47	137	---	76	76	75	50	32	37	50
30	29	128	46	123	---	75	67	71	48	32	96	618
31	32	---	53	112	---	74	---	67	---	32	39	---
TOTAL	1107	1132	2375	7194	6625	3687	2544	2571	2137	1311	1238	2797
MEAN	35.7	37.7	76.6	232	237	119	84.8	82.9	71.2	42.3	39.9	93.2
MAX	77	128	371	1810	1520	282	166	446	252	98	99	653
MIN	29	26	38	66	70	74	61	51	44	32	24	24
CFSM	.76	.80	1.63	4.94	5.04	2.53	1.80	1.76	1.52	.90	.85	1.98
IN.	.88	.90	1.88	5.69	5.24	2.92	2.01	2.03	1.69	1.04	.98	2.21

CAL YR 1978 TOTAL 33894 MEAN 92.9 MAX 2070 MIN 26 CFSM 1.98 IN 26.83
WTR YR 1979 TOTAL 34718 MEAN 95.1 MAX 1810 MIN 24 CFSM 2.02 IN 27.48

DELAWARE RIVER BASIN

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01480000 RED CLAY CREEK AT WOODDALE, DE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1953 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: April 1953 to current year.

INSTRUMENTATION.--Temperature recorder since April 1953.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 30.5°C July 17, Aug. 2, 6, 1955, July 19, 1963; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 26.5°C July 16, Aug. 10; minimum, 0.0°C Feb. 22, 23, 24.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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

DELAWARE RIVER BASIN

01480000 RED CLAY CREEK AT WOODDALE, DE--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	16.5	13.5	19.5	19.0	22.5	21.0	26.0	23.5	24.0	22.5
2	---	---	15.5	12.5	19.5	19.0	21.5	20.5	26.0	25.0	24.5	23.0
3	---	---	15.0	13.0	19.0	17.5	22.0	20.0	25.0	24.5	24.5	23.5
4	---	---	16.0	14.5	17.5	17.0	21.5	19.0	25.5	24.5	25.0	23.0
5	---	---	17.0	14.5	19.5	17.5	19.0	17.5	25.5	24.0	24.5	24.0
6	---	---	16.5	14.0	20.0	19.0	19.0	17.0	25.5	24.0	24.0	23.0
7	---	---	18.0	14.0	21.0	19.0	20.5	18.0	25.0	23.0	23.5	22.5
8	---	---	20.0	16.5	22.0	20.0	22.0	18.5	25.5	23.5	22.5	21.0
9	---	---	22.0	18.5	21.5	20.5	21.5	19.5	26.0	24.0	21.0	19.0
10	---	---	22.0	20.0	22.5	21.0	21.5	20.5	26.5	24.0	19.5	18.0
11	---	---	22.5	21.5	22.5	19.5	21.5	20.0	25.5	23.0	19.5	18.5
12	---	---	22.0	19.5	19.5	17.5	23.5	21.5	23.0	18.5	19.5	18.5
13	---	---	19.5	18.5	19.5	17.5	24.5	22.5	19.5	17.5	20.0	18.5
14	---	---	18.5	17.0	20.0	17.5	25.5	24.0	22.0	19.0	21.0	19.5
15	---	---	19.0	16.0	21.0	18.5	25.0	24.0	21.0	19.5	21.0	19.0
16	---	---	19.0	17.5	21.0	19.5	26.5	24.5	20.5	18.5	19.0	17.5
17	---	---	19.0	16.5	21.5	20.0	26.0	24.5	19.5	18.0	18.5	17.0
18	11.0	7.5	18.5	17.0	22.0	21.0	25.0	24.0	18.5	18.0	19.0	17.0
19	12.0	8.5	17.0	16.5	21.5	20.5	24.5	23.0	20.5	18.5	19.5	18.0
20	13.0	9.0	17.0	16.5	22.5	20.0	24.5	23.5	22.0	20.0	18.0	16.0
21	13.5	9.5	17.0	16.5	21.5	19.5	24.0	23.0	22.0	21.0	17.0	16.0
22	13.5	11.5	18.5	17.0	21.0	20.0	23.0	21.5	22.5	20.0	18.0	17.0
23	15.5	12.5	18.5	17.5	22.0	20.0	23.0	22.0	22.0	20.0	18.0	17.0
24	15.0	13.0	18.5	18.0	22.0	19.0	23.5	22.0	22.5	21.5	17.0	15.5
25	15.5	12.5	19.0	18.0	19.5	17.5	24.5	23.0	24.5	22.5	16.5	16.0
26	16.0	15.0	19.0	16.5	20.0	18.0	25.0	24.0	24.0	23.5	17.0	16.0
27	15.5	14.5	16.5	15.0	20.5	18.5	24.5	23.5	24.5	23.5	17.0	16.5
28	14.5	13.0	16.5	15.5	20.5	19.5	24.5	23.0	24.0	23.0	17.5	17.0
29	15.5	12.5	17.5	15.5	21.5	20.0	24.0	23.0	24.0	23.5	19.0	17.5
30	15.5	12.0	19.0	17.0	23.0	21.0	24.0	22.5	24.0	23.0	19.5	19.0
31	---	---	19.0	18.5	---	---	24.0	23.0	24.0	23.0	---	---
MONTH	16.0	7.5	22.5	12.5	23.0	17.0	26.5	17.0	26.5	17.5	25.0	15.5

DELAWARE RIVER BASIN

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01480100 LITTLE MILL CREEK AT ELSMERE, DE

LOCATION.--Lat 39°44'05", long 75°35'14", New Castle County, Hydrologic Unit 02040205, on left bank at downstream side of bridge on North Du Pont Road at Elsmere, 0.5 mi (0.8 km) downstream from unnamed tributary, and 2.2 mi (3.5 km) upstream from mouth.

DRAINAGE AREA.--6.70 mi² (17.35 km²).

PERIOD OF RECORD.--October 1963 to current year.

GAGE.--Water-stage recorder. Concrete control since Nov. 5, 1968. Prior to Mar. 19, 1964, nonrecording gage at same site and datum. Datum of gage is 48.62 ft (14.819 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--16 years, 10.2 ft³/s (0.289 m³/s), 20.67 in/yr (525 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,960 ft³/s (112 m³/s) Aug. 10, 1967, gage height, 8.58 ft (2.615 m), from rating curve extended above 380 ft³/s (10.8 m³/s) on basis of contracted-opening measurement of peak flow; minimum, 0.10 ft³/s (0.003 m³/s) July 17, 18, Sept. 18, 19, 1966.

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)
Jan. 7	2315	401 11.4	3.98 1.213	June 11	0845	464 13.1	4.17 1.271
Jan. 21	0300	624 17.7	4.60 1.402	July 18	1515	388 11.0	3.94 1.201
Jan. 24	1830	583 16.5	4.49 1.369	Aug. 2	1545	572 16.2	4.46 1.359
Feb. 24	2345	639 18.1	4.64 1.414	Sept. 6	0100	404 11.4	3.99 1.216
Feb. 26	0300	805 22.8	5.04 1.536	Sept. 30	0330	*940 26.6	5.39 1.643

Minimum discharge, 0.92 ft³/s (0.026 m³/s) Oct. 1, 16, Nov. 14, 15.

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	15	1.2	3.0	16	6.7	14	5.6	5.3	4.5	20	1.6	1.3
2	1.7	1.1	2.4	123	6.5	13	7.6	4.8	3.7	3.7	66	1.3
3	1.3	1.2	3.1	19	5.5	10	11	5.0	40	2.7	30	1.3
4	1.5	1.2	29	6.8	5.5	9.7	11	4.9	35	5.8	7.9	1.2
5	1.5	1.1	36	5.3	4.5	12	10	4.7	8.3	3.4	2.8	15
6	2.4	1.1	4.4	5.5	5.1	73	6.2	4.0	5.5	2.8	2.2	88
7	1.3	1.3	3.1	67	4.9	21	5.2	3.8	4.4	2.6	1.8	3.1
8	1.2	1.3	5.0	126	5.5	12	5.2	3.7	3.9	1.9	1.9	1.9
9	1.1	1.8	111	13	4.5	9.6	46	3.5	3.6	1.9	1.6	1.6
10	1.2	2.4	15	7.5	4.4	8.7	24	3.4	3.7	1.9	1.7	1.6
11	1.4	2.8	5.3	5.8	3.9	33	8.3	3.4	69	1.9	3.6	1.5
12	1.4	3.1	4.2	5.4	3.8	11	8.5	3.9	8.1	1.9	21	1.3
13	1.6	1.7	3.7	17	4.8	8.7	7.8	15	4.6	1.9	5.0	1.3
14	2.4	1.6	3.3	13	4.4	9.7	30	7.4	3.7	1.8	2.2	12
15	1.3	1.8	3.1	6.4	5.0	7.9	9.6	4.9	3.4	1.9	1.6	3.2
16	4.5	2.5	2.9	5.2	4.8	6.8	7.5	5.5	3.3	2.7	1.5	1.5
17	12	5.0	3.3	5.1	4.5	6.7	6.7	3.5	3.3	3.7	1.4	1.3
18	1.6	18	2.5	4.3	5.2	6.4	6.1	8.8	3.2	35	3.1	1.2
19	1.5	2.0	2.5	4.4	5.6	6.3	5.7	6.6	2.8	4.0	2.6	1.3
20	1.4	1.5	5.7	43	7.8	6.2	5.4	4.3	2.5	2.5	1.7	1.2
21	1.2	1.4	16	251	14	5.9	5.1	4.0	2.8	2.8	2.1	13
22	1.3	1.4	3.8	18	32	5.9	5.0	3.8	2.6	2.4	1.8	43
23	1.3	2.0	3.1	9.7	22	6.1	5.1	7.0	12	5.2	1.4	19
24	1.1	2.7	50	156	257	35	4.9	23	6.5	3.3	4.9	2.8
25	1.1	1.7	68	33	229	15	12	20	2.8	1.9	2.6	2.0
26	1.3	1.6	6.8	12	201	8.1	56	6.4	2.5	1.9	3.5	1.8
27	3.6	12	4.7	9.5	28	6.8	36	4.1	2.5	2.5	4.5	1.7
28	1.4	9.2	3.8	13	17	6.3	10	3.8	2.4	1.5	2.9	1.5
29	1.1	12	3.7	10	---	6.3	7.5	3.6	3.5	1.7	2.7	4.2
30	1.1	15	3.5	7.4	---	5.9	6.1	3.9	17	3.1	9.5	116
31	1.2	---	7.0	6.9	---	5.8	---	3.6	---	1.6	1.5	---
TOTAL	73.0	112.7	418.9	1025.2	902.9	392.8	375.1	189.6	271.1	131.9	198.6	347.1
MEAN	2.35	3.76	13.5	33.1	32.2	12.7	12.5	6.12	9.04	4.25	6.41	11.6
MAX	15	18	111	251	257	73	56	23	69	35	66	116
MIN	1.1	1.1	2.4	4.3	3.8	5.8	4.9	3.4	2.4	1.5	1.4	1.2
CFSM	.35	.56	2.02	4.94	4.81	1.90	1.87	.91	1.35	.63	.96	1.73
IN.	.41	.63	2.33	5.69	5.01	2.18	2.08	1.05	1.50	.73	1.10	1.93

CAL YR 1978 TOTAL 4735.32 MEAN 13.0 MAX 360 MIN .92 CFSM 1.94 IN 26.29
WTR YR 1979 TOTAL 4438.90 MEAN 12.2 MAX 257 MIN 1.1 CFSM 1.82 IN 24.64

01481500 BRANDYWINE CREEK AT WILMINGTON, DE

LOCATION.--Lat 39°46'09", long 75°34'25", New Castle County, Hydrologic Unit 02040205, on right bank in Rockford Park, 0.2 mi (0.3 km) downstream from Henry Clay Bridge, in Wilmington, and 4.2 mi (6.8 km) upstream from mouth.
DRAINAGE AREA.--314 mi² (813 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1946 to current year. Prior to December 1946 monthly discharge only, published in WSP 1302.

REVISED RECORDS.--WSP 1432: 1948, 1950.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 68.23 ft (20.797 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. Some diurnal fluctuation at low flow caused by mills above station. Flow regulated since November 1973 by Marsh Creek Reservoir about 27 mi (43 km) upstream. No diversion just above station by plant of E. I. du Pont de Nemours & Co. since June 13, 1960.

AVERAGE DISCHARGE.--33 years, 484 ft³/s (13.71 m³/s), 20.93 in/yr (532 mm/yr), adjusted for storage since November 1973.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,000 ft³/s (821 m³/s) June 23, 1972, gage height, 15.49 ft (4.721 m), from rating curve extended above 18,000 ft³/s (510 m³/s); minimum, about 30 ft³/s (0.85 m³/s) Dec. 26, 1948, during period of ice effect; minimum daily, 56 ft³/s (1.59 m³/s) Aug. 23, 24, 1957.

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 9	1930	5610 159	7.40 2.256	May 24	0745	4770 135	6.83 2.082
Jan. 8	1600	5200 147	7.23 2.204	June 3	1645	4660 132	6.75 2.057
Jan. 21	1815	10700 303	9.90 3.018	July 22	0215	5520 156	7.34 2.237
Jan. 25	0500	*22400 634	13.22 4.029	Sept. 6	2145	10500 297	9.79 2.984
Feb. 24	1300	5110 145	7.07 2.155	Sept. 22	1615	13100 371	10.70 3.261
Feb. 25	1015	11800 334	10.29 3.136	Sept. 30	0445	7440 211	8.44 2.573
Feb. 26	1400	15300 433	11.37 3.466				

Minimum daily discharge, 172 ft³/s (4.87 m³/s) Oct. 25.

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	234	182	435	630	975	1750	553	532	699	657	317	297
2	226	188	289	1780	902	1520	597	501	867	472	348	280
3	220	187	247	1690	738	1400	597	501	2640	426	601	278
4	222	181	537	723	718	1210	633	521	1990	400	484	266
5	238	183	1000	650	679	1270	718	521	1200	461	323	299
6	346	190	526	623	532	1920	598	491	1010	389	293	6090
7	393	185	314	822	670	1430	521	482	878	355	274	2340
8	238	183	297	4190	620	1110	501	463	808	342	264	746
9	224	181	3000	1500	586	1050	662	454	754	330	260	602
10	218	182	2380	869	450	1010	1210	436	728	325	246	495
11	253	178	793	773	470	1350	698	410	998	321	285	431
12	247	182	583	704	410	1040	633	402	802	311	606	396
13	393	180	517	731	440	950	645	445	682	299	1040	404
14	463	185	461	887	440	925	1010	633	622	298	399	439
15	488	183	405	835	553	822	921	542	589	324	322	733
16	431	199	384	662	553	758	698	445	567	318	292	389
17	630	207	370	621	454	748	657	370	544	472	278	341
18	309	406	351	590	410	738	609	386	555	367	269	321
19	202	302	331	458	394	718	564	698	517	367	339	320
20	198	208	324	616	532	708	532	670	490	308	293	297
21	185	193	510	7640	575	689	521	491	471	1980	272	334
22	185	191	461	4960	779	679	521	454	459	1880	274	7960
23	179	191	330	1160	867	657	521	436	955	500	255	2080
24	176	211	413	3260	3760	835	491	3380	628	452	310	1000
25	172	207	2020	12100	10000	927	521	1810	504	367	289	798
26	176	187	779	2050	11900	708	632	1200	448	360	322	712
27	189	202	540	1600	3760	657	896	925	432	414	271	661
28	187	243	457	1420	1900	621	811	833	405	351	557	601
29	173	259	398	1230	---	621	670	768	434	322	334	624
30	173	630	380	1100	---	586	575	758	442	486	942	2330
31	173	---	426	1030	---	553	---	708	---	486	381	---
TOTAL	8141	6586	20258	57904	45067	29960	19716	21666	23118	15140	11740	32864
MEAN	263	220	653	1868	1610	966	657	699	771	488	379	1095
MAX	630	630	3000	12100	11900	1920	1210	3380	2640	1980	1040	7960
MIN	172	178	247	458	394	553	491	370	405	298	246	266
(*)	-43.6	+11.6	+12.2	+1.3	+35.6	-10.4	+0.8	-3.4	+2.0	-0.2	-1.5	-0.2
MEAN*	219	232	665	1869	1646	956	658	696	773	488	378	1095
CFSM*	.70	.74	2.12	5.95	5.24	3.04	2.10	2.22	2.46	1.55	1.20	3.49
IN*	.81	.83	2.44	6.86	5.46	3.51	2.34	2.56	2.75	1.79	1.38	3.89

CAL YR 1978 TOTAL 248916 MEAN 682 MAX 11200 MIN 172 MEAN* 680 CFSM* 2.17 IN* 29.38
WTR YR 1979 TOTAL 292160 MEAN 800 MAX 12100 MIN 172 MEAN* 680 CFSM* 2.55 IN* 34.60

* Change in contents in Marsh Creek Reservoir, equivalent in cubic feet per second, furnished by Pennsylvania Department of Environmental Resources.

* Adjusted for change in reservoir contents.

DELAWARE RIVER BASIN

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01481500 BRANDYWINE CREEK AT WILMINGTON, DE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1947 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: November 1956 to September 1961, February 1971 to September 1973, October 1974 to current year.

SUSPENDED-SEDIMENT DISCHARGE: December 1946 to September 1961, July 1962 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum daily, 30.5°C July 18, 19, 1977; minimum daily, 0.0°C on many days during winter periods.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,700 mg/L Feb. 14, 1966; minimum daily mean, 1 mg/L on many days.

SEDIMENT LOADS: Maximum daily, 35,700 tons (32,400 tonnes), Feb. 14, 1971; minimum daily, less than 0.50 ton (0.45 tonne) on many days.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 650 mg/L Jan. 21, Sept. 22; minimum daily mean, 2 mg/L Apr. 7, 8.

SEDIMENT LOADS: Maximum daily, 14,000 tons (12,700 tonnes) Sept. 22; minimum daily, 1.5 tons (1.4 tonnes) Nov. 9, 10.

WATER QUALITY DATA: WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW- INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	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)
OCT 02...	1300	234	240	7.7	21.0	18.0	10	--	89	36	22	8.3
JAN 02...	1115	1770	157	6.3	12.5	8.5	20	11.8	62	30	15	5.9
APR 02...	1030	560	193	6.2	9.0	13.5	10	12.5	70	27	17	6.7
JUN 02...	1030	470	200	7.6	26.5	21.0	5	8.8	73	31	18	6.7
SEP 27...	1145	645	184	8.3	21.0	16.5	5	8.7	69	30	17	6.4

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT 02...	11	21	.5	2.8	65	53	2.1	24	18	.1	10	143
JAN 02...	7.3	20	.4	2.6	39	32	31	19	12	.1	11	109
APR 02...	9.7	23	.5	2.0	52	43	53	20	14	.1	7.5	106
JUN 02...	8.8	20	.5	2.6	51	42	2.1	20	14	.1	9.8	137
SEP 27...	8.7	21	.5	2.8	48	39	.4	21	12	.1	11	118

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 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- 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 02...	128	.19	90.3	2.4	.22	.67	290	270	20	40	10	30
JAN 02...	92	.15	521	2.1	.16	.49	2500	2400	80	100	0	100
APR 02...	103	.14	160	2.0	.08	.24	--	--	40	--	--	20
JUN 02...	105	.19	174	2.0	.14	.43	610	560	50	70	50	20
SEP 27...	103	.16	206	2.2	.11	.34	710	640	70	40	20	20

DELAWARE RIVER BASIN

01481500 BRANDYWINE CREEK AT WILMINGTON, DE--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	12.0	5.0	---	---	6.0	---	17.0	19.0	---	26.0	---
2	17.5	11.0	5.0	3.5	1.0	7.5	13.0	16.0	---	21.5	25.0	25.5
3	16.5	11.0	---	---	1.0	6.5	11.0	16.5	17.0	22.0	25.0	---
4	15.5	10.0	9.0	---	---	7.0	9.0	17.0	17.5	20.0	25.5	26.0
5	15.5	---	9.0	---	---	---	10.5	17.0	---	19.0	26.0	25.0
6	17.0	11.0	7.5	2.0	---	---	9.5	---	20.5	19.5	27.0	24.5
7	14.5	11.0	7.0	---	---	8.0	8.5	18.5	21.0	20.5	26.0	24.0
8	14.0	11.5	9.0	3.0	---	9.0	---	20.5	22.0	21.0	26.5	22.0
9	---	11.0	10.0	.5	---	9.0	8.0	---	22.0	21.0	26.5	---
10	---	---	4.5	.5	---	10.0	9.5	23.5	22.5	22.0	27.0	20.0
11	14.0	9.5	3.0	---	---	---	12.0	23.5	20.5	22.0	25.0	20.0
12	15.5	---	---	1.0	---	5.5	11.5	---	18.5	24.0	---	20.0
13	16.5	9.5	4.0	2.0	---	7.0	10.0	20.0	18.5	25.0	20.5	20.0
14	---	10.0	3.5	---	---	9.5	8.0	18.0	20.0	25.0	21.5	---
15	12.5	11.5	3.0	.5	---	5.5	---	18.5	21.0	---	20.5	---
16	11.0	10.5	4.0	2.0	---	5.0	10.0	20.0	20.5	26.0	20.5	---
17	12.0	10.5	---	1.5	---	7.0	10.0	19.0	22.0	26.5	20.0	---
18	12.0	12.5	4.0	.5	---	9.0	12.0	17.0	22.5	25.0	---	---
19	12.0	10.0	2.0	---	---	10.0	13.0	---	---	25.0	---	---
20	12.5	9.5	1.5	---	---	10.0	14.0	17.5	22.0	25.0	22.0	---
21	---	7.0	4.0	1.5	---	10.5	13.5	17.5	21.0	24.0	22.0	---
22	12.0	6.5	3.5	2.5	---	12.0	15.0	18.0	21.0	23.0	---	---
23	15.0	---	3.0	3.5	---	13.0	17.0	19.0	21.0	23.5	22.0	---
24	13.0	7.5	2.0	5.5	---	12.0	15.0	18.0	19.5	24.0	23.0	---
25	12.0	7.5	3.0	2.0	1.0	11.0	17.0	19.0	19.5	24.0	24.5	---
26	12.5	5.0	---	3.5	3.0	---	17.0	18.0	20.0	25.5	---	---
27	12.5	3.5	2.0	---	3.0	8.0	16.5	---	21.0	25.5	25.0	---
28	12.5	4.0	1.0	3.5	5.5	8.0	15.0	15.5	21.0	25.0	25.0	---
29	10.5	3.5	.5	4.0	---	12.0	16.0	17.5	21.5	---	25.0	---
30	10.5	6.0	.5	4.0	---	15.0	16.5	19.0	22.0	24.5	24.5	---
31	11.5	---	3.0	2.5	---	16.0	---	19.0	---	---	25.0	---

DELAWARE RIVER BASIN

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01482100 DELAWARE RIVER AT DELAWARE MEMORIAL BRIDGE, NEAR WILMINGTON, DE--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	190	170	175	2630	390	1360	150	140	149	1580	230	693
2	200	160	175	2290	350	1200	150	140	146	1590	220	685
3	230	160	177	2270	340	1250	160	140	148	1650	260	783
4	320	160	191	2460	370	1170	150	140	147	1840	270	859
5	460	170	224	1990	320	1010	150	140	147	1980	330	1160
6	700	170	242	2140	330	1020	150	140	148	2210	270	1110
7	720	170	275	1720	330	891	160	140	149	2180	260	952
8	1800	180	560	2390	390	1230	170	140	150	2390	300	1080
9	1520	180	633	2670	500	1440	160	150	151	2530	250	1090
10	1750	190	616	2940	480	1560	170	150	152	1630	250	775
11	1610	190	696	3460	480	1740	160	150	153	1590	250	665
12	1470	200	584	---	---	---	170	150	156	1320	260	691
13	1510	200	655	---	---	---	170	150	157	1260	270	700
14	2030	210	755	---	---	---	170	150	160	1850	270	700
15	1360	210	626	---	---	---	170	160	161	790	250	416
16	1350	220	603	---	---	---	170	160	167	350	250	273
17	1320	220	594	330	300	317	530	160	218	280	250	262
18	1240	230	560	330	270	303	580	170	239	260	230	255
19	1250	230	562	390	250	293	2060	170	414	260	200	233
20	1530	240	646	---	---	---	1010	170	347	250	180	212
21	2320	240	758	---	---	---	600	170	264	330	170	201
22	1440	250	592	270	230	247	730	180	276	340	160	193
23	1400	250	579	280	230	243	960	180	357	260	160	195
24	2440	270	999	260	220	233	1310	180	410	---	---	---
25	2370	290	1140	250	210	228	1270	190	479	---	---	---
26	2550	300	1170	250	210	225	1370	200	556	---	---	---
27	2250	300	1010	---	---	---	1350	220	651	---	---	---
28	2590	350	1200	---	---	---	1590	220	737	---	---	---
29	---	---	---	150	140	146	1540	210	719	---	---	---
30	---	---	---	160	110	145	1640	210	674	---	---	---
31	---	---	---	150	140	149	---	---	---	260	230	248
MONTH	2590	160	607	3460	110	745	2060	140	293	2530	160	601

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	270	230	248	2660	590	1470	4320	1480	2790	---	---	---
2	290	240	251	3040	640	1550	3990	1390	2640	---	---	---
3	310	240	260	2880	750	1760	4440	1410	2700	---	---	---
4	350	250	265	2630	390	1170	4570	1200	2680	---	---	---
5	340	250	278	2990	390	1160	4250	1210	2540	2920	750	1800
6	430	260	292	1960	400	1020	4060	1130	2450	3170	770	1930
7	540	260	319	1960	380	989	3890	750	2180	3740	760	2060
8	480	270	316	2090	390	1060	3700	610	1840	4370	820	2340
9	360	270	299	2210	410	1140	2300	520	1510	3720	830	2390
10	360	270	301	2500	440	1240	2140	540	1360	4790	1120	2660
11	450	280	324	2110	440	1260	2280	550	1320	4630	1220	2700
12	440	280	335	2540	490	1370	2030	480	1270	3970	1010	2470
13	450	290	335	2780	510	1490	1700	430	1060	4330	1090	2560
14	340	300	313	2880	570	1580	1990	430	985	4450	1460	2810
15	500	300	335	3110	580	1640	2170	430	1030	4720	1270	2800
16	670	300	374	3350	660	1730	2560	480	1160	4930	1340	2890
17	800	310	435	4240	700	1850	3000	450	1250	5170	1330	3020
18	1090	310	481	3620	610	1840	3270	490	1380	4930	1490	3180
19	1350	310	561	4230	710	1920	3470	570	1600	5330	1550	3270
20	1440	320	698	4780	750	2160	3630	550	1670	5520	1660	3450
21	1820	350	843	4330	820	2260	3350	720	1910	4920	1530	3140
22	2350	330	909	4450	930	2470	3360	880	2090	4230	1390	2790
23	2710	340	1010	4250	970	2610	3330	900	2210	4680	1440	3120
24	2430	360	1130	4450	1040	2680	3650	950	2240	4330	1620	3000
25	2340	380	1200	4440	1330	3030	4350	1100	2550	4310	1440	2840
26	2290	440	1350	4550	1410	3000	4220	1350	2680	4910	1570	3000
27	2910	410	1320	4640	1670	3130	4480	1450	2680	5170	1870	3200
28	2070	440	1290	4230	1370	2840	3460	950	2250	4930	1540	3250
29	2330	470	1290	4370	1480	2800	4050	680	1820	5770	1670	3440
30	2900	500	1380	4420	1350	2750	2790	670	1610	6330	1990	3770
31	---	---	---	4350	1610	2910	2610	670	1580	---	---	---
MONTH	2910	230	625	4780	380	1930	4570	430	1900	6330	750	2840

DELAWARE RIVER BASIN

01482100 DELAWARE RIVER AT DELAWARE MEMORIAL BRIDGE, NEAR WILMINGTON, DE--Continued

PH (UNITS), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	6.8	6.8	6.8	7.0	6.6	6.8	6.7	6.7	6.7	7.0	6.7	6.8
2	6.8	6.7	6.8	7.0	6.6	6.8	6.7	6.6	6.7	7.0	6.6	6.8
3	6.8	6.7	6.8	7.0	6.6	6.8	6.7	6.6	6.7	7.0	6.6	6.8
4	6.8	6.7	6.7	7.0	6.6	6.8	6.7	6.6	6.6	7.1	6.6	6.8
5	6.9	6.7	6.7	7.0	6.6	6.8	6.6	6.6	6.6	7.1	6.7	6.9
6	6.9	6.6	6.7	7.0	6.6	6.8	6.6	6.5	6.6	7.1	6.7	6.9
7	7.0	6.6	6.8	7.0	6.6	6.8	6.6	6.5	6.6	7.0	6.6	6.8
8	7.1	6.7	6.9	7.1	6.6	6.9	6.6	6.5	6.6	7.0	6.6	6.8
9	7.0	6.7	6.9	7.1	6.7	6.9	6.6	6.6	6.6	7.0	6.6	6.8
10	7.0	6.7	6.8	7.1	6.7	6.9	6.6	6.5	6.6	6.9	6.6	6.7
11	7.0	6.6	6.8	7.1	6.7	6.9	6.6	6.5	6.6	6.9	6.5	6.7
12	7.0	6.4	6.7	---	---	---	6.7	6.6	6.6	6.8	6.6	6.7
13	7.0	6.5	6.7	---	---	---	6.7	6.5	6.6	6.9	6.6	6.7
14	7.0	6.6	6.8	---	---	---	6.7	6.6	6.6	7.0	6.6	6.8
15	6.9	6.6	6.8	---	---	---	6.7	6.6	6.7	6.8	6.6	6.7
16	6.9	6.6	6.8	---	---	---	6.8	6.6	6.7	6.8	6.7	6.7
17	6.9	6.6	6.8	6.7	6.4	6.6	6.9	6.6	6.7	6.7	6.7	6.7
18	6.9	6.6	6.7	6.8	6.6	6.7	6.9	6.6	6.7	6.7	6.7	6.7
19	6.9	6.6	6.7	6.8	6.7	6.8	7.0	6.6	6.8	6.7	6.6	6.7
20	6.9	6.6	6.7	---	---	---	6.9	6.6	6.8	6.7	6.6	6.6
21	6.9	6.6	6.7	---	---	---	6.9	6.6	6.7	6.7	6.6	6.6
22	6.9	6.5	6.7	6.9	6.7	6.8	6.9	6.6	6.7	6.7	6.5	6.6
23	6.9	6.5	6.7	6.8	6.7	6.8	6.9	6.6	6.7	6.7	6.5	6.6
24	7.0	6.6	6.8	6.8	6.7	6.7	6.9	6.6	6.7	---	---	---
25	7.0	6.6	6.8	6.8	6.7	6.7	6.9	6.6	6.7	---	---	---
26	7.1	6.6	6.8	6.8	6.7	6.8	6.9	6.6	6.8	---	---	---
27	6.9	6.5	6.7	---	---	---	7.0	6.7	6.8	---	---	---
28	7.0	6.6	6.8	---	---	---	7.0	6.7	6.9	---	---	---
29	---	---	---	6.8	6.7	6.7	7.0	6.7	6.9	---	---	---
30	---	---	---	6.7	6.7	6.7	7.0	6.7	6.8	---	---	---
31	---	---	---	6.7	6.7	6.7	---	---	---	6.3	6.2	6.3
MONTH	7.1	6.4	6.8	7.1	6.4	6.8	7.0	6.5	6.7	7.1	6.2	6.7

01482100 DELAWARE RIVER AT DELAWARE MEMORIAL BRIDGE, NEAR WILMINGTON, DE--Continued

PH (UNITS). WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	6.3	6.2	6.2	6.9	6.5	6.7	7.0	6.8	6.9	---	---	---
2	6.4	6.2	6.3	6.9	6.5	6.7	7.0	6.8	6.9	---	---	---
3	6.4	6.2	6.3	6.9	6.5	6.7	7.0	6.8	6.9	---	---	---
4	6.3	6.2	6.2	6.9	6.5	6.7	7.0	6.8	6.9	---	---	---
5	6.4	6.2	6.3	6.9	6.5	6.7	6.9	6.7	6.8	6.9	6.5	6.7
6	6.4	6.2	6.3	6.8	6.4	6.6	6.9	6.7	6.8	6.9	6.5	6.7
7	6.5	6.2	6.3	6.8	6.4	6.6	6.9	6.7	6.8	6.9	6.5	6.7
8	6.4	6.1	6.3	6.8	6.4	6.6	6.9	6.7	6.8	7.0	6.5	6.8
9	6.4	6.2	6.3	6.8	6.4	6.6	7.0	6.6	6.8	7.0	6.6	6.8
10	6.4	6.2	6.3	6.8	6.4	6.6	7.0	6.6	6.8	7.1	6.6	6.9
11	6.5	6.2	6.3	6.8	6.4	6.7	7.0	6.6	6.8	7.1	6.7	6.9
12	6.5	6.3	6.3	6.9	6.5	6.7	6.9	6.6	6.8	7.0	6.6	6.9
13	6.5	6.3	6.4	7.0	6.5	6.7	6.9	6.5	6.7	7.2	6.7	6.9
14	6.5	6.3	6.4	6.9	6.5	6.8	6.9	6.5	6.7	7.1	6.8	7.0
15	6.6	6.3	6.4	6.9	6.5	6.7	6.9	6.5	6.7	7.1	6.7	6.9
16	6.8	6.3	6.4	6.9	6.6	6.7	6.9	6.5	6.7	7.0	6.6	6.8
17	6.7	6.3	6.4	6.9	6.5	6.7	6.9	6.6	6.8	7.0	6.6	6.8
18	6.7	6.3	6.4	6.9	6.5	6.7	6.9	6.6	6.8	7.0	6.6	6.8
19	6.7	6.3	6.4	6.9	6.5	6.7	7.0	6.6	6.8	7.0	6.6	6.8
20	6.7	6.3	6.5	6.9	6.6	6.8	7.0	6.6	6.8	7.0	6.6	6.9
21	6.8	6.3	6.5	7.0	6.6	6.8	7.1	6.7	6.9	7.0	6.6	6.8
22	6.8	6.3	6.5	6.9	6.6	6.8	7.1	6.7	7.0	6.9	6.6	6.8
23	6.7	6.3	6.5	7.0	6.7	6.8	7.1	6.7	6.9	7.1	6.6	6.9
24	6.7	6.3	6.5	7.0	6.7	6.9	7.1	6.8	6.9	7.0	6.7	6.9
25	6.7	6.3	6.5	7.0	6.8	6.9	7.2	6.6	7.0	7.0	6.6	6.8
26	6.7	6.3	6.5	7.0	6.8	6.9	7.1	6.8	7.0	7.1	6.6	6.8
27	6.8	6.4	6.6	7.1	6.8	6.9	7.2	6.8	7.0	7.0	6.6	6.8
28	6.9	6.4	6.6	7.0	6.8	6.9	7.1	6.8	6.9	7.0	6.6	6.8
29	6.9	6.4	6.6	7.1	6.8	6.9	7.0	6.5	6.8	7.1	6.6	6.9
30	6.9	6.4	6.7	7.0	6.8	6.9	6.9	6.5	6.7	7.1	6.7	6.9
31	---	---	---	7.0	6.8	6.9	6.8	6.5	6.7	---	---	---
MONTH	6.9	6.1	6.4	7.1	6.4	6.8	7.2	6.5	6.8	7.2	6.5	6.8

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

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

DELAWARE RIVER BASIN

01482100 DELAWARE RIVER AT DELAWARE MEMORIAL BRIDGE, NEAR WILMINGTON, DE--Continued

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

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

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

01482100 DELAWARE RIVER AT DELAWARE MEMORIAL BRIDGE, NEAR WILMINGTON, DE--Continued

DISSOLVED OXYGEN (DO), MG/L, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	5.1	1.4	3.0	8.4	7.4	7.8	9.9	8.3	9.0	---	---	---
2	4.1	1.7	2.8	8.4	7.5	7.9	9.0	8.3	8.6	---	---	---
3	4.1	1.8	2.7	8.5	7.4	7.9	8.7	8.3	8.5	---	---	---
4	4.8	2.5	3.5	8.1	7.2	7.6	8.7	8.4	8.5	---	---	---
5	5.4	3.1	3.9	7.6	6.4	7.2	9.1	8.6	8.8	---	---	---
6	5.0	3.3	4.1	8.4	6.7	7.6	9.5	8.7	9.0	12.1	11.3	11.7
7	5.5	3.5	4.3	8.7	7.6	8.2	10.7	9.3	10.2	12.4	11.3	11.8
8	6.6	3.6	4.8	8.6	7.1	7.8	11.4	10.5	10.7	12.4	11.3	11.8
9	6.5	4.0	5.3	8.0	5.6	6.9	11.6	10.6	10.9	12.3	11.6	11.9
10	6.1	4.0	5.0	7.2	5.4	6.2	11.6	11.0	11.2	12.6	11.7	12.0
11	6.0	3.8	4.8	6.9	5.4	6.0	12.3	11.0	11.5	12.9	12.0	12.4
12	5.6	3.5	4.5	6.8	5.5	6.0	12.4	11.0	11.6	12.6	12.3	12.5
13	6.4	3.6	4.8	7.2	5.8	6.5	12.4	11.0	11.7	12.6	12.2	12.4
14	8.1	4.2	6.3	7.7	6.6	7.0	12.3	10.8	11.5	12.9	12.5	12.7
15	8.0	5.3	6.6	7.8	6.7	7.2	11.9	10.5	11.2	12.8	12.5	12.6
16	8.0	5.2	6.5	7.7	6.9	7.2	11.3	10.0	10.7	12.8	12.6	12.7
17	7.3	5.9	6.6	7.8	6.9	7.3	10.9	9.8	10.3	12.9	12.6	12.7
18	7.7	6.5	6.9	8.7	7.0	7.5	10.4	9.8	10.0	12.9	12.7	12.8
19	7.1	6.2	6.6	8.4	7.5	7.9	---	---	---	12.9	12.8	12.8
20	7.0	6.2	6.6	8.8	7.7	8.1	11.6	11.0	11.3	13.3	12.8	13.1
21	7.2	6.5	6.9	8.6	7.7	8.1	12.1	11.1	11.5	13.1	12.7	13.0
22	7.5	6.6	6.8	8.2	7.4	7.8	---	---	---	13.0	12.4	12.8
23	7.6	6.7	7.0	9.0	7.7	8.2	---	---	---	12.8	12.1	12.6
24	7.6	6.9	7.0	8.6	7.3	8.0	---	---	---	12.7	11.8	12.3
25	7.1	6.6	6.9	8.7	7.2	8.0	---	---	---	12.5	11.7	12.1
26	7.1	6.6	6.9	8.7	7.4	8.1	---	---	---	12.9	12.0	12.3
27	7.2	6.8	7.0	9.1	7.9	8.5	---	---	---	13.0	12.2	12.5
28	6.9	6.6	6.8	9.4	8.2	8.8	---	---	---	13.1	12.7	12.9
29	7.6	6.7	7.1	9.4	8.2	8.7	---	---	---	13.1	12.8	13.0
30	8.1	7.3	7.5	9.9	8.4	9.0	---	---	---	13.0	12.8	13.0
31	8.0	7.2	7.5	---	---	---	---	---	---	13.0	12.8	12.9
MONTH	8.1	1.4	5.7	9.9	5.4	7.6	12.4	8.3	10.3	13.3	11.3	12.5
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	13.0	12.8	12.9	10.7	6.3	9.3	11.3	10.8	11.0	8.8	6.7	7.9
2	12.9	12.7	12.8	10.6	7.5	9.3	11.0	10.6	10.8	9.0	4.9	7.7
3	12.8	12.5	12.7	10.5	7.3	9.2	10.9	10.3	10.6	8.7	6.3	7.8
4	12.7	12.3	12.6	10.6	7.2	9.1	10.7	10.0	10.3	9.1	6.1	7.8
5	12.6	12.1	12.4	10.1	6.1	8.5	10.4	9.8	10.0	9.1	7.0	8.4
6	12.5	12.1	12.3	10.4	6.3	8.4	10.3	9.6	9.8	8.9	6.1	7.8
7	12.9	12.1	12.6	9.9	3.7	7.9	9.9	9.3	9.5	8.3	5.7	7.2
8	13.1	12.2	12.7	10.6	6.0	8.7	9.8	9.1	9.3	8.1	5.5	7.0
9	12.8	12.1	12.5	10.6	7.1	9.0	9.7	8.9	9.3	8.5	5.1	6.9
10	12.8	11.8	12.4	10.3	6.9	8.8	9.8	8.7	9.0	7.3	4.5	6.2
11	12.6	11.7	12.2	10.5	6.2	8.4	9.4	7.8	8.6	7.0	4.3	5.8
12	12.5	11.5	12.0	---	---	---	9.6	8.4	9.1	6.8	4.0	5.8
13	12.4	11.5	12.0	---	---	---	9.4	8.7	9.0	7.4	4.7	6.1
14	12.4	11.3	11.9	---	---	---	9.4	8.8	9.0	8.1	5.4	6.7
15	12.2	11.0	11.7	---	---	---	9.5	8.7	9.1	7.2	5.0	6.5
16	12.1	11.0	11.5	---	---	---	9.6	8.6	9.1	7.1	5.3	6.4
17	11.9	10.6	11.3	8.5	7.5	8.1	9.7	8.4	9.1	6.8	5.0	5.9
18	11.6	10.4	11.0	9.3	8.0	8.4	9.5	8.0	8.8	6.1	4.7	5.2
19	11.6	10.1	10.9	10.1	8.7	9.3	9.9	8.0	9.0	5.4	4.7	5.0
20	11.6	10.0	10.8	---	---	---	9.2	7.8	8.7	5.3	4.8	5.0
21	11.7	9.6	10.6	---	---	---	9.2	7.4	8.3	5.8	4.9	5.3
22	11.2	9.3	10.4	9.8	9.4	9.6	8.9	7.1	8.0	6.0	5.4	5.7
23	11.6	9.2	10.4	9.6	9.1	9.3	9.1	6.7	7.9	6.1	5.5	5.7
24	12.0	9.5	10.8	9.5	9.0	9.2	8.8	6.3	7.6	---	---	---
25	11.8	9.5	10.8	9.6	9.3	9.5	8.5	6.3	7.5	---	---	---
26	11.8	6.9	9.8	10.1	9.6	9.8	8.7	6.3	7.8	---	---	---
27	10.4	3.5	7.9	---	---	---	9.2	7.4	8.5	---	---	---
28	10.6	4.5	8.4	---	---	---	9.3	7.3	8.5	---	---	---
29	---	---	---	11.9	11.4	11.6	9.1	7.1	8.3	---	---	---
30	---	---	---	11.7	11.4	11.5	8.8	6.6	8.0	---	---	---
31	---	---	---	11.5	11.1	11.3	---	---	---	6.0	3.7	4.9
MONTH	13.1	3.5	11.4	11.9	3.7	9.3	11.3	6.3	9.0	9.1	3.7	6.5

DELAWARE RIVER BASIN

01482100 DELAWARE RIVER AT DELAWARE MEMORIAL BRIDGE, NEAR WILMINGTON, DE--Continued

DISSOLVED OXYGEN (DO), MG/L, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	5.9	3.1	4.5	5.9	2.2	4.4	6.0	3.8	4.9	---	---	---
2	6.5	2.8	4.3	5.4	2.2	4.0	5.5	3.5	4.5	---	---	---
3	5.8	2.4	4.1	5.4	2.1	4.2	5.3	3.3	4.4	---	---	---
4	5.2	2.0	3.8	5.6	3.2	4.6	5.6	3.6	4.6	---	---	---
5	6.3	2.5	4.4	5.8	3.2	4.7	5.2	3.4	4.4	4.3	2.1	3.3
6	6.0	2.3	4.5	5.4	2.7	4.3	5.1	3.1	4.3	4.0	2.0	3.2
7	7.0	2.4	4.8	5.0	2.4	4.0	5.4	3.2	4.4	4.2	2.3	3.4
8	6.2	2.6	4.6	5.4	2.6	4.2	5.4	3.0	4.5	4.7	2.5	3.9
9	5.8	2.1	4.1	5.5	2.5	4.2	5.0	2.2	4.1	4.9	2.8	3.9
10	5.9	2.0	4.0	5.4	2.1	3.9	5.1	2.3	4.0	5.6	3.1	4.5
11	6.1	2.1	4.1	5.6	1.9	4.0	5.2	1.9	3.7	5.8	4.0	4.9
12	6.2	2.9	4.6	5.9	2.3	4.4	4.7	1.5	3.4	5.6	3.9	4.9
13	6.0	3.0	4.7	6.4	2.7	4.6	4.0	1.0	2.8	6.2	3.9	5.2
14	6.4	3.0	4.6	5.7	3.1	4.7	3.9	.7	2.3	6.0	4.5	5.3
15	7.3	3.8	5.2	5.7	2.9	4.5	4.3	.6	2.2	6.0	4.2	5.2
16	7.9	3.8	5.2	5.1	2.6	4.1	4.6	.8	2.6	5.7	3.9	4.9
17	6.7	3.8	5.1	5.0	2.2	3.6	4.6	1.4	2.9	5.7	3.7	4.8
18	6.7	3.3	4.7	4.7	1.8	3.2	4.6	1.4	3.0	5.5	3.4	4.7
19	6.5	3.1	4.4	4.5	1.6	3.0	4.7	1.6	3.2	5.4	3.3	4.6
20	6.2	2.8	4.3	4.7	2.0	3.5	4.5	1.8	3.3	5.4	3.4	4.6
21	6.2	2.7	4.2	5.0	2.1	3.7	5.6	2.7	4.2	5.3	3.3	4.5
22	5.8	2.4	3.9	4.8	2.2	3.6	5.3	2.9	4.4	4.9	3.0	4.2
23	5.5	1.9	3.5	4.5	2.2	3.5	5.4	2.7	4.3	5.7	3.3	4.8
24	5.1	1.6	3.4	5.0	2.3	3.6	5.3	2.9	4.2	5.5	3.8	4.8
25	5.0	1.3	3.3	5.0	2.9	4.1	5.7	3.2	4.4	5.4	3.6	4.6
26	5.2	1.7	3.6	5.2	2.9	4.1	5.4	3.6	4.6	5.8	3.8	5.0
27	5.3	1.4	3.6	5.7	3.4	4.5	5.9	3.5	4.6	5.9	4.2	5.1
28	5.9	1.8	3.9	5.4	3.4	4.5	5.4	3.9	4.8	5.6	3.8	4.9
29	6.2	1.9	4.0	5.8	3.4	4.5	5.0	3.3	4.4	6.1	3.9	5.1
30	6.2	2.0	4.2	5.9	3.8	4.8	4.8	2.9	3.9	6.2	4.3	5.3
31	---	---	---	6.0	4.2	5.0	4.7	2.6	3.7	---	---	---
MONTH	7.9	1.3	4.3	6.4	1.6	4.1	6.0	.6	3.9	6.2	2.0	4.6

01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE

LOCATION.--Lat 39°30'03", long 75°34'07", New Castle County, Hydrologic Unit 02040205, water-quality recorder located on platform about 0.4 mi (0.6 km) downstream from Reedy Island near Port Penn.

DRAINAGE AREA.--11,200 mi² (29,100 km²), approximately.

PERIOD OF RECORD.--October 1963 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1963 to current year.

pH: February 1970 to current year.

WATER TEMPERATURES: February 1970 to current year.

DISSOLVED OXYGEN: February 1970 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 35,600 micromhos Nov. 15, 1978; minimum, 100 micromhos on several days during August 1969, April 1970, February 1974, January, February, and March 1979.

pH: Maximum, 8.8 Aug. 29, Sept. 2, 1973; minimum, 5.4 Dec. 31, 1972.

WATER TEMPERATURES: Maximum, 31.5°C July 21, 1977; minimum, 0.0°C on many days during winter periods.

DISSOLVED OXYGEN: Maximum, 15.2 mg/L Feb. 27, 1978; minimum, 0.3 mg/L Sept. 16, 17, 1971.

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	9440	4360	6290	6840	2800	4350	4400	520	2080	5400	530	2040
2	8200	3600	5080	6800	2960	4360	3400	320	1360	5360	527	1810
3	7800	3360	4670	6800	2960	4720	3040	160	920	2840	433	985
4	9880	3360	5980	7920	3200	4860	---	---	---	4440	409	1440
5	11200	3800	7160	7600	3200	4800	---	---	---	4200	365	1650
6	12200	4000	7810	9120	3600	5870	---	---	---	6160	400	2210
7	12600	3800	8030	9920	4560	6840	---	---	---	8160	560	3290
8	14800	5240	9570	11300	2960	6590	---	---	---	8600	1360	3940
9	14200	6400	9840	6520	2240	4030	---	---	---	6200	1000	3330
10	12200	4360	7550	5000	2400	3350	---	---	---	---	---	---
11	11200	4000	7060	3640	1520	2650	---	---	---	---	---	---
12	11200	3960	6370	2640	1720	2230	---	---	---	---	---	---
13	11200	3760	6210	2960	880	1870	---	---	---	---	---	---
14	14400	5160	8660	3360	880	1630	---	---	---	---	---	---
15	11200	4040	7760	3600	800	1550	---	---	---	---	---	---
16	11200	4320	6580	2640	720	1260	---	---	---	---	---	---
17	7200	2800	4460	2880	920	1370	---	---	---	---	---	---
18	6600	2720	3550	1440	560	1160	---	---	---	---	---	---
19	6960	2400	3460	1320	720	1000	---	---	---	---	---	---
20	5240	2000	3370	2920	560	1120	---	---	---	---	---	---
21	7800	2000	3880	3600	600	1560	---	---	---	---	---	---
22	6040	1920	3440	2160	440	1160	---	---	---	---	---	---
23	6800	1600	3130	4320	720	1900	604	401	476	---	---	---
24	4840	1600	3140	5480	760	2600	649	340	492	---	---	---
25	5000	1560	2830	5120	840	2320	450	305	398	---	---	---
26	5000	1600	2760	4760	1000	2560	421	255	353	---	---	---
27	4800	1600	2940	2000	400	1200	2800	258	614	---	---	---
28	5000	1680	2850	1240	160	600	2000	253	464	---	---	---
29	6760	1800	3480	2600	160	760	2280	251	426	---	---	---
30	7160	2560	4570	4040	320	1440	2160	257	510	---	---	---
31	7640	3160	4470	---	---	---	3160	246	810	---	---	---
MONTH	14800	1560	5390	11300	160	2720	4400	160	742	8600	365	2300

DELAWARE RIVER BASIN

01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	---	---	---	13200	5240	8510	304	174	208	9800	4560	6130
2	---	---	---	11800	5400	7690	439	174	311	10300	4360	6130
3	---	---	---	13600	4840	8470	295	194	246	11000	4440	6470
4	---	---	---	---	---	---	241	201	220	11200	4560	6260
5	---	---	---	---	---	---	229	174	214	11600	4440	7670
6	---	---	---	---	---	---	205	180	197	11600	4440	7220
7	---	---	---	---	---	---	---	---	---	10000	4360	6240
8	---	---	---	---	---	---	---	---	---	9800	4320	6040
9	---	---	---	---	---	---	---	---	---	10400	4000	5950
10	---	---	---	---	---	---	---	---	---	8320	3360	4930
11	---	---	---	---	---	---	---	---	---	7800	3000	4600
12	---	---	---	---	---	---	---	---	---	7640	3240	4800
13	---	---	---	---	---	---	---	---	---	7000	3400	4800
14	---	---	---	---	---	---	---	---	---	6840	3360	4860
15	---	---	---	---	---	---	5960	560	3570	6800	2600	4130
16	---	---	---	---	---	---	8600	1800	5000	5560	1400	3150
17	---	---	---	---	---	---	10800	4440	7370	5200	1240	2560
18	---	---	---	---	---	---	10000	4760	6830	2440	840	1550
19	---	---	---	---	---	---	11200	4720	7420	2760	560	1110
20	---	---	---	---	---	---	11000	5160	7340	2360	560	913
21	---	---	---	7800	2720	4860	8560	4440	6030	1240	560	760
22	---	---	---	5760	1760	3550	8720	4000	5500	1760	560	753
23	12300	4560	7190	4840	960	2720	8840	4000	5400	2320	440	797
24	14600	4560	8680	3960	830	1830	8600	3920	5350	2440	400	809
25	14000	4840	8810	3000	544	1330	8400	3960	5230	1360	400	564
26	13200	5200	8800	2720	549	1150	8400	4160	5400	1240	200	493
27	12000	4440	7470	2040	311	681	8840	4800	6150	840	160	293
28	12600	4440	7950	---	---	---	11400	5200	7560	720	160	269
29	---	---	---	---	---	---	11200	4960	6890	440	160	233
30	---	---	---	---	---	---	9760	4720	6020	1400	160	379
31	---	---	---	255	190	219	---	---	---	1960	160	501
MONTH	14600	4440	8150	13600	190	3730	11400	174	4480	11600	160	3270

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	4160	200	837	13800	4760	8120	18300	8800	12700	12700	4960	7510
2	4960	400	1290	14400	5200	8680	18400	9000	12600	13400	5200	8500
3	5000	440	1490	13400	6040	9170	18200	7600	11300	13400	5520	8580
4	5240	400	1620	13400	4800	7850	14000	6960	9440	12600	5240	8310
5	5640	760	2550	13900	4880	8910	13400	6800	9020	13800	5920	9030
6	6600	760	2550	14000	5120	8300	14000	6760	9310	13600	6040	9400
7	7360	1120	2820	13200	4960	7540	13400	6400	8900	13600	6000	9060
8	6360	1000	2620	12000	4560	7310	11600	4960	7780	14600	6040	9280
9	5120	1000	2060	12000	4560	7220	10200	4560	6850	14600	6200	9780
10	4800	840	1870	11600	3960	7320	10600	4600	7070	16200	6800	10100
11	6040	840	2500	11200	3920	6970	12000	4560	7140	13400	7240	10200
12	5640	960	2270	13200	4840	8410	12000	4720	7430	12000	5360	8230
13	5520	1160	2270	14200	5400	8950	11200	4440	6830	15800	5120	8390
14	5000	720	2010	14000	5600	8970	11800	4160	6650	17200	7160	10700
15	8360	800	3490	14200	5200	8800	12400	4200	6680	14600	7760	10900
16	10400	1240	4620	15800	5520	9140	13500	4400	7040	15200	7360	10500
17	11100	2440	5600	16200	6160	9790	13100	4600	7260	15600	7200	10500
18	10800	2760	5410	15000	6160	9510	13000	4560	7320	16400	7600	11000
19	10400	2840	5170	16200	6400	9500	13200	5120	7930	15600	7920	11000
20	10700	2960	5710	16000	6560	9540	13400	5200	8260	16400	8200	11800
21	11400	3640	6310	15200	7120	9990	14000	5600	8740	14800	8200	10900
22	11200	3640	6150	15800	7200	10400	14800	6360	9920	13400	7200	9470
23	10800	3640	6180	15900	7640	11000	13800	6720	9840	16400	7200	11500
24	10600	3760	6320	16000	7640	11000	13800	6800	9520	15800	8600	12200
25	10400	4000	6490	16600	8200	11600	16000	6840	9950	16000	8200	11200
26	10600	4440	6690	15900	8200	11500	15500	7240	11000	18300	8200	12400
27	9600	4200	6380	15600	8840	11900	15400	7760	10800	19000	9360	14300
28	9520	4200	6190	29800	8160	11300	13100	6720	9530	19200	10200	14200
29	11200	4040	6570	17600	7640	11200	12800	5520	8120	20800	10000	14500
30	12200	4360	7220	17000	8400	11700	13000	5000	7600	20600	10600	14800
31	---	---	---	18600	8160	12700	12600	5240	8160	---	---	---
MONTH	12200	200	4110	29800	3920	9490	18400	4160	8730	20800	4960	10600

DELAWARE RIVER BASIN

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01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE--Continued

PH (UNITS), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	7.4	7.2	7.3	7.3	7.0	7.1	7.2	6.7	6.9	7.4	6.9	7.2
2	7.4	7.2	7.3	7.3	7.0	7.1	7.0	6.6	6.8	7.4	7.0	7.1
3	7.5	7.2	7.3	7.4	7.0	7.2	6.9	6.5	6.7	7.3	6.9	7.1
4	7.6	7.2	7.4	7.3	7.0	7.2	6.8	6.5	6.6	7.4	6.9	7.1
5	7.6	7.3	7.5	7.3	6.9	7.1	7.1	6.5	6.8	7.4	7.0	7.2
6	7.6	7.3	7.5	7.4	7.0	7.2	7.0	6.6	6.7	7.5	7.0	7.2
7	7.7	7.3	7.5	7.5	7.2	7.4	---	---	---	7.6	7.1	7.3
8	7.8	7.3	7.5	7.6	7.0	7.3	---	---	---	7.6	7.1	7.4
9	7.7	7.4	7.5	7.3	6.7	7.0	---	---	---	7.5	7.2	7.4
10	7.6	7.4	7.5	7.1	6.7	6.9	---	---	---	---	---	---
11	7.6	7.3	7.4	7.0	6.6	6.9	---	---	---	---	---	---
12	7.6	7.3	7.4	6.8	6.7	6.8	---	---	---	---	---	---
13	7.6	7.3	7.4	7.2	6.7	6.8	---	---	---	---	---	---
14	7.7	7.4	7.6	7.0	6.7	6.8	---	---	---	---	---	---
15	7.7	7.4	7.6	7.0	6.7	6.8	---	---	---	---	---	---
16	7.7	7.4	7.5	6.9	6.7	6.7	---	---	---	---	---	---
17	7.8	7.4	7.5	6.9	6.7	6.7	---	---	---	---	---	---
18	7.7	7.3	7.4	7.3	6.7	6.8	---	---	---	---	---	---
19	7.6	7.3	7.4	7.3	6.8	6.9	---	---	---	---	---	---
20	7.5	7.0	7.3	7.0	6.8	6.8	---	---	---	---	---	---
21	7.5	6.9	7.2	7.0	6.8	6.9	---	---	---	---	---	---
22	7.3	6.8	7.1	6.9	6.7	6.8	---	---	---	---	---	---
23	7.3	6.8	7.0	7.2	6.8	6.9	7.0	6.8	6.9	---	---	---
24	7.2	6.8	7.0	7.2	6.8	6.9	7.0	6.8	6.9	---	---	---
25	7.2	6.7	6.9	7.2	6.7	6.9	6.9	6.8	6.9	---	---	---
26	7.1	6.7	6.9	7.2	6.8	7.0	7.0	6.8	6.9	---	---	---
27	7.1	6.7	6.9	7.2	6.7	6.9	7.3	6.9	7.0	---	---	---
28	7.1	6.7	6.8	7.0	6.7	6.8	7.1	6.8	6.9	---	---	---
29	7.3	6.7	6.9	7.0	6.7	6.8	7.2	6.8	6.9	---	---	---
30	7.3	6.9	7.1	7.2	6.7	6.9	7.2	6.8	6.9	---	---	---
31	7.4	7.0	7.1	---	---	---	7.3	6.8	7.0	---	---	---
MONTH	7.8	6.7	7.3	7.6	6.6	6.9	7.3	6.5	6.9	7.6	6.9	7.2

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	---	---	---	7.8	7.5	7.6	6.7	6.5	6.6	7.4	7.0	7.1
2	---	---	---	7.7	7.5	7.6	6.8	6.5	6.7	7.5	7.0	7.2
3	---	---	---	7.8	7.5	7.6	6.7	6.6	6.7	7.5	7.0	7.2
4	---	---	---	---	---	---	6.7	6.6	6.6	7.5	7.0	7.2
5	---	---	---	---	---	---	6.7	6.5	6.6	7.5	7.1	7.3
6	---	---	---	---	---	---	6.6	6.5	6.6	7.5	7.1	7.2
7	---	---	---	---	---	---	6.6	6.5	6.6	7.4	7.0	7.1
8	---	---	---	---	---	---	6.6	6.5	6.5	7.3	7.0	7.1
9	---	---	---	---	---	---	6.6	6.5	6.6	7.4	7.0	7.1
10	---	---	---	---	---	---	6.6	6.5	6.5	7.2	6.9	7.0
11	---	---	---	---	---	---	6.5	6.5	6.5	7.2	6.9	7.0
12	---	---	---	---	---	---	6.6	6.5	6.5	7.2	6.8	7.0
13	---	---	---	---	---	---	6.6	6.5	6.6	7.1	6.9	7.0
14	---	---	---	---	---	---	7.0	6.5	6.7	7.2	7.0	7.1
15	---	---	---	---	---	---	7.3	6.7	7.0	7.2	6.9	7.1
16	---	---	---	---	---	---	7.6	6.9	7.2	7.1	6.8	7.0
17	---	---	---	---	---	---	7.7	7.1	7.4	7.0	6.7	6.9
18	---	---	---	---	---	---	7.6	7.1	7.3	6.8	6.6	6.8
19	---	---	---	---	---	---	7.6	7.1	7.3	6.8	6.5	6.7
20	---	---	---	---	---	---	7.5	7.1	7.3	6.7	6.5	6.6
21	---	---	---	7.3	7.0	7.1	7.3	7.0	7.2	6.7	6.5	6.6
22	---	---	---	7.2	6.9	7.0	7.3	7.0	7.1	6.7	6.5	6.6
23	7.8	7.4	7.6	7.1	6.9	6.9	7.3	6.9	7.1	6.7	6.5	6.6
24	7.8	7.4	7.6	7.0	6.8	6.9	7.3	6.9	7.0	6.7	6.5	6.6
25	7.8	7.4	7.6	7.0	6.8	6.9	7.2	6.8	7.0	6.6	6.4	6.5
26	7.8	7.5	7.6	7.0	6.8	6.9	7.3	6.9	7.0	6.6	6.4	6.5
27	7.7	7.4	7.6	7.0	6.7	6.8	7.3	7.0	7.2	6.6	6.4	6.5
28	7.8	7.5	7.6	6.7	6.6	6.7	7.5	7.1	7.2	6.6	6.3	6.5
29	---	---	---	6.7	6.6	6.7	7.5	7.1	7.2	6.6	6.4	6.4
30	---	---	---	6.7	6.6	6.7	7.4	7.0	7.1	6.7	6.4	6.5
31	---	---	---	6.6	6.5	6.6	---	---	---	6.8	6.4	6.5
MONTH	7.8	7.4	7.6	7.8	6.5	7.0	7.7	6.5	6.9	7.5	6.3	6.9

DELAWARE RIVER BASIN

01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE--Continued

PH (UNITS), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	6.9	6.4	6.6	7.5	7.1	7.3	7.3	7.1	7.2	7.3	7.0	7.1
2	7.0	6.4	6.6	7.5	7.1	7.2	7.3	7.1	7.2	7.3	7.0	7.1
3	7.0	6.5	6.7	7.4	7.1	7.2	7.3	7.1	7.2	7.3	7.0	7.1
4	7.1	6.4	6.7	7.4	7.1	7.2	7.3	7.1	7.2	7.2	7.0	7.1
5	7.1	6.6	6.9	7.4	7.1	7.2	7.3	7.1	7.2	7.3	7.0	7.1
6	7.1	6.7	6.9	7.4	7.0	7.2	7.3	7.1	7.2	7.3	7.0	7.1
7	7.2	6.7	6.9	7.3	7.0	7.1	7.3	7.0	7.2	7.3	7.0	7.1
8	7.2	6.7	6.9	7.4	7.0	7.2	7.2	7.0	7.1	7.4	7.0	7.2
9	7.1	6.7	6.9	7.4	7.0	7.2	7.2	7.0	7.1	7.3	7.1	7.2
10	7.1	6.7	6.9	7.3	7.0	7.2	7.2	7.0	7.1	7.4	7.1	7.2
11	7.2	6.7	6.9	7.3	7.0	7.1	7.3	7.0	7.1	7.4	7.2	7.3
12	7.2	6.7	7.0	7.3	7.0	7.2	7.3	7.0	7.1	7.3	7.1	7.2
13	7.2	6.8	7.0	7.5	7.1	7.2	7.2	7.0	7.1	7.5	7.1	7.3
14	7.2	6.7	7.0	7.4	7.1	7.2	7.3	6.9	7.0	7.5	7.2	7.3
15	7.5	6.9	7.1	7.4	7.0	7.2	7.3	6.9	7.0	7.4	7.2	7.3
16	7.7	6.9	7.2	7.3	7.0	7.1	7.3	6.9	7.1	7.4	7.1	7.2
17	7.5	7.1	7.2	7.3	6.9	7.1	7.3	6.9	7.1	7.4	7.1	7.2
18	7.5	7.0	7.2	7.3	6.9	7.0	7.3	6.9	7.1	7.4	7.1	7.2
19	7.4	6.9	7.1	7.2	6.8	7.0	7.3	6.9	7.1	7.3	7.1	7.2
20	7.5	6.9	7.2	7.3	6.9	7.0	7.3	7.0	7.1	7.3	7.1	7.2
21	7.5	7.0	7.2	7.2	6.9	7.0	7.4	7.1	7.2	7.3	7.1	7.2
22	7.5	6.9	7.2	7.2	6.9	7.0	7.4	7.0	7.2	7.2	7.1	7.1
23	7.4	6.9	7.1	7.2	6.9	7.0	7.3	7.0	7.2	7.4	7.1	7.3
24	7.4	7.0	7.2	7.2	6.9	7.1	7.3	7.1	7.2	7.3	7.2	7.3
25	7.5	7.0	7.2	7.3	7.0	7.1	7.4	7.1	7.2	7.4	7.1	7.2
26	7.4	7.0	7.2	7.3	7.0	7.2	7.4	7.1	7.2	7.5	7.2	7.3
27	7.3	7.0	7.2	7.3	7.1	7.2	7.4	7.1	7.2	7.6	7.2	7.4
28	7.3	7.0	7.2	7.2	7.1	7.2	7.3	7.1	7.2	7.5	7.3	7.4
29	7.5	7.1	7.2	7.3	7.1	7.2	7.3	7.1	7.1	7.5	7.3	7.4
30	7.5	7.0	7.2	7.4	7.1	7.2	7.3	7.0	7.1	7.5	7.3	7.4
31	---	---	---	7.4	7.1	7.2	7.3	7.0	7.1	---	---	---
MONTH	7.7	6.4	7.0	7.5	6.8	7.2	7.4	6.9	7.1	7.6	7.0	7.2

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

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

01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE--Continued

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

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

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

DELAWARE RIVER BASIN

01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE--Continued

DISSOLVED OXYGEN (DO), MG/L, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	7.0	6.4	6.7	8.6	8.0	8.3	10.5	10.0	10.3	11.4	11.0	11.2
2	7.1	6.4	6.7	8.7	8.2	8.4	10.2	9.6	9.9	11.8	11.0	11.6
3	7.3	6.5	6.9	8.7	8.1	8.4	9.9	9.1	9.6	12.1	11.5	11.8
4	7.5	6.7	7.2	8.6	8.1	8.3	9.9	9.0	9.5	12.2	11.7	12.0
5	7.7	6.9	7.2	8.5	7.9	8.2	10.2	9.0	9.6	12.2	11.9	12.0
6	7.4	6.8	7.1	8.8	8.1	8.5	10.2	9.2	9.6	12.1	11.6	11.9
7	7.7	6.9	7.2	9.0	8.6	8.8	---	---	---	11.8	11.5	11.6
8	7.7	6.9	7.4	8.9	8.4	8.7	---	---	---	11.7	11.3	11.5
9	7.6	7.1	7.4	8.6	7.5	8.1	---	---	---	11.5	10.8	11.2
10	7.6	7.2	7.4	8.2	7.4	7.9	---	---	---	---	---	---
11	7.7	6.9	7.3	8.2	7.2	7.9	---	---	---	---	---	---
12	7.6	7.0	7.4	11.5	7.2	7.7	---	---	---	---	---	---
13	8.0	7.2	7.7	10.3	7.3	8.2	---	---	---	---	---	---
14	8.6	7.8	8.2	12.4	7.7	8.3	---	---	---	---	---	---
15	8.6	8.2	8.4	8.6	7.8	8.1	---	---	---	---	---	---
16	8.7	8.1	8.5	8.1	7.6	7.9	---	---	---	---	---	---
17	11.8	8.2	8.8	8.3	7.6	8.0	---	---	---	---	---	---
18	10.4	8.5	8.8	10.4	7.8	8.5	---	---	---	---	---	---
19	8.8	8.4	8.6	11.7	8.6	9.1	---	---	---	---	---	---
20	8.7	7.9	8.4	9.4	8.6	8.8	---	---	---	---	---	---
21	8.8	7.6	8.3	9.0	8.6	8.8	---	---	---	---	---	---
22	8.4	7.2	7.9	8.8	8.4	8.6	---	---	---	---	---	---
23	8.3	7.2	7.8	9.5	8.6	9.0	11.3	11.1	11.2	---	---	---
24	8.0	7.2	7.6	9.5	8.7	9.1	11.5	11.1	11.2	---	---	---
25	8.0	6.7	7.3	9.5	8.5	9.0	11.4	10.8	11.2	---	---	---
26	7.7	6.7	7.1	9.6	8.8	9.3	11.4	10.8	11.0	---	---	---
27	7.7	6.8	7.2	13.8	9.3	10.1	11.6	11.2	11.4	---	---	---
28	7.6	6.6	7.0	10.9	9.7	10.1	11.6	11.2	11.4	---	---	---
29	8.1	7.0	7.5	10.5	10.0	10.2	11.5	11.2	11.4	---	---	---
30	8.4	7.6	8.0	10.5	10.2	10.4	11.4	11.0	11.1	---	---	---
31	8.6	7.8	8.1	---	---	---	11.2	10.8	11.1	---	---	---
MONTH	11.8	6.4	7.7	13.8	7.2	8.7	11.6	9.0	10.6	12.2	10.8	11.6

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	---	---	---	14.8	14.0	14.4	10.7	10.4	10.5	9.4	8.9	9.1
2	---	---	---	14.6	12.7	13.3	10.9	10.4	10.7	9.5	9.0	9.2
3	---	---	---	13.2	12.6	12.9	10.9	10.7	10.8	9.4	8.9	9.2
4	---	---	---	---	---	---	10.8	10.6	10.7	9.4	8.8	9.2
5	---	---	---	---	---	---	10.8	10.4	10.6	9.5	9.2	9.4
6	---	---	---	---	---	---	10.6	10.1	10.4	9.5	8.8	9.1
7	---	---	---	---	---	---	10.4	9.9	10.2	9.2	8.6	8.9
8	---	---	---	---	---	---	10.2	9.9	10.1	9.1	8.6	8.8
9	---	---	---	---	---	---	10.4	9.9	10.2	9.2	8.4	8.8
10	---	---	---	---	---	---	10.2	9.8	10.0	9.0	8.2	8.5
11	---	---	---	---	---	---	10.0	9.2	9.6	8.7	7.9	8.3
12	---	---	---	---	---	---	9.5	9.2	9.4	8.7	8.0	8.4
13	---	---	---	---	---	---	9.5	9.1	9.3	8.8	8.3	8.6
14	---	---	---	---	---	---	9.8	9.2	9.6	9.0	8.5	8.8
15	---	---	---	---	---	---	10.0	9.5	9.8	8.7	8.4	8.6
16	---	---	---	---	---	---	10.3	9.7	10.0	8.7	8.1	8.4
17	---	---	---	---	---	---	10.3	9.8	10.1	8.2	7.6	8.0
18	---	---	---	---	---	---	10.0	9.6	9.8	7.9	7.0	7.6
19	---	---	---	---	---	---	10.0	9.6	9.8	7.4	6.4	7.1
20	---	---	---	---	---	---	9.8	9.4	9.6	7.0	6.1	6.7
21	---	---	---	10.8	9.9	10.4	9.5	9.2	9.4	7.5	6.0	6.7
22	---	---	---	10.4	9.2	9.8	9.6	9.2	9.3	7.5	6.2	6.9
23	14.8	13.8	14.3	10.0	9.0	9.5	9.6	9.0	9.2	7.5	6.2	6.9
24	15.0	14.1	14.5	9.4	8.7	9.1	9.4	8.7	9.0	7.2	6.1	6.7
25	14.9	14.1	14.5	9.2	8.6	9.0	9.3	8.6	9.0	7.1	6.0	6.6
26	14.8	14.0	14.5	9.4	8.9	9.2	9.4	8.8	9.1	7.0	5.8	6.4
27	15.2	14.0	14.4	9.4	8.8	9.1	9.6	9.2	9.4	7.0	5.9	6.6
28	14.8	14.0	14.4	9.1	8.8	9.0	9.7	9.2	9.4	7.0	6.1	6.6
29	---	---	---	9.2	8.8	9.0	9.6	9.2	9.4	7.0	6.2	6.6
30	---	---	---	9.3	9.0	9.2	9.4	9.0	9.2	7.2	6.1	6.7
31	---	---	---	10.6	10.4	10.5	---	---	---	7.3	6.2	6.7
MONTH	15.2	13.8	14.4	14.8	8.6	10.3	10.9	8.6	9.8	9.5	5.8	7.9

01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE--Continued

DISSOLVED OXYGEN (DO), MG/L, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	7.4	6.2	6.8	6.7	5.5	6.0	6.2	5.6	5.8	6.0	5.3	5.6
2	7.5	6.5	7.0	6.3	5.2	5.7	6.0	5.4	5.6	6.0	5.3	5.6
3	7.3	6.4	6.9	6.2	5.1	5.7	6.0	5.3	5.6	5.9	5.3	5.5
4	8.0	6.2	7.0	6.4	5.4	5.9	5.9	5.4	5.6	6.1	5.3	5.6
5	7.6	6.8	7.2	7.0	5.8	6.1	6.0	2.3	5.5	6.4	5.4	5.8
6	7.5	6.4	7.1	6.9	5.6	5.9	6.0	5.3	5.6	6.3	5.4	5.8
7	7.2	6.5	6.8	6.5	5.5	5.9	5.9	5.4	5.7	6.1	5.7	5.8
8	7.2	6.2	6.8	6.6	5.5	5.9	5.9	5.4	5.7	6.2	5.8	6.0
9	7.1	6.0	6.5	6.4	5.5	5.8	6.0	5.4	5.6	6.5	5.8	6.1
10	6.9	6.0	6.5	6.0	5.4	5.7	6.0	5.4	5.6	6.9	6.1	6.5
11	7.0	6.0	6.5	6.6	5.5	6.0	5.9	5.4	5.6	6.9	6.3	6.6
12	7.1	6.0	6.6	7.0	6.1	6.4	5.7	5.2	5.5	6.9	6.4	6.6
13	7.2	6.1	6.6	7.0	6.2	6.6	5.6	5.0	5.3	7.2	6.6	6.9
14	7.2	6.2	6.8	6.8	6.2	6.5	5.4	4.8	5.1	7.4	6.8	7.0
15	7.5	6.5	7.0	6.7	6.0	6.3	5.4	4.5	5.0	7.1	6.6	7.0
16	7.8	6.6	7.2	6.4	5.6	6.0	5.5	4.6	5.1	7.0	6.5	6.7
17	7.4	6.7	7.1	6.1	5.3	5.7	5.5	4.7	5.1	7.0	6.5	6.7
18	7.5	6.4	6.9	6.0	4.8	5.4	5.5	4.6	5.1	7.2	6.4	6.6
19	7.1	6.2	6.7	5.7	4.6	5.2	5.7	4.6	5.0	6.8	6.3	6.5
20	7.2	5.9	6.6	5.6	4.6	5.2	5.5	4.5	5.1	6.9	6.2	6.5
21	7.4	6.0	6.5	5.8	4.6	5.2	6.2	5.2	5.6	6.9	6.2	6.4
22	7.2	5.6	6.3	5.5	4.5	5.0	6.2	5.2	5.6	6.8	6.1	6.4
23	7.1	5.5	6.2	5.4	4.3	4.8	6.0	5.2	5.5	7.1	6.6	6.8
24	7.1	5.5	6.3	5.6	4.5	5.0	5.9	5.2	5.4	7.1	6.6	6.8
25	7.4	5.8	6.4	5.8	4.9	5.4	5.9	5.2	5.5	7.2	6.5	6.8
26	6.7	5.8	6.2	6.0	5.2	5.6	5.8	5.4	5.6	7.8	6.9	7.3
27	6.4	5.4	6.0	5.9	5.4	5.6	6.2	5.2	5.6	7.7	6.9	7.3
28	6.3	5.5	5.9	5.8	1.6	5.5	6.3	5.5	5.9	7.6	7.0	7.3
29	6.6	5.6	6.0	6.0	5.2	5.5	6.2	5.4	5.8	8.3	7.4	7.7
30	6.5	5.4	6.0	6.2	5.4	5.7	6.2	5.5	5.8	8.3	7.5	7.8
31	---	---	---	6.3	5.6	5.9	5.9	5.3	5.6	---	---	---
MONTH	8.0	5.4	6.6	7.0	1.6	5.7	6.3	2.3	5.5	8.3	5.3	6.5

DELAWARE RIVER BASIN

01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	19600	11200	14700	18200	11000	14100	19600	12000	15000	13400	4800	8140
2	19400	11200	15000	20400	11500	14900	19400	11200	15000	9640	5120	7690
3	20800	11600	15400	18800	11000	14300	19200	11400	14000	---	---	---
4	21800	11900	16300	20200	12000	15000	18600	11600	14900	---	---	---
5	20600	12000	15800	20800	11600	16000	16400	10400	12700	---	---	---
6	20400	12400	16300	20000	11900	15600	16200	10000	12300	---	---	---
7	19400	12000	15100	18800	12400	15300	15000	9520	11600	---	---	---
8	19400	11800	14600	17600	11200	14000	15600	9240	12100	---	---	---
9	20300	11200	14400	17800	11000	14300	14000	8720	11000	---	---	---
10	18100	11000	13600	16600	10800	13100	11900	6760	9000	---	---	---
11	20000	10200	13500	17000	11000	13600	13600	5200	7830	---	---	---
12	21500	11200	15400	15500	11100	12900	11800	4560	6840	---	---	---
13	19900	11600	14900	18600	11400	14700	13800	4560	7470	---	---	---
14	20000	11800	14700	17600	11400	14100	8560	3240	5260	---	---	---
15	19000	11200	14400	35600	10700	13200	11600	3360	5920	---	---	---
16	20000	11500	14900	16800	10200	12800	10000	2760	4830	---	---	---
17	21100	12000	15100	18600	10800	14100	10400	2400	5250	4200	360	1510
18	20200	11800	15800	15800	10400	13000	8440	1800	3410	3120	360	802
19	18000	11600	14800	15200	10000	11900	10400	1600	4210	---	---	---
20	19000	11200	13900	16200	10200	12200	15400	1600	7550	---	---	---
21	19600	11500	15000	17600	10400	13100	16200	4800	10500	---	---	---
22	16200	10800	13200	18200	9400	13200	12000	3560	7270	---	---	---
23	17800	9560	13000	16600	10600	13600	14000	3400	8670	---	---	---
24	20400	9960	13800	17200	11000	13800	13000	3760	8620	---	---	---
25	20800	11600	16500	16800	10400	13000	16000	4400	9300	---	---	---
26	18400	9800	14000	18400	9920	13900	7960	2600	4590	400	100	216
27	17400	8600	11900	17600	11000	13800	7560	2160	4310	200	100	136
28	19600	8440	13100	---	---	---	9800	2000	4310	160	100	133
29	19200	10200	13900	---	---	---	13200	2160	6310	140	100	113
30	18800	11000	14300	19800	12300	15600	14600	3560	7800	200	100	123
31	19600	11200	14700	---	---	---	14200	4000	7740	800	100	155
MONTH	21800	8440	14600	35600	9400	13900	19600	1600	8570	13400	100	1900

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	200	100	159	---	---	---	---	---	---	4320	1000	1890
2	200	100	162	440	160	332	---	---	---	3800	1000	1800
3	---	---	---	440	160	288	---	---	---	3800	960	1880
4	---	---	---	840	320	528	---	---	---	4040	960	1910
5	---	---	---	560	400	447	---	---	---	5160	960	2390
6	---	---	---	---	---	---	---	---	---	7120	1200	3600
7	---	---	---	720	160	446	---	---	---	6000	1560	3300
8	---	---	---	440	160	262	---	---	---	6440	1400	3000
9	---	---	---	400	100	224	---	---	---	6200	1360	3010
10	---	---	---	960	160	245	---	---	---	5400	1240	2680
11	---	---	---	400	100	203	---	---	---	6440	1400	2960
12	---	---	---	400	100	193	---	---	---	7600	1640	3480
13	---	---	---	800	100	185	---	---	---	7760	1800	3680
14	---	---	---	840	100	188	---	---	---	6800	1920	3310
15	---	---	---	140	100	117	---	---	---	7120	1960	3500
16	---	---	---	1200	100	168	---	---	---	7120	2000	3590
17	---	---	---	1360	100	235	---	---	---	6800	2000	3680
18	---	---	---	2200	100	303	4400	1000	1860	8160	2560	4630
19	---	---	---	3600	100	773	6040	1160	2490	9400	2800	5510
20	---	---	---	3400	140	840	6160	1120	2810	8840	3000	5390
21	---	---	---	3920	160	1140	6840	1160	3020	9120	2960	5400
22	---	---	---	5520	160	1570	6720	1360	3110	9000	3000	4990
23	---	---	---	4200	160	1230	6400	1200	2850	9360	3120	5200
24	---	---	---	---	---	---	6200	1240	2840	7160	2840	4590
25	---	---	---	---	---	---	6200	1400	2930	6600	1800	3300
26	---	---	---	---	---	---	7400	1600	3300	5800	840	2320
27	---	---	---	---	---	---	8160	1760	3600	3000	1360	1830
28	---	---	---	---	---	---	6200	1560	2860	---	---	---
29	---	---	---	---	---	---	5640	1200	2520	---	---	---
30	---	---	---	---	---	---	5800	1120	2370	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	200	100	161	5520	100	472	8160	1000	2810	9400	840	3440

DELAWARE RIVER BASIN

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01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	440	400	410	7640	3200	5140	13100	6400	8760	15000	6960	9840
2	1600	400	576	7640	3200	4740	---	---	---	14800	7360	10100
3	2720	400	1030	9000	2560	4840	---	---	---	14200	6800	9330
4	---	---	---	11400	2560	5850	---	---	---	14800	6760	9240
5	---	---	---	14000	3600	7630	---	---	---	13600	6960	9520
6	---	---	---	15000	4400	8500	---	---	---	14700	5200	9630
7	5520	1000	2250	16400	4560	8370	---	---	---	11600	4560	6930
8	---	---	---	16200	5600	9200	---	---	---	9400	4360	6340
9	---	---	---	16600	6360	9490	14000	7240	9680	11600	4040	6710
10	---	---	---	16000	6560	9560	16700	7760	11400	10400	4000	6460
11	---	---	---	16000	6760	10200	14600	7600	10400	9600	4000	5890
12	---	---	---	16800	7240	10900	15500	8040	11400	9600	3920	5860
13	3920	1200	2060	15600	7600	10800	17800	8720	13300	9600	4000	6220
14	6040	1400	2960	16200	8000	11100	15600	8560	11700	9520	4440	6770
15	---	---	---	14600	8000	11000	15000	7600	9970	8360	3200	4790
16	---	---	---	14700	7760	10900	18000	7760	11500	9760	3160	5710
17	---	---	---	14400	7520	10300	18000	8200	12500	12000	3800	6890
18	---	---	---	13600	7400	9870	18200	9400	12900	12600	4200	7130
19	---	---	---	14000	6800	9540	17400	8800	11800	13200	3800	6980
20	---	---	---	13600	6800	9160	18200	8560	12100	13400	4560	8010
21	---	---	---	13800	6800	9090	18200	9160	12300	14200	5360	8700
22	8440	2440	4600	13600	6560	8990	17200	8960	12200	12600	3120	6730
23	8000	2400	4050	13800	6560	8950	17000	9360	12100	10200	3400	5810
24	8000	2320	3900	13600	6360	8590	16400	9400	12200	9920	3800	6950
25	8040	2320	4260	12600	6200	8410	15600	9240	11600	10300	3400	6470
26	9800	2600	5140	13100	5920	8500	14600	8200	10800	9400	3200	5640
27	9160	2960	4870	12800	5760	8180	14400	7960	10900	9160	2960	5300
28	8560	2960	4860	13200	5800	8760	14000	7240	9720	---	---	---
29	9120	3200	5180	13000	6000	8590	14000	7520	10000	---	---	---
30	8600	3520	5420	12000	6040	8830	13600	6960	9450	---	---	---
31	---	---	---	13000	6160	9080	14000	6720	9300	---	---	---
MONTH	9800	400	3440	16800	2560	8810	18200	6400	11200	15000	2960	7180

PH (UNITS), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	7.5	7.3	7.4	7.9	7.7	7.8	7.7	7.5	7.6	7.7	7.3	7.5
2	7.5	7.3	7.4	7.9	7.7	7.8	7.7	7.4	7.5	7.6	7.3	7.5
3	7.5	7.3	7.4	7.9	7.6	7.8	7.6	7.4	7.5	---	---	---
4	7.6	7.3	7.4	7.9	7.7	7.8	7.6	7.4	7.5	---	---	---
5	7.5	7.2	7.4	7.9	7.7	7.8	7.6	7.4	7.5	---	---	---
6	7.5	7.2	7.4	7.9	7.7	7.8	7.6	7.4	7.5	---	---	---
7	7.5	7.3	7.4	7.9	7.7	7.8	7.5	7.3	7.4	---	---	---
8	7.5	7.3	7.4	7.8	7.4	7.6	7.5	7.3	7.4	---	---	---
9	7.6	7.3	7.4	7.6	7.4	7.5	7.5	7.3	7.4	---	---	---
10	7.5	7.3	7.4	7.6	7.4	7.5	7.4	7.2	7.3	---	---	---
11	7.6	7.2	7.4	7.6	7.4	7.5	7.5	7.2	7.3	---	---	---
12	7.6	7.3	7.4	7.5	7.4	7.4	7.5	7.1	7.3	---	---	---
13	7.5	7.3	7.4	7.6	7.4	7.5	7.5	7.1	7.2	---	---	---
14	7.5	7.3	7.4	7.6	7.4	7.5	7.3	7.0	7.2	---	---	---
15	7.5	7.3	7.4	7.5	7.3	7.5	7.4	7.1	7.2	---	---	---
16	7.6	7.3	7.4	7.6	7.4	7.5	7.4	7.1	7.2	---	---	---
17	7.6	7.3	7.4	7.7	7.4	7.5	7.4	7.2	7.3	7.2	6.8	7.0
18	7.6	7.3	7.4	7.6	7.5	7.6	7.5	7.1	7.3	7.2	6.9	7.0
19	7.5	7.3	7.4	7.6	7.5	7.5	7.6	7.2	7.3	---	---	---
20	7.5	7.3	7.4	7.7	7.5	7.6	7.7	7.2	7.4	---	---	---
21	7.5	7.3	7.4	7.7	7.5	7.6	7.7	7.4	7.5	---	---	---
22	7.5	7.3	7.4	7.7	7.5	7.6	7.6	7.3	7.4	---	---	---
23	7.5	7.3	7.4	7.7	7.5	7.6	7.7	7.3	7.5	---	---	---
24	7.7	7.3	7.4	7.7	7.5	7.6	7.7	7.3	7.5	---	---	---
25	7.6	7.4	7.5	7.7	7.6	7.6	7.7	7.3	7.5	---	---	---
26	7.6	7.4	7.5	7.8	7.6	7.7	7.5	7.2	7.4	6.8	6.6	6.7
27	7.4	7.3	7.4	7.7	7.6	7.6	7.5	7.2	7.4	6.6	6.5	6.5
28	---	---	---	---	---	---	7.6	7.2	7.4	6.5	6.5	6.5
29	---	---	---	---	---	---	7.7	7.2	7.5	6.6	6.5	6.5
30	8.0	7.8	7.9	7.8	7.5	7.6	7.7	7.3	7.5	6.7	6.5	6.6
31	7.9	7.8	7.9	---	---	---	7.7	7.3	7.5	6.8	6.6	6.6
MONTH	8.0	7.2	7.4	7.9	7.3	7.6	7.7	7.0	7.4	7.7	6.5	6.8

DELAWARE RIVER BASIN

01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE--Continued

PH (UNITS), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	6.7	6.5	6.6	---	---	---	---	---	---	7.0	6.7	6.8
2	6.7	6.6	6.6	6.5	6.5	6.5	---	---	---	7.0	6.7	6.8
3	---	---	---	6.6	6.5	6.5	---	---	---	7.0	6.7	6.8
4	---	---	---	6.7	6.5	6.6	---	---	---	7.0	6.7	6.8
5	---	---	---	6.6	6.5	6.5	---	---	---	7.1	6.7	6.8
6	---	---	---	---	---	---	---	---	---	7.2	6.7	6.9
7	---	---	---	6.6	6.4	6.5	---	---	---	7.1	6.8	6.9
8	---	---	---	6.5	6.4	6.4	---	---	---	7.2	6.8	6.9
9	---	---	---	6.5	6.4	6.4	---	---	---	7.1	6.8	7.0
10	---	---	---	6.6	6.4	6.5	---	---	---	7.1	6.8	6.9
11	---	---	---	6.7	6.5	6.6	---	---	---	7.2	6.8	7.0
12	---	---	---	6.8	6.6	6.7	---	---	---	7.2	6.9	7.0
13	---	---	---	6.9	6.6	6.7	---	---	---	7.2	6.9	7.0
14	---	---	---	6.9	6.6	6.7	---	---	---	7.1	6.8	6.9
15	---	---	---	6.8	6.5	6.7	---	---	---	7.1	6.8	7.0
16	---	---	---	6.9	6.5	6.6	---	---	---	7.1	6.8	7.0
17	---	---	---	7.0	6.5	6.6	---	---	---	7.2	6.9	7.0
18	---	---	---	7.1	6.6	6.7	7.1	6.9	7.0	7.2	6.9	7.1
19	---	---	---	7.2	6.6	6.8	7.2	6.9	7.0	7.4	7.0	7.2
20	---	---	---	7.1	6.6	6.8	7.3	6.9	7.1	7.3	7.0	7.2
21	---	---	---	7.2	6.6	6.9	7.3	6.9	7.0	7.3	7.0	7.1
22	---	---	---	7.2	6.7	6.9	7.2	6.9	7.0	7.3	6.9	7.1
23	---	---	---	7.1	6.6	6.8	7.2	6.8	7.0	7.3	7.0	7.1
24	---	---	---	---	---	---	7.1	6.8	6.9	7.2	6.9	7.1
25	---	---	---	---	---	---	7.1	6.8	6.9	7.2	6.8	7.0
26	---	---	---	---	---	---	7.2	6.8	7.0	7.1	6.7	6.9
27	---	---	---	---	---	---	7.2	6.9	7.0	6.9	6.7	6.8
28	---	---	---	---	---	---	7.1	6.8	6.9	---	---	---
29	---	---	---	---	---	---	7.1	6.8	6.9	---	---	---
30	---	---	---	---	---	---	7.1	6.7	6.8	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	6.7	6.5	6.6	7.2	6.4	6.6	7.3	6.7	7.0	7.4	6.7	7.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	6.5	6.4	6.5	7.3	7.1	7.2	7.3	7.1	7.2	7.4	7.2	7.2
2	6.6	6.4	6.5	7.3	7.0	7.2	---	---	---	7.3	7.2	7.2
3	6.7	6.4	6.5	7.4	7.0	7.2	---	---	---	7.3	7.2	7.2
4	---	---	---	7.5	7.0	7.2	---	---	---	7.3	7.1	7.2
5	---	---	---	7.6	7.1	7.3	---	---	---	7.5	7.1	7.2
6	---	---	---	7.6	7.2	7.4	---	---	---	7.5	7.2	7.3
7	6.9	6.5	6.6	7.6	7.1	7.3	---	---	---	7.2	7.0	7.2
8	---	---	---	7.6	7.1	7.4	---	---	---	7.2	7.0	7.1
9	---	---	---	7.6	7.2	7.3	7.3	7.1	7.2	7.3	7.0	7.1
10	---	---	---	7.6	7.2	7.3	7.4	7.1	7.3	7.2	7.0	7.1
11	---	---	---	7.5	7.2	7.3	7.4	7.1	7.2	7.2	6.9	7.0
12	---	---	---	7.5	7.1	7.3	7.5	7.2	7.3	7.2	6.9	7.0
13	6.9	6.5	6.7	7.5	7.1	7.3	7.5	7.3	7.4	7.2	6.9	7.0
14	7.0	6.6	6.8	7.4	7.1	7.2	7.4	7.3	7.4	7.2	7.0	7.1
15	---	---	---	7.4	7.1	7.2	7.4	7.3	7.3	7.2	7.0	7.1
16	---	---	---	7.4	7.1	7.2	7.6	7.3	7.4	7.3	7.0	7.1
17	---	---	---	7.3	7.1	7.2	7.6	7.3	7.5	7.3	7.0	7.1
18	---	---	---	7.3	7.1	7.2	7.5	7.4	7.5	7.4	7.0	7.2
19	---	---	---	7.3	7.0	7.1	7.5	7.3	7.4	7.4	7.1	7.2
20	---	---	---	7.3	7.0	7.1	7.5	7.3	7.4	7.4	7.1	7.3
21	---	---	---	7.3	7.0	7.1	7.5	7.3	7.3	7.4	7.1	7.3
22	7.2	6.8	7.0	7.3	7.0	7.1	7.4	7.2	7.3	7.4	7.1	7.2
23	7.2	6.8	7.0	7.3	7.0	7.1	7.4	7.2	7.3	7.4	7.1	7.2
24	7.2	6.8	7.0	7.3	7.0	7.1	7.5	7.3	7.4	7.4	7.1	7.3
25	7.2	6.8	7.0	7.2	7.0	7.1	7.4	7.3	7.4	7.3	7.0	7.2
26	7.3	6.9	7.1	7.3	7.0	7.1	7.5	7.3	7.3	7.3	7.0	7.1
27	7.3	6.9	7.1	7.3	7.0	7.1	7.4	7.3	7.3	7.3	6.9	7.1
28	7.3	7.0	7.1	7.3	7.0	7.2	7.4	7.3	7.3	---	---	---
29	7.3	7.0	7.1	7.3	7.1	7.2	7.3	7.2	7.3	---	---	---
30	7.3	7.0	7.2	7.4	7.1	7.2	7.3	7.2	7.2	---	---	---
31	---	---	---	7.4	7.1	7.2	7.4	7.2	7.2	---	---	---
MONTH	7.3	6.4	6.9	7.6	7.0	7.2	7.6	7.1	7.3	7.5	6.9	7.2

01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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

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

DELAWARE RIVER BASIN

01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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

DISSOLVED OXYGEN (DO), MG/L, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	8.3	7.5	7.7	8.6	8.1	8.4	9.7	9.4	9.6	11.9	11.2	11.5
2	8.0	7.5	7.7	8.6	8.0	8.3	9.7	9.3	9.6	11.7	11.3	11.6
3	8.5	7.6	7.8	8.4	8.0	8.2	9.8	9.4	9.6	---	---	---
4	8.0	7.5	7.8	8.5	8.0	8.3	9.8	9.5	9.6	---	---	---
5	7.8	7.3	7.5	8.5	8.0	8.3	9.7	9.3	9.5	---	---	---
6	7.6	6.9	7.2	8.4	8.0	8.2	9.7	9.2	9.5	---	---	---
7	7.4	7.0	7.2	8.3	7.8	8.1	9.6	9.1	9.3	---	---	---
8	7.7	7.2	7.4	8.5	7.8	8.1	9.5	9.0	9.3	---	---	---
9	7.9	7.4	7.6	8.4	8.0	8.2	9.5	8.9	9.2	---	---	---
10	7.9	7.5	7.7	8.4	7.9	8.1	9.6	8.8	9.3	---	---	---
11	8.0	7.4	7.6	8.4	7.9	8.2	9.8	9.0	9.3	---	---	---
12	8.0	7.6	7.8	8.2	7.8	8.0	10.1	8.6	9.4	---	---	---
13	8.0	7.5	7.7	8.5	8.2	8.3	10.4	9.2	9.8	---	---	---
14	7.9	7.5	7.7	8.5	8.0	8.3	10.6	9.4	10.1	---	---	---
15	8.0	7.5	7.8	8.4	8.0	8.2	10.7	10.0	10.3	---	---	---
16	8.2	7.6	7.9	8.4	8.1	8.3	10.9	10.1	10.5	---	---	---
17	8.4	8.0	8.1	8.7	8.3	8.5	11.4	10.4	10.9	13.0	12.7	12.8
18	8.4	8.0	8.1	8.7	8.5	8.6	11.8	10.8	11.3	13.5	12.6	12.9
19	8.2	7.9	8.1	8.8	8.4	8.6	11.8	11.1	11.4	---	---	---
20	8.3	7.9	8.1	8.9	8.6	8.7	11.6	11.2	11.4	---	---	---
21	8.3	7.9	8.1	9.0	8.6	8.8	11.6	11.4	11.4	---	---	---
22	8.3	7.9	8.1	9.1	8.8	9.0	11.6	11.4	11.5	---	---	---
23	8.3	7.8	8.0	9.3	8.9	9.1	11.6	11.4	11.5	---	---	---
24	8.8	8.0	8.4	9.2	9.0	9.1	11.7	11.3	11.5	---	---	---
25	8.6	8.3	8.5	9.3	9.0	9.2	11.6	11.3	11.5	---	---	---
26	8.5	8.2	8.4	9.6	9.2	9.4	11.6	11.2	11.4	13.0	12.6	12.8
27	8.7	8.2	8.4	9.6	9.4	9.5	11.6	11.1	11.4	12.7	11.6	12.1
28	8.7	8.2	8.4	---	---	---	11.9	11.3	11.7	11.7	11.4	11.5
29	8.7	8.2	8.4	---	---	---	12.1	11.5	11.8	11.8	11.4	11.6
30	8.8	8.3	8.6	9.7	9.4	9.6	12.1	11.6	11.8	11.8	11.5	11.7
31	8.8	8.4	8.5	---	---	---	12.0	11.5	11.7	11.8	11.4	11.6
MONTH	8.8	6.9	8.0	9.7	7.8	8.6	12.1	8.6	10.5	13.5	11.2	12.0

DELAWARE RIVER BASIN

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01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE--Continued

DISSOLVED OXYGEN (DO), MG/L, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	12.0	11.5	11.8	---	---	---	---	---	---	7.6	7.1	7.4
2	12.2	11.7	11.9	10.8	10.5	10.7	---	---	---	7.7	7.0	7.4
3	---	---	---	11.0	10.7	10.8	---	---	---	7.7	7.1	7.3
4	---	---	---	10.9	10.5	10.8	---	---	---	7.4	6.8	7.2
5	---	---	---	10.7	10.6	10.6	---	---	---	8.0	7.0	7.5
6	---	---	---	---	---	---	---	---	---	8.2	7.2	7.6
7	---	---	---	11.1	10.6	10.9	---	---	---	8.1	7.3	7.6
8	---	---	---	10.9	10.2	10.5	---	---	---	8.4	7.3	7.7
9	---	---	---	10.6	10.1	10.3	---	---	---	8.4	7.4	7.8
10	---	---	---	10.5	10.2	10.3	---	---	---	8.6	7.4	7.8
11	---	---	---	11.0	10.2	10.6	---	---	---	8.4	7.4	7.9
12	---	---	---	11.6	10.7	11.1	---	---	---	8.0	7.6	7.8
13	---	---	---	11.7	11.0	11.3	---	---	---	7.8	7.2	7.5
14	---	---	---	11.6	11.0	11.3	---	---	---	7.4	6.8	7.2
15	---	---	---	11.8	11.2	11.5	---	---	---	7.3	6.7	7.0
16	---	---	---	11.7	11.2	11.5	---	---	---	7.4	6.6	7.0
17	---	---	---	11.5	11.2	11.4	---	---	---	7.8	7.0	7.4
18	---	---	---	11.3	11.1	11.2	9.9	9.3	9.6	8.1	7.2	7.7
19	---	---	---	11.3	10.9	11.1	10.0	9.4	9.7	8.2	7.8	8.0
20	---	---	---	11.1	10.8	11.0	10.0	9.3	9.6	8.0	7.5	7.8
21	---	---	---	11.1	10.7	10.9	9.8	9.0	9.4	7.8	7.3	7.6
22	---	---	---	11.2	10.6	10.8	9.6	8.8	9.2	7.8	7.0	7.4
23	---	---	---	10.8	10.4	10.5	9.2	8.4	8.8	7.8	7.0	7.4
24	---	---	---	---	---	---	8.8	8.1	8.4	7.8	6.9	7.4
25	---	---	---	---	---	---	8.8	8.0	8.3	7.5	6.5	7.2
26	---	---	---	---	---	---	9.1	8.0	8.5	7.4	5.8	6.8
27	---	---	---	---	---	---	9.1	8.1	8.5	7.0	6.6	---
28	---	---	---	---	---	---	8.7	7.6	8.1	---	---	---
29	---	---	---	---	---	---	8.3	7.5	7.9	---	---	---
30	---	---	---	---	---	---	8.1	7.2	7.6	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	12.2	11.5	11.9	11.8	10.1	10.9	10.0	7.2	8.7	8.6	5.8	7.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	5.0	4.4	4.7	7.3	6.9	7.1	6.0	5.7	5.8	7.6	6.2	6.5
2	4.9	4.2	4.5	7.2	6.8	7.0	---	---	---	6.8	6.1	6.4
3	4.9	4.4	4.6	7.4	6.8	7.1	---	---	---	6.5	6.0	6.2
4	---	---	---	7.5	6.9	7.2	---	---	---	6.8	5.8	6.0
5	---	---	---	7.6	6.9	7.2	---	---	---	7.6	5.6	6.1
6	---	---	---	7.9	7.1	7.4	---	---	---	7.0	6.1	6.5
7	5.0	4.4	4.8	7.8	6.9	7.3	---	---	---	6.6	5.6	6.0
8	---	---	---	8.0	6.8	7.2	---	---	---	6.3	5.4	5.8
9	---	---	---	7.5	6.8	7.1	6.3	5.4	5.8	6.6	5.7	6.1
10	---	---	---	7.6	6.8	7.1	6.8	5.5	6.0	6.3	5.4	5.8
11	---	---	---	7.4	6.6	7.0	7.3	5.8	6.4	6.0	5.3	5.6
12	---	---	---	7.1	6.3	6.8	8.1	6.5	7.2	6.2	5.4	5.9
13	6.0	5.2	5.7	6.9	6.0	6.5	7.9	7.2	7.5	6.4	5.6	6.0
14	6.0	5.2	5.6	6.6	5.7	6.3	7.7	7.4	7.5	7.0	6.0	6.5
15	---	---	---	6.6	5.6	6.1	7.8	7.3	7.6	7.2	6.2	6.7
16	---	---	---	6.5	5.6	6.0	7.9	6.9	7.5	7.0	6.4	6.7
17	---	---	---	6.3	5.5	5.9	8.0	7.0	7.4	7.0	6.3	6.6
18	---	---	---	6.2	5.4	5.8	7.6	7.1	7.3	6.9	6.2	6.6
19	---	---	---	6.2	5.2	5.7	7.3	6.8	7.0	7.2	6.3	6.7
20	---	---	---	6.0	5.0	5.5	7.6	6.6	6.9	7.4	6.7	7.0
21	---	---	---	5.8	5.1	5.4	7.2	6.6	6.8	7.3	6.9	7.1
22	6.7	6.2	6.5	5.7	4.7	5.2	7.4	6.4	6.7	7.4	6.8	7.1
23	6.7	6.1	6.4	5.6	4.7	5.2	7.4	6.5	6.9	7.7	7.0	7.4
24	6.7	6.1	6.5	5.8	4.9	5.3	7.4	6.8	7.1	7.8	7.2	7.5
25	7.0	6.3	6.7	6.0	5.0	5.4	7.3	6.8	7.0	7.6	6.8	7.2
26	7.1	6.5	6.9	5.7	5.1	5.4	7.6	6.5	6.8	7.0	6.4	6.7
27	7.2	6.8	7.0	5.9	5.2	5.5	7.3	6.4	6.8	6.8	6.3	6.6
28	7.4	6.8	7.1	5.9	5.3	5.6	7.0	6.5	6.6	---	---	---
29	7.3	6.8	7.1	6.1	5.3	5.6	7.0	6.4	6.6	---	---	---
30	7.4	7.0	7.2	6.3	5.5	5.9	7.0	6.3	6.5	---	---	---
31	---	---	---	6.3	5.5	5.9	7.3	6.2	6.5	---	---	---
MONTH	7.4	4.2	6.1	8.0	4.7	6.3	8.1	5.4	6.8	7.8	5.3	6.5

DELAWARE RIVER BASIN

01483200 BLACKBIRD CREEK AT BLACKBIRD, DE

LOCATION.--Lat 39°21'58", long 75°40'10", New Castle County, Hydrologic Unit 02040205, on right bank 15 ft (5 m) downstream from highway bridge, 0.5 mi (0.8 km) upstream from Barlow Branch, 0.6 mi (1.0 km) southwest of Blackbird, 5.6 mi (9.0 km) northwest of Smyrna, and 13.8 mi (22.2 km) upstream from mouth.

DRAINAGE AREA.--3.85 mi² (9.97 km²).

PERIOD OF RECORD.--Annual maximum, water years 1952-56, and occasional low-flow measurements, water years 1952-53, 1955-56. October 1956 to current year.

GAGE.--Water-stage recorder. Concrete control since May 23, 1968. Datum of gage is 18.89 ft (5.758 m) National Geodetic Vertical Datum of 1929. Mar. 5, 1951, to Oct. 16, 1956, nonrecording gage and crest-stage gage at site 15 ft (5 m) upstream at same datum.

REMARKS.--Water-discharge records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--23 years, 4.85 ft³/s (0.137 m³/s), 17.11 in/yr (435 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 712 ft³/s (20.2 m³/s) June 22, 1972, gage height, 5.04 ft (1.536 m), from rating curve extended above 200 ft³/s (5.66 m³/s) on basis of Type III culvert measurement of peak flow; no flow at times during 1964, 1965, 1966, 1969.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 50 ft³/s (1.4 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	0945	171 4.84	3.01 0.917	July 24	0515	86 2.44	2.49 0.759
Feb. 26	0745	*256 7.25	3.45 1.052				

Minimum discharge, 0.56 ft³/s (0.016 m³/s) Aug. 9, 10, gage height, 0.82 ft (0.250 m).

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	1.1	1.2	2.4	7.1	8.3	22	7.4	5.3	9.4	11	1.1	1.9
2	1.7	1.2	1.8	19	7.2	18	8.6	4.9	5.1	3.7	2.8	1.7
3	1.2	1.2	1.8	23	6.8	15	9.8	4.8	8.0	2.2	12	1.6
4	1.3	1.4	11	6.9	7.1	14	10	4.7	23	2.2	2.9	1.5
5	1.6	1.7	15	5.1	6.3	13	11	4.9	9.4	3.1	1.6	2.5
6	1.4	1.4	7.5	5.6	5.2	24	7.4	4.0	6.3	1.8	1.1	33
7	1.1	1.4	3.4	11	5.8	28	6.1	3.8	4.8	1.5	.79	7.3
8	.99	1.3	3.1	35	6.5	16	5.8	3.5	4.1	1.4	.69	2.6
9	.94	1.3	8.6	16	6.2	13	9.8	3.3	3.4	1.4	.63	2.0
10	.86	1.2	12	7.4	5.7	11	14	3.1	3.5	1.3	.60	1.9
11	.94	1.3	4.8	6.3	5.1	23	7.5	2.9	16	1.4	5.2	1.6
12	.94	1.4	3.7	5.7	5.0	18	7.2	3.2	12	1.3	19	1.5
13	.90	1.3	3.4	7.5	5.1	12	7.2	4.5	4.4	1.2	12	1.7
14	.90	1.3	3.1	12	5.8	12	13	7.3	3.3	1.3	2.8	1.7
15	.77	1.3	2.9	8.0	5.9	12	10	4.3	2.8	1.3	1.5	1.8
16	1.1	1.7	2.9	6.2	5.9	9.5	7.6	3.5	2.6	1.1	1.3	1.5
17	2.7	1.9	3.3	6.0	5.2	9.0	6.9	2.9	2.9	1.1	1.1	1.4
18	1.5	2.7	2.8	5.8	5.0	8.3	6.0	3.4	3.0	1.8	1.2	1.4
19	1.4	1.8	2.7	4.2	4.9	7.8	5.4	5.3	2.4	2.7	2.4	1.4
20	1.2	1.5	2.8	9.0	4.4	7.7	5.2	3.6	2.1	1.4	1.5	1.2
21	1.2	1.4	6.6	103	5.3	7.4	5.1	3.6	1.9	1.6	1.3	1.5
22	1.1	1.4	4.0	29	8.4	7.2	5.1	3.5	2.1	1.4	1.5	22
23	1.1	1.4	3.1	14	11	7.1	5.1	3.5	2.2	6.9	1.1	16
24	1.1	1.7	5.4	21	29	13	4.9	4.3	4.9	40	1.1	4.7
25	1.2	1.5	21	31	120	16	5.0	8.8	2.5	6.2	5.8	2.9
26	1.1	1.4	8.4	15	173	9.2	9.8	3.9	1.9	3.6	28	2.7
27	1.5	2.6	4.6	11	45	7.5	24	3.3	1.8	2.8	6.9	2.4
28	1.3	4.7	3.6	11	28	7.0	9.8	2.9	1.7	2.4	10	2.4
29	1.2	2.8	3.1	13	---	6.9	7.9	2.8	1.7	2.3	4.4	10
30	1.2	4.6	3.1	11	---	6.8	6.0	3.0	1.9	2.5	3.4	9.4
31	1.2	---	4.4	9.2	---	6.7	---	2.8	---	2.0	2.3	---
TOTAL	37.74	53.0	166.3	475.0	537.1	388.1	248.6	125.6	151.1	115.9	138.01	145.2
MEAN	1.22	1.77	5.36	15.3	19.2	12.5	8.29	4.05	5.04	3.74	4.45	4.84
MAX	2.7	4.7	21	103	173	28	24	8.8	23	40	28	33
MIN	.77	1.2	1.8	4.2	4.4	6.7	4.9	2.8	1.7	1.1	.60	1.2
CFSM	.32	.46	1.39	3.97	4.99	3.25	2.15	1.05	1.31	.97	1.16	1.26
IN.	.36	.51	1.61	4.59	5.19	3.75	2.40	1.21	1.46	1.12	1.33	1.40

CAL YR 1978 TOTAL 2541.62 MEAN 6.96 MAX 132 MIN .76 CFSM 1.81 IN 24.55
WTR YR 1979 TOTAL 2581.65 MEAN 7.07 MAX 173 MIN .60 CFSM 1.84 IN 24.94

ST. JONES RIVER BASIN

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01483700 ST. JONES RIVER AT DOVER, DE

LOCATION.--Lat 39°09'49", long 75°31'10", Kent County, Hydrologic Unit 02040207, on left bank 150 ft (46 m) upstream from Division Street Bridge in Dover, 1,950 ft (594 m) downstream from Silver Lake, and 12.5 mi (20.1 km) upstream from mouth.

DRAINAGE AREA.--31.9 mi² (82.6 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1958 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 0.50 ft (0.152 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. Flow affected by Silver Lake. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--21 years, 37.2 ft³/s (1.054 m³/s), 15.84 in/yr (402 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,900 ft³/s (53.8 m³/s) Sept. 13, 1960, gage height, 9.45 ft (2.880 m), from floodmark; no flow at times in 1959, 1961, 1962.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,340 ft³/s (37.9 m³/s) Feb. 26, gage height, 8.40 ft (2.560 m); minimum, 2.9 ft³/s (0.082 m³/s) Nov. 3.

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	5.6	7.7	25	27	64	231	44	40	41	43	17	12
2	6.8	6.8	16	61	48	170	47	33	50	38	17	13
3	4.9	4.3	13	107	44	138	53	30	43	20	29	17
4	6.4	9.2	43	82	45	113	68	30	79	16	21	14
5	8.2	13	74	49	41	100	78	31	116	19	13	16
6	8.2	13	61	37	31	149	68	28	82	16	10	119
7	6.4	9.8	38	53	37	334	47	26	50	12	8.2	120
8	4.3	9.8	24	109	34	232	38	24	48	10	7.7	64
9	3.7	8.2	31	106	38	142	45	23	56	9.2	7.3	26
10	4.9	7.3	40	70	31	104	62	21	37	9.8	8.2	17
11	5.9	8.2	35	44	29	118	59	19	69	10	43	16
12	5.9	5.9	24	34	29	148	47	22	153	10	59	13
13	5.6	5.2	18	50	27	115	43	31	122	9.8	78	12
14	5.9	9.8	16	65	26	91	61	44	57	16	62	13
15	4.9	10	13	56	29	81	79	41	34	21	25	12
16	6.5	11	13	44	31	68	67	30	29	16	16	9.8
17	19	12	18	35	31	61	52	21	32	12	12	8.7
18	10	16	11	30	27	58	43	22	37	13	10	8.7
19	8.2	11	12	26	34	52	37	32	30	12	13	8.7
20	7.7	8.7	13	91	24	50	33	32	24	9.8	13	6.8
21	6.4	8.2	26	348	25	47	31	26	20	11	11	8.2
22	6.4	8.2	25	305	38	44	30	24	18	11	11	55
23	6.4	7.7	20	169	58	43	29	23	19	23	10	81
24	6.4	11	25	199	159	66	29	28	23	87	10	67
25	4.6	9.2	59	239	609	111	28	82	20	118	16	33
26	5.2	7.7	67	170	1190	104	38	103	16	48	56	22
27	8.7	17	41	116	753	68	88	55	13	20	53	18
28	7.3	27	25	97	400	49	106	31	13	13	41	16
29	6.8	26	17	86	---	47	73	26	13	20	31	19
30	4.6	29	16	82	---	44	52	37	13	68	21	21
31	6.8	---	19	73	---	44	---	38	---	48	16	---
TOTAL	208.6	337.9	878	3060	3932	3222	1575	1053	1357	789.6	745.4	866.9
MEAN	6.73	11.3	28.3	98.7	140	104	52.5	34.0	45.2	25.5	24.0	28.9
MAX	19	29	74	348	1190	334	106	103	153	118	78	120
MIN	3.7	4.3	11	26	24	43	28	19	13	9.2	7.3	6.8
CFSM	.21	.35	.89	3.09	4.39	3.26	1.65	1.07	1.42	.80	.75	.91
IN.	.24	.39	1.02	3.57	4.59	3.76	1.84	1.23	1.58	.92	.87	1.01
CAL YR 1978 TOTAL	18690.6			MEAN 51.2	MAX 663	MIN 3.7	CFSM 1.61	IN 21.80				
WTR YR 1979 TOTAL	18025.4			MEAN 49.4	MAX 1190	MIN 3.7	CFSM 1.55	IN 21.02				

ST. JONES RIVER BASIN

01483700 ST. JONES RIVER AT DOVER, DE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965-72, 1974 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	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)
OCT 02...	1020	7.6	187	6.7	23.0	19.0	60	--	49	21	13	4.0
DEC 05...	1500	73	180	7.4	10.5	9.0	40	11.8	50	13	13	4.2
APR 02...	1445	44	130	6.5	13.5	13.5	50	10.6	35	22	9.1	3.0
JUL 09...	1335	8.7	138	7.2	29.5	25.5	80	9.8	36	19	9.5	2.9
SEP 20...	1500	5.9	144	7.1	20.0	22.5	50	12.1	36	--	9.6	2.8

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT 02...	13	35	.8	3.1	34	26	11	32	12	.1	17	125
DEC 05...	14	36	.9	3.3	45	37	2.9	31	12	.1	16	123
APR 02...	9.1	34	.7	2.4	16	13	8.1	22	10	.1	13	92
JUL 09...	10	36	.7	2.2	20	16	2.0	23	11	.1	17	110
SEP 20...	11	46	.8	3.0	--	--	--	22	9.7	.1	8.6	95

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 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- 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 02...	112	.17	2.57	.11	.11	.34	1700	1000	660	100	40	60
DEC 05...	116	.17	24.2	.00	.07	.21	650	420	230	50	20	30
APR 02...	77	.13	11.9	.89	.10	.31	960	630	330	100	10	90
JUL 09...	87	.15	2.58	.22	.13	.40	1900	800	1100	110	30	80
SEP 20...	68	.13	1.51	.30	.13	.40	1500	770	730	90	30	60

01484000 MURDERKILL RIVER NEAR FELTON, DE

LOCATION.--Lat 38°58'33", long 75°34'03", Kent County, Hydrologic Unit 02040207, on left bank 30 ft (9 m) downstream from northbound lane of bridge on U.S. Highway 13, 400 ft (122 m) downstream from Black Swamp Creek, 1.3 mi (2.1 km) upstream from Killen Pond, 2.2 mi (3.5 km) south of Felton, and 17.6 mi (28.3 km) upstream from mouth.

DRAINAGE AREA.--13.6 mi² (35.2 km²).

PERIOD OF RECORD.--July 1931 to October 1933. Monthly discharge only for July to September 1931, published in WSP 1302. Annual maximum, water years 1952-60, and occasional low-flow measurements, water years 1952-53, 1955-57, 1959-60. June 1960 to current year.

REVISED RECORDS.--WSP 1432: 1932.

GAGE.--Water-stage recorder. Datum of gage is 21.87 ft (6.666 m) National Geodetic Vertical Datum of 1929. July 1931 to October 1933, nonrecording gage at bridge 200 ft (61 m) upstream at datum 2.00 ft (0.610 m) higher. March 1951 to May 1960, nonrecording gage and crest-stage gage at bridge 200 ft (61 m) upstream at datum 2.00 ft (0.610 m) higher.

REMARKS.--Water-discharge records good. Several observations of water temperature were made during the year. AVERAGE DISCHARGE.--21 years (water years 1932-33, 1961-79), 19.0 ft³/s (0.538 m³/s), 18.97 in/yr (482 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,090 ft³/s (59.2 m³/s) Aug. 4, 1967, gage height, 8.83 ft (2.691 m); minimum, 0.80 ft³/s (0.023 m³/s) Aug. 28, Sept. 11, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 4, 1967, is believed to have been the highest since that of 1935, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 130 ft³/s (3.6 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	1515	222	6.29	May 25	1030	141	3.99
Jan. 25	0400	152	4.30	June 4	2030	149	4.22
Feb. 25	0630	*864	24.5	June 11	2200	205	5.81
Feb. 26	0700	758	21.5	Sept. 6	1230	137	3.88
Mar. 7	0115	239	6.77				
			5.31				4.76
			1.618				1.451

Minimum daily discharge, 3.0 ft³/s (0.085 m³/s), Oct. 14.

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	3.7	4.1	5.3	14	22	97	23	17	29	35	6.9	7.1
2	3.4	4.0	4.4	32	19	70	24	16	24	18	7.9	7.8
3	3.4	4.1	4.2	66	18	52	39	16	20	15	44	7.6
4	4.0	4.9	16	23	18	44	47	16	83	14	15	7.6
5	4.2	6.3	26	19	16	39	51	16	99	15	9.4	12
6	4.0	4.4	13	18	14	95	31	15	44	13	7.7	97
7	3.5	4.2	9.0	23	15	196	24	14	26	11	6.7	28
8	3.3	4.1	8.2	55	15	94	22	14	21	11	6.4	15
9	3.2	4.3	16	39	15	52	29	13	18	10	6.1	12
10	3.1	4.2	21	22	13	40	33	13	17	11	6.7	11
11	3.2	4.8	12	19	12	64	24	12	91	11	18	10
12	3.2	4.3	10	17	12	56	22	13	120	10	26	9.4
13	3.1	4.2	9.1	22	11	38	22	15	37	9.9	17	8.9
14	3.0	4.0	8.6	35	11	34	35	33	24	10	11	11
15	3.1	4.2	8.6	24	13	32	31	18	20	9.2	8.6	12
16	3.5	4.7	8.6	19	12	27	25	15	18	8.0	7.7	8.6
17	6.9	4.7	9.8	18	11	25	22	13	19	7.5	7.0	8.0
18	3.9	5.3	9.1	17	10	24	20	14	18	7.3	7.0	7.7
19	3.8	4.0	9.5	14	12	22	19	16	17	7.6	7.6	7.3
20	3.6	3.7	9.9	17	12	21	18	14	16	7.3	6.6	6.7
21	3.5	3.7	15	156	11	21	18	13	15	7.9	7.2	7.1
22	3.4	3.7	13	134	18	19	17	13	15	7.6	7.3	28
23	3.2	3.5	11	57	26	19	17	13	14	7.1	6.3	19
24	3.8	5.7	14	57	76	39	17	18	28	8.6	6.0	13
25	3.7	4.0	32	121	654	44	17	115	18	6.7	5.8	12
26	3.5	3.5	17	59	600	28	23	40	15	6.3	6.2	12
27	4.5	9.4	14	39	280	22	41	22	15	5.8	11	10
28	4.1	8.2	13	32	170	20	25	18	14	4.9	13	9.5
29	3.8	5.4	11	35	---	20	22	16	13	6.9	12	9.8
30	3.8	9.0	11	28	---	19	19	37	14	18	9.0	11
31	4.0	---	12	24	---	19	---	21	---	8.5	7.9	---
TOTAL	114.4	144.6	381.3	1255	2116	1392	777	639	922	329.1	325.0	426.1
MEAN	3.69	4.82	12.3	40.5	75.6	44.9	25.9	20.6	30.7	10.6	10.5	14.2
MAX	6.9	9.4	32	156	654	196	51	115	120	35	44	97
MIN	3.0	3.5	4.2	14	10	19	17	12	13	4.9	5.8	6.7
CFSM	.27	.35	.90	2.98	5.56	3.30	1.90	1.52	2.26	.78	.77	1.04
IN.	.31	.40	1.04	3.43	5.79	3.81	2.13	1.75	2.52	.90	.89	1.17

CAL YR 1978 TOTAL 8705.2 MEAN 23.8 MAX 356 MIN 3.0 CFSM 1.75 IN 23.81
WTR YR 1979 TOTAL 8821.5 MEAN 24.2 MAX 654 MIN 3.0 CFSM 1.78 IN 24.13

LOCATION.--Lat 38°54'20", long 75°30'49", Kent County, Hydrologic Unit 02040207, on left bank 15 ft (5 m) upstream from bridge on State Highway 384, 0.8 mi (1.3 km) south of Houston, and 1.2 mi (1.9 km) upstream from Blairs Pond and mouth.

PERIOD OF RECORD.--May 1958 to current year.

REMARKS.--Water-discharge records good except those for period July 13 to Aug. 22, which are poor. Diversion for irrigation of about 150 acres (60.7 ha) above station during some years. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 176 ft³/s (4.98 m³/s) Sept. 12, 1960, gage height, 5.55 ft (1.692 m); no flow July 28, 1977 (result of pumpage for irrigation).

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	1730	38	1.08	3.33	1.015	Mar. 7	Unknown	68	1.93	3.94	1.201
Jan. 25	0200	31	0.88	3.17	0.966	Aug. 11	Unknown	Unknown		Unknown	
Feb. 24	2245	32	0.91	3.18	0.969	Aug. 28	2345	40	1.13	3.37	1.027
Feb. 26	Unknown	*104	2.95	4.59	1.399	Sept. 6	1315	40	1.13	3.36	1.024
Mar. 4	2215	44	1.25	3.45	1.052						

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	1.5	1.1	1.3	2.0	6.0	15	6.4	4.9	4.8	6.2	3.2	4.2
2	1.5	1.1	1.2	3.4	5.7	12	6.2	4.7	4.4	5.3	18	4.1
3	1.4	1.1	1.1	5.1	5.6	10	6.2	4.7	4.3	4.9	7.8	3.9
4	1.4	1.2	1.6	2.7	5.6	21	7.8	4.8	8.4	4.8	5.8	3.8
5	1.4	1.1	2.6	2.6	5.3	30	8.3	4.8	8.4	4.8	4.7	4.2
6	1.5	1.0	1.7	2.6	5.2	40	7.4	4.6	6.6	4.6	4.3	24
7	1.4	1.0	1.5	3.0	5.3	30	6.6	4.5	6.0	4.5	4.0	11
8	1.3	1.0	1.4	5.4	5.2	16	6.2	4.3	5.6	4.4	4.6	5.9
9	1.3	1.0	2.0	3.9	5.1	12	6.6	4.2	5.5	4.3	4.4	4.9
10	1.3	1.0	2.3	3.2	4.9	10	6.8	4.1	5.4	4.3	4.7	4.6
11	1.3	1.0	1.7	3.1	4.8	9.8	6.1	4.0	12	4.3	25	4.3
12	1.3	1.0	1.6	3.0	4.7	13	6.0	4.1	12	4.3	10	4.2
13	1.3	.98	1.6	3.4	4.8	9.8	6.1	4.1	7.0	6.2	7.2	4.0
14	1.2	.97	1.6	4.3	4.6	9.3	7.4	4.2	6.3	10	5.4	4.1
15	1.2	.97	1.5	3.6	4.6	8.9	6.8	4.1	6.0	6.2	4.4	4.1
16	1.2	.97	1.5	3.3	4.6	8.3	6.3	3.9	5.8	4.6	3.7	3.8
17	1.6	1.0	1.6	3.2	4.5	7.6	5.9	3.8	6.0	4.4	3.7	3.6
18	1.3	1.0	1.5	3.2	4.4	7.4	5.7	3.8	5.8	4.4	4.0	3.6
19	1.3	.97	1.5	3.0	4.5	7.2	5.6	3.9	5.5	4.3	4.0	3.5
20	1.2	.97	1.6	3.1	5.8	7.0	5.5	3.7	5.3	4.3	3.7	3.4
21	1.1	.97	1.8	19	4.4	6.8	5.4	3.7	5.1	4.3	3.7	3.4
22	1.1	.97	1.6	13	5.3	7.0	5.3	3.6	5.2	4.1	3.4	5.8
23	1.1	.97	1.5	7.0	6.0	6.6	5.1	3.5	5.0	4.1	3.3	4.9
24	1.1	1.0	1.8	11	13	6.6	5.1	4.6	8.3	4.3	3.2	4.0
25	1.1	.94	3.0	18	70	10	5.0	17	5.8	4.0	3.2	3.7
26	1.1	.90	2.1	7.1	85	12	5.8	6.0	5.2	4.0	7.4	3.7
27	1.1	1.4	1.9	5.9	42	8.7	6.7	4.9	5.0	3.8	3.9	3.5
28	1.1	1.3	1.8	5.7	24	7.6	5.6	4.6	4.9	3.7	9.7	3.4
29	1.1	1.2	1.9	5.7	---	7.0	5.4	4.4	4.8	8.3	20	3.4
30	1.1	1.7	1.9	5.1	---	6.8	5.1	4.5	4.8	3.6	6.1	3.5
31	1.1	---	2.0	5.4	---	6.6	---	4.2	---	3.3	4.7	---
TOTAL	39.0	31.78	53.7	170.0	350.9	370.0	184.4	146.2	185.2	148.6	201.2	148.5
MEAN	1.26	1.06	1.73	5.48	12.5	11.9	6.15	4.72	6.17	4.79	6.49	4.95
MAX	1.6	1.7	3.0	19	85	40	8.3	17	12	10	25	24
MIN	1.1	.90	1.1	2.0	4.4	6.6	5.0	3.5	4.3	3.3	3.2	3.4
CFSM	.45	.38	.61	1.94	4.42	4.21	2.17	1.67	2.18	1.69	2.29	1.75
IN.	.51	.42	.71	2.23	4.61	4.86	2.42	1.92	2.43	1.95	2.64	1.95
CAL YR 1978	TOTAL	1702.08	MEAN	4.66	MAX	42	MIN	.90	CFSM	1.65	IN	22.37
WTR YR 1979	TOTAL	2029.48	MEAN	5.56	MAX	85	MIN	.90	CFSM	1.97	IN	26.67

01484270 BEAVERDAM CREEK NEAR MILTON, DE

LOCATION.--Lat 38°45'41", long 75°16'03", Sussex County, Hydrologic Unit 02040207, on left bank, 15 ft (5 m) upstream from culvert on state road (maintenance No. 88), 2.3 mi (3.7 km) east of Milton, and 3.2 mi (5.1 km) upstream from mouth.

DRAINAGE AREA.--6.10 mi² (15.8 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1955-71, and annual maximums, water years 1966-71. May 1971 to current year.

GAGE.--Water-stage recorder and artificial control. Datum of gage is 0.91 ft (0.28 m) National Geodetic Vertical Datum of 1929. Prior to Jan. 14, 1966, nonrecording gage at same site at different datum. Jan. 14, 1966, to April 1971 nonrecording gage and crest-stage gage at same site and datum.

REMARKS.--Water-discharge records good except those for period Nov. 14 to Dec. 13, which are poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--8 years, 12.0 ft³/s (0.340 m³/s), 26.71 in/yr (678 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 63 ft³/s (1.78 m³/s) Feb. 26, 1979, gage height, 4.84 ft (1.475 m); minimum, 3.9 ft³/s (0.11 m³/s) Nov. 2, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 26 ft³/s (0.74 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	0745	32	0.91	4.21	1.283	May 25	0300	27	0.76	3.95	1.204
Feb. 22	1815	27	0.76	3.93	1.198	June 1	1200	39	1.10	4.29	1.308
Feb. 25	0330	60	1.70	4.78	1.457	June 5	0300	37	1.05	4.23	1.289
Feb. 26	0400	*63	1.78	4.84	1.475	June 11	1600	30	0.85	4.04	1.231
Mar. 7	1730	63	1.78	4.84	1.475	July 1	0630	28	0.79	3.99	1.216
Mar. 24	1530	41	1.16	4.33	1.320	Aug. 28	1645	31	0.88	4.08	1.244
Apr. 4	1745	27	0.76	3.94	1.201	Sept. 6	0945	48	1.36	4.52	1.378
Apr. 9	1645	31	0.88	4.06	1.237	Sept. 22	1900	27	0.76	3.99	1.216
Apr. 26	1915	29	0.82	3.99	1.216						

Minimum daily discharge, 5.6 ft³/s (0.16 m³/s) Nov. 14.

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	7.0	6.2	6.6	6.2	13	29	21	18	35	22	11	10
2	6.8	6.2	6.3	10	13	27	21	17	22	15	10	11
3	7.3	6.2	6.0	9.0	14	26	24	17	18	13	11	11
4	7.4	7.5	6.2	6.7	13	25	25	17	18	13	11	10
5	7.3	7.9	8.7	7.0	14	24	25	17	32	13	10	13
6	7.2	6.3	8.0	7.2	12	43	23	17	24	12	10	30
7	7.0	5.9	7.0	9.1	12	56	21	16	19	12	9.8	20
8	6.6	6.1	7.0	12	15	53	21	16	17	12	9.9	14
9	6.4	6.2	8.6	8.4	13	38	24	16	17	12	9.8	12
10	6.2	6.2	8.6	7.6	12	33	25	16	17	12	9.6	12
11	6.4	6.5	7.5	7.6	12	32	21	15	22	13	10	12
12	6.6	6.3	7.1	7.2	12	31	20	15	24	12	18	12
13	6.5	6.0	7.0	8.4	12	29	21	16	19	15	17	11
14	6.9	5.6	6.6	8.3	12	28	23	19	17	15	12	11
15	6.3	5.8	6.4	7.0	11	28	22	17	16	13	11	12
16	6.0	5.8	6.4	6.6	11	26	21	16	16	12	10	11
17	6.7	5.8	6.5	7.0	12	26	20	15	17	12	10	11
18	6.7	6.0	6.0	8.2	12	25	20	15	17	12	10	11
19	6.6	7.0	6.1	7.5	17	24	19	16	16	12	10	11
20	6.5	6.3	6.6	10	13	23	19	16	16	11	10	10
21	6.4	5.8	7.6	24	14	23	19	15	15	12	11	10
22	5.9	5.8	6.9	16	21	23	18	15	15	12	11	17
23	6.2	6.0	6.4	10	19	23	18	15	15	12	9.6	21
24	6.2	5.8	8.7	15	31	29	18	15	17	14	10	14
25	6.2	5.8	11	14	49	31	18	23	15	12	9.6	12
26	6.1	5.8	6.8	12	54	27	21	17	14	11	9.5	12
27	6.0	6.2	6.6	13	46	24	24	15	13	11	8.8	11
28	6.0	8.0	6.6	12	35	23	20	15	13	11	15	11
29	6.0	7.4	6.4	12	---	22	19	15	13	11	21	10
30	5.9	8.4	5.7	11	---	22	19	15	13	13	14	10
31	5.8	---	6.5	12	---	21	---	14	---	11	11	---
TOTAL	201.1	190.8	218.4	312.0	524	896	630	501	542	393	350.6	383
MEAN	6.49	6.36	7.05	10.1	18.7	28.9	21.0	16.2	18.1	12.7	11.3	12.8
MAX	7.4	8.4	11	24	54	58	25	23	35	22	21	30
MIN	5.8	5.6	5.7	6.2	11	21	18	14	13	11	8.8	10
CFSM	1.06	1.04	1.16	1.66	3.07	4.74	3.44	2.66	2.97	2.08	1.85	2.10
IN.	1.23	1.16	1.33	1.90	3.20	5.46	3.84	3.05	3.30	2.40	2.14	2.34

CAL YR 1978 TOTAL 5018.4 MEAN 13.7 MAX 34 MIN 5.6 CFSM 2.25 IN 30.60
WTR YR 1979 TOTAL 5141.9 MEAN 14.1 MAX 58 MIN 5.6 CFSM 2.31 IN 31.35

BROADKILL RIVER BASIN

01484270 BEAVERDAM CREEK NEAR MILTON, DE--Continued

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	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 CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
APR 03...	1110	23	219	8.4	12.5	14.0	200	--	29	0	6.4	3.1
SEP 24...	1145	13	198	6.7	21.0	16.0	25	5.0	25	--	5.9	2.4

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
APR 03...	27	56	2.2	13	69	57	.4	17	20	.0	13	175
SEP 24...	12	47	1.1	3.8	--	--	--	19	17	.0	17	106

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 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- 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)
APR 03...	134	.24	10.9	3.0	1.8	5.4	2100	1700	430	120	50	70
SEP 24...	77	.14	3.86	4.3	.35	1.1	670	480	190	30	0	40

INDIAN RIVER BASIN

67

01484500 STOCKLEY BRANCH AT STOCKLEY, DE

LOCATION.--Lat 38°38'19", long 75°20'31", Sussex County, Hydrologic Unit 02060010, on left bank at highway bridge in Stockley, 1.6 mi (2.6 km) upstream from mouth, and 4.4 mi (7.1 km) southeast of Georgetown.

DRAINAGE AREA.--5.24 mi² (13.57 km²).

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 24.54 ft (7.480 m) National Geodetic Vertical Datum of 1929. Prior to Aug. 16, 1950, nonrecording gage at same site and datum.

REMARKS.--Water-discharge records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--36 years, 7.03 ft³/s (0.199 m³/s), 18.22 in/yr (463 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 217 ft³/s (6.15 m³/s) Feb. 26, 1979, gage height, 5.01 ft (1.53 m); minimum observed, 0.13 ft³/s (0.004 m³/s) Sept. 1-11, 1944.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 45 ft³/s (1.2 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	1530	59 1.67	3.44 1.049	Mar. 7	0115	153 4.33	4.38 1.335
Jan. 25	0045	48 1.36	3.26 0.994	June 4	2230	87 2.46	3.57 1.088
Feb. 25	0800	187 5.30	4.73 1.442	June 11	1945	52 1.47	3.06 0.933
Feb. 26	0830	*217 6.15	5.01 1.527				

Minimum discharge, 1.0 ft³/s (0.028 m³/s) Oct. 30.

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	1.8	1.1	2.0	3.8	12	28	11	8.2	13	9.0	2.9	2.3
2	1.7	1.1	1.8	6.2	11	22	11	8.0	11	7.1	2.7	4.1
3	1.7	1.1	1.7	8.0	10	18	13	7.9	9.8	6.4	3.4	3.1
4	1.6	1.5	1.9	5.9	9.9	16	15	8.0	38	6.3	3.1	2.7
5	1.4	1.5	5.0	5.6	9.5	15	16	8.2	50	6.0	3.1	3.2
6	1.4	1.3	2.9	5.7	8.9	69	14	6.9	24	5.7	2.7	10
7	1.7	1.3	2.3	7.2	8.9	108	13	7.1	17	5.5	2.9	4.4
8	1.4	1.3	2.2	12	9.0	40	12	7.1	14	5.3	2.7	3.7
9	1.4	1.2	4.4	9.7	8.6	25	14	6.8	12	5.2	2.6	3.4
10	1.4	1.2	4.9	8.3	8.3	20	17	6.7	11	5.2	2.6	3.3
11	1.4	1.4	3.1	7.8	7.9	22	14	6.5	23	5.2	3.1	3.2
12	1.4	1.3	2.8	7.6	7.9	19	13	6.5	29	4.1	4.8	3.0
13	1.3	1.2	2.8	8.2	7.9	16	12	6.8	17	4.7	5.4	3.0
14	1.4	1.2	2.6	9.4	7.7	15	13	8.7	13	4.4	3.3	3.1
15	1.4	1.2	2.6	8.3	7.9	14	13	8.1	11	4.4	3.1	3.1
16	1.4	1.2	2.7	7.9	7.6	13	12	7.0	10	3.8	2.9	2.8
17	1.5	1.2	2.6	7.8	7.9	13	11	6.2	11	3.5	2.7	2.7
18	1.4	1.6	2.4	7.7	7.9	13	11	6.5	10	3.4	2.8	2.7
19	1.4	1.3	2.7	7.2	7.9	12	10	6.5	9.1	3.9	2.9	2.7
20	1.4	1.2	3.1	8.1	8.5	12	9.3	6.1	8.3	3.4	2.5	2.6
21	1.4	1.2	3.8	42	9.0	11	9.1	6.2	7.9	3.5	3.2	2.6
22	1.3	1.2	3.1	32	14	11	9.2	6.2	7.8	3.5	3.2	8.0
23	1.3	1.2	2.8	19	16	11	8.8	5.9	7.6	3.4	3.0	4.6
24	1.3	1.3	3.8	25	52	19	8.3	6.3	7.4	4.7	2.7	3.7
25	1.3	1.2	7.3	35	153	19	8.2	14	7.2	3.6	2.4	3.8
26	1.3	1.2	4.4	20	174	15	9.9	9.6	6.8	3.2	2.3	3.6
27	1.2	2.5	4.1	16	86	13	13	8.6	6.6	3.4	2.3	3.5
28	1.2	2.3	3.8	15	42	12	10	8.0	6.5	3.6	3.5	3.4
29	1.2	2.0	3.7	14	---	12	9.4	8.4	6.2	3.4	3.5	3.4
30	1.1	4.3	3.7	13	---	12	8.5	8.0	5.8	3.2	3.1	3.5
31	1.1	---	3.7	12	---	12	---	9.2	---	3.1	2.3	---
TOTAL	43.2	43.8	100.7	395.4	721.2	657	348.7	234.2	411.0	141.1	93.7	109.2
MEAN	1.39	1.46	3.25	12.8	25.8	21.2	11.6	7.55	13.7	4.55	3.02	3.64
MAX	1.8	4.3	7.3	42	174	108	17	14	50	9.0	5.4	10
MIN	1.1	1.1	1.7	3.8	7.6	11	8.2	5.9	5.8	3.1	2.3	2.3
CFSM	.27	.28	.62	2.44	4.92	4.05	2.21	1.44	2.62	.87	.58	.70
IN.	.31	.31	.71	2.81	5.12	4.66	2.48	1.66	2.92	1.00	.67	.78

CAL YR 1978 TOTAL 3144.7 MEAN 8.62 MAX 66 MIN 1.1 CFSM 1.65 IN 22.32
WTR YR 1979 TOTAL 3299.2 MEAN 9.04 MAX 174 MIN 1.1 CFSM 1.73 IN 23.42

POCOMOKE RIVER BASIN

01485000 POCOMOKE RIVER NEAR WILLARDS, MD

LOCATION.--Lat 38°23'20", long 75°19'30", Worcester County, Hydrologic Unit 02060009, on left bank 30 ft (9 m) downstream from bridge on State Highway 346, 0.6 mi (1.0 km) upstream from Burnt Mill Branch, 1.3 mi (2.1 km) east of Willards, 1.3 mi (2.1 km) west of Whaleysville, and 50.3 mi (80.9 km) upstream from mouth.

DRAINAGE AREA.--60.5 mi² (156.7 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 13.95 ft (4.252 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--29 years (water years 1951-79), 72.4 ft³/s (2.050 m³/s), 16.25 in/yr (413 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,870 ft³/s (53.0 m³/s) Feb. 26, 1979, gage height, 13.88 ft (4.231 m); minimum, 2.2 ft³/s (0.062 m³/s) Aug. 18, 19, 1957, gage height, 1.91 ft (0.582 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft³/s (14 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 22	0730	1130 32.0	11.90 3.627	Mar. 7	1630	1420 40.2	12.76 3.889
Jan. 25	0700	857 24.3	10.99 3.350	June 5	1500	1050 29.7	11.63 3.545
Feb. 26	1700	*1870 53.0	13.88 4.231	Sept. 22	2000	529 15.0	9.43 2.874

Minimum daily discharge, 8.0 ft³/s (0.23 m³/s) Oct. 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	10	11	55	73	155	671	77	74	265	52	28	63
2	12	11	45	107	135	435	72	64	228	60	27	59
3	10	11	41	253	123	286	80	59	148	52	28	101
4	9.3	12	41	163	115	210	129	57	409	46	52	75
5	9.1	13	92	123	108	172	194	62	984	44	72	63
6	9.1	12	101	110	99	457	145	57	791	40	50	310
7	8.6	12	75	120	97	1300	112	52	444	37	41	299
8	8.4	12	67	344	96	1150	95	48	286	35	36	171
9	8.2	12	74	313	91	718	95	46	184	33	33	116
10	8.1	12	164	200	85	432	112	43	136	32	30	89
11	8.1	16	115	155	81	321	93	42	150	32	29	74
12	8.1	16	92	127	79	270	82	40	252	31	32	64
13	8.0	15	80	133	77	202	78	43	158	99	47	56
14	8.5	15	72	178	76	172	86	104	115	199	45	53
15	8.3	15	65	149	74	153	91	110	89	82	38	56
16	8.3	15	61	119	74	128	79	90	75	61	33	52
17	9.0	16	61	107	71	115	71	71	71	51	31	47
18	8.8	18	58	100	72	105	65	65	68	48	29	43
19	8.6	18	56	86	83	95	61	77	60	46	28	41
20	8.7	17	56	86	148	87	57	70	55	42	27	38
21	8.5	17	87	648	117	81	55	63	49	40	28	36
22	8.6	17	91	1060	413	75	53	57	49	40	35	324
23	8.9	17	78	763	599	71	51	53	49	38	33	431
24	9.0	18	82	597	792	171	50	53	46	39	31	255
25	9.1	17	246	806	1300	258	49	142	46	38	30	215
26	9.5	17	162	546	1740	176	58	121	42	36	29	213
27	10	19	127	348	1530	137	178	86	40	34	27	164
28	9.9	26	103	264	1050	113	139	69	39	32	53	130
29	10	26	87	238	---	101	108	62	37	30	183	109
30	10	61	77	202	---	91	86	59	36	30	139	104
31	10	---	73	175	---	83	---	58	---	29	85	---
TOTAL	280.7	514	2684	8693	9480	8836	2701	2097	5401	1508	1409	3851
MEAN	9.05	17.1	86.6	280	339	285	90.0	67.6	180	48.6	45.5	128
MAX	12	61	246	1060	1740	1300	194	142	984	199	183	431
MIN	8.0	11	41	73	71	71	49	40	36	29	27	36
CFSM	.15	.28	1.43	4.63	5.60	4.71	1.49	1.12	2.98	.80	.75	2.12
IN.	.17	.32	1.65	5.35	5.83	5.43	1.66	1.29	3.32	.93	.87	2.37

CAL YR 1978	TOTAL	36256.5	MEAN	99.3	MAX	908	MIN	6.9	CFSM	1.64	IN	22.29
WTR YR 1979	TOTAL	47454.7	MEAN	130	MAX	1740	MIN	8.0	CFSM	2.15	IN	29.18

POCOMOKE RIVER BASIN

69

01485500 NASSAWANGO CREEK NEAR SNOW HILL, MD

LOCATION.--Lat 38°13'44", long 75°28'19", Worcester County, Hydrologic Unit 02060009, on right bank 18^{ft} (5 m) downstream from bridge on State Highway 12, 0.5 mi (0.8 km) upstream from Furnace Branch, 0.6 mi (1.0 km) downstream from Millville Creek, 5.5 mi (8.8 km) northwest of Snow Hill, and 7.3 mi (11.7 km) upstream from mouth.

DRAINAGE AREA.--44.9 mi² (116.3 km²).

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

REVISED RECORDS.--WSP 1332: 1953.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 12.29 ft (3.746 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good.

AVERAGE DISCHARGE.--29 years (water years 1951-79), 55.0 ft³/s (1.558 m³/s), 16.63 in/yr (422 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,940 ft³/s (54.9 m³/s) Feb. 26, 1979, gage height, 7.95 ft (2.423 m); minimum discharge, 0.80 ft³/s (0.023 m³/s) Sept. 8, 9, 10, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 280 ft³/s (7.9 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)
Jan. 22	1600	1040 29.5	7.09 2.161	July 15	0400	386 10.9	5.79 1.765
Feb. 26	1100	*1940 54.9	7.95 2.423	Aug. 22	1800	304 8.61	5.46 1.664
Mar. 7	1600	1360 38.5	7.47 2.277	Sept. 7	1000	858 24.3	6.83 2.082
June 5	1800	1080 30.6	7.15 2.179	Sept. 23	2300	444 12.6	5.98 1.823

Minimum discharge, 2.5 ft³/s (0.071 m³/s) Oct. 1, 13, 14, 15, 16, 23, 24, 25, 26, 27.

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	6.8	3.0	39	45	115	346	57	82	172	19	47	136
2	18	3.1	47	65	92	234	49	55	185	55	38	134
3	11	2.9	43	118	77	179	51	42	151	68	35	144
4	8.0	4.0	35	163	69	147	75	37	258	67	106	121
5	6.5	5.2	54	155	55	128	118	38	976	48	184	111
6	5.4	4.4	58	119	41	280	141	35	811	33	137	428
7	4.4	4.1	77	107	40	1200	128	32	404	25	82	812
8	3.8	4.6	77	149	38	954	98	29	215	19	46	539
9	3.5	5.2	66	253	37	492	81	27	131	15	33	275
10	3.1	4.7	83	249	37	276	83	24	92	12	27	158
11	2.8	11	96	169	33	214	80	22	83	13	23	95
12	2.7	12	109	123	30	206	74	21	120	12	66	65
13	2.6	10	83	115	29	189	63	20	124	24	143	47
14	2.6	8.2	57	126	29	163	68	33	117	234	131	39
15	2.6	6.9	43	134	29	145	71	52	84	354	92	35
16	2.5	7.5	37	126	30	125	71	67	53	214	56	32
17	2.7	8.4	37	106	30	108	63	64	42	112	37	30
18	2.9	8.9	34	88	29	94	50	46	39	65	30	28
19	3.0	8.5	32	65	50	81	42	43	34	53	28	25
20	2.9	8.0	31	68	46	70	36	38	31	48	26	22
21	2.8	7.5	44	278	66	61	33	36	27	54	71	21
22	2.7	7.4	52	931	154	53	31	33	25	56	280	116
23	2.6	7.4	65	744	413	48	31	30	25	51	249	346
24	2.5	10	71	437	788	86	30	37	23	84	157	383
25	2.5	9.3	104	446	1380	174	29	90	24	153	107	287
26	2.6	8.5	128	430	1850	222	43	140	21	165	85	276
27	2.6	15	145	286	1290	175	117	164	18	105	61	242
28	2.6	23	118	207	656	127	157	115	16	62	66	162
29	2.7	22	81	174	---	100	157	73	14	42	98	114
30	2.6	43	57	151	---	82	116	43	12	34	192	91
31	2.8	---	50	133	---	68	---	76	---	49	212	---
TOTAL	126.8	283.7	2053	6760	7533	6827	2243	1644	4327	2345	2945	5314
MEAN	4.09	9.46	66.2	218	269	220	74.8	53.0	144	75.6	95.0	177
MAX	18	43	145	931	1850	1200	157	164	976	354	280	812
MIN	2.5	2.9	31	45	29	48	29	20	12	12	23	21
CFSM	.09	.21	1.47	4.86	5.99	4.90	1.67	1.18	3.21	1.68	2.12	3.94
IN.	.11	.24	1.70	5.60	6.24	5.66	1.86	1.36	3.58	1.94	2.44	4.40

CAL YR 1978 TOTAL 28125.8 MEAN 77.1 MAX 720 MIN 2.5 CFSM 1.72 IN 23.30
WTR YR 1979 TOTAL 42401.5 MEAN 116 MAX 1850 MIN 2.5 CFSM 2.58 IN 35.13

01486000 MANOKIN BRANCH NEAR PRINCESS ANNE, MD

LOCATION.--Lat 38°12'50", long 75°40'18", Somerset County, Hydrologic Unit 02060009, on right bank 45 ft (14 m) downstream from farm bridge, 1.4 mi (2.3 km) northeast of Princess Anne, and 1.6 mi (2.6 km) upstream from confluence with Loretto Branch.

DRAINAGE AREA.--4.80 mi² (12.43 km²).

PERIOD OF RECORD.--April 1951 to September 1971, October 1974 to current year.

REVISED RECORDS.--WDR MD-DE-75-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 7.03 ft (2.143 m) National Geodetic Vertical Datum of 1929. Artificial control since April 30, 1975. Nov. 26, 1968, to Sept. 30, 1971, water-stage recorder above and non-recording gage below gage height 1.4 ft (0.43 m). Prior to Nov. 26, 1968, recording gage at datum 1.0 ft (0.30 m) higher.

REMARKS.--Water-discharge records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--25 years (water years 1952-71, 1975-79), 4.60 ft³/s (0.130 m³/s), 13.01 in/yr (330 mm/yr). The figure published in the 1978 report was in error; the correct figure is 24 years, 4.36 ft³/s (0.123 m³/s), 12.34 in/yr (313 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 547 ft³/s (15.5 m³/s) Aug. 20, 1969, gage height, 5.44 ft (1.658 m), from rating curve extended above 27 ft³/s (0.76 m³/s) on basis of channel-conveyance study; no flow at times in 1954, 1963, 1964, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 50 ft³/s (1.4 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	0845	338 9.57	5.12 1.561	May 25	0600	63 1.78	3.22 0.981
Jan. 24	1900	77 2.18	3.33 1.015	June 4	1730	219 6.20	4.37 1.332
Feb. 22	1630	95 2.69	3.47 1.058	July 2	0100	56 1.59	3.16 0.963
Feb. 24	0515	112 3.17	3.60 1.097	Aug. 28	1830	269 7.62	4.70 1.433
Feb. 25	0215	293 8.30	4.82 1.469	Sept. 6	0545	*361 10.2	5.28 1.609
Feb. 26	0300	241 6.83	4.47 1.362	Sept. 22	1145	50 1.42	3.10 0.945
Mar. 6	1700	197 5.58	4.18 1.274	Sept. 25	0800	65 1.84	3.24 0.988

Minimum daily discharge, 0.51 ft³/s (0.014 m³/s) Oct. 30, Nov. 3.

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	.86	.54	5.1	4.4	8.1	22	4.9	4.7	25	12	1.2	11
2	.95	.52	3.9	16	6.5	17	5.1	3.9	14	25	1.2	9.3
3	.76	.51	3.3	25	5.6	13	10	3.4	8.8	8.0	1.2	8.4
4	.71	.57	3.7	12	5.2	11	18	3.2	109	5.0	1.2	10
5	.69	.58	12	8.1	4.9	9.9	11	3.5	66	4.0	1.1	20
6	.66	.54	8.5	8.1	4.4	81	7.7	3.0	28	2.9	1.0	174
7	.65	.53	5.5	13	4.4	71	6.2	2.9	16	2.4	.94	43
8	.62	.58	4.7	31	4.4	34	5.9	2.7	9.3	2.0	.90	23
9	.60	.57	7.6	20	4.4	23	7.8	2.5	6.4	1.8	.87	14
10	.60	.53	18	12	3.9	16	5.9	2.5	4.9	1.7	.92	10
11	.60	.85	8.5	9.0	3.5	21	5.1	2.4	17	1.6	1.1	7.8
12	.60	.76	6.4	7.3	3.3	18	4.7	2.3	21	1.5	3.8	6.1
13	.60	.65	5.3	12	3.3	13	6.1	2.4	11	1.5	3.0	5.2
14	.63	.63	4.7	15	3.3	12	6.1	9.3	6.3	1.5	1.9	4.8
15	.59	.64	4.2	9.4	3.3	11	5.3	8.9	4.6	1.5	1.5	5.1
16	.57	.70	3.8	7.7	3.3	9.2	4.3	6.0	3.7	1.5	1.4	4.3
17	.59	.73	4.3	6.9	3.0	8.2	4.7	4.3	3.3	1.4	1.3	3.7
18	.57	.77	4.0	6.5	2.9	7.4	4.0	3.9	3.0	1.3	1.3	3.4
19	.58	.72	3.7	4.9	3.5	6.7	3.7	4.5	2.5	1.4	1.3	3.2
20	.62	.69	3.7	6.6	8.1	6.2	3.5	3.9	2.3	1.4	1.3	3.0
21	.59	.70	5.7	157	12	5.6	3.3	3.4	2.1	1.5	3.4	2.9
22	.58	.70	7.6	60	55	5.1	2.9	3.2	2.1	1.5	5.0	31
23	.59	.73	4.7	33	38	5.0	2.9	3.0	2.0	1.4	3.3	23
24	.58	.95	6.6	47	95	24	2.9	4.1	1.9	1.4	2.8	14
25	.56	.85	17	37	143	17	2.9	38	1.6	1.3	2.5	46
26	.56	.79	9.4	23	127	11	6.0	17	1.5	1.3	2.3	26
27	.55	1.4	7.3	16	48	8.2	18	10	1.5	1.2	2.3	17
28	.52	2.5	5.6	16	30	6.9	13	6.7	1.5	1.1	73	12
29	.52	2.4	4.7	14	---	6.1	8.5	6.7	1.4	1.3	100	9.4
30	.51	9.3	4.2	11	---	5.7	6.0	5.4	2.1	1.2	35	10
31	.52	---	4.2	9.4	---	5.2	---	20	---	1.2	18	---
TOTAL	19.13	32.93	197.9	658.3	637.3	510.4	196.4	197.7	379.8	93.8	276.03	560.6
MEAN	.62	1.10	6.38	21.2	22.8	16.5	6.55	6.38	12.7	3.03	8.90	18.7
MAX	.95	9.3	18	157	143	81	18	38	109	25	100	174
MIN	.51	.51	3.3	4.4	2.9	5.0	2.9	2.3	1.4	1.1	.87	2.9
CFSM	.13	.23	1.33	4.42	4.75	3.44	1.37	1.33	2.65	.63	1.85	3.90
IN.	.15	.26	1.53	5.10	4.94	3.95	1.52	1.53	2.94	.73	2.14	4.34

CAL YR 1978 TOTAL 2745.81 MEAN 7.52 MAX 181 MIN .51 CFSM 1.57 IN 21.28
WTR YR 1979 TOTAL 3760.29 MEAN 10.3 MAX 174 MIN .51 CFSM 2.15 IN 29.14

NANTICOKE RIVER BASIN

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01487000 NANTICOKE RIVER NEAR BRIDGEVILLE, DE

LOCATION.--Lat 38°43'42", long 75°33'44", Sussex County, Hydrologic Unit 02060008, on left bank at downstream side of highway bridge, 800 ft (244 m) downstream from Gum Branch, 2.5 mi (4.0 km) southeast of Bridgeville, and 50.5 mi (81.3 km) upstream from mouth.

DRAINAGE AREA.--75.4 mi² (195.3 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1943 to current year. Prior to October 1955, published as Gravelly Fork near Bridgeville.

REVISED RECORDS.--WSP 1111: 1947. WSP 1232: 1945-49.

GAGE.--Water-stage recorder. Datum of gage is 13.64 ft (4.157 m) National Geodetic Vertical Datum of 1929 (levels by Soil Conservation Service). Prior to Apr. 19, 1947, nonrecording gage, and Apr. 19, 1947, to Dec. 18, 1969, recording gage at present site and datum. Timber control Sept. 3, 1947, to Dec. 18, 1969. Feb. 18, 1970, to Oct. 1, 1973, recording gage at site 300 ft (91 m) downstream at same datum.

REMARKS.--Water-discharge records fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--36 years, 92.8 ft³/s (2.628 m³/s), 16.71 in/yr (424 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,020 ft³/s (85.5 m³/s) Feb. 26, 1979, gage height, 10.31 ft (3.142 m); minimum observed, 6.3 ft³/s (0.18 m³/s) Sept. 29, 1943.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, about 11.0 ft (3.35 m) in September 1935, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 360 ft³/s (10 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	1945	588 16.7	7.22 2.201	June 12	0400	372 10.5	6.51 1.984
Jan. 25	0400	529 15.0	7.08 2.158	Aug. 12	1500	372 10.5	6.23 1.899
Feb. 26	1400	*3020 85.5	10.31 3.142	Aug. 29	1100	733 20.8	7.40 2.256
Mar. 7	0300	878 24.9	7.68 2.341	Sept. 6	2200	629 17.8	7.17 2.185

Minimum daily discharge, 26 ft³/s (0.74 m³/s) Nov. 20, 21, 22, 23, 25, 26.

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	31	28	37	47	154	493	155	107	94	119	56	121
2	32	28	34	53	141	409	152	101	92	111	55	108
3	31	28	32	104	133	352	159	98	87	93	85	108
4	31	29	35	76	128	316	179	97	151	87	136	97
5	32	29	48	65	122	293	201	96	239	86	89	93
6	31	29	48	64	115	419	181	90	167	83	71	412
7	30	29	41	66	116	722	162	88	146	80	66	440
8	30	28	39	102	114	449	152	86	256	77	62	238
9	29	28	42	113	106	351	158	85	166	73	60	173
10	29	28	51	86	101	302	166	83	137	72	58	145
11	29	28	45	80	96	323	149	81	170	74	61	131
12	29	28	43	76	95	325	141	80	315	73	285	119
13	29	27	42	80	96	274	140	80	198	72	302	111
14	29	27	42	92	91	259	150	82	160	104	180	108
15	28	27	40	89	90	244	156	81	139	80	120	112
16	28	28	40	82	86	221	147	78	128	72	95	100
17	33	28	41	79	83	210	137	75	123	70	84	92
18	30	29	40	79	83	203	130	75	120	66	78	88
19	30	28	40	75	81	194	124	78	111	64	77	86
20	29	26	41	77	101	187	120	75	103	67	74	82
21	29	26	44	366	88	179	116	73	98	66	75	80
22	28	26	42	376	101	170	113	72	96	66	76	112
23	28	26	41	236	121	164	112	71	92	64	70	130
24	29	27	43	252	291	223	109	72	94	66	68	109
25	29	26	57	430	2060	285	106	206	98	63	66	99
26	29	26	53	262	2880	228	111	148	88	61	73	94
27	29	31	49	213	1650	197	144	110	83	58	77	89
28	28	36	47	197	680	180	130	97	83	56	143	85
29	28	32	46	191	---	171	121	92	80	56	623	83
30	28	44	45	176	---	166	111	101	79	58	302	85
31	28	---	46	163	---	159	---	94	---	58	164	---
TOTAL	913	860	1334	4447	10003	8668	4232	2852	3993	2295	3831	3930
MEAN	29.5	28.7	43.0	143	357	280	141	92.0	133	74.0	124	131
MAX	33	44	57	430	2880	722	201	206	315	119	623	440
MIN	28	26	32	47	81	159	106	71	79	56	55	80
CFSM	.39	.38	.57	1.90	4.74	3.71	1.87	1.22	1.76	.98	1.65	1.74
IN.	.45	.42	.66	2.19	4.94	4.28	2.09	1.41	1.97	1.13	1.89	1.94

CAL YR 1978 TOTAL 41553 MEAN 114 MAX 870 MIN 26 CFSM 1.51 IN 20.50
WTR YR 1979 TOTAL 47358 MEAN 130 MAX 2880 MIN 26 CFSM 1.72 IN 23.36

NANTICOKE RIVER BASIN

01487000 NANTICOKE RIVER NEAR BRIDGEVILLE, DE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961-72, 1974 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	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 11...	1230	46	120	7.1	-5	5.5	5	13.2	25	12	6.1	2.4
APR 04...	1115	190	116	8.2	7.5	11.5	20	--	24	3	5.8	2.3
JUL 10...	1030	72	100	6.7	26.0	18.5	20	5.5	21	12	5.2	2.0
SEP 24...	1305	143	122	6.8	19.0	16.5	10	8.1	24	--	5.9	2.3

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
DEC 11...	9.0	40	.8	3.0	16	13	2.0	8.5	12	.0	19	78
APR 04...	11	47	1.0	2.0	26	21	.3	7.5	12	.0	17	86
JUL 10...	7.0	39	.7	1.8	11	9	3.5	4.9	11	.0	17	73
SEP 24...	8.6	40	.8	2.9	--	--	--	7.7	11	.0	18	78

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 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- 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- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
DEC 11...	68	.11	9.69	3.1	.06	.18	1100	620	480	--	--	30
APR 04...	71	.12	44.1	2.9	.03	.09	640	480	160	60	10	50
JUL 10...	55	.10	14.2	2.4	.44	1.4	6100	5900	200	160	50	110
SEP 24...	57	.11	30.1	2.6	.11	.34	1400	1100	290	70	40	30

01488500 MARSHYHOPE CREEK NEAR ADAMSVILLE, DE

LOCATION.--Lat 38°50'59", long 75°40'24", Kent County, Hydrologic Unit 02060008, on left bank 45 ft (14 m) upstream from highway bridge, 1.4 mi (2.3 km) upstream from Cattail Branch, 1.6 mi (2.6 km) northeast of Adamsville, 4.9 mi (7.9 km) northwest of Greenwood, and 33 mi (53 km) upstream from mouth.

DRAINAGE AREA.--43.9 mi² (113.7 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1943 to March 1969, October 1971 to current year.

REVISED RECORDS.--WSP 1141: 1948(P). WSP 1432: 1946(M), 1948, 1952.

GAGE.--Water-stage recorder. Datum of gage is 26.21 ft (7.989 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 24, 1953, nonrecording gage and crest-stage gage, and Nov. 24, 1953, to March 1969, recording gage at site on old channel about 240 ft (73 m) southeast of present site at datum 2.00 ft (0.610 m) higher.

REMARKS.--Water-discharge records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--33 years (water years 1944-68, 1972-79), 55.4 ft³/s (1.569 m³/s), 17.14 in/yr (435 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,700 ft³/s (105 m³/s) July 13, 1975, gage height, 13.19 ft (4.020 m); maximum gage height, 13.98 ft (4.261 m) Aug. 5, 1967, present datum; minimum discharge, 1.0 ft³/s (0.028 m³/s) Sept. 9, 10, 1964, Aug. 20, 1965.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 16.5 ft (5.03 m), present datum, in September 1935, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 450 ft³/s (12 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	1100	753 21.3	6.59 2.009	June 11	1900	590 16.7	5.67 1.728
Jan. 24	2300	631 17.9	5.91 1.801	Aug. 12	0200	762 21.6	5.99 1.826
Feb. 26	0900	*2760 78.2	11.85 3.612	Sept. 6	0945	700 19.8	5.51 1.679
Mar. 6	2000	917 26.0	7.39 2.252				

Minimum daily discharge, 9.3 ft³/s (0.26 m³/s) Nov. 22, 23, 26.

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	13	10	11	28	86	245	83	59	76	139	32	44
2	13	11	10	72	77	194	82	56	74	79	29	41
3	13	11	10	161	71	158	97	54	64	61	255	40
4	12	12	13	66	69	139	123	54	170	55	110	38
5	12	12	30	55	65	125	132	53	184	52	60	39
6	12	13	28	53	60	427	103	50	113	47	47	450
7	11	12	18	57	60	447	87	47	87	45	40	177
8	11	11	16	174	59	231	80	46	73	42	37	100
9	11	11	20	116	56	169	84	45	65	36	34	75
10	11	10	40	77	54	140	91	44	60	31	32	64
11	11	11	27	66	52	202	78	43	255	31	159	58
12	11	10	23	60	51	162	73	42	243	29	583	53
13	11	9.8	22	63	50	130	70	41	131	42	248	49
14	11	9.5	21	101	49	124	83	53	97	44	114	48
15	11	9.6	20	89	49	115	85	45	82	30	78	52
16	11	9.7	19	69	48	104	79	42	73	28	62	45
17	12	9.9	19	64	46	102	75	39	68	26	54	41
18	11	10	18	62	42	103	69	40	65	26	49	40
19	11	9.7	18	56	29	98	66	44	60	25	47	38
20	11	9.4	18	58	45	94	63	41	55	24	43	36
21	11	9.4	21	572	53	90	61	40	52	24	42	34
22	11	9.3	19	311	76	86	59	39	50	23	41	67
23	11	9.3	19	181	91	84	59	38	48	22	38	79
24	11	10	21	293	398	124	58	49	114	23	36	62
25	11	9.6	58	353	2410	140	56	227	72	22	35	53
26	11	9.3	40	183	2310	113	60	101	58	21	130	49
27	11	11	33	136	692	98	93	76	54	20	68	46
28	11	12	30	122	334	90	76	65	51	20	67	43
29	11	11	28	125	---	87	69	59	48	70	109	42
30	10	12	27	105	---	84	63	96	47	185	64	41
31	10	---	27	93	---	82	---	69	---	45	51	---
TOTAL	349	314.5	724	4021	7482	4587	2357	1797	2689	1367	2794	2044
MEAN	11.3	10.5	23.4	130	267	148	78.6	58.0	89.6	44.1	90.1	68.1
MAX	13	13	58	572	2410	447	132	227	255	185	583	450
MIN	10	9.3	10	28	29	82	56	38	47	20	29	34
CFSM	.26	.24	.53	2.96	6.08	3.37	1.79	1.32	2.04	1.01	2.05	1.55
IN.	.30	.27	.61	3.41	6.34	3.89	2.00	1.52	2.28	1.16	2.37	1.73

CAL YR 1978 TOTAL 27003.5 MEAN 74.0 MAX 1280 MIN 9.3 CFSM 1.69 IN 22.88
WTR YR 1979 TOTAL 30525.5 MEAN 83.6 MAX 2410 MIN 9.3 CFSM 1.90 IN 25.87

NANTICOKE RIVER BASIN

01488500 MARSHYHOPE CREEK NEAR ADAMSVILLE, DE--Continued

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	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 11...	1445	26	108	6.7	2.5	4.5	120	12.6	27	13	7.1	2.3
APR 04...	131"	98	84	8.1	7.0	11.0	50	--	25	5	6.4	2.1
JUL 09...	1200	33	82	7.1	26.0	21.0	50	9.8	26	9	7.2	2.0
SEP 24...	1445	60	100	7.8	21.0	19.0	40	5.8	24	--	6.4	2.0

DATE	SODIUM, DIS- SOLVED (MG/L AS Na)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	ALKA- LINITY (MG/L AS CaCO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
DEC 11...	5.8	29	.5	3.2	17	14	5.4	16	8.9	.0	18	78
APR 04...	6.7	35	.6	1.9	24	20	.3	12	8.8	.0	18	82
JUL 09...	7.3	36	.6	1.8	21	17	2.7	10	9.7	.1	22	84
SEP 24...	6.9	35	.6	2.7	--	--	--	11	9.3	.1	21	75

DATE	SOLIDS, SUM OF CONSTIT- UENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	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- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
DEC 11...	70	.11	5.48	1.3	.07	.21	1800	1700	120	130	0	150
APR 04...	68	.11	21.7	1.4	.14	.43	3200	2900	260	90	0	90
JUL 09...	71	.11	7.48	1.2	.05	.15	1900	1300	640	90	10	80
SEP 24...	60	.10	12.2	.83	.07	.21	1900	1400	540	40	0	60

NANTICOKE RIVER BASIN

75

01489000 FAULKNER BRANCH AT FEDERALSBURG, MD

LOCATION.--Lat 38°42'44", long 75°47'34", Caroline County, Hydrologic Unit 02060008, on right bank 25 ft (8 m) downstream from bridge on Nichols Road, 0.9 mi (1.4 km) upstream from mouth, and 1.6 mi (2.6 km) northwest of Federalsburg.

DRAINAGE AREA.--7.10 mi² (18.39 km²).

PERIOD OF RECORD.--July 1950 to current year.

REVISED RECORDS.--WSP 1552: 1952. WSP 2103: 1960(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 16.70 ft (5.090 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. Diversion for irrigation of about 100 acres (40.5 ha) above station during some years. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--29 years, 9.01 ft³/s (0.255 m³/s), 17.23 in/yr (438 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,680 ft³/s (47.6 m³/s) July 13, 1975, gage height, 5.98 ft (1.823 m), from rating curve extended above 210 ft³/s (5.95 m³/s) on basis of contracted-opening measurement of peak flow; no flow at times during many years (result of pumpage for irrigation).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1935 is believed to have been higher than that of July 13, 1975, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 60 ft³/s (1.6 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. 3	0100	81 2.29	2.56 0.780	July 1	0530	68 1.93	2.41 0.735
Jan. 21	1530	160 4.53	3.15 0.960	July 29	2330	375 10.6	3.94 1.201
Jan. 24	2115	178 5.04	3.24 0.988	Aug. 3	0200	160 4.53	3.15 0.960
Feb. 25	0145	*1070 30.3	5.26 1.603	Aug. 3	1830	170 4.81	3.20 0.975
Feb. 26	0345	674 19.1	4.63 1.411	Aug. 11	2200	75 2.12	2.48 0.756
Mar. 6	1730	348 9.86	3.86 1.177	Aug. 28	1915	129 3.65	2.98 0.908
June 11	1400	108 3.06	2.83 0.863	Sept. 6	0515	90 2.55	2.66 0.811

Minimum discharge, 1.3 ft³/s (0.037 m³/s) Nov. 9, 10, 12, gage height, 1.19 ft (0.363 m).

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	3.8	1.7	3.5	8.5	16	35	11	10	6.1	31	11	13
2	6.2	1.6	3.0	24	14	30	11	9.4	5.7	11	9.5	12
3	2.9	1.7	2.9	48	13	26	12	8.7	5.5	8.8	91	12
4	2.7	1.6	3.8	19	13	24	16	8.6	14	8.4	35	11
5	2.7	1.7	12	15	12	22	20	8.3	13	8.0	19	14
6	2.4	1.7	7.8	15	10	137	15	7.5	9.3	7.3	14	53
7	2.2	1.4	5.7	18	11	108	12	6.7	7.9	6.9	12	24
8	2.0	1.4	5.4	37	11	40	11	6.7	7.1	6.3	11	18
9	1.9	1.3	8.6	26	9.9	29	13	6.4	6.7	6.2	10	16
10	1.9	1.3	15	18	9.2	25	14	6.2	6.5	6.0	11	14
11	1.9	1.4	8.7	15	8.9	34	11	6.0	39	5.7	18	13
12	1.8	1.4	7.4	13	8.9	31	10	5.8	21	5.4	32	12
13	1.8	1.5	7.2	16	8.9	23	10	5.8	14	6.2	25	12
14	1.9	1.4	6.7	21	8.9	22	13	6.0	11	5.7	16	12
15	1.8	1.5	6.1	16	8.9	19	12	5.7	10	5.3	13	11
16	1.9	1.6	5.9	14	8.7	16	11	5.3	9.2	5.1	11	9.7
17	3.3	1.7	6.0	13	8.5	15	9.6	5.0	9.1	4.9	10	9.2
18	2.4	2.0	5.5	12	8.5	15	8.9	5.2	8.4	5.7	9.9	9.0
19	2.2	1.7	5.4	11	8.5	14	8.5	5.4	7.9	6.1	9.5	8.6
20	2.0	1.6	5.6	13	8.5	13	8.1	5.1	7.3	5.1	8.6	8.2
21	1.8	1.6	8.0	114	9.0	12	7.8	4.9	7.1	5.3	11	8.1
22	1.8	1.6	6.6	57	14	12	7.6	4.7	7.1	4.9	11	30
23	1.9	1.6	6.0	29	20	11	7.9	4.7	6.8	4.9	9.2	19
24	1.9	1.8	8.0	73	100	20	8.0	6.0	7.7	4.9	8.7	15
25	1.9	1.7	23	73	612	32	8.3	16	6.4	4.9	8.3	13
26	2.0	1.6	13	30	396	21	14	7.6	5.9	4.9	9.9	12
27	2.0	3.3	10	25	103	16	24	6.2	5.8	4.7	9.1	11
28	1.7	3.6	9.0	23	49	13	15	5.7	5.7	4.6	41	11
29	1.7	2.9	8.2	25	---	12	12	5.3	5.5	49	31	10
30	1.6	4.6	7.7	20	---	12	11	7.4	6.0	87	19	16
31	1.6	---	8.0	17	---	12	---	5.7	---	15	15	---
TOTAL	69.6	55.5	239.7	858.5	1509.3	851	352.7	208.0	282.7	345.2	549.7	436.8
MEAN	2.25	1.85	7.73	27.7	53.9	27.5	11.8	6.71	9.42	11.1	17.7	14.6
MAX	6.2	4.6	23	114	612	137	24	16	39	87	91	53
MIN	1.6	1.3	2.9	8.5	8.5	11	7.6	4.7	5.5	4.6	8.3	8.1
CFSM	.32	.26	1.09	3.90	7.59	3.87	1.66	.95	1.33	1.56	2.49	2.06
IN.	.36	.29	1.26	4.50	7.91	4.46	1.85	1.09	1.48	1.81	2.88	2.29

CAL YR 1978 TOTAL 4416.1 MEAN 12.1 MAX 190 MIN 1.3 CFSM 1.70 IN 23.13
WTR YR 1979 TOTAL 5758.7 MEAN 15.8 MAX 612 MIN 1.3 CFSM 2.23 IN 30.17

TRANSQUAKING RIVER BASIN

01490000 CHICAMACOMICO RIVER NEAR SALEM, MD

LOCATION.--Lat 38°30'43", long 75°52'51", Dorchester County, Hydrologic Unit 02060007, on left bank 30 ft (9 m) downstream from Big Mill Pond dam, 1.6 mi (2.6 km) east of Salem, 3.5 mi (5.6 km) northwest of Vienna, and 13 mi (21 km) upstream from mouth.

DRAINAGE AREA.--15.0 mi² (38.8 km²).

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

REVISED RECORDS.--WSP 1332: 1952.

GAGE.--Water-stage recorder. Altitude of gage is 10 ft (3.05 m).

REMARKS.--Water-discharge records fair except those for March, which are poor. Occasional regulation by Big Mill Pond. Diversion for irrigation of about 225 acres (91.1 ha) above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--28 years, 18.6 ft³/s (0.527 m³/s), 16.84 in/yr (428 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 715 ft³/s (20.2 m³/s) Feb. 26, 1979, gage height, 4.99 ft (1.521 m); maximum gage height, 5.62 ft (1.713 m) Feb. 26, 1979 (result of dam failure); minimum daily, 0.13 ft³/s (0.004 m³/s) July 6, 7, 1977 (result of pumpage for irrigation).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 715 ft³/s (20.2 m³/s) Feb. 26, gage height, 4.99 ft (1.521 m); maximum gage height, 5.62 ft (1.713 m) Feb. 26 (result of dam failure); minimum daily, 3.9 ft³/s (0.110 m³/s) Oct. 11.

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	6.0	10	14	31	100	24	23	24	27	13	17
2	6.5	6.2	7.3	25	26	81	25	20	20	22	11	16
3	5.6	6.4	6.4	57	23	65	33	19	17	14	58	18
4	6.4	6.8	7.6	32	23	56	42	20	70	12	45	16
5	7.8	7.5	17	22	22	50	48	20	123	12	20	18
6	7.8	7.3	14	20	20	158	36	18	56	11	14	150
7	7.3	7.2	8.3	26	20	270	28	17	36	10	12	99
8	5.6	7.8	7.2	51	20	104	25	16	26	9.7	11	48
9	4.3	7.5	13	48	19	87	32	15	21	9.4	10	32
10	4.0	7.3	26	31	16	76	38	14	19	9.2	10	25
11	3.9	8.1	17	23	15	72	29	14	38	8.8	10	21
12	4.0	7.6	14	20	15	70	25	14	62	8.4	44	18
13	4.3	7.0	13	22	14	67	25	15	33	8.0	49	17
14	4.9	6.8	12	31	14	61	36	16	23	7.8	25	17
15	4.0	7.6	12	27	14	54	34	15	19	7.4	16	17
16	4.5	8.0	12	20	13	49	27	14	17	7.4	13	13
17	7.0	7.6	13	19	13	45	24	12	16	7.4	11	12
18	6.2	9.8	12	19	13	40	22	12	16	7.2	11	12
19	5.9	8.5	11	17	12	36	20	15	14	8.0	12	12
20	5.2	6.4	12	18	12	35	19	14	14	8.0	11	11
21	4.5	5.7	18	113	14	34	18	12	13	8.7	36	11
22	4.6	5.4	15	115	19	31	18	12	14	11	60	65
23	4.5	5.6	13	64	35	30	18	11	14	9.9	27	67
24	4.3	7.6	14	68	84	33	17	13	12	29	19	37
25	4.5	6.5	35	106	549	75	16	54	11	14	16	30
26	5.7	5.4	22	61	725	61	26	32	11	12	29	30
27	5.7	8.1	17	47	323	38	74	23	11	13	23	24
28	5.2	13	14	42	140	30	46	20	10	11	64	20
29	5.1	8.8	14	45	---	29	35	19	10	21	73	19
30	5.6	17	13	39	---	27	28	18	9.9	22	41	25
31	5.6	---	14	34	---	25	---	18	---	16	24	---
TOTAL	165.9	230.5	433.8	1276	2244	1989	888	555	779.9	382.3	818	917
MEAN	5.35	7.68	14.0	41.2	80.1	64.2	29.6	17.9	26.0	12.3	26.4	30.6
MAX	7.8	17	35	115	725	270	74	54	123	29	73	150
MIN	3.9	5.4	6.4	14	12	25	16	11	9.9	7.2	10	11
CFSM	.36	.51	.93	2.75	5.34	4.28	1.97	1.19	1.73	.82	1.76	2.04
IN.	.41	.57	1.08	3.16	5.56	4.93	2.20	1.38	1.93	.95	2.03	2.27
CAL YR 1978 TOTAL	8980.8			MEAN 24.6	MAX 260	MIN 2.5	CFSM 1.64	IN 22.27				
WTR YR 1979 TOTAL	10679.4			MEAN 29.3	MAX 725	MIN 3.9	CFSM 1.95	IN 26.48				

CHOPTANK RIVER BASIN

77

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD

LOCATION.--Lat 38°59'50", long 75°47'09", Caroline County, Hydrologic Unit 02060005, on left bank at highway bridge, 0.1 mi (0.2 km) upstream from Gravelly Branch, 2 mi (3 km) northeast of Greensboro, and 60 mi (97 km) upstream from mouth.

DRAINAGE AREA.--113 mi² (293 km²).

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1622: 1948.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 3.51 ft (1.070 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--31 years, 132 ft³/s (3.738 m³/s), 15.86 in/yr (403 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,970 ft³/s (197 m³/s) Aug. 4, 1967, gage height, 14.47 ft (4.410 m), from rating curve extended above 3,600 ft³/s (102 m³/s); minimum, 1.2 ft³/s (0.034 m³/s) Aug. 29, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1935 is believed to have been higher than that of Aug. 4, 1967, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28 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. 22	0615	2020 57.2	8.50 2.591	Feb. 26	1030	*6110 173	13.61 4.148
Jan. 25	1615	1310 37.1	7.22 2.201	Mar. 7	1300	1500 42.5	7.77 2.368

Minimum discharge, 18 ft³/s (0.51 m³/s) Oct. 3, 9, 10, 11, 12, 13, 14, 15, 16, gage height, 1.99 ft (0.607 m).

REVISIONS.--The peak discharge of Feb. 24, 1961, has been revised to 1,390 ft³/s (39.4 m³/s), gage height, 7.55 ft (2.301 m), superseding figures published in WSP 1903 and the report for 1961.

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	20	21	44	103	222	1050	156	162	182	215	99	48
2	21	21	37	160	192	724	162	140	204	213	81	44
3	20	20	34	484	171	543	173	124	191	150	172	42
4	21	22	61	492	159	410	223	116	298	106	156	42
5	23	30	130	257	151	337	291	112	652	91	108	67
6	23	30	159	187	137	443	282	103	538	82	75	108
7	22	26	115	179	121	1310	211	94	318	71	63	287
8	20	25	80	359	118	867	174	86	453	64	55	221
9	19	25	92	624	118	521	167	80	528	59	50	116
10	19	24	135	364	118	361	200	76	275	55	47	84
11	19	25	142	240	118	372	216	72	265	52	49	73
12	19	26	103	185	115	548	181	68	713	50	90	67
13	19	25	84	172	112	380	167	73	599	47	145	62
14	19	25	77	203	106	288	172	119	312	46	159	58
15	19	25	71	268	97	263	216	138	203	53	99	56
16	19	27	67	221	97	229	210	113	159	77	73	52
17	28	29	67	179	97	198	183	88	136	44	64	48
18	25	31	63	168	97	173	163	76	130	40	58	46
19	22	30	61	153	97	173	146	88	115	41	56	45
20	21	27	59	149	95	167	133	93	98	36	59	43
21	20	26	73	789	97	160	124	80	89	41	54	42
22	19	25	84	1760	131	151	116	73	82	41	51	74
23	20	25	80	904	287	145	112	69	77	38	48	115
24	21	29	75	592	323	185	108	88	120	76	44	151
25	20	27	151	1140	2960	321	105	405	121	185	43	120
26	20	25	228	857	5900	302	113	480	89	102	61	88
27	22	30	173	488	4120	226	243	286	74	62	77	76
28	22	44	133	358	1820	172	318	183	68	51	75	70
29	22	40	107	324	---	164	232	144	64	48	70	67
30	21	46	96	306	---	160	189	155	62	163	62	67
31	21	---	94	262	---	154	---	187	---	233	54	---
TOTAL	646	831	2975	12927	18096	11497	5486	4171	7215	2632	2397	2479
MEAN	20.8	27.7	96.0	417	646	371	183	135	241	84.9	77.3	82.6
MAX	28	46	228	1760	5900	1310	318	480	713	233	172	287
MIN	19	20	34	103	95	145	105	68	62	36	43	42
CFSM	.18	.25	.85	3.69	5.72	3.28	1.62	1.20	2.13	.75	.68	.73
IN.	.21	.27	.98	4.26	5.96	3.78	1.81	1.37	2.38	.87	.79	.82

CAL YR 1978 TOTAL 62869 MEAN 172 MAX 2490 MIN 18 CFSM 1.52 IN 20.70
 WTR YR 1979 TOTAL 71352 MEAN 195 MAX 5900 MIN 19 CFSM 1.73 IN 23.49

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1974 to current year.

WATER TEMPERATURES: October 1974 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 184 micromhos Sept. 23, 1976; minimum daily, 45 micromhos July 15, 1975.

WATER TEMPERATURE: Maximum daily, 28.0°C July 23, 1978; minimum daily, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 172 micromhos Nov. 21; minimum daily, 45 micromhos Feb. 28.

WATER TEMPERATURE: Maximum daily, 26.5°C Aug. 2; minimum daily, 0.0°C on many days during winter periods.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	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)
OCT										
25...	1200	20	160	7.1	17.0	11.0	2.0	9.1	K24	50
DEC										
05...	1000	130	260	7.7	9.0	10.0	10	9.2	K1400	K7500
JAN										
23...	1030	920	180	7.3	3.0	3.5	28	12.2	220	310
MAR										
07...	1000	1400	64	6.9	7.0	10.0	60	8.8	2250	1400
27...	1000	220	99	6.7	8.5	7.0	6.0	10.0	K20000	K5000
APR										
24...	1330	108	120	7.3	18.0	16.0	3.0	8.4	52	37
MAY										
24...	1015	74	130	7.2	22.5	19.5	1.0	7.4	110	430
JUN										
25...	1100	121	120	6.7	19.0	18.0	7.0	7.2	1600	800
JUL										
25...	1100	211	90	7.4	27.5	23.5	70	7.8	2000	2300
AUG										
28...	1405	75	110	7.5	28.0	24.5	3.0	6.3	94	290
SEP										
25...	1300	118	140	7.6	20.5	16.5	3.0	9.2	110	230

DATE	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)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)
OCT										
25...	50	23	14	3.7	7.8	24	.5	3.1	27	--
DEC										
05...	42	24	11	3.5	5.8	21	.4	3.5	18	--
JAN										
23...	23	17	5.9	2.0	2.9	19	.3	2.6	6	--
MAR										
07...	21	14	5.4	1.8	2.9	21	.3	2.5	7	--
27...	29	21	7.6	2.4	5.2	27	.4	1.8	8	--
APR										
24...	35	18	9.4	2.8	6.4	27	.5	1.6	17	--
MAY										
24...	35	19	9.4	2.8	7.5	30	.6	1.8	16	--
JUN										
25...	37	20	9.9	3.0	6.3	25	.5	2.4	17	--
JUL										
25...	25	17	6.8	1.9	4.1	24	.4	2.7	8	.6
AUG										
28...	35	14	9.4	2.7	7.1	29	.5	2.6	21	--
SEP										
25...	32	16	8.5	2.5	5.7	26	.4	3.4	16	.8

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	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)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)
OCT 25...	18	14	.0	15	98	92	.13	5.29	1.1	.02
DEC 05...	20	12	.1	13	87	80	.12	30.5	1.1	.01
JAN 23...	13	5.2	.1	7.8	69	43	.09	171	.79	.06
MAR 07...	12	5.5	.1	8.0	69	42	.09	261	.63	.12
27...	18	9.0	.1	13	85	62	.12	50.5	.89	.03
APR 24...	15	10	.1	8.0	82	64	.11	23.9	.84	.06
MAY 24...	14	11	.1	18	88	74	.12	17.6	1.1	.09
JUN 25...	16	11	.1	16	99	75	.13	32.3	1.1	.08
JUL 25...	13	7.7	.1	9.2	80	50	.11	45.6	.69	.06
AUG 28...	13	12	.1	14	96	74	.13	19.4	.64	.06
SEP 25...	15	10	.1	15	85	73	.12	27.1	.55	.04

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)
OCT 25...	.03	.43	.45	.02	.43	1.6	.21	.07	.00
DEC 05...	.01	.82	.83	.29	.54	1.9	.34	.11	.02
JAN 23...	.07	.76	.82	.16	.66	1.6	.31	.10	.03
MAR 07...	.15	.67	.79	.33	.46	1.4	.52	.17	.02
27...	.04	.44	.47	.00	.54	1.4	.18	.06	.03
APR 24...	.07	.33	.39	.21	.18	1.2	.12	.04	.02
MAY 24...	.11	.71	.80	.24	.56	1.9	.28	.09	.00
JUN 25...	.10	.55	.63	.08	.55	1.7	.37	.12	.02
JUL 25...	.07	.74	.80	.47	.33	1.5	.55	.18	.02
AUG 28...	.07	.41	.47	.02	.45	1.1	.25	.08	.02
SEP 25...	.05	.61	.65	.46	.19	1.2	.25	.08	.02

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)
OCT 25...	--	--	--	--	--	--	5.6	--	--
DEC 05...	0	0	0	30	10	20	7.0	4.7	.6
JAN 23...	--	--	--	--	--	--	10	--	--
MAR 07...	--	--	--	--	--	--	11	--	--
27...	0	0	0	20	10	10	7.6	8.7	.6
APR 24...	--	--	--	--	--	--	4.6	--	--
MAY 24...	--	--	--	--	--	--	7.4	--	--
JUN 25...	0	0	0	20	10	10	--	5.0	1.0
JUL 25...	--	--	--	--	--	--	9.4	--	--
AUG 28...	--	--	--	--	--	--	6.0	--	--
SEP 25...	0	0	0	0	0	0	--	11	.4

CHOPTANK RIVER BASIN

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01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	ATRA-ZINE, TOTAL (UG/L)	P,P'- DDO, TOTAL (UG/L)	SIMA-ZINE TOTAL COUL- SON COND. (UG/L)	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	2,4,5-T TOTAL (UG/L)	2,4,5-T TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	SILVEX, TOTAL (UG/L)	SILVEX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
JUN 19...	ND	.54	ND	ND	ND	ND	ND	ND	ND
AUG 23...	ND	--	ND	ND	--	ND	--	ND	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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)
DEC 05...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MAR 07...	ND	--	ND	--	ND	--	ND	--	ND	--
MAY 24...	ND	--	ND	--	ND	--	ND	--	ND	--

DATE	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- AZINON, TOTAL (UG/L)	DI- AZINON, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- ELDRIN TOTAL (UG/L)	DI- ELDRIN 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)	ETHION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
DEC 05...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MAR 07...	ND	--	ND	--	ND	--	ND	--	ND	--
MAY 24...	ND	--	ND	--	ND	--	ND	--	ND	--

DATE	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)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MALA- THION, TOTAL (UG/L)	MALA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)
DEC 05...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MAR 07...	ND	--	ND	--	ND	--	ND	--	ND	--
MAY 24...	ND	--	ND	--	ND	--	ND	--	ND	--

DATE	METHYL PARA- THION, TOTAL (UG/L)	METHYL PARA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METHYL TRI- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	PARA- THION, TOTAL (UG/L)	PARA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOX- APHENE, TOTAL (UG/L)	TOX- APHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TRI- THION, TOTAL (UG/L)	TRI- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
DEC 05...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MAR 07...	ND	--	ND	--	ND	--	ND	--	ND	--
MAY 24...	ND	--	ND	--	ND	--	ND	--	ND	--

ND NOT DETECTED

CHOPTANK RIVER BASIN

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS)	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUORUM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUORUM (MG/M2)
JUN 25...	4.49	4.96	1469	.320	.000
SEP 25...	.390	.470	19.8	4.04	1.67

DATE	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	DATE	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 25...	4	.22	100	MAY 24...	13	2.6	91
DEC 05...	23	8.1	93	JUN 25...	30	9.8	94
JAN 23...	19	47	100	JUL 25...	56	32	100
MAR 07...	55	208	94	AUG 28...	7	1.4	77
27...	6	3.6	100	SEP 25...	5	1.6	100
APR 24...	8	2.3	86				

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	157	155	150	124	99	67	109	102	102	103	94	122
2	155	---	157	128	102	65	112	106	104	106	115	---
3	158	155	153	102	112	---	106	111	108	100	92	126
4	152	152	144	87	109	79	105	112	102	108	89	129
5	150	151	135	94	111	83	102	112	95	121	108	125
6	153	153	137	107	114	86	99	117	94	121	111	104
7	152	155	137	112	118	73	101	117	91	120	119	89
8	154	158	132	122	113	73	102	119	90	122	122	94
9	152	158	139	92	117	80	---	120	73	124	123	98
10	151	155	134	91	120	88	107	122	92	124	119	108
11	151	155	132	98	125	---	102	122	99	121	132	114
12	151	152	136	112	129	90	102	123	80	126	129	117
13	153	159	139	115	127	90	106	129	---	125	105	118
14	155	159	141	115	126	88	105	120	85	122	99	120
15	155	152	145	110	---	95	105	112	90	125	108	120
16	157	158	136	108	122	101	103	110	98	118	120	121
17	152	156	148	110	121	108	100	112	107	114	119	122
18	152	153	139	112	---	108	105	119	112	128	125	123
19	158	152	138	118	---	110	107	119	114	128	132	129
20	157	152	138	119	---	112	109	119	117	---	130	125
21	159	172	132	83	127	112	111	118	118	132	132	126
22	158	159	132	60	119	112	111	119	122	130	132	118
23	158	162	137	70	118	122	112	119	124	119	135	111
24	158	153	142	77	107	119	118	120	120	89	133	101
25	157	153	127	81	---	108	---	95	118	90	133	101
26	157	151	114	73	---	102	119	90	112	89	134	109
27	155	147	112	80	---	101	105	86	119	111	128	113
28	155	146	129	85	45	99	---	103	121	121	106	116
29	158	149	125	93	---	103	90	102	137	126	114	118
30	159	148	128	95	---	108	95	110	---	109	117	118
31	158	---	127	99	---	---	---	110	---	80	127	---
MEAN	155	154	136	99	113	96	105	113	105	115	119	115

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.5	11.5	6.5	4.5	1.5	3.5	15.0	19.0	21.0	19.5	25.0	24.0
2	17.0	10.0	6.0	9.0	.0	1.0	15.0	17.5	20.5	21.0	26.5	---
3	14.5	11.0	5.5	.5	.0	---	14.0	17.0	19.0	21.0	24.5	24.5
4	15.5	10.5	---	.5	.0	3.5	11.0	18.5	18.5	22.0	24.5	24.0
5	16.0	10.5	10.0	.0	.0	10.0	13.0	16.5	18.0	21.0	24.5	25.0
6	17.5	11.0	8.0	.5	.0	10.0	12.5	17.5	20.0	19.0	25.0	24.0
7	15.0	11.0	---	3.5	.0	10.0	10.5	19.0	22.0	18.0	25.0	24.0
8	13.0	12.0	8.5	6.5	.0	9.0	9.5	21.0	21.5	21.5	25.0	23.0
9	11.5	11.5	12.5	3.0	.0	8.0	---	23.0	22.5	21.5	25.0	20.5
10	10.5	10.0	7.0	.5	.0	9.5	11.5	24.0	23.5	21.0	24.0	19.0
11	12.5	12.5	6.0	.5	.0	---	13.0	24.5	20.5	21.0	25.0	21.0
12	12.0	12.0	.5	.0	.0	7.0	13.5	22.0	18.5	23.5	23.0	20.0
13	14.5	12.0	.5	.5	.0	8.0	12.0	21.0	---	24.5	19.0	22.0
14	16.5	13.0	2.5	4.0	---	8.5	11.5	19.5	19.0	24.0	19.5	22.0
15	13.5	13.5	3.0	1.5	---	9.0	12.5	18.0	19.0	24.0	21.0	21.0
16	11.0	11.5	4.5	.5	.0	6.0	11.0	20.0	19.0	26.0	19.0	19.5
17	12.5	---	5.0	1.5	.0	8.0	11.5	17.5	21.0	25.0	18.0	19.5
18	11.0	14.0	4.0	.5	.0	10.0	14.0	17.5	20.5	26.0	19.0	19.5
19	10.5	11.5	3.0	.0	---	10.0	15.0	18.0	21.0	24.5	20.0	19.5
20	11.5	8.5	3.0	.0	---	11.0	15.5	18.0	21.0	---	22.5	20.0
21	11.5	8.5	5.0	4.0	.0	11.0	14.0	18.0	20.0	23.5	21.5	18.0
22	11.5	9.0	4.5	5.0	4.0	13.0	15.0	18.0	20.0	23.0	21.5	18.0
23	14.0	9.5	3.0	3.0	4.0	14.5	17.0	18.0	23.5	24.5	21.5	19.0
24	12.5	10.0	3.5	4.5	---	13.5	16.0	19.5	20.5	24.0	22.5	18.5
25	11.0	8.0	5.5	6.0	---	13.0	---	19.0	19.5	23.5	25.5	17.5
26	13.5	7.0	4.5	4.0	---	11.0	18.5	18.5	20.0	25.0	24.5	17.0
27	14.5	4.5	3.0	3.0	---	8.5	17.0	18.0	19.5	26.0	25.0	17.5
28	12.0	5.5	.5	3.0	---	7.5	---	17.5	21.0	25.5	24.5	17.5
29	12.0	5.0	.0	3.0	---	9.5	17.0	17.5	20.5	25.0	24.5	19.0
30	11.0	5.5	.0	3.5	---	14.0	17.5	20.0	---	24.0	25.0	21.0
31	10.5	---	1.5	3.0	---	16.0	---	19.0	---	25.0	25.5	---
MEAN	13.0	10.0	4.5	2.5	.5	9.5	14.0	19.0	20.5	23.0	23.0	20.5

CHOPTANK RIVER BASIN

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

PHYTOPLANKTON ANALYSES, AUGUST 1978 TO SEPTEMBER 1978

DATE TIME	AUG 23, 78 1000	SEP 25, 78 1230
TOTAL CELLS/ML	8600	5
DIVERSITY: DIVISION	1.4	0.9
..CLASS	1.4	0.9
..ORDER	1.6	1.6
...FAMILY	2.2	1.6
....GENUS	2.7	1.6

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)				
..CHLOROPHYCEAE				
...CHLOROCOCCALES				
....COELASTRACEAE				
.....COELASTRUM	2400#	29	--	-
.....OOCYSTACEAE				
.....SELENASTRUM	--	-	2#	33
...SCENEDESMACEAE				
....CRUCIGENIA	610	7	--	-
....SCENEDESMUS	920	11	--	-
....TETRASTRUM	610	7	--	-
CHRYSOPHYTA				
..BACILLARIOPHYCEAE				
...CENTRALES				
....COSCINODISCACEAE				
.....CYCLOTELLA	2100#	25	2#	33
....STEPHANODISCUS	150	2	--	-
..PENNALES				
...FRAGILARIACEAE				
....FRAGILARIA	150	2	--	-
....NAVICULACEAE				
.....NAVICULA	--	-	2#	33
....NITZSCHIACEAE				
.....NITZSCHIA	310	4	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)				
..CYANOPHYCEAE				
...HORMOGONALES				
....OSCILLATORIACEAE				
.....OSCILLATORIA	1200	14	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	DEC 5,78 1000	MAR 27,79 1000	MAY 24,79 1015	JUN 25,79 1100	JUL 25,79 1050	SEP 25,79 1300
TOTAL CELLS/ML	1900	740	720	26	600	790
DIVERSITY: DIVISION	1.6	1.7	1.0	0.0	0.3	1.0
..CLASS	1.7	1.8	1.0	0.0	0.3	1.0
..ORDER	1.7	2.4	1.2	0.0	0.3	1.8
...FAMILY	2.8	3.0	1.2	0.0	0.3	1.9
....GENUS	3.1	3.0	1.4	0.0	0.3	2.0

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)												
..CHLOROPHYCEAE												
...CHLOROCOCCALES												
....OOCYSTACEAE												
....ANKISTRODESMUS	22	1	13	2	--	--	--	--	--	--	14	2
....DICTYOSPHAERIUM	220	11	--	--	--	--	--	--	--	--	--	--
....TREUBANIA	--	--	--	--	--	--	--	--	--	--	14	2
....SCENEDESMACEAE												
....CRUCIGENIA	--	--	--	--	100	14	--	--	--	--	--	--
....SCENEDESMUS	310#	16	13	2	52	7	--	--	--	--	57	7
..VOLVOCALES												
...CHLAMYDOMONADACEAE												
....CHLAMYDOMONAS	--	--	280#	37	--	--	--	--	--	--	--	--
..ZYGNEMATALES												
...DESMIDIACEAE												
....STAUROSTRUM	--	--	13	2	--	--	--	--	--	--	--	--
CHRYSOPHYTA												
..BACILLARIOPHYCEAE												
...CENTRALES												
...COSCINODISCACEAE												
....CYCLOITELLA	--	--	82	11	--	--	--	--	--	--	43	5
....STEPHANODISCUS	--	--	--	--	13	2	--	--	--	--	--	--
..PENNALES												
...ACHNANTHACEAE												
....ACHNANTHES	22	1	--	--	--	--	--	--	--	--	--	--
...CYMBELLACEAE												
....AMPHOMA	22	1	--	--	--	--	--	--	--	--	--	--
...EUNOTIACEAE												
....EUNOTIA	22	1	--	--	--	--	--	--	--	--	--	--
...FRAGILARIACEAE												
....ASTERIONELLA	150	8	--	--	--	--	--	--	--	--	--	--
...FRAGILARIA	44	2	6	1	--	--	--	--	--	--	--	--
...SYNEDRA	180	9	--	--	--	--	--	--	--	--	--	--
...GOMPHONEMACEAE												
....GOMPHONEMA	44	2	44	6	--	--	--	--	--	--	--	--
...MERIDIUMACEAE												
....MERIDIUM	--	--	6	1	--	--	--	--	--	--	--	--
...NAVICULACEAE												
....GYROSIGMA	22	1	--	--	--	--	--	--	--	--	--	--
...NAVICULA	110	6	19	3	--	--	--	--	--	--	--	--
...NITZSCHACEAE												
....NITZSCHIA	110	6	110#	15	26	4	--	--	26	4	14	2
...SURIRELLACEAE												
....SURIRELLA	--	--	13	2	--	--	--	--	--	--	--	--
...TABELLARIACEAE												
....TABELLARIA	--	--	6	1	--	--	--	--	--	--	--	--
..CHRYSOPHYCEAE												
...CHRYSONOMADALES												
....MALLONOMADACEAE												
....MALLONOMAS	--	--	6	1	--	--	--	--	--	--	--	--
...OCHROMONADACEAE												
....DINOBRYON	22	1	--	--	--	--	--	--	--	--	--	--
....OCHROMONAS	--	--	6	1	--	--	--	--	--	--	--	--
CRYPTOPHYTA (CRYPTOMONADS)												
..CRYPTOPHYCEAE												
...CRYPTOMONADALES												
....CRYPTOMONADACEAE												
....CRYPTOMONAS	--	--	69	9	--	--	--	--	--	--	--	--

Continued

CHOPTANK RIVER BASIN

01491000 CHOPTANK RIVER NEAR GREENSBORO, MD--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)												
..CYANOPHYCEAE												
...CHROOCOCCALES												
...CHROOCOCCACEAE												
....ANACYSTIS	--	-	13	2	13	2	26#100	--	-		340#	44
...HORMOGONALES												
...NOSTOCACEAE												
....ANABAENA	--	-	--	-	--	-	--	-	--	-	290#	36
...OSCILLATORIACEAE												
....OSCILLATORIA	610#	32	--	-	520#	71	--	-	580#	94	--	-
EUGLENOPHYTA (EUGLENOIDS)												
..EUGLENOPHYCEAE												
...EUGLENALES												
....EUGLENACEAE												
....TRACHELOMONAS	22	1	44	6	--	-	--	-	--	-	14	2

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

CHOPTANK RIVER BASIN

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01492000 BEAVERDAM BRANCH AT MATTHEWS, MD

LOCATION.--Lat 38°48'41", long 75°58'15", Talbot County, Hydrologic Unit 01060005, on left bank 50 ft (15 m) upstream from bridge on State Highway 328, 1 mi (2 km) west of Matthews, 1.2 mi (1.9 km) upstream from mouth, and 6 mi (10 km) northeast of Easton.

DRAINAGE AREA.--5.85 mi² (15.15 km²).

PERIOD OF RECORD.--July 1950 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 2.33 ft (0.710 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--29 years, 6.90 ft³/s (0.195 m³/s), 16.02 in/yr (407 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,200 ft³/s (62.3 m³/s) Sept. 12, 1960, gage height, 10.24 ft (3.121 m), from high-water mark in gage shelter, from rating curve extended above 440 ft³/s (12.5 m³/s) on basis of contracted-opening measurement at gage height 7.15 ft (2.179 m); no flow at times during many years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 120 ft³/s (3.3 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Jan. 2	2015	141	3.99	2.96	0.902	May 24	2400	243	6.88	3.83	1.167
Jan. 21	0800	174	4.93	3.27	0.997	Aug. 2	2345	259	7.33	3.95	1.204
Jan. 24	1730	157	4.45	3.12	0.951	Aug. 11	2045	219	6.20	3.64	1.109
Feb. 25	0500	*674	19.1	5.97	1.820	Aug. 26	0400	140	3.96	2.95	0.899
Feb. 26	0300	552	15.6	5.49	1.673	Aug. 28	0315	160	4.53	3.13	0.954
Mar. 6	1715	184	5.21	3.36	1.024	Sept. 6	0800	180	5.10	3.31	1.009

Minimum discharge, 0.22 ft³/s (0.006 m³/s) Oct. 9, gage height, 1.13 ft (0.344 m).

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	.26	.45	2.2	6.2	7.0	33	7.3	3.6	28	21	.40	3.2
2	.26	.50	1.5	66	5.9	23	6.9	3.1	7.2	4.9	13	2.8
3	.22	.52	1.3	62	6.3	14	20	3.0	5.2	2.8	51	2.6
4	.22	.51	6.6	8.1	6.0	12	23	3.1	47	2.1	3.8	2.9
5	.38	.66	41	6.2	4.9	12	17	3.5	19	2.2	1.7	8.5
6	.45	.59	5.3	6.6	4.2	96	7.7	2.7	6.7	1.7	1.1	107
7	.22	.51	2.9	27	4.4	62	5.8	2.4	4.6	1.4	.87	12
8	.18	.49	2.4	81	4.9	24	5.4	2.2	3.5	1.2	.74	5.5
9	.14	.45	25	23	4.6	14	8.2	2.0	2.9	1.1	.72	4.0
10	.18	.47	22	8.1	4.0	11	9.7	1.9	2.5	1.0	1.3	3.5
11	.18	.55	4.1	6.2	3.9	61	6.1	1.8	50	.96	45	3.0
12	.18	.57	3.1	5.6	3.9	23	5.8	1.9	16	.87	87	2.7
13	.22	.52	2.8	12	3.9	12	5.4	3.0	5.2	1.0	16	2.5
14	.18	.52	2.5	19	3.8	12	11	12	3.6	1.9	4.4	3.5
15	.14	.56	2.3	7.8	3.8	10	7.3	3.5	2.9	1.3	2.4	4.7
16	.26	.79	2.1	5.9	3.8	7.7	5.5	2.3	2.5	.96	1.9	2.4
17	.45	1.0	2.3	5.8	3.7	7.7	5.1	1.8	3.7	.82	1.6	2.1
18	.38	1.3	2.0	5.5	3.7	7.5	4.2	2.1	3.1	.79	1.5	2.0
19	.38	1.0	1.9	3.8	3.7	6.9	4.0	4.2	2.3	.75	1.7	1.9
20	.38	.79	2.2	15	3.8	6.9	3.7	2.6	2.0	.74	1.3	1.7
21	.32	.76	6.6	141	4.1	6.5	3.7	2.1	1.9	1.1	7.2	1.8
22	.26	.76	3.4	61	8.7	6.1	3.7	2.1	2.0	.95	5.1	56
23	.25	.72	2.5	14	18	6.1	3.7	3.1	1.7	.82	7.8	23
24	.37	1.2	13	86	130	41	3.7	35	23	.81	8.7	7.1
25	.39	1.0	59	72	461	22	3.8	85	4.2	.78	6.2	5.0
26	.40	.82	7.0	16	300	9.2	10	8.1	2.3	.69	64	4.7
27	.60	3.0	4.6	9.2	82	6.9	17	4.6	1.9	.58	17	3.9
28	.49	4.0	3.4	14	52	6.1	6.6	3.5	1.7	.44	73	3.4
29	.39	2.0	3.0	18	---	6.1	5.1	3.7	1.5	.43	11	3.5
30	.35	5.3	2.8	8.6	---	5.8	4.1	24	3.4	.47	6.1	3.6
31	.38	---	3.7	7.7	---	6.1	---	5.4	---	.50	4.2	---
TOTAL	9.46	32.31	244.5	828.3	1146.0	577.6	230.5	239.3	261.5	57.06	447.73	290.5
MEAN	.31	1.08	7.89	26.7	40.9	18.6	7.68	7.72	8.72	1.84	14.4	9.68
MAX	.60	5.3	59	141	461	96	23	85	50	21	87	107
MIN	.14	.45	1.3	3.8	3.7	5.8	3.7	1.8	1.5	.43	.40	1.7
CFSM	.05	.19	1.35	4.56	6.99	3.18	1.31	1.32	1.49	.32	2.46	1.66
IN.	.06	.21	1.55	5.27	7.29	3.67	1.47	1.52	1.66	.36	2.85	1.85

CAL YR 1978 TOTAL 3549.16 MEAN 9.72 MAX 226 MIN .14 CFSM 1.66 IN 22.57
WTR YR 1979 TOTAL 4364.76 MEAN 12.0 MAX 461 MIN .14 CFSM 2.05 IN 27.75

CHESTER RIVER BASIN

01493000 UNICORN BRANCH NEAR MILLINGTON, MD

LOCATION.--Lat 39°14'59", long 75°51'40", Queen Annes County, Hydrologic Unit 02060002, on right bank 20 ft (6 m) upstream from bridge on State Highway 313, 0.9 mi (1.4 km) upstream from mouth, and 1.4 mi (2.3 km) southwest of Millington.

DRAINAGE AREA.--22.3 mi² (57.8 km²).

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

REVISED RECORDS.--WSP 1382: 1952(P).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 3.57 ft (1.088 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. Occasional regulation at low flow by fish hatchery above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--31 years, 24.9 ft³/s (0.705 m³/s), 15.16 in/yr (385 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,060 ft³/s (30.0 m³/s) Sept. 12, 1960, gage height, 7.17 ft (2.185 m); no flow for part of each day June 13, 14, 1965, caused by regulation at Unicorn Lake Dam.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 180 ft³/s (5.1 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	1930 *	392 11.1	4.71 1.436	Feb. 26	1130	*697 19.7	5.83 1.777
Jan. 25	0730	249 7.05	4.14 1.262				

Minimum discharge, 1.3 ft³/s (0.037 m³/s) Dec. 20, gage height, 1.64 ft (0.500 m).

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	6.0	9.0	11	18	45	138	36	27	28	40	14	12
2	6.4	9.1	9.8	47	39	104	36	24	32	21	14	11
3	6.0	9.5	9.8	106	37	85	39	23	30	16	14	12
4	6.4	9.5	36	59	34	73	45	22	70	15	14	11
5	7.0	10	42	35	34	67	51	22	91	16	13	14
6	7.0	10	43	30	32	77	44	21	46	14	12	52
7	6.6	9.4	43	39	32	137	37	20	30	13	12	46
8	6.2	9.2	33	107	31	92	34	19	24	13	11	19
9	5.8	9.1	23	114	28	73	39	18	21	12	12	15
10	5.6	9.7	22	60	28	62	56	18	20	12	12	14
11	5.4	10	22	44	28	79	46	17	32	12	29	13
12	5.4	10	21	41	27	90	39	18	45	12	50	13
13	5.4	10	20	40	26	67	37	20	28	15	36	12
14	5.4	10	20	40	26	60	43	34	21	21	20	12
15	5.2	10	17	41	26	56	49	28	18	65	16	12
16	5.0	11	13	41	25	52	41	21	17	23	14	12
17	9.0	11	13	41	24	48	36	19	17	16	13	12
18	9.0	12	12	40	23	46	32	18	18	14	12	11
19	8.7	10	7.7	38	23	41	30	22	16	14	15	11
20	8.5	9.5	1.5	39	23	42	28	20	16	14	14	10
21	8.2	9.0	8.4	227	24	46	26	19	15	14	12	12
22	8.0	8.5	15	270	26	25	25	18	15	14	13	62
23	8.0	8.7	15	117	30	34	24	18	15	20	12	46
24	7.8	9.0	15	91	57	44	23	28	17	78	12	27
25	8.4	8.5	35	209	345	58	24	50	15	31	15	19
26	8.8	8.4	36	121	631	48	27	41	14	19	35	17
27	10	11	21	78	410	41	58	26	13	16	27	15
28	9.5	12	18	65	200	38	52	21	13	15	19	15
29	9.0	11	16	63	---	36	39	19	15	15	16	33
30	9.3	14	15	60	---	36	32	19	15	16	13	51
31	9.2	---	15	51	---	34	---	20	---	14	12	---
TOTAL	226.2	298.1	629.2	2372	2314	1929	1128	710	767	630	533	621
MEAN	7.30	9.94	20.3	76.5	82.6	62.2	37.6	22.9	25.6	20.3	17.2	20.7
MAX	10	14	43	270	631	138	58	50	91	78	50	62
MIN	5.0	8.4	1.5	18	23	25	17	13	12	12	11	10
CFSM	.33	.45	.91	3.43	3.70	2.79	1.69	1.03	1.15	.91	.77	.93
IN.	.38	.50	1.05	3.96	3.86	3.22	1.88	1.18	1.28	1.05	.89	1.04

CAL YR 1978	TOTAL	11332.0	MEAN	31.0	MAX	461	MIN	1.5	CFSM	1.39	IN	18.90
WTR YR 1979	TOTAL	12157.5	MEAN	33.3	MAX	631	MIN	1.5	CFSM	1.49	IN	20.28

01493500 MORGAN CREEK NEAR KENNEDYVILLE, MD

LOCATION.--Lat 39°16'48", long 76°00'54", Kent County, Hydrologic Unit 02060002, on right bank 200 ft (61 m) upstream from highway bridge, 2 mi (3 km) southwest of Kennedyville, and 4.5 mi (7.2 km) upstream from mouth.

DRAINAGE AREA.--12.7 mi² (32.9 km²).

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1552: 1952, 1953(P), 1954(M), 1955, 1956-57(M). WDR MD-DE-76-1: Drainage area.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 15 ft (4.6 m).

REMARKS.--Water-discharge records good below 50 ft³/s (1.42 m³/s) and fair above. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--28 years, 10.7 ft³/s (0.303 m³/s), 11.44 in/yr (291 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,500 ft³/s (212 m³/s) June 22, 1972, gage height, 13.07 ft (3.984 m), from rating curve extended above 590 ft³/s (16.7 m³/s) on basis of Type IV culvert and flow-over-road measurement of peak flow; minimum, 0.60 ft³/s (0.017 m³/s) Aug. 28, 29, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 200 ft³/s (5.6 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	0815	473 13.4	6.24 1.902	Feb. 26	0515	*876 24.8	7.64 2.329

Minimum daily discharge, 3.2 ft³/s (0.091 m³/s) Oct. 9.

REVISIONS.--The maximum discharge for the water year 1961 has been revised to 625 ft³/s (17.7 m³/s) June 15, 1961, gage height, 6.50 ft (1.981 m), superseding figure published in WSP 1672.

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	4.0	4.4	6.7	15	8.8	18	10	6.8	18	48	5.2	5.0
2	4.0	4.4	5.3	64	7.7	15	12	6.3	15	29	5.2	5.5
3	3.6	4.4	5.0	67	7.9	14	12	6.6	25	8.2	13	5.6
4	4.4	4.5	23	12	8.9	13	12	7.0	79	7.1	85	5.2
5	4.9	5.2	29	8.1	7.5	17	13	7.3	23	8.6	17	7.4
6	4.4	4.8	12	8.3	6.0	24	9.5	6.5	12	6.3	6.1	93
7	3.6	4.8	6.3	19	6.6	25	8.2	6.3	8.3	5.6	4.9	22
8	3.6	4.8	6.0	105	8.6	15	8.3	6.3	31	5.3	4.5	7.0
9	3.2	4.3	17	35	8.9	12	14	5.9	11	5.3	4.5	5.3
10	3.6	4.1	24	11	7.4	11	19	5.8	6.7	4.9	4.4	4.8
11	3.6	4.4	8.0	7.9	6.6	25	10	5.8	12	4.8	4.8	4.8
12	3.6	4.4	6.2	7.0	6.2	18	9.4	7.4	12	4.8	13	4.7
13	4.0	4.4	5.8	9.3	6.0	12	9.7	16	6.5	5.2	14	4.4
14	4.0	4.4	5.5	15	6.4	12	15	28	5.8	7.2	7.2	5.8
15	4.0	4.5	5.2	9.7	6.8	11	12	9.9	5.8	11	5.8	6.3
16	4.0	5.5	5.3	7.7	6.8	9.1	9.7	7.3	5.3	6.1	5.2	4.7
17	5.8	6.0	5.6	7.3	6.6	9.7	8.8	6.2	7.0	5.5	4.9	4.4
18	4.4	8.4	5.2	6.8	6.0	9.9	8.5	6.9	7.1	5.1	5.3	4.6
19	4.4	5.9	5.2	5.4	5.6	9.3	8.1	9.7	6.0	5.3	6.8	4.7
20	4.4	4.5	5.6	13	5.5	9.3	7.6	7.7	5.8	5.3	6.1	4.4
21	4.0	4.4	9.5	295	7.5	9.3	7.5	7.5	5.6	6.0	6.1	5.1
22	4.0	4.4	6.5	54	12	9.3	7.5	7.5	5.3	5.6	6.4	69
23	3.6	4.7	5.3	15	15	9.3	7.7	7.8	5.5	8.1	5.9	60
24	3.9	5.7	8.0	64	51	15	7.5	17	7.2	62	7.1	16
25	4.0	4.6	50	85	487	14	7.9	16	6.0	13	13	7.4
26	4.0	4.4	14	19	507	9.8	9.8	12	5.3	6.1	48	6.9
27	5.1	7.8	6.6	12	73	8.7	18	8.5	4.8	5.3	12	6.4
28	5.8	11	5.0	25	26	8.7	13	6.9	4.9	4.9	11	6.7
29	6.3	7.2	4.7	14	---	8.9	8.7	6.9	7.0	5.3	6.7	30
30	4.1	12	4.7	11	---	9.3	7.5	6.7	6.9	5.8	7.7	19
31	4.3	---	7.7	9.7	---	8.9	---	6.5	---	5.4	6.0	---
TOTAL	138.6	164.3	313.9	1037.2	1319.3	400.5	311.9	273.0	360.8	316.1	352.8	436.1
MEAN	4.21	5.48	10.1	33.5	47.1	12.9	10.4	8.81	12.0	10.2	11.4	14.5
MAX	6.3	12	50	295	507	25	19	28	79	62	85	93
MIN	3.2	4.1	4.7	5.4	5.5	8.7	7.5	5.8	4.8	4.8	4.4	4.4
CFSM	.33	.43	.80	2.64	3.71	1.02	.82	.69	.95	.80	.90	1.14
IN.	.38	.48	.92	3.04	3.86	1.17	.91	.80	1.06	.93	1.03	1.28

CAL YR 1978	TOTAL	4538.5	MEAN 12.4	MAX 635	MIN 2.9	CFSM .98	IN 13.29
WTR YR 1979	TOTAL	5416.5	MEAN 14.8	MAX 507	MIN 3.2	CFSM 1.17	IN 15.86

CHESTER RIVER BASIN

01493500 MORGAN CREEK NEAR KENNEDYVILLE, MD--Continued

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT										
24...	0900	4.2	130	7.0	17.0	11.0	30	10.0	260	190
DEC										
06...	1200	14	160	7.6	13.0	9.5	150	10.4	K50000	K60000
JAN										
23...	1320	16	110	6.5	4.0	.0	40	12.2	360	550
MAR										
06...	0930	81	130	6.7	13.0	12.5	55	8.6	420	1000
28...	1605	8.8	140	6.3	14.0	12.0	5	9.0	K40000	K35000
APR										
24...	1000	7.8	--	6.4	24.0	17.5	55	8.3	370	98
MAY										
24...	1205	19	125	7.1	25.0	19.5	200	6.4	K8400	K8900
JUN										
25...	1300	5.6	125	7.4	19.0	18.0	30	8.2	190	400
JUL										
25...	1230	10	130	7.6	29.5	23.0	15	6.8	4600	5100
AUG										
28...	1230	11	125	7.6	28.0	22.0	20	5.9	1900	3500
SEP										
26...	1000	7.2	120	7.5	19.0	--	10	17.5	330	760

DATE	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)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HC03)	ALKA- LINITY (MG/L AS CAC03)
OCT										
24...	44	7	12	3.3	5.0	18	.3	4.1	44	36
DEC										
06...	44	13	11	4.1	5.2	17	.3	10	38	31
JAN										
23...	31	12	8.0	2.7	3.2	16	.3	5.4	23	19
MAR										
06...	39	16	10	3.3	4.3	17	.3	4.5	28	23
28...	38	14	9.8	3.2	4.7	20	.3	3.1	29	24
APR										
24...	41	12	11	3.4	5.9	22	.4	2.8	36	30
MAY										
24...	41	13	11	3.2	3.9	15	.3	4.5	34	28
JUN										
25...	42	7	11	3.5	5.0	19	.3	3.0	42	34
JUL										
25...	44	2	12	3.4	4.3	16	.3	3.7	51	42
AUG										
28...	41	6	11	3.3	4.5	16	.3	7.0	43	35
SEP										
26...	37	--	9.7	3.1	4.2	17	.3	7.2	--	--

CHESTER RIVER BASIN

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01493500 MORGAN CREEK NEAR KENNEDYVILLE, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)
UCT									
24...	7.0	2.7	10	.1	11	69	70	.09	.78
DEC									
06...	1.5	12	15	.1	8.9	104	85	.14	3.93
JAN									
23...	12	8.4	7.8	.1	6.9	66	54	.09	2.89
MAR									
06...	8.9	8.7	9.9	.1	8.5	83	63	.11	18.2
28...	23	6.3	12	.1	6.0	75	60	.10	1.79
APR									
24...	23	3.0	9.7	.1	7.3	79	61	.11	1.66
MAY									
24...	4.3	5.0	8.0	.2	8.4	83	61	.11	4.26
JUN									
25...	2.7	3.6	9.9	.1	12	--	69	.08	.85
JUL									
25...	2.1	4.1	9.4	.1	10	86	72	.12	2.39
AUG									
28...	1.7	4.9	11	.2	10	99	74	.13	3.05
SEP									
26...	--	5.4	10	.1	10	77	50	.10	1.51
DATE	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)
OCT									
24...	1.1	.08	.24	1000	720	280	80	0	90
DEC									
06...	.18	.41	1.2	2600	2400	230	120	10	110
JAN									
23...	1.7	.23	.71	2000	1900	130	150	30	120
MAR									
06...	1.7	.14	.43	--	--	80	--	--	80
28...	1.8	.07	.21	1300	850	450	180	10	170
APR									
24...	1.4	.08	.25	1800	1700	90	240	0	240
MAY									
24...	2.2	.33	1.0	6700	6600	100	470	200	270
JUN									
25...	1.5	.06	.18	1500	1400	110	80	0	90
JUL									
25...	1.3	.07	.21	1500	1400	90	100	0	110
AUG									
28...	1.2	.23	.71	2400	1900	460	200	30	170
SEP									
26...	1.4	.11	.34	1500	1400	50	80	0	80

01495000 BIG ELK CREEK AT ELK MILLS, MD

LOCATION.--Lat 39°39'26", long 75°49'20", Cecil County, Hydrologic Unit 02060002, on right bank 100 ft (30 m) downstream from highway bridge at Elk Mills, 3.5 mi (5.6 km) north of Elkton, and 7 mi (11 km) upstream from confluence with Little Elk Creek.

DRAINAGE AREA.--52.6 mi² (136.2 km²).

PERIOD OF RECORD.--April 1932 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 1432: 1932-33, 1934(M), 1935, 1936(M), 1938, 1939-40(M), 1942(M), 1943-51, 1952-53(P).

GAGE.--Water-stage recorder. Datum of gage is 68.5 ft (20.88 m) National Geodetic Vertical Datum of 1929. Apr. 10, 1932, to May 16, 1946, nonrecording gage at bridge 100 ft (30 m) upstream at same datum.

REMARKS.--Water-discharge records good. Slight diurnal fluctuation caused by mills above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--47 years, 70.3 ft³/s (1.991 m³/s), 18.15 in/yr (461 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,600 ft³/s (300 m³/s) July 5, 1937, gage height, 14.5 ft (4.42 m), from floodmarks, from rating curve extended above 1,700 ft³/s (48.1 m³/s) on basis of velocity-area and conveyance studies; minimum, 4.5 ft³/s (0.13 m³/s) Jan. 21, 1955, (result of freezeup); minimum daily, 4.8 ft³/s (0.14 m³/s) Sept. 8-10, 1966; minimum gage height observed, 2.09 ft (0.637 m) Sept. 19, 22-24, 1932.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, about 19 ft (5.8 m) in June 1884, from information by local residents.

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)
Jan. 21	0630	3890 110	8.99 2.740	Feb. 26	0330	3070 86.9	8.07 2.460
Jan. 24	1830	*4250 120	9.36 2.853	Sept. 6	0830	1910 54.1	6.62 2.018
Feb. 24	2345	3300 93.5	8.34 2.542	Sept. 22	0715	2860 81.0	7.82 2.384

Minimum discharge, 19 ft³/s (0.54 m³/s) Aug. 11.

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	33	38	58	97	87	147	56	54	55	69	25	36
2	33	37	46	459	84	134	61	51	54	42	28	33
3	31	37	42	323	83	116	66	51	99	39	31	31
4	33	37	98	103	76	104	73	52	208	38	62	30
5	35	38	184	84	71	125	83	51	106	45	27	36
6	38	37	73	78	81	200	62	47	88	35	24	853
7	33	37	56	123	81	131	54	46	80	33	22	106
8	31	37	55	782	80	102	53	45	74	32	22	63
9	31	38	418	238	70	91	91	44	59	31	21	50
10	31	37	255	130	60	86	134	42	56	29	20	45
11	31	38	91	105	56	152	72	43	68	31	22	42
12	30	37	69	99	52	96	69	48	64	29	100	41
13	31	38	61	110	56	84	67	83	51	28	96	39
14	39	38	56	161	61	84	105	101	45	34	34	43
15	45	38	50	105	66	78	82	60	43	32	28	88
16	34	46	49	85	58	71	69	52	42	32	26	40
17	52	49	50	76	50	71	64	45	41	27	24	37
18	40	95	49	72	58	70	59	46	48	26	26	35
19	36	46	47	78	65	67	56	56	40	26	34	35
20	36	37	47	120	78	65	54	51	38	24	28	33
21	34	35	84	2060	90	63	53	47	37	27	27	41
22	34	34	60	279	110	61	52	46	38	32	28	779
23	34	34	50	126	120	60	52	49	39	26	26	124
24	36	44	69	1690	985	76	50	332	62	27	47	73
25	36	38	392	449	1790	88	73	135	41	25	35	59
26	38	35	104	169	1460	68	78	83	37	25	59	54
27	46	44	74	133	291	61	121	67	35	25	80	48
28	44	60	57	121	176	58	93	61	34	23	140	46
29	38	64	53	116	---	59	68	57	39	24	46	54
30	38	120	49	108	---	58	58	55	38	30	150	51
31	38	---	58	94	---	57	---	51	---	27	47	---
TOTAL	1119	1343	2904	8773	6395	2783	2128	2051	1759	973	1385	3045
MEAN	36.1	44.8	93.7	283	228	89.8	70.9	66.2	58.6	31.4	44.7	102
MAX	52	120	418	2060	1790	200	134	332	208	69	150	853
MIN	30	34	42	72	50	57	50	42	34	23	20	30
CFSM	.69	.85	1.78	5.38	4.34	1.71	1.35	1.26	1.11	.60	.85	1.94
IN.	.79	.95	2.05	6.20	4.52	1.97	1.50	1.45	1.24	.69	.98	2.15

CAL YR 1978 TOTAL 34092 MEAN 93.4 MAX 2690 MIN 30 CFSM 1.78 IN 24.11
WTR YR 1979 TOTAL 34658 MEAN 95.0 MAX 2060 MIN 20 CFSM 1.81 IN 24.51

01496000 NORTHEAST CREEK AT LESLIE, MD

LOCATION.--Lat 39°37'38", long 75°56'40", Cecil County, Hydrologic Unit 02060002, on left bank at downstream side of highway bridge, 0.7 mi (1.1 km) northeast of Leslie, 1.5 mi (2.4 km) southeast of Bay View, and 1.7 mi (2.7 km) upstream from confluence with Little Northeast Creek.

DRAINAGE AREA.--24.3 mi² (62.9 km²).

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

REVISED RECORDS.--WSP 1232: 1949-51.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 115.0 ft (35.05 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good. Slight diurnal fluctuation at low flow caused by powerplant above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--31 years, 36.3 ft³/s (1.028 m³/s), 20.29 in/yr (515 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,800 ft³/s (136 m³/s) June 22, 1972, gage height, 8.41 ft (2.563 m), from rating curve extended above 2,300 ft³/s (65.1 m³/s) on basis of contracted-opening measurement at gage height 7.74 ft (2.359 m); minimum, 1.2 ft³/s (0.034 m³/s) Sept. 8, 9, 10, 11, 12, 13, 14, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft³/s (22 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	0945	2010 56.9	5.57 1.698	Sept. 6	0315	984 27.9	4.27 1.301
Jan. 24	2130	1730 49.0	5.23 1.594	Sept. 6	1215	1400 39.6	4.88 1.487
Feb. 25	0630	1670 47.3	5.16 1.573	Sept. 22	0830	*2190 62.0	5.81 1.771
Feb. 26	0745	1520 43.0	4.96 1.512				

Minimum discharge, 6.2 ft³/s (0.18 m³/s) Oct. 14.

REVISIONS.--Revised daily discharges, in cubic feet per second, for the period September 1-30, 1974, are given below. These figures supersede those published in the report for 1978.

Sept. 1.....	18	Sept. 11.....	8.8	Sept. 21.....	10
2.....	14	12.....	9.2	22.....	10
3.....	12	13.....	20	23.....	11
4.....	11	14.....	12	24.....	10
5.....	10	15.....	9.6	25.....	9.6
6.....	10	16.....	9.6	26.....	9.2
7.....	9.2	17.....	9.2	27.....	9.2
8.....	9.2	18.....	9.2	28.....	9.2
9.....	9.2	19.....	18	29.....	8.8
10.....	8.8	20.....	12	30.....	8.4
Month	Total	Mean	Max	Min	
September 1978	324.4	10.8	20	8.4	
Wtr Yr 1978	19915.9	54.6	1860	7.1	

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	8.8	11	27	60	39	90	21	25	27	22	8.3	12
2	8.8	11	18	416	32	78	23	23	24	15	8.1	11
3	8.8	10	15	260	30	58	27	23	41	13	8.4	10
4	8.8	10	66	43	30	47	34	23	211	13	12	10
5	9.6	11	185	32	31	85	47	23	50	18	8.9	33
6	12	11	35	29	38	174	28	21	32	13	8.4	830
7	11	10	22	66	34	71	21	20	26	11	7.5	51
8	9.6	10	21	606	34	42	20	19	22	11	7.3	21
9	8.8	10	333	104	31	35	58	19	20	10	7.0	17
10	8.8	10	210	51	29	32	154	18	19	10	6.8	15
11	8.4	10	38	40	27	144	41	18	21	10	7.1	14
12	8.4	10	27	38	25	47	37	18	22	10	39	13
13	7.6	10	24	42	27	34	39	122	17	9.9	40	13
14	7.2	10	22	156	30	32	74	101	16	11	12	15
15	13	10	20	50	29	30	51	36	15	14	9.9	27
16	10	11	19	32	27	24	39	26	14	11	9.1	15
17	13	14	19	28	23	25	35	22	14	10	8.7	13
18	14	40	18	29	25	25	30	21	19	10	8.5	13
19	11	24	18	29	29	23	27	24	15	9.6	9.8	12
20	12	13	17	40	30	22	25	22	13	9.1	9.2	12
21	10	12	37	1360	31	22	25	21	12	9.4	8.3	20
22	10	12	28	261	70	21	24	21	13	10	8.8	825
23	11	12	21	56	109	22	24	22	14	9.5	14	82
24	10	16	37	631	441	30	23	164	15	11	59	31
25	11	15	389	543	1350	44	25	72	14	9.4	15	23
26	12	12	53	83	1200	28	29	36	12	8.9	23	20
27	13	15	32	61	265	23	88	27	12	8.8	19	19
28	14	31	24	55	121	21	53	25	12	8.4	57	19
29	13	35	24	64	---	21	35	23	12	8.7	17	26
30	12	77	23	72	---	21	28	22	12	10	21	21
31	11	---	23	45	---	21	---	21	---	9.0	14	---
TOTAL	326.6	493	1845	5382	4187	1392	1185	1078	766	343.7	492.1	2243
MEAN	10.5	16.4	59.5	174	150	44.9	39.5	34.8	25.5	11.1	15.9	74.8
MAX	14	77	389	1360	1350	174	154	164	211	22	59	830
MIN	7.2	10	15	28	23	21	20	18	12	8.4	6.8	10
CFSM	.43	.68	2.45	7.16	6.17	1.85	1.63	1.43	1.05	.46	.65	3.08
IN.	.50	.75	2.82	8.24	6.41	2.13	1.81	1.65	1.17	.53	.75	3.43

CAL YR 1978 TOTAL 17609.2 MEAN 48.2 MAX 1860 MIN 7.2 CFSM 1.98 IN 26.96
WTR YR 1979 TOTAL 19733.4 MEAN 54.1 MAX 1360 MIN 6.8 CFSM 2.23 IN 30.21

PRINCIPIO CREEK BASIN

01496200 PRINCIPIO CREEK NEAR PRINCIPIO FURNACE, MD

LOCATION.--Lat 39°37'34", long 76°02'27", Cecil County, Hydrologic Unit 02060002, on left bank, 55 ft (17 m) downstream from bridge on Belvedere Road, 3.5 mi (5.6 km) north of Principio Furnace, and 4.9 mi (7.9 km) upstream from mouth.

DRAINAGE AREA.--9.03 mi² (23.39 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 215 ft (65.5 m).

REMARKS.--Water-stage records good except those for February, which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--12 years, 14.1 ft³/s (0.399 m³/s), 21.20 in/yr (538 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,060 ft³/s (200 m³/s) Aug. 4, 1969, gage height, 9.26 ft (2.822 m), from rating curve extended above 170 ft³/s (4.81 m³/s) on basis of slope-area measurements at gage heights 8.89 ft (2.710 m) and 9.26 ft (2.822 m); minimum, 1.6 ft³/s (0.045 m³/s) Oct. 4, 5, 1968, July 17, 18, 1969.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 300 ft³/s (8.5 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 2	1300	303 8.58	4.10 1.250	Feb. 25	0030	623 17.6	5.22 1.591
Jan. 8	0045	360 10.2	4.32 1.317	Feb. 25	2145	505 14.3	4.85 1.478
Jan. 21	0300	1070 30.3	6.38 1.945	Feb. 26	0330	709 20.1	5.47 1.667
Jan. 21	1415	383 10.8	4.41 1.344	May 13	1545	394 11.2	4.45 1.356
Jan. 24	1130	720 20.4	5.50 1.676	Sept. 6	0400	866 24.5	5.89 1.795
Jan. 24	1630	542 15.3	4.97 1.515	Sept. 22	0145	*1150 32.6	6.56 1.999

Minimum discharge, 2.9 ft³/s (0.082 m³/s) Nov. 13, 14, 15.

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	3.5	3.4	6.0	17	11	8.7	11	12	8.8	9.4	6.5	4.9
2	3.5	3.4	5.1	14.0	10	9.5	11	12	7.9	6.1	6.3	4.8
3	3.4	3.3	4.9	23	10	12	12	12	14	5.5	6.5	4.7
4	3.8	3.4	20	11	10	13	14	12	48	6.4	6.9	4.5
5	3.9	3.4	36	9.3	9.8	25	17	12	13	6.8	6.0	22
6	5.1	3.4	8.1	9.4	10	25	13	12	11	5.3	5.5	248
7	3.5	3.3	6.6	41	9.9	17	12	12	9.5	5.0	5.4	11
8	3.4	3.2	7.0	154	10	14	12	13	8.6	5.1	4.9	7.7
9	3.4	3.1	107	16	9.0	13	29	11	8.1	5.2	5.0	6.4
10	3.4	3.1	18	12	8.0	13	32	12	7.7	5.4	5.0	5.9
11	3.4	3.1	9.1	10	6.8	34	14	12	8.8	5.5	4.8	5.7
12	3.5	3.1	8.0	10	6.2	14	14	12	7.9	5.5	13	5.4
13	3.6	2.9	7.5	35	6.6	13	14	68	7.2	5.5	9.8	5.5
14	5.4	2.9	6.8	30	7.2	13	21	23	7.0	7.3	5.2	10
15	4.1	2.9	6.5	12	7.8	12	15	11	7.2	5.6	4.7	7.5
16	3.5	3.4	6.3	10	6.5	11	13	9.1	7.1	4.6	4.5	5.4
17	4.2	3.1	6.3	9.7	5.8	12	13	8.1	6.9	4.4	4.4	5.2
18	3.6	6.3	6.0	8.7	5.6	12	13	8.2	7.2	4.3	4.7	5.1
19	3.7	4.5	5.8	8.0	5.8	12	13	8.4	6.5	4.3	5.6	5.0
20	3.6	3.9	6.0	64	6.2	12	13	7.6	6.2	4.1	5.0	4.7
21	3.5	3.9	11	446	7.0	12	14	7.5	6.0	4.9	4.7	46
22	3.5	3.7	7.1	22	8.0	12	14	7.3	6.4	4.5	5.0	162
23	3.5	4.0	6.4	14	20	12	14	7.8	7.4	4.5	20	13
24	3.4	5.0	27	235	208	14	14	36	6.2	5.5	9.7	5.6
25	3.5	3.9	72	42	348	15	15	15	6.0	4.5	5.6	4.3
26	3.7	3.8	11	17	208	12	16	9.7	5.8	4.8	7.5	3.9
27	4.3	6.0	8.8	15	19	11	25	8.6	5.8	5.1	7.9	3.6
28	3.8	8.7	8.0	14	11	11	18	8.1	7.5	5.3	10	3.7
29	3.6	7.7	7.4	20	---	11	14	7.7	6.7	6.1	6.1	5.6
30	3.5	16	6.8	14	---	11	13	7.3	6.8	7.0	11	3.9
31	3.5	---	8.4	12	---	11	---	6.9	---	6.5	5.8	---
TOTAL	115.3	131.8	460.9	1481.1	991.2	427.2	463	409.3	273.2	170.0	213.0	631.0
MEAN	3.72	4.39	14.9	47.8	35.4	13.8	15.4	13.2	9.11	5.48	6.87	21.0
MAX	5.4	16	107	446	348	34	32	68	48	9.4	20	248
MIN	3.4	2.9	4.9	8.0	5.6	8.7	11	6.9	5.8	4.1	4.4	3.6
CFSM	.41	.49	1.65	5.29	3.92	1.53	1.71	1.46	1.01	.61	.76	2.33
IN.	.47	.54	1.90	6.10	4.08	1.76	1.91	1.69	1.13	.70	.88	2.60

CAL YR 1978 TOTAL 5940.4 MEAN 16.3 MAX 595 MIN 2.9 CFSM 1.81 IN 24.47
WTR YR 1979 TOTAL 5767.0 MEAN 15.8 MAX 446 MIN 2.9 CFSM 1.75 IN 23.76

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD

LOCATION.--Lat 39°39'31", long 76°10'28", Harford County, Hydrologic Unit 02050306, at downstream side of Conowingo Dam, 1 mi (1.6 km) southwest of Conowingo, and 9.9 mi (15.9 km) upstream from mouth.

DRAINAGE AREA.--27,100 mi² (70,190 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 5.00 ft (1.524 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow regulated by Conowingo Reservoir beginning October 1928, usable capacity, 55,070,000,000 gal (208.4 hm³); dead storage, 45,290,000,000 gal (171.4 hm³). Records do not include a small infrequent diversion above station to augment municipal supply of city of Baltimore. Records of diversion available from Baltimore Department of Public Works.

AVERAGE DISCHARGE.--12 years, 44,820 ft³/s (1,269 m³/s), 22.46 in/yr (570 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,130,000 ft³/s (32,000 m³/s) June 24, 1972, gage height, 36.83 ft (11.226 m); minimum, 144 ft³/s (4.08 m³/s) Mar. 2, 1969, gage height, 6.28 ft (1.914 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 499,000 ft³/s (14,100 m³/s) Mar. 7, gage height, 28.04 ft (8.547 m); minimum, 737 ft³/s (20.9 m³/s) November 25, 26, gage height, 7.26 ft (2.213 m).

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	888	20700	24400	13600	77300	134000	56800	46400	77500	10600	17300	9170
2	9320	24500	10200	57500	64700	117000	64700	46900	62900	24100	17700	5270
3	12000	24200	910	121000	41700	106000	68100	41900	44900	24700	24000	5020
4	12200	2350	19500	235000	33300	101000	72900	44100	53400	2310	12500	17800
5	11700	1130	20900	195000	42500	129000	81600	35800	54900	23300	3890	28600
6	13600	16300	23400	135000	27700	320000	83400	19500	44900	21800	22300	48200
7	7250	18400	31000	100000	23900	462000	80300	43100	38000	3830	14300	60500
8	861	18200	40200	112000	23600	410000	66800	35600	35200	2680	14800	71300
9	7360	18000	33700	109000	29700	308000	69000	36400	25500	16800	14800	52500
10	11700	13200	34200	90000	22300	239000	68900	34600	15400	12700	14300	51200
11	14500	1920	53600	78700	1310	201000	75900	32900	32700	13100	2480	48000
12	11700	878	61500	65100	23100	180000	94800	24600	26800	13900	8780	36800
13	16000	13600	57900	44400	21000	154000	95000	19600	27200	13900	25200	33200
14	4130	15200	56400	36200	18200	131000	87500	32300	31300	3160	28700	18500
15	831	13600	51400	43800	18400	115000	83600	35700	27500	1940	28700	14600
16	10600	14500	32300	42800	18200	102000	83600	30100	11600	18800	27100	8010
17	20400	18900	12800	42600	14700	90900	82000	34500	9810	14000	25300	25800
18	16600	2170	32100	37800	6260	83700	81000	26700	23800	12200	4680	22800
19	21200	828	29600	41300	17300	82300	77300	13000	20200	16500	1740	19400
20	21500	18500	29500	18600	19000	73500	65600	11100	18700	13600	17400	20300
21	10200	20900	32400	47300	18100	67300	54400	26900	18600	7920	15100	31400
22	828	30200	31700	85900	21000	64100	39700	24600	19800	4060	15700	31600
23	13500	866	29100	68600	32100	60600	59900	25600	2630	16100	15400	19700
24	15800	16200	18100	93800	29600	57200	43400	31400	2370	15100	16900	40100
25	14100	13600	22700	266000	79200	54100	34800	52800	15300	15300	3880	29800
26	16600	3310	45900	259000	216000	82300	36900	77000	14200	16800	1140	27900
27	16400	26400	52500	207000	218000	119000	42700	92800	15600	18200	18100	25900
28	6100	24700	41900	172000	174000	121000	40400	98800	15000	1640	16700	23700
29	909	22900	37300	134000	---	104000	17600	104000	14800	1860	19800	7400
30	15600	18500	21100	101000	---	85200	45900	99600	4940	22300	25900	4520
31	18900	---	10200	83300	---	73400	---	82200	---	18900	25800	---
TOTAL	353277	434652	998410	3137300	1332170	4427600	1954500	1360500	805450	402100	500390	838990
MEAN	11400	14490	32210	101200	47580	142800	65150	43890	26850	12970	16140	27970
MAX	21500	30200	61500	266000	218000	462000	95000	104000	77500	24700	28700	71300
MIN	828	828	910	13600	1310	54100	17600	11100	2370	1640	1140	4520
CFSM	.42	.54	1.19	3.73	1.76	5.27	2.40	1.62	.99	.48	.60	1.03
IN.	.48	.60	1.37	4.31	1.83	6.08	2.68	1.87	1.11	.55	.69	1.15

CAL YR 1978 TOTAL 16712074 MEAN 45790 MAX 282000 MIN 828 CFSM 1.69 IN 22.94
WTR YR 1979 TOTAL 16545339 MEAN 45330 MAX 462000 MIN 828 CFSM 1.67 IN 22.71

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD, --

SPECIFIC CONDUCTANCE: June to September 1979.
WATER TEMPERATURES: June to September 1979.

REMARKS.--Daily samples collected by a local observer.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

[illegible]

SUSQUEHANNA RIVER BASIN

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01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SAMPLE LOC- ATION, CROSS SECTION (% FROM L BANK)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	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)
NOV											
09...	1115	--	61000	315	8.0	14.0	13.5	--	9.3	--	--
28...	1030	25	63500	310	8.0	4.0	9.5	--	10.0	--	--
28...	1100	75	63200	310	7.9	4.0	9.5	--	10.0	--	--
DEC											
21...	1000	75	71300	205	8.0	7.0	3.0	--	13.0	--	--
21...	1100	25	70600	210	7.7	7.0	3.0	--	13.0	--	--
JAN											
10...	1030	75	102000	140	7.9	-5	1.0	--	14.6	--	--
10...	1115	25	120000	165	7.5	--	1.0	--	14.9	--	--
25...	1330	75	285000	205	7.7	3.5	1.5	--	15.4	--	--
25...	1430	25	365000	205	8.1	3.5	1.5	--	15.2	--	--
29...	1015	75	172000	155	8.2	7.0	1.5	--	14.4	--	--
29...	1115	25	158000	160	7.7	7.0	1.5	--	14.6	--	--
FEB											
16...	1000	75	49200	210	7.5	-5.0	1.0	--	13.6	--	--
16...	1030	25	48500	255	7.3	-5.0	1.5	--	13.5	--	--
28...	0945	--	179000	155	7.1	5.5	1.0	--	14.5	--	--
MAR											
07...	1700	--	448000	125	7.9	7.0	4.5	--	13.6	--	--
08...	1630	--	396000	110	7.9	8.0	5.0	--	13.0	--	--
09...	1500	--	305000	115	7.7	11.0	5.5	--	13.8	--	--
12...	1600	--	171000	145	8.1	5.5	4.5	--	13.7	--	--
13...	1500	--	159000	160	8.0	10.0	4.0	--	11.6	--	--
28...	1000	--	152000	190	8.1	6.0	7.0	10	12.6	200	210
APR											
11...	1200	--	84200	180	7.8	13.1	9.0	--	--	--	--
23...	1230	--	78500	185	8.0	24.1	14.2	5.0	10.8	--	--
MAY											
08...	1200	--	70100	220	8.4	25.2	18.5	--	10.2	--	--
22...	1100	--	57200	240	7.8	20.5	21.2	3.0	--	K3	56
JUN											
06...	1500	--	79600	180	8.1	23.3	20.3	--	--	--	--
26...	1030	--	46300	240	7.7	22.0	24.0	4.0	--	K4	K19
JUL											
10...	1130	--	39600	310	7.9	25.0	24.0	--	5.3	--	--
24...	1200	--	57200	300	7.7	28.2	28.0	3.0	5.2	K4	K8
AUG											
08...	1200	--	34300	335	7.6	31.0	29.0	--	6.1	--	--
17...	1230	--	53000	315	7.9	24.5	24.0	4.0	--	K4	K12
SEP											
04...	1100	--	29800	278	8.1	26.5	27.5	89	7.8	K16	<1
08...	1700	--	57100	280	--	--	--	--	--	--	--
19...	0815	--	13100	230	7.9	20.0	--	--	--	--	--
19...	1015	--	39800	230	7.7	21.5	--	--	--	--	--
19...	1215	--	40300	225	7.6	18.0	22.0	--	--	--	--
19...	1415	--	48400	225	7.8	22.0	22.0	--	--	--	--
19...	1615	--	31900	235	7.5	21.0	22.0	--	--	--	--
19...	1915	--	23400	--	--	--	--	--	--	--	--

SUSQUEHANNA RIVER BASIN

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA: WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	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)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY (MG/L AS CAC03)
NOV									
09...	120	--	33	10	10	15	.4	2.2	55
28...	120	--	31	9.5	11	17	.4	2.3	50
28...	120	--	31	9.4	11	17	.4	2.3	50
DEC									
21...	68	37	19	5.1	6.2	16	.3	1.8	31
21...	68	37	19	5.0	6.3	16	.3	1.7	31
JAN									
10...	58	35	16	4.4	5.3	16	.3	1.6	23
10...	61	38	17	4.6	5.4	16	.3	1.5	23
25...	59	34	16	4.6	8.5	23	.5	2.2	25
25...	58	32	16	4.3	8.6	24	.5	2.4	26
29...	44	24	12	3.5	6.0	22	.4	1.5	20
29...	47	28	13	3.5	5.1	19	.3	1.6	19
FEB									
16...	92	52	25	7.2	7.6	15	.3	1.5	40
16...	88	49	24	6.9	7.3	15	.3	1.5	39
28...	43	21	12	3.1	5.1	20	.3	2.3	22
MAR									
07...	35	18	10	2.5	3.7	18	.3	1.2	17
08...	33	21	9.3	2.4	2.9	15	.2	1.4	12
09...	36	18	10	2.7	3.2	16	.2	1.3	18
12...	47	26	13	3.6	3.6	14	.2	1.3	21
13...	50	50	14	3.7	3.3	12	.2	1.3	0
28...	66	36	18	5.0	4.9	14	.3	1.4	30
APR									
23...	64	29	18	4.6	4.5	13	.2	1.3	35
MAY									
22...	90	49	24	7.3	7.1	14	.3	1.5	41
JUN									
26...	100	59	28	7.9	7.3	13	.3	1.6	43
JUL									
24...	120	65	33	10	9.8	20	.4	2.1	59
AUG									
17...	120	68	32	9.8	11	22	.4	2.3	52
SEP									
04...	110	62	29	8.9	9.4	15	.4	2.1	47
08...	110	59	28	9.0	9.5	16	.4	2.4	48

SUSQUEHANNA RIVER BASIN

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01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	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 AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)
NOV								
09...	63	14	.1	.1	--	--	--	--
28...	62	16	.1	.6	--	--	--	--
28...	61	16	.1	.5	--	--	--	--
DEC								
21...	34	9.6	.1	4.7	--	104	.14	20000
21...	33	9.9	.1	4.7	--	103	.14	19600
JAN								
10...	24	8.6	.0	4.8	--	84	.11	23100
10...	25	8.8	.0	4.8	--	87	.12	28200
25...	27	14	.1	4.3	--	98	.13	75400
25...	26	14	.1	4.2	--	98	.13	96600
29...	24	8.6	.1	4.2	--	76	.10	35300
29...	22	8.7	.1	4.3	--	74	.10	31600
FEB								
16...	44	12	.1	6.0	--	135	.18	17900
16...	43	11	.1	5.9	--	130	.18	17000
28...	18	8.1	.1	3.2	--	69	.09	33300
MAR								
07...	18	6.0	.0	3.8	--	59	.08	71400
08...	18	5.1	.0	4.0	--	53	.07	56700
09...	20	5.1	.1	4.2	--	61	.08	50200
12...	24	6.0	.1	4.5	--	73	.10	33700
13...	34	3.4	.0	4.5	--	64	.09	27500
28...	32	7.4	.0	5.1	99	93	.13	40600
APR								
23...	30	7.5	.1	3.9	98	91	.13	20800
MAY								
22...	43	9.4	.1	.5	147	118	.20	22700
JUN								
26...	48	12	.1	1.9	183	133	.25	22900
JUL								
24...	62	14	.2	2.0	213	172	.29	32900
AUG								
17...	65	14	.1	3.6	205	173	.28	29300
SEP								
04...	55	12	.1	2.5	181	147	.25	14600
08...	54	13	.1	2.1	--	149	.20	23000

SUSQUEHANNA RIVER BASIN

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SOLIDS, RESIDUE AT 105 DEG. C. TOTAL (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N03)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N02)	NITRO- GEN, N02+N03 TOTAL (MG/L AS N)	NITRO- GEN, N02+N03 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)
NOV										
09...	--	--	.77	3.4	--	.02	.07	--	.79	--
20...	--	.79	--	--	.02	--	--	.81	.81	.22
28...	--	.77	--	--	.02	--	--	.79	.79	.24
DEC										
21...	--	1.1	--	--	.01	--	--	1.1	1.1	.12
21...	--	1.1	--	--	.01	--	--	1.1	1.1	.12
JAN										
10...	--	1.2	--	--	.01	--	--	1.2	1.2	.08
10...	--	1.2	--	--	.01	--	--	1.2	1.2	.09
25...	--	1.2	--	--	.01	--	--	1.2	1.3	.24
25...	--	.99	--	--	.01	--	--	1.0	1.2	.31
29...	--	.94	--	--	.01	--	--	.95	.85	.11
29...	--	.95	--	--	.01	--	--	.96	.84	.08
FEB										
16...	--	1.6	--	--	.01	--	--	1.6	1.6	.21
16...	--	1.5	--	--	.01	--	--	1.5	1.5	.20
28...	--	.89	--	--	.02	--	--	.91	.88	.30
MAR										
07...	--	.66	--	--	.02	--	--	.68	.70	.23
08...	--	--	--	--	--	--	--	--	.70	--
09...	--	--	--	--	--	--	--	--	.72	--
12...	--	--	--	--	--	--	--	--	.91	--
13...	--	.95	--	--	.01	--	--	.96	--	.06
28...	126	--	--	--	--	--	--	.92	--	.07
APR										
11...	114	1.2	.99	4.4	.01	.01	.03	1.2	1.0	.07
23...	110	--	--	--	--	--	--	.87	--	.02
MAY										
08...	145	.56	.56	2.5	.02	.02	.07	.58	.58	.02
22...	162	--	--	--	--	--	--	.61	--	.11
JUN										
06...	127	.95	.97	4.3	.02	.02	.07	.97	.99	.07
26...	185	--	--	--	--	--	--	.56	--	.23
JUL										
10...	216	.58	.60	2.7	.11	.08	.26	.69	.68	.21
24...	221	--	--	--	--	--	--	.91	.85	.05
AUG										
08...	250	--	.91	4.0	--	.06	.20	.92	.97	.04
17...	238	.74	.70	3.1	.05	--	--	.79	.81	.14
SEP										
04...	--	--	--	--	--	--	--	.97	--	.00
08...	198	.67	.49	2.2	.07	.04	.13	.74	.53	.11
19...	171	.95	--	--	.04	.03	.10	.99	--	.11
19...	166	.96	1.1	4.7	.04	.03	.10	1.0	1.1	.12
19...	159	.96	.97	4.3	.04	.03	.10	1.0	1.0	.10
19...	165	.96	1.1	4.7	.04	.03	.10	1.0	1.1	.11
19...	160	.96	.98	4.3	.04	.02	.07	1.0	1.0	.11
19...	170	.96	.94	4.2	.04	.02	.07	1.0	.96	--

SUSQUEHANNA RIVER BASIN

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01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (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)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)
NOV										
09...	.08	--	.10	--	.33	--	--	.41	--	--
28...	--	.27	--	.20	--	.42	--	--	1.2	--
28...	--	.31	--	.19	--	.43	--	--	1.2	--
DEC										
21...	--	.15	--	.11	--	.23	--	--	1.3	--
21...	--	.15	--	.07	--	.19	--	--	1.3	--
JAN										
10...	--	.10	--	.29	--	.37	--	--	1.6	--
10...	--	.11	--	.27	--	.36	--	--	1.6	--
25...	--	.28	--	.48	--	.72	--	--	1.9	--
25...	--	.40	--	1.2	--	1.5	--	--	2.5	--
29...	--	.13	--	.33	--	.44	--	--	1.4	--
29...	--	.10	--	.38	--	.46	--	--	1.4	--
FEB										
16...	--	.25	--	.19	--	.40	--	--	2.0	--
16...	--	.24	--	.21	--	.41	--	--	1.9	--
28...	--	.39	--	1.0	--	1.3	--	--	2.2	--
MAR										
07...	--	.28	--	.87	--	1.1	--	--	1.8	--
08...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--
13...	--	.08	--	.42	--	.48	--	--	1.4	--
28...	--	.09	--	.16	--	.23	.01	.22	1.2	--
APR										
11...	.07	.09	.09	.23	.22	.30	.01	.29	1.5	1.3
23...	--	.02	--	.06	--	.08	.00	.10	.95	--
MAY										
08...	.03	.02	.04	.36	.14	.30	.21	.17	.96	.75
22...	--	.13	--	.58	--	.69	.30	.39	1.3	--
JUN										
06...	.07	.08	.09	.23	.13	.30	.10	.20	1.3	1.2
26...	--	.28	--	.27	--	.50	.04	.46	1.1	--
JUL										
10...	.23	.25	.30	.32	.30	.53	.00	.53	1.2	1.2
24...	.06	.06	.08	.71	.45	.76	.25	.51	1.7	1.4
AUG										
08...	.05	.05	.06	.37	.06	.41	.30	.11	1.3	1.1
17...	.16	.17	.21	.43	.41	.57	.00	.57	1.4	1.4
SEP										
04...	--	.00	--	.38	--	.38	.16	.22	1.4	--
08...	.07	.13	.09	.44	.24	.55	.24	.31	1.3	.84
19...	.05	.13	.06	.62	--	.73	--	--	1.7	--
19...	.05	.15	.06	.47	.42	.59	.12	.47	1.6	1.6
19...	.04	.12	.05	.61	.20	.71	.47	.24	1.7	1.2
19...	.02	.13	.03	.40	.12	.51	.37	.14	1.5	1.2
19...	.02	.13	.03	.34	.32	.45	.11	.34	1.5	1.3
19...	.03	--	.04	--	.24	.83	.56	.27	1.8	1.2

SUSQUEHANNA RIVER BASIN

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITRO- GEN, TOTAL (MG/L AS N03)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P04)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTH0, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTH0, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTH0, DIS- SOLVED (MG/L AS P04)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDE RECOV. (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)
NOV										
09...	--	--	--	.01	--	.00	.00	300	260	40
28...	5.4	.04	.12	.02	.01	.01	.03	130	130	0
28...	5.4	.04	.12	.01	.01	.00	.00	170	160	10
DEC										
21...	5.9	.04	.12	.01	.01	.01	.03	220	180	40
21...	5.7	.04	.12	.01	.02	.02	.06	220	170	50
JAN										
10...	7.0	.06	.18	.02	.02	.01	.03	420	380	40
10...	6.9	.06	.18	.02	.02	.01	.03	450	400	50
25...	8.5	.31	.95	.06	.06	.04	.12	9300	9200	110
25...	11	.28	.86	.03	.03	.03	.09	10000	10000	30
29...	6.2	.07	.21	.11	.02	.10	.31	1600	1600	20
29...	6.3	.08	.24	.00	.02	.00	.00	1800	1800	30
FEB										
16...	8.9	.03	.09	.02	.02	.01	.03	0	0	0
16...	8.5	.03	.09	.01	.02	.01	.03	0	0	10
28...	9.8	.29	.89	.06	.06	.06	.18	0	0	0
MAR										
07...	7.9	.35	1.1	.02	.03	.00	.00	12000	12000	0
08...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--
13...	6.4	.05	.15	.00	.01	.01	.03	1100	1100	0
28...	5.1	.04	.12	.01	--	.00	.00	--	--	--
APR										
11...	6.6	.03	.09	.01	.00	.01	.03	230	180	50
23...	4.2	.03	.09	.01	--	.01	.03	220	140	80
MAY										
08...	4.3	.02	.06	.01	.01	.00	.00	160	10	150
22...	5.8	.04	.12	.00	--	.00	.00	80	40	40
JUN										
06...	5.6	.05	.15	.02	.01	.01	.03	130	90	40
26...	4.7	.04	.12	.02	--	.01	.03	220	170	50
JUL										
10...	5.4	.03	.09	.00	.01	.02	.06	170	130	40
24...	7.4	.03	.09	.01	.00	.00	.00	150	110	40
AUG										
08...	5.9	.05	.15	.01	.00	.00	.00	400	360	40
17...	6.0	.06	.18	.02	.03	.00	.00	--	--	70
SEP										
04...	6.0	.03	.09	.02	--	--	--	--	--	--
08...	5.7	.09	.28	.04	.03	.05	.15	290	240	50
19...	7.6	.06	.18	.03	.07	.00	.00	700	600	100
19...	7.0	.06	.18	.02	.01	.00	.00	600	600	0
19...	7.6	.05	.15	.02	.07	.00	.00	800	800	0
19...	6.7	.05	.15	.01	.01	.00	.00	600	500	100
19...	6.4	.06	.18	.02	.08	.00	.00	800	700	100
19...	8.1	.06	.18	.02	--	.00	.00	800	800	0

SUSQUEHANNA RIVER BASIN

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01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)
NOV										
09...	0	--	--	--	--	--	10	1	--	--
DEC										
21...	1	--	--	--	--	--	0	0	--	--
21...	1	--	--	--	--	--	0	1	--	--
JAN										
10...	1	--	--	--	--	--	0	5	--	--
10...	1	--	--	--	--	--	0	1	--	--
29...	1	--	--	--	--	--	0	0	--	--
29...	1	--	--	--	--	--	0	1	--	--
FEB										
28...	3	--	--	--	--	--	0	0	--	--
MAR										
07...	2	--	--	--	--	--	0	1	--	--
13...	1	--	--	--	--	--	0	1	--	--
28...	1	0	1	0	0	0	--	20	19	1
APR										
23...	6	--	--	--	--	--	0	1	--	--
MAY										
22...	3	--	--	--	--	--	0	12	--	--
JUN										
26...	3	1	2	0	0	--	0	1	1	0
JUL										
24...	4	--	--	--	--	--	0	1	--	--
AUG										
17...	2	--	--	--	--	--	0	10	--	--
SEP										
04...	2	1	1	100	100	0	--	2	1	1

DATE	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV- ERABLE (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)
NOV									
09...	<10	--	--	--	--	--	5	--	--
DEC									
21...	<10	--	--	--	--	--	4	--	--
21...	<10	--	--	--	--	--	4	--	--
JAN									
10...	<10	--	--	--	--	--	5	--	--
10...	<10	--	--	--	--	--	4	--	--
29...	10	--	--	--	--	--	3	--	--
29...	<10	--	--	--	--	--	4	--	--
FEB									
28...	30	--	--	--	--	--	10	--	--
MAR									
07...	10	--	--	--	--	--	18	--	--
13...	<10	--	--	--	--	--	4	--	--
28...	30	20	10	3	1	2	23	21	2
APR									
23...	10	--	--	--	--	--	3	--	--
MAY									
22...	20	--	--	--	--	--	3	--	--
JUN									
26...	<10	0	10	0	0	0	7	5	2
JUL									
24...	30	--	--	--	--	--	4	--	--
AUG									
17...	20	--	--	--	--	--	5	--	--
SEP									
04...	10	0	<10	2	2	0	2	1	1

SUSQUEHANNA RIVER BASIN

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE D RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE D 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 D RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
NOV									
09...	280	280	0	5	--	--	50	50	0
28...	380	350	30	--	--	--	70	50	20
28...	450	390	60	--	--	--	80	50	30
DEC									
21...	790	740	50	2	--	--	110	0	120
21...	540	490	50	4	--	--	100	0	100
JAN									
10...	920	870	50	5	--	--	180	50	130
10...	980	610	370	0	--	--	180	50	130
25...	12000	12000	200	--	--	--	530	190	340
25...	15000	15000	130	--	--	--	--	--	--
29...	2900	2900	40	53	--	--	240	100	140
29...	3000	3000	40	55	--	--	270	130	140
FEB									
16...	480	350	130	--	--	--	280	20	260
16...	590	510	80	--	--	--	270	10	260
28...	7700	7700	40	6	--	--	300	140	160
MAR									
07...	14000	14000	50	18	--	--	1100	700	400
13...	1500	1500	40	3	--	--	220	60	160
28...	1000	310	690	12	7	5	180	0	180
APR									
11...	730	640	90	--	--	--	190	10	180
23...	620	490	130	8	--	--	190	20	170
MAY									
08...	620	520	100	--	--	--	100	100	0
22...	310	290	20	120	--	--	140	60	80
JUN									
06...	670	550	120	--	--	--	200	40	160
26...	330	330	0	8	8	0	200	70	130
JUL									
10...	370	370	0	--	--	--	130	90	40
24...	350	350	0	5	--	--	180	110	70
AUG									
08...	420	420	0	--	--	--	150	110	40
17...	--	--	10	3	--	--	--	--	30
SEP									
04...	270	270	0	15	15	0	160	110	50
08...	890	860	30	--	--	--	120	110	10
19...	390	370	20	--	--	--	90	90	0
19...	430	410	20	--	--	--	90	90	0
19...	330	310	20	--	--	--	90	90	0
19...	340	330	10	--	--	--	80	70	10
19...	320	310	10	--	--	--	90	80	10
19...	470	450	20	--	--	--	110	100	18

SUSQUEHANNA RIVER BASIN

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01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	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)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)
NOV							
09...	<.5	--	--	13	0	--	--
DEC							
21...	<.5	--	--	19	0	--	--
21...	1.0	--	--	10	0	--	--
JAN							
10...	1.4	--	--	12	0	--	--
10...	1.0	--	--	11	0	--	--
29...	1.4	--	--	16	0	--	--
29...	1.4	--	--	18	0	--	--
FEB							
28...	<.5	--	--	25	0	--	--
MAR							
07...	1.2	--	--	27	1	--	--
13...	<.5	--	--	16	0	--	--
28...	.5	.0	.5	--	0	0	0
APR							
23...	.5	--	--	15	0	--	--
MAY							
22...	<.5	--	--	18	0	--	--
JUN							
26...	<.5	.0	<.5	29	0	0	0
JUL							
24...	<.5	--	--	2	0	--	--
AUG							
17...	<.5	--	--	6	0	--	--
SEP							
04...	<.5	.0	<.5	--	0	0	0

DATE	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV						
09...	--	--	--	40	--	--
DEC						
21...	--	--	--	20	--	--
21...	--	--	--	30	--	--
JAN						
10...	--	--	--	50	--	--
10...	--	--	--	30	--	--
29...	--	--	--	20	--	--
29...	--	--	--	30	--	--
FEB						
28...	--	--	--	70	--	--
MAR						
07...	--	--	--	110	--	--
13...	--	--	--	0	--	--
28...	0	0	0	30	10	20
APR						
23...	--	--	--	20	--	--
MAY						
22...	--	--	--	30	--	--
JUN						
26...	0	0	0	20	10	10
JUL						
24...	--	--	--	30	--	--
AUG						
17...	--	--	--	40	--	--
SEP						
04...	0	0	0	10	10	0

SUSQUEHANNA RIVER BASIN

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS ALPHA, DIS- SOLVED (PCI/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS- SOLVED (AS SR/ YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L)	URANIUM DIS- SOLVED, EXTRAC- TION (UG/L)
APR										
02...	<1.0	.8	<.7	.5	1.7	.6	1.6	.6	.04	<.01
06...	<1.4	.8	--	--	1.6	.8	1.5	.8	--	--
12...	<1.3	.4	--	--	1.7	.6	1.5	.7	--	--
19...	<1.1	.6	--	--	1.4	<.5	1.3	<.5	--	--
MAY										
01...	<1.5	.5	--	--	2.0	<.5	1.9	.6	--	--

DATE	CARBON, TOTAL (MG/L AS C)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, INOR- GANIC, TOTAL (MG/L AS C)	CARBON, INOR- GANIC, DIS- SOLVED (MG/L AS C)	DATE	CARBON, TOTAL (MG/L AS C)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, INOR- GANIC, TOTAL (MG/L AS C)	CARBON, INOR- GANIC, DIS- SOLVED (MG/L AS C)
NOV						MAY					
09...	15	2.3	--	13	--	08...	--	--	3.5	11	10
28...	13	1.6	--	11	--	22...	--	2.3	2.5	--	--
28...	13	2.3	--	11	--	JUN					
DEC						06...	--	--	6.1	--	5.2
21...	--	--	--	1.8	--	26...	16	2.0	2.5	14	12
21...	--	--	--	1.6	--	JUL					
JAN						10...	--	--	1.9	16	17
10...	--	--	--	9.9	--	24...	13	3.4	2.7	9.1	7.6
10...	--	--	--	7.5	--	AUG					
29...	--	--	--	5.7	--	08...	20	4.9	2.3	15	16
29...	--	--	--	7.8	--	17...	16	3.0	2.9	13	12
FEB						SEP					
16...	--	--	--	13	--	04...	--	--	3.4	--	--
16...	--	--	--	11	--	08...	--	--	--	14	12
28...	--	--	--	5.8	--	19...	--	--	--	11	--
MAR						19...	13	1.7	--	11	--
13...	--	--	--	6.3	--	19...	13	2.1	--	11	--
28...	--	--	5.8	--	--	19...	14	2.0	--	12	--
APR											
11...	--	--	2.6	13	12						
23...	18	7.6	2.7	10	11						

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	PCB, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	ATRA- ZINE, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)
NOV 09...	.0	.00	.00	.0	.00	.00	.00	.00	.00	.00	.00	.00
DEC 21...	.0	.00	.10	.0	.00	.00	.00	.00	.00	.00	.00	.00
21...	.0	.00	.00	.0	.00	.00	.00	.00	.00	.00	.00	.00
JAN 10...	.0	.00	--	.0	.00	.00	.00	.00	.00	.00	.00	.00
10...	.0	.00	.00	.0	.00	.00	.00	.00	.00	.00	.00	.00
29...	.0	.00	.00	.0	.00	.00	.00	.00	.00	.00	.00	.00
29...	.0	.00	.00	.0	.00	.00	.00	.00	.00	.00	.00	.00
FEB 28...	.0	.00	.00	.0	.00	.00	.00	.00	.00	.00	.00	.00
MAR 28...	.0	.00	.00	.0	.00	.00	.00	.00	.00	.00	.00	.00
APR 23...	.0	.00	.00	.0	.00	.00	.00	.00	.00	.00	.00	.00
MAY 22...	.0	.00	.20	.0	.00	.00	.00	.00	.00	.00	.00	.00
JUN 26...	.0	.00	.30	.0	.00	.00	.00	.00	.00	.00	.00	.00
JUL 24...	.0	.00	.50	.0	.00	.00	.00	.00	.00	.00	.00	.00
AUG 17...	.0	.00	.20	.0	.00	.00	.00	.00	.00	.00	.00	.00
SEP 04...	.0	.00	.10	.0	.00	.00	.00	.00	.00	.00	.00	.00

DATE	LINDANE TOTAL (UG/L)	MIREX, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	PROME- TONE TOTAL (UG/L)	PROME- TRYNE TOTAL (UG/L)	SIME- TRYNE TOTAL (UG/L)	SIMA- ZINE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
NOV 09...	.00	.00	.00	.00	--	--	--	--	0	.00	.01	.00
DEC 21...	.00	.00	.00	.00	--	--	--	--	0	.00	.00	.00
21...	.00	.00	.00	.00	--	--	--	--	0	.00	.00	.00
JAN 10...	.00	.00	.00	.00	--	--	--	--	0	.00	.01	.00
10...	.00	.00	.00	.00	--	--	--	--	0	.00	.01	.00
29...	.00	.00	.00	.00	--	--	--	--	0	.02	.01	.00
29...	.00	.00	.00	.00	--	--	--	--	0	.00	.01	.00
FEB 28...	.00	.00	.00	.00	--	--	--	--	0	.07	.02	.00
MAR 28...	.00	.00	.00	.00	--	--	--	--	0	.03	.01	.00
APR 23...	.00	.00	.00	.00	--	--	--	--	0	.07	.00	.00
MAY 22...	.00	.00	.00	.00	--	--	--	--	0	.22	.00	.00
JUN 26...	.00	.00	.00	.00	--	--	--	--	0	.09	.00	.00
JUL 24...	.00	.00	.00	.00	--	--	.0	.0	0	.00	.00	.00
AUG 17...	.00	.00	.00	.00	.0	.0	.0	.0	0	--	--	--
SEP 04...	.00	.00	.00	.00	.0	.0	.0	.1	0	.17	.00	.00

SUSQUEHANNA RIVER BASIN

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)	SEDI- MENT, SUS- PENDEO (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDEO (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
FEB					
28...	--	--	197	95200	--
MAR					
07...	--	--	454	549000	--
08...	--	--	308	329000	--
09...	--	--	204	168000	--
12...	--	--	64	29500	--
13...	--	--	35	15000	--
19...	--	--	14	--	--
28...	1.04	.000	--	--	--
APR					
11...	1.65	.000	31	7050	--
23...	8.23	.000	10	2120	100
MAY					
08...	17.5	.000	16	3030	--
22...	4.52	.000	4	618	100
JUN					
06...	--	--	12	2580	--
26...	2.31	.000	8	1000	100
JUL					
10...	--	--	7	748	--
24...	5.47	.000	17	2630	82
AUG					
08...	5.80	.000	17	1570	97
17...	2.73	.000	4	572	100
SEP					
04...	--	--	9	724	100
08...	6.33	.000	--	--	--
19...	7.59	.000	--	--	--
19...	9.31	.000	--	--	--
19...	9.56	.000	--	--	--
19...	9.35	.000	--	--	--
19...	13.1	.000	--	--	--

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM
AUG 08...	1200	34300	29.0	17	1570	67	71
DATE		SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM
AUG 08...	83	88	94	97	98	99	100

DATE	TRITIUM TOTAL (PCI/L)	TRITIUM IN WATER MOLE- CULES (TU)	TRITIUM WATER MOLE- CULES COUNT ERROR (TU)
APR 06...	<200	54.0	4.9
12...	<200	43.2	4.2
19...	<200	47.2	4.2
MAY 01...	<200	47.4	4.1

SUSQUEHANNA RIVER BASIN

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01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									---	265	326	283
2									---	263	---	282
3									---	279	---	---
4									---	280	---	278
5									---	230	---	285
6									---	235	329	295
7									---	280	---	280
8									---	242	335	250
9									---	281	349	210
10									---	310	353	200
11									---	286	---	200
12									---	320	335	---
13									---	343	338	205
14									---	341	332	220
15									---	344	325	210
16									---	342	327	159
17									---	345	315	210
18									220	333	---	239
19									225	331	---	230
20									225	---	317	251
21									235	304	---	257
22									240	---	301	232
23									---	300	290	237
24									---	300	301	252
25									240	271	---	252
26									240	282	---	262
27									210	348	288	242
28									250	---	272	262
29									260	---	271	257
30									270	304	270	257
31									---	310	259	---

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									---	24.5	28.0	26.0
2									---	25.0	---	26.0
3									---	25.0	---	---
4									---	24.0	---	26.5
5									---	23.5	---	27.0
6									---	23.5	29.0	27.5
7									---	23.5	28.5	26.5
8									---	23.0	29.0	25.5
9									---	23.5	29.0	24.0
10									---	24.0	29.0	23.0
11									---	24.5	---	22.5
12									---	24.5	27.5	---
13									---	25.0	26.5	22.0
14									---	24.5	26.0	22.5
15									---	24.5	24.0	22.5
16									---	24.5	23.5	22.5
17									---	24.5	23.5	22.0
18									24.0	27.0	---	22.0
19									23.5	27.5	---	21.5
20									23.5	---	24.0	21.0
21									23.5	26.5	---	22.0
22									22.5	---	23.5	21.0
23									---	28.0	23.5	20.5
24									---	28.0	24.0	20.0
25									24.0	28.0	---	20.0
26									23.5	28.0	---	20.0
27									23.5	28.5	24.5	19.5
28									24.0	---	25.0	19.5
29									24.0	---	25.5	20.0
30									24.0	28.0	26.0	20.0
31									---	28.0	26.0	---

SUSQUEHANNA RIVER BASIN

01578310 SUSQUEHANNA RIVER AT CONOWINGO, MD--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO JULY 1979

DATE TIME	MAR 28,79 1000	MAY 22,79 1100	JUN 26,79 1030	JUL 24,79 1200
TOTAL CELLS/ML	390	6100	1900	20000
DIVERSITY: DIVISION	0.5	1.0	0.8	1.5
..CLASS	0.5	1.0	0.8	1.5
..ORDER	1.5	1.7	1.0	2.1
...FAMILY	2.6	1.9	2.1	2.8
....GENUS	2.8	2.4	2.3	3.4

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
....OOCYSTACEAE								
....GLOEOACTINIUM	--	-	--	-	--	-	630	3
...CHARACIACEAE	--	-	--	-	--	-	*	0
...SCHROEDERIA	--	-	--	-	--	-		
...COELASTRACEAE	--	-	--	-	180	9	4300#	21
....COELASTRUM	--	-	--	-	--	-		
...MICRACTINIACEAE	--	-	--	-	--	-	420	2
....MICRACTINIUM	--	-	--	-	--	-		
...OOCYSTACEAE								
....ANKISTRODESMUS	5	1	150	3	13	1	370	2
...DICTYOSPHAERIUM	--	-	--	-	820#	43	--	-
....KIRCHNERIELLA	--	-	--	-	--	-	*	0
...OOCYSTIS	--	-	--	-	--	-	210	1
...SELENASTRUM	--	-	--	-	--	-	100	1
...TREUBARIA	--	-	*	0	--	-	100	1
...SCENEDESMACEAE								
....ACTINASTRUM	--	-	410	7	--	-	--	-
...CRUCIGENIA	--	-	--	-	52	3	210	1
...SCENEDESMUS	10	3	2900#	47	520#	27	1800	9
...TETRASTRUM	--	-	52	1	--	-	--	-
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	25	6	*	0	13	1	100	1
...VOLVOCAEAE								
....PANDORINA	--	-	830	14	--	-	--	-
...ZYGNEATALES								
...DESMIDIACEAE								
...CLOSTERIUM	--	-	*	0	--	-	--	-
...STAUROSTRUM	--	-	--	-	--	-	*	0
CHRYCOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	160#	40	*	0	90	5	310	2
....MELOSIRA	5	1	1200#	20	--	-	940	5
...STEPHANODISCUS	--	-	90	1	--	-	1300	6
..PENNALES								
CRYPTOPHYTA (CRYPTOMONADS)								
..CRYPTOPHYCEAE								
...CRYPTOMONADALES								
....CRYPTOMONADACEAE								
.....CRYPTOMONAS	--	-	--	-	--	-	210	1
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
....CHROOCOCCACEAE								
.....AGMENELLUM	--	-	--	-	--	-	2100	10
....ANACYSTIS	--	-	130	2	150	8	2600	13
...HORMOGONALES								
...OSCILLATORIACEAE								
....OSCILLATORIA	--	-	--	-	--	-	4200#	21
PYRRHOPHYTA (FIRE ALGAE)								
..DINOPHYCEAE								
...PERIDINIALES								
...GLENODINIACEAE								
....GLENODINIUM	--	-	--	-	13	1	*	0

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

01580000 DEER CREEK AT ROCKS, MD

LOCATION.--Lat 39°37'49", long 76°24'13", Harford County, Hydrologic Unit 02050306, on right bank 0.3 mi (0.5 km) upstream from bridge on Cherry Hill Road, 0.8 mi (1.3 km) southeast of Rocks, 1.2 mi (1.9 km) upstream from Stirrup Run, and 23.5 mi (37.8 km) upstream from mouth.

DRAINAGE AREA.--94.4 mi² (244.5 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1926 to current year. Monthly discharge only for November and December 1926, published in WSP 1302.

REVISED RECORDS.--WSP 726: Drainage area. WSP 1502: 1927-36 (maximum and minimum only 1927-29, maximum only 1930-32, 1936).

GAGE.--Water-stage recorder. Concrete control since Sept. 7, 1938. Datum of gage is 250.40 ft (76.322 m) Baltimore city datum.

REMARKS.--Records good except those for February, which are fair. Some regulation at low flow by mills above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--53 years, 125 ft³/s (3.540 m³/s), 17.98 in/yr (457 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,600 ft³/s (385 m³/s) Aug. 23, 1933, gage height, 17.7 ft (5.39 m), from floodmarks, from rating curve extended above 3,000 ft³/s (85.0 m³/s) on basis of slope-area measurements at gage heights 13.3 ft (4.05 m) and 17.7 ft (5.39 m); minimum, 8 ft³/s (0.23 m³/s) Dec. 16, 1930, Jan. 26, 1939, result of regulation; minimum daily, 8.6 ft³/s (0.24 m³/s) Sept. 11, 12, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1888, that of Aug. 23, 1933.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,900 ft³/s (53 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	0630	3440 97.4	8.15 2.484	May 24	0130	3800 108	8.66 2.640
Jan. 21	1530	4020 114	8.96 2.731	Aug. 25	2230	3380 95.7	8.08 2.463
Jan. 24	1300	4030 114	8.97 2.734	Sept. 6	0530	5130 145	10.43 3.179
Feb. 25	0030	3600 102	8.38 2.554	Sept. 22	0130	*6160 174	11.81 3.600
Feb. 26	0430	4810 136	9.99 3.045				

Minimum discharge, 48 ft³/s (1.36 m³/s) all or part of each day Oct. 15, 16, 23, 24, Nov. 7, 9-13, gage height, 2.10 ft (0.640 m).

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	51	50	84	139	163	392	144	142	163	186	95	91
2	54	49	71	529	152	339	155	136	186	149	136	89
3	52	49	67	266	146	256	163	135	251	126	158	88
4	52	49	129	170	137	231	181	139	363	126	106	84
5	57	49	185	150	134	457	210	137	224	138	93	256
6	111	49	101	127	150	431	165	130	227	117	87	2770
7	60	49	82	147	188	281	149	128	192	110	83	354
8	54	49	82	488	155	233	147	125	176	107	83	226
9	51	48	426	210	144	205	189	122	165	105	83	186
10	51	48	243	187	138	194	235	119	166	105	79	163
11	49	48	128	182	136	241	172	118	165	105	85	152
12	49	49	105	180	150	214	180	121	155	102	243	143
13	49	50	94	178	170	197	176	152	144	117	158	136
14	49	50	87	322	150	192	208	186	139	122	105	173
15	49	50	81	190	145	175	188	137	134	161	95	176
16	49	60	78	136	140	162	175	130	133	111	88	134
17	57	65	77	120	140	159	164	118	145	107	85	127
18	52	136	74	114	140	155	155	116	206	99	86	123
19	52	72	72	146	160	151	148	132	141	97	93	120
20	52	59	72	320	180	147	144	121	131	95	86	115
21	49	55	88	2730	190	143	141	117	126	97	85	692
22	49	54	78	500	220	140	139	116	130	95	85	2120
23	49	55	72	242	250	138	136	267	136	102	82	350
24	48	64	122	2240	1350	244	133	1140	123	104	86	220
25	48	57	561	866	2560	256	133	327	120	93	570	180
26	49	54	151	355	2730	193	134	340	114	95	273	180
27	55	64	116	269	767	169	292	217	113	91	140	170
28	52	77	106	239	541	156	204	193	162	91	143	170
29	50	88	104	217	---	152	164	178	223	131	131	165
30	49	133	98	200	---	148	150	163	132	218	130	160
31	50	---	93	180	---	144	---	153	---	106	99	---
TOTAL	1648	1829	3927	12339	11626	6745	5074	5855	4985	3608	3951	10113
MEAN	53.2	61.0	127	398	415	218	169	189	166	116	127	337
MAX	111	136	561	2730	2730	457	292	1140	363	218	570	2770
MIN	48	48	67	114	134	138	133	116	113	91	79	84
CFSM	.65	.65	1.35	4.22	4.40	2.31	1.79	2.00	1.76	1.23	1.35	3.57
IN.	.65	.72	1.55	4.86	4.58	2.66	2.00	2.31	1.96	1.42	1.56	3.99
CAL YR 1978	TOTAL	59217	MEAN 162	MAX 4040	MIN 48	CFSM 1.72	IN 23.34					
WTR YR 1979	TOTAL	71700	MEAN 196	MAX 2770	MIN 48	CFSM 2.08	IN 28.25					

SUSQUEHANNA RIVER BASIN

01580000 DEER CREEK AT ROCKS, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1972-73, 1976 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	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)
DEC 13...	0930	95	120	7.7	-5.5	.5	20	34	15	7.9	3.4	5.5
MAR 15...	0915	179	110	8.2	-3.0	4.0	5	28	11	6.4	2.8	4.3
AUG 29...	1530	108	106	8.0	27.5	22.5	10	30	12	6.7	3.2	5.1

DATE	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
DEC 13...	25	.4	1.9	23	19	.7	5.9	10	.1	5.3	65	51
MAR 15...	24	.4	1.4	20	16	.2	6.3	9.0	.0	8.5	64	49
AUG 29...	26	.4	1.8	22	18	.4	5.1	8.3	.0	8.2	43	49

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- 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)
DEC 13...	.09	16.7	3.0	.17	.52	280	200	80	50	20	30
MAR 15...	.09	30.9	2.6	.04	.12	290	290	0	20	0	40
AUG 29...	.06	12.5	2.2	.03	.09	420	280	140	40	10	30

01581700 WINTERS RUN NEAR BENSON, MD

LOCATION.--Lat 39°31'12", long 76°22'24", Harford County, Hydrologic Unit 02060003, on left bank 30 ft (9 m) downstream from bridge on U.S. Highway 1, 0.1 mi (0.2 km) upstream from Heavenly Waters, 1.2 mi (1.9 km) northeast of Benson, 1.8 mi (2.9 km) southwest of Bel Air, and 10.5 mi (16.9 km) upstream from mouth.

DRAINAGE AREA.--34.8 mi² (90.1 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 195 ft (59 m), from topographic map.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--12 years, 56.7 ft³/s (1.606 m³/s), 22.13 in/yr (562 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,600 ft³/s (215 m³/s) June 22, 1972, gage height, 11.60 ft (3.536 m); minimum, 7.2 ft³/s (0.20 m³/s) July 5, 1969.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28 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	0500	2400 68.0	6.42 1.957	Feb. 26	0300	3030 85.8	7.24 2.207
Jan. 21	1400	2380 67.4	6.39 1.948	Aug. 25	1845	*5510 156	9.91 3.021
Jan. 24	1045	2050 58.1	5.93 1.807	Sept. 6	0415	3580 101	7.90 2.408
Jan. 24	1715	1560 44.2	5.19 1.582	Sept. 21	2315	5220 148	9.63 2.935
Feb. 24	2315	1960 55.5	5.79 1.765				

Minimum discharge, 16 ft³/s (0.45 m³/s) Oct. 1.

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	17	18	34	72	64	142	55	50	68	43	31	34
2	18	18	29	296	61	132	60	48	78	42	41	34
3	18	18	27	91	56	105	64	48	87	36	40	32
4	19	18	68	52	54	97	74	49	111	41	33	31
5	19	18	108	48	51	155	80	50	68	42	31	321
6	42	18	42	47	50	135	61	46	60	36	28	939
7	22	18	34	83	50	96	54	44	54	33	28	142
8	19	19	34	266	50	85	54	43	50	33	27	94
9	19	19	189	75	50	75	90	42	47	32	27	67
10	18	19	82	52	48	73	91	42	47	31	26	46
11	18	18	45	50	48	113	63	42	50	32	27	44
12	18	18	39	48	48	76	63	42	47	31	112	42
13	18	19	35	103	48	69	61	99	42	54	58	40
14	19	18	33	138	48	68	80	75	41	39	35	63
15	18	18	31	60	48	63	64	52	39	32	32	59
16	18	23	29	48	46	59	59	51	38	32	28	40
17	23	27	28	48	46	58	55	45	69	54	28	37
18	20	64	28	42	46	56	53	46	77	33	29	36
19	19	29	26	42	46	55	50	53	43	32	32	35
20	19	24	28	164	48	54	49	46	40	32	29	33
21	18	22	44	1190	50	53	49	46	38	32	29	616
22	18	21	32	124	70	54	49	45	38	32	28	728
23	18	23	30	72	90	54	48	56	41	38	27	127
24	17	27	103	748	450	131	48	190	37	40	37	89
25	17	23	248	184	1000	98	47	82	37	33	601	80
26	18	22	58	101	1120	70	48	77	35	40	111	76
27	21	31	44	84	262	62	196	58	34	32	54	72
28	19	39	37	82	187	58	83	55	35	33	63	70
29	18	38	38	81	---	58	59	53	58	40	44	78
30	18	64	39	76	---	55	54	49	39	48	82	69
31	18	---	39	68	---	56	---	48	---	33	39	---
TOTAL	601	751	1681	4635	4235	2515	1961	1772	1548	1141	1837	4166
MEAN	19.4	25.0	54.2	150	151	81.1	65.4	57.2	51.6	36.8	59.3	139
MAX	42	64	248	1190	1120	155	196	190	111	54	601	939
MIN	17	18	26	42	46	53	47	42	34	31	26	31
CFSM	.56	.72	1.56	4.31	4.34	2.33	1.88	1.64	1.48	1.06	1.79	3.99
IN.	.64	.80	1.80	4.95	4.53	2.69	2.10	1.89	1.65	1.22	1.96	4.45

CAL YR 1978	TOTAL	22574	MEAN	61.8	MAX	1670	MIN	16	CFSM	1.78	IN	24.13
WTR YR 1979	TOTAL	26843	MEAN	73.5	MAX	1190	MIN	17	CFSM	2.11	IN	28.69

GUNPOWDER RIVER BASIN

01582000 LITTLE FALLS AT BLUE MOUNT, MD

LOCATION.--Lat 39°36'16", long 76°37'16", Baltimore County, Hydrologic Unit 02060003, on left bank at downstream side of Pennsylvania Railroad bridge, 0.2 mi (0.3 km) north of Blue Mount, 0.6 mi (1.0 km) upstream from mouth, 0.9 mi (1.4 km) downstream from First Mine Branch, and 1.2 mi (1.9 km) south of White Hall.

DRAINAGE AREA.--52.9 mi² (137.0 km²).

PERIOD OF RECORD.--June 1944 to current year.

REVISED RECORDS.--WSP 111: 1944(M), 1945-47(P).

GAGE.--Water-stage recorder. Altitude of gage is 305 ft (93 m), from topographic map.

REMARKS.--Records good except those for February, which are fair. Slight diurnal fluctuation at low flow caused by mill above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--35 years, 69.5 ft³/s (1.968 m³/s), 17.84 in/yr (453 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,280 ft³/s (234 m³/s) June 22, 1972, gage height, 18.54 ft (5.651 m), from rating curve extended above 1,300 ft³/s (36.8 m³/s) on basis of contracted-opening measurement of peak flow; minimum, 1.9 ft³/s (0.054 m³/s) Aug. 29, 1966; minimum daily, 4.5 ft³/s (0.13 m³/s) Sept. 11, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 1,000 ft³/s (28 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	0600	1940 54.9	5.99 1.826	Feb. 26	0400	2550 72.2	7.18 2.188
Jan. 21	1530	2190 62.0	6.49 1.978	May 24	0030	1110 31.4	4.27 1.301
Jan. 24	1300	2490 70.5	7.06 2.152	Aug. 2	1730	1980 56.1	6.07 1.850
Jan. 24	2030	2430 68.8	6.94 2.115	Sept. 6	0415	*6470 183	14.60 4.450
Feb. 24	2330	1910 54.1	5.92 1.804	Sept. 22	0230	3230 91.5	8.40 2.560

Minimum discharge, 26 ft³/s (0.74 m³/s) Oct. 15, 16.

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	30	30	44	75	81	208	83	75	133	105	75	49
2	31	30	38	247	76	190	89	73	119	71	385	49
3	30	30	37	106	72	148	96	73	143	63	132	49
4	33	30	81	84	70	138	103	76	197	68	88	47
5	34	30	89	78	62	252	108	74	137	70	73	151
6	77	29	52	60	70	224	91	71	121	61	66	1880
7	32	30	45	77	70	161	85	69	110	59	62	180
8	29	30	47	197	70	138	84	67	100	57	60	140
9	28	29	218	88	68	121	111	67	96	57	59	110
10	28	29	104	88	66	118	115	67	94	57	56	94
11	28	29	63	75	64	163	93	66	94	58	61	88
12	28	29	54	75	70	123	101	68	92	57	162	82
13	28	30	49	81	70	120	95	98	88	149	90	77
14	28	30	46	140	68	114	111	97	84	106	68	97
15	27	30	43	70	66	107	101	77	82	73	63	86
16	28	40	41	66	66	98	95	74	82	63	60	73
17	34	42	41	56	66	96	90	68	100	64	58	70
18	30	79	39	54	66	94	86	67	94	58	59	68
19	30	39	38	62	70	91	83	77	78	57	61	66
20	30	32	38	97	80	90	80	69	72	55	57	63
21	29	31	48	1160	80	88	79	68	71	56	59	311
22	29	30	40	187	100	85	78	67	72	54	57	781
23	29	31	37	117	100	84	77	161	72	63	54	191
24	29	39	64	1260	740	151	76	357	68	62	56	143
25	29	32	203	302	1050	137	76	172	67	55	125	128
26	31	30	67	161	1160	106	77	158	64	55	73	118
27	38	39	54	127	339	96	127	114	63	52	65	112
28	31	48	49	115	282	90	94	102	64	60	64	110
29	30	48	53	106	---	88	83	95	80	100	57	109
30	30	72	54	96	---	85	79	88	71	180	54	106
31	30	---	47	87	---	84	---	85	---	70	51	---
TOTAL	978	1077	1923	5594	5242	3888	2746	2940	2808	2215	2510	5628
MEAN	31.5	35.9	62.0	180	187	125	91.5	94.8	93.6	71.5	81.0	188
MAX	77	79	218	1260	1160	252	127	357	197	180	385	1880
MIN	27	29	37	54	62	84	76	66	63	52	51	47
CFSM	.68	.68	1.17	3.40	3.54	2.36	1.73	1.79	1.77	1.35	1.53	3.55
IN.	.69	.76	1.35	3.93	3.69	2.73	1.93	2.07	1.97	1.56	1.77	3.96

CAL YR 1978	TOTAL	36132	MEAN	82.6	MAX	1710	MIN	27	CFSM	1.56	IN	21.19
WTR YR 1979	TOTAL	37549	MEAN	103	MAX	1880	MIN	27	CFSM	1.95	IN	26.40

GUNPOWDER RIVER BASIN

115

01583000 SLADE RUN NEAR GLYNDON, MD

LOCATION.--Lat 39°29'40", long 76°47'45", Baltimore County, Hydrologic Unit 02060003, on left bank at downstream side of bridge on Longnecker Road, 1.1 mi (1.8 km) upstream from mouth, 1.6 mi (2.6 km) northeast of Glyndon, and 2.6 mi (4.2 km) northeast of Reisterstown.

DRAINAGE AREA.--2.09 mi² (5.41 km²).

PERIOD OF RECORD.--September 1947 to current year.

REVISED RECORD.--WSP 1502: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 425.25 ft (129.616 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--32 years, 2.39 ft³/s (0.068 m³/s), 15.53 in/yr (394 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 515 ft³/s (14.6 m³/s) June 22, 1972, gage height, 4.80 ft (1.463 m), from rating curve extended above 80 ft³/s (2.27 m³/s) on basis of slope-area measurement at gage height 3.96 ft (1.207 m); no flow many days in August and September 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 90 ft³/s (2.5 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	1315	90 2.55	3.36 1.024	Aug. 1	1815	224 6.34	4.09 1.247
Jan. 24	0915	102 2.89	3.44 1.049	Sept. 6	0030	*297 8.41	4.39 1.338
Jan. 24	1415	142 4.02	3.69 1.125	Sept. 22	0030	115 3.26	3.53 1.076

Minimum discharge, 0.97 ft³/s (0.027 m³/s) Oct. 1, 2, 3, 4, 23, 24, gage height, 2.12 ft (0.646 m).

REVISIONS.--The peak discharges and annual maximum (*) for water years 1973-75 and 1978 have been revised as shown in the following table. They supersede figures published in the reports for 1973-75 and 1978.

Water year	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Water year	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
1973	Apr. 1, 1973	1715	*125 3.54	3.59 1.094	1975	June 13, 1975	0245	142 4.02	3.69 1.125
					1975	Sept. 25, 1975	2300	211 5.98	4.03 1.228
1974	May 17, 1974	2315	*172 4.87	3.85 1.173	1975	Sept. 26, 1975	0745	*367 10.4	4.63 1.411
					1978	Jan. 26, 1978	0530	*125 3.54	3.59 1.094

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	1.1	1.1	1.5	3.4	3.2	7.9	3.4	3.0	4.5	3.6	15	2.0
2	1.1	1.1	1.3	9.2	3.0	8.4	3.6	3.0	3.8	3.1	8.9	2.0
3	1.0	1.0	1.3	4.0	2.8	6.3	3.8	3.0	4.7	2.5	4.3	1.9
4	1.1	1.0	2.9	2.7	3.0	6.1	4.5	3.0	5.7	2.7	3.2	1.9
5	1.3	1.0	3.3	2.4	2.6	11	4.3	3.0	4.3	2.7	2.7	25
6	2.4	1.0	1.8	2.4	2.6	9.3	3.6	2.8	4.0	2.3	2.3	37
7	1.4	1.0	1.6	3.4	2.6	6.2	3.4	2.8	3.7	2.1	2.1	5.6
8	1.3	.97	1.6	6.9	2.4	5.4	3.4	2.7	3.5	2.0	2.0	4.8
9	1.2	.97	6.0	3.8	2.3	5.0	4.5	2.5	3.3	1.9	2.4	4.2
10	1.2	.97	3.2	2.8	2.4	5.0	4.3	2.4	3.3	1.9	2.4	3.9
11	1.2	.97	2.0	2.4	2.3	6.2	3.8	2.4	3.2	1.9	2.1	3.7
12	1.2	.97	1.9	2.2	2.2	4.9	3.8	2.4	3.1	1.8	5.9	3.6
13	1.2	1.0	1.8	2.7	2.2	4.7	3.4	3.8	3.0	4.6	3.5	3.5
14	1.1	1.1	1.7	4.3	2.1	4.6	4.0	3.2	2.9	3.1	2.8	4.1
15	1.1	1.1	1.6	2.6	2.1	4.5	3.6	2.7	2.8	2.5	2.4	3.6
16	1.1	1.5	1.5	2.2	2.1	4.3	3.4	2.8	2.7	2.2	2.3	3.3
17	1.4	1.7	1.4	2.1	1.9	4.5	3.2	2.7	6.0	2.7	2.2	3.1
18	1.3	2.7	1.4	2.0	2.0	4.5	3.2	2.7	3.9	2.0	2.2	3.1
19	1.2	1.4	1.4	1.8	2.2	4.3	2.8	3.0	3.1	2.0	2.5	3.0
20	1.2	1.2	1.5	4.7	2.0	4.3	2.8	2.7	2.8	2.2	2.6	2.9
21	1.1	1.1	2.1	30	2.4	4.3	2.8	2.7	2.6	2.3	3.6	20
22	1.2	1.1	1.6	5.5	3.4	4.3	3.0	2.5	2.7	2.0	2.8	20
23	1.1	1.2	1.5	4.4	3.3	4.1	3.0	5.8	2.6	1.9	2.4	6.7
24	1.0	1.2	3.3	54	26	8.0	3.0	10	2.5	1.9	2.4	4.9
25	1.1	1.1	6.4	7.1	33	4.4	3.0	5.6	2.4	1.8	2.7	4.6
26	1.1	1.1	2.7	4.6	28	3.8	3.0	4.8	2.4	2.1	2.5	4.3
27	1.1	1.4	2.2	4.2	9.3	3.6	3.8	4.0	2.3	1.9	3.1	4.1
28	1.3	1.7	2.0	4.1	9.8	3.4	3.2	3.6	2.4	2.7	3.0	4.0
29	1.2	1.8	1.8	4.0	---	3.4	3.0	3.4	2.6	9.2	2.6	4.1
30	1.0	2.4	1.7	3.8	---	3.4	3.0	3.2	2.8	5.8	2.3	4.0
31	1.1	---	2.0	3.6	---	3.4	---	3.0	---	3.0	2.1	---
TOTAL	37.4	37.85	68.0	193.3	163.2	163.5	103.6	105.2	99.6	84.4	103.3	198.9
MEAN	1.21	1.26	2.19	6.24	5.83	5.27	3.45	3.39	3.32	2.72	3.33	6.63
MAX	2.4	2.7	6.4	54	33	11	4.5	10	6.0	9.2	15	37
MIN	1.0	.97	1.3	1.8	1.9	3.4	2.8	2.4	2.3	1.8	2.0	1.9
CFSM	.58	.60	1.05	2.99	2.79	2.52	1.65	1.62	1.59	1.30	1.59	3.17
IN.	.67	.67	1.21	3.44	2.90	2.91	1.84	1.87	1.77	1.50	1.84	3.54

CAL YR 1978 TOTAL 1002.05 MEAN 2.75 MAX 50 MIN .97 CFSM 1.32 IN 17.83
WTR YR 1979 TOTAL 1358.25 MEAN 3.72 MAX 54 MIN .97 CFSM 1.78 IN 24.16

01583500 WESTERN RUN AT WESTERN RUN, MD

LOCATION.--Lat 39°30'38", long 76°40'37", Baltimore County, Hydrologic Unit 02060003, on right bank 100 ft (30 m) downstream from bridge on Western Run Road, 0.3 mi (0.5 km) southeast of Western Run, 2.5 mi (4.0 km) northwest of Cockeysville, 3.2 mi (5.1 km) upstream from Beaverdam Run, and 5.0 mi (8.0 km) upstream from mouth.

DRAINAGE AREA.--59.8 mi² (154.9 km²).

PERIOD OF RECORD.--September 1944 to current year.

REVISED RECORDS.--WSP 1502: 1945-46, 1948(M).

GAGE.--Water-stage recorder. Datum of gage is 262.78 ft (80.095 m) Baltimore County datum.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--35 years, 69.7 ft³/s (1.974 m³/s), 15.83 in/yr (402 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,000 ft³/s (1,080 m³/s) June 22, 1972, gage height, 26.0 ft (7.92 m), from floodmarks, from rating curve extended above 3,200 ft³/s (90.6 m³/s) on basis of slope-area measurement and contracted-opening measurement at gage height 26.0 ft (7.92 m); minimum, 2.4 ft³/s (0.068 m³/s) Sept. 12, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28 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	0500	2110 59.8	5.94 1.811	May 24	0230	1500 42.5	4.84 1.475
Jan. 21	1745	2500 70.8	6.60 2.012	Aug. 1	2115	1710 48.4	5.21 1.588
Jan. 24	1930	3630 103	8.18 2.493	Sept. 6	0415	*8800 249	13.22 4.029
Feb. 25	0100	2560 72.5	6.69 2.039	Sept. 22	0445	3120 88.4	7.51 2.289
Feb. 26	0215	3320 94.0	7.78 2.371				

Minimum discharge, 27 ft³/s (0.76 m³/s) Oct. 1, 3, 4.

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	29	32	43	85	86	252	91	78	148	91	281	51
2	29	32	39	308	81	239	96	76	121	78	272	51
3	28	33	38	122	77	168	103	76	145	65	124	49
4	30	32	78	82	76	153	114	78	214	70	87	47
5	32	32	93	77	70	300	123	78	136	72	72	176
6	65	32	54	73	68	284	100	74	118	61	65	2110
7	32	32	46	88	72	178	93	72	106	58	60	172
8	29	32	47	259	72	149	92	71	98	55	57	117
9	28	32	188	110	68	134	120	68	93	54	56	94
10	28	32	109	88	68	128	127	67	91	54	61	87
11	28	32	64	77	66	177	100	66	93	55	53	83
12	28	32	55	76	76	130	99	67	88	52	152	80
13	28	33	51	83	74	120	96	99	83	84	94	77
14	28	33	47	180	70	118	110	107	81	151	68	85
15	28	33	44	89	70	108	99	79	78	82	62	82
16	30	40	43	72	70	102	94	77	78	64	57	71
17	32	43	42	69	69	101	91	69	105	70	54	69
18	30	74	41	65	68	99	88	69	92	58	55	67
19	31	39	41	72	74	95	84	84	74	57	58	66
20	30	35	42	99	90	94	82	74	70	55	77	64
21	30	33	57	1500	86	93	81	71	68	60	84	297
22	30	32	45	208	107	91	82	70	68	53	69	943
23	30	32	42	119	110	91	81	133	66	76	59	176
24	30	35	66	1890	850	188	80	523	65	74	60	120
25	31	32	267	333	1570	141	80	182	65	56	73	107
26	32	31	85	143	1710	113	81	162	63	57	65	99
27	35	37	70	119	457	102	110	118	63	52	93	93
28	32	44	60	112	379	97	91	106	64	57	81	92
29	32	44	58	104	---	95	83	99	67	99	64	92
30	31	68	54	98	---	93	80	90	67	199	61	90
31	32	---	59	92	---	91	---	88	---	74	55	---
TOTAL	968	1103	2068	6892	6734	4324	2851	3171	2768	2243	2629	5807
MEAN	31.2	36.8	66.7	222	241	139	95.0	102	92.3	72.4	84.8	194
MAX	65	74	267	1890	1710	300	127	523	214	199	281	2110
MIN	28	31	38	65	66	91	80	66	63	52	53	47
CFSM	.52	.62	1.12	3.71	4.03	2.32	1.59	1.71	1.54	1.21	1.42	3.24
IN.	.60	.69	1.29	4.29	4.19	2.69	1.77	1.97	1.72	1.40	1.64	3.61

CAL YR 1978	TOTAL	32025	MEAN	87.7	MAX	2020	MIN	27	CFSM	1.47	IN	19.92
WTR YR 1979	TOTAL	41558	MEAN	114	MAX	2110	MIN	28	CFSM	1.91	IN	25.85

GUNPOWDER RIVER BASIN

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01584050 LONG GREEN CREEK AT GLEN ARM, MD

LOCATION.--Lat 39°27'17", long 76°28'45", Baltimore County, Hydrologic Unit 02060003, on right bank 0.5 mi (0.8 km) downstream from bridge on Glen Arm Road, 0.6 mi (1.0 km) upstream from State Highway 147 (Harford Road), 0.8 mi (1.3 km) east of Glen Arm, and 1.6 mi (2.6 km) upstream from mouth.

DRAINAGE AREA.--9.40 mi² (24.3 km²).

PERIOD OF RECORD.--October 1975 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 230 ft (70 m), from topographic map.

REMARKS.--Records good except those for period of no gage-height record, March 24 to May 10, which are fair. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,610 ft³/s (73.9 m³/s) Aug. 27, 1978, gage height, 6.31 ft (1.923 m); minimum, 1.0 ft³/s (0.028 m³/s) Jan. 29, 1977, gage height, 0.79 ft (0.241 m), result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 300 ft³/s (8.5 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	0500	439 12.4	3.90 1.189	Feb. 26	0145	959 27.2	4.75 1.448
Jan. 21	1400	582 16.5	4.17 1.271	Apr. 27	1145	404 11.4	3.81 1.161
Jan. 24	1000	480 13.6	4.00 1.219	Aug. 2	1645	609 17.2	4.21 1.283
Jan. 24	1715	341 9.66	3.63 1.106	Sept. 6	Unknown	997 28.2	4.82 1.469
Feb. 25	0015	401 11.4	3.80 1.158	Sept. 21	2330	*1980 56.1	5.84 1.780

Minimum discharge, 5.6 ft³/s (0.16 m³/s) Nov. 9, 10, 11, 12, 13, 14, 15, gage height, 1.11 ft (0.338 m).

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	6.7	5.9	7.5	17	16	31	15	14	18	9.4	8.2	7.5
2	6.7	5.9	6.9	102	15	29	16	13	16	9.1	56	7.9
3	6.7	5.9	6.8	21	15	24	17	13	25	7.8	18	7.4
4	7.1	5.9	16	14	15	24	18	13	28	8.5	11	7.0
5	7.2	5.9	25	13	13	50	20	13	18	9.1	9.1	63
6	8.9	5.9	10	13	14	34	15	12	16	8.1	8.2	250
7	6.9	5.9	8.8	22	14	24	13	12	14	7.8	7.4	30
8	6.6	5.9	9.1	90	14	21	13	12	12	7.5	7.2	20
9	6.4	5.9	54	18	13	19	20	11	12	7.4	7.1	14
10	6.4	5.6	16	15	13	19	25	11	11	7.2	6.7	11
11	6.4	5.6	12	14	13	29	16	10	11	7.4	7.0	10
12	6.4	5.6	10	13	13	19	16	9.9	10	7.1	26	9.8
13	6.4	5.6	9.6	42	13	18	16	23	9.9	7.0	12	9.3
14	6.4	5.6	9.1	39	13	18	20	15	9.6	7.0	9.0	13
15	6.3	5.6	8.8	16	12	17	16	12	9.4	7.0	8.0	10
16	6.3	6.6	8.5	14	12	16	15	11	9.4	7.4	7.6	9.2
17	7.1	7.8	8.2	14	12	16	14	10	11	16	7.2	8.7
18	6.4	14	7.8	13	12	16	14	10	11	11	7.3	8.4
19	6.4	7.0	7.8	12	12	15	13	13	9.4	10	7.5	8.1
20	6.3	6.4	8.2	64	12	15	13	11	9.1	9.9	7.3	7.8
21	6.2	6.2	11	238	13	15	12	10	8.8	8.8	7.3	179
22	6.2	6.2	8.5	24	17	15	12	10	8.8	8.5	7.2	146
23	6.2	6.1	7.8	18	19	14	12	11	8.5	12	6.7	31
24	6.2	6.5	32	180	168	34	12	19	8.2	8.3	11	18
25	6.2	6.0	57	38	281	24	12	15	8.2	6.6	32	15
26	6.2	5.9	13	24	238	20	12	15	7.8	10	16	14
27	6.7	7.6	11	21	59	18	50	12	7.5	7.3	11	13
28	6.2	8.5	9.6	21	40	16	20	11	7.8	10	12	13
29	6.2	7.6	9.1	22	---	16	16	10	8.8	16	10	13
30	5.9	8.5	8.8	20	---	15	15	10	8.2	16	8.8	12
31	5.9	---	9.9	17	---	15	---	10	---	8.8	7.8	---
TOTAL	202.1	197.6	427.8	1189	1101	656	498	381.9	352.4	284.0	367.6	966.1
MEAN	6.52	6.39	13.8	38.4	39.3	21.2	16.6	12.3	11.7	9.16	11.9	32.2
MAX	8.9	14	57	238	281	50	50	23	28	16	56	250
MIN	5.9	5.6	6.8	12	12	14	12	9.9	7.5	6.6	6.7	7.0
CFSM	.69	.70	1.47	4.09	4.18	2.26	1.77	1.31	1.25	.97	1.27	3.43
IN.	.80	.78	1.69	4.70	4.36	2.60	1.97	1.51	1.39	1.12	1.45	3.82
CAL YR 1978 TOTAL	6021.1		MEAN 16.5	MAX 408	MIN 5.6	CFSM 1.76	IN 23.83					
WTR YR 1979 TOTAL	6623.5		MEAN 18.1	MAX 281	MIN 5.6	CFSM 1.93	IN 26.21					

01585100 WHITEMARSH RUN AT WHITE MARSH, MD

LOCATION.--Lat 39°22'15", long 76°26'46", Baltimore County, Hydrologic Unit 02060003, on left bank at upstream side of bridge on State Highway 7, 1 mi (1.6 km) southwest of White Marsh, and 3 mi (4.8 km) upstream from mouth.

DRAINAGE AREA.--7.61 mi² (19.71 km²).

PERIOD OF RECORD.--February 1959 to current year.

REVISED RECORDS.--WDR MD-DE-73-1: 1960(M), 1967-68, 1969(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 38.96 ft (11.875 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for February, which are fair. Low flow affected by operations of sand and gravel plant in vicinity of gage. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--20 years, 11.6 ft³/s (0.329 m³/s), 20.70 in/yr (526 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,000 ft³/s (227 m³/s) Aug. 1, 1971, gage height, 14.05 ft (4.282 m), from rating curve extended above 1,300 ft³/s (36.8 m³/s) on basis of computation of flow-through-culvert at gage height 10.04 ft (3.060 m) and computation of flow-through-culvert and over road at gage height 14.05 ft (4.282 m); no flow for part of Mar. 20, 1965, caused by construction work above station; minimum daily, 0.10 ft³/s (0.003 m³/s) Sept. 11, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 750 ft³/s (21 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. 25	0100	688 19.5	4.13 1.259	Apr. 27	1200	1440 40.8	7.52 2.292
Jan. 2	1215	900 25.5	4.90 1.494	July 17	0200	910 25.8	4.94 1.056
Jan. 21	0445	580 16.4	3.81 1.161	July 29	2330	1650 46.7	8.57 2.612
Jan. 21	1330	664 18.8	4.05 1.234	Aug. 2	1715	1700 48.1	8.81 2.685
Jan. 24	1715	849 24.0	4.70 1.433	Aug. 3	2045	963 27.3	5.18 1.579
Feb. 24	1815	1260 35.7	6.58 2.006	Sept. 5	2330	1700 48.1	8.79 2.679
Feb. 25	2015	639 18.1	3.97 1.210	Sept. 6	0315	*2640 74.8	10.65 3.246
Feb. 26	0130	1050 29.7	5.59 1.704	Sept. 21	2300	1580 44.7	8.19 2.496

Minimum discharge, 1.6 ft³/s (0.045 m³/s) Oct. 28, 29, 30, July 12, gage height, 1.32 ft (0.402 m); minimum daily discharge, 1.6 ft³/s (0.045 m³/s) Oct. 29.

REVISIONS.--The maximum discharges for water years 1965 and 1966 have been revised to 902 ft³/s (25.5 m³/s) Aug. 5, 1965, gage height, 4.91 ft (1.497 m), and 794 ft³/s (22.5 m³/s) Feb. 13, 1966, gage height, 4.48 ft (1.366 m), superseding figures published in WSP's 1903 and 2103 and the reports for 1965 and 1966.

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	2.3	2.1	5.2	45	9.3	18	7.2	6.9	49	9.6	5.2	3.5
2	2.6	2.0	4.0	223	8.7	15	9.5	6.2	37	5.1	168	3.7
3	2.2	2.0	6.6	30	7.5	11	10	6.3	77	2.7	75	3.2
4	3.2	2.1	56	11	7.2	9.7	25	7.5	68	4.7	18	2.9
5	3.0	2.1	59	9.5	5.6	49	14	7.7	16	3.5	6.3	175
6	9.0	2.2	8.2	9.8	6.3	30	6.8	5.7	10	2.5	4.6	393
7	2.5	2.3	5.7	61	6.4	12	5.9	5.3	8.3	2.2	3.7	14
8	2.1	2.2	8.6	123	7.0	9.0	5.5	5.0	7.1	2.1	3.6	7.5
9	2.1	2.2	103	22	6.5	7.6	49	5.0	6.6	2.1	4.6	5.6
10	2.3	2.5	20	12	5.5	7.3	26	4.8	6.0	2.0	4.0	4.9
11	2.1	2.8	8.0	8.2	5.1	47	8.7	4.6	7.6	2.0	5.3	4.3
12	2.1	2.7	6.3	7.2	5.0	11	7.7	4.6	5.5	2.0	66	4.0
13	2.1	3.0	5.4	52	5.5	8.0	7.2	87	4.8	3.8	12	3.9
14	6.4	3.0	4.6	45	5.0	8.0	20	24	4.6	3.3	5.1	8.9
15	2.5	3.1	4.4	15	4.8	6.4	8.7	9.1	4.4	2.2	3.9	5.1
16	2.9	5.2	4.2	9.5	4.8	6.0	7.2	7.3	4.5	1.9	3.2	3.3
17	5.1	11	3.9	8.2	5.4	5.9	6.3	6.5	11	68	3.0	3.6
18	2.5	33	3.7	7.2	6.4	5.7	5.9	7.8	7.0	4.3	3.9	3.4
19	2.4	4.0	3.6	6.3	8.0	5.5	5.5	9.6	4.3	3.1	3.4	3.0
20	2.1	3.1	6.3	62	10	5.5	5.1	5.7	4.1	2.7	3.4	2.8
21	2.1	3.0	13	223	9.0	5.4	5.1	5.4	4.0	17	14	141
22	2.1	2.7	4.8	34	25	5.5	4.7	5.1	4.1	3.6	3.8	137
23	2.3	3.7	4.0	15	20	5.5	4.7	10	3.9	25	3.0	23
24	3.0	3.8	80	191	385	57	4.7	33	3.8	7.5	13	7.3
25	2.4	2.6	96	46	300	22	4.5	23	3.6	4.7	16	5.8
26	2.6	2.2	11	18	236	9.9	6.5	16	3.5	12	9.8	5.0
27	4.9	16	7.1	14	58	7.7	209	6.6	3.6	3.1	27	4.7
28	1.8	11	5.5	18	33	6.8	22	5.9	3.5	25	15	5.0
29	1.6	22	5.0	25	---	6.3	11	9.6	3.4	130	6.6	5.0
30	1.8	20	4.8	14	---	6.3	8.5	14	4.1	80	13	4.7
31	2.1	---	13	9.8	---	5.9	---	7.0	---	7.2	4.3	---
TOTAL	88.2	179.6	570.9	1374.7	1196.0	415.9	521.9	362.2	380.3	444.9	527.7	994.1
MEAN	2.85	5.99	18.4	44.3	42.7	13.4	17.4	11.7	12.7	14.4	17.0	33.1
MAX	9.0	33	103	223	385	57	209	87	77	130	168	393
MIN	1.6	2.0	3.6	6.3	4.8	5.4	4.5	4.6	3.4	1.9	3.0	2.8
CFSM	.38	.79	2.42	5.82	5.61	1.76	2.29	1.54	1.67	1.89	2.23	4.35
IN.	.43	.88	2.79	6.72	5.85	2.03	2.55	1.77	1.86	2.17	2.58	4.86

CAL YR 1978 TOTAL 9973.3 MEAN 16.4 MAX 473 MIN 1.5 CFSM 2.16 IN 29.20
WTR YR 1979 TOTAL 7054.4 MEAN 19.3 MAX 393 MIN 1.6 CFSM 2.54 IN 34.49

01585200 WEST BRANCH HERRING RUN AT IDLEWYLDE, MD

LOCATION.--Lat 39°22'25", long 76°35'05", Baltimore County, Hydrologic Unit 02060003, on left bank 40 ft (12 m) downstream from bridge on Regester Avenue, at Idlewylde, 0.1 mi (0.2 km) north of Baltimore city limits, 1 mi (1.6 km) upstream from mouth, and 1.3 mi (2.1 km) east of State Highway 45.

DRAINAGE AREA.--2.13 mi² (5.52 km²).

PERIOD OF RECORD.--July 1957 to May 1965, January 1966 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 285 ft (87 m), from topographic map. Prior to May 31, 1965, at site 40 ft (12 m) upstream at datum 3.24 ft (0.988 m) higher.

REMARKS.--Records good except those for February 9 to March 14, which are fair. Diurnal fluctuation (occasionally extensive) caused by ready-mixed concrete plant above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--20 years (water years 1958-64, 1967-79), 2.70 ft³/s (0.0765 m³/s), 17.21 in/yr (437 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,740 ft³/s (49.3 m³/s) Sept. 11, 1971, gage height, 6.80 ft (2.073 m), from rating curve extended above 90 ft³/s (2.55 m³/s) on basis of slope-area measurement at gage height 6.37 ft (1.942 m); no flow Aug. 14-24, 1957.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 290 ft³/s (8.2 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)
July 13	1830	1160 32.9	5.80 1.768	Aug. 3	1900	421 11.9	3.94 1.201
July 30	2145	494 14.0	4.18 1.274	Sept. 6	0130	*1660 47.0	6.68 2.036
Aug. 2	1500	1160 32.9	5.81 1.771	Sept. 21	2115	675 19.1	4.70 1.433

Minimum discharge, 0.06 ft³/s (0.002 m³/s) Nov. 3, gage height, 0.81 ft (0.247 m); minimum daily, 0.27 ft³/s (0.008 m³/s) Oct. 30.

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	.70	.32	.64	7.7	2.8	4.4	4.4	1.8	8.6	5.9	1.2	1.2
2	.40	.28	.57	4.2	2.2	4.1	2.7	1.5	2.2	1.2	32	1.3
3	.38	.28	4.0	2.8	1.8	3.4	4.5	1.6	16	.86	17	1.2
4	1.4	.33	11	1.9	1.8	3.2	6.7	2.7	7.3	2.5	3.0	1.3
5	3.6	.32	10	1.6	1.6	15	2.4	1.9	2.2	.92	1.7	50
6	1.6	.28	1.0	2.0	1.6	5.1	1.9	1.4	1.8	.79	1.3	55
7	.43	.30	.78	19	2.1	3.2	1.9	1.3	1.7	.83	1.2	2.4
8	.37	.28	2.4	20	2.1	2.8	1.8	1.3	1.5	.79	1.2	1.8
9	.32	.31	24	2.6	2.2	2.6	12	1.3	1.6	.74	3.9	2.0
10	.38	.30	1.8	2.0	1.7	3.8	2.5	1.3	1.4	.78	1.3	1.4
11	.34	.34	1.1	1.8	1.4	8.7	1.9	1.2	2.4	.75	5.3	1.3
12	.39	.31	1.0	1.8	1.4	2.6	1.9	1.3	1.3	.75	23	1.1
13	.34	.37	.90	18	1.3	2.6	1.9	17	1.2	29	2.2	1.1
14	.47	.32	.77	6.6	1.3	2.6	5.1	2.0	1.2	5.6	1.4	5.3
15	.33	.84	.73	2.2	1.4	2.3	1.9	2.0	1.2	1.3	1.2	1.4
16	1.6	1.9	.72	1.9	1.4	2.2	1.7	1.5	1.5	.96	1.2	1.2
17	.57	6.1	.59	2.2	1.3	2.1	1.7	1.2	4.8	5.2	1.1	1.1
18	.34	8.9	.63	1.7	1.3	2.1	1.6	3.4	1.3	.93	1.9	1.1
19	.43	.55	.62	1.5	1.3	2.0	1.5	2.2	1.0	.93	4.9	1.1
20	.31	.45	4.0	24	1.8	1.9	1.5	1.3	.99	.88	1.5	.97
21	.38	.46	2.5	45	3.5	1.9	3.2	1.2	.98	2.2	8.0	53
22	.36	.42	.72	3.3	10	1.8	5.1	1.2	1.0	.97	1.2	15
23	.57	1.5	.70	2.4	10	1.8	1.7	5.6	.96	2.6	1.2	6.9
24	.51	.49	23	47	55	20	1.4	9.6	.93	.84	3.9	2.5
25	.39	.48	7.6	4.9	51	3.1	1.6	9.5	.88	4.0	11	2.1
26	.61	.49	1.6	3.0	30	2.3	2.9	2.6	.87	1.4	2.1	1.9
27	2.1	4.8	1.2	2.7	8.3	2.1	23	1.6	.89	.72	5.9	1.8
28	.36	1.5	1.1	4.0	5.8	1.9	2.4	1.7	.98	4.9	1.7	1.8
29	.31	4.2	1.0	3.3	---	2.0	1.9	1.8	.97	28	6.2	1.7
30	.27	2.2	1.0	2.3	---	1.9	1.7	1.6	2.6	6.4	2.3	2.3
31	.31	---	3.9	2.1	---	5.9	---	2.0	---	1.5	1.3	---
TOTAL	20.87	39.62	111.57	283.3	287.4	121.4	106.4	87.6	72.25	115.14	152.3	222.27
MEAN	.67	1.32	3.60	9.14	7.41	3.92	3.55	2.83	2.41	3.71	4.91	7.41
MAX	3.6	8.9	24	47	55	20	23	17	16	29	32	55
MIN	.32	.28	.57	1.5	1.3	1.8	1.4	1.2	.87	.72	1.1	.97
CFSM	.32	.62	1.69	4.29	3.48	1.84	1.67	1.33	1.13	1.74	2.31	3.48
IN.	.36	.69	1.95	4.95	3.62	2.12	1.86	1.53	1.26	2.01	2.66	3.88
CAL YR 1978 TOTAL	1149.16			MEAN 3.15	MAX 55	MIN .27	CFSM 1.48	IN 20.06				
WTR YR 1979 TOTAL	1540.12			MEAN 4.22	MAX 55	MIN .27	CFSM 1.98	IN 26.89				

BACK RIVER BASIN

01585300 STEMMERS RUN AT ROSSVILLE, MD

LOCATION.--Lat 39°20'28", long 76°29'17", Baltimore County, Hydrologic Unit 02060003, on left bank 500 ft (152 m) upstream from bridge on State Highway 7, at Rossville, 0.9 mi (1.4 km) upstream from Brien Run, and 2.1 mi (3.4 km) upstream from mouth.

DRAINAGE AREA.--4.46 mi² (11.55 km²).

PERIOD OF RECORD.--December 1958 to September 1972, October 1973 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 21.64 ft (6.596 m) Baltimore County datum. Prior to Sept. 30, 1972, at site on old channel about 550 ft (168 m) southeast of present site at datum 2.40 ft (0.732 m) lower.

REMARKS.--Records good. Slight diurnal fluctuation at times from unknown source. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--19 years (water years 1960-72, 1974-79), 6.89 ft³/s (0.195 m³/s), 20.98 in/yr (533 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,950 ft³/s (169 m³/s) Aug. 1, 1971, gage height, 11.34 ft (3.456 m), from high-water mark in well, site and datum then in use, from rating curve extended above 1,100 ft³/s (31.2 m³/s) on basis of contracted-opening and flow-over-road measurement of peak flow; minimum daily, 0.10 ft³/s (0.003 m³/s) many days in 1962, 1964, and 1966.

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 2	1145	709 20.1	3.43 1.045	Aug. 2	1615	1380 39.1	4.37 1.332
Feb. 26	0045	871 24.7	3.67 1.119	Aug. 3	1945	1310 37.1	4.28 1.305
Apr. 27	1045	1400 39.6	4.40 1.341	Sept. 5	2230	1980 56.1	5.08 1.548
July 17	0115	1100 31.2	4.00 1.219	Sept. 6	0200	*2850 80.7	6.68 2.036
July 29	2200	800 22.7	3.57 1.088	Sept. 21	2215	1270 36.0	4.23 1.289

Minimum daily discharge, 0.78 ft³/s (0.022 m³/s) Oct. 9, 30.

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	.86	.86	1.8	34	4.0	9.6	3.5	2.6	43	6.3	1.7	2.0
2	.96	.84	1.5	199	3.5	8.2	4.7	2.4	20	2.4	75	2.0
3	.79	.83	4.3	11	3.0	5.4	6.4	2.3	85	1.1	74	1.8
4	1.4	.89	33	5.0	2.7	5.0	14	4.1	39	2.7	9.1	1.7
5	.99	.87	39	3.2	2.6	36	8.2	3.4	6.5	1.6	2.9	226
6	5.4	.86	3.0	3.9	2.3	16	3.5	2.1	4.0	1.0	2.1	220
7	.93	.89	2.1	57	2.1	6.6	2.5	2.0	3.0	.95	1.7	6.1
8	.80	.86	4.7	94	2.6	4.7	2.4	1.9	2.5	.88	1.7	3.6
9	.78	.85	74	13	2.3	3.8	40	1.8	2.3	.94	3.4	2.8
10	.83	.88	6.8	6.6	1.9	4.0	10	1.8	2.2	.91	3.3	2.5
11	.83	.93	2.8	3.2	1.8	28	3.8	1.7	3.4	.96	6.1	2.4
12	.83	.91	2.3	2.8	1.7	4.9	3.7	1.8	1.9	.95	57	2.2
13	.85	.95	2.1	38	2.1	3.7	3.0	71	1.7	2.3	5.8	2.7
14	3.9	.97	1.8	19	1.7	4.0	11	9.3	1.7	1.7	2.5	5.0
15	.92	1.0	1.7	10	1.7	3.0	3.8	3.5	1.6	.98	2.0	2.0
16	1.7	3.2	1.7	4.1	1.8	2.6	3.0	3.0	1.6	.85	1.7	1.4
17	2.5	7.3	1.7	3.2	1.7	2.6	2.7	2.0	4.8	.49	1.6	1.3
18	.98	22	1.5	2.8	2.1	2.5	2.5	4.3	2.6	1.5	2.2	1.2
19	.92	1.4	1.5	2.3	2.6	2.4	2.4	3.5	1.6	1.2	1.9	1.2
20	.84	1.1	4.9	68	3.5	2.3	2.2	2.1	1.4	1.1	2.0	1.1
21	.82	1.1	6.8	175	2.6	2.2	2.1	1.9	1.4	4.4	9.5	94
22	.84	.99	2.0	11	15	2.1	2.1	1.9	1.4	1.2	1.9	75
23	.87	1.7	1.7	5.2	12	2.0	2.0	5.9	1.4	3.5	1.5	9.9
24	1.1	1.6	85	154	247	47	1.9	15	1.3	1.8	13	2.8
25	.81	.99	54	17	212	9.7	2.0	9.0	1.2	3.7	17	2.4
26	.85	.99	4.6	6.7	155	3.9	3.6	5.1	1.1	4.9	5.5	2.1
27	2.6	11	3.0	5.1	26	3.0	158	2.2	1.1	1.1	32	1.9
28	.87	4.8	2.2	8.7	14	2.6	8.6	2.0	1.1	6.1	6.6	2.2
29	.83	17	2.0	11	---	2.5	4.2	9.4	1.1	62	8.5	2.2
30	.78	7.3	2.0	5.5	---	2.4	3.2	5.9	1.7	20	8.1	2.0
31	.83	---	9.1	4.1	---	2.5	---	4.3	---	1.9	2.4	---
TOTAL	39.21	95.86	364.6	983.4	731.3	235.2	321.0	189.2	242.6	189.92	363.7	683.5
MEAN	1.26	3.20	11.8	31.7	26.1	7.59	10.7	6.10	8.09	6.13	11.7	22.8
MAX	5.4	22	85	199	247	47	158	71	85	62	75	226
MIN	.78	.83	1.5	2.3	1.7	2.0	1.9	1.7	1.1	.85	1.5	1.1
CFSM	.28	.72	2.65	7.11	5.85	1.70	2.40	1.37	1.81	1.37	2.62	5.11
IN.	.33	.80	3.04	8.20	6.10	1.96	2.68	1.58	2.02	1.58	3.03	5.70
CAL YR 1978 TOTAL	3371.14			MEAN 9.24	MAX 317	MIN .65	CFSM 2.07	IN 28.11				
WTR YR 1979 TOTAL	4439.49			MEAN 12.2	MAX 247	MIN .78	CFSM 2.74	IN 37.02				

BACK RIVER BASIN

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01585400 BRIEN RUN AT STEMMERS RUN, MD

LOCATION.--Lat 39°20'01", long 76°28'23", Baltimore County, Hydrologic Unit 02060003, on right bank 0.2 mi (0.3 km) upstream from mouth and 0.3 mi (0.5 km) north of Stemmers Run.

DRAINAGE AREA.--1.97 mi² (5.10 km²).

PERIOD OF RECORD.--May 1958 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 8.80 ft (2.681 m) Baltimore County datum.

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

AVERAGE DISCHARGE.--21 years, 2.61 ft³/s (0.074 m³/s), 17.99 in/yr (457 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,500 ft³/s (99.1 m³/s) Aug. 1, 1971, gage height, 10.75 ft (3.277 m), from high-water mark in well, from rating curve extended above 180 ft³/s (5.10 m³/s) on basis of computation of peak flow through culvert and over road at site 0.8 mile (1.3 km) upstream, adjusted for flow from intervening area; no flow at times many years.

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)
Dec. 24	2400	157 4.45	2.73 0.832	Aug. 27	1800	307 8.69	3.85 1.174
Feb. 24	2400	185 5.24	2.96 0.902	Sept. 5	2345	434 12.3	4.63 1.411
Feb. 26	0145	163 4.62	2.78 0.847	Sept. 6	0300	*624 17.7	5.55 1.692
Apr. 27	1130	344 9.74	4.09 1.247				

Minimum discharge, 0.25 ft³/s (0.007 m³/s) Oct. 30, 31, gage height, 0.96 ft (0.293 m)

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	.41	.30	.88	12	1.0	2.9	1.1	1.4	21	2.0	.85	.85
2	.40	.30	.68	55	.88	2.5	1.6	1.3	7.0	.97	11	.72
3	.38	.30	1.7	4.5	.85	1.7	2.4	.99	32	.72	14	.72
4	.45	.31	12	2.3	.90	1.6	5.5	1.6	18	1.4	3.0	.65
5	.41	.35	15	1.3	.83	9.8	3.6	1.2	3.1	.91	.85	.48
6	.41	.35	1.6	.99	.76	5.2	1.4	.94	2.2	.80	.99	102
7	.41	.35	1.2	15	.66	2.2	1.0	.85	1.2	.72	.85	2.1
8	.41	.35	2.6	26	.80	1.5	.99	.85	1.1	.72	.61	1.2
9	.41	.35	29	1.5	.72	1.3	17	.85	.99	.72	.99	1.0
10	.41	.34	3.8	1.3	.62	1.2	5.4	.86	.93	.72	.72	.93
11	.41	.30	1.3	1.2	.58	9.8	1.9	.85	1.1	.72	8.5	.98
12	.41	.34	1.1	.78	.54	1.8	1.4	.85	.86	.72	25	.88
13	.41	.35	1.2	11	.60	1.3	1.2	.85	.85	.72	3.3	1.0
14	.47	.35	.77	7.4	.54	1.2	4.3	4.7	.81	.72	.99	3.2
15	.35	.39	.74	1.8	.50	1.0	1.7	1.5	.80	.72	.72	.99
16	.61	.72	.72	1.6	.50	1.0	1.4	1.2	.85	.60	.72	.77
17	.36	2.0	.69	2.0	.56	.99	1.1	1.0	2.1	11	.60	.72
18	.30	7.1	.72	.90	.70	.94	1.1	2.0	1.3	.72	.72	.72
19	.30	.72	.75	.63	.84	.90	1.0	1.3	1.2	.60	.72	.72
20	.34	.60	2.7	18	.90	.85	.85	1.0	1.1	.60	.60	.72
21	.35	.60	3.0	63	1.0	.85	.85	1.1	1.1	3.5	1.9	10
22	.35	.72	1.0	4.8	3.0	1.0	.85	1.1	1.0	.72	.72	22
23	.36	.85	.76	2.3	4.6	.91	.85	3.4	.72	2.3	.60	3.5
24	.37	.72	26	46	69	18	.77	6.1	.72	.85	.60	1.5
25	.35	.60	24	6.9	83	4.2	.72	2.9	.73	.85	3.5	1.1
26	.36	.60	1.9	2.2	49	1.7	1.2	1.5	.72	.85	1.2	.86
27	.40	4.5	1.1	1.7	10	1.2	62	1.1	.73	.72	46	1.1
28	.30	2.1	.86	3.1	5.4	1.2	3.4	.99	.74	2.3	6.7	1.3
29	.30	5.5	.72	3.9	---	.99	1.6	2.5	.75	11	8.0	.94
30	.25	3.1	.72	2.2	---	1.1	1.2	2.6	1.0	8.0	6.7	1.0
31	.29	---	3.0	1.3	---	1.1	---	2.2	---	1.5	1.2	---
TOTAL	11.74	35.46	142.21	302.60	239.28	81.93	129.38	74.73	106.70	59.39	152.85	212.17
MEAN	.38	1.18	4.59	9.76	8.55	2.64	4.31	2.41	3.56	1.92	4.93	7.07
MAX	.61	7.1	29	63	83	18	62	24	32	11	46	102
MIN	.25	.30	.68	.63	.50	.85	.72	.85	.72	.60	.60	.65
CFSM	.19	.60	2.33	4.95	4.34	1.34	2.19	1.22	1.81	.98	2.50	3.59
IN.	.22	.67	2.68	5.71	4.52	1.55	2.44	1.41	2.01	1.12	2.88	4.00

CAL YR 1978 TOTAL 1176.94 MEAN 3.22 MAX 112 MIN .25 CFSM 1.64 IN 22.21
WTR YR 1979 TOTAL 1548.44 MEAN 4.24 MAX 102 MIN .25 CFSM 2.15 IN 29.22

01585500 CRANBERRY BRANCH NEAR WESTMINSTER, MD

LOCATION.--Lat 39°35'35", long 76°58'05", Carroll County, Hydrologic Unit 02060003, on left bank 80 ft (24 m) upstream from culvert, 0.7 mi (1.1 km) upstream from mouth, and 1.8 mi (2.9 km) northeast of Westminster.

DRAINAGE AREA.--3.29 mi² (8.52 km²).

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

REVISED RECORDS.--WSP 1432: Drainage area, 1954-55. WDR MD-DE-75-1: 1972(M).

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 670 ft (204 m), from topographic map.

REMARKS.--Records good. Occasional small diversions to and releases from Cranberry Reservoir located offstream 1 mi (1.6 km) above station since August 1957, capacity, 113,700,000 gal (430,400 m³). Beginning October 1972 occasional large diversions past the gaging station from the reservoir through a 30-inch (0.76 m) pipe. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--30 years, 3.59 ft³/s (0.102 m³/s), 14.82 in/yr (376 mm/yr), unadjusted for storage and diversions.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,220 ft³/s (62.9 m³/s) Sept. 26, 1975, gage height, 7.47 ft (2.277 m), from rating curve extended above 200 ft³/s (5.66 m³/s) on the basis of computations of flows through culvert at gage heights 5.54 ft (1.689 m) and 7.47 ft (2.277 m); minimum daily, 0.27 ft³/s (0.008 m³/s) Dec. 3, 1969.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 80 ft³/s (2.2 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)				
Jan. 21	0345	144	4.08	3.12	0.951	Feb. 25	2215	189	5.35	3.31	1.009
Jan. 21	1345	156	4.42	3.17	0.966	Feb. 26	0145	263	7.45	3.59	1.094
Jan. 24	1000	252	7.14	3.55	1.082	Sept. 6	0045	*475	13.5	4.22	1.286
Jan. 24	1530	260	7.36	3.58	1.091	Sept. 22	0015	89	2.52	2.82	0.860
Feb. 24	2145	132	3.74	3.06	0.933						

Minimum daily, 0.29 ft³/s (0.008 m³/s) Oct. 3.

REVISIONS.--Peak discharges and annual maximum (*) for water years 1973-78 have been revised as shown in the following table. They supersede figures published in the reports for 1973-78.

Water year	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Water year	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)				
1973	June 29, 1973	2245	151	4.28	3.15	0.960	1975	Sept. 20, 1975	2215	136	3.85	3.08	0.939
1973	Sept. 3, 1973	2145	120	3.40	3.00	0.914	1975	Sept. 24, 1975	0915	130	3.68	3.05	0.930
1974	Dec. 26, 1973	1015	82	2.32	2.77	0.844	1975	Sept. 25, 1975	0515	122	3.46	3.01	0.917
1974	Jan. 21, 1974	1215	*134	3.79	3.07	0.936	1975	Sept. 26, 1975	0100	1320	37.4	6.01	1.832
1974	Mar. 30, 1974	1845	120	3.40	3.00	0.914	1975	Sept. 26, 1975	0630	*2220	62.9	7.47	2.277
1974	Apr. 4, 1974	0930	80	2.27	2.75	0.838	1976	Jan. 27, 1976	1745	*80	2.27	2.75	0.838
1975	Dec. 16, 1974	1130	96	2.72	2.86	0.872	1977	Apr. 5, 1977	0230	*106	3.00	2.92	0.890
1975	Mar. 19, 1975	1600	130	3.68	3.05	0.930	1977	June 28, 1977	1400	82	2.32	2.77	0.844
1975	Apr. 25, 1975	2015	91	2.58	2.83	0.863	1978	Dec. 18, 1977	1030	85	2.41	2.79	0.850
1975	May 31, 1975	2300	111	3.14	2.95	0.899	1978	Jan. 26, 1978	0545	*798	22.6	4.98	1.518
1975	June 1, 1975	0345	149	4.22	3.14	0.957	1978	Mar. 14, 1978	1630	165	4.67	3.21	0.978
1975	June 5, 1975	2230	162	4.59	3.20	0.975	1978	Mar. 26, 1978	1400	85	2.41	2.79	0.850
1975	Aug. 14, 1975	0230	89	2.52	2.82	0.860							

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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	.30	.42	2.0	3.7	.67	11	2.3	2.6	2.6	2.3	2.4	1.1
2	.30	.46	1.8	18	.60	9.5	2.8	2.5	2.4	2.1	2.8	1.1
3	.29	.40	1.9	5.5	.52	6.0	3.4	2.4	3.8	1.9	2.0	1.1
4	.33	.39	5.7	2.9	.52	6.6	2.9	2.7	6.6	2.2	1.7	1.1
5	.68	.39	5.2	.76	.50	14	2.8	2.6	3.1	1.9	1.5	29
6	.95	.40	2.4	.69	.50	12	1.5	2.4	2.7	1.7	1.4	59
7	.33	.40	1.8	1.9	.50	6.4	1.1	2.3	2.5	1.6	1.3	4.5
8	.33	.40	2.7	12	.46	3.6	1.1	2.2	2.6	1.5	1.3	3.1
9	.31	.42	16	2.9	.46	3.2	3.5	2.1	2.7	1.5	1.2	2.5
10	.32	.42	4.7	.89	.48	3.5	2.3	2.0	3.1	1.7	1.3	2.3
11	.31	.42	2.9	.75	.47	7.8	1.7	1.9	3.5	1.6	1.4	2.2
12	.36	.39	1.9	.68	.47	3.0	2.2	2.0	3.2	1.6	4.9	2.0
13	.48	.39	.54	.76	.46	2.4	2.5	2.7	2.4	2.1	2.0	2.0
14	.78	.39	.94	3.7	.46	2.5	3.6	2.6	2.0	1.9	1.6	2.4
15	.84	.43	.44	1.2	.46	2.0	2.9	2.1	2.0	1.8	1.5	2.0
16	1.0	.51	.41	.60	.46	1.8	2.9	1.9	2.0	2.7	1.4	1.9
17	1.2	.75	.58	.60	.46	1.9	2.7	1.8	2.5	1.9	1.5	1.8
18	1.1	3.2	.75	.54	.52	1.8	2.4	1.9	2.2	1.5	1.6	1.8
19	1.1	.40	.75	.74	.52	1.7	3.2	2.8	2.0	1.5	2.3	1.8
20	1.1	.36	.78	6.3	.46	1.7	3.7	2.1	2.0	1.5	2.1	1.8
21	1.1	.34	.91	70	.67	1.5	3.5	2.1	1.9	1.5	4.6	10
22	1.1	.34	.74	8.2	.91	1.4	3.3	2.0	2.0	1.4	2.0	17
23	1.1	.36	.71	7.2	3.1	1.4	3.1	8.5	1.9	1.3	1.9	5.2
24	1.2	.61	5.1	99	63	8.6	3.0	11	1.8	1.3	1.8	3.7
25	1.2	.91	9.0	7.0	85	5.3	3.0	5.6	1.7	1.3	1.7	3.0
26	.94	.96	1.2	2.5	63	3.5	3.1	6.1	1.6	1.5	1.6	2.1
27	1.4	1.2	.64	1.7	16	1.6	3.7	3.6	1.7	1.1	1.8	2.0
28	1.5	1.6	.52	1.5	14	1.3	3.1	3.2	1.7	1.6	1.7	2.0
29	1.4	1.6	.46	1.1	---	2.2	2.8	2.8	1.7	2.4	1.5	1.6
30	1.4	2.6	.46	.82	---	2.2	2.7	2.4	1.8	2.4	1.3	1.3
31	.96	---	.51	.67	---	2.3	---	2.4	---	1.6	1.2	---
TOTAL	25.71	21.86	74.44	264.80	255.63	133.7	82.8	95.3	73.7	53.9	58.3	172.4
MEAN	.83	.73	2.40	8.54	9.13	4.31	2.76	3.07	2.46	1.74	1.88	5.75
MAX	1.5	3.2	16	99	85	14	3.7	11	6.6	2.7	4.9	59
MIN	.29	.34	.41	.54	.46	1.3	1.1	1.8	1.6	1.1	1.2	1.1
CAL YR 1978	TOTAL	1244.26	MEAN	3.41	MAX	120	MIN	.29				
WTR YR 1979	TOTAL	1312.54	MEAN	3.60	MAX	99	MIN	.29				

PATAPSCO RIVER BASIN

01586000 NORTH BRANCH PATAPSCO RIVER AT CEDARHURST, MD

LOCATION.--Lat 39°30'00", long 76°53'00", Carroll County, Hydrologic Unit 02060003, on left bank at downstream side of private footbridge at Cedarhurst, 0.8 mi (1.3 km) downstream from Roaring Run, 8 mi (12.9 km) southeast of Westminster, and 16.5 mi (26.5 km) upstream from confluence with South Branch.

DRAINAGE AREA.--56.6 mi² (146.6 km²).

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

REVISED RECORDS.--WSP 1903: 1959-60.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 425 ft (130 m), from topographic map.

REMARKS.--Records good. Slight diurnal fluctuation at low and medium flow caused by mill above station. Low flow affected slightly by Cranberry Reservoir since August 1957, capacity, 113,700,000 gal (430,400 m³). Records do not include a mean discharge of 2.14 ft³/s (0.061 m³/s) diverted above station for municipal supply of Westminster; sewage effluent discharged into Little Pipe Creek in Monocacy River basin. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--34 years, 65.2 ft³/s (1.846 m³/s), 15.64 in/yr (397 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,800 ft³/s (787 m³/s) June 22, 1972, gage height, 20.75 ft (6.325 m), from high-water mark in well, from rating curve extended above 4,100 ft³/s (116 m³/s) on basis of contracted-opening measurement of peak flow; minimum, 1.9 ft³/s (0.054 m³/s) Sept. 10, 1966, result of filling pond above station; minimum daily, 3.1 ft³/s (0.088 m³/s) Sept. 10, 12, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28 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	0630	2240 63.4	6.40 1.951	May 23	2345	1400 39.6	4.88 1.487
Jan. 21	1615	2248 63.4	6.40 1.951	July 13	2015	1380 39.1	4.84 1.475
Jan. 24	1845	3630 103	8.22 2.506	Sept. 6	0200	*4580 130	9.28 2.829
Feb. 24	2315	2480 70.2	6.75 2.057	Sept. 22	0145	2310 65.4	6.51 1.984
Feb. 26	0345	3240 91.8	7.74 2.359				

Minimum discharge, 4.0 ft³/s (0.11 m³/s) July 4, gage height, 1.20 ft (0.366 m).

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	20	18	38	93	80	234	80	56	102	70	103	31
2	20	18	33	425	69	216	87	54	79	54	138	32
3	19	18	33	74	69	166	98	55	113	43	69	30
4	22	18	105	77	70	155	103	59	186	49	46	30
5	26	18	102	68	58	298	103	59	98	51	40	425
6	77	18	48	64	55	266	84	54	86	40	34	1410
7	24	18	38	96	57	179	80	52	79	37	33	130
8	22	18	42	252	60	151	78	50	74	36	32	88
9	19	18	283	98	54	130	123	49	73	35	36	72
10	19	18	109	71	46	124	126	47	76	34	35	59
11	18	18	56	62	46	202	96	46	72	35	32	55
12	18	18	47	56	46	128	93	47	64	33	136	52
13	18	18	41	70	52	115	89	69	57	180	64	49
14	18	18	37	128	51	112	115	76	54	85	41	56
15	18	18	34	70	51	99	96	52	51	45	38	53
16	18	29	34	58	52	91	89	48	51	39	36	44
17	24	36	33	53	46	89	84	43	61	42	33	41
18	20	97	29	45	41	86	78	42	59	35	33	42
19	20	33	28	39	43	82	76	62	51	34	36	40
20	20	26	29	65	51	80	73	47	49	52	39	39
21	19	23	43	1350	58	80	73	45	47	44	77	219
22	19	22	29	206	112	78	69	44	48	37	46	602
23	19	23	27	137	123	76	67	174	46	36	35	129
24	18	28	68	1830	901	188	63	431	44	44	36	85
25	18	23	308	349	1450	126	63	192	43	35	43	80
26	19	22	72	167	1510	100	64	149	39	37	36	72
27	23	29	54	133	377	89	82	105	38	33	44	66
28	19	43	43	123	310	80	70	93	41	38	46	64
29	18	43	41	118	---	80	62	86	41	77	35	67
30	18	72	40	95	---	82	59	75	44	58	34	62
31	18	---	47	88	---	80	---	70	---	40	31	---
TOTAL	668	819	1971	6560	5938	4062	2523	2531	1966	1508	1517	4224
MEAN	21.5	27.3	63.6	212	212	131	84.1	81.6	65.5	48.6	48.9	141
MAX	77	97	308	1830	1510	298	126	431	186	180	138	1410
MIN	18	18	27	39	41	76	59	42	38	33	31	30
CFSM	.38	.48	1.12	3.75	3.75	2.31	1.49	1.44	1.16	.86	.86	2.49
IN.	.44	.54	1.30	4.31	3.90	2.67	1.66	1.66	1.29	.99	1.00	2.78

CAL YR 1978 TOTAL 27408 MEAN 75.1 MAX 2110 MIN 18 CFSM 1.33 IN 18.01
WTR YR 1979 TOTAL 34287 MEAN 93.9 MAX 1830 MIN 18 CFSM 1.66 IN 22.53

01587500 SOUTH BRANCH PATAPSCO RIVER AT HENRYTON, MD

LOCATION.--Lat 39°21'05", long 76°54'50", Howard County, Hydrologic Unit 02060003, on right bank at downstream side of bridge on Henryton Road at Henryton, 1.3 mi (2.1 km) upstream from Piney Run, 2.5 mi (4.0 km) upstream from confluence with North Branch, and 3.2 mi (5.1 km) southeast of Sykesville.

DRAINAGE AREA.--64.4 mi² (166.8 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 289.15 ft (88.133 m) National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--31 years, 74.3 ft³/s (2.104 m³/s), 15.67 in/yr (398 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,900 ft³/s (762 m³/s) June 22, 1972, gage height, 28.14 ft (8.577 m), from floodmarks, from rating curve extended above 1,900 ft³/s (53.8 m³/s) on basis of slope-area measurements at gage height 7.88 ft (2.402 m) and 28.14 ft (8.577 m), and contracted-opening measurements at gage heights 10.12 ft (3.085 m) and 19.40 ft (5.913 m); minimum, 0.40 ft³/s (0.011 m³/s) Sept. 9-12, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 950 ft³/s (26 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. 2	1430	1050 29.7	4.37 1.332	Feb. 26	0300	3710 105	9.84 2.999
Jan. 21	0700	1950 55.2	6.37 1.942	May 24	0200	1140 32.3	4.58 1.396
Jan. 21	1600	1900 53.8	6.28 1.914	Sept. 6	0300	*5790 164	12.93 3.941
Jan. 24	1630	3320 94.0	9.10 2.774	Sept. 22	0100	2020 57.2	6.52 1.987

Minimum discharge, 26 ft³/s (0.74 m³/s) Oct. 1, 3, 4, 15, 16.

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	27	30	50	110	105	340	107	79	278	80	54	44
2	28	29	42	464	90	300	111	76	163	79	113	45
3	27	29	39	149	90	240	124	77	245	60	78	43
4	29	29	110	119	85	210	143	81	255	62	56	42
5	33	30	150	100	75	400	153	83	143	70	49	826
6	54	29	56	90	75	350	116	75	122	56	45	1960
7	31	30	50	119	80	300	104	73	113	53	42	194
8	29	29	51	325	78	220	103	71	100	51	41	129
9	28	29	258	118	75	190	161	69	91	51	46	104
10	28	29	142	105	65	170	183	67	88	50	79	91
11	28	29	72	90	60	270	125	66	89	51	52	84
12	28	29	61	85	60	200	120	65	82	49	230	79
13	28	30	55	100	70	160	116	109	76	48	105	75
14	27	31	52	152	70	146	133	111	73	74	60	78
15	27	31	48	104	70	133	116	78	70	70	51	77
16	28	39	47	90	70	125	107	75	69	52	48	67
17	32	43	45	80	65	124	101	66	98	49	46	65
18	29	97	43	70	55	121	96	65	94	47	46	64
19	29	43	43	60	58	114	92	78	73	46	48	61
20	30	36	44	144	70	108	90	74	69	51	44	58
21	29	34	60	1270	80	103	88	70	67	61	95	257
22	29	32	48	300	150	101	87	68	72	49	62	616
23	29	32	43	200	180	100	87	78	66	46	51	201
24	28	36	75	1470	1000	245	86	518	62	45	51	129
25	28	32	333	400	1500	201	86	267	62	44	64	110
26	29	31	94	250	1750	142	89	204	59	45	62	100
27	32	39	73	180	700	124	115	159	57	41	75	92
28	30	48	66	160	400	118	98	147	57	64	64	89
29	29	52	62	150	---	116	87	140	58	117	52	90
30	29	95	58	130	---	110	83	126	67	226	50	85
31	29	---	62	120	---	106	---	122	---	64	46	---
TOTAL	921	1132	2432	7304	7226	5687	3307	3437	3018	1951	2005	5955
MEAN	29.7	37.7	78.5	236	258	183	110	111	101	62.9	64.7	199
MAX	54	97	333	1470	1750	400	183	518	278	226	230	1960
MIN	27	29	39	60	55	100	83	65	57	41	41	42
CFSM	.46	.59	1.22	3.67	4.01	2.84	1.71	1.72	1.57	.98	1.01	3.09
IN.	.53	.65	1.40	4.22	4.17	3.28	1.91	1.99	1.74	1.13	1.16	3.44

CAL YR 1978 TOTAL 33718 MEAN 92.4 MAX 2220 MIN 26 CFSM 1.44 IN 19.48
WTR YR 1979 TOTAL 44375 MEAN 122 MAX 1960 MIN 27 CFSM 1.89 IN 25.63

PATAPSCO RIVER BASIN

01587500 SOUTH BRANCH PATAPSCO RIVER AT HENRYTON, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965-74, 1976 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	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)
DEC 13...	1400	54	180	7.5	12.5	2.5	15	48	18	13	3.7	8.0
MAR 15...	1200	136	150	7.1	-3.0	4.5	5	37	18	9.7	3.1	6.4
MAY 01...	1515	79	140	9.1	18.5	16.0	--	--	--	--	--	--
AUG 29...	1315	58	159	7.8	26.5	23.5	5	51	13	14	3.8	8.5

DATE	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HC03)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
DEC 13...	25	.5	2.8	36	30	1.8	13	13	.2	3.5	97	75
MAR 15...	26	.5	1.7	23	19	2.9	8.8	13	.1	8.9	80	63
MAY 01...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 29...	26	.5	2.5	46	38	1.2	7.3	13	.2	9.3	92	81

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- 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)
DEC 13...	.13	14.1	2.5	.20	.61	300	190	110	50	30	20
MAR 15...	.11	29.4	2.5	.08	.24	370	300	70	50	0	50
MAY 01...	--	--	--	--	--	--	--	--	--	--	--
AUG 29...	.13	14.4	1.9	.17	.52	660	510	150	70	10	60

PATAPSCO RIVER BASIN

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01589000 PATAPSCO RIVER AT HOLLOFIELD, MD

LOCATION.--Lat 39°18'36", long 76°47'34", Baltimore County, Hydrologic Unit 0206003, on left bank at downstream side of highway bridge at Hollofield, 0.3 mi (0.5 km) downstream from Dogwood Run, 3.0 mi (4.8 km) north of Ellicott City, and 28 mi (45 km) upstream from mouth.

DRAINAGE AREA.--285 mi² (738 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1944 to current year.

GAGE.--Water-stage recorder. Datum of gage is 187.7 ft (57.21 m) National Geodetic Vertical Datum of 1929. June 26 to Dec. 8, 1972, nonrecording gage at same site and datum. Prior to June 22, 1972, water-stage recorder at site on opposite bank at same datum.

REMARKS.--Water-discharge records good except those for February, which are fair. Flow regulated by Liberty Reservoir 11 mi (18 km) upstream beginning July 22, 1954, usable capacity, 42,070,000,000 gal (159.2 hm³); dead storage, 1,260,000,000 gal (4.769 hm³). Diversions above station for municipal supply of Westminster (sewage effluent discharged into Little Pipe Creek), and from Liberty Reservoir beginning Feb. 26, 1953, for municipal supply of Baltimore, and beginning February 1970 for a small municipal supply for part of Carroll County.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 80,600 ft³/s (2,280 m³/s) June 22, 1972, gage height, 31.3 ft (9.54 m), from floodmarks, from rating curve extended above 27,000 ft³/s (765 m³/s) on basis of slope-area measurement of peak flow; minimum, 6 ft³/s (0.17 m³/s) Sept. 6, 1944; minimum daily, 9.6 ft³/s (0.27 m³/s) Aug. 12, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,500 ft³/s (297 m³/s) Sept. 6, gage height, 9.51 ft (2.899 m); minimum, 48 ft³/s (1.36 m³/s) Oct. 1, 3, 4.

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	48	62	89	173	157	1360	235	148	473	151	109	87
2	51	62	71	969	145	1150	242	139	302	147	368	86
3	48	62	67	341	140	892	266	135	522	114	203	86
4	52	64	169	180	138	701	323	140	745	111	124	81
5	61	64	230	155	132	1050	396	151	503	120	102	1180
6	141	65	124	136	119	1340	333	132	362	102	88	3870
7	70	65	100	191	130	939	271	127	288	93	83	419
8	60	65	100	590	125	704	219	124	224	89	78	273
9	56	64	428	244	125	569	285	121	185	88	94	206
10	57	64	314	185	120	490	472	115	167	86	193	176
11	57	64	152	165	110	705	346	112	164	86	102	158
12	58	64	130	142	110	550	307	111	151	86	415	140
13	60	66	101	191	120	453	287	200	133	94	221	147
14	57	68	88	215	120	419	336	252	127	166	124	150
15	55	69	85	165	120	386	313	148	117	153	103	153
16	54	78	83	145	120	312	285	140	117	98	90	123
17	60	90	77	130	105	293	265	118	346	147	84	124
18	57	220	74	125	100	289	236	111	221	90	82	118
19	57	137	76	106	100	263	204	135	144	86	86	113
20	58	121	78	224	110	252	181	130	124	86	84	107
21	56	116	106	2650	120	233	168	118	117	107	147	679
22	55	113	87	563	200	215	158	117	120	89	129	2000
23	56	78	77	290	300	204	158	155	117	84	91	880
24	55	80	121	2810	1200	492	151	749	105	81	139	511
25	54	75	620	867	2500	540	156	476	105	81	179	360
26	59	73	162	342	5010	415	160	529	102	85	139	283
27	69	88	122	262	2620	336	229	378	100	85	159	229
28	65	105	97	238	1680	291	205	299	100	96	145	195
29	62	97	89	210	---	270	171	255	100	149	113	205
30	62	163	92	190	---	251	155	200	102	516	107	179
31	62	---	103	175	---	239	---	163	---	137	96	---
TOTAL	1872	2602	4312	13369	16076	16603	7513	6228	6483	3703	4277	13318
MEAN	60.4	86.7	139	431	574	536	250	201	216	119	138	444
MAX	141	220	620	2810	5010	1360	472	749	745	516	415	3870
MIN	48	62	67	106	100	204	151	111	100	81	78	81
(*)	34080	31520	31100	39360	43820	43280	43190	43270	42510	41360	40660	43260
(+)	226	241	237	242	249	255	249	241	240	233	240	238

CAL YR 1978 TOTAL 74000 MEAN 203 MAX 4380 MIN 47 + 236
WTR YR 1979 TOTAL 96356 MEAN 264 MAX 5010 MIN 48 + 241

* Month-end contents, in millions of gallons in Liberty Reservoir, contents on Sept. 30, 1978: 37,080,000,000 gal (140.3 hm³); records furnished by Baltimore Department of Public Works.

* Diversions, in cubic feet per second, above station for municipal supply of city of Westminster; and from Liberty Reservoir for municipal supply of city of Baltimore, and for part of Carroll County. Records furnished by cities of Westminster and Baltimore, respectively.

PATAPSCO RIVER BASIN

01589000 PATAPSCO RIVER AT HOLLOFIELD, MD--Continued

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	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)
DEC 13...	1500	98	175	7.3	11.0	3.5	5	52	20	14	4.1	6.7
MAR 15...	1245	399	158	7.2	-1.0	4.5	5	44	20	12	3.4	6.1
MAY 01...	1545	154	150	9.3	16.0	17.0	--	--	--	--	--	--
AUG 29...	1400	108	169	7.9	28.0	24.0	5	61	18	17	4.5	7.5

DATE	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HC03)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS Si02)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
DEC 13...	21	.4	2.6	39	32	3.1	13	12	.1	12	94	84
MAR 15...	22	.4	1.9	29	24	2.9	9.7	12	.1	8.8	79	68
MAY 01...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 29...	20	.4	2.8	52	43	1.0	11	11	.1	13	102	93

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 P04)	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 13...	.13	24.9	1.9	.06	.18	340	250	90	70	30	40
MAR 15...	.11	85.1	1.8	.04	.12	330	270	60	60	10	50
MAY 01...	--	--	--	--	--	--	--	--	--	--	--
AUG 29...	.14	29.7	1.5	.08	.25	1100	980	120	110	40	70

01589100 EAST BRANCH HERBERT RUN AT ARBUTUS, MD

LOCATION.--Lat 39°14'24", long 76°41'33", Baltimore County, Hydrologic Unit 02060003, on right bank at downstream side of bridge on Tom Day Boulevard at U.S. Route 1 in Arbutus, 0.5 mi (0.8 km) upstream from mouth, and 2 mi (3 km) south of Baltimore city limits.

DRAINAGE AREA.--2.47 mi² (6.40 km²).

PERIOD OF RECORD.--August 1957 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 45 ft (14 m), from topographic map.

REMARKS.--Records poor. Slight regulation at low flow from unknown source above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--22 years, 3.40 ft³/s (0.096 m³/s), 18.69 in/yr (475 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,460 ft³/s (69.7 m³/s) Sept. 6, 1979, gage height, 6.2 ft (1.89 m), from rating curve extended above 280 ft³/s (7.93 m³/s) on basis of culvert measurement at gage height 3.67 ft (1.119 m), discharge, 580 ft³/s (16.4 m³/s) and culvert and flow-over-road measurement of peak flow at gage height 6.2 ft (1.89 m) in gage well, 6.8 ft (2.07 m) from floodmarks; maximum gage height, 6.35 ft (1.935 m) June 22, 1972; minimum daily, 0.30 ft³/s (0.008 m³/s) July 24, Sept. 4, 11, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges 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)
Apr. 27	1030	457 12.9	3.36 1.024	Aug. 27	1700	818 23.2	4.14 1.262
May 13	1345	414 11.7	3.24 0.988	Aug. 29	2145	1040 29.5	4.51 1.375
Aug. 1	1700	1460 41.3	5.10 1.554	Sept. 6	0045	*2460 69.7	a6.2 1.89
Aug. 3	1800	1340 37.9	4.95 1.509				

a From floodmarks in well.

Minimum daily, 0.50 ft³/s (0.014 m³/s) Oct. 2, 15.

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	.70	.70	.72	15	2.2	5.0	2.9	1.3	20	6.1	56	1.8
2	.50	.55	.57	77	2.2	4.5	2.7	1.2	2.8	1.7	24	1.8
3	.60	.55	4.3	4.5	2.0	3.7	4.3	1.2	46	1.4	54	1.7
4	3.0	.60	16	2.7	1.9	3.5	7.5	2.2	16	3.1	12	1.7
5	10	.60	20	2.2	1.5	25	2.7	2.0	4.1	1.4	5.4	130
6	2.0	.65	1.2	2.5	1.7	8.2	1.7	1.3	2.9	1.5	1.3	200
7	1.5	.65	.99	32	1.9	4.4	1.4	1.2	2.4	1.4	1.8	3.4
8	1.1	.70	7.5	22	2.2	3.7	1.2	1.1	2.2	1.1	9.9	2.9
9	1.0	.70	34	3.9	1.7	3.3	15	1.1	2.0	1.1	25	2.4
10	1.2	.75	2.5	2.9	1.7	3.7	3.4	.99	1.9	1.1	2.9	2.2
11	.90	.80	1.4	2.4	1.4	16	2.9	.99	3.2	1.2	14	2.2
12	.80	.90	1.3	2.2	1.4	3.3	2.6	.90	1.7	1.1	37	2.2
13	.70	1.2	1.2	24	1.5	3.1	2.4	37	2.4	3.3	2.9	2.2
14	.60	.65	1.1	7.0	1.5	3.3	5.0	3.7	2.4	3.6	1.8	11
15	.50	1.0	1.1	3.3	1.5	2.7	3.0	1.9	2.4	1.2	1.7	2.0
16	.70	3.0	.99	2.9	1.7	2.5	2.4	1.3	2.4	.99	1.7	1.7
17	1.2	10	.81	3.4	1.3	2.2	2.0	1.2	13	.99	1.5	1.8
18	.59	15	1.2	2.2	1.3	2.2	1.9	3.4	1.7	.99	1.7	1.8
19	.90	2.0	1.1	1.7	1.3	2.0	1.8	9.3	1.4	.90	1.5	1.8
20	.99	1.0	6.4	36	1.5	2.0	1.9	2.2	1.4	.90	1.5	1.8
21	.99	.75	3.0	59	3.1	1.9	1.8	1.4	1.4	.90	12	46
22	1.1	.80	.90	5.4	9.9	1.7	1.7	1.3	1.3	.99	1.5	28
23	2.9	2.0	.72	3.5	10	1.7	1.6	4.2	1.2	.90	1.4	6.3
24	2.9	1.1	33	67	89	20	1.4	13	1.2	.90	11	2.4
25	.90	.80	14	6.1	91	3.3	1.3	15	1.1	1.5	7.8	2.2
26	.99	.70	1.9	4.4	95	2.7	1.9	4.1	1.1	1.1	1.7	2.1
27	7.0	8.0	1.4	3.7	9.9	2.0	33	2.0	1.8	.90	61	2.0
28	.90	3.5	1.2	6.1	6.7	1.9	2.5	1.7	1.0	6.5	6.3	2.2
29	.90	13	1.2	3.9	---	1.9	1.7	1.7	1.1	2.4	44	2.0
30	.64	3.0	.99	2.9	---	1.7	1.4	1.7	2.5	10	12	2.6
31	1.0	---	5.1	2.5	---	2.5	---	1.5	---	1.1	2.0	---
TOTAL	49.70	75.65	167.79	416.3	398.0	145.6	117.0	123.08	145.2	62.26	418.3	472.2
MEAN	1.60	2.52	5.41	13.4	11.0	4.70	3.90	3.97	4.84	2.01	13.5	15.7
MAX	10	15	34	77	91	25	33	37	46	10	61	200
MIN	.50	.55	.57	1.7	1.3	1.7	1.2	.90	1.0	.90	1.3	1.7
CFSM	.65	1.02	2.19	5.43	4.45	1.90	1.50	1.61	1.96	.81	5.47	6.36
IN.	.75	1.14	2.93	6.27	4.64	2.19	1.76	1.85	2.19	.94	6.30	7.11

CAL YR 1978 TOTAL 1211.92 MEAN 3.32 MAX 68 MIN .50 CFSM 1.34 IN 18.25
WTR YR 1979 TOTAL 2501.08 MEAN 6.05 MAX 200 MIN .50 CFSM 2.77 IN 37.65

PATAPSCO RIVER BASIN

01589300 GWYNNS FALLS AT VILLA NOVA, MD

LOCATION.--Lat 39°20'45", long 76°44'01", Baltimore County, Hydrologic Unit 02060003, on right bank 300 ft (91 m) downstream from bridge on Essex Road, 300 ft (91 m) north of State Highway 26 (Liberty Road), in Villa Nova, 1.1 mi (1.8 km) west of Baltimore city limits, and 11.5 mi (18.5 km) upstream from mouth.

DRAINAGE AREA.--32.5 mi² (84.2 km²).

PERIOD OF RECORD.--February 1957 to current year.

GAGE.--Water-stage recorder. Datum of gage is 361.32 ft (110.130 m) Baltimore County datum. Prior to Aug. 27, 1963, and Oct. 25, 1972, to Sept. 20, 1973, water-stage recorder, and June 26, 1972, to Oct. 24, 1972, non-recording gage at site 300 ft (91 m) upstream at same datum.

REMARKS.--Records good. Slight diurnal fluctuation at times from unknown source above station. Small diversion for irrigation above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--22 years, 38.7 ft³/s (1.096 m³/s), 16.17 in/yr (411 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,200 ft³/s (459 m³/s) June 22, 1972, gage height, 21.5 ft (6.55 m), from floodmarks, from rating curve extended above 2,200 ft³/s (62.3 m³/s) on basis of contracted-opening measurement of peak flow; minimum, 1.7 ft³/s (0.048 m³/s) Sept. 7, 8, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 21, 1956, reached a stage of 12.6 ft (3.84 m), discharge, 5,270 ft³/s (149 m³/s) on basis of contracted-opening measurement.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 750 ft³/s (21 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. 2	1215	805 22.8	4.32 1.317	Feb. 26	0245	1710 48.4	6.54 1.993
Jan. 21	1415	1080 30.6	5.07 1.545	July 30	0045	1160 32.9	5.06 1.542
Jan. 24	1730	2280 64.6	7.68 2.341	Aug. 24	2345	766 21.7	4.00 1.219
Feb. 24	1500	1400 39.6	5.88 1.792	Sept. 6	0100	*6050 171	12.82 3.908
Feb. 25	0015	1460 41.3	6.01 1.832	Sept. 21	2230	2630 74.5	8.11 2.472

Minimum discharge, 7.1 ft³/s (0.20 m³/s) Feb. 13, 14, result of freezeup.

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	11	16	22	106	40	139	40	31	157	31	25	23
2	12	16	17	468	38	135	41	29	78	27	151	23
3	11	17	22	82	36	95	61	29	201	18	46	23
4	13	19	135	36	35	85	85	29	159	20	29	22
5	28	21	143	32	34	254	76	36	58	19	24	714
6	98	18	33	30	34	180	47	29	42	17	22	2180
7	16	15	24	109	33	84	40	28	36	17	22	82
8	14	15	33	280	32	66	39	27	32	17	21	56
9	13	14	289	60	31	57	105	26	34	17	30	46
10	13	13	76	34	31	56	79	25	31	17	41	41
11	13	14	33	32	30	156	47	24	38	17	41	39
12	13	14	27	32	30	64	43	23	28	17	231	37
13	13	15	23	80	30	54	42	68	25	19	49	33
14	13	14	21	122	29	52	66	94	24	68	28	44
15	13	15	19	47	28	46	47	34	23	29	26	35
16	14	28	18	34	28	41	40	40	23	19	23	27
17	18	40	16	32	26	42	38	27	107	37	23	27
18	14	76	16	28	24	41	36	27	48	21	23	26
19	14	25	16	24	26	39	34	40	28	20	25	26
20	14	15	22	113	28	38	34	29	26	19	36	25
21	14	14	53	809	50	37	33	26	25	21	84	480
22	14	14	22	119	80	36	32	26	25	19	31	761
23	14	14	18	61	70	36	32	64	24	19	25	138
24	15	14	111	1210	600	205	32	192	23	21	78	52
25	16	13	250	220	955	91	32	71	22	19	196	42
26	16	13	43	73	868	58	32	72	21	21	100	39
27	26	45	32	59	222	42	94	37	20	19	45	36
28	16	45	24	60	176	39	53	32	20	40	43	36
29	15	44	22	56	---	39	37	32	20	51	30	36
30	15	80	20	49	---	40	33	28	25	249	29	35
31	16	---	39	44	---	40	---	27	---	31	25	---
TOTAL	545	716	1639	4541	3644	2387	1450	1302	1423	976	1602	5184
MEAN	17.6	23.9	52.9	146	130	77.0	48.3	42.0	47.4	31.5	51.7	173
MAX	98	80	289	1210	955	254	105	192	201	249	231	2180
MIN	11	13	16	24	24	36	32	23	20	17	21	22
CFSM	.54	.74	1.63	4.49	4.00	2.37	1.49	1.29	1.46	.97	1.59	5.32
IN.	.62	.82	1.88	5.20	4.17	2.73	1.66	1.49	1.63	1.12	1.83	5.93

CAL YR 1978 TOTAL 18545 MEAN 58.8 MAX 1290 MIN 11 CFSM 1.56 IN 21.23
WTR YR 1979 TOTAL 25409 MEAN 69.6 MAX 2180 MIN 11 CFSM 2.14 IN 29.08

PATAPSCO RIVER BASIN

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01589330 DEAD RUN AT FRANKLINTOWN, MD

LOCATION.--Lat 39°18'40", long 76°43'02", Baltimore County, Hydrologic Unit 02060003, on right bank at downstream side of bridge on Colonial Road at Security Boulevard at Franklinton, 0.3 mi (0.5 km) west of Baltimore city limits, 1.2 mi (1.9 km) southwest of Woodlawn, and 2.5 mi (4.0 km) upstream from mouth.

DRAINAGE AREA.--5.52 mi² (14.30 km²).

PERIOD OF RECORD.--October 1959 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 310 ft (94 m), from topographic map.

REMARKS.--Records good except those for February which are fair. Occasional regulation at low flow from unknown source above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--20 years, 7.82 ft³/s (0.221 m³/s), 19.24 in/yr (489 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,400 ft³/s (210 m³/s) June 22, 1972, gage height, 12.5 ft (3.81 m), from floodmarks, from rating curve extended above 1,600 ft³/s (45.3 m³/s) on basis of contracted-opening measurement of peak flow at bridge 0.6 mi (1.0 km) downstream, adjusted for flow from intervening area; minimum, 0.10 ft³/s (0.003 m³/s) Sept. 11-12, 1966, gage height, 0.57 ft (0.174 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 650 ft³/s (18 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	1215	841 23.8	4.59 1.399	Sept. 5	1800	730 20.7	4.23 1.289
Jan. 24	0830	817 23.1	4.51 1.375	Sept. 5	2200	1930 54.7	7.46 2.274
Jan. 24	1600	764 21.6	4.35 1.326	Sept. 6	0100	*3640 103	10.00 3.048
June 3	1545	733 20.8	4.24 1.292	Sept. 6	0330	811 23.0	4.51 1.375
Sept. 5	1645	733 20.8	4.24 1.292	Sept. 21	2215	1440 40.8	6.34 1.932

Minimum discharge, 0.23 ft³/s (0.007 m³/s) Oct. 25, gage height 0.59 ft (0.180 m).

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	.52	.77	2.1	45	3.5	17	4.6	2.5	27	18	11	1.8
2	.43	.80	1.7	187	3.4	16	5.0	2.3	7.0	3.0	34	1.6
3	.62	.82	14	17	3.0	7.0	18	2.3	107	1.3	23	1.5
4	3.0	.79	52	12	3.2	6.9	27	7.2	42	8.6	3.7	1.5
5	21	.86	45	8.1	2.7	98	9.1	4.6	5.9	1.7	1.6	325
6	6.6	.85	3.1	8.1	2.9	29	3.8	2.2	3.5	1.1	1.3	374
7	1.5	.88	2.3	69	2.3	7.2	3.1	2.1	3.1	.98	1.2	9.2
8	.73	1.1	11	86	1.5	4.9	2.9	2.3	2.6	.95	2.8	3.6
9	.61	.91	107	5.8	2.2	4.2	49	2.3	29	.96	25	2.7
10	.55	.98	8.1	4.0	2.2	7.3	10	2.5	3.7	1.0	4.6	2.3
11	.50	1.3	3.4	3.2	2.1	49	4.1	2.3	9.8	1.0	27	2.5
12	.48	1.4	2.9	3.4	2.9	4.5	4.5	2.4	2.3	1.1	97	2.3
13	.47	2.0	2.5	56	2.8	3.6	4.3	71	1.9	2.3	5.9	1.9
14	.37	.97	2.6	34	2.8	4.5	20	11	1.8	6.6	2.6	14
15	.27	2.1	2.3	5.8	2.9	3.0	9.0	4.4	1.7	1.7	2.0	2.3
16	1.1	7.0	1.6	3.9	3.6	2.8	3.8	4.9	1.6	1.0	1.7	1.6
17	1.3	22	1.4	4.8	3.6	2.7	3.3	2.4	38	3.8	1.5	1.6
18	.94	31	1.4	3.1	3.6	2.9	3.1	5.0	3.0	1.1	2.3	1.5
19	.94	1.5	1.4	2.7	3.5	2.9	2.9	18	2.1	1.1	1.4	1.4
20	1.2	1.0	12	82	3.6	2.7	2.9	5.4	1.7	1.6	1.3	1.4
21	1.5	1.0	9.7	195	23	2.4	2.6	2.5	1.7	1.4	30	219
22	1.0	1.1	1.9	14	54	2.7	2.6	2.4	1.7	.97	2.1	111
23	.82	4.1	1.6	5.9	32	2.5	2.6	16	1.6	1.4	1.6	48
24	.29	3.0	70	255	234	64	2.5	46	1.4	1.0	18	10
25	.22	.98	44	22	235	8.6	2.3	22	1.3	6.8	16	8.6
26	.24	.88	5.1	8.4	162	4.0	5.1	7.5	1.3	3.2	3.7	6.2
27	10	24	3.2	6.1	49	3.2	56	3.1	1.3	1.1	33	5.7
28	1.5	9.9	2.5	14	29	2.9	4.7	3.0	1.4	18	5.0	5.9
29	1.3	33	2.5	8.9	---	2.9	2.9	2.8	1.3	14	7.8	5.8
30	1.7	11	2.5	5.8	---	2.8	2.5	3.6	8.6	28	6.6	10
31	1.9	---	18	4.6	---	5.4	---	2.7	---	1.8	2.1	---
TOTAL	63.60	167.99	438.8	1180.6	876.3	377.5	274.2	268.7	316.3	136.56	376.8	1183.9
MEAN	2.05	5.60	14.2	38.1	31.3	12.2	9.14	8.67	10.5	4.41	12.2	39.5
MAX	21	33	107	255	235	98	56	71	107	28	97	374
MIN	.22	.77	1.4	2.7	1.5	2.4	2.3	2.1	1.3	.95	1.2	1.4
CFSM	.37	1.01	2.57	6.90	5.67	2.21	1.66	1.57	1.90	.80	2.21	7.16
IN.	.43	1.13	2.96	7.95	5.90	2.54	1.85	1.81	2.13	.92	2.54	7.98

CAL YR 1978 TOTAL 3284.68 MEAN 9.00 MAX 334 MIN .22 CFSM 1.63 IN 22.13
WTR YR 1979 TOTAL 5661.25 MEAN 15.5 MAX 374 MIN .22 CFSM 2.81 IN 38.14

PATAPSCO RIVER BASIN

01589440 JONES FALLS AT SORRENTO, MD

LOCATION.--Lat 39°23'30", long 76°39'42", Baltimore County, Hydrologic Unit 02060003, on right bank 0.3 mi (0.5 km) downstream from bridge on State Highway 25 (Falls Road), 0.4 mi (0.6 km) downstream from Slaughterhouse Branch and Sorrento, and 18 mi (29 km) upstream from mouth.

DRAINAGE AREA.--25.2 mi² (65.3 km²).

PERIOD OF RECORD.--Annual maximum, water years 1958-66. April 1966 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 240 ft (73 m), from topographic map. January 1958 to April 1966, nonrecording gage at site 450 ft (140 m) upstream at same datum.

REMARKS.--Records good except those for Sept. 6-11, which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--13 years, 35.3 ft³/s (1.000 m³/s), 19.02 in/yr (483 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,800 ft³/s (391 m³/s) June 22, 1972, gage height, 18.11 ft (5.520 m), from floodmarks, from rating curve extended above 1,400 ft³/s (39.6 m³/s) on basis of slope-area measurement of peak flow; minimum, 1.8 ft³/s (0.051 m³/s) Sept. 7, 8, 1966, gage height, 1.16 ft (0.354 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 600 ft³/s (17 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	0445	702 19.9	6.47 1.972	July 14	1845	1020 28.9	7.50 2.286
Jan. 21	1430	874 24.8	7.04 2.146	July 17	0130	1010 28.6	7.46 2.274
Jan. 24	1700	1280 36.2	8.21 2.502	July 29	2330	1740 49.3	9.39 2.862
Feb. 25	0045	925 26.2	7.20 2.195	Aug. 25	2145	635 18.0	6.28 1.914
Feb. 26	0245	1200 34.0	8.01 2.441	Sept. 6	Unknown	*11700 331	al7.2 5.24
July 13	2000	912 25.8	7.16 2.182	Sept. 22	Unknown	Unknown	Unknown

a From floodmarks.

Minimum discharge, 10 ft³/s (0.28 m³/s) Oct. 3.

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	13	13	23	52	50	94	48	38	56	33	34	28
2	13	13	20	230	48	90	51	37	43	31	59	27
3	12	13	21	56	46	73	56	37	87	25	39	26
4	13	13	53	39	46	67	64	38	71	27	28	24
5	21	13	65	35	43	150	62	38	48	27	23	311
6	54	13	31	35	42	105	52	35	42	23	20	1500
7	19	12	25	52	40	72	51	34	39	23	18	100
8	15	12	27	130	40	63	50	33	36	22	17	75
9	14	12	115	67	38	57	74	32	34	21	19	60
10	14	12	50	56	38	56	65	32	33	21	22	52
11	14	12	34	51	36	85	51	31	38	21	32	48
12	13	12	30	49	36	59	50	32	32	20	144	43
13	13	12	27	65	34	54	49	62	30	146	45	42
14	13	12	25	84	34	54	58	47	29	182	27	59
15	13	12	24	58	32	51	51	37	28	58	22	40
16	13	17	23	51	32	49	48	37	28	36	20	36
17	15	28	22	50	30	48	46	32	58	118	18	34
18	14	42	21	47	28	48	45	33	40	30	20	33
19	14	20	20	45	30	47	43	37	31	26	34	30
20	13	17	23	89	36	46	42	32	29	25	48	30
21	13	16	37	535	44	45	42	32	28	25	60	400
22	13	15	24	76	49	44	42	31	28	23	33	550
23	13	16	21	55	48	43	42	51	27	22	26	100
24	13	16	59	733	286	111	42	103	26	22	47	50
25	13	15	139	150	628	68	42	55	25	22	185	44
26	14	14	39	73	631	56	42	47	24	24	94	42
27	20	24	32	64	169	52	88	38	23	20	52	42
28	14	26	27	63	126	50	49	36	23	31	48	42
29	13	29	25	60	---	50	42	34	24	133	39	42
30	13	40	24	56	---	49	39	32	27	188	35	40
31	13	---	32	52	---	48	---	33	---	40	30	---
TOTAL	475	521	1138	3258	2740	1984	1526	1226	1087	1465	1338	3950
MEAN	15.3	17.4	36.7	105	97.9	64.0	50.9	39.5	36.2	47.3	43.2	132
MAX	54	42	139	733	631	150	88	103	87	188	185	1500
MIN	12	12	20	35	28	43	39	31	23	20	17	24
CFSM	.61	.69	1.46	4.17	3.89	2.54	2.02	1.57	1.44	1.88	1.71	5.24
IN.	.70	.77	1.68	4.81	4.04	2.93	2.25	1.81	1.60	2.16	1.98	5.83
CAL YR 1978	TOTAL	13922	MEAN 38.1	MAX 707	MIN 12	CFSM 1.51	IN 20.55					
WTR YR 1979	TOTAL	20708	MEAN 56.7	MAX 1500	MIN 12	CFSM 2.25	IN 30.57					

SOUTH RIVER BASIN

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01590500 BACON RIDGE BRANCH AT CHESTERFIELD, MD

LOCATION.--Lat 39°00'07", long 76°36'53", Anne Arundel County, Hydrologic Unit 02060004, on left bank 50 ft (15 m) downstream from highway bridge, 0.5 mi (0.8 km) east of Chesterfield, 1.4 mi (2.3 km) upstream from confluence with North River, and 6.8 mi (10.9 km) northwest of Annapolis.

DRAINAGE AREA.--6.92 mi² (17.92 km²).

PERIOD OF RECORD.--October 1942 to September 1952. Annual maximum, water years 1965-74. October 1974 to current year. Monthly discharge only October and November 1942, published in WSP 1302.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 15 ft (4.6 m), from topographic map.

REMARKS.--Records good. Records include sewage from Crownsville State Hospital, which obtains its water supply from wells. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--15 years (water years 1943-52, 1975-79), 9.96 ft³/s (0.282 m³/s), 19.55 in/yr (497 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,100 ft³/s (59.5 m³/s) Aug. 2, 1944, gage height, 5.49 ft (1.673 m), from rating curve extended above 140 ft³/s (3.96 m³/s) on basis of velocity-area studies; minimum discharge, 2.2 ft³/s (0.062 m³/s) part or all of each day Oct. 1-8, 1977, Sept. 30, 1978; minimum gage height, 1.72 ft (0.524 m) Aug. 30, 1975.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 185 ft³/s (5.2 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)
Feb. 26	0600	293 8.30	4.01 1.222	Sept. 6	0530	*679 19.2	5.02 1.530

Minimum discharge, 2.5 ft³/s (0.071 m³/s) part or all of each day Oct. 1-4, 12, 13, gage height 1.75 ft (0.533 m).

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	2.5	4.4	6.3	17	8.8	33	14	11	33	15	4.5	5.8
2	2.7	4.6	5.2	46	7.8	29	12	9.8	23	19	4.4	5.7
3	2.5	4.4	5.2	36	7.5	28	15	9.8	16	7.3	7.9	5.3
4	3.3	4.5	16	11	8.5	23	16	10	35	7.7	11	5.8
5	3.6	4.8	22	9.3	7.4	30	16	13	19	8.7	5.3	17
6	4.7	4.7	9.8	9.3	6.5	35	11	9.7	12	6.1	4.5	259
7	3.2	4.6	6.7	15	6.5	24	10	9.2	10	5.3	4.1	37
8	2.8	4.1	7.0	29	6.0	18	10	8.7	9.3	5.0	4.0	15
9	2.9	4.1	13	13	6.0	15	15	8.4	8.3	4.8	4.5	11
10	2.9	4.1	15	11	6.0	14	16	7.9	7.6	6.7	7.2	9.1
11	2.9	4.3	7.1	8.5	6.0	24	11	7.6	9.0	7.0	15	8.1
12	2.8	4.4	6.4	7.1	5.5	17	11	7.8	8.0	5.5	68	7.6
13	2.7	4.4	6.2	11	5.5	13	11	20	6.7	5.4	26	7.2
14	3.1	4.4	5.8	18	5.5	13	15	56	6.5	9.0	9.2	8.3
15	3.1	4.6	5.4	11	5.5	12	11	16	6.1	22	6.7	12
16	3.3	6.2	5.4	8.3	5.0	11	10	10	5.9	6.8	5.7	7.1
17	4.6	8.4	5.5	8.0	5.0	11	9.9	8.8	11	5.8	5.2	6.3
18	3.8	10	5.0	7.5	4.8	11	9.8	8.9	8.8	5.3	5.2	6.2
19	4.3	5.8	5.2	5.5	4.8	11	9.7	16	6.9	5.1	5.9	6.2
20	4.1	4.9	6.2	9.1	5.0	11	9.3	14	6.1	5.1	5.2	5.3
21	3.7	4.8	10	47	6.0	9.8	9.3	9.8	5.9	6.6	13	6.6
22	3.7	4.7	6.2	30	8.0	9.8	9.3	9.2	6.2	5.5	8.7	60
23	3.9	4.9	5.3	14	10	9.8	9.6	11	5.8	5.2	5.9	22
24	4.6	5.8	9.2	41	21	26	9.5	16	13	5.4	5.7	12
25	4.3	4.8	28	52	122	20	9.7	13	7.0	9.1	6.0	9.2
26	4.4	4.6	9.6	22	205	12	10	9.6	5.9	6.4	7.6	8.7
27	5.8	8.8	7.4	14	65	11	49	8.5	5.4	5.4	11	8.1
28	4.7	12	5.7	14	39	10	30	7.8	5.3	4.9	34	7.9
29	4.4	7.8	5.1	13	---	10	15	7.7	5.2	6.0	9.1	14
30	4.4	12	5.2	11	---	10	12	8.2	5.8	5.3	9.8	11
31	4.4	---	9.8	9.7	---	10	---	7.3	---	5.0	6.9	---
TOTAL	114.1	171.9	265.9	558.3	599.6	521.4	406.1	370.7	313.7	227.4	327.2	604.5
MEAN	3.68	5.73	8.58	18.0	21.4	16.8	13.5	12.0	10.5	7.34	10.6	20.2
MAX	5.8	12	28	52	205	35	49	56	35	22	68	259
MIN	2.5	4.1	5.0	5.5	4.8	9.8	9.3	7.3	5.2	4.8	4.0	5.3
CFSM	.53	.83	1.24	2.60	3.09	2.43	1.95	1.73	1.52	1.06	1.53	2.92
IN.	.61	.92	1.43	3.00	3.22	2.80	2.18	1.99	1.69	1.22	1.76	3.25
CAL YR 1978	TOTAL	3450.3	MEAN	9.45	MAX	197	MIN	2.4	CFSM	1.37	IN	18.55
WTR YR 1979	TOTAL	4480.8	MEAN	12.3	MAX	259	MIN	2.5	CFSM	1.78	IN	24.68

RHODE RIVER BASIN

01590700 NORTH FORK MUDDY CREEK NEAR SOUTH RIVER, MD

LOCATION.--Lat 38°53'22", long 76°33'31", Anne Arundel County, Hydrologic Unit 02060004, on left bank 140 ft (43 m) downstream from road culvert on Smithsonian Institution property, 0.6 mi (1 km) downstream from State Highway 468, 0.9 mi (1.5 km) south of South River, and 7 mi (11 km) south-southwest of Annapolis.

DRAINAGE AREA.--0.88 mi² (2.28 km²).

PERIOD OF RECORD.--October 1971 to January 1976 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is about 5 ft (1.5 m) from topographic map.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 54 cfs (1.53 m³/s) Nov. 25, 1971, gage height, 2.28 ft (0.695 m); no flow on numerous occasions.

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	.60	1.4	2.5	.92	.96	2.5	1.2	1.3	1.3	1.5	.34	.04
2	1.3	1.3	2.0	1.9	1.1	2.2	1.3	1.2	.65	1.1	.25	.07
3	1.0	1.5	1.9	1.3	3.5	3.6	1.1	3.4	.52	1.1	.21	.06
4	.70	1.2	1.7	1.4	4.1	2.5	1.5	2.1	.47	1.0	.27	.05
5	.60	1.0	1.6	4.2	2.0	2.2	1.2	1.5	1.4	1.6	.23	.05
6	.70	1.1	1.6	2.1	2.0	1.9	1.1	1.3	.74	1.3	.20	.04
7	.50	1.0	1.0	1.6	1.7	1.8	1.8	1.2	.71	.94	.25	.03
8	.50	1.0	5.0	1.3	1.4	1.7	2.4	1.0	.45	.79	.20	.03
9	.60	.90	3.1	1.6	1.2	1.5	2.0	3.2	.40	.65	.16	.02
10	9.0	.88	2.7	2.7	1.1	1.5	1.6	1.9	.36	.56	.14	.01
11	4.5	.84	2.3	2.2	1.1	1.5	1.5	1.4	.27	.48	.12	.02
12	2.2	.80	2.1	1.7	1.2	1.5	1.3	1.1	.27	.83	.11	.03
13	1.5	.77	2.0	1.7	8.2	1.5	5.7	.96	.25	6.0	.10	.03
14	1.3	.74	1.7	1.8	3.3	2.1	2.9	1.6	.32	1.9	.09	.33
15	1.0	.74	1.7	1.5	2.4	2.4	2.2	2.6	.28	1.1	.09	.14
16	.92	.74	1.6	1.3	1.9	2.6	2.2	1.9	.23	1.6	.08	.06
17	.84	.74	1.5	1.2	1.7	6.7	3.9	1.1	.43	1.4	.15	.05
18	.77	.74	1.5	1.2	2.1	3.0	2.2	1.0	.62	.98	.17	.05
19	.71	.77	1.4	1.4	7.2	2.4	1.9	1.4	.60	.68	.10	.05
20	.65	.80	2.6	1.3	3.3	2.0	1.6	3.0	.48	.65	.08	.04
21	.62	.77	1.7	1.4	2.8	1.9	1.5	2.1	2.0	.59	.06	.10
22	.62	.68	1.4	1.3	3.0	2.7	7.8	1.6	13	.43	.06	.10
23	.84	.62	1.3	1.5	2.5	2.1	3.6	1.2	5.3	.38	.05	.06
24	2.5	.68	1.4	1.4	4.7	1.7	2.7	1.0	2.6	.34	.05	.05
25	8.4	18	1.2	1.2	4.9	1.5	2.1	.92	1.8	.30	.05	.05
26	8.2	4.2	1.2	1.0	7.2	1.5	1.8	.77	1.4	.23	.04	.04
27	3.3	2.9	1.1	.96	3.7	1.4	1.6	.71	.98	.25	.06	.07
28	2.5	3.8	1.1	1.4	3.0	1.3	1.5	.65	1.4	.28	.27	.08
29	1.9	2.8	1.0	1.3	2.7	1.3	1.4	.60	2.1	.30	.08	.09
30	1.7	5.6	1.1	1.3	---	1.3	1.4	.65	3.1	.38	.05	.77
31	1.5	---	1.0	1.0	---	1.3	---	.92	---	.41	.04	---
TOTAL	61.97	59.01	64.0	48.08	85.96	65.1	66.0	45.28	44.43	30.05	4.15	2.61
MEAN	2.00	1.97	2.06	1.55	2.96	2.10	2.20	1.46	1.48	.97	.13	.087
MAX	9.0	18	10	4.2	8.2	6.7	7.8	3.4	13	6.0	.34	.77
MIN	.50	.62	1.0	.92	.96	1.3	1.1	.60	.23	.23	.04	.01
CFSM	2.27	2.24	2.34	1.76	3.36	2.39	2.50	1.66	1.68	1.10	.15	.10
IN.	2.62	2.49	2.70	2.03	3.63	2.75	2.79	1.91	1.88	1.27	.18	.11

WTR YR 1972 TOTAL 576.64 MEAN 1.58 MAX 18 MIN .01 CFSM 1.80 IN 24.35

RHODE RIVER BASIN

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01590700 NORTH FORK MUDDY CREEK NEAR SOUTH RIVER, MD--Continued

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	.15	.36	3.3	1.8	2.2	1.1	5.7	1.6	.62	.42	.23	.00
2	.08	.38	1.8	1.5	12	1.2	5.0	1.4	.53	.40	.34	.00
3	.05	.28	1.6	1.4	5.0	1.7	2.8	1.5	.53	1.5	.20	.00
4	.05	.25	1.4	3.0	3.5	2.5	5.0	1.3	.50	1.2	.15	.00
5	.05	.20	1.2	1.9	2.6	1.8	3.4	1.2	.56	.52	.09	.00
6	.08	.17	2.3	1.6	2.6	1.8	2.5	.97	.42	.38	.06	.01
7	.93	.16	1.6	1.4	3.6	1.7	2.2	.89	.36	.30	.04	.01
8	.25	3.2	6.0	1.2	3.4	2.1	5.8	.93	.40	.24	.04	.00
9	.11	.86	6.6	1.2	2.9	1.8	3.3	1.4	1.4	.22	.03	.00
10	.06	.59	4.0	1.1	2.2	1.6	3.9	.89	.95	.20	.02	.00
11	.06	.59	2.5	1.0	1.8	1.6	2.6	.78	.58	.26	.02	.00
12	.06	.48	2.1	1.0	1.8	1.6	2.4	.68	.42	.20	.02	.00
13	.06	.45	1.9	1.0	1.6	1.4	2.1	.65	.34	.16	.01	.00
14	.05	6.4	1.6	1.1	2.1	1.4	1.9	.62	.28	.14	.03	.11
15	.05	2.6	3.8	1.1	3.7	1.3	1.9	.68	.22	.14	.06	.05
16	.04	1.4	2.8	1.0	2.2	1.4	1.8	.71	.52	.14	.03	.03
17	.05	1.1	1.6	1.1	1.6	2.8	1.6	.62	.56	.10	.00	.02
18	.04	.90	1.6	1.1	1.6	1.6	1.6	.56	.54	.10	.01	.01
19	.71	2.9	1.6	1.8	1.5	1.4	1.6	.59	.48	.10	.05	.00
20	.27	6.4	1.6	1.5	1.4	1.2	1.4	.78	.44	.09	.02	.00
21	.17	2.0	2.3	1.0	1.6	1.2	1.4	.65	2.8	.10	.03	.00
22	.15	1.5	8.3	1.5	1.6	1.2	1.2	.50	2.0	.29	.05	.00
23	.12	1.2	4.9	1.4	1.4	1.0	1.2	1.0	.91	.18	.02	.00
24	.11	1.0	3.4	1.1	1.3	1.0	1.0	2.5	.70	.11	.00	.00
25	.10	1.1	2.6	.97	1.2	1.2	1.2	3.6	.56	.09	.00	.00
26	.09	3.4	2.4	.97	1.3	5.7	4.8	1.6	.48	.08	.00	.00
27	.09	1.5	2.2	3.8	1.2	2.4	5.7	1.8	.44	.06	.00	.00
28	1.5	1.2	1.9	3.1	1.2	1.8	3.1	2.8	.46	.05	.00	.00
29	.56	1.0	1.6	7.3	---	1.6	2.2	1.4	1.3	.04	.00	.00
30	.34	3.8	1.7	2.9	---	1.8	1.9	.97	.58	.04	.00	.00
31	.27	---	2.0	2.4	---	2.0	---	.71	---	.03	.00	---
TOTAL	6.70	47.37	84.2	54.24	70.1	53.9	82.2	36.28	20.88	7.88	1.55	.24
MEAN	.22	1.58	2.72	1.75	2.50	1.74	2.74	1.17	.70	.25	.050	.008
MAX	1.5	6.4	8.3	7.3	12	5.7	5.8	3.6	2.8	1.5	.34	.11
MIN	.04	.16	1.2	.97	1.2	1.0	1.0	.50	.22	.03	.00	.00
CFSM	.25	1.80	3.09	1.99	2.84	1.98	3.11	1.33	.80	.28	.06	.009
IN.	.28	2.00	3.56	2.29	2.96	2.28	3.47	1.53	.88	.33	.07	.01
CAL YR 1972	TOTAL	529.93	MEAN	1.45	MAX	13	MIN	.01	CFSM	1.65	IN	22.38
WTR YR 1973	TOTAL	465.54	MEAN	1.28	MAX	12	MIN	.00	CFSM	1.46	IN	19.66

RHODE RIVER BASIN

01590700 NORTH FORK MUDDY CREEK NEAR SOUTH RIVER, MD--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	.00	.04	.00	1.6	.67	.52	2.1	.56	.61	.22	.00	.00
2	.23	.01	.00	1.0	.64	.54	1.7	.52	5.6	.17	.00	.00
3	.07	.00	.00	1.1	.70	.56	1.6	1.1	3.3	.11	.00	.04
4	.02	.00	.00	1.9	.70	.52	1.6	.88	1.2	.09	.00	.06
5	.01	.04	.26	1.2	.58	.50	2.9	.61	.73	.07	.00	.05
6	.00	.04	.24	.99	.64	.54	2.6	.64	.61	.06	.00	.05
7	.00	.02	.10	.85	.95	.61	1.8	.61	.52	.06	.00	.46
8	.00	.02	.10	.70	.82	.56	2.6	.54	.56	.05	.00	.20
9	.00	.14	2.5	1.4	.73	.50	8.5	.56	.52	.04	.00	.07
10	.01	.06	1.1	2.0	.73	.48	2.9	.70	.40	.03	.01	.02
11	.02	.04	.56	3.2	.70	.44	2.1	.56	.30	.03	.00	.06
12	.02	.02	.42	2.1	.73	.54	1.8	1.4	.22	.02	.00	.06
13	.01	.00	.38	1.4	.88	.50	2.1	1.5	.17	.02	.00	.03
14	.00	.00	.76	1.2	.88	.44	1.9	.85	.17	.02	.00	.01
15	.00	.00	.52	1.1	.73	.42	1.6	.61	.15	.01	.00	.00
16	.00	.00	.42	.99	.70	1.8	1.2	.48	.17	.00	.00	.01
17	.00	.00	.46	.85	.82	2.4	1.2	.42	.30	.00	.00	.00
18	.00	.00	.42	.76	.70	1.4	1.2	.36	.22	.00	.00	.00
19	.00	.00	.36	.73	.67	.95	1.1	.34	.15	.00	.00	.00
20	.00	.00	1.3	.70	.61	.79	.99	.32	.10	.00	.00	.00
21	.00	.00	8.6	1.2	.52	4.3	.95	.28	.13	.00	.00	.00
22	.00	.00	2.3	1.2	.64	3.0	.95	.24	.24	.00	.00	.00
23	.00	.00	1.4	.91	.56	1.8	1.4	.36	.61	.00	.00	.00
24	.00	.00	1.0	.82	.52	1.4	.95	.44	.44	.00	.00	.00
25	.00	.00	.91	1.5	.52	1.0	.85	.36	.28	.00	.00	.00
26	.00	.00	1.1	1.2	.46	.99	.79	.24	.20	.00	.00	.00
27	.00	.00	1.4	1.1	.46	.91	.76	.22	.24	.00	.00	.00
28	.00	.00	.95	.99	.48	.85	.73	.20	.52	.00	.00	.21
29	.20	.00	.70	.99	---	1.2	.70	.24	.73	.00	.00	.26
30	.06	.00	.61	.85	---	12	.61	.61	.40	.00	.00	.15
31	.06	---	1.3	.79	---	5.0	---	.48	---	.00	.00	---
TOTAL	.71	.43	30.17	37.32	18.74	47.46	52.18	17.23	19.79	1.00	.01	1.74
MEAN	.023	.014	.97	1.20	.67	1.53	1.74	.56	.66	.032	.000	.058
MAX	.23	.14	8.6	3.2	.95	12	8.5	1.5	5.6	.22	.01	.46
MIN	.00	.00	.00	.70	.46	.42	.61	.20	.10	.00	.00	.00
CFSM	.03	.02	1.10	1.36	.76	1.74	1.98	.64	.75	.04	.000	.07
IN.	.03	.02	1.27	1.58	.79	2.00	2.20	.73	.84	.04	.00	.07
CAL YR 1973	TOTAL	358.58	MEAN .98	MAX 12	MIN .00	CFSM 1.11	IN 15.14					
WTR YR 1974	TOTAL	226.78	MEAN .62	MAX 12	MIN .00	CFSM .71	IN 9.58					

01590700 NORTH FORK MUDDY CREEK NEAR SOUTH RIVER, MD--Continued

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	.05	.05	.42	.58	.82	.73	1.4	2.5	1.2	.09	.36	1.5
2	.03	.04	.91	.38	.79	.67	1.1	3.0	.73	.06	.28	1.0
3	.02	.04	.44	.34	.73	.61	1.2	1.8	.61	.06	.20	.80
4	.01	.03	.30	.32	.61	.64	1.1	3.4	.46	.06	.17	.70
5	.00	.05	.19	.30	1.6	.64	1.0	3.0	.44	.06	.24	.60
6	.00	.06	.18	.46	2.5	.58	.99	2.4	.50	.06	.85	.50
7	.00	.05	.19	.91	1.9	.58	.95	2.6	.30	.06	.44	.55
8	.00	.04	1.9	.69	1.2	.58	.88	1.6	.26	.17	.28	.42
9	.00	.04	.95	1.4	1.1	.50	.85	1.4	.22	.09	.19	.36
10	.00	.04	.52	.82	.88	.56	.85	1.2	.22	.35	.17	.24
11	.00	.03	.40	.73	.91	.67	.85	1.0	.18	1.1	.16	.24
12	.00	.06	.36	.61	1.4	1.4	.85	1.6	.48	.44	.16	.26
13	.00	.14	.32	1.9	1.2	1.8	.79	3.4	.76	10	.15	.19
14	.00	.10	.32	1.4	.99	4.7	.76	1.6	.50	7.5	.24	.15
15	.14	.09	.28	.91	.88	3.7	1.9	1.1	.28	2.1	.18	.15
16	.67	.08	3.3	.70	.88	2.3	1.7	1.4	.22	1.8	2.6	.15
17	.40	.06	1.6	.61	.88	3.1	1.2	1.3	1.2	1.4	2.3	.15
18	.26	.06	.85	1.2	.95	2.3	.99	1.0	.54	1.2	.82	.41
19	.18	.06	.70	1.6	.85	8.8	.95	.95	.32	.88	.42	.79
20	.11	.08	.58	2.1	.76	6.0	.88	.79	.19	.87	.28	.48
21	.08	.10	.54	1.3	.67	2.9	.76	.70	.13	3.2	.18	.32
22	.05	.08	.50	1.1	.67	2.2	.73	.61	.10	1.6	.15	.40
23	.04	.06	.42	.88	.99	1.8	.73	.82	.09	1.0	.14	6.1
24	.04	.05	.42	1.1	1.4	2.0	.76	.61	.08	.70	.11	6.2
25	.04	.06	.38	1.6	1.3	2.3	1.6	.64	.07	.50	.11	12
26	.04	.11	.28	1.2	.91	1.9	3.0	.64	.14	.44	.10	14
27	.03	.09	.30	.91	.79	1.6	1.4	.52	.15	.34	.10	4.2
28	.03	.08	.32	.88	.76	1.5	1.1	.42	.15	.30	.09	2.2
29	.03	.07	.28	.82	---	1.4	1.4	.36	.14	.93	.08	1.7
30	.03	.07	.26	.76	---	1.9	1.2	.50	.11	.70	.06	1.4
31	.04	---	.24	.82	---	1.9	---	.52	---	.64	3.0	---
TOTAL	2.32	1.97	18.65	29.33	29.32	62.26	33.87	43.38	10.77	38.70	14.61	58.16
MEAN	.075	.066	.60	.95	1.05	2.01	1.13	1.40	.36	1.25	.47	1.94
MAX	.67	.14	3.3	2.1	2.5	8.8	3.0	3.4	1.2	10	3.0	14
MIN	.00	.03	.18	.30	.61	.50	.73	.36	.07	.06	.06	.15
CFSM	.09	.08	.68	1.08	1.19	2.28	1.28	1.59	.41	1.42	.53	2.21
IN.	.10	.08	.79	1.24	1.24	2.63	1.43	1.83	.45	1.63	.62	2.46

CAL YR 1974 TOTAL 218.41 MEAN .60 MAX 12 MIN .00 CFSM .68 IN 9.22
WTR YR 1975 TOTAL 343.34 MEAN .94 MAX 14 MIN .00 CFSM 1.07 IN 14.50

RHODE RIVER BASIN

01590700 NORTH FORK MUDDY CREEK NEAR SOUTH RIVER, MD--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	1.2	1.0	.82	7.5								
2	1.1	.90	.73	3.4								
3	.95	.90	.67	4.2								
4	.85	.80	.64	2.3								
5	.85	.75	.64	1.8								
6	.79	.73	.67	1.6								
7	.73	.70	.73	---								
8	.75	.76	.76	---								
9	4.4	.70	1.1	---								
10	2.0	.73	1.1	---								
11	1.5	.70	.85	---								
12	1.2	1.5	.73	---								
13	1.2	4.7	.73	---								
14	1.1	2.0	.73	---								
15	.85	1.4	.73	---								
16	.76	1.1	.76	---								
17	3.8	.99	.70	---								
18	2.8	.95	.61	---								
19	2.1	.95	.50	---								
20	1.5	1.0	.52	---								
21	1.2	1.0	.56	---								
22	.99	.95	.56	---								
23	.91	.85	.52	---								
24	.85	.76	.50	---								
25	.85	.73	.50	---								
26	.91	.73	3.5	---								
27	.85	.76	2.0	---								
28	.79	.73	1.0	---								
29	.70	.70	.95	---								
30	1.2	.70	1.2	---								
31	1.0	---	15	---								
TOTAL	40.68	31.17	41.01	---								
MEAN	1.31	1.04	1.32	---								
MAX	4.4	4.7	15	---								
MIN	.70	.70	.50	---								
CFSM	1.49	1.18	1.50	---								
IN.	1.72	1.32	1.73	---								

CAL YR 1975 TOTAL 433.26 MEAN 1.19 MAX 15 MIN .06 CFSM 1.35 IN 18.29

RHODE RIVER BASIN

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01590710 NORTH FORK MUDDY CREEK NEAR SOUTH RIVER, MD

LOCATION.--Lat 38°53'18", long 76°33'34", Anne Arundel County, Hydrologic Unit 02060004, 915 ft (279 m) downstream from road culvert on Smithsonian Institution property, 0.8 mi (1.3 km) downstream from State Highway 468, 1 mi (1.6 km) south of South River, and 7 mi (11 km) south-southwest of Annapolis.

DRAINAGE AREA.--0.89 mi² (2.31 km²).

PERIOD OF DAILY RECORD.--November 1970 to March 1976. Intermittent records October 1976 to June 1978.

INSTRUMENTATION.--Temperature recorder since November 1970.

REMARKS.--Periods of missing record throughout the record are due to recorder malfunction or periods of no flow.

EXTREMES FOR PERIOD OF RECORD.--Maximum, 25.6°C August 26, 1975; minimum, 0.0°C on many days during the winter.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

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

RHODE RIVER BASIN

01590710 NORTH FORK MUDDY CREEK NEAR SOUTH RIVER, MD--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	11.5	3.0	16.0	7.5	17.0	13.5	25.0	22.5	24.0	22.0	21.5	19.5
2	10.5	7.5	14.5	9.0	17.0	14.0	23.5	21.0	24.0	21.5	20.0	18.5
3	13.0	5.0	13.0	9.5	19.5	15.5	22.0	18.5	24.5	22.0	20.5	18.0
4	13.0	4.5	16.5	8.0	20.5	16.0	21.5	18.0	23.5	22.0	21.0	18.5
5	13.0	6.5	18.0	9.5	20.0	16.5	22.0	17.5	22.0	20.5	21.5	19.5
6	8.5	5.0	16.5	12.5	20.5	17.0	23.0	18.0	22.0	18.5	22.0	19.5
7	11.5	4.5	14.0	13.0	21.0	17.0	23.5	18.5	21.5	18.5	21.5	19.0
8	12.0	4.5	13.5	12.0	22.0	18.0	24.0	20.0	23.0	18.5	22.5	20.0
9	14.5	5.0	17.5	10.5	19.5	18.0	24.5	21.5	23.5	20.0	22.0	20.0
10	12.5	8.0	18.0	11.5	19.5	16.5	24.5	22.0	24.0	21.0	22.0	19.5
11	14.0	5.0	18.5	12.0	20.0	16.0	22.0	19.5	24.5	22.5	22.5	21.5
12	15.0	5.5	17.0	14.0	19.5	17.5	21.5	17.5	23.0	19.0	22.0	20.5
13	16.0	6.5	17.5	14.0	20.5	18.0	22.0	19.0	21.0	17.0	21.5	20.0
14	15.5	8.5	18.0	12.5	21.0	18.5	23.5	20.0	22.0	18.0	21.0	19.0
15	14.5	6.0	15.0	13.0	18.5	16.5	22.0	18.5	22.5	18.0	21.5	19.0
16	15.5	7.0	14.0	12.5	17.5	16.0	22.5	19.0	21.5	20.5	21.0	19.0
17	15.5	7.5	17.0	11.5	19.0	15.0	24.0	20.5	22.0	19.5	21.5	20.0
18	17.0	11.0	17.0	12.0	19.5	15.5	22.5	20.5	22.0	19.5	21.0	19.5
19	17.0	8.5	18.5	13.0	20.5	16.0	22.5	21.0	22.5	21.0	21.0	20.0
20	16.0	9.0	18.5	15.0	22.0	18.5	22.0	20.5	23.0	20.5	22.0	20.0
21	18.0	10.0	16.0	14.0	22.5	19.5	21.5	18.5	24.0	21.0	21.5	18.5
22	16.0	9.5	15.0	13.0	22.5	20.0	21.5	17.5	22.0	21.0	18.5	17.0
23	16.0	7.5	16.0	11.5	21.5	20.0	22.0	18.5	22.5	19.0	18.5	17.0
24	18.0	8.5	15.5	12.0	23.0	20.0	22.0	18.0	19.5	16.0	18.5	15.5
25	16.0	7.5	18.0	15.5	23.5	20.0	24.0	21.0	20.5	16.0	16.0	13.5
26	14.0	9.0	19.0	15.0	24.5	21.5	24.5	22.0	21.0	18.5	16.0	14.0
27	16.0	7.0	16.5	14.0	24.0	21.5	24.0	22.0	20.5	19.0	17.5	16.0
28	12.0	10.0	14.5	13.5	22.5	21.5	24.0	20.5	21.0	18.0	18.5	16.0
29	14.0	9.0	14.5	13.5	22.0	21.0	24.5	22.5	21.5	18.5	19.0	17.0
30	14.0	7.5	14.0	13.0	24.0	21.0	23.5	22.5	22.5	19.0	19.0	17.5
31	---	---	16.5	13.5	---	---	23.5	22.0	22.5	19.5	---	---
MONTH	18.0	3.0	19.0	7.5	24.5	13.5	25.0	17.5	24.5	16.0	22.5	13.5

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

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

01590710 NORTH FORK MUDDY CREEK NEAR SOUTH RIVER, MD--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

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

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

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

RHODE RIVER BASIN

01590710 NORTH FORK MUDDY CREEK NEAR SOUTH RIVER, MD--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

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

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

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

01590710 NORTH FORK MUDDY CREEK NEAR SOUTH RIVER, MD--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974

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

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

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

RHODE RIVER BASIN

01590710 NORTH FORK MUDDY CREEK NEAR SOUTH RIVER, MD--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	14.5	7.0	12.5	11.5	20.5	19.0	20.5	18.5	24.0	21.0	19.5	19.0
2	14.5	7.0	15.0	11.5	20.0	17.0	20.5	17.5	25.0	22.0	21.0	19.5
3	13.0	6.5	17.0	10.5	19.5	17.0	22.0	19.5	25.5	22.5	20.5	19.0
4	10.0	4.0	15.0	12.0	20.0	17.0	20.5	20.0	25.5	23.0	20.5	18.5
5	9.0	3.0	13.5	12.0	20.5	18.0	22.0	20.0	24.5	22.5	20.5	18.5
6	10.5	3.5	17.0	10.5	21.0	18.5	21.5	19.5	23.5	21.5	21.0	19.0
7	8.0	5.0	16.5	12.0	19.0	17.5	21.0	20.0	21.5	19.5	20.0	19.0
8	12.0	4.5	17.5	11.5	18.0	16.0	21.5	20.0	20.5	18.0	20.5	19.0
9	13.0	5.0	15.0	12.0	17.5	15.0	22.5	20.5	21.5	18.5	21.0	18.0
10	9.5	7.0	17.5	13.0	18.0	16.0	---	20.5	21.5	19.0	18.0	15.5
11	10.0	5.0	17.5	12.0	18.0	16.5	---	---	23.0	20.5	19.5	16.0
12	12.0	6.0	18.0	13.0	18.0	17.0	---	---	23.0	20.5	21.5	18.5
13	11.0	5.0	18.5	14.5	20.5	17.5	---	---	24.0	21.5	18.5	15.0
14	12.0	4.5	18.5	13.5	20.5	18.0	---	---	23.5	21.5	15.0	13.0
15	9.0	7.5	18.0	14.0	22.0	19.0	---	---	23.5	22.0	15.5	13.0
16	13.0	7.0	17.5	15.5	22.0	20.5	---	---	24.5	22.0	16.5	14.0
17	15.5	7.0	17.0	14.5	22.5	19.5	---	---	23.5	23.0	17.0	15.0
18	12.0	8.5	17.0	14.5	22.5	20.5	---	---	24.0	21.5	18.0	16.0
19	15.0	10.5	18.5	15.5	23.0	20.5	---	---	22.5	21.0	19.5	17.5
20	16.0	9.5	20.0	15.5	22.5	20.5	---	---	22.0	20.5	20.5	18.5
21	15.5	8.5	20.5	16.5	21.5	19.0	23.0	21.0	22.0	19.5	19.5	17.0
22	11.5	7.5	21.5	18.0	21.0	18.5	22.5	21.0	23.5	21.0	17.0	16.0
23	16.0	8.0	21.5	18.0	22.0	19.0	23.0	21.5	23.0	20.5	17.5	16.0
24	16.5	12.0	21.0	18.5	22.5	20.0	23.0	21.5	23.0	20.5	19.0	17.5
25	16.5	13.0	19.5	16.5	22.5	20.5	22.5	21.5	24.5	22.0	18.0	18.0
26	18.5	12.5	19.0	16.0	21.0	19.5	22.0	20.0	25.5	23.5	20.5	18.0
27	16.5	9.5	20.5	17.0	21.0	19.5	21.5	18.0	24.5	23.0	19.5	18.5
28	14.0	11.0	19.5	17.5	22.0	19.5	22.5	20.0	22.5	20.5	18.5	16.5
29	13.0	11.0	19.5	16.0	21.5	20.5	23.0	20.5	21.5	19.0	17.0	15.0
30	14.5	11.0	19.5	18.0	21.5	20.5	22.5	20.0	23.0	20.5	18.0	15.0
31	---	---	20.5	18.5	---	---	23.0	20.5	21.5	19.5	---	---
MONTH	18.5	3.0	21.5	10.5	23.0	15.0	23.0	17.5	25.5	18.0	21.5	13.0

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

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

01590710 NORTH FORK MUDDY CREEK NEAR SOUTH RIVER, MD--Continued

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

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

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

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1					---	---						
2					---	---						
3					---	---						
4					---	---						
5					---	---						
6					---	---						
7					---	---						
8					---	---						
9					---	---						
10					15.0	---						
11					18.0	13.0						
12					19.0	13.5						
13					19.0	16.0						
14					18.0	16.5						
15					18.5	17.0						
16					21.0	16.5						
17					21.5	18.0						
18					23.5	18.5						
19					23.5	19.5						
20					---	---						
21					---	---						
22					---	---						
23					---	---						
24					---	---						
25					---	---						
26					---	---						
27					---	---						
28					---	---						
29					---	---						
30					---	---						
31					---	---						
MONTH					23.5	13.0						

RHODE RIVER BASIN

01590710 NORTH FORK MUDDY CREEK NEAR SOUTH RIVER, MD--Continued

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

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

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

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

PATUXENT RIVER BASIN

147

01591000 PATUXENT RIVER NEAR UNITY, MD

LOCATION.--Lat 39°14'18", long 77°03'23", Montgomery County, Hydrologic Unit 02060006, on right bank at downstream side of bridge on State Highway 97, 0.6 mi (1 km) upstream from Cattail Creek, 0.8 mi (1.3 km) upstream from Triadelphia Reservoir, 1.1 mi (1.8 km) northeast of Unity, and 97 mi (155 km) upstream from mouth.

DRAINAGE AREA.--34.8 mi² (90.1 km²).

PERIOD OF RECORD.--July 1944 to current year.

REVISED RECORDS.--WSP 1111: 1947. WSP 1432: 1948.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 364.76 ft (111.179 m) Washington Suburban Sanitary Commission datum. Prior to Aug. 14, 1946, non-recording gage at same site and datum.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--35 years, 39.7 ft³/s (1.124 m³/s), 15.49 in/yr (393 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,800 ft³/s (595 m³/s) Sept. 11, 1971, gage height, 18.60 ft (5.669 m), from rating curve extended above 1,500 ft³/s (42.5 m³/s) on basis of slope-area measurement at gage height 13.00 ft (3.962 m); minimum, 0.20 ft³/s (0.006 m³/s) Sept. 10, 11, 12, 1966, gage height, 1.66 ft (0.506 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 770 ft³/s (21 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	0830	1020 28.9	6.04 1.841	Feb. 26	0400	2190 62.0	8.01 2.441
Jan. 21	1700	913 25.9	5.79 1.765	May 24	0330	841 23.8	5.61 1.710
Jan. 24	1530	1390 39.4	6.79 2.070	Sept. 6	0400	*3150 89.2	9.15 2.789
Feb. 25	0300	1700 48.1	7.32 2.231	Sept. 22	0400	996 28.2	5.99 1.826

Minimum discharge, 12 ft³/s (0.34 m³/s) Oct. 1, 3, 4, gage height, 2.05 ft (0.625 m).

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	13	15	27	71	60	203	60	44	153	39	31	24
2	13	15	22	389	58	191	62	42	57	43	40	29
3	12	15	21	116	54	145	71	43	142	30	30	24
4	13	15	55	70	53	128	82	45	134	31	26	23
5	15	15	74	58	47	219	84	46	76	34	23	407
6	28	15	34	54	48	225	65	42	60	28	21	1100
7	16	15	27	81	49	141	59	40	57	26	20	97
8	14	15	27	204	48	116	57	39	52	25	20	66
9	14	14	167	83	46	100	102	38	46	25	30	54
10	14	14	83	68	45	93	104	37	44	24	40	48
11	14	15	43	60	40	135	73	36	45	25	24	44
12	13	15	35	56	40	93	69	36	41	23	90	42
13	13	15	31	56	42	83	66	57	39	24	50	40
14	13	15	28	83	42	81	76	55	37	24	30	44
15	13	15	25	56	43	72	66	43	35	24	24	41
16	13	19	25	47	43	67	61	47	35	22	22	36
17	15	24	23	45	40	66	57	37	54	21	21	34
18	14	53	22	42	39	64	54	36	45	20	21	33
19	14	22	22	43	40	61	52	46	37	20	22	32
20	14	18	22	91	45	59	50	39	35	30	22	31
21	13	16	31	698	50	57	49	37	33	31	70	138
22	13	16	24	148	65	55	48	36	35	24	40	369
23	13	16	22	98	80	54	48	46	32	22	30	106
24	13	18	42	725	428	187	47	328	31	21	40	67
25	13	16	208	214	1050	128	47	98	30	21	50	58
26	15	15	55	117	1130	85	49	72	29	21	36	54
27	16	20	42	95	288	73	73	55	28	20	32	50
28	15	26	34	89	238	67	57	51	29	22	40	49
29	15	31	32	78	---	66	49	48	33	26	32	49
30	15	58	30	71	---	63	47	43	31	30	29	47
31	15	---	36	66	---	61	---	41	---	23	26	---
TOTAL	444	591	1369	4172	4251	3238	1884	1703	1535	799	1032	3236
MEAN	14.3	19.7	44.2	135	152	104	62.8	54.9	51.2	25.8	33.3	108
MAX	28	58	208	725	1130	225	104	328	153	43	90	1100
MIN	12	14	21	42	39	54	47	36	28	20	20	23
CFSM	.41	.57	1.27	3.88	4.37	2.99	1.81	1.58	1.47	.74	.96	3.10
IN.	.47	.63	1.46	4.46	4.54	3.46	2.01	1.82	1.64	.85	1.10	3.46

CAL YR 1978 TOTAL 19323 MEAN 52.9 MAX 1260 MIN 12 CFSM 1.52 IN 20.66
WTR YR 1979 TOTAL 24254 MEAN 66.4 MAX 1130 MIN 12 CFSM 1.91 IN 25.93

PATUXENT RIVER BASIN

01592500 PATUXENT RIVER NEAR LAUREL, MD

LOCATION.--Lat 39°06'56", long 76°52'27", Prince Georges County, Hydrologic Unit 02060006, on right bank at Rocky Gorge pumping station, 600 ft (180 m) downstream from T. Howard Duckett Reservoir, 0.7 mi (1.1 km) upstream from Walker Branch, 1.3 mi (2.1 km) northwest of Laurel, and 81 mi (130 km) upstream from mouth.

DRAINAGE AREA.--132 mi² (342 km²).

PERIOD OF RECORD.--October 1944 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 153.5 ft (46.79 m) National Geodetic Vertical Datum of 1929 (levels by Washington Suburban Sanitary Commission). Prior to Oct. 1, 1955, water-stage recorder and concrete control at site 0.3 mi (0.5 km) downstream at different datum. Oct. 1, 1955, to Sept. 30, 1956, nonrecording gage at present site at datum 1.2 ft (0.37 m) lower. Oct. 1, 1956, to Jan. 27, 1957, nonrecording gage at present site and datum. Jan. 28, 1957, to May 3, 1972, water-stage recorder and concrete control at present site and datum. May 4, 1972, to Sept. 4, 1973, nonrecording gage at present site and datum.

REMARKS.--Records good. Records do not include diversion at Patuxent (formerly Willis School) filtration plant for supply of Washington Suburban Sanitary District. Flow regulated by Triadelphia Reservoir, and since March 1954 by T. Howard Duckett Reservoir, combined usable capacity, 12,500,000,000 gal (47.31 hm³); dead storage, 80,000,000 gal (302,800 m³). Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 26,000 ft³/s (736 m³/s) June 22, 1972, gage height, about 25 ft (7.6 m), from floodmarks, from rating curve extended above 6,600 ft³/s (187 m³/s) on basis of contracted-opening measurement of peak flow; minimum, 0.10 ft³/s (0.003 m³/s) Sept. 25, 1964, (valve closed for repair); minimum daily, 1.1 ft³/s (0.031 m³/s) June 26, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,010 ft³/s (114 m³/s) Sept. 6, gage height, 10.57 ft (3.222 m); minimum daily discharge, 15 ft³/s (0.42 m³/s) Oct. 29, Nov. 1, 2, 18, 19.

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	17	15	16	17	17	762	99	183	107	104	29	343
2	17	15	16	63	17	300	100	139	326	57	28	342
3	17	74	16	125	17	406	234	101	724	23	302	341
4	17	157	16	127	17	401	700	94	1080	22	477	1270
5	17	158	17	128	17	401	32	93	156	22	457	1850
6	17	152	18	126	117	403	20	95	101	22	43	2980
7	16	156	18	127	360	284	20	95	100	32	27	1870
8	18	153	175	126	336	370	19	49	99	21	27	1390
9	18	150	241	149	178	315	20	24	98	20	27	1090
10	18	167	20	235	91	129	20	24	99	19	21	746
11	18	167	23	405	90	120	39	23	98	37	20	415
12	17	170	22	465	90	114	90	22	97	19	20	329
13	17	172	22	214	90	115	90	22	45	19	23	328
14	17	102	20	68	90	115	91	21	19	19	24	213
15	17	17	20	68	88	115	91	76	19	18	24	61
16	16	16	20	98	88	114	173	110	20	18	24	61
17	16	16	19	213	88	113	227	55	16	21	68	61
18	16	15	18	341	88	114	229	71	19	25	136	52
19	16	15	18	283	87	130	121	190	23	23	135	41
20	18	17	18	135	293	148	21	121	30	22	135	29
21	17	18	18	1260	572	148	21	86	22	22	243	24
22	17	17	18	2200	254	187	21	86	40	21	350	204
23	17	17	18	1670	108	336	68	86	75	19	331	273
24	17	16	18	1290	244	446	144	363	75	20	162	820
25	17	16	18	1100	2870	353	190	925	73	21	37	892
26	17	17	17	963	3060	246	189	438	72	21	37	477
27	16	17	17	546	2940	183	187	60	72	20	38	196
28	16	17	17	17	639	183	186	18	72	21	38	268
29	15	18	17	17	---	184	186	17	78	20	219	329
30	16	16	17	17	---	160	185	19	105	24	344	328
31	18	---	17	17	---	100	---	17	---	31	344	---
TOTAL	523	2073	945	12610	12946	7495	3813	3723	3960	803	4190	17623
MEAN	16.9	69.1	30.5	407	462	242	127	120	132	25.9	135	587
MAX	18	172	241	2200	3060	762	700	925	1080	104	477	2980
MIN	15	15	16	17	17	100	19	17	16	18	20	24
(*)	10520	9300	9860	11720	11430	11640	11720	11840	12030	12030	11810	9840
(*)	72.7	63.6	66.2	66.5	69.9	68.6	66.6	69.3	76.5	70.3	76.6	76.7

CAL YR 1978 TOTAL 49327 MEAN 135 MAX 4530 MIN 14 * 72.0
WTR YR 1979 TOTAL 70704 MEAN 194 MAX 3060 MIN 15 * 70.3

* Combined month-end total contents, millions of gallons, in Triadelphia and T. Howard Duckett Reservoirs, contents on Sept. 30, 1978: 8,350,000,000 gal (31.60 hm³); furnished by Washington Suburban Sanitary Commission.

* Diversion, in cubic feet per second, above station at Patuxent (formerly Willis School) filtration plant for supply of Washington Suburban Sanitary District. Records furnished by Washington Suburban Sanitary Commission.

PATUXENT RIVER BASIN

149

01593500 LITTLE PATUXENT RIVER AT GUILFORD, MD

LOCATION.--Lat 39°10'04", long 76°51'07", Howard County, Hydrologic Unit 02060006, on left bank 75 ft (23 m) upstream from bridge on State Highway 32, 1 mi (1.6 km) west of Guilford, 3 mi (4.8 km) upstream from Middle Patuxent River, 4 mi (6.4 km) north of Laurel, and 20.1 mi (32.3 km) upstream from mouth.

DRAINAGE AREA.--38.0 mi² (98.4 km²).

PERIOD OF RECORD.--April 1932 to current year. Monthly discharge only for April 1932, published in WSP 1302.

REVISED RECORDS.--WSP 1502: 1933, 1934(M), 1939(M), 1945(M), 1948(P).

GAGE.--Water-stage recorder. Concrete control since June 20, 1946. Altitude of gage is 260 ft (79.2 m), from topographic map. Prior to June 25, 1946, nonrecording gage at same site and datum.

REMARKS.--Records good. Low flow affected by regulation from unknown source. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--47 years, 42.9 ft³/s (1.215 m³/s), 15.33 in/yr (389 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,400 ft³/s (351 m³/s) June 22, 1972, gage height, 18.38 ft (5.602 m), from high-water mark in well, from rating curve extended above 1,800 ft³/s (51.0 m³/s) on basis of contracted-opening measurement at gage height 13.26 ft (4.042 m) and contracted-opening and flow-over-embankment measurement at gage height 18.38 ft (5.602 m); no flow Sept. 8, and parts of Sept. 6, 7, 9-12, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft³/s (22 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. 2	1430	819 23.2	7.38 2.250	Feb. 26	0600	1840 52.1	10.02 3.054
Jan. 21	1500	1040 29.5	8.45 2.576	Aug. 27	2230	1200 34.0	8.90 2.713
Jan. 24	2100	1300 36.8	9.09 2.771	Sept. 6	0300	*4680 133	12.84 3.914
Feb. 25	0600	1910 54.1	10.11 3.082	Sept. 22	0700	1950 55.2	10.16 3.097

Minimum recorded discharge, 10 ft³/s (0.28 m³/s) Oct. 15, 16, 23, 25, 26, gage height, 2.62 ft (0.799 m), but may have been less during period of no gage-height record Oct. 1-11.

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	10	11	30	104	43	132	56	36	205	58	24	29
2	10	11	22	535	40	114	55	33	115	67	88	28
3	11	11	20	112	38	95	68	33	308	33	121	27
4	11	12	110	46	37	81	87	37	246	36	36	25
5	16	12	160	39	36	181	93	45	92	41	27	482
6	75	12	40	38	35	164	58	34	62	30	23	2140
7	20	12	27	103	36	91	45	32	52	26	21	93
8	14	12	32	275	36	74	43	31	48	25	22	57
9	13	12	220	75	35	65	96	30	41	24	40	46
10	12	11	98	45	36	61	111	29	53	25	103	41
11	12	11	39	39	33	145	58	28	47	26	31	38
12	12	12	31	36	31	75	52	27	39	24	220	36
13	12	12	28	86	31	61	51	86	32	27	98	35
14	11	12	26	130	31	60	82	109	30	63	37	50
15	10	12	22	65	31	55	57	44	29	41	29	54
16	11	17	22	40	32	47	49	44	28	27	25	34
17	13	30	23	39	29	49	45	31	282	27	24	31
18	12	84	19	36	23	48	43	31	160	24	24	30
19	12	24	18	30	24	46	41	74	51	23	25	29
20	11	16	20	100	29	44	39	51	40	32	23	30
21	11	14	44	857	34	43	39	37	35	46	89	128
22	11	14	25	145	59	42	38	34	36	26	47	996
23	11	15	22	64	77	41	38	49	35	24	28	146
24	11	18	49	635	437	138	38	177	32	23	29	74
25	11	14	208	354	1320	98	38	98	31	22	140	57
26	11	12	47	77	1130	59	40	112	29	30	48	51
27	16	35	34	63	224	49	86	53	28	25	292	46
28	13	44	27	64	166	45	58	41	29	21	238	42
29	11	42	26	59	---	45	41	40	29	34	54	44
30	11	100	24	54	---	44	38	48	40	72	43	42
31	11	---	38	47	---	45	---	34	---	30	33	---
TOTAL	436	654	1551	4392	4113	2337	1683	1588	2284	1032	2082	4961
MEAN	14.1	21.8	50.0	142	147	75.4	56.1	51.2	76.1	33.3	67.2	145
MAX	75	100	220	857	1320	181	111	177	308	72	292	2140
MIN	10	11	18	30	23	41	38	27	28	21	21	25
CFSM	.37	.57	1.32	3.74	3.87	1.98	1.48	1.35	2.00	.88	1.77	4.34
IN.	.43	.64	1.52	4.30	4.03	2.29	1.65	1.55	2.24	1.01	2.04	4.86

CAL YR 1978 TOTAL 18301 MEAN 50.1 MAX 1970 MIN 10 CFSM 1.32 IN 17.92
WTR YR 1979 TOTAL 27113 MEAN 74.3 MAX 2140 MIN 10 CFSM 1.96 IN 26.54

PATUXENT RIVER BASIN

01594000 LITTLE PATUXENT RIVER AT SAVAGE, MD

LOCATION.--Lat 39°08'00", long 76°48'58", Howard County, Hydrologic Unit 02060006, on left bank 500 ft (150 m) downstream from bridge on U.S. Highway 1, 0.5 mi (0.8 km) southeast of Savage, 1.0 mi (1.6 km) downstream from Middle Patuxent River, and 16.1 mi (25.9 km) upstream from mouth.

DRAINAGE AREA.--98.4 mi² (254.9 km²).

PERIOD OF RECORD.--October 1939 to September 1958. Annual maximum, water years 1959-66, 68, 72, 75. October 1975 to current year. Prior to December 1939 monthly discharge only, published in WSP 1302.

GAGE.--Water-stage recorder. Altitude of gage is 125 ft (38.1 m), from topographic map. Prior to 1958, water-stage recorder at site 100 ft (30 m) upstream at same datum. October 1958 to September 1972, crest-stage gage 100 ft (30 m) upstream on right bank at same datum.

REMARKS.--Records good. Some diurnal fluctuation at low flow caused by plant 0.5 mi (0.8 km) upstream. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--23 years (water years 1940-58, 1976-79), 108 ft³/s (3.059 m³/s), 14.90 in/yr (378 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,400 ft³/s (1,000 m³/s) June 22, 1972; gage height, 25.4 ft (7.74 m), from floodmarks, from rating curve extended above 11,000 ft³/s (312 m³/s) on basis of contracted-opening measurement of peak flow; minimum daily, 7.0 ft³/s (0.20 m³/s) Sept. 19, 1943.

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. 2	1500	2150 60.9	7.81 2.381	June 3	2100	2310 65.4	8.03 2.448
Jan. 21	1800	2870 81.3	8.78 2.676	Aug. 3	0030	2200 62.3	7.88 2.402
Jan. 24	2015	4520 128	10.66 3.249	Aug. 27	2215	2760 78.2	8.64 2.633
Feb. 25	0200	4630 131	10.77 3.283	Sept. 6	0430	*10400 295	15.59 4.752
Feb. 25	2045	3290 93.2	9.29 2.832	Sept. 22	0530	5750 163	11.86 3.615

Minimum discharge, 31 ft³/s (0.88 m³/s) Oct. 1, 2, gage height, 2.66 ft (0.811 m).

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	31	37	81	242	117	437	139	103	650	133	61	77
2	32	37	63	1310	110	382	137	96	316	139	335	72
3	32	37	59	352	105	296	155	97	856	82	480	70
4	33	37	222	137	101	238	197	102	731	79	102	66
5	43	38	320	120	95	567	229	121	249	98	73	1030
6	148	39	111	112	95	504	151	100	172	74	62	5250
7	53	39	80	234	90	263	126	96	153	66	55	293
8	39	39	81	761	90	208	120	92	138	62	63	183
9	36	38	480	234	90	181	207	91	120	62	78	145
10	35	37	305	136	90	168	275	90	127	60	198	128
11	35	38	109	115	85	351	155	86	121	62	73	121
12	35	39	90	110	80	205	140	83	111	59	549	114
13	35	39	82	196	80	169	138	196	96	78	265	109
14	35	40	77	367	80	164	190	284	91	136	104	128
15	35	41	71	201	80	152	151	125	87	116	79	150
16	35	49	70	114	85	134	134	117	84	70	68	102
17	39	68	72	108	80	135	126	93	446	67	64	96
18	39	172	69	105	70	135	120	85	316	61	61	95
19	37	67	67	93	70	129	114	162	120	58	66	93
20	37	48	68	188	80	125	111	134	102	69	62	87
21	36	44	109	2080	90	123	110	104	93	131	181	354
22	36	42	78	450	110	120	109	97	92	70	126	2760
23	36	42	69	186	200	118	108	115	89	62	75	411
24	35	49	98	2190	1200	340	107	439	82	58	78	206
25	35	44	548	844	3460	262	107	220	79	55	250	162
26	35	40	132	216	2340	161	109	284	74	65	105	147
27	45	65	99	172	771	137	182	144	72	60	707	135
28	44	98	86	164	566	128	151	120	72	51	576	128
29	39	90	80	153	---	126	115	115	73	69	154	137
30	38	200	80	147	---	124	106	121	85	161	117	125
31	37	---	91	129	---	122	---	99	---	77	89	---
TOTAL	1260	1693	4047	11966	10510	6704	4319	4211	5897	2490	5356	12974
MEAN	40.6	56.4	131	386	375	216	144	136	197	80.3	173	432
MAX	148	200	548	2190	3460	567	275	439	856	161	707	5250
MIN	31	37	59	93	70	118	106	83	72	51	55	66
CFSM	.41	.57	1.33	3.92	3.81	2.20	1.46	1.38	2.00	.82	1.76	4.39
IN.	.48	.64	1.53	4.52	3.97	2.53	1.63	1.59	2.23	.94	2.02	4.90

CAL YR 1978 TOTAL 49300 MEAN 135 MAX 4500 MIN 31 CFSM 1.37 IN 18.64
WTR YR 1979 TOTAL 71427 MEAN 196 MAX 5250 MIN 31 CFSM 1.99 IN 27.00

01594440 PATUXENT RIVER NEAR BOWIE, MD

LOCATION.--Lat 38°57'21", long 76°41'36", Anne Arundel County, Hydrologic Unit 02060006, on left bank 45 ft (14 m) upstream from bridge on U.S. Highway 50 (John Hanson Highway), 3.0 mi (4.8 km) west of Bowie City Hall, 3.1 mi (5.0 km) downstream from mouth of Little Patuxent River, 4.2 mi (6.8 km) northwest of Davidsonville, and 60 mi (97 km) upstream from mouth.

DRAINAGE AREA.--348 mi² (901 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1955 to June 1977 (gage heights and discharge measurements only), August 1977 to current year.

GAGE.--Water-stage recorder. Datum of gage is 13.10 ft (3.993 m) National Geodetic Vertical Datum of 1929. Prior to June 27, 1977, nonrecording gage at same site and datum.

REMARKS.--Water-discharge records good except those for February, which are fair. Some regulation at low flow by Rocky Gorge Dam, 21 mi (34 km) above station. Several observations of water temperature were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,100 ft³/s (881 m³/s) June 22, 1972, gage height, 27.9 ft (8.50 m), from floodmarks, on basis of contracted opening measurement of peak flow; minimum observed, 32 ft³/s (0.91 m³/s); minimum daily 61 ft³/s (1.73 m³/s) Sept. 14, 15, 1977.

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. 3	1230	3630 103	11.76 3.584	Apr. 5	1000	2620 74.2	10.77 3.283
Jan. 9	0330	2210 62.6	10.32 3.146	June 4	2130	4150 118	12.33 3.758
Jan. 22	1600	4200 119	12.40 3.780	Aug. 28	2000	3050 86.4	11.21 3.417
Jan. 25	1930	5380 152	13.86 4.225	Sept. 6	2400	*11500 326	18.52 5.645
Feb. 26	Unknown	Unknown	Unknown	Sept. 23	0500	4750 135	13.10 3.993
Mar. 6	1000	2090 59.2	10.17 3.100				

Minimum discharge, 91 ft³/s (258 m³/s) Oct. 1, gage height, 3.81 ft (1.161 m).

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	96	113	309	478	339	2210	451	455	828	422	178	615
2	98	112	188	1430	278	1620	477	426	1570	462	177	575
3	97	108	167	3160	276	1200	471	355	1070	271	744	557
4	98	156	412	994	290	1050	700	335	2940	201	917	569
5	108	224	824	516	267	1110	1850	382	2930	245	705	900
6	180	229	630	451	215	1890	612	344	962	209	618	7350
7	179	229	263	547	351	1310	379	312	534	184	227	7500
8	111	234	218	1400	563	930	332	298	490	182	172	2780
9	100	236	464	1610	702	875	351	244	429	166	223	1800
10	98	236	1310	672	210	787	712	220	398	168	460	1460
11	97	253	519	570	205	792	470	211	384	168	423	1180
12	98	254	272	637	200	875	389	201	385	180	755	885
13	98	255	231	802	195	583	408	293	330	214	1100	638
14	104	257	214	1120	198	535	493	1130	249	322	380	619
15	101	195	191	800	190	511	512	535	220	332	244	602
16	98	136	181	434	190	463	422	407	211	207	205	289
17	106	162	174	403	185	447	478	352	358	181	188	242
18	106	317	168	498	180	442	505	262	858	176	233	231
19	105	283	163	557	180	432	496	422	362	170	290	213
20	105	152	162	570	200	442	363	606	257	167	328	199
21	105	131	251	1710	400	445	276	400	238	256	438	196
22	104	125	242	3920	600	437	265	326	226	206	656	1870
23	105	123	181	2850	700	476	262	334	243	170	572	3450
24	107	131	201	2270	2000	728	305	734	390	165	526	1060
25	108	129	927	4650	4500	1250	374	954	278	181	488	900
26	107	119	779	2820	8000	915	413	1320	250	168	451	1240
27	117	155	310	1460	8470	647	775	1180	239	167	327	999
28	124	297	233	1170	4430	514	1090	399	234	153	1830	554
29	115	242	193	637	---	494	591	300	242	208	1000	616
30	111	462	184	466	---	489	493	290	244	263	833	664
31	112	---	225	389	---	443	---	258	---	257	800	---
TOTAL	3398	6055	10786	39991	34506	25342	15715	14285	18349	6821	16488	40753
MEAN	110	202	348	1290	1232	817	524	461	612	220	532	1358
MAX	180	462	1310	4650	8470	2210	1850	1320	2940	462	1830	7500
MIN	96	108	162	389	180	432	262	201	211	153	172	196
CFSM	.32	.58	1.00	3.71	3.54	2.35	1.51	1.33	1.76	.63	1.53	3.90
IN.	.36	.65	1.15	4.27	3.69	2.71	1.68	1.53	1.96	.73	1.76	4.36

CAL YR 1978 TOTAL 165397 MEAN 453 MAX 8860 MIN 96 CFSM 1.30 IN 17.68
WTR YR 1979 TOTAL 232489 MEAN 637 MAX 8470 MIN 96 CFSM 1.83 IN 24.85

PATUXENT RIVER BASIN

01594440 PATUXENT RIVER NEAR BOWIE, MD--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: December 1977 to current year.

WATER TEMPERATURES: December 1977 to current year.

REMARKS.--Daily samples collected by a local observer. Record missing October to April and June to August.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	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)
OCT										
10...	1220	96	255	7.3	18.0	12.0	28	7.2	75	150
NOV										
14...	1240	256	175	7.2	19.0	13.0	8.0	7.7	28	130
DEC										
19...	1300	161	240	7.3	6.0	5.0	6.0	10.3	60	690
JAN										
16...	0945	441	250	7.3	2.5	1.5	14	12.4	K7	K20
MAR										
01...	1515	1940	170	7.6	6.0	14.2	52	14.2	48	160
27...	1400	600	165	7.6	9.5	8.0	15	--	K8	K12
APR										
26...	1000	411	170	7.7	19.4	16.5	6.0	7.6	48	660
MAY										
23...	1445	329	180	7.7	26.5	18.0	8.0	--	160	380
JUN										
13...	1430	331	200	7.7	21.2	18.2	10	--	140	420
JUL										
17...	1430	184	203	7.4	27.4	24.0	15	4.3	200	170
AUG										
15...	1500	236	185	7.1	21.0	20.0	20	6.2	92	630
SEP										
26...	1300	105	105	7.5	22.0	19.0	20	--	620	760

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)
OCT										
10...	54	25	15	3.9	19	41	1.1	4.9	29	--
NOV										
14...	42	9	12	3.0	11	34	.7	3.3	33	--
DEC										
19...	53	17	15	3.7	15	36	.9	3.6	36	--
JAN										
16...	51	30	14	3.8	25	50	1.5	3.2	21	--
MAR										
01...	29	16	8.1	2.2	10	40	.8	2.5	13	--
27...	37	21	10	2.9	12	39	.9	2.5	16	--
APR										
26...	40	19	11	3.0	11	36	.8	2.6	21	--
MAY										
23...	46	22	13	3.3	14	38	.9	2.8	24	--
JUN										
13...	49	29	14	3.5	14	36	.9	3.0	20	--
JUL										
17...	52	23	15	3.5	15	43	.9	4.0	29	2.3
AUG										
15...	54	27	16	3.4	13	33	.8	3.7	27	4.2
SEP										
26...	29	3	8.3	2.1	5.6	33	.5	2.9	26	1.6

01594440 PATUXENT RIVER NEAR BOWIE, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	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 AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)
OCT 10...	20	24	.3	11	136	116	.19	35.3	3.4	1.2
NOV 14...	9.9	14	.2	6.4	97	80	.13	67.0	1.7	.53
DEC 19...	18	21	.2	12	116	111	.16	50.4	2.4	1.8
JAN 16...	17	42	.1	8.3	132	126	.18	157	1.2	.86
MAR 01...	12	18	.1	5.9	84	67	.11	440	1.0	.25
27...	15	19	.1	8.3	90	80	.12	146	1.3	.54
APR 26...	13	18	.1	5.9	89	77	.12	98.8	1.9	--
MAY 23...	14	19	.1	9.9	110	91	.15	97.7	1.9	.48
JUN 13...	16	20	.2	9.8	111	93	.15	99.2	2.0	.38
JUL 17...	16	21	.2	9.5	140	102	.19	69.6	2.6	.38
AUG 15...	20	20	.2	11	121	104	.16	77.1	1.9	.50
SEP 26...	9.1	9.5	.1	7.4	65	67	.09	18.4	1.0	.14
DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN+AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN+NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN+AM- MONIA + ORGANIC DIS. TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)
OCT 10...	1.5	.60	1.8	.00	1.8	5.2	23	1.5	4.5	1.2
NOV 14...	.64	.47	1.0	.12	.88	2.7	12	.77	2.3	.53
DEC 19...	.21	.60	2.4	.00	2.5	4.8	21	1.0	3.0	.89
JAN 16...	1.0	.34	1.2	.00	1.2	2.4	11	.44	1.3	.34
MAR 01...	.30	.51	.76	.18	.58	1.8	7.8	.18	.55	.07
27...	.66	.22	.76	.00	.79	2.1	9.1	.31	.95	.21
APR 26...	--	--	--	--	--	--	--	--	--	--
MAY 23...	.58	.62	1.1	.10	1.0	3.0	13	.62	1.9	.36
JUN 13...	.46	.19	.57	.00	.91	2.6	11	.55	1.7	.40
JUL 17...	.46	.72	1.1	.20	.90	3.7	16	.82	2.5	.56
AUG 15...	.61	.80	1.3	.38	.92	3.2	14	.57	1.7	.33
SEP 26...	.17	.42	.56	.14	.42	1.6	6.9	.19	.58	.08

01594440 PATUXENT RIVER NEAR BOWIE, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	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 AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)
OCT 10...	20	24	.3	11	136	116	.19	35.3	3.4	1.2
NOV 14...	9.9	14	.2	6.4	97	80	.13	67.0	1.7	.53
DEC 19...	18	21	.2	12	116	111	.16	50.4	2.4	1.8
JAN 16...	17	42	.1	8.3	132	126	.18	157	1.2	.86
MAR 01...	12	18	.1	5.9	84	67	.11	440	1.0	.25
27...	15	19	.1	8.3	90	80	.12	146	1.3	.54
APR 26...	13	18	.1	5.9	89	77	.12	98.8	1.9	--
MAY 23...	14	19	.1	9.9	110	91	.15	97.7	1.9	.48
JUN 13...	16	20	.2	9.8	111	93	.15	99.2	2.0	.38
JUL 17...	16	21	.2	9.5	140	102	.19	69.6	2.6	.38
AUG 15...	20	20	.2	11	121	104	.16	77.1	1.9	.50
SEP 26...	9.1	9.5	.1	7.4	65	67	.09	18.4	1.0	.14

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN+AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN+NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN+AM- MONIA + ORGANIC DIS. TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS P04)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)
OCT 10...	1.5	.60	1.8	.00	1.8	5.2	23	1.5	4.5	1.2
NOV 14...	.64	.47	1.0	.12	.88	2.7	12	.77	2.3	.53
DEC 19...	.21	.60	2.4	.00	2.5	4.8	21	1.0	3.0	.89
JAN 16...	1.0	.34	1.2	.00	1.2	2.4	11	.44	1.3	.34
MAR 01...	.30	.51	.76	.18	.58	1.8	7.8	.18	.55	.07
27...	.66	.22	.76	.00	.79	2.1	9.1	.31	.95	.21
APR 26...	--	--	--	--	--	--	--	--	--	--
MAY 23...	.58	.62	1.1	.10	1.0	3.0	13	.62	1.9	.36
JUN 13...	.46	.19	.57	.00	.91	2.6	11	.55	1.7	.40
JUL 17...	.46	.72	1.1	.20	.90	3.7	16	.82	2.5	.56
AUG 15...	.61	.80	1.3	.38	.92	3.2	14	.57	1.7	.33
SEP 26...	.17	.42	.56	.14	.42	1.6	6.9	.19	.58	.08

Missing
data
in QW data
file

PATUXENT RIVER BASIN

01594440 PATUXENT RIVER NEAR BOWIE, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	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)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
DEC 19...	1	0	1	0	0	0	1	0	2	20
MAR 27...	1	0	1	0	0	0	0	0	1	20
JUN 13...	1	0	1	0	0	30	0	0	0	10
SEP 26...	1	1	0	0	0	20	1	1	0	20

DATE	CHRO- MIUM, SUS- PENDED RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDED RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)
DEC 19...	20	0	2	0	2	0	0	0	1100	930
MAR 27...	10	10	2	0	2	3	1	2	870	840
JUN 13...	0	40	0	0	1	3	0	3	1200	1000
SEP 26...	10	<10	6	3	3	8	4	4	1500	0

DATE	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDED RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDED RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)
DEC 19...	170	12	6	6	170	0	190	<.5	.0	<.5
MAR 27...	30	7	3	4	120	20	100	.5	.0	.5
JUN 13...	170	3	1	2	--	--	150	<.5	.0	<.5
SEP 26...	1500	8	5	3	110	50	60	<.5	.0	<.5

DATE	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDED TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDED RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDED RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
DEC 19...	0	0	10	0	0	0	40	40	0
MAR 27...	0	0	0	0	0	0	30	20	10
JUN 13...	0	0	0	0	0	0	10	6	4
SEP 26...	0	0	0	--	--	0	30	30	3

PATUXENT RIVER BASIN

01594440 PATUXENT RIVER NEAR BOWIE, MD--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								190				142
2								175				142
3								175				138
4								195				138
5								195				112
6								173				75
7								173				97
8								190				102
9								193				105
10								175				105
11								174				113
12								145				132
13								165				136
14								174				134
15								173				175
16								193				172
17								172				180
18								170				185
19								172				193
20								175				195
21								194				200
22								193				108
23								172				124
24								154				136
25								194				136
26								196				115
27								165				132
28								153				155
29								153				142
30								150				143
31								145				---
MEAN								175				139

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								16.0				21.5
2								16.0				23.0
3								15.0				22.5
4								15.0				22.0
5								16.0				22.5
6								17.0				22.5
7								18.5				22.5
8								18.0				20.5
9								18.5				20.0
10								16.0				20.0
11								17.0				20.5
12								17.0				21.0
13								15.5				20.5
14								15.5				22.5
15								15.0				20.0
16								16.0				20.5
17								16.0				18.5
18								17.0				19.5
19								18.0				19.0
20								18.0				19.5
21								17.5				19.0
22								18.0				19.0
23								16.0				17.0
24								16.0				17.0
25								16.5				---
26								17.0				---
27								16.0				---
28								18.0				---
29								18.0				---
30								17.5				19.5
31								17.0				---
MEAN								16.5				20.5

PATUXENT RIVER BASIN

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01594440 PATUXENT RIVER NEAR BOWIE, MD--Continued

PHYTOPLANKTON ANALYSES, AUGUST 1978 TO SEPTEMBER 1978

DATE TIME	AUG 15, 78 1500	SEP 12, 78 1315
TOTAL CELLS/ML	1200	280
DIVERSITY: DIVISION	1.5	1.5
..CLASS	1.5	1.5
..ORDER	2.3	2.1
...FAMILY	3.0	2.6
....GENUS	0.0	2.7

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)				
..CHLOROPHYCEAE				
...CHLOROCOCCALES				
....COELASTRACEAE				
.....COELASTRUM	110	9	--	-
....MICRACTINIACEAE				
.....MICRACTINIUM	--	-	14	5
....OOCYSTACEAE				
.....ANKISTRODESMUS	--	-	2	1
....CHODATELLA	--	-	2	1
....DICTYOSPHAERIUM	57	5	--	-
....OOCYSTIS	--	-	4	1
....TETRAEDRON	--	-	2	1
....SCENEDESMACEAE				
....CORONASTRUM	110	9	--	-
....SCENEDESMUS	29	2	57#	20
....TETRASTRUM	--	-	7	3
..TETRASPORALES				
...COCCOMYXACEAE				
....ELAKATOTHRIX	--	-	7	3
...PALMELLACEAE				
....SPHAEROCYSTIS	110	9	32	11
..VOLVOCALES				
...CHLAMYDOMONADACEAE				
....CHLAMYDOMONAS	--	-	5	2
..ZYGNEMATALES				
...DESMIDIACEAE				
....CLOSTERIUM	14	1	--	-
....STAUSTRUM	14	1	--	-
CHRYSTOPHYTA				
..BACILLARIOPHYCEAE				
...CENTRALES				
....COSCINODISCACEAE				
....CYCLOTELLA	29	2	7	3
..PENNALES				
...ACHNANTHACEAE				
....ACHNANTHES	29	2	--	-
...FRAGILARIACEAE				
....SYNEDRA	29	2	--	-
...NAVICULACEAE				
....NAVICULA	140	11	5	2
...NITZSCHACEAE				
....NITZSCHIA	43	3	11	4
CYANOPHYTA (BLUE-GREEN ALGAE)				
..CYANOPHYCEAE				
...CHROOCOCCALES				
....CHROOCOCCACEAE				
.....ANACYSTIS	430#	34	--	-
...HORMOGONALES				
....OSCILLATORIACEAE	86	7	--	-
....OSCILLATORIA	--	-	120#	42
EUGLENOPHYTA (EUGLENOIDS)				
..EUGLENOPHYCEAE				
...EUGLENALES				
....EUGLENACEAE				
.....EUGLENA			7	3

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
 * - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

PATUXENT RIVER BASIN

01594440 PATUXENT RIVER NEAR BOWIE, MD--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO JULY 1979

DATE TIME	NOV 14,78 1240	MAR 27,79 1400	MAY 23,79 1445	JUN 13,79 1430	JUL 17,79 1030
TOTAL CELLS/ML	1600	5700	890	230	1400
DIVERSITY: DIVISION	1.2	0.5	1.0	1.9	1.4
..CLASS	1.2	0.5	1.0	1.9	1.4
..ORDER	1.7	1.3	1.3	2.2	1.6
...FAMILY	2.1	1.6	1.5	2.5	1.8
....GENUS	2.5	2.1	1.5	2.9	2.2

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
....MICRACTINIACEAE										
....GOLENKINIA	--	-	--	-	13	1	--	-	--	-
....OOCYSTACEAE										
....ANKISTRODESMUS	14	1	76	1	--	-	13	6	72	5
....CHLORELLA	--	-	--	-	--	-	--	-	43	3
....DICTYOSPHAERIUM	--	-	--	-	--	-	--	-	110	8
....OOCYSTIS	--	-	--	-	52	6	26	11	14	1
....SCENEDESMACEAE	--	-	--	-	--	-	--	-	--	-
....CRUCIGENIA	--	-	--	-	--	-	--	-	57	4
....SCENEDESMUS	72	5	38	1	26	3	26	11	72	5
..VOLVOCELES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	--	-	230	4	--	-	26	11	72	5
...VOLVOCEAE										
....PANDORINA	--	-	--	-	210#	23	--	-	--	-
CHRYSTOPHYTA										
..BACILLARIOPHYCEAE										
...CENTRALES										
...COSCINODISCAEAE										
....CYCLOTELLA	29	2	3500#	61	--	-	--	-	--	-
....MELOSIRA	320#	20	530	9	--	-	13	6	14	1
....STEPHANODISCUS	--	-	--	-	--	-	77#	33	--	-
...PENNALES										
....ACHNANTHACEAE										
....ACHNANTHES	14	1	--	-	--	-	--	-	--	-
....FRAGILARIACEAE										
....ASTERIONELLA	14	1	680	12	--	-	--	-	--	-
....FRAGILARIA	--	-	76	1	--	-	--	-	--	-
....SYNEDRA	--	-	38	1	--	-	--	-	--	-
....GOMPHONEMATACEAE										
....GOMPHONEMA	--	-	38	1	--	-	--	-	--	-
....NAVICULACEAE										
....NAVICULA	29	2	260	5	--	-	--	-	--	-
....NITZSCHACEAE										
....NITZSCHIA	14	1	76	1	--	-	--	-	14	1
....SURIRELLACEAE										
....SURIRELLA	--	-	38	1	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)										
..CRYPTOPHYCEAE										
...CRYPTOMONADALES										
....CRYPTOMONADACEAE										
....CRYPTOMONAS	--	-	--	-	--	-	13	6	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)										
..CYANOPHYCEAE										
...CHROOCOCCALES										
....CHROOCOCCACEAE										
....ANACYSTIS	120	7	150	3	--	-	26	11	850#	60
...HORMOGONALES										
....NOSTOCACEAE										
....ANABAENA	690#	44	--	-	--	-	--	-	--	-
....APHANIZOMENON	170	11	--	-	--	-	--	-	--	-
....OSCILLATORIA										
....OSCILLATORIA	--	-	--	-	580#	65	--	-	--	-
....RIVULARIACEAE										
....RAPHIDIOPSIS	72	5	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)										
..EUGLENOPHYCEAE										
...EUGLENALES										
....EUGLENACEAE										
....EUGLENA	--	-	--	-	13	1	13	6	--	-
....TRACHELOMONAS	14	1	--	-	--	-	--	-	100	7

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

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).

WATER-DISCHARGE RECORDS

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

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

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

AVERAGE DISCHARGE.--23 years, 173 ft³/s (4.899 m³/s), 32.18 in/yr (817 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,900 ft³/s (195 m³/s) July 3, 1978, gage height, 10.30 ft (3.139 m), from rating curve extended above 3,000 ft³/s (85.0 m³/s) on basis of slope-area measurement of peak flow; minimum, 2.9 ft³/s (0.082 m³/s) Sept. 10, 1965, gage height, 2.03 ft (0.619 m).

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

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. 21	0645	2840 80.4	6.88 2.097	Mar. 5	0745	2370 67.1	6.40 1.951
Feb. 24	2015	2860 81.0	6.90 2.103	May 12	2315	*2920 82.7	6.96 2.121

Minimum discharge, 11 ft³/s (0.31 m³/s) Oct. 11, gage height, 2.18 ft (0.664 m).

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	18	37	150	624	120	347	229	155	181	23	21	38
2	19	35	130	850	100	532	490	137	156	40	23	40
3	17	33	320	460	100	680	420	132	173	29	22	90
4	21	29	860	390	100	1400	394	189	220	29	18	49
5	21	26	580	300	90	1890	407	212	148	200	15	100
6	17	22	350	270	75	1050	322	164	125	110	15	693
7	15	19	248	290	80	684	260	142	122	68	17	242
8	24	18	799	540	80	533	260	126	181	52	18	148
9	22	19	1250	350	70	477	250	111	128	43	22	112
10	18	19	629	270	70	486	260	115	103	38	25	93
11	14	18	398	230	65	500	230	216	115	36	128	77
12	15	18	294	200	70	350	209	674	96	34	274	62
13	15	19	237	180	70	300	188	1120	79	31	126	56
14	21	21	200	170	75	439	183	445	68	43	64	70
15	18	41	172	160	90	350	178	305	60	60	72	88
16	19	160	154	150	400	274	200	240	52	90	49	60
17	38	130	188	230	300	249	194	190	49	56	38	52
18	24	100	154	340	150	226	179	168	66	35	47	45
19	24	80	142	240	130	214	155	149	43	24	90	56
20	19	62	470	400	120	202	141	131	33	21	66	47
21	19	50	1850	950	300	184	126	119	30	33	52	123
22	19	43	670	640	600	168	119	108	34	48	45	307
23	20	38	416	460	700	156	310	104	32	46	37	162
24	24	48	374	360	1840	260	211	224	31	27	30	115
25	26	46	631	370	1640	350	181	732	27	21	40	90
26	29	43	370	310	1020	232	188	368	24	21	79	79
27	157	96	291	260	559	199	294	290	20	22	131	75
28	73	340	261	230	399	177	250	247	17	22	77	84
29	51	250	250	190	---	162	214	195	27	35	79	85
30	44	180	240	155	---	153	178	180	32	52	52	72
31	38	---	308	168	---	148	---	191	---	28	42	---
TOTAL	899	2040	13386	10737	9413	13372	7220	7879	2472	1417	1814	3410
MEAN	29.0	68.0	432	346	336	431	241	254	82.4	45.7	58.5	114
MAX	157	340	1850	950	1840	1890	490	1120	220	200	274	693
MIN	14	18	130	150	65	148	119	104	17	21	15	38
CFSM	.40	.93	5.92	4.74	4.60	5.90	3.30	3.48	1.13	.63	.80	1.56
IN.	.46	1.04	6.82	5.47	4.80	6.81	3.68	4.01	1.26	.72	.92	1.74
CAL YR 1978	TOTAL	78970	MEAN 216	MAX 3600	MIN 14	CFSM 2.96	IN 40.24					
WTR YR 1979	TOTAL	74059	MEAN 203	MAX 1890	MIN 14	CFSM 2.78	IN 37.74					

POTOMAC RIVER BASIN

01595000 NORTH BRANCH POTOMAC RIVER AT STEYER, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1979.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

				STREAM- FLOW, INSTAN- TANEOUS (CFS)		SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)		PH (UNITS)		TEMPER- ATURE, AIR (DEG C)		TEMPER- ATURE (DEG C)		OXYGEN, DIS- SOLVED (MG/L)	
DATE		TIME													
APR 18...		1500		160		345		4.8		16.0		10.0		10.8	
MAY 30...		1330		150		320		5.3		23.0		13.0		--	
JUN 20...		0945		36		723		5.1		22.0		17.5		--	
JUL 27...		1130		24		780		4.9		25.0		23.0		8.9	
AUG 21...		1015		54		660		4.7		21.0		19.0		7.8	
SEP 24...		1045		118		410		4.1		14.0		12.0		10.2	
DATE		HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	SODIUM+ POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)			
APR 18...		--	--	--	--	--	--	--	--	--	--	--			
MAY 30...		120	120	.3	15	40	5.1	2.3	4	.1	3.3	1.0			
JUN 20...		340	330	.0	.0	120	8.9	4.2	3	.1	--	1.8			
JUL 27...		400	400	.0	.0	140	12	5.5	3	.1	7.6	2.1			
AUG 21...		340	340	.0	.0	120	10	4.0	2	.1	5.8	1.8			
SEP 24...		200	200	1.5	74	67	7.4	2.3	2	.1	3.6	1.3			
DATE		ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	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)			
APR 18...		--	--	140	--	--	--	--	--	--	--	--			
MAY 30...		0	.0	120	2.6	.1	5.2	--	179	.24	72.5	.48			
JUN 20...		4	--	340	2.8	.2	6.4	525	491	.71	51.0	.68			
JUL 27...		2	49	400	3.5	.2	8.1	595	576	.81	38.6	.51			
AUG 21...		0	.0	320	2.8	.2	6.6	501	467	.68	73.0	--			
SEP 24...		0	.0	210	2.5	.2	6.3	335	303	.46	107	.44			
DATE		ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (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, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)				
AUG 21...		1	0	0	2	<10	10	20	<10	12	20				

01595000 NORTH BRANCH POTOMAC RIVER AT STEYER, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE D RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE D RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, FM BOT- TOM MA- TERIAL (UG/G)
APR 18...	2300	1400	940	--	--	--	330	0	340	--
MAY 30...	1300	980	320	--	--	--	320	0	320	--
JUN 20...	510	320	190	--	--	--	600	0	600	--
JUL 27...	400	340	60	--	--	--	810	20	790	--
AUG 21...	3200	2900	310	71000	8	20	850	0	890	140
SEP 24...	4800	2400	2400	--	--	--	610	50	560	--
DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, IN BOT- TOM MA- TERIAL (UG/G)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE D (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE D (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
JUN 20...	--	--	--	--	--	--	--	5	.49	100
JUL 27...	--	--	--	--	--	--	--	9	.58	100
AUG 21...	<.5	.00	0	0	1	200	50	30	4.4	--
SEP 24...	--	--	--	--	--	--	--	25	8.0	--

POTOMAC RIVER BASIN

01595200 STONY RIVER NEAR MT. STORM, WV

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

DRAINAGE AREA.--48.8 mi² (126.4 km²).

WATER-DISCHARGE RECORDS

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

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

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

AVERAGE DISCHARGE.--18 years, 98.3 ft³/s (2.784 m³/s), 27.35 in/yr (695 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, from minimum stage indicator.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,860 ft³/s (52.7 m³/s) Feb. 24, gage height, 6.86 ft (2.091 m); minimum, 3.2 ft³/s (0.091 m³/s) sometime during period Oct. 3-23, gage height, 1.79 ft (0.546 m), from minimum stage indicator.

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	4.0	4.0	44	311	39	287	68	98	164	30	19	15
2	4.4	4.0	41	413	30	162	136	89	114	30	23	15
3	4.1	3.8	73	297		164	166	87	40	26	20	21
4	4.5	3.7	271	256		343	215	98	60	116	17	20
5	5.0	3.6	182	232	21	580	223	101	46	81	16	116
6	4.5	3.4	162	217	17	570	210	89	42	53	14	640
7	4.2	3.7	172	265	17	525	187	84	41	45	12	570
8	6.0	4.3	386	308	17	444	180	77	46	43	12	417
9	5.7	4.3	750	244	16	387	182	72	48	42	12	315
10	4.3	4.2	262	215	15	256	180	73	48	43	14	200
11	3.6	4.5	138	190	14	156	170	148	51	44	31	73
12	4.0	4.1	136	172	14	220	160	154	48	41	98	31
13	3.8	4.5	136	132	13	217	156	375	43	42	42	30
14	4.2	4.6	148	95	13	229	160	331	40	48	24	46
15	5.0	6.4	166	89	15	210	162	283	36	53	26	81
16	5.4	46	172	87	244	187	166	232	34	55	17	71
17	9.7	40	162	134	156	166	164	74	36	50	15	36
18	9.1	27	144	140	130	67	148	71	40	47	15	22
19	7.0	16	130	120	120	68	132	71	37	45	17	24
20	5.6	12	180	150	130	72	118	68	34	43	15	22
21	4.5	11	462	444	200	73	99	68	30	40	15	67
22	3.6	9.3	205	355	287	73	49	64	29	36	15	158
23	3.3	8.6	172	290	371	74	98	67	27	33	14	200
24	4.0	13	175	413	1160	319	80	94	25	29	13	177
25	4.1	12	205	444	1300	391	74	274	24	27	12	162
26	4.2	9.3	187	359	992	283	99	202	23	29	15	152
27	10	14	180	301	673	229	168	207	21	25	23	146
28	5.7	85	175	253	520	81	140	265	19	23	17	144
29	4.3	47	164	57	---	42	122	250	38	26	15	128
30	4.0	46	150	46	---	38	108	215	35	27	14	110
31	3.8	---	192	41	---	38	---	188	---	22	14	---
TOTAL	155.6	459.3	6122	7070	6578	6951	4320	4569	1319	1294	626	4209
MEAN	5.02	15.3	197	228	235	224	144	147	44.0	41.7	20.2	140
MAX	10	85	750	444	1300	580	223	375	164	116	98	640
MIN	3.3	3.4	41	41	13	38	49	64	19	22	12	15
(+)	1315	1333	1175	1144	1208	1315	1345	1357	1431	1345	1456	1285

CAL YR 1978 TOTAL 40701.9 MEAN 112 MAX 2560 MIN 3.3 CFSM 2.30 IN 31.03
WTR YR 1979 TOTAL 43672.9 MEAN 120 MAX 1300 MIN 3.3 CFSM 2.46 IN 33.29

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

01595200 STONY RIVER NEAR MOUNT STORM, WV--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

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

INSTRUMENTATION.--Temperature recorder since December 1961.

REMARKS.--Temperature recorder pen did not ink Oct. 1-3, July 28 to Aug. 22.

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, 25.0°C July 24; minimum, 0.5°C on many days during winter periods.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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

POTOMAC RIVER BASIN

01595200 STONY RIVER NEAR MOUNT STORM, WV--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	10.5	10.5	15.0	11.5	22.5	21.5	17.5	16.0	---	---	21.0	18.5
2	11.5	10.5	16.0	11.5	22.0	21.0	17.0	16.0	---	---	21.5	19.0
3	11.0	10.5	15.5	14.5	21.0	17.0	17.0	15.0	---	---	21.0	20.0
4	10.5	10.0	15.5	14.5	18.0	16.0	17.0	15.0	---	---	20.5	18.5
5	10.0	9.5	16.0	14.0	20.0	17.0	15.5	14.5	---	---	20.0	19.0
6	9.5	7.5	17.0	13.0	19.0	17.0	17.5	14.5	---	---	23.0	18.0
7	10.0	7.0	19.0	15.0	23.5	17.0	18.5	15.0	---	---	24.0	23.0
8	11.0	8.5	19.5	17.0	21.5	20.0	19.5	16.5	---	---	24.0	23.0
9	10.5	8.0	22.0	19.0	22.5	19.5	19.5	17.5	---	---	23.5	23.0
10	10.5	7.5	21.0	19.0	23.0	22.0	19.5	18.5	---	---	23.0	22.5
11	11.5	8.5	19.5	18.0	23.0	17.0	20.5	18.5	---	---	22.5	20.5
12	12.5	11.0	21.0	18.0	19.0	16.0	21.5	19.5	---	---	20.5	19.5
13	12.0	11.0	19.0	17.0	19.5	17.0	22.0	21.0	---	---	19.5	18.0
14	12.0	11.0	20.0	19.0	21.0	16.0	22.0	21.0	---	---	18.5	18.0
15	11.0	9.5	20.0	19.0	21.5	20.0	22.5	21.5	---	---	18.0	17.5
16	10.0	9.5	20.0	17.0	22.0	19.0	24.0	21.5	---	---	19.0	17.0
17	10.5	9.5	17.0	13.0	21.0	19.5	23.5	22.5	---	---	18.5	16.5
18	13.0	9.0	18.0	13.0	23.0	19.5	23.5	22.0	---	---	17.0	15.0
19	12.5	9.0	19.0	16.0	22.0	19.5	23.0	21.0	---	---	17.0	15.5
20	13.5	9.0	20.5	16.0	21.5	17.5	23.0	21.0	---	---	15.5	13.0
21	15.0	10.0	19.5	17.5	21.0	19.0	23.5	22.5	---	---	15.0	15.0
22	14.5	12.0	19.5	16.5	22.0	19.0	23.5	22.5	---	---	18.0	15.0
23	14.0	12.5	19.5	18.5	21.5	19.5	24.5	22.5	20.5	20.0	20.5	18.5
24	13.5	12.5	18.5	17.5	21.0	16.0	25.0	24.0	20.5	20.0	20.5	19.5
25	16.5	13.5	17.5	15.5	17.5	13.0	24.0	23.0	22.0	20.0	21.5	19.5
26	16.0	14.5	16.5	15.5	18.0	13.5	23.5	23.0	22.0	20.0	21.5	19.5
27	14.5	13.0	17.5	16.5	18.5	14.0	23.0	22.5	21.0	20.0	21.5	21.0
28	13.0	12.0	20.5	17.5	18.0	16.0	---	---	20.5	17.5	21.5	21.5
29	12.5	11.5	20.5	19.5	18.0	17.0	---	---	21.0	19.5	21.5	21.5
30	14.0	11.5	21.5	19.5	18.0	16.0	---	---	21.0	19.0	22.0	21.5
31	---	---	21.5	21.0	---	---	---	---	21.5	18.5	---	---
MONTH	16.5	7.0	22.0	11.5	23.5	13.0	25.0	14.5	22.0	17.5	24.0	13.0

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.--30 years, 449 ft³/s (12.72 m³/s), 27.10 in/yr (688 mm/yr), adjusted for storage.

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

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 21	0800	5170 146	7.57 2.307	May 13	0200	3920 111	7.01 2.137
Feb. 24	2145	*7540 214	8.40 2.560	Sept. 6	0330	3400 96.3	6.75 2.057
Mar. 5	0800	5860 166	7.84 2.390				

Minimum discharge, 34 ft³/s (0.96 m³/s) Oct. 11, 12, 23, gage height, 2.33 ft (0.710 m).

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	37	45	385	1460	266	1280	453	498	534	120	77	99
2	40	45	306	2000	246	1450	1140	437	441	129	83	94
3	39	43	433	1280	243	1880	977	405	327	120	73	166
4	40	42	2250	960	238	3530	1040	529	499	399	63	129
5	44	40	1270	833	194	5110	1180	620	329	541	55	184
6	40	39	840	743	175	3380	971	502	268	248	51	2490
7	36	39	647	806	200	2450	803	442	237	179	48	1430
8	40	39	1470	1460	196	2010	742	400	309	150	54	1020
9	43	42	2870	910	175	1790	748	359	264	133	72	812
10	39	40	1570	762	165	1650	777	331	222	129	54	613
11	37	39	935	634	165	1430	690	770	231	134	187	381
12	36	39	744	565	181	1150	612	817	204	121	511	252
13	36	41	625	505	190	1020	566	2240	170	114	337	228
14	39	43	552	465	200	1250	579	1200	148	145	158	260
15	42	53	487	422	216	1090	559	931	136	198	142	311
16	39	400	473	385	970	872	586	801	124	261	113	237
17	57	338	491	703	742	785	581	515	120	167	88	186
18	54	249	406	952	415	646	526	425	149	136	85	131
19	43	161	364	557	360	593	460	383	126	124	139	138
20	40	123	590	562	330	569	419	343	105	117	114	111
21	37	107	3570	2450	495	521	384	312	96	132	97	174
22	36	98	1490	1650	1670	478	309	293	98	139	92	878
23	35	91	982	1080	1730	444	572	276	99	126	84	653
24	36	116	819	1050	4470	928	512	561	100	100	82	501
25	39	110	1360	1090	5130	1340	418	1770	89	87	103	423
26	40	95	924	887	3930	930	488	1060	82	87	199	378
27	136	165	761	710	2190	758	947	898	75	85	399	338
28	97	800	625	560	1590	560	801	851	72	81	211	341
29	64	542	529	425	---	431	659	747	104	93	180	335
30	54	451	512	332	---	383	566	630	195	142	136	283
31	48	---	625	325	---	355	---	563	---	95	112	---
TOTAL	1443	4475	29905	27523	27072	41063	20065	28909	5953	4832	4199	13576
MEAN	46.5	149	965	888	967	1325	669	674	198	156	135	453
MAX	136	800	3570	2450	5130	5110	1180	2240	534	541	511	2490
MIN	35	39	306	325	165	355	309	276	72	81	48	94

CAL YR 1978 TOTAL 191957 MEAN 526 MAX 8310 MIN 34 CFSM 2.34 IN 31.74
WTR YR 1979 TOTAL 201015 MEAN 551 MAX 5130 MIN 35 CFSM 2.45 IN 33.23

POTOMAC RIVER BASIN

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

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: August 1961 to current year.

INSTRUMENTATION.--Temperature recorder since August 1961.

REMARKS.--Period of missing record, Jan. 2 to Feb. 28, due to recorder malfunction.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: 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, 28.0°C Aug. 7; minimum, 0.0°C on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)
APR 18...	1200	500	285	4.6	14.0	9.0	10.8	100	100	--	--	32
AUG 22...	1200	34	540	4.7	21.0	17.5	8.8	240	240	.0	.0	79

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	SODIUM+ POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)
APR 18...	5.9	2.2	4	.1	--	1.0	2	--	120	2.8	.1	4.6
AUG 22...	10	4.6	4	.1	6.2	1.6	0	.0	240	3.2	.2	6.8

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)
APR 18...	--	175	.24	236	.44	--	--	--	--	--	3900
AUG 22...	372	347	.51	34.1	--	0	<10	10	20	10	960

DATE	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	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)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)
APR 18...	1200	2700	--	--	670	30	640	--	--	--	--
AUG 22...	890	70	1100	20	1200	0	1300	150	.00	0	90

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

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH		
1	16.5	15.0	9.5	6.0	5.0	4.0	6.5	4.0	---	---	4.0	3.5
2	17.5	14.0	8.5	5.0	4.5	3.5	---	---	---	---	4.5	3.5
3	17.0	12.5	9.0	5.0	5.5	4.5	---	---	---	---	4.5	3.0
4	17.5	14.5	9.5	6.0	9.0	5.5	---	---	---	---	4.5	3.5
5	16.0	12.0	10.0	6.5	8.5	6.5	---	---	---	---	4.0	3.5
6	15.0	12.5	10.0	6.5	6.5	5.5	---	---	---	---	4.5	4.0
7	12.5	11.5	8.5	7.0	6.5	5.5	---	---	---	---	5.0	3.5
8	11.0	10.0	8.5	6.5	10.0	6.5	---	---	---	---	5.5	4.0
9	12.5	7.5	8.0	4.5	10.0	7.0	---	---	---	---	6.0	4.5
10	13.0	8.0	8.0	5.0	7.0	4.0	---	---	---	---	6.0	5.0
11	13.5	8.5	9.0	5.5	4.0	4.0	---	---	---	---	5.0	2.5
12	16.0	11.0	8.0	6.5	4.0	4.0	---	---	---	---	3.5	2.5
17	9.5	8.0	8.5	8.0	5.0	4.0	---	---	---	---	5.5	2.5
18	10.0	6.5	9.0	8.0	4.0	3.5	---	---	---	---	5.0	4.0
19	11.5	8.5	8.5	7.0	4.0	3.5	---	---	---	---	6.5	4.5
20	11.5	9.0	7.0	5.5	4.0	3.5	---	---	---	---	7.5	4.5
21	12.5	8.0	7.0	5.0	6.0	4.0	---	---	---	---	8.0	4.5
22	13.0	8.0	7.0	6.0	5.0	4.0	---	---	---	---	9.0	5.5
23	13.0	9.5	6.5	6.0	4.5	4.0	---	---	---	---	8.5	6.5
24	11.5	8.5	6.5	6.0	4.5	4.0	---	---	---	---	8.5	7.5
25	12.0	6.5	6.0	4.0	4.0	4.0	---	---	---	---	7.5	6.0
26	13.0	10.5	4.0	3.5	4.0	4.0	---	---	---	---	6.5	4.5
27	13.0	9.5	3.5	3.5	4.5	4.0	---	---	---	---	4.5	3.5
28	10.5	8.0	5.0	3.5	4.5	4.5	---	---	4.0	2.5	6.0	3.0
29	10.5	7.0	5.0	4.0	5.0	4.5	---	---	---	---	9.0	5.5
30	10.0	6.5	5.5	4.5	4.5	4.0	---	---	---	---	10.0	8.0
31	9.0	7.0	---	---	4.0	4.0	---	---	---	---	11.0	9.0
MONTH	17.5	6.5	10.5	3.5	10.0	3.5	6.5	4.0	4.0	2.5	11.0	2.5
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	11.0	10.0	12.5	9.0	20.0	17.0	21.0	18.5	27.0	22.5	23.0	20.5
2	11.0	9.5	13.5	9.0	20.5	18.0	18.0	17.5	26.0	22.0	25.0	20.5
3	10.0	8.0	13.0	11.5	19.5	16.0	22.0	17.5	26.0	21.0	23.5	21.0
4	8.0	7.0	12.0	11.0	18.5	15.0	20.5	16.5	26.0	20.5	24.0	20.5
5	7.0	6.0	13.0	9.5	19.5	16.0	18.0	15.0	26.0	21.0	22.5	19.5
6	6.5	5.0	14.5	10.0	19.0	16.5	21.0	15.0	26.5	21.5	20.0	18.5
7	6.0	3.0	15.5	11.5	22.0	16.5	22.0	16.0	28.0	21.0	22.0	20.0
8	7.5	5.5	16.5	13.5	21.0	19.0	23.0	17.0	27.0	22.5	21.5	19.0
9	7.5	5.5	20.0	15.0	23.0	19.0	23.0	18.5	27.0	21.0	19.0	17.5
10	7.5	4.5	19.5	17.0	24.5	20.5	21.5	20.0	27.0	22.5	20.0	16.5
11	9.0	5.5	18.5	16.0	22.5	16.5	25.0	19.0	24.0	20.5	19.5	16.5
12	9.5	8.5	18.0	15.0	19.5	15.0	25.0	21.0	20.5	17.0	20.0	18.0
13	9.5	7.5	16.0	14.5	20.5	15.5	25.0	22.0	20.0	16.0	19.0	17.5
14	9.5	7.0	16.0	14.5	22.0	15.0	24.5	22.0	21.5	17.5	18.5	17.5
15	9.0	7.0	16.0	14.0	23.5	17.0	25.0	22.5	19.5	17.5	17.5	15.0
16	7.0	6.5	16.5	14.0	23.5	18.0	24.0	21.0	20.0	15.5	17.5	13.5
17	7.5	6.0	16.0	12.0	21.0	19.0	26.0	22.0	18.5	15.0	18.0	13.5
18	10.0	6.0	16.5	12.0	23.5	18.5	24.5	21.5	19.0	17.0	17.5	13.5
19	11.0	7.0	18.0	14.5	24.0	19.0	25.0	19.5	21.0	18.0	17.5	15.0
20	11.5	7.5	18.5	14.0	24.0	17.5	23.0	21.5	21.5	19.0	16.5	12.5
21	13.0	8.5	17.5	15.5	22.5	19.0	24.5	21.0	21.0	19.5	15.0	14.0
22	14.0	11.0	18.5	14.0	24.5	19.0	24.5	21.0	19.5	19.0	14.5	14.0
23	13.5	11.5	18.0	16.5	25.0	20.0	26.0	21.0	22.0	18.5	15.0	14.0
24	12.5	11.0	17.0	16.0	22.5	17.0	25.5	22.0	23.5	20.0	15.0	13.0
25	16.0	12.0	16.0	13.0	22.0	14.5	26.0	22.0	23.5	20.5	15.5	13.5
26	15.0	13.0	13.0	11.5	23.0	15.5	24.5	22.5	22.0	20.0	16.5	14.5
27	13.0	10.5	12.5	11.0	23.5	16.5	25.0	22.0	20.5	19.5	16.5	14.5
28	10.5	8.5	15.5	12.5	22.5	18.0	23.5	22.0	22.0	19.0	16.5	16.0
29	9.5	8.0	17.0	14.0	22.5	19.5	22.5	21.0	23.5	20.0	16.5	16.0
30	11.0	7.5	18.0	14.5	22.0	19.0	25.0	20.0	24.0	20.0	16.5	16.0
31	---	---	17.5	16.5	---	---	26.0	20.5	25.0	20.0	---	---
MONTH	16.0	3.0	20.0	9.0	25.0	14.5	26.0	15.0	28.0	15.0	25.0	12.5

POTOMAC RIVER BASIN

01595800 NORTH BRANCH POTOMAC RIVER AT BARNUM, WV

LOCATION.--Lat 39°26'44", long 79°06'39", Garrett County, Md., Hydrologic Unit 02070002, on left bank at highway bridge at Barnum, 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 except those for winter periods, which are fair. Regulation at low flow by Stony River Reservoir, 39 mi (63 km) above station (see station 01595200).

AVERAGE DISCHARGE.--13 years, 536 ft³/s (15.18 m³/s), 27.36 in/yr (695 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,100 ft³/s (767 m³/s) July 3, 1978, gage height, 13.37 ft (4.075 m), from rating curve extended above 8,000 ft³/s (227 m³/s) on basis of slope-area measurement of peak flow; minimum, 10 ft³/s (0.28 m³/s) Oct. 2, 3, 1968, gage height, 1.69 ft (0.515 m).

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 21	1200	4630 131	7.14 2.176	Mar. 5	1700	6210 176	7.90 2.408
Feb. 26	0700	6350 180	7.96 2.426				

Minimum discharge, 35 ft³/s (0.99 m³/s) Oct. 12, 23, gage height, 2.01 ft (0.613 m).

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	44	54	483	1470	346	1880	560	658	595	155	104	114
2	43	51	373	2400	299	1790	1300	590	510	127	93	107
3	46	50	386	1660	320	2460	1250	546	392	144	93	152
4	45	51	2290	1150	316	3930	1350	640	515	271	81	195
5	46	49	1620	961	252	5980	1550	792	392	779	73	176
6	48	45	939	867	252	5430	1300	687	316	303	61	2670
7	44	43	705	805	270	3480	1050	681	278	202	57	1560
8	43	43	1180	1600	250	2810	950	557	320	161	57	1030
9	46	44	3170	1040	230	2460	900	504	324	130	79	786
10	48	46	1940	846	220	2310	980	456	307	130	76	629
11	44	46	1060	730	220	2040	880	812	267	127	167	411
12	42	45	825	635	230	1650	748	998	263	119	488	286
13	41	45	699	590	250	1430	687	2630	215	114	568	230
14	42	46	629	562	260	1590	693	1540	186	198	244	233
15	46	49	557	525	300	1610	687	1080	170	189	167	286
16	46	260	546	499	1030	1270	705	924	155	328	152	295
17	49	342	557	609	1140	1160	711	658	117	252	112	240
18	64	292	499	1200	723	1010	658	525	158	167	102	176
19	57	194	462	669	500	820	584	472	170	150	133	176
20	50	147	486	723	450	720	536	426	133	135	149	176
21	46	123	3650	2260	690	650	493	392	119	140	119	186
22	43	109	1910	2060	1890	630	426	359	119	150	104	1110
23	40	104	1130	1240	2130	580	618	337	117	140	102	792
24	40	109	910	1090	4440	780	658	568	117	130	93	594
25	41	125	1470	1230	6230	1650	546	1900	102	112	119	503
26	43	113	1080	998	6000	1400	546	1380	88	104	144	439
27	66	115	867	860	3420	1100	1120	1040	84	102	536	413
28	140	612	705	773	2240	850	1100	902	79	102	313	401
29	89	742	612	579	---	700	867	819	88	107	215	420
30	69	520	579	421	---	560	748	693	222	164	173	371
31	59	---	640	402	---	520	---	601	---	146	135	---
TOTAL	1610	4614	32959	31454	34898	55250	25201	25087	6918	5578	5109	15157
MEAN	51.9	154	1063	1015	1246	1782	840	809	231	180	165	505
MAX	140	742	3650	2400	6230	5980	1550	2630	595	779	568	2670
MIN	40	43	373	402	220	520	426	337	79	102	57	107
CAL YR 1978	TOTAL	213994	MEAN 586	MAX 10900	MIN 40	CFSM 2.20	IN 29.93					
WTR YR 1979	TOTAL	243835	MEAN 668	MAX 6230	MIN 40	CFSM 2.51	IN 34.10					

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

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)
APR 18...	1030	600	205	4.9	14.0	7.5	10.8	--	--	87
AUG 22...	1030	34	480	4.7	18.5	19.0	8.2	.6	30	200
DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	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)
APR 18...	--	--	--	--	--	--	--	1000	760	240
AUG 22...	314	.43	1	<10	10	20	20	680	620	60
DATE	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	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)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	
APR 18...	--	--	540	0	540	--	--	--	--	
AUG 22...	24000	20	1400	0	1400	320	.00	0	60	

POTOMAC RIVER BASIN

01596500 SAVAGE RIVER NEAR BARTON, MD

LOCATION.--Lat 39°34'05", long 79°06'10", Garrett County, Hydrologic Unit 02070002, on right bank 0.9 mi (1.4 km) upstream from Bear Pen Run, 1.5 mi (2.4 km) downstream from Popular Lick Run, 5.4 mi (8.7 km) northwest of Barton, and 10 mi (16 km) upstream from mouth.

DRAINAGE AREA.--49.1 mi² (127.2 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1603.88 ft (488.863 m) National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--31 years, 74.6 ft³/s (2.113 m³/s), 20.63 in/yr (524 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,510 ft³/s (213 m³/s) Oct. 15, 1954, gage height, 8.45 ft (2.576 m), from rating curve extended above 1,600 ft³/s (45.3 m³/s) on basis of slope-area measurement of peak flow; minimum, 0.40 ft³/s (0.011 m³/s) Sept. 3, 4, 1966, gage height, 0.96 ft (0.293 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft³/s (22 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. 26	0315	880 24.9	3.40 1.036	Mar. 5	0745	*1350 38.2	4.01 1.222

Minimum discharge, 5.8 ft³/s (0.16 m³/s) Oct. 25, Nov. 2, 3, 4, 5, 6, 7, 11, 12, 13, gage height, 1.17 ft (0.357 m).

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	7.2	6.3	44	171	42	191	83	92	74	24	15	19
2	7.5	6.2	42	546	49	246	287	77	62	20	13	16
3	7.1	5.8	114	290	43	366	273	73	56	19	11	26
4	7.9	5.8	560	230	39	793	226	110	56	45	9.8	19
5	8.3	5.8	308	190	35	1130	242	150	45	53	9.1	23
6	7.6	5.8	165	160	37	690	203	180	37	31	8.5	353
7	7.5	5.9	107	130	34	382	149	150	33	23	7.8	151
8	7.4	7.4	200	150	34	327	119	120	31	18	11	85
9	7.1	7.1	536	130	32	325	111	94	127	15	14	60
10	7.0	6.6	314	120	31	340	100	110	265	15	10	45
11	7.1	6.0	177	105	31	325	86	130	180	15	15	35
12	6.6	5.8	122	98	29	229	83	180	113	13	56	29
13	6.2	5.9	94	92	29	165	79	200	79	11	41	25
14	7.7	6.2	77	92	29	185	75	150	59	12	27	39
15	8.1	7.1	64	84	29	194	73	100	47	16	24	38
16	7.8	28	55	75	28	151	84	85	38	22	19	26
17	9.1	25	50	72	27	114	91	69	33	31	15	21
18	8.2	27	43	72	26	105	94	59	31	48	14	18
19	7.7	21	38	64	26	118	87	53	25	29	14	17
20	7.3	16	44	58	27	136	77	47	21	21	19	15
21	7.1	14	409	250	44	137	67	41	19	20	16	34
22	6.6	12	248	160	68	130	60	38	20	17	14	109
23	6.4	11	154	100	94	126	53	39	19	14	13	81
24	6.2	19	133	88	242	301	47	126	16	12	12	64
25	6.2	18	308	82	573	500	43	230	15	11	15	52
26	6.6	15	208	70	659	296	57	215	12	18	13	42
27	9.9	17	143	64	324	189	168	163	11	16	12	34
28	9.5	32	104	58	229	133	197	171	11	13	13	36
29	7.7	36	86	54	---	105	155	143	14	24	54	35
30	7.0	37	78	50	---	90	116	111	18	28	34	30
31	6.6	---	72	55	---	80	---	88	---	19	24	---
TOTAL	230.2	421.7	5097	3960	2890	8599	3585	3594	1567	673	573.2	1577
MEAN	7.43	14.1	164	128	103	277	120	116	52.2	21.7	18.5	52.6
MAX	9.9	37	560	546	659	1130	287	230	265	53	56	353
MIN	6.2	5.8	38	50	26	80	43	38	11	11	7.8	15
CFSM	.15	.29	3.34	2.61	2.10	5.64	2.44	2.36	1.06	.44	.38	1.07
IN.	.17	.32	3.86	3.00	2.19	6.51	2.72	2.72	1.19	.51	.43	1.19

CAL YR 1978 TOTAL 32593.1 MEAN 89.3 MAX 766 MIN 5.8 CFSM 1.82 IN 24.69
WTR YR 1979 TOTAL 32767.1 MEAN 89.8 MAX 1130 MIN 5.8 CFSM 1.83 IN 24.83

POTOMAC RIVER BASIN

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01596500 SAVAGE RIVER NEAR BARTON, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April to September 1979.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICHO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)
APR 17...	1515	93	80	7.6	10.0	9.0	11.4	21	15	--	--
AUG 21...	1630	15	132	7.6	19.5	17.0	9.4	36	16	.0	.0

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	SODIUM+ POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	
APR 17...	5.2	1.9	3.9	28	.4	--	1.0	6	--	12	7.2
AUG 21...	9.8	2.8	10	36	.7	12	1.6	20	1.0	23	16

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, 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)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)
APR 17...	.0	4.6	--	42	.06	10.5	.55	8	--	--	--
AUG 21...	.0	4.0	677	79	.92	27.4	--	<10	<10	10	<10

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	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)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)
APR 17...	130	110	20	--	--	20	20	2	--	--
AUG 21...	300	240	60	17000	10	20	10	10	440	50

POTOMAC RIVER BASIN

01597000 CRABTREE CREEK NEAR SWANTON, MD

LOCATION.--Lat 39°30'00", long 79°09'35", Garrett County, Hydrologic Unit 02070002, on left bank 0.5 mi (0.8 km) upstream from mouth, 1.0 mi (1.6 km) downstream from Springlick Run, and 5.0 mi (8.0 km) northeast of Swanton.

DRAINAGE AREA.--16.7 mi² (43.3 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,529.06 ft (466.058 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Small diversion above station by Baltimore and Ohio Railroad. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--31 years, 28.9 ft³/s (0.818 m³/s), 23.50 in/yr (597 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,260 ft³/s (92.3 m³/s) July 12, 1949, gage height, 5.01 ft (1.527 m), from rating curve extended above 210 ft³/s (5.95 m³/s) on basis of slope-area and contracted-opening measurements of peak flow; minimum, 0.1 ft³/s (0.003 m³/s) Dec. 3, 1953, gage height, 0.56 ft (0.171 m); minimum daily, 0.8 ft³/s (0.023 m³/s) Nov. 6, 1953.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 330 ft³/s (9.3 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 26	0015	527 14.9	2.81 0.856	Sept. 6	Unknown	Unknown	Unknown
Mar. 5	0530	*770 21.8	3.10 0.945				

Minimum discharge, 1.7 ft³/s (0.048 m³/s) Nov. 10, 11, 12, gage height 0.74 ft (0.226 m).

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	2.2	1.9	25	61	17	71	35	40	27	9.4	6.0	7.5
2	2.3	1.8	21	143	18	91	83	32	23	9.0	5.2	6.5
3	2.2	1.9	35	110	16	137	93	30	22	8.1	4.3	10
4	2.5	1.9	139	95	14	282	91	43	21	7.0	3.9	7.5
5	2.3	1.8	98	80	13	634	91	60	17	25	3.6	9.0
6	2.1	1.8	56	60	15	312	80	64	15	26	3.2	150
7	2.1	1.9	40	50	13	202	63	54	16	17	3.0	60
8	2.3	1.9	66	70	13	160	52	43	15	14	4.5	35
9	2.1	1.8	168	50	12	141	48	34	50	10	5.5	24
10	2.0	1.8	117	44	12	150	41	40	100	9.4	4.0	18
11	1.9	1.8	69	40	12	138	35	120	70	8.0	6.0	14
12	2.0	1.8	50	37	11	95	33	61	50	7.0	22	12
13	2.0	1.9	39	35	11	73	32	71	35	5.0	16	9.7
14	2.3	1.9	32	37	11	88	32	62	28	5.5	11	11
15	2.3	2.9	26	32	11	86	31	52	21	7.5	9.5	9.3
16	2.4	11	23	28	11	66	31	43	17	9.0	7.5	7.2
17	2.7	10	21	28	10	54	31	34	16	12	6.0	6.3
18	2.2	8.8	18	30	10	48	31	28	14	19	5.6	5.8
19	2.2	6.4	17	25	10	47	30	25	12	11	5.6	8.8
20	2.2	5.2	20	23	10	50	27	21	12	8.4	7.5	5.9
21	2.0	4.7	108	80	15	46	24	19	9.8	8.0	6.4	16
22	1.9	4.2	86	50	60	41	22	17	7.9	6.6	5.6	42
23	1.9	4.0	60	47	94	38	20	18	8.0	5.5	5.2	38
24	2.0	6.1	55	43	241	64	17	33	7.4	4.7	4.8	31
25	1.9	4.8	84	40	302	99	16	148	7.5	4.4	6.0	24
26	2.2	4.4	66	33	279	85	25	113	6.8	7.2	5.2	18
27	4.2	6.2	51	29	131	65	57	73	6.0	6.4	4.8	15
28	2.6	21	40	27	86	51	72	57	5.4	5.2	5.2	16
29	2.1	22	35	24	---	42	63	47	5.3	9.5	22	14
30	2.0	24	33	20	---	35	50	38	6.8	11	14	12
31	1.9	---	27	19	---	31	---	32	---	7.5	9.5	---
TOTAL	69.0	171.6	1725	1490	1458	3522	1356	1552	651.9	303.3	228.6	643.5
MEAN	2.23	5.72	55.6	48.1	52.1	114	45.2	50.1	21.7	9.78	7.37	21.5
MAX	4.2	24	168	143	302	634	93	148	100	26	22	150
MIN	1.9	1.8	17	19	10	31	16	17	5.3	4.4	3.0	5.8
CFSM	.13	.34	3.33	2.88	3.12	6.83	2.71	3.00	1.30	.59	.44	1.29
IN.	.15	.38	3.84	3.32	3.25	7.84	3.02	3.46	1.45	.68	.51	1.43

CAL YR 1978	TOTAL	11716.1	MEAN	32.1	MAX	265	MIN	1.8	CFSM	1.92	IN	26.10
WTR YR 1979	TOTAL	13170.9	MEAN	36.1	MAX	634	MIN	1.8	CFSM	2.16	IN	29.34

POTOMAC RIVER BASIN

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01597000 CRABTREE CREEK NEAR SWANTON, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April to September 1979.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
APR 17...	1130	34	95	7.8	10.0	7.5	11.9	--	--	13
AUG 21...	1300	3.7	143	8.2	21.0	16.0	9.1	.0	.0	15
DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G 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)
APR 17...	--	--	--	--	--	--	--	170	170	0
AUG 21...	79	.11	1	<10	<10	<10	10	90	90	0
DATE	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G 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)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	
APR 17...	--	--	10	0	10	--	--	--	--	
AUG 21...	13000	20	10	10	0	760	.00	0	60	

POTOMAC RIVER BASIN

01597500 SAVAGE RIVER, BELOW SAVAGE RIVER DAM, NEAR BLOOMINGTON, MD

LOCATION.--Lat 39°30'05", long 79°07'25", Garrett County, Hydrologic Unit 02070002, on left bank 0.7 mi (1.1 km) downstream from Savage River Dam, 1.1 mi (1.8 km) downstream from Crabtree Creek, 3.2 mi (5.1 km) northwest of Bloomington, and 3.7 mi (6.0 km) upstream from mouth.

DRAINAGE AREA.--106 mi² (275 km²).

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1432: 1955.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,276.40 ft (389.047 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Diversions above station by Baltimore and Ohio Railroad and by cities of Frostburg and Westernport for municipal supply. Flow regulated by Savage River Reservoir beginning December 1950, capacity 20,000 acre-ft (24.7 hm³). Several observations of water temperature were made during the year. Gage-height telemeter at station.

AVERAGE DISCHARGE.--31 years, 165 ft³/s (4.673 m³/s), 21.14 in/yr (537 mm/yr), adjusted for storage since December 1950.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,530 ft³/s (185 m³/s) Oct. 16, 1954, gage height, 7.70 ft (2.347 m); minimum, 0.35 ft³/s (0.010 m³/s) Oct. 27, 1966, gage height, 0.57 ft (0.174 m); minimum daily, 0.6 ft³/s (0.017 m³/s) July 27-31, Aug. 5, 6, 9, 10, 1951.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,330 ft³/s (66.0 m³/s) Mar. 6, gage height, 5.28 ft (1.609 m); minimum, 1.9 ft³/s (0.054 m³/s) Oct. 3, gage height, 0.70 ft (0.213 m); minimum daily, 15 ft³/s (0.42 m³/s) July 25, 26.

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	101	94	88	219	82	1590	108	210	164	53	30	420
2	101	94	88	523	74	1110	107	177	139	47	24	297
3	88	94	89	952	70	409	103	158	128	40	23	28
4	100	94	310	670	70	442	103	229	129	80	33	28
5	100	94	674	264	50	688	105	310	104	142	42	29
6	100	94	666	86	42	1790	105	334	88	86	46	66
7	100	94	433	87	42	2220	104	286	79	60	60	110
8	100	94	305	286	42	2040	104	235	93	47	67	108
9	99	94	238	406	42	1900	105	212	111	39	67	108
10	98	94	243	300	62	1160	103	202	369	37	67	218
11	98	94	583	170	71	517	103	350	267	39	67	288
12	98	92	791	40	71	588	103	443	192	33	68	285
13	98	91	551	40	53	407	104	374	142	30	43	285
14	98	70	299	40	45	242	103	290	109	35	30	281
15	98	78	138	40	46	244	103	253	89	29	30	278
16	98	79	86	100	45	244	103	212	75	51	30	278
17	97	79	86	200	45	245	76	172	66	52	30	170
18	97	78	86	40	45	244	57	146	68	63	69	104
19	97	78	86	40	45	152	57	130	51	64	32	104
20	97	77	87	40	41	96	58	117	42	99	32	104
21	97	77	91	40	40	98	58	106	39	26	32	104
22	96	75	306	250	42	99	58	94	42	26	32	104
23	96	75	443	401	45	101	58	96	40	26	24	104
24	95	53	438	397	57	104	58	197	36	20	22	104
25	95	41	440	209	282	110	58	536	27	15	30	104
26	95	42	654	83	1060	345	59	543	25	15	33	104
27	95	42	755	84	1830	467	61	441	23	17	33	104
28	94	42	326	85	1700	496	62	226	26	21	33	104
29	94	43	170	85	---	347	88	271	39	23	33	104
30	94	71	218	283	---	106	234	229	48	35	33	104
31	94	---	218	200	---	106	---	187	---	46	66	---
TOTAL	3008	2317	9986	6660	6139	18707	2708	7766	2850	1396	1261	4629
MEAN	97.0	77.2	322	215	219	603	90.3	251	95.0	45.0	40.7	154
MAX	101	94	791	952	1830	2220	234	543	369	142	69	420
MIN	88	41	86	40	40	96	57	94	23	15	22	28
(+)	9280	6270	4430	3870	8560	8750	20160	20140	20040	20060	19190	14370

CAL YR 1978 TOTAL 63508 MEAN 174 MAX 1640 MIN 24 CFSM 1.64 IN 22.29
WTR YR 1979 TOTAL 67427 MEAN 185 MAX 2220 MIN 15 CFSM 1.75 IN 23.66

* Monthend contents, in acre-feet, in Savage River Reservoir (contents on Sept. 30, 1978, 15,070 acre-feet).
Records furnished by Corps of Engineers.

01597500 SAVAGE RIVER, BELOW SAVAGE RIVER DAM, NEAR BLOOMINGTON, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1979.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)
APR 17...	1030	58	80	7.9	12.5	8.0	11.9
MAY 29...	1630	230	80	7.4	21.0	15.0	--
JUN 19...	1600	46	79	8.2	26.0	19.7	--
JUL 27...	0930	21	87	7.7	23.0	13.0	10.6
AUG 21...	0900	32	83	7.9	21.0	7.5	10.9
SEP 24...	1330	112	77	7.7	16.5	12.0	10.2

DATE	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	SODIUM+ POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
APR 17...	--	--	--	--	--	--	--	--	--	--	--
MAY 29...	24	11	.0	.0	6.5	1.9	3.0	20	.3	4.1	1.1
JUN 19...	25	11	.0	.0	6.8	2.0	2.7	18	.2	--	1.1
JUL 27...	28	16	.0	.0	8.1	2.0	3.2	19	.3	4.2	1.0
AUG 21...	27	13	.0	.0	7.4	2.1	3.5	21	.3	4.6	1.1
SEP 24...	27	19	.0	.0	7.4	2.0	2.8	18	.2	3.9	1.1

DATE	ALKA- LITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
APR 17...	--	--	14	--	--	--	--	--	--	--	--
MAY 29...	13	1.0	15	4.2	.0	4.8	--	46	.06	28.6	.44
JUN 19...	14	--	15	3.8	.0	5.0	57	48	.08	7.08	.65
JUL 27...	12	.5	13	4.2	.0	4.8	50	47	.07	2.84	.72
AUG 21...	14	.3	18	4.7	.0	5.4	51	51	.07	4.41	--
SEP 24...	8	.3	12	3.7	.0	5.0	48	41	.07	14.5	.54

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (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, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)
AUG 21...	1	1	0	2	<10	10	10	20	5	10

POTOMAC RIVER BASIN

01597500 SAVAGE RIVER, BELOW SAVAGE RIVER DAM, NEAR BLOOMINGTON, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (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- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)
APR 17...	130	110	20	--	--	--	20	--	--	--
MAY 29...	440	430	10	--	--	--	20	10	10	--
JUN 19...	190	160	30	--	--	--	20	10	10	--
JUL 27...	150	120	30	--	--	--	30	10	20	--
AUG 21...	210	160	50	17000	9	<10	90	0	90	1300
SEP 24...	230	170	60	--	--	--	100	0	100	--
DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, IN BOT- TOM MA- TERIAL (UG/G)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
JUN 19...	--	--	--	--	--	--	--	3	.37	100
JUL 27...	--	--	--	--	--	--	--	4	.23	100
AUG 21...	<.5	.00	0	0	1	10	60	--	1	100
SEP 24...	--	--	--	--	--	--	--	14	4.2	--

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

AVERAGE DISCHARGE.--36 years (water years 1900-05, 1950-79), 710 ft³/s (20.11 m³/s), 23.87 in/yr (606 mm/yr), adjusted for storage since October 1949.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,230 ft³/s (233 m³/s) Mar. 5, gage height, 8.98 ft (2.737 m); maximum gage height, 11.17 ft (3.405 m) Feb. 22 backwater from ice jam; minimum, 59 ft³/s (1.67 m³/s) Oct. 3, gage height, 0.94 ft (0.287 m).

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	154	155	580	1950	438	4030	651	913	832	235	136	641
2	153	151	474	3640	376	3320	1500	782	703	194	121	482
3	139	150	464	3480	395	3070	1370	706	582	205	119	177
4	155	150	3010	2430	392	4650	1490	917	712	323	116	216
5	155	148	2930	1530	320	7140	1700	1200	572	1060	116	197
6	158	144	2080	1070	320	8010	1430	1130	453	460	109	2730
7	153	141	1390	978	330	6490	1200	964	396	299	115	1800
8	152	142	1720	2210	310	5570	1080	828	456	230	120	1180
9	153	141	3960	1780	300	4950	1040	735	470	194	136	912
10	156	143	2760	1380	290	3890	1110	673	829	185	141	867
11	151	143	2030	960	290	2650	981	1160	642	188	196	755
12	149	141	2090	747	300	2290	879	1540	534	178	501	624
13	147	141	1580	716	300	1820	817	3070	414	179	695	568
14	152	126	1080	710	310	1690	815	1920	335	205	294	576
15	153	136	729	652	400	1710	810	1440	290	216	199	632
16	156	366	629	674	1200	1380	819	1220	255	416	188	618
17	155	516	620	805	1300	1280	802	896	232	328	145	445
18	172	457	572	1570	1000	1150	717	686	244	258	175	284
19	164	319	526	769	700	944	644	618	243	221	163	283
20	156	254	509	774	600	828	594	572	192	233	188	283
21	152	219	4040	2520	800	775	556	512	165	192	156	307
22	147	204	2800	2960	1800	725	492	485	174	189	142	1200
23	143	194	1970	2060	2500	682	635	461	168	178	131	935
24	143	183	1660	1820	5440	916	712	827	167	152	118	728
25	143	189	2370	1780	6900	1890	600	2710	147	127	146	619
26	147	167	2200	1230	7740	1620	595	2240	132	120	162	557
27	163	176	2120	1050	6020	1560	1200	1700	121	124	555	523
28	266	731	1310	946	4510	1400	1260	1270	119	124	359	513
29	201	858	828	721	---	1030	1010	1250	138	142	262	538
30	173	584	899	759	---	646	1050	1040	281	208	211	476
31	161	---	937	693	---	600	---	873	---	189	289	---
TOTAL	4922	7569	50867	45364	45581	78706	28559	35938	10998	7552	6504	20666
MEAN	159	252	1641	1463	1628	2539	952	1140	367	244	210	689
MAX	266	858	4040	3640	7740	8010	1700	3070	832	1060	695	2730
MIN	139	126	464	652	290	600	492	461	119	120	109	177

CAL YR 1978 TOTAL 319526 MEAN 875 MAX 10600 MIN 109 CFSM 2.17 IN 29.42
WTR YR 1979 TOTAL 342626 MEAN 939 MAX 8010 MIN 109 CFSM 2.32 IN 31.55

POTOMAC RIVER BASIN

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 current year.

INSTRUMENTATION.--Temperature recorder during all periods.

REMARKS.--Period of missing record, October, November, May 20 to September 30, due to recorder malfunction.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 33.0°C July 3, 1966; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum unknown; minimum, 0.5°C on many days during winter periods.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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

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

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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

POTOMAC RIVER BASIN

01599000 GEORGES CREEK AT FRANKLIN, MD

LOCATION.--Lat 39°29'38", long 79°02'42", Allegany County, Hydrologic Unit 02070002, on right bank at Franklin, and 1.2 mi (1.9 km) upstream from Westernport and mouth.
 DRAINAGE AREA.--72.4 mi² (187.5 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1905 to July 1906 (published as "at Westernport"), October 1929 to current year.

REVISED RECORDS.--WSP 726: Drainage area. WSP 1502: 1940.

GAGE.--Water-stage recorder. Datum of gage is 958.96 ft (292.291 m) Westvaco Corporation datum. May 4, 1905, to July 15, 1906, nonrecording gage at bridge 0.8 mi (1.3 km) downstream at different datum. Oct. 16, 1929, to Oct. 1, 1937, water-stage recorder at site 95 ft (29 m) downstream at present datum.

REMARKS.--Records good. Records include about 0.5 ft³/s (0.014 m³/s) of sewage from city of Frostburg, which obtains its water supply from Big Piney Run (Monongahela River basin) and Savage River. A negligible discharge is diverted above station by Frostburg Water Co. for municipal supplies of Eckhart and Welch Hill. An undetermined amount of water is diverted from the upper third of basin into the Wills Creek basin by the Hoffman drainage tunnel (see station 01601500). Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--50 years (water years 1930-79), 81.2 ft³/s (2.300 m³/s), 15.23 in/yr (387 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,500 ft³/s (241 m³/s) Mar. 17, 1936, gage height, 9.6 ft (2.93 m), site then in use, from rating curve extended above 2,000 ft³/s (56.6 m³/s) on basis of slope-area measurement of peak flow; minimum, 1.6 ft³/s (0.045 m³/s) Sept. 29 to Oct. 13, 1930.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 29, 1924, reached a stage of about 10 ft (3.0 m), from flood-marks, at site 95 ft (29 m) downstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 26	0115	*1980 56.1	7.83 2.387	Sept. 6	0330	1360 38.5	6.99 2.131
Mar. 5	2200	1860 52.7	7.68 2.341				

Minimum discharge, 9.8 ft³/s (0.278 m³/s) Oct. 3, 4, 25, gage height, 3.14 ft (0.957 m).

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	11	11	49	195	65	460	190	116	70	25	16	37
2	11	11	41	485	70	607	632	106	63	25	16	34
3	10	11	105	268	60	709	485	104	65	25	16	50
4	13	11	236	213	55	1210	521	149	70	59	16	50
5	11	10	137	151	50	1680	537	147	57	42	16	89
6	12	10	102	135	46	1440	379	126	50	34	15	637
7	13	11	87	140	48	924	299	120	47	27	15	223
8	13	12	137	176	44	735	243	113	47	21	15	142
9	13	11	246	116	40	642	236	97	87	17	15	109
10	12	11	166	109	38	586	174	99	182	16	15	94
11	11	11	135	97	36	490	128	95	113	18	15	79
12	11	11	120	90	34	398	118	97	86	17	44	69
13	11	12	99	90	33	320	120	113	70	17	43	65
14	16	12	79	97	32	308	116	97	58	17	38	100
15	13	15	69	76	32	239	113	82	52	30	37	89
16	15	42	62	76	31	187	118	76	46	32	36	66
17	15	46	58	79	30	161	104	67	44	36	35	57
18	13	36	50	84	29	144	95	61	43	37	35	50
19	12	23	49	59	28	135	90	61	39	23	35	48
20	12	19	54	69	28	124	84	58	35	17	34	43
21	11	16	195	201	50	115	79	57	31	18	26	116
22	11	15	111	142	200	106	75	53	37	17	18	213
23	10	16	92	106	400	102	70	59	40	17	17	86
24	10	22	111	125	879	333	69	111	30	15	17	69
25	10	21	220	140	1160	672	65	151	29	19	20	61
26	11	18	135	115	1310	490	81	120	25	19	19	53
27	14	24	109	106	1010	329	287	109	23	15	21	47
28	12	46	90	100	756	236	223	113	22	14	36	53
29	12	49	78	90	---	198	174	92	23	23	116	52
30	11	46	78	82	---	166	140	79	28	28	54	46
31	11	---	78	80	---	142	---	74	---	20	42	---
TOTAL	371	609	3378	4092	6594	14388	6045	3002	1612	740	893	2927
MEAN	12.0	20.3	109	132	236	464	202	96.8	53.7	23.9	28.8	97.6
MAX	16	49	246	485	1310	1680	632	151	182	59	116	637
MIN	10	10	41	59	28	102	65	53	22	14	15	34
CFSM	.17	.28	1.51	1.82	3.26	6.41	2.79	1.34	.74	.33	.40	1.35
IN.	.19	.31	1.74	2.10	3.39	7.39	3.11	1.54	.83	.38	.46	1.50

CAL YR 1978 TOTAL 39628 MEAN 109 MAX 1120 MIN 10 CFSM 1.51 IN 20.36
 WTR YR 1979 TOTAL 44651 MEAN 122 MAX 1680 MIN 10 CFSM 1.69 IN 22.94

POTOMAC RIVER BASIN

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01599000 GEORGES CREEK AT FRANKLIN, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1979.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

		DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)			
		APR 16...	1530	113	650	6.8	8.5	8.5	11.2			
		MAY 29...	1530	31	500	7.2	21.5	15.0	--			
		JUN 19...	1505	34	727	7.0	27.0	21.6	--			
		JUL 26...	1600	21	980	6.8	27.0	23.5	8.1			
		AUG 21...	1115	24	1000	6.0	19.0	19.0	8.9			
		SEP 24...	1500	70	460	7.7	13.0	15.0	9.8			
DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	SODIUM+ POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	
APR 16...	--	--	--	--	--	--	--	--	--	--	--	
MAY 29...	210	200	.0	.0	52	20	5.4	5	.2	6.8	1.4	
JUN 19...	340	330	.0	.0	85	32	5.8	4	.1	7.6	1.8	
JUL 26...	110	69	.0	.0	31	9.0	5.8	10	.2	7.4	1.6	
AUG 21...	510	510	.0	.0	130	46	11	4	.2	14	2.6	
SEP 24...	200	190	.0	.0	52	17	6.6	7	.2	8.3	1.7	
DATE	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	
APR 16...	--	--	260	--	--	--	--	--	--	--	--	
MAY 29...	15	1.8	200	7.0	.2	6.8	--	305	.41	25.5	.48	
JUN 19...	15	2.9	330	7.2	.2	7.4	58	481	.08	5.32	--	
JUL 26...	45	14	75	9.0	.1	6.2	167	168	.23	9.47	.62	
AUG 21...	6	12	480	11	.2	9.4	771	696	1.05	50.0	--	
SEP 24...	7	.3	190	8.6	.2	7.5	307	292	.42	58.0	.64	
DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (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, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CR)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)		
AUG 21...	1	0	0	8	<10	10	30	40	20	30		

POTOMAC RIVER BASIN

01599000 GEORGES CREEK AT FRANKLIN, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE D RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (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- PENDE D RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)
APR 16...	2800	2500	340	--	--	--	1800	0	1800	--
MAY 29...	1900	1500	410	--	--	--	1000	0	1100	--
JUN 19...	2800	2200	580	--	--	--	1500	0	1600	--
JUL 26...	850	830	20	--	--	--	2500	2300	190	--
AUG 21...	3100	2800	330	42000	130	40	2200	0	2300	2100
SEP 24...	1900	1700	160	--	--	--	1100	0	1100	--
DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, IN BOT- TOM MA- TERIAL (UG/G)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE D (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE D (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 29...	--	--	--	--	--	--	--	25	2.1	100
JUN 19...	--	--	--	--	--	--	--	23	2.1	100
JUL 26...	--	--	--	--	--	--	--	47	2.7	100
AUG 21...	<.5	.00	0	0	0	140	100	24	1.6	100
SEP 24...	--	--	--	--	--	--	--	35	6.6	--

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), and since December 1950, by Savage River Reservoir, 25 mi (40 km) above station (see station 01597500).

AVERAGE DISCHARGE.--41 years, 886 ft³/s (25.09 m³/s), 20.19 in/yr (513 mm/yr), unadjusted.

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

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,800 ft³/s (362 m³/s) Feb. 26, gage height, 13.28 ft (4.048 m); minimum, 126 ft³/s (3.57 m³/s) Nov. 15, gage height, 1.88 ft (0.573 m).

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	171	177	695	1750	603	4580	888	1250	1030	319	217	564
2	172	170	566	3990	483	4200	2160	1080	899	250	188	690
3	171	169	514	3870	482	4140	2070	964	770	241	172	394
4	165	169	2470	2700	509	6330	2220	1160	841	298	161	311
5	173	169	3050	1930	378	9570	2650	1540	769	1140	157	292
6	174	167	2240	1340	320	10400	2210	1470	586	631	152	3550
7	171	165	1500	1230	380	7890	1810	1290	498	376	147	2550
8	169	164	1540	2050	369	6350	1560	1130	502	246	151	1590
9	168	164	3720	1990	352	5480	1480	984	637	243	159	1180
10	172	163	3050	1610	343	4670	1500	893	1170	230	181	1010
11	171	163	1990	1190	340	3180	1310	1140	988	233	175	954
12	169	164	2090	908	350	2770	1180	1800	774	224	404	767
13	166	167	1740	835	370	2350	1090	2890	600	206	911	663
14	173	165	1260	790	390	2010	1060	2260	476	270	415	688
15	173	152	918	755	450	2150	1060	1720	403	260	266	735
16	179	250	735	739	1000	1750	1050	1430	357	471	232	724
17	184	618	711	897	1500	1580	1040	1140	327	448	205	604
18	183	554	698	1600	1100	1430	937	853	318	333	179	369
19	193	394	610	969	800	1230	845	758	320	280	231	338
20	177	299	581	871	750	1060	770	703	275	287	224	336
21	173	255	3330	2470	850	1010	717	631	236	300	217	368
22	169	231	3050	3340	1900	936	663	595	243	255	191	1470
23	167	224	2060	2310	2180	879	660	625	245	247	180	1250
24	161	226	1760	2100	5390	1160	895	1210	231	229	164	973
25	162	213	2680	2210	9280	2720	753	3080	215	228	157	839
26	165	209	2330	1530	11100	2200	746	3090	191	366	194	794
27	169	217	2200	1310	7550	2040	1530	2160	172	215	443	729
28	235	463	1670	1200	5220	1830	1880	1590	161	195	509	752
29	242	1090	959	1010	---	1530	1490	1570	180	210	572	800
30	201	678	1030	832	---	968	1400	1310	253	273	330	669
31	183	---	1030	969	---	877	---	1100	---	284	280	---
TOTAL	5501	8409	52777	51295	54739	99270	39624	43416	14667	9828	8164	26953
MEAN	177	280	1702	1655	1955	3202	1321	1401	489	317	263	898
MAX	242	1090	3720	3990	11100	10400	2650	3090	1170	1140	911	3550
MIN	161	152	514	739	320	877	660	595	161	195	147	292
CAL YR 1978 TOTAL	390628			MEAN 1070	MAX 10700	MIN 131	CFSM 1.80	IN 24.38				
WTR YR 1979 TOTAL	414643			MEAN 1136	MAX 11100	MIN 147	CFSM 1.91	IN 25.88				

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.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLOR (PLAT- INUM- COBALT UNITS)
OCT								
31...	1400	183	1200	7.2	17.0	12.0	--	--
JAN								
02...	1430	4170	200	7.2	2.0	5.5	--	--
MAR								
09...	0845	5600	190	7.2	1.0	6.0	--	5
APR								
16...	1400	1050	390	7.9	9.5	9.0	10.2	--
MAY								
02...	0930	1100	320	7.1	8.0	12.0	--	--
29...	1430	1540	285	7.5	21.5	16.0	--	--
JUN								
01...	1535	1030	285	7.3	21.0	19.0	--	--
19...	1320	330	777	7.8	24.0	24.2	--	--
JUL								
05...	1530	1280	425	7.1	20.0	19.0	--	--
26...	1330	295	480	7.5	25.0	24.5	7.0	--
AUG								
02...	1300	189	800	7.3	28.5	29.5	--	--
22...	0930	192	955	7.8	17.0	21.0	7.5	--
SEP								
24...	1700	942	330	7.2	18.0	17.0	9.4	--

DATE	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT
MAR								
09...	68	60	--	--	19	5.1	5.0	13
APR								
16...	--	--	--	--	--	--	--	--
MAY								
29...	93	78	.0	.0	28	5.7	12	22
JUN								
19...	230	200	.0	.0	71	12	59	36
JUL								
26...	150	94	.0	.0	49	6.9	29	29
AUG								
22...	330	290	.0	.0	110	13	64	29
SEP								
24...	110	110	.0	.0	35	6.3	16	23

DATE	SODIUM AD- SORP- TION RATIO	SODIUM+ POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
MAR									
09...	.3	--	1.1	10	8	1.0	57	8.7	.1
APR									
16...	--	--	--	--	--	--	110	--	--
MAY									
29...	.5	13	1.4	--	15	.9	84	19	.1
JUN									
19...	1.7	--	4.3	--	30	--	220	78	.1
JUL									
26...	1.0	33	3.9	--	57	3.5	100	37	.1
AUG									
22...	1.5	68	3.9	--	34	1.1	270	96	.1
SEP									
24...	.7	18	1.8	--	8	1.0	90	23	.1

SILICA, DTS- SOLVED (MG/L AS ST02)	SOLIDS, RESIDUE AT 180 DEG. C DTS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS DTS- SOLVED (MG/L)	SOLIDS, DTS- SO: VED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
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DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BARIIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (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, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)
MAR 09...	5.0	115	106	.16	1740	.77	--	.05		
APR 16...	--	--	--	--	--	--	--	--		
MAY 29...	5.4	--	167	.23	694	--	.43	--		
JUN 19...	6.8	544	472	.74	485	--	.47	--		
JUL 26...	5.7	292	270	.40	233	--	.77	--		
AUG 22...	7.0	620	585	.84	321	--	--	--		
SEP 24...	5.9	205	187	.28	521	--	.71	--		
AUG 22...	1	0	0	8	<10	10	20	30	12	20
DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (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- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)
MAR 09...	23000	23000	10	--	--	--	310	--	--	--
APR 16...	1100	1000	80	--	--	--	650	0	650	--
MAY 29...	1000	900	100	--	--	--	440	0	440	--
JUN 19...	730	600	130	--	--	--	820	20	800	--
JUL 26...	2600	2600	40	--	--	--	340	100	240	--
AUG 22...	670	590	80	44000	110	30	910	0	920	10
SEP 24...	940	920	20	--	--	--	590	20	570	--
DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
JUN 19...	--	--	--	--	--	--	--	12	11	100
JUL 26...	--	--	--	--	--	--	--	111	88	100
AUG 22...	<.5	.00	0	0	1	50	150	16	8.3	100
SEP 24...	--	--	--	--	--	--	--	28	71	--

01601500 WILLS CREEK NEAR CUMBERLAND, MD

LOCATION.--Lat 39°40'07", long 78°47'18", Allegany County, Hydrologic Unit 02070002, on right bank at downstream side of Western Maryland Railway bridge, 2.0 mi (3.2 km) upstream from Cumberland, and mouth.
DRAINAGE AREA.--247 mi² (640 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1905 to July 1906 (published as "at Cumberland"), October 1929 to current year.

REVISED RECORDS.--WSP 726: Drainage area. WSP 1432: 1906, 1930(M), 1933-34(M), 1936-37, 1945(M).

GAGE.--Water-stage recorder. Datum of gage is 640.89 ft (195.343 m) National Geodetic Vertical Datum of 1929. May 6, 1905, to July 14, 1906, nonrecording gage at highway bridge 700 ft (213 m) upstream at different datum. Oct. 18, 1929, to Mar. 17, 1936, water-stage recorder, and Apr. 1, 1936, to Mar. 19, 1937, nonrecording gage at site 200 ft (61 m) upstream at present datum.

REMARKS.--Records good. Records include drainage from numerous active and abandoned coal mines. An undetermined amount of water is diverted into the basin from Georges Creek basin by Hoffman drainage tunnel. Miscellaneous measurements of discharge from the Hoffman drainage tunnel have been made in the water years 1944, 1964-65, and 1967-79 by the U.S. Geological Survey, and in the water years 1958 and 1959 by the Maryland Geological Survey. See page 317. Slight diurnal fluctuation at low flow caused by quarry upstream. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--50 years (water years 1930-79), 324 ft³/s (9.176 m³/s), 17.81 in/yr (452 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,100 ft³/s (1,080 m³/s) Mar. 17, 1936, gage height, 20.2 ft (6.16 m), from floodmarks at present site, from rating curve extended above 6,500 ft³/s (184 m³/s) on basis of slope-area measurements at gage heights 13.45 ft (4.100 m) and 20.2 ft (6.16 m); minimum, 9 ft³/s (0.25 m³/s) Oct. 14, 1930.

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 2	1030	4410 125	6.82 2.079	Mar. 25	0200	4500 127	6.87 2.094
Feb. 26	0215	6710 190	8.05 2.454	Sept. 6	0600	4030 114	6.61 2.015
Mar. 5	2315	*9150 259	9.18 2.798				

Minimum discharge, 33 ft³/s (0.93 m³/s) Oct. 13, 24, 25, gage height, 1.65 ft (0.503 m).

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	40	37	160	569	249	1180	494	537	408	105	146	217
2	40	36	146	3270	210	1540	1270	453	346	93	144	208
3	39	36	252	1830	222	1930	1270	442	307	86	119	301
4	43	35	984	976	207	4540	1230	587	289	235	103	188
5	43	36	838	683	151	8010	1400	625	235	301	92	234
6	42	35	518	548	153	6530	1180	635	203	173	82	2670
7	39	36	355	494	167	3220	880	603	184	131	76	1210
8	39	38	475	585	161	2360	724	527	184	107	79	690
9	37	38	1200	368	137	1950	698	453	246	93	80	480
10	36	37	909	310	124	1800	611	441	675	119	72	354
11	36	36	611	260	124	1600	504	455	476	112	85	283
12	35	35	460	247	121	1160	466	434	332	87	310	239
13	35	38	364	230	118	869	444	438	256	110	256	206
14	41	39	295	220	120	835	434	363	207	703	172	281
15	42	43	238	210	121	802	411	314	177	426	147	259
16	45	78	208	201	121	663	396	284	157	550	120	185
17	45	114	196	197	108	565	355	249	152	450	100	160
18	45	112	165	198	102	518	327	225	144	385	95	145
19	42	91	155	125	155	528	312	216	125	283	99	137
20	39	72	165	156	162	545	296	205	109	408	96	123
21	38	63	512	570	159	519	280	193	106	462	102	244
22	38	58	443	573	264	479	270	185	112	299	111	618
23	35	58	398	416	700	455	250	210	125	239	94	446
24	34	82	410	1130	2280	1180	240	1020	100	206	108	359
25	35	96	873	1850	3950	3400	230	1380	89	182	97	305
26	35	78	606	986	4960	1670	406	1110	82	203	87	259
27	39	86	490	699	2130	1030	915	865	75	160	80	219
28	45	122	378	579	1360	759	903	783	73	137	275	229
29	45	146	268	467	---	627	781	644	75	215	1160	259
30	40	137	292	377	---	535	642	551	80	239	442	217
31	38	---	309	320	---	473	---	467	---	173	293	---
TOTAL	1225	1948	13673	19644	18836	52272	18619	15894	6129	7472	5322	11725
MEAN	39.5	64.9	441	634	673	1686	621	513	204	241	172	391
MAX	45	146	1200	3270	4960	8010	1400	1380	675	703	1160	2670
MIN	34	35	146	125	102	455	230	185	73	86	72	123
CFSM	.16	.26	1.79	2.57	2.73	6.83	2.51	2.08	.83	.98	.70	1.58
IN.	.18	.29	2.06	2.96	2.84	7.87	2.80	2.39	.92	1.13	.80	1.77

CAL YR 1978 TOTAL 143187 MEAN 392 MAX 4870 MIN 34 CFSM 1.59 IN 21.56
WTR YR 1979 TOTAL 172759 MEAN 473 MAX 8010 MIN 34 CFSM 1.92 IN 26.02

POTOMAC RIVER BASIN

187

01601500 WILLS CREEK NEAR CUMBERLAND, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD---Water year 1979.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

				STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)			
DATE	TIME											
APR 17...	1000			335	210	7.5	11.5	7.5	11.6			
MAY 30...	0815			570	120	8.0	13.0	12.0	--			
JUN 19...	0900			125	405	8.1	18.0	16.8	--			
JUL 26...	0930			210	332	8.0	23.0	20.5	9.0			
AUG 20...	0930			93	365	8.0	23.0	18.0	9.4			
SEP 25...	1200			277	215	7.7	22.0	14.0	10.8			
DATE	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	SODIUM+ POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	
APR 17...	--	--	--	--	--	--	--	--	--	--	--	
MAY 30...	41	23	.0	.0	11	3.3	2.5	11	.2	--	1.1	
JUN 19...	170	130	.0	.0	45	14	5.4	6	.2	--	1.5	
JUL 26...	510	510	.0	.0	130	46	7.7	3	.1	10	2.5	
AUG 20...	150	110	.0	.0	42	12	6.5	8	.2	8.0	1.5	
SEP 25...	84	53	.0	.0	23	6.4	4.6	10	.2	6.1	1.5	
DATE	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	
APR 17...	--	--	68	--	--	--	--	--	--	--	--	
MAY 30...	18	.4	25	3.5	.1	6.0	--	67	.09	103	.71	
JUN 19...	45	--	120	11	.1	5.9	285	232	.39	96.2	.48	
JUL 26...	2	.0	480	8.6	.2	9.9	784	691	1.07	445	.56	
AUG 20...	45	.9	100	11	.1	4.7	225	205	.31	56.5	--	
SEP 25...	31	1.2	47	7.1	.1	6.7	130	119	.18	97.2	.75	
DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (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, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)		
AUG 20...	1	0	0	9	<10	10	<10	30	11	20		

POTOMAC RIVER BASIN

01601500 WILLS CREEK NEAR CUMBERLAND, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE D RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (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- PENDE D RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)
APR 17...	270	200	70	--	--	--	190	0	200	--
MAY 30...	380	370	10	--	--	--	60	10	50	--
JUN 19...	1200	1200	10	--	--	--	400	50	350	--
JUL 26...	3900	3400	500	--	--	--	2600	200	2400	--
AUG 20...	390	380	10	31000	47	30	230	20	210	1100
SEP 25...	200	170	30	--	--	--	130	10	120	--
	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE D (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE D (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
JUN 19...	--	--	--	--	--	--	--	11	3.7	100
JUL 26...	--	--	--	--	--	--	--	35	20	88
AUG 20...	<.5	.00	0	0	1	20	150	3	.75	100
SEP 25...	--	--	--	--	--	--	--	14	10	--

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 winter periods, which are fair. Regulation by Stony River Reservoir, 79 mi (127 km) above station (see station 01595200), and since December 1950, by Savage River Reservoir, 39 mi (63 km) above station (see station 01597500). 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.--50 years, 1,256 ft³/s (35.57 m³/s), 19.49 in/yr (495 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 88,200 ft³/s (2,500 m³/s) Mar. 17, 1936, gage height, 29.1 ft (8.87 m), from rating curve extended above 33,000 ft³/s (935 m³/s) on basis of slope-area measurement of peak flow; minimum (river only), 12 ft³/s (0.34 m³/s) Sept. 22, 1932, gage height, 2.38 ft (0.725 m); minimum daily (including flow in canal), 38 ft³/s (1.08 m³/s) Sept. 24, 1932.

EXTREMES OUTSIDE PERIOD OF RECORD.--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.--Peak discharges above base of 10,000 ft³/s (280 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 26	0930	19500 552	15.67 4.776	Mar. 6	0345	*20400 578	16.19 4.935

Minimum discharge, 161 ft³/s (4.56 m³/s) Oct. 4, Nov. 15; minimum daily, 173 ft³/s (4.90 m³/s) Oct. 24.

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	203	200	917	2120	979	6630	1480	2010	1570	476	424	731
2	203	190	795	7100	813	6380	3720	1700	1390	393	368	997
3	197	184	823	6650	793	6790	3810	1530	1210	352	260	1050
4	197	181	3080	4290	823	10300	3790	1850	1200	474	281	586
5	207	186	4460	3070	720	17700	4570	2350	1160	1420	255	551
6	205	180	3130	2080	660	18000	3890	2370	917	1110	238	6340
7	199	180	2050	1860	630	12500	3100	2110	793	653	217	4570
8	196	180	1970	2540	640	9720	2580	1830	769	482	224	2650
9	191	178	4910	2740	620	8340	2440	1580	945	397	231	1790
10	189	175	4710	2190	530	7520	2370	1460	1940	392	249	1390
11	195	175	2840	1670	530	5470	2040	1610	1690	401	278	1300
12	189	178	2790	1240	530	4550	1830	2380	1260	357	559	1040
13	185	188	2350	1230	540	3760	1690	3390	1000	331	1240	888
14	203	186	1690	1290	590	3200	1630	3090	810	834	863	967
15	202	182	1270	1190	600	3380	1610	2290	680	833	533	998
16	210	297	1000	970	560	2780	1580	1910	596	816	402	907
17	224	743	956	1140	2000	2420	1530	1570	555	1260	359	799
18	215	717	919	1640	1200	2200	1390	1210	528	911	305	519
19	226	554	817	1380	1000	2020	1290	1080	506	753	343	434
20	209	415	794	1030	900	1800	1190	1010	448	587	317	434
21	194	345	3260	2500	1000	1710	1110	925	404	958	350	584
22	191	306	4190	4570	2000	1580	1050	872	393	785	346	1970
23	183	296	2740	3130	3600	1490	958	890	418	601	303	1820
24	173	319	2330	3560	7000	2180	1240	2310	372	537	290	1380
25	175	326	3910	4540	13100	6660	1090	4410	340	491	254	1100
26	178	304	3320	2830	16200	4370	1220	5010	305	453	287	957
27	187	326	3000	2210	11600	3490	2550	3470	271	662	505	849
28	232	448	2390	1950	7570	2920	3190	2790	246	408	1220	820
29	317	1320	1300	1630	---	2440	2600	2490	259	481	1890	878
30	248	904	1390	1250	---	1740	2270	2090	309	558	895	779
31	213	---	1400	1440	---	1490	---	1750	---	514	616	---
TOTAL	6336	10363	71501	77030	77728	165530	64808	65337	23284	19680	14902	40078
MEAN	204	345	2306	2485	2776	5340	2160	2108	776	635	481	1336
MAX	317	1320	4910	7100	16200	18000	4570	5010	1940	1420	1890	6340
MIN	173	175	794	970	530	1490	958	872	246	331	217	434

CAL YR 1978 TOTAL 577883 MEAN 1583 MAX 15100 MIN 154 CFSM 1.81 IN 24.57
WTR YR 1979 TOTAL 636577 MEAN 1744 MAX 18000 MIN 173 CFSM 1.99 IN 27.06

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 current year.

SUSPENDED SEDIMENT DISCHARGE: October 1964 to current year.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: 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, 2.1 tons (1.9 tonnes) Aug. 27, 1971.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum daily, 26.5°C July 19; minimum daily, 0.0°C on many days during winter periods.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLOR (PLAT- INUM- COBALT UNITS)
OCT								
05...	0930	208	750	8.0	--	14.5	--	35
NOV								
01...	1245	202	950	7.6	13.0	11.5	--	50
JAN								
02...	1530	7870	140	7.3	2.0	5.0	--	5
MAR								
09...	0830	8500	180	7.3	1.0	6.0	--	10
APR								
17...	1100	1400	320	7.4	13.0	9.1	11.4	--
MAY								
02...	0900	1740	260	7.4	8.0	11.0	--	5
29...	1315	2500	265	7.9	20.0	16.5	--	--
JUN								
01...	1600	1580	225	7.0	21.0	19.0	--	5
19...	1100	495	670	7.9	22.5	21.6	--	--
JUL								
05...	1500	1940	465	7.2	20.0	21.0	--	50
26...	1100	740	690	7.7	25.0	24.0	8.0	--
AUG								
02...	1440	384	520	7.7	26.0	28.5	--	15
22...	1330	328	740	7.9	17.0	21.0	9.3	--
SEP								
25...	1315	1180	315	7.7	21.5	17.0	10.4	--

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO
OCT									
05...	280	220	--	--	88	14	44	25	1.2
NOV									
01...	370	320	--	--	120	18	41	19	.9
JAN									
02...	53	38	--	--	15	3.8	4.5	15	.3
MAR									
09...	54	40	--	--	15	4.1	4.1	14	.2
APR									
17...	--	--	--	--	--	--	--	--	--
MAY									
02...	110	84	--	--	29	7.9	8.0	14	.3
29...	86	64	.0	.0	25	5.7	10	20	.5
JUN									
01...	100	79	--	--	28	7.3	8.3	15	.4
19...	200	160	.0	.0	61	12	41	30	1.3
JUL									
05...	210	170	--	--	64	11	33	26	1.0
26...	230	180	.0	.0	75	11	43	28	1.2
AUG									
02...	200	170	--	--	61	11	28	23	.9
22...	230	190	.0	.0	74	12	47	30	1.3
SEP									
25...	110	90	.0	.0	33	6.3	13	20	.5

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SODIUM+ POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	ALKA- LITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	
OCT										
05...	--	3.7	67	55	1.1	200	73	.1	5.9	
NOV										
01...	--	4.1	67	55	2.7	280	65	.2	5.5	
JAN										
02...	--	1.9	18	15	1.4	35	7.4	.0	5.0	
MAR										
09...	--	1.3	18	15	1.4	41	7.3	.1	5.1	
APR										
17...	--	--	--	--	--	100	--	--	--	
MAY										
02...	--	1.5	25	21	1.6	74	13	.1	5.2	
29...	11	1.4	--	22	.5	71	15	.1	5.7	
JUN										
01...	--	1.5	25	21	4.0	73	13	.1	6.0	
19...	--	3.4	--	40	--	170	53	.1	6.4	
JUL										
05...	--	3.5	40	33	4.0	170	47	.1	5.9	
26...	46	3.3	--	54	2.1	180	61	.1	6.1	
AUG										
02...	31	2.8	37	30	1.2	140	41	.1	5.8	
22...	51	3.5	--	45	1.1	180	69	.1	5.8	
SEP										
25...	15	1.8	--	18	.7	78	20	.1	5.9	
DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS P04)		
OCT										
05...	499	462	.68	280	.48	--	.14	--		
NOV										
01...	576	568	.78	314	.26	--	.06	--		
JAN										
02...	84	82	.11	1790	1.2	--	.07	--		
MAR										
09...	100	87	.14	2300	1.0	--	.03	--		
APR										
17...	--	--	--	--	--	--	--	--		
MAY										
02...	164	151	.22	770	.63	--	.03	.09		
29...	--	150	.20	1010	--	.50	--	--		
JUN										
01...	167	150	.23	712	.66	--	.04	.12		
19...	424	374	.58	567	--	.60	--	--		
JUL										
05...	412	355	.56	2160	.69	--	.15	.46		
26...	449	415	.61	897	--	.57	--	--		
AUG										
02...	374	308	.51	388	.36	--	.06	.18		
22...	469	419	.64	415	--	--	--	--		
SEP										
25...	188	172	.26	599	--	.54	--	--		
DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (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, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CR)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)
AUG										
22...	2	0	0	2	<10	10	30	30	9	20

POTOMAC RIVER BASIN

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE D RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE D RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, FM BOT- TOM MA- TERIAL (UG/G)
OCT 05...	10000	9900	140	--	--	--	470	50	420	--
NOV 01...	500	360	140	--	--	--	570	20	550	--
JAN 02...	4500	4500	20	--	--	--	350	300	50	--
MAR 09...	2000	1800	200	--	--	--	230	40	190	--
APR 17...	1000	960	40	--	--	--	500	0	510	--
MAY 02...	420	400	20	--	--	--	270	10	260	--
29...	860	790	70	--	--	--	330	20	310	--
JUN 01...	520	510	10	--	--	--	260	160	100	--
19...	700	560	140	--	--	--	550	0	550	--
JUL 05...	2400	2200	160	--	--	--	780	340	440	--
26...	1100	1000	80	--	--	--	500	40	460	--
AUG 02...	510	450	60	--	--	--	400	40	360	--
22...	880	740	140	56000	84	90	500	30	470	720
SEP 25...	720	690	30	--	--	--	370	0	370	--

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, FM BOT- TOM MA- TERIAL (UG/G)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE D (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE D (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 05...	--	--	--	--	--	--	--	24	13	100
DEC 09...	--	--	--	--	--	--	--	279	4380	93
21...	--	--	--	--	--	--	--	262	4280	89
MAR 06...	--	--	--	--	--	--	--	1730	93900	93
JUN 19...	--	--	--	--	--	--	--	14	19	100
JUL 26...	--	--	--	--	--	--	--	33	66	100
AUG 22...	<.5	.00	0	0	1	30	170	26	23	--
SEP 25...	--	--	--	--	--	--	--	23	73	--

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDE D (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE D (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
DEC 09...	2330	5810	4.0	279	4380	--	--	--
21...	2350	6050	4.0	262	4280	43	58	72
MAR 06...	0135	20100	2.0	1730	93700	39	52	66

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	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
DEC 09...	--	93	100	--	--	--	--
21...	78	89	96	99	99	99	100
MAR 06...	84	93	98	99	100	--	--

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

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.0	12.0	8.0	1.0	1.0	2.0	7.0	9.0	19.0	25.5	---	23.0
2	12.0	12.0	8.0	---	1.0	2.0	7.0	9.0	---	25.5	---	23.0
3	12.0	11.0	---	1.0	2.0	2.0	8.0	8.0	---	24.0	---	23.0
4	11.5	11.0	---	1.0	3.0	---	8.0	8.0	---	24.5	---	---
5	13.0	11.0	4.0	1.0	1.0	2.0	8.0	8.0	---	25.5	---	22.0
6	12.0	12.0	4.0	2.0	1.0	2.0	7.0	9.0	19.0	26.0	---	22.0
7	13.0	11.0	4.0	1.0	1.0	5.0	7.0	10.0	21.0	25.0	23.0	---
8	13.0	12.0	4.0	---	1.0	5.0	7.0	11.0	---	25.5	23.0	19.0
9	11.0	12.0	4.0	1.0	1.0	5.0	6.0	11.0	---	24.0	24.0	---
10	11.0	13.0	---	---	1.0	5.0	7.0	12.0	---	25.0	23.0	19.0
11	11.0	10.0	4.0	2.0	---	5.0	7.0	12.0	26.5	26.0	23.0	19.0
12	13.0	12.0	4.0	2.0	2.0	5.0	7.0	11.0	25.5	24.0	24.0	20.0
13	12.0	10.0	4.0	2.0	1.0	5.0	7.0	13.0	24.0	25.0	23.0	19.0
14	10.0	10.0	3.0	2.0	2.0	5.0	7.0	13.0	24.0	---	23.0	19.0
15	10.0	13.0	4.0	1.0	2.0	5.0	6.0	13.0	26.0	25.0	24.0	20.0
16	12.0	13.0	5.0	1.0	2.0	4.0	7.0	---	26.0	24.5	24.0	20.0
17	13.0	---	5.0	1.0	.0	6.0	8.0	14.0	26.5	25.0	23.0	21.0
18	11.0	13.0	5.0	1.0	.0	---	6.0	---	26.5	25.5	23.0	21.0
19	10.0	14.0	4.0	1.0	.0	6.0	7.0	---	26.5	26.5	22.0	18.0
20	10.0	12.0	4.0	2.0	.0	8.0	7.0	---	26.5	25.5	24.0	19.0
21	11.0	10.0	4.0	1.0	1.0	6.0	7.0	---	25.5	26.5	24.0	20.0
22	12.0	8.0	3.0	1.0	1.0	6.0	6.0	17.0	25.5	26.0	23.0	19.0
23	10.0	7.0	5.0	1.0	1.0	6.0	6.0	---	26.0	25.5	23.0	18.0
24	11.0	6.0	3.0	---	2.0	6.0	6.0	17.0	26.0	25.5	23.5	19.0
25	12.0	6.0	2.0	1.0	2.0	6.0	12.0	---	---	25.0	23.0	20.0
26	12.0	6.0	3.0	2.0	2.0	5.0	13.0	---	26.0	---	24.0	20.0
27	10.0	5.0	2.0	2.0	2.0	5.0	12.0	---	26.0	26.0	24.0	20.0
28	11.0	5.0	2.0	3.0	2.0	5.0	---	---	24.5	25.0	24.0	21.0
29	10.0	6.0	3.0	2.0	---	5.0	---	13.0	24.0	---	24.0	---
30	12.0	6.0	2.0	2.0	---	6.0	13.0	---	---	26.0	24.0	---
31	13.0	---	3.0	2.0	---	---	---	17.0	---	25.5	24.0	---

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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	19	10	12	6.5	37	92						
2	19	10	23	12	24	52						
3	18	9.6	21	10	25	56						
4	18	9.6	25	12	28	233						
5	20	11	28	14	31	373						
6	19	11	18	8.7	33	279						
7	19	10	13	6.3	35	194						
8	20	11	10	4.9	35	186						
9	19	9.8	12	5.8	212	3030						
10	18	9.2	13	6.1	272	3430						
11	16	8.4	11	5.2	270	2070						
12	13	6.6	9	4.3	240	1810						
13	19	9.5	8	4.1	145	920						
14	24	13	10	5.0	132	602						
15	25	14	10	4.9	175	600						
16	26	15	12	9.6	200	540						
17	23	14	50	100	156	403						
18	19	11	52	101	91	226						
19	17	10	15	22	55	121						
20	16	9.0	25	28	38	81						
21	17	8.9	32	30	190	2640						
22	18	9.3	41	34	138	1590						
23	24	12	54	43	33	244						
24	32	15	51	44	33	208						
25	33	16	51	45	34	359						
26	30	14	51	42	32	287						
27	26	13	50	44	30	243						
28	18	11	47	57	30	194						
29	16	14	46	164	32	112						
30	16	11	49	120	30	113						
31	10	5.8	---	---	30	113						

POTOMAC RIVER BASIN

01603500 EVITTS CREEK NEAR CENTERVILLE, PA

LOCATION.--Lat 39°47'23", long 78°38'48", Bedford County, Hydrologic Unit 02070002, on left bank 2.0 mi (3.2 km) upstream from Thomas W. Koon Dam, 3.0 mi (4.8 km) south of Centerville, 7.0 mi (11.3 km) upstream from Rock Gully Creek, and at mile 16.3 (26.2 km).

DRAINAGE AREA.--30.2 mi² (78.2 km²).

PERIOD OF RECORD.--September 1932 to current year. Prior to October 1952, published as "near Bedford Valley."

REVISED RECORDS.--WSP 781: 1933(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,027.59 ft (313.209 m) City of Cumberland datum.

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

AVERAGE DISCHARGE.--47 years, 32.2 ft³/s (0.912 m³/s), 14.48 in/yr (368 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,240 ft³/s (148 m³/s) Mar. 17, 1936, gage height, 7.13 ft (2.173 m), from rating curve extended above 400 ft³/s (11.3 m³/s) on basis of slope-area measurements at gage heights 4.64 ft (1.414 m) and 7.13 ft (2.173 m); minimum, 0.70 ft³/s (0.020 m³/s) Dec. 17, 1958, gage height, 0.79 ft (0.241 m), result of freezeup.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, about 8 ft (2.4 m), from floodmark, date unknown.

EXTREMES FOR CURRENT YEAR.--Peak discharges 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)
Jan. 4	1045	Unknown	a2.94 0.896	Mar. 5	2230	*925 26.2	3.45 1.052
Jan. 24	1630	614 17.4	3.10 0.945	Mar. 25	0200	747 21.2	3.26 0.994
Feb. 24	1630	Unknown	*a3.58 1.091	Sept. 6	Unknown	Unknown	Unknown
Feb. 26	0100	765 21.7	3.28 1.000				

a Ice jam.

Minimum discharge, 4.2 ft³/s (0.12 m³/s) Oct. 23, gage height 1.14 ft (0.347 m).

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	5.1	4.6	11	64	22	150	52	41	44	14	16	30
2	5.1	4.6	8.5	259	18	229	145	37	39	13	50	29
3	5.1	4.6	10	98	20	238	94	43	38	12	21	45
4	6.2	4.6	38	70	20	493	107	59	36	65	17	30
5	5.9	4.6	21	49	15	811	121	56	31	31	16	35
6	5.6	4.6	15	43	14	676	90	45	28	17	15	370
7	5.1	4.8	13	44	16	337	75	42	26	14	13	180
8	4.8	5.4	35	70	14	223	67	40	26	12	13	100
9	4.6	5.1	92	48	13	163	74	38	60	12	14	60
10	4.6	4.8	41	42	12	134	62	46	59	16	12	47
11	4.6	4.6	29	38	12	111	50	40	44	14	13	38
12	4.6	4.6	26	34	11	88	46	38	33	12	26	34
13	4.6	4.8	23	30	11	74	43	43	29	23	57	30
14	5.1	5.1	21	30	11	67	44	34	25	59	21	42
15	5.1	5.4	19	28	11	55	41	31	23	28	17	34
16	5.4	9.7	18	26	10	48	39	29	22	30	15	25
17	5.1	11	17	24	10	44	35	27	24	32	14	23
18	4.8	10	16	21	9.0	41	32	25	21	23	13	20
19	4.6	6.8	15	20	14	39	30	26	18	19	15	20
20	4.4	5.6	15	18	15	36	28	24	17	21	16	17
21	4.4	5.4	32	52	22	34	27	24	17	22	16	40
22	4.4	5.4	21	48	35	32	26	22	17	18	26	85
23	4.6	5.4	17	33	80	30	26	46	16	18	18	34
24	4.4	9.5	22	249	200	143	24	144	15	16	15	26
25	4.6	7.4	60	167	350	341	24	106	14	24	16	24
26	4.6	6.2	33	75	521	125	41	77	12	37	14	23
27	5.4	6.8	25	58	203	90	88	73	12	20	13	21
28	4.8	11	22	51	146	71	59	75	12	17	40	24
29	4.6	13	19	43	---	63	51	66	15	22	160	24
30	4.6	12	18	37	---	55	46	52	17	30	65	21
31	4.6	---	19	26	---	50	---	46	---	19	40	---
TOTAL	151.4	197.4	771.5	1895	1835.0	5091	1687	1495	790	710	817	1531
MEAN	4.88	6.58	24.9	61.1	65.5	164	56.2	48.2	26.3	22.9	26.4	51.0
MAX	6.2	13	92	259	521	811	145	144	60	65	160	370
MIN	4.4	4.6	8.5	18	9.0	30	24	22	12	12	12	17
CFSM	.16	.22	.83	2.02	2.17	5.43	1.86	1.60	.87	.76	.87	1.69
IN.	.19	.24	.95	2.33	2.26	6.27	2.08	1.84	.97	.87	1.01	1.89

CAL YR 1978 TOTAL 13214.3 MEAN 36.2 MAX 476 MIN 4.4 CFSM 1.20 IN 16.28
WTR YR 1979 TOTAL 16971.3 MEAN 46.5 MAX 811 MIN 4.4 CFSM 1.54 IN 20.90

01608500 SOUTH BRANCH POTOMAC RIVER NEAR SPRINGFIELD, WV

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

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

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

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

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

REMARKS.--Records poor. National Weather Service gage-height telemeter at station.

AVERAGE DISCHARGE.--55 years (water years 1900-01, 1904-05, 1929-79), 1,291 ft³/s (36.56 m³/s), 11.92 in/yr (303 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 143,000 ft³/s (4,050 m³/s) Mar. 18, 1936, gage height, 34.2 ft (10.42 m), from rating curve extended above 28,000 ft³/s (793 m³/s) on basis of measurement made about 10 mi (16 km) upstream from station, adjusted for storage and inflow and slope-area measurement at gage height 29.84 ft (9.095 m); minimum, 29 ft³/s (0.82 m³/s) Jan. 28, 1956, result of freezeup, July 30, 1966, result of temporary dam; minimum gage height, 0.39 ft (0.119 m) July 30, 1966.

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

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 22	0045	14100 399	11.95 3.642	Mar. 6	0800	11800 334	10.77 3.283
Feb. 26	1745	*34200 969	19.17 5.843	Sept. 6	2115	12600 357	11.20 3.414

Minimum discharge, 141 ft³/s (3.993 m³/s) Nov. 8; minimum gage height, 1.57 ft (0.479 m) Oct. 11.

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	161	149	608	1410	1350	6630	1670	2100	1680	630	385	453
2	159	149	660	3940	1200	6350	2920	1800	1790	491	498	406
3	159	147	517	8060	1000	7250	3030	1700	1710	436	565	544
4	161	147	530	4580	1000	7020	4050	1600	2640	498	498	600
5	163	147	1090	3030	910	8280	4520	1500	4480	747	424	700
6	161	147	1480	2200	890	11100	3750	1500	3200	608	370	5720
7	159	145	1000	1870	910	7870	3030	1300	2350	504	331	7070
8	159	145	683	1980	980	5840	2520	1200	1930	424	308	3520
9	154	151	1340	3530	920	4760	2260	1200	2340	385	300	2300
10	151	149	3630	2720	860	4010	2150	1100	3450	375	283	1670
11	147	149	2970	2000	800	3590	1870	1500	4860	375	292	1260
12	147	149	1980	1700	760	3390	1620	3000	3060	370	349	1020
13	147	151	1310	1400	720	3000	1480	3100	2260	350	586	858
14	159	151	1080	1380	670	2740	1470	4000	1810	450	675	731
15	171	159	939	1350	700	2580	1510	4500	1480	640	511	675
16	178	195	876	1200	730	2370	1440	3000	1240	740	396	675
17	181	267	798	1120	700	2140	1410	2300	1090	600	340	593
18	184	308	699	1280	650	2020	1400	1900	1200	470	317	524
19	184	308	651	1300	630	1910	1350	1600	1100	410	317	500
20	178	275	620	1100	700	1820	1300	1500	950	350	385	480
21	171	231	1800	4470	930	1750	1250	1300	820	360	653	478
22	163	209	3180	12300	860	1650	1200	1200	723	370	498	1430
23	163	195	2140	6230	3000	1500	1200	1100	798	385	465	6000
24	159	187	1690	4640	11900	1590	1200	2200	683	401	424	5910
25	156	178	2060	6300	20900	4760	1200	5850	668	723	406	3650
26	151	184	2680	4270	29200	5490	1100	5780	623	1430	472	2520
27	149	249	2240	3030	15200	3940	2000	3660	565	832	600	1850
28	147	370	1840	2570	8120	2940	2800	2700	524	615	600	1430
29	149	551	1400	2150	---	2390	3300	2230	498	524	558	1290
30	149	723	1300	1800	---	2050	2600	2000	530	485	558	1120
31	147	---	1230	1540	---	1790	---	1700	---	430	530	---
TOTAL	4967	6665	45021	96450	107190	124520	62600	71120	51052	16408	13894	55977
MEAN	160	222	1452	3111	3828	4017	2087	2294	1702	529	448	1866
MAX	184	723	3630	12300	29200	11100	4520	5850	4860	1430	675	7070
MIN	147	145	517	1100	630	1500	1100	1100	498	350	283	406
CFSM	.11	.15	.99	2.12	2.60	2.73	1.42	1.56	1.16	.36	.31	1.27
IN.	.13	.17	1.14	2.44	2.71	3.15	1.58	1.80	1.29	.41	.35	1.42
CAL YR 1978 TOTAL	573097			MEAN 1570	MAX 25100	MIN 145	CFSM 1.07	IN 14.49				
WTR YR 1979 TOTAL	655864			MEAN 1797	MAX 29200	MIN 145	CFSM 1.22	IN 16.59				

01609000 TOWN CREEK NEAR OLDTOWN, MD

LOCATION.--Lat 39°33'12", long 78°33'19", Allegany County, Hydrologic Unit 02070003, on left bank at downstream side of bridge on Pack Horse Trail (formerly Oldtown Road), 0.4 mi (0.6 km) northeast of Maryland State Highway 51, 2.0 mi (3.2 km) upstream from mouth of Sawpit Run, 3.0 mi (4.8 km) northeast of Oldtown, and 4.0 mi (6.4 km) upstream from mouth.

DRAINAGE AREA.--148 mi² (383 km²).

PERIOD OF RECORD.--July 1928 to September 1935, June 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 547.97 ft (167.021 m) National Geodetic Vertical Datum of 1929. July 1928 to September 1935, nonrecording gage on upstream side of highway bridge at datum 0.08 ft (0.024 m) lower.

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

AVERAGE DISCHARGE.--19 years (water years 1929-35, 1968-79), 159 ft³/s (4.503 m³/s), 14.59 in/yr (371 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,700 ft³/s (331 m³/s) June 22, 1972, gage height, 14.13 ft (4.307 m); minimum, 0.9 ft³/s (0.025 m³/s) Aug. 2, 3, 7-14, 1930, gage height, 1.49 ft (0.454 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 17 or 18, 1936, reached a stage of 19.08 ft (5.816 m), from floodmarks, discharge, 27,000 ft³/s (765 m³/s), from rating curve extended above 9,500 ft³/s (269 m³/s) on basis of contracted-opening measurement of peak flow.

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. 21	1845	Unknown	a7.56 2.304	Mar. 25	0900	2750 77.9	9.58 2.920
Jan. 25	0315	2550 72.2	9.25 2.819	Aug. 29	0445	2500 70.8	9.16 2.792
Feb. 26	0730	*3270 92.6	10.31 3.142	Sept. 6	1515	2310 65.4	8.84 2.694
Mar. 6	0715	2360 66.8	8.93 2.722				

a Ice jam.

Minimum discharge, 9.6 ft³/s (0.27 m³/s) Oct. 12, gage height, 1.95 ft (0.594 m).

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	13	11	55	182	130	744	207	207	174	70	55	125
2	13	11	52	1020	105	1010	913	178	156	50	85	94
3	14	12	42	732	115	1240	833	159	142	42	72	96
4	14	11	134	398	105	1350	688	193	161	42	52	87
5	15	11	176	306	70	2060	876	253	126	218	42	73
6	16	11	108	240	65	2020	616	210	105	92	37	1460
7	14	11	77	193	70	1230	436	188	93	59	33	684
8	13	12	75	443	70	829	353	170	85	45	29	341
9	12	13	476	285	55	626	321	152	95	38	29	225
10	12	13	416	195	50	514	291	137	398	37	35	167
11	13	12	214	160	48	464	220	129	416	42	32	135
12	11	14	161	140	48	370	210	255	184	38	58	114
13	12	14	129	120	46	304	200	244	127	32	161	97
14	14	11	108	105	46	274	190	203	98	72	88	96
15	14	13	89	96	44	233	180	158	82	101	63	129
16	14	18	90	85	44	186	170	172	72	96	49	91
17	15	27	74	73	40	179	150	135	68	144	41	75
18	15	35	66	64	36	165	140	119	81	88	39	67
19	14	34	60	55	50	153	130	114	62	58	40	63
20	14	25	60	65	55	142	120	110	52	89	42	57
21	14	21	112	590	60	133	110	98	47	228	44	59
22	13	18	144	600	100	124	100	89	47	105	52	382
23	12	17	107	305	300	117	95	112	48	73	52	216
24	12	17	112	816	1200	222	89	541	43	57	42	145
25	11	20	709	1510	2120	1940	83	603	39	57	38	115
26	11	23	452	578	2690	858	86	455	35	53	35	98
27	15	24	284	376	1290	514	340	326	32	53	34	86
28	11	26	177	324	738	365	430	329	31	44	31	80
29	11	49	145	246	---	299	324	286	29	44	1030	83
30	11	53	130	201	---	253	250	233	58	83	435	78
31	11	---	125	165	---	220	---	195	---	74	199	---
TOTAL	404	587	5159	10668	9790	19138	9151	6753	3186	2324	3074	5618
MEAN	13.0	19.6	166	344	350	617	305	218	106	75.0	99.2	187
MAX	16	53	709	1510	2690	2060	913	603	416	228	1030	1460
MIN	11	11	42	55	36	117	83	89	29	32	29	57
CFSM	.09	.13	1.12	2.32	2.37	4.17	2.06	1.47	.72	.51	.67	1.26
IN.	.10	.15	1.30	2.68	2.46	4.81	2.30	1.70	.80	.58	.77	1.41
CAL YR 1978	TOTAL	63658	MEAN 174	MAX 2460	MIN 11	CFSM 1.18	IN 16.00					
WTR YR 1979	TOTAL	75852	MEAN 208	MAX 2690	MIN 11	CFSM 1.41	IN 19.07					

POTOMAC RIVER BASIN

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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 winter periods, which are fair. Low flow affected by Stony River Reservoir (see station 01595200), and since December 1950, by Savage River Reservoir (see station 01597500). Several observations of water temperature were made during the year. Gage-height telemeter at station.

AVERAGE DISCHARGE.--41 years, 3,249 ft³/s (92.01 m³/s), 14.19 in/yr (360 mm/yr).

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

EXTREMES OUTSIDE PERIOD OF RECORD.--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 (560 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 22	0600	23600 668	16.84 5.133	Mar. 6	1300	40000 1130	22.20 6.767
Feb. 26	2030	*65300 1850	29.13 8.879	Sept. 7	0130	23300 660	16.74 5.102

Minimum discharge, 441 ft³/s (12.5 m³/s) Oct. 25, 26, gage height, 3.49 ft (1.064 m).

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	493	484	1790	3590	3470	17800	4120	5050	3940	1510	1360	1760
2	492	472	1740	11300	2710	16700	8410	4390	4010	1450	1420	1820
3	486	461	1570	18200	2410	19800	9980	3890	3690	1170	1500	2360
4	495	458	2630	11600	2300	21800	10900	3980	4020	1180	1270	2110
5	499	453	5750	7850	2150	31600	13200	4600	7000	2510	1090	1760
6	500	457	5170	5860	1800	38100	11000	4670	5410	2700	948	11800
7	489	455	3900	4900	1750	28300	8550	4300	4170	1790	834	17200
8	482	455	3170	5320	1750	19600	7010	3860	3350	1360	748	8500
9	470	450	6150	7280	1690	15600	6290	3470	3710	1130	724	5570
10	463	447	9450	6030	1470	13300	6050	3170	6620	1040	725	4230
11	466	447	7370	4920	1340	10800	5320	3110	10200	1130	755	3520
12	461	449	5550	3990	1310	9270	4690	5690	6340	1050	992	2930
13	461	461	4650	3470	1300	7890	4320	6960	4610	970	2330	2460
14	491	463	3690	3470	1430	6770	4130	8020	3570	1640	2250	2250
15	499	469	2950	3270	1540	6490	4130	7650	2920	3580	1640	2360
16	516	538	2430	2980	1580	5790	3960	5930	2470	3720	1220	2160
17	548	782	2150	2820	1700	5090	3840	4790	2200	3360	1010	1970
18	545	1220	1990	3060	1800	4670	3620	3880	2140	2440	890	1680
19	538	1140	1830	3730	1900	4320	3390	3330	2030	1890	852	1400
20	543	940	1690	2870	2040	3940	3160	3030	1890	1570	961	1310
21	517	799	2370	7670	2410	3710	2970	2740	1620	3060	1280	1300
22	493	717	7750	21300	2740	3470	2810	2510	1480	2100	1240	3760
23	482	654	5710	13000	10700	3260	2640	2530	1550	1660	1100	7570
24	467	650	4540	11400	23100	3500	2730	4850	1440	1510	1040	8630
25	447	661	7890	17100	43700	14100	2740	10000	1310	1640	957	5810
26	447	640	8140	10800	59700	13800	2610	14700	1220	2640	990	4330
27	454	687	6300	7420	44400	9790	3950	9340	1110	2500	1280	3460
28	455	809	4970	6370	21500	7550	6230	7350	1000	1750	1600	2950
29	512	1590	3710	5420	---	6240	6430	6110	940	1540	6210	2810
30	561	2010	3290	4440	---	5230	5680	5230	1060	1680	3140	2620
31	506	---	3320	3970	---	4450	---	4420	---	1590	2190	---
TOTAL	15278	20718	133610	225400	245690	362730	164860	163550	97020	58860	44546	122390
MEAN	493	691	4310	7271	8775	11700	5495	5276	3234	1899	1437	4080
MAX	561	2010	9450	21300	59700	38100	13200	14700	10200	3720	6210	17200
MIN	447	447	1570	2820	1300	3260	2610	2510	940	970	724	1300

CAL YR 1978	TOTAL	1494948	MEAN	4096	MAX	47000	MIN	447	CFSM	1.32	IN	17.89
WTR YR 1979	TOTAL	1654652	MEAN	4533	MAX	59700	MIN	447	CFSM	1.46	IN	19.80

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).

WATER-DISCHARGE RECORDS

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.--Water-discharge records good except those for winter periods, which are fair. Slight regulation at low flow from power plants upstream. Low flow affected slightly by Stony River Reservoir (see station 01595200) and since December 1950, by Savage River Reservoir (see station 01597500). Gage-height telemeter at station.

AVERAGE DISCHARGE.--47 years, 4,120 ft³/s (116.8 m³/s), 13.75 in/yr (349 mm/yr).

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

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

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 3	1900	23600 668	13.29 4.051	Mar. 1	0015	24600 697	13.61 4.148
Jan. 22	1530	31800 901	15.68 4.779	Mar. 6	2115	43800 1240	18.67 5.691
Jan. 25	1100	31000 878	15.45 4.709	Sept. 7	0945	25800 731	13.98 4.261
Feb. 27	0130	*81300 2300	25.96 7.913				

Minimum discharge, 543 ft³/s (15.4 m³/s) Oct. 1, 13, Nov. 11, 12, 13, 14, gage height, 2.72 ft (0.829 m).

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	554	630	2190	4140	4780	23200	5300	6560	5070	1440	1840	2320
2	588	606	2240	5540	3960	21500	7780	5750	4880	1890	1680	1910
3	584	590	2200	21100	3420	24200	12800	5020	4770	1690	1690	2020
4	593	579	2160	17600	3330	25000	13700	4710	4660	1460	1680	2720
5	594	572	3190	10800	3000	32200	16500	5080	7050	1780	1440	2240
6	597	569	5450	8150	2600	41200	15600	5620	7550	3320	1240	8490
7	593	569	5550	6430	2400	36700	11900	5360	5740	2830	1080	22800
8	583	552	5080	6320	2530	24900	9450	4830	4510	2030	960	12600
9	573	552	4780	7520	2400	19300	8120	4360	3880	1590	894	7650
10	563	552	8030	7930	2100	16100	7690	3940	5640	1340	840	5530
11	552	547	10600	6510	1900	13900	7010	3770	11300	1240	840	4370
12	552	543	8660	5430	1850	11600	6000	4920	9290	1280	923	3720
13	549	543	7310	4650	1850	9990	5410	9080	6470	1220	1410	3080
14	602	550	6180	4310	2000	8610	5080	9810	4830	1350	2730	2690
15	610	554	5120	4130	2200	7720	5030	10600	3850	2510	2500	2600
16	649	584	4300	3940	2300	7310	4910	8440	3200	4710	1880	2580
17	696	631	3690	3720	2400	6310	4680	6730	2830	4920	1430	2340
18	718	803	3260	3560	2600	5690	4530	5390	2630	3770	1190	2090
19	689	1250	2970	3990	2700	5260	4190	4500	2620	2890	1060	1770
20	663	1330	2750	3860	2900	4870	3920	3990	2360	2300	995	1530
21	662	1240	2580	4720	3400	4490	3680	3660	2130	2810	1100	1540
22	632	1150	3000	24400	3900	4250	3470	3290	1870	3480	1430	2720
23	603	1060	5550	20600	14400	3970	3290	3130	1710	2400	1430	7600
24	587	994	5850	14000	25300	3940	3130	4300	1770	1960	1280	11000
25	573	939	6010	27200	51800	14900	3330	8860	1610	1790	1190	8420
26	554	910	11300	18200	71500	20100	3240	19700	1490	1960	1130	6000
27	552	891	9810	11300	68300	13800	3900	14500	1380	3200	1190	4650
28	552	880	8510	8970	31300	10400	6580	10300	1260	2710	1500	3810
29	552	889	6750	7660	---	8380	8190	8260	1150	2080	4000	3360
30	561	1420	4870	6300	---	7120	7430	7160	1150	1930	4960	3210
31	649	---	4290	5210	---	5920	---	5960	---	2030	3300	---
TOTAL	18579	23479	164230	288190	323120	442830	205840	207580	118650	71910	50812	147360
MEAN	599	783	5298	9296	11540	14280	6861	6696	3955	2320	1639	4912
MAX	718	1420	11300	27200	71500	41200	6500	19700	11300	4920	4960	22800
MIN	549	543	2160	3560	1850	3940	3130	3130	1150	1220	840	1530
CFSM	.15	.19	1.30	2.28	2.83	3.51	1.69	1.64	.97	.57	.40	1.21
IN.	.17	.21	1.50	2.63	2.95	4.04	1.88	1.90	1.08	.66	.46	1.35

CAL YR 1978 TOTAL 1898003 MEAN 5200 MAX 57900 MIN 543 CFSM 1.28 IN 17.34
WTR YR 1979 TOTAL 2062580 MEAN 5651 MAX 71500 MIN 543 CFSM 1.39 IN 18.84

CF

POTOMAC RIVER BASIN

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01613000 POTOMAC RIVER AT HANCOCK, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969-72, 1976 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	HARDNESS (MG/L AS CaCO3)	HARDNESS, NONCARBONATE (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNESIUM DIS-SOLVED (MG/L AS Mg)	SODIUM DIS-SOLVED (MG/L AS Na)	SODIUM PERCENT
DEC 14...	1030	200	8.2	2.5	20	68	37	20	4.3	5.4	14

DATE	SODIUM ADSORPTION RATIO	POTASSIUM DIS-SOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	ALKALINITY (MG/L AS CaCO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE DIS-SOLVED (MG/L AS CL)	FLUORIDE DIS-SOLVED (MG/L AS F)	SILICA DIS-SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
DEC 14...	.3	1.9	37	30	.4	37	5.9	.0	6.8	108

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOVERABLE (UG/L AS MN)	MANGANESE, DIS-SOLVED (UG/L AS MN)
DEC 14...	100	.15	.83	.08	1800	1700	120	100	20	80

$$\text{Waterbed Inches} = \frac{\left(\frac{\text{CFS}}{\text{Area mi}^2} \right)}{(1.1518)}$$

POTOMAC RIVER BASIN

01614500 CONOCOCHEAGUE CREEK AT FAIRVIEW, MD

LOCATION.--Lat 39°42'57", long 77°49'28", Washington County, Hydrologic Unit 02070004, on right bank 0.7 mi (1.1 km) upstream from highway bridge in Fairview, 2.0 mi (3.2 km) upstream from Rockdale Run, 6.5 mi (10.5 km) northwest of Hagerstown, and 19.1 mi (30.7 km) upstream from mouth.

DRAINAGE AREA.--494 mi² (1,279 km²).

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 756: Drainage area. WSP 1432: 1929(M), 1930, 1931-32(M), 1935(M).

GAGE.--Water-stage recorder. Datum of gage is 391.85 ft (119.436 m) National Geodetic Vertical Datum of 1929. Prior to Dec. 6, 1932, nonrecording gage at highway bridge 0.7 mi (1.1 km) downstream at datum 2.93 ft (0.893 m) lower. Dec. 6, 1932, to Oct. 7, 1933, nonrecording gage 150 ft (46 m) downstream from former site at datum 4.92 ft (1.500 m) lower than present datum.

REMARKS.--Water-discharge records good. Low flow partly regulated by small powerplants near Mercersburg, Pa.

AVERAGE DISCHARGE.--51 years, 593 ft³/s (16.79 m³/s), 16.30 in/yr (414 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,400 ft³/s (918 m³/s) June 23, 1972, gage height, 24.5 ft (7.47 m), from floodmark, from rating curve extended above 15,000 ft³/s (425 m³/s) on basis of contracted-opening and flow-over-road measurement of peak flow; minimum, 21 ft³/s (0.59 m³/s) Aug. 8, Sept. 12, 1966; minimum daily, 25 ft³/s (0.71 m³/s) Nov. 28, 1930.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known prior to 1928, about 16.5 ft (5.03 m), present datum, sometime in 1889, from information by local residents; discharge, about 22,000 ft³/s (620 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,300 ft³/s (120 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 25	0630	*12500 354	12.97 3.953	Mar. 6	1515	4930 140	8.07 2.460
Feb. 26	1200	11300 320	12.33 3.758	Sept. 7	0530	11900 337	12.67 3.862

Minimum discharge, 98 ft³/s (2.78 m³/s) Nov. 1, gage height 1.32 ft (0.402 m).

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	115	105	280	489	850	3360	856	550	798	700	274	221
2	115	109	257	2320	760	2940	1270	540	738	587	248	202
3	115	111	227	2290	690	2870	1460	530	1030	427	264	210
4	120	109	312	1210	640	2360	1620	615	1060	369	284	216
5	128	109	415	880	580	3220	2290	628	862	598	227	237
6	128	107	342	771	520	4710	1820	552	705	423	204	8290
7	122	107	263	746	540	3860	1470	508	624	327	194	8470
8	116	107	244	1720	490	2830	1290	481	557	284	221	2160
9	111	107	843	1430	450	2190	1260	455	513	260	394	1440
10	109	105	1330	1010	420	1850	1310	429	472	251	264	1120
11	109	105	743	821	390	1860	1080	417	504	245	218	928
12	109	103	525	670	360	1550	972	476	490	236	305	793
13	109	107	428	650	340	1360	947	529	410	224	650	689
14	126	114	364	615	350	1250	950	521	369	305	432	694
15	149	120	313	565	360	1130	953	457	346	327	327	874
16	130	126	280	525	380	990	887	439	327	245	280	650
17	130	149	262	500	370	921	813	402	309	267	245	538
18	124	171	238	461	360	858	754	363	309	230	227	490
19	118	178	225	362	360	803	699	364	294	210	230	449
20	114	153	213	444	380	757	680	390	274	199	248	410
21	112	140	251	1990	410	716	660	367	260	207	412	563
22	111	128	287	2870	430	672	640	359	260	210	662	3230
23	109	122	257	1410	500	641	620	398	257	205	386	2220
24	111	132	245	3550	1500	704	600	1300	245	309	463	1180
25	109	146	1280	11200	6570	2110	580	1500	233	312	533	940
26	111	138	1240	4230	10200	1820	560	1540	227	362	467	803
27	120	142	810	2250	6150	1410	580	1290	213	291	369	703
28	130	153	567	1990	3230	1190	600	1240	202	267	323	631
29	130	185	390	1520	---	1070	580	1250	204	267	287	599
30	122	221	360	1310	---	975	560	1050	661	410	260	553
31	118	---	360	1130	---	891	---	904	---	338	242	---
TOTAL	3680	3909	14151	51929	38580	53868	29361	20844	13753	9892	10140	40503
MEAN	119	130	456	1675	1378	1738	979	672	458	319	327	1350
MAX	149	221	1330	11200	10200	4710	2290	1540	1060	700	662	8470
MIN	109	103	213	362	340	641	560	359	202	199	194	202
CFSM	.24	.26	.92	3.39	2.79	3.52	1.98	1.36	.93	.65	.66	2.73
IN.	.28	.29	1.07	3.91	2.91	4.06	2.21	1.57	1.04	.74	.76	3.05

CAL YR 1978	TOTAL	257503	MEAN 705	MAX 7000	MIN 103	CFSM 1.43	IN 19.39
WTR YR 1979	TOTAL	290610	MEAN 796	MAX 11200	MIN 103	CFSM 1.61	IN 21.88

WATER-QUALITY RECORDS

SUSPENDED SEDIMENT DISCHARGE: October 1966 to current year.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,050 mg/L Oct. 25, 1971; minimum daily mean, 1 mg/L on many days.
SEDIMENT LOADS: Maximum daily, 73,000 tons (66,200 tonnes) June 23, 1972; minimum daily, 0.17 ton (0.15 tonne)
Nov. 24, 26, 27, 1966.

SEDIMENT LOADS: Maximum daily, 9,840 tons (8,930 tonnes) Feb. 26; minimum daily, 0.30 ton (0.27 tonne) Nov.3.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	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)
OCT 27...	1145	102	450	8.3	13.5	11.0	30	200	28	57	14	9.2
DEC 14...	1200	361	360	8.0	1.0	2.0	10	140	25	41	9.1	7.6
FEB 01...	1115	990	310	8.2	.0	2.0	0	130	30	39	7.6	5.2
MAR 20...	1240	754	290	8.2	12.0	10.5	5	140	38	44	8.4	5.1
MAY 09...	1350	466	285	8.6	27.0	21.0	--	--	--	--	--	--

[illegible][illegible]

POTOMAC RIVER BASIN

01614500 CONOCOCHIEGUE CREEK AT FAIRVIEW, MD--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM
JAN							
24...	1650	7000	4.0	457	8640	35	47
25...	1100	15200	3.0	219	8990	59	72
FEB							
25...	1200	9930	3.0	232	6220	55	70
SEP							
06...	0830	11000	22.0	456	13500	--	66

DATE	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM
JAN							
24...	61	76	87	96	99	100	--
25...	84	92	96	98	99	99	100
FEB							
25...	80	90	94	97	99	99	100
SEP							
06...	85	91	95	99	100	--	--

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

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

01614500 CONOCOCHEAGUE CREEK AT FAIRVIEW, MD--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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	17	5.3	2	.57	15	11	18	24	12	28	91	836
2	10	3.1	3	.88	12	8.3	233	1760	12	25	70	556
3	13	4.0	1	.30	12	7.4	119	818	11	20	62	480
4	14	4.5	2	.59	17	14	46	150	8	14	45	287
5	14	4.8	6	1.8	30	34	19	45	8	13	82	713
6	24	8.3	4	1.2	15	14	11	23	8	11	120	1530
7	10	3.3	2	.58	10	7.1	11	22	9	13	68	709
8	5	1.6	4	1.2	7	4.6	61	295	8	11	45	344
9	8	2.4	12	3.5	71	199	43	173	8	9.7	35	207
10	9	2.6	5	1.4	96	366	24	65	8	9.1	28	140
11	7	2.1	2	.57	27	54	30	67	8	8.4	28	141
12	11	3.2	2	.56	15	21	15	27	9	8.7	28	117
13	22	6.5	2	.58	9	10	14	25	9	8.3	21	77
14	10	3.4	4	1.2	7	6.9	12	20	8	7.6	18	61
15	12	4.8	3	.97	5	4.2	9	14	9	8.7	16	49
16	8	2.8	2	.68	4	3.0	13	18	11	11	17	45
17	7	2.5	3	1.2	6	4.2	11	15	10	10	15	37
18	8	2.7	4	1.8	5	3.2	10	12	10	9.7	17	39
19	4	1.3	4	1.9	3	1.8	6	5.9	30	29	9	20
20	5	1.5	5	2.1	3	1.7	10	12	20	21	7	14
21	6	1.8	7	2.6	4	2.7	158	1080	10	11	7	14
22	7	2.1	6	2.1	7	5.4	198	1710	25	29	8	15
23	5	1.5	6	2.0	9	6.2	43	164	50	67	8	14
24	4	1.2	5	1.8	8	5.3	251	4510	160	1620	22	42
25	5	1.5	4	1.6	134	530	300	9380	284	5020	135	769
26	5	1.5	2	.75	72	255	90	1080	364	9840	46	226
27	4	1.3	4	1.5	24	52	52	316	132	2390	17	65
28	7	2.5	5	2.1	9	14	42	226	72	635	11	35
29	5	1.8	5	2.5	5	5.3	30	123	---	---	9	26
30	4	1.3	10	6.0	8	7.8	22	78	---	---	10	26
31	4	1.3	---	---	5	4.9	15	46	---	---	10	24
TOTAL	---	88.5	---	46.53	---	1664.0	---	22303.9	---	19888.2	---	7658
APRIL			MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	13	30	13	19	30	65	180	340	34	25	16	9.5
2	24	82	15	22	33	66	122	193	28	19	17	9.3
3	26	102	15	21	115	320	66	76	27	19	14	7.9
4	42	184	16	27	79	226	55	55	32	25	25	15
5	94	581	16	27	52	121	93	150	12	7.4	45	29
6	35	172	14	21	48	91	59	67	7	3.9	360	6860
7	17	67	18	25	40	67	41	36	7	3.7	95	2330
8	14	49	21	27	38	57	38	29	14	8.4	56	328
9	13	44	22	27	33	46	37	26	49	52	36	140
10	12	42	31	36	27	34	36	24	31	22	25	76
11	12	35	36	41	37	50	39	26	25	15	22	55
12	12	31	44	57	35	46	34	22	36	30	22	47
13	12	31	23	33	28	31	32	19	102	179	18	33
14	11	28	21	30	25	25	40	33	48	56	26	49
15	17	44	19	23	25	23	45	40	34	30	37	87
16	12	29	21	25	20	18	35	23	20	15	28	49
17	11	24	17	18	18	15	38	27	22	15	16	23
18	9	18	20	20	20	17	35	22	17	10	15	20
19	9	17	21	21	19	15	22	12	21	13	18	22
20	10	18	20	21	19	14	23	12	27	18	13	14
21	10	18	18	18	16	11	31	17	30	40	10	18
22	10	17	20	19	13	13	26	15	105	188	112	995
23	10	17	36	39	21	15	28	15	48	50	64	384
24	10	16	132	463	20	13	42	35	68	85	34	108
25	9	14	121	490	13	8.2	44	37	83	119	21	53
26	17	26	124	524	14	8.6	59	58	72	91	18	39
27	36	56	58	202	12	6.9	50	39	48	48	20	38
28	25	40	45	151	12	6.5	48	35	19	17	27	46
29	14	22	50	169	25	14	45	32	30	23	24	39
30	13	20	39	111	171	355	65	72	28	20	18	27
31	---	---	31	76	---	---	50	46	20	13	---	---
TOTAL	---	1874	---	2803	---	1798.2	---	1633	---	1260.4	---	11950.7
TOTAL LOAD FOR YEAR:			72968.43		TONS.							

POTOMAC RIVER BASIN

01617800 MARSH RUN AT GRIMES, MD

LOCATION.--Lat 39°30'53", long 77°46'38", Washington County, Hydrologic Unit 02070004, on right bank 220 ft (67 m) upstream from bridge on Sprecher Road, 0.1 mi (0.2 km) downstream from unnamed tributary, 0.5 mi (0.8 km) southwest of Grimes, 1.5 mi (2.4 km) upstream from mouth, and 2.2 mi (3.5 km) southwest of Fairplay.

DRAINAGE AREA.--18.9 mi² (49.0 km²).

PERIOD OF RECORD.--October 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 354.72 ft (108.119 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for period of no gage-height record, Feb. 18 to Mar. 13, which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--16 years, 13.5 ft³/s (0.382 m³/s), 9.70 in/yr (246 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 450 ft³/s (12.7 m³/s) Feb. 26, 1979, gage height, 4.41 ft (1.344 m); no flow Oct. 1, 1977, result of regulation caused by construction work above station.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 60 ft³/s (1.7 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	1730	Unknown	a2.61 0.796	Feb. 26	Unknown	*450 12.7	4.41 1.344
Jan. 24	1745	415 11.8	4.25 1.295	Mar. 6	Unknown	Unknown	Unknown
Feb. 18	0945	Unknown	a2.11 0.643				

a Ice jam.

Minimum discharge, 3.5 ft³/s (0.099 m³/s) Aug. 28, 29, gage height, 0.95 ft (0.290 m)

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	6.0	4.8	5.7	13	26	52	27	17	14	13	6.2	5.8
2	6.0	4.8	5.1	31	24	49	30	17	13	10	6.2	5.7
3	5.7	4.5	5.1	21	23	47	30	17	14	9.4	6.4	5.4
4	6.3	4.5	7.6	16	22	44	30	19	20	9.5	5.9	5.6
5	6.0	4.5	6.6	15	21	60	31	19	18	10	5.6	7.2
6	5.7	4.5	5.7	15	20	78	28	18	16	8.6	5.4	31
7	5.7	4.5	5.4	17	19	60	26	17	15	8.0	5.3	14
8	5.7	4.5	6.6	21	18	49	26	17	15	8.3	5.5	9.5
9	5.4	4.2	20	18	17	43	28	17	15	8.4	5.6	7.8
10	5.4	4.2	17	16	16	39	29	16	15	8.4	5.3	7.4
11	5.4	4.2	10	15	16	42	26	15	15	8.6	5.9	7.4
12	5.4	4.2	9.1	14	15	35	25	15	14	8.2	9.4	7.0
13	8.0	4.2	8.7	15	14	33	25	15	14	7.4	8.9	6.8
14	13	4.2	8.0	16	14	34	26	19	13	7.1	6.9	7.3
15	7.0	4.5	7.6	15	15	32	25	17	12	6.9	6.2	7.8
16	6.0	5.4	7.6	14	16	30	24	17	11	6.6	6.0	7.2
17	6.0	6.0	7.3	13	14	30	23	16	12	6.5	5.8	6.6
18	5.7	6.3	7.6	12	13	30	22	16	13	6.3	5.8	6.3
19	5.4	5.1	7.6	12	12	29	21	16	12	6.2	6.0	6.2
20	5.1	4.2	8.0	13	13	28	21	14	11	6.4	5.9	6.0
21	5.1	4.2	9.9	98	14	27	21	13	11	6.9	6.4	11
22	4.8	4.2	8.0	52	15	27	21	14	11	6.5	7.1	39
23	4.8	4.2	7.3	31	18	26	21	16	10	6.3	5.4	17
24	4.5	4.2	8.4	138	54	31	20	22	9.4	8.1	4.7	13
25	4.5	4.0	21	92	90	47	18	20	9.0	8.8	4.2	11
26	4.8	4.0	13	40	145	34	19	18	8.8	11	4.0	10
27	5.1	4.8	11	36	80	30	20	15	8.4	7.7	3.8	9.6
28	4.8	5.7	9.9	35	56	29	20	15	8.0	6.9	3.6	9.5
29	4.8	5.7	9.1	32	---	28	20	16	6.3	7.4	6.5	9.3
30	4.8	7.3	8.7	30	---	27	19	15	7.8	7.4	8.9	9.2
31	4.8	---	9.1	28	---	27	---	15	---	6.8	6.1	---
TOTAL	177.7	141.6	281.7	934	820	1177	722	513	371.7	247.6	184.9	306.6
MEAN	5.73	4.72	9.09	30.1	29.3	38.0	24.1	16.5	12.4	7.99	5.96	10.2
MAX	13	7.3	21	138	145	78	31	22	20	13	9.4	39
MIN	4.5	4.0	5.1	12	12	26	18	13	6.3	6.2	3.6	5.4
CFSM	.30	.25	.48	1.59	1.55	2.01	1.28	.87	.66	.42	.32	.54
IN.	.35	.28	.55	1.84	1.61	2.32	1.42	1.01	.73	.49	.36	.60
CAL YR 1978 TOTAL	5557.4			MEAN 15.2	MAX 107	MIN 4.0	CFSM .80	IN 10.94				
WTR YR 1979 TOTAL	5877.8			MEAN 16.1	MAX 145	MIN 3.6	CFSM .85	IN 11.57				

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

AVERAGE DISCHARGE.--40 years (water years 1929-53, 1965-79), 6,098 ft³/s (172.7 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, 170 ft³/s (4.81 m³/s) Aug. 1, 1966; minimum daily, 185 ft³/s (5.24 m³/s) July 31, 1966.

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

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 3	2100	31700 898	10.78 3.286	Mar. 26	0630	32100 909	10.86 3.310
Jan. 22	2000	43700 1240	13.22 4.029	Apr. 6	0430	25200 714	9.35 2.850
Jan. 25	1730	62200 1760	16.55 5.044	May 26	2300	28000 793	9.98 3.042
Feb. 27	0700	*110000 3120	23.60 7.193	Sept. 7	1630	41100 1160	12.70 3.871
Mar. 7	0430	56200 1590	15.54 4.737				

Minimum discharge, 784 ft³/s (22.2 m³/s) Oct. 1, 2, gage height, 1.71 ft (0.521 m).

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	956	1010	2880	5470	8110	36900	8520	9360	7940	2660	2900	3790
2	937	976	3160	8130	6940	33100	8910	8240	8150	3140	2700	2890
3	961	971	2940	26800	5830	33800	15800	7260	8010	3330	2400	2510
4	1010	937	2860	27000	5430	34600	18900	6620	8250	2950	2400	3080
5	1020	917	3110	17100	4900	38400	22300	6560	8170	2870	2300	3380
6	1020	914	6480	12400	4200	51700	24100	7080	10500	3710	2100	13600
7	1010	915	6500	9980	3890	52800	19200	7170	8560	4470	1900	39200
8	999	907	5370	9580	3760	38200	15200	6670	6840	3510	1700	25300
9	976	909	4830	11800	3500	28400	13000	6050	5640	2760	1550	13800
10	955	878	11100	11900	3300	22800	12200	5520	5320	2320	1810	9430
11	941	883	14400	9990	3100	20100	11300	5090	9270	2070	1510	7180
12	929	889	11100	8050	2900	17300	9720	5010	13500	1970	1470	5910
13	974	895	8120	6920	2800	15000	8680	8420	9260	1970	1980	5030
14	1090	922	6710	6230	2800	12800	8110	11300	6880	2340	2980	4410
15	1130	976	5520	6050	3000	11400	7780	12900	5430	2500	3570	4210
16	1090	985	4560	5340	3100	10500	7590	11800	4520	3850	3010	4150
17	1100	1080	3870	5110	3300	9490	7170	9240	4010	5630	2400	3750
18	1120	1170	3350	4750	3400	8810	6730	7500	4260	5720	2000	3370
19	1120	1390	3070	4570	3600	7870	6330	6250	4070	4420	1820	3050
20	1100	1810	2950	4490	3800	7290	5860	5460	3600	3760	1810	2690
21	1050	1740	2840	7290	4000	6760	5500	4980	3230	4310	1740	2600
22	1030	1530	2860	30800	4200	6360	5210	4620	2950	4400	2020	6660
23	1020	1370	7250	35200	4530	6020	4970	4320	2690	4220	2560	10600
24	971	1280	7400	23500	20300	5940	4720	5300	2500	3360	2280	13200
25	935	1200	7970	53300	66500	13200	4590	10700	2490	3040	2200	13400
26	918	1160	15700	40600	96000	30900	4720	19600	2300	2980	2540	9550
27	941	1220	14300	22300	103000	23200	5000	23400	2160	3170	2390	7280
28	928	1300	10800	16400	56600	17000	8330	15900	2050	4180	2160	5950
29	932	1300	8280	13700	---	13500	10800	13000	1930	3490	2390	5110
30	946	1640	6230	11200	---	11500	10700	11000	1920	3000	6030	4670
31	957	---	5500	9360	---	9790	---	9220	---	3100	5240	---
TOTAL	31066	34074	202010	465310	436790	635430	301940	275540	166400	105200	75860	239750
MEAN	1002	1136	6516	15010	15600	20500	10060	8888	5547	3394	2447	7992
MAX	1130	1810	15700	53300	103000	52800	24100	23400	13500	5720	6030	39200
MIN	918	878	2840	4490	2800	5940	4590	4320	1920	1970	1470	2510
CFSM	.17	.19	1.10	2.53	2.63	3.45	1.70	1.50	.93	.57	.41	1.35
IN.	.19	.21	1.27	2.92	2.74	3.98	1.89	1.73	1.04	.66	.48	1.50

CAL YR 1978 TOTAL 2735380 MEAN 7494 MAX 85300 MIN 780 CFSM 1.26 IN 17.14
WTR YR 1979 TOTAL 2969370 MEAN 8135 MAX 103000 MIN 878 CFSM 1.37 IN 18.61

POTOMAC RIVER BASIN

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March to September 1979.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	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)
MAR 29...	1300	13600	195	8.0	25.0	8.0	7.0	12.8	170	180
APR 25...	1345	4640	300	8.2	28.6	18.5	2.0	10.9	K2	K23
MAY 14...	1200	10600	260	8.2	--	23.0	5.0	--	--	--
17...	1330	9200	180	8.1	16.9	19.5	10	8.8	64	400
JUN 04...	1300	8240	240	8.1	23.9	21.5	5.0	--	1200	2500
12...	1330	9820	220	8.2	--	--	40	--	330	670
JUL 11...	1480	2070	360	8.5	25.6	23.2	3.0	10.2	K15	180
31...	1430	4050	325	7.9	31.0	26.0	5.0	8.7	120	K5
AUG 13...	1430	1950	365	8.2	25.0	24.5	7.0	8.7	K19	K19
27...	1400	2370	380	8.3	29.5	25.0	4.0	8.8	40	440
SEP 05...	1430	3310	270	8.1	23.5	25.5	20	7.2	710	880
DATE	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)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)
MAR 29...	73	34	22	4.4	4.1	11	.2	1.3	39	--
APR 25...	120	47	36	6.9	6.9	11	.3	1.6	71	--
MAY 14...	100	48	31	6.0	6.1	11	.3	1.7	54	--
17...	70	30	21	4.2	3.5	10	.2	1.6	40	--
JUN 04...	94	31	29	5.3	5.1	10	.2	1.7	63	1.0
12...	90	39	28	4.8	4.5	10	.2	1.7	51	--
JUL 11...	160	71	48	8.9	12	14	.4	2.3	86	--
31...	140	49	43	7.7	9.9	13	.4	2.2	90	--
AUG 13...	160	39	49	9.0	11	13	.4	2.4	120	1.5
27...	150	50	45	8.0	11	14	.4	2.7	95	.9
SEP 05...	120	40	36	6.2	7.4	12	.3	2.7	75	1.2
DATE	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 AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)
MAR 29...	28	6.4	.0	5.9	109	96	.15	4000	.94	.01
APR 25...	43	11	.1	2.0	157	150	.21	1970	.79	.02
MAY 14...	44	9.9	.1	2.8	146	134	.20	4180	.53	.05
17...	26	4.0	.0	5.9	106	90	.14	2630	.68	.05
JUN 04...	30	7.2	.1	6.0	128	122	.17	2850	.85	.01
12...	29	6.8	.1	5.2	125	111	.17	3310	.61	.04
JUL 11...	60	17	.1	3.7	258	204	.35	1440	.91	.04
31...	44	14	.1	5.9	199	181	.27	2180	.94	.01
AUG 13...	41	15	.1	4.5	241	204	.33	1270	.94	.08
27...	45	15	.1	3.9	223	188	.30	1430	1.0	.07
SEP 05...	31	9.9	.1	6.1	166	150	.23	1480	1.2	.15

POTOMAC RIVER BASIN

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01618000 POTOMAC RIVER AT SHEPHERDSTOWN, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)
MAR 29...	.01	.92	.93	.74	.19	1.9	8.3	.03	.09	.01
APR 25...	.02	.21	.23	.00	.29	1.0	4.5	.02	.06	.02
MAY 14...	.06	.22	.27	.00	.31	.80	3.5	.04	.12	.01
17...	.06	.24	.29	.02	.27	.97	4.3	.04	.12	.02
JUN 04...	.01	.42	.43	.01	.42	1.3	5.7	.09	.28	.04
12...	.05	.37	.41	.22	.19	1.0	4.5	.07	.21	.02
JUL 11...	.05	.38	.42	.00	.99	1.3	5.9	.04	.12	.02
31...	.01	.69	.70	.40	.30	1.6	7.3	.05	.15	.03
AUG 13...	.10	.76	.84	.59	.25	1.8	7.9	.05	.15	.03
27...	.08	.44	.51	.23	.28	1.5	6.7	.06	.18	.03
SEP 05...	.18	.29	.44	.14	.30	1.6	7.3	.09	.28	.04

DATE	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)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CO)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
MAR 29...	1	0	1	0	0	0	2	1	1	--
JUN 12...	3	1	2	100	50	50	1	1	0	20
SEP 05...	2	1	1	--	--	--	1	0	2	10

DATE	CHRO- MIUM, SUS- PENDED RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDED RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)
MAR 29...	--	20	1	0	1	4	3	1	620	610
JUN 12...	10	10	2	2	0	6	5	1	2200	2200
SEP 05...	0	10	1	1	0	4	3	1	810	730

DATE	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDED RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDED RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)
MAR 29...	10	6	3	3	50	20	30	<.5	.0	<.5
JUN 12...	0	9	8	1	110	110	5	<.5	.0	<.5
SEP 05...	80	9	8	1	90	90	3	<.5	.0	<.5

POTOMAC RIVER BASIN

01618000 POTOMAC RIVER AT SHEPHERDSTOWN, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDED TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDED RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDED RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
MAR 29...	0	0	0	0	0	0	50	40	10
JUN 12...	0	0	0	0	0	0	30	30	0
SEP 05...	0	0	0	0	0	0	20	10	10

DATE	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAR 29...	--	2.1	.6	510	--	--	--
APR 25...	1.9	--	--	--	8	100	100
MAY 14...	2.4	--	--	8800	14	401	88
17...	2.2	--	--	--	18	447	93
JUN 04...	3.2	--	--	--	67	1490	80
12...	--	4.7	1.0	590	78	2070	94
JUL 11...	7.0	--	--	33000	20	112	60
31...	4.4	--	--	--	15	164	100
AUG 13...	2.8	--	--	--	5	26	100
27...	--	--	--	--	14	90	78
SEP 05...	--	3.4	--	--	38	340	100

01618000 POTOMAC RIVER AT SHEPHERDSTOWN, WV--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO JULY 1979

DATE TIME	MAR 29,79 1300	MAY 14,79 1200	JUN 12,79 1330	JUL 11,79 1400
TOTAL CELLS/ML	510	8800	590	33000
DIVERSITY: DIVISION	1.0	0.1	1.7	1.8
..CLASS	1.0	0.1	1.7	1.8
..ORDER	1.9	1.0	1.8	2.0
...FAMILY	2.9	1.7	2.3	2.4
....GENUS	3.1	1.8	2.3	2.7

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
....MICRACTINIACEAE								
.....GOLENKINIA	--	-	--	-	--	-	590	2
.....MICHACTINIUM	--	-	--	-	52	9	3900	12
....OOCYSTACEAE								
.....ANKISTRODESMUS	--	-	--	-	--	-	980	3
.....KIRCHNERIELLA	5	1	70	1	--	-	--	-
.....SELENASTRUM	--	-	--	-	13	2	590	2
.....WESTELLA	--	-	--	-	--	-	1600	5
....SCENEDESMACEAE								
.....SCENEDESMUS	10	2	--	-	100#	17	790	2
.....TETRASTRUM	--	-	--	-	--	-	790	2
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	10	2	--	-	13	2	200	1
CHRYSTOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
....COSCINODISCACEAE								
.....CYCLOTELLA	180#	35	5700#	65	--	-	13000#	40
....MELOSIRA	20	4	--	-	--	-	--	-
..PENNALES								
...ACHNANTHACEAE								
.....ACHNANTHES	--	-	70	1	13	2	--	-
....COCCONEIS	--	-	70	1	--	-	--	-
...CYMBELLACEAE								
.....CYMBELLA	10	2	1300	14	--	-	--	-
....DIATOMACEAE								
.....DIATOMA	15	3	--	-	--	-	--	-
...FRAGILARIACEAE								
.....FRAGILARIA	15	3	--	-	--	-	--	-
....SYNEDRA	5	1	700	8	--	-	--	-
...GOMPHONEMACEAE								
.....GOMPHONEMA	60	12	70	1	--	-	--	-
...MERIDIONACEAE								
.....MERIDION	10	2	--	-	--	-	--	-
...NAVICULACEAE								
.....NAVICULA	60	12	560	6	--	-	--	-
...NITZSCHACEAE								
.....NITZSCHIA	30	6	210	2	120#	20	390	1
CRYPTOPHYTA (CRYPTOMONADS)								
..CRYPTOPHYCEAE								
...CRYPTOMONADALES								
....CRYPTOCHRYSIDACEAE								
.....CHROOMONAS	--	-	--	-	--	-	200	1
....CRYPTOMONADACEAE								
.....CRYPTOMONAS	--	-	70	1	26	4	2800	8
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
....CHROOCOCCACEAE								
.....ANACYSTIS	60	12	--	-	--	-	6900#	21
...HORMOGONALES								
....NOSTOCACEAE								
.....ANABAENA	15	3	--	-	--	-	--	-
...OSCILLATORIACEAE								
....OSCILLATORIA	--	-	--	-	260#	43	--	-
EUGLENOPHYTA (EUGLENOIDS)								
..EUGLENOPHYCEAE								
...EUGLENALES								
....EUGLENACEAE								
.....TRACHELOMONAS	5	1	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

01619000 ANTIETAM CREEK NEAR WAYNESBORO, PA

LOCATION.--Lat 39°42'59", long 77°36'28", Washington County, Md., Hydrologic Unit 02070004, on right bank 100 ft (30 m) upstream from highway bridge at Rocky Forge, 0.4 mi (0.6 km) downstream from Pennsylvania-Maryland State line, 0.7 mi (1.1 km) downstream from confluence of west and east branches, 1.9 mi (3.1 km) northeast of Leitersburg, Md., 2.5 mi (4.0 km) southwest of Waynesboro, Pa., and 36.6 mi (58.9 km) upstream from mouth.

DRAINAGE AREA.--93.5 mi² (242.2 km²).

PERIOD OF RECORD.--May 1948 to September 1951, October 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 536.59 ft (163.553 m) National Geodetic Vertical Datum of 1929. May 1948 to September 1951, nonrecording gage and crest-stage gage 100 ft (30 m) downstream at present datum.

REMARKS.--Records good except those for period of no gage-height record, Feb. 10 to May 8, which are fair. Occasional regulation from mills above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--17 years (water years 1949-51, 1966-79), 120 ft³/s (3.398 m³/s), 17.43 in/yr (443 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,430 ft³/s (154 m³/s) June 22, 1972, gage height, 12.33 ft (3.758 m), from rating curve extended above 2,700 ft³/s (76.5 m³/s); minimum daily, 11 ft³/s (0.31 m³/s) Jan. 30, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 850 ft³/s (24 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	1745	882 25.0	5.47 1.667	Mar. 6	Unknown	Unknown	Unknown
Jan. 24	1915	*3700 105	10.20 3.109	Sept. 6	0445	3210 90.9	9.54 2.908
Feb. 26	Unknown	Unknown	Unknown	Sept. 22	0145	1140 32.3	6.03 1.838

Minimum discharge, 32 ft³/s (0.91 m³/s) Nov. 9, 10, 11, 12, 13, 15, 22, 26, 27, gage height, 3.12 ft (0.951 m).

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	42	36	44	74	185	400	160	125	129	82	59	47
2	42	35	40	239	160	340	180	120	125	77	61	47
3	41	35	40	141	151	320	180	115	196	72	83	55
4	44	35	58	102	144	290	190	120	190	81	58	51
5	43	35	47	94	130	350	210	125	146	83	53	238
6	43	35	41	89	121	580	200	120	140	70	52	1510
7	41	35	38	104	124	420	190	115	128	67	50	291
8	39	34	47	184	121	340	180	110	120	64	66	174
9	39	34	150	127	113	300	190	106	115	64	64	135
10	39	34	99	113	105	320	220	103	118	63	62	116
11	39	34	72	103	100	350	190	103	117	64	60	105
12	38	34	64	95	98	300	180	113	107	62	110	98
13	54	34	56	95	96	280	175	118	100	61	78	107
14	75	34	49	103	96	270	180	122	96	63	60	141
15	45	35	47	90	98	250	190	106	93	64	57	127
16	43	40	46	84	100	230	175	107	91	86	55	89
17	44	42	45	81	92	210	165	97	92	71	53	79
18	42	52	44	79	86	190	160	94	93	61	53	80
19	41	44	43	69	82	185	155	110	86	59	53	77
20	40	42	43	87	90	180	155	104	83	58	52	77
21	38	35	49	567	94	175	150	97	82	59	93	280
22	38	34	46	252	105	170	145	95	81	58	70	636
23	38	40	43	168	125	160	140	129	78	58	60	281
24	36	42	51	1550	520	170	135	254	75	62	59	208
25	37	40	126	989	1000	260	135	216	75	66	55	171
26	39	34	74	422	1500	220	130	191	72	65	55	152
27	43	37	69	313	600	200	135	170	71	58	52	145
28	38	41	54	266	450	190	145	170	70	59	51	140
29	35	43	50	229	---	180	135	159	70	61	50	132
30	35	51	50	229	---	170	130	140	82	63	49	124
31	35	---	52	204	---	165	---	131	---	56	48	---
TOTAL	1286	1136	1777	7342	6686	8165	5005	3985	3121	2037	1881	5913
MEAN	41.5	37.9	57.3	237	239	263	167	129	104	65.7	60.7	197
MAX	75	52	150	1550	1500	580	220	254	196	86	110	1510
MIN	35	34	38	69	82	160	130	94	70	56	48	47
CFSM	.44	.41	.61	2.54	2.56	2.81	1.79	1.38	1.11	.70	.65	2.11
IN.	.51	.45	.71	2.92	2.66	3.25	1.99	1.59	1.24	.81	.75	2.35

CAL YR 1978 TOTAL 42876 MEAN 117 MAX 985 MIN 34 CFSM 1.25 IN 17.06
WTR YR 1979 TOTAL 48334 MEAN 132 MAX 1550 MIN 34 CFSM 1.41 IN 19.23

01619500 ANTIETAM CREEK NEAR SHARPSBURG, MD

LOCATION.--Lat 39°27'01", long 77°43'52", Washington County, Hydrologic Unit 02070004, on left bank 400 ft (120 m) downstream from Burnside Bridge, 1.0 mi (1.6 km) southeast of Sharpsburg, and 4.0 mi (6.4 km) upstream from mouth.

DRAINAGE AREA.--281 mi² (728 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1897 to September 1905, August 1928 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 192: 1897-1905. WSP 726: Drainage area. WSP 1432: 1929-31(M), 1933, 1935(M), 1937(M), 1949(M), 1952(M).

GAGE.--Water-stage recorder. Concrete control since Mar. 29, 1934. Datum of gage is 311.05 ft (94.793 m) National Geodetic Vertical Datum of 1929. June 24, 1897, to Aug. 25, 1905, nonrecording gage a few hundred feet downstream from Middle Bridge, 1.2 mi (1.9 km) upstream at datum 12 ft (3.7 m) higher. Aug. 21, 1928, to July 13, 1933, nonrecording gage at Burnside Bridge, 0.1 mi (0.2 km) upstream at present datum.

REMARKS.--Water-discharge records good. Some diurnal fluctuation caused by powerplant above station. Since 1928 records include pumpage from the Potomac River for municipal supply of Hagerstown. This water later enters Antietam Creek above station as sewage.

AVERAGE DISCHARGE.--56 years (water years 1898-1903, 1905, 1931-79), 276 ft³/s (7.816 m³/s), 13.34 in/yr (339 mm/yr), adjusted for inflow since January 1930.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,600 ft³/s (357 m³/s) July 20, 1956, gage height, 16.73 ft (5.099 m); minimum, 9.4 ft³/s (0.266 m³/s) Nov. 22, 1957, result of regulation caused by construction work above station; minimum daily, 37 ft³/s (1.05 m³/s) Jan. 30, 1966.

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. 21	1915	2270 64.3	6.58 2.006	Mar. 6	0045	1880 53.2	6.00 1.829
Jan. 25	0900	*5470 155	10.39 3.167	Sept. 6	2030	3310 93.7	7.95 2.423
Feb. 26	0315	4480 127	9.32 2.841	Sept. 22	1330	1750 49.6	5.81 1.771

Minimum discharge, 107 ft³/s (3.03 m³/s) Nov. 12, 13, 22, 23, 26, gage height, 2.38 ft (0.725 m).

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	126	113	140	210	543	1130	482	363	350	241	163	140
2	125	112	128	546	496	1080	527	351	340	226	167	137
3	126	110	120	618	467	1050	531	345	363	211	182	135
4	131	111	151	388	447	997	563	356	454	218	182	148
5	131	111	158	350	423	1320	610	371	387	249	157	174
6	127	111	139	318	389	1760	591	362	351	213	149	2160
7	125	113	124	318	393	1320	553	334	334	197	146	1090
8	122	112	130	463	383	1090	538	325	317	190	149	489
9	120	111	276	433	364	944	557	321	305	185	169	381
10	121	110	394	359	338	860	664	313	303	186	174	327
11	121	111	236	331	325	923	581	305	305	185	174	297
12	120	110	198	307	315	793	542	325	299	182	226	275
13	132	110	181	300	310	725	533	336	278	178	259	262
14	255	110	167	309	310	704	539	380	269	181	189	278
15	169	112	156	308	313	673	552	326	261	179	167	364
16	135	126	150	273	316	622	520	317	256	179	159	270
17	134	128	145	265	295	593	496	301	269	228	154	237
18	131	139	141	255	270	569	478	283	276	184	151	226
19	127	136	141	237	260	547	463	284	253	172	153	218
20	123	121	141	247	290	533	449	296	240	170	169	213
21	121	117	160	1460	299	514	434	289	233	175	184	286
22	121	111	147	1220	333	494	420	280	234	167	224	1330
23	118	109	139	617	395	476	412	283	230	163	179	730
24	116	125	141	2430	1730	501	403	497	222	216	197	548
25	115	115	367	3930	2730	766	397	544	217	187	165	470
26	116	111	284	1240	4090	664	392	543	213	226	157	421
27	123	115	220	909	1770	589	412	462	209	180	153	392
28	120	132	202	808	1240	549	428	441	203	174	150	375
29	117	128	180	706	---	521	398	434	221	177	150	361
30	113	151	172	635	---	507	374	388	213	178	174	342
31	114	---	176	583	---	491	---	363	---	172	145	---
TOTAL	3995	3531	5604	21373	19034	24305	14839	11118	8405	5969	5317	13076
MEAN	129	118	181	689	708	784	495	359	280	193	172	436
MAX	255	151	394	3930	4090	1760	664	544	454	249	259	2160
MIN	113	109	120	210	260	476	374	280	203	163	145	135
(*)	-13.8	-13.9	-11.5	-8.2	-8.0	-7.4	-6.5	-6.9	-8.1	-12.1	-12.8	-11.3
MEAN*	115	104	170	681	700	777	488	352	272	181	159	425
CFSM*	.41	.37	.60	2.42	2.49	2.77	1.74	1.25	.97	.64	.57	1.51
IN*	.47	.41	.69	2.79	2.59	3.19	1.94	1.44	1.08	.74	.66	1.68

CAL YR 1978 TOTAL 126470 MEAN 346 MAX 2000 MIN 109 MEAN* 331 CFSM* 1.18 IN* 16.03
WTR YR 1979 TOTAL 137366 MEAN 376 MAX 4090 MIN 109 MEAN* 366 CFSM* 1.30 IN* 17.69

* Pumpage in cubic feet per second, from Potomac River for municipal supply of Hagerstown.

* Adjusted for pumpage.

POTOMAC RIVER BASIN

01619500 ANTIETAM CREEK NEAR SHARPSBURG, MD--Continued

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

				STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MMOS)	PH	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)		
DATE		TIME				(UNITS)				
OCT 26...		1400		115	570	8.4	19.5	12.0		
DEC 14...		1430		166	540	8.3	--	3.5		
FEB 01...		1245		538	485	8.1	.5	4.0		
MAR 20...		1145		533	440	8.2	10.0	9.5		
MAY 08...		1355		323	430	8.3	27.0	20.0		

DATE	COLOR (PLAT- INUM- COBALT UNITS)	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)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HC03)
DEC 14...	5	220	42	66	14	12	10	.4	3.8	220
MAR 20...	50	210	43	63	12	7.3	7	.2	2.7	200

DATE	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SI02)	SOLIDS, 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)
DEC 14...	180	1.8	34	21	.2	9.4	296	269	.40
MAR 20...	160	2.0	27	14	.2	6.4	254	231	.35

DATE	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	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- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
DEC 14...	133	4.0	.29	180	140	40	0	0	0
MAR 20...	366	3.8	.12	320	310	10	20	20	3

POTOMAC RIVER BASIN

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01636500 SHENANDOAH RIVER AT MILLVILLE, WV

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

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

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 of 1929. Apr. 15, 1895, to Mar. 31, 1909, nonrecording gage at site 0.8 mi (1.3 km) downstream at datum 0.32 ft (0.098 m) higher.

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

AVERAGE DISCHARGE.--64 years (water years 1896-1908, 1929-79), 2,684 ft³/s (76.01 m³/s), 11.99 in/yr (305 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)
Jan. 22	2315	20200 572	9.79 2.984	Mar. 7	0715	20200 572	9.81 2.990
Jan. 25	2200	22800 646	10.39 3.167	June 5	0700	20900 592	9.98 3.042
Feb. 26	1300	*54200 1530	16.03 4.886	Sept. 7	1300	41100 1160	13.93 4.246

Minimum discharge, 577 ft³/s (16.34 m³/s) Nov. 24, gage height, 1.51 ft (0.460 m).

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	751	640	1000	1570	4130	14400	4760	4410	3820	1560	1270	1820
2	740	641	1020	1930	3600	11100	4470	3870	3930	1600	1260	1540
3	731	642	970	4320	3220	9480	4250	3540	4340	1560	1270	1430
4	737	637	981	5450	2960	8240	4820	3160	12900	1570	1150	1240
5	755	652	958	4930	2700	7870	5470	2980	19800	1650	1070	2290
6	808	641	1070	3800	2600	12300	5560	2920	13800	1650	993	9380
7	745	638	1010	3190	2460	19100	5270	2830	9020	1450	945	35300
8	728	640	1020	3150	2380	13900	4900	2600	6750	1400	958	17400
9	718	639	1220	3970	2200	10200	4610	2420	5430	1290	963	8990
10	705	642	2360	4670	2100	8400	4520	2290	4580	1250	771	6400
11	656	636	2490	4290	1920	7520	4340	2150	5560	1250	882	4910
12	691	653	2630	3490	1900	6960	3960	2050	5360	1250	958	3830
13	711	650	2300	3160	1800	6280	3600	2920	4940	1240	1360	3130
14	658	657	1820	2710	1700	5630	3490	6170	3950	1540	1440	2790
15	681	681	1610	2540	1700	5240	3670	9730	3400	1340	1630	2900
16	715	659	1320	2500	1800	4790	3810	7340	3030	1170	1420	3910
17	706	724	1270	2270	2000	4340	3720	5810	2950	1350	1130	3390
18	702	742	1220	2140	2600	3980	3600	4780	3190	1440	982	2870
19	711	754	1050	2020	4300	3730	3390	4050	3020	1390	948	2520
20	694	748	1100	2030	3290	3500	3190	3630	2800	1570	952	2220
21	688	776	940	3260	2860	3360	2980	3320	2370	1290	1040	2150
22	683	777	993	13100	2800	3190	2840	3060	2190	1240	1170	3190
23	671	753	965	17500	3600	3030	2720	2810	2090	1220	1120	15600
24	647	712	978	12800	7390	3100	2620	2870	2070	1270	2270	14500
25	638	674	1460	20600	24600	7730	2560	3480	1920	1290	1380	9740
26	650	668	2390	17500	50600	12100	2530	6260	1840	1360	1200	7210
27	669	697	2590	10500	45300	11200	2720	8010	1780	1710	1130	5780
28	626	729	2430	7780	23100	8300	3310	6180	1730	1820	1590	4800
29	656	787	2020	6360	---	6700	4490	5110	1640	1610	1650	4080
30	646	851	1770	5440	---	5760	4830	4380	1540	1460	1960	3510
31	626	---	1630	4730	---	5120	---	3680	---	1390	1950	---
TOTAL	21543	20740	46585	183700	211610	236550	117000	128810	141740	44180	38812	188820
MEAN	695	691	1503	5926	7558	7631	3900	4155	4725	1425	1252	6294
MAX	808	851	2630	20600	50600	19100	5560	9730	19800	1820	2270	35300
MIN	626	636	940	1570	1700	3030	2530	2050	1540	1170	771	1240
CFSM	.23	.23	.49	1.95	2.49	2.51	1.28	1.37	1.55	.47	.41	2.07
IN.	.26	.25	.57	2.25	2.59	2.89	1.43	1.58	1.73	.54	.47	2.31

CAL YR 1978 TOTAL 1225426 MEAN 3357 MAX 41600 MIN 626 CFSM 1.10 IN 15.00
WTR YR 1979 TOTAL 1380090 MEAN 3781 MAX 50600 MIN 626 CFSM 1.24 IN 16.89

POTOMAC RIVER BASIN

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March to September 1979.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	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)
MAR 29...	1030	6680	205	8.2	21.5	8.0	10	11.6	220	670
APR 25...	1100	2540	410	8.6	24.5	18.5	3.0	10.3	K9	K11
MAY 14...	1430	7550	340	8.2	--	23.0	25	--	--	--
17...	1100	5900	270	8.1	16.7	18.0	20	8.3	510	670
JUN 04...	1100	11800	275	8.2	20.4	19.6	3.0	--	1700	8900
12...	1030	5230	290	8.1	--	21.0	40	--	1000	440
JUL 11...	1030	1260	420	8.7	24.2	23.5	2.0	10.0	47	640
31...	1045	1400	520	8.6	28.5	25.5	3.0	10.2	120	K12
AUG 13...	1130	1530	450	8.7	22.0	21.5	20	9.1	400	260
27...	1130	1400	440	8.7	28.8	26.0	15	9.0	160	370
SEP 05...	1130	2460	440	8.8	24.5	27.0	15	7.2	230	280

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)
MAR 29...	76	21	22	5.1	7.6	18	.4	1.3	55	--
APR 25...	130	29	37	9.0	15	20	.6	1.7	100	--
MAY 14...	130	21	37	9.4	14	19	.5	1.9	110	--
17...	99	21	28	7.1	11	19	.5	2.8	78	--
JUN 04...	110	16	30	7.3	13	21	.6	1.9	89	1.1
12...	120	27	36	7.6	7.7	12	.3	2.4	94	--
JUL 11...	160	28	40	14	27	27	.9	2.4	130	--
31...	200	50	57	14	36	28	1.1	2.8	150	--
AUG 13...	170	31	47	13	37	32	1.2	2.7	140	.5
27...	170	29	48	12	26	25	.9	2.8	140	.5
SEP 05...	160	33	47	11	29	28	1.0	3.0	130	.4

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)
MAR 29...	25	4.3	.0	6.4	110	105	.15	1980	.86	.05
APR 25...	42	9.2	.1	1.2	184	175	.25	1260	.82	.02
MAY 14...	39	8.4	.1	4.1	189	180	.26	3850	1.0	.15
17...	29	6.0	.0	6.7	154	138	.21	2450	1.4	.23
JUN 04...	36	6.6	.1	7.1	157	156	.21	5000	1.1	.03
12...	25	6.6	.1	6.7	164	149	.22	2320	1.4	.07
JUL 11...	62	14	.1	.5	263	238	.36	895	.57	.10
31...	84	16	.1	6.2	323	306	.44	1220	1.1	.03
AUG 13...	84	17	.1	6.4	299	291	.41	1240	.26	.01
27...	66	15	.1	5.0	281	259	.38	1060	.87	.13
SEP 05...	61	14	.1	5.0	264	255	.36	1750	2.6	.15

01636500 SHENANDOAH RIVER AT MILLVILLE, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P04)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)
MAR 29...	.06	.25	.30	.00	.45	1.2	5.1	.08	.25	.06
APR 25...	.02	.33	.35	.12	.23	1.2	5.2	.06	.18	.06
MAY 14...	.18	.76	.91	.53	.38	1.9	8.5	.19	.58	.08
17...	.28	.62	.85	.23	.62	2.3	10	.20	.61	.14
JUN 04...	.04	1.7	1.7	1.4	.30	2.8	12	.22	.67	.09
12...	.08	.88	.95	.35	.60	2.4	10	.16	.49	.09
JUL 11...	.12	.84	.94	.67	.27	1.5	6.7	.08	.25	.01
31...	.04	.97	1.0	.71	.29	2.1	9.3	.21	.64	.09
AUG 13...	.01	1.2	1.2	.86	.34	1.5	6.5	.15	.46	.05
27...	.16	.82	.95	.52	.43	1.8	8.1	.18	.55	.10
SEP 05...	.18	.80	.95	.45	.50	3.6	16	.20	.61	.11

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA)	BARIIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
MAR 29...	1	0	1	0	0	0	1	0	1	30
JUN 12...	3	0	3	100	60	40	1	0	1	20
SEP 05...	2	1	1	100	60	40	1	0	3	10

DATE	CHRO- MIUM, SUS- PENDED RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDED RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)
MAR 29...	10	20	1	0	1	4	3	1	640	610
JUN 12...	10	10	1	0	2	10	7	3	1400	1400
SEP 05...	0	10	1	1	0	4	3	1	640	610

DATE	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDED RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDED RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)
MAR 29...	30	19	17	2	40	40	5	.5	.0	.5
JUN 12...	0	10	8	2	100	100	5	<.5	.0	<.5
SEP 05...	30	8	8	0	70	70	5	<.5	.0	<.5

POTOMAC RIVER BASIN

01636500 SHENANDOAH RIVER AT MILLVILLE, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDED TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDED RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDED RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
MAR 29...	0	0	0	0	0	0	60	50	10
JUN 12...	0	0	0	0	0	0	90	60	30
SEP 05...	0	0	0	0	0	0	30	0	30

DATE	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAR 29...	--	2.7	.7	1400	--	--	--
APR 25...	3.4	--	--	--	7	48	100
MAY 14...	4.1	--	--	12000	163	3320	94
17...	4.4	--	--	--	61	972	97
JUN 04...	6.1	--	--	--	169	5380	91
12...	--	2.5	.6	2400	69	974	100
JUL 11...	4.2	--	--	55000	20	68	65
31...	5.6	--	--	--	28	106	100
AUG 13...	11	--	--	--	26	107	100
27...	--	--	--	--	20	76	100
SEP 05...	--	3.2	1.7	--	39	259	95

POTOMAC RIVER BASIN

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01636500 SHENANDOAH RIVER AT MILLVILLE, WV--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO JULY 1979

DATE TIME	MAR 29,79 1030	MAY 14,79 1430	JUN 12,79 1030	JUL 11,79 1030
TOTAL CELLS/ML	1400	12000	2400	55000
DIVERSITY: DIVISION	1.2	1.0	1.5	0.9
..CLASS	1.2	1.0	1.5	0.9
...ORDER	1.9	2.0	2.1	1.3
....FAMILY	2.8	2.5	2.3	2.2
.....GENUS	2.9	2.8	2.4	3.0

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
....CHLOROCOCCACEAE								
.....CHLOROCOCCUM	--	-	--	-	--	-	720	1
....HYDRODICTYACEAE								
...PEDIASTRUM	300#	21	--	-	--	-	--	-
...MICRACTINIACEAE								
....GOLENKINIA	--	-	--	-	13	1	480	1
...OOCYSTACEAE								
....ANKISTRODESMUS	--	-	2200#	18	64	3	900	7
....CHODATELLA	--	-	130	1	--	-	*	0
....DICTYOSPHAERIUM	--	-	--	-	--	-	960	2
....KIRCHNERIELLA	--	-	--	-	26	1	3600	7
...OOCYSTIS	--	-	320	3	--	-	1900	3
...SELENASTRUM	--	-	130	1	--	-	5800	10
...TETRAEDRON	--	-	--	-	--	-	480	1
...TREUBARIA	--	-	--	-	26	1	*	0
...SCENEDESMACEAE								
....SCENEDESMUS	56	4	2300#	19	590#	24	22000#	40
...TETRASTRUM	--	-	--	-	--	-	960	2
...TETRASPORALES								
...PALMELLACEAE								
....SPHAEROCYSTIS	--	-	4100#	33	--	-	1900	3
...VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	47	3	--	-	52	2	720	1
...ZYGNETALES								
...DESMIDIACEAE								
....SPONDYLIUM	--	-	130	1	--	-	--	-
CHRYSOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	220#	15	1200	9	220	9	4100	7
....MELOSIRA	19	1	--	-	--	-	--	-
....STEPHANODISCUS	--	-	--	-	26	1	--	-
...PENNALES								
...ACHNANTHACEAE								
....COCCONEIS	38	3	65	1	--	-	--	-
...CYMBELLACEAE								
....CYMBELLA	9	1	--	-	--	-	--	-
...DIATOMACEAE								
....DIATOMA	19	1	--	-	--	-	--	-
...GOMPHONEMACEAE								
....GOMPHONEMA	9	1	--	-	--	-	--	-
...NAVICULACEAE								
....NAVICULA	490#	34	900	7	--	-	*	0
...NITZSCHACEAE								
....NITZSCHIA	75	5	450	4	90	4	480	1
...SURIPELLACEAE								
....SURIPELLA	66	5	--	-	--	-	--	-

Continued

POTOMAC RIVER BASIN

01636500 SHENANDOAH RIVER AT MILLVILLE, WV--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO JULY 1979

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CRYPTOPHYTA (CRYPTOMONADS)								
..CRYPTOPHYCEAE								
...CRYPTOMONADALES								
....CRYPTOMONADACEAE								
.....CRYPTOMONAS	--	-	--	-	39	2	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
....CHROOCOCCACEAE								
.....ANACYSTIS	--	-	--	-	240	10	6200	11
...HORMOGONALES								
....NOSTOCACEAE								
.....ANABAENA	75	5	390	3	--	-	--	-
...OSCILLATORIACEAE								
....OSCILLATORIA	--	-	--	-	1000#	43	--	-
EUGLENOPHYTA (EUGLENOIDS)								
..EUGLENOPHYCEAE								
...EUGLENALES								
....EUGLENACEAE								
.....TRACHELOMONAS	9	1	65	1	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
 * - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

POTOMAC RIVER BASIN

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01637500 CATOCTIN CREEK NEAR MIDDLETOWN, MD

LOCATION.--Lat 39°25'35", long 77°33'25", Frederick County, Hydrologic Unit 02070008, on right bank 300 ft (91 m) downstream from bridge on State Highway 17, 1.3 mi (2.1 km) south of Middletown, 2.2 mi (3.5 km) downstream from Little Catoctin Creek, and 14.8 mi (23.8 km) upstream from mouth.

DRAINAGE AREA.--66.9 mi² (173.3 km²).

PERIOD OF RECORD.--August 1947 to current year.

REVISED RECORDS.--WSP 1432: 1947-48. WDR MD-DE-77-1: 1960(M), 1965(M), 1970(M), 1972(P), 1975(P).

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 385 ft (117.3 m), from topographic map.

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

AVERAGE DISCHARGE.--32 years, 76.7 ft³/s (2.172 m³/s), 15.57 in/yr (395 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,000 ft³/s (340 m³/s) Oct. 9, 1976, gage height, 14.13 ft (4.307 m), from rating curve extended above 2,600 ft³/s (73.6 m³/s) on basis of slope-area measurement of peak flow; no flow Aug. 27 to Sept. 12, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	0330	1200 34.0	4.52 1.378	Feb. 26	0030	2920 82.7	6.75 2.057
Jan. 24	1630	4500 127	8.39 2.557	Sept. 6	0530	*5030 142	8.89 2.710
Feb. 24	2200	1900 53.8	5.52 1.682	Sept. 22	0130	1470 41.6	4.93 1.503

Minimum discharge, 4.0 ft³/s (0.11 m³/s) Oct. 1, 22, 24, gage height, 1.51 ft (0.460 m).

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	4.3	6.1	24	135	110	346	113	60	100	29	13	10
2	4.5	5.7	16	611	94	367	128	56	86	27	34	9.3
3	4.4	5.8	14	296	80	333	149	56	85	22	47	9.4
4	6.1	6.1	47	204	69	312	160	65	110	24	20	11
5	6.8	6.2	49	147	62	711	164	69	77	35	13	300
6	7.6	6.1	27	126	57	748	143	57	69	23	11	1930
7	6.5	6.1	19	135	55	483	128	52	62	19	9.5	242
8	5.5	6.1	22	239	53	383	124	49	55	17	12	148
9	4.8	6.1	207	136	50	303	184	46	51	16	12	108
10	4.8	6.1	141	114	47	262	221	43	48	16	21	84
11	4.8	6.1	64	94	46	299	174	41	48	17	19	70
12	4.6	6.4	48	76	46	221	163	39	43	16	32	60
13	6.5	6.3	40	96	54	194	151	63	38	15	39	52
14	19	6.8	34	118	50	184	165	83	35	18	18	58
15	11	8.4	28	81	47	160	141	55	33	23	13	70
16	7.2	13	27	79	45	136	124	72	31	16	11	43
17	6.7	16	24	65	38	127	114	50	51	15	9.9	37
18	6.2	25	22	57	35	120	103	45	54	14	9.7	34
19	5.9	17	21	38	39	110	94	51	35	13	11	32
20	5.6	11	21	65	45	101	89	54	30	13	11	28
21	5.1	8.9	43	924	46	94	82	48	29	15	38	128
22	4.3	8.1	36	371	81	88	78	47	29	14	41	612
23	5.5	8.2	26	217	132	82	75	108	27	13	26	188
24	4.6	8.9	37	2220	930	142	71	236	25	11	32	131
25	4.6	9.4	244	676	1310	313	69	228	24	11	20	106
26	5.3	8.6	97	343	1170	204	72	200	22	14	17	89
27	6.1	11	70	266	448	173	103	164	20	13	15	77
28	6.8	14	51	231	374	153	80	161	20	15	13	68
29	8.4	21	49	182	---	138	74	143	28	30	12	65
30	7.3	34	48	151	---	126	66	115	22	22	12	58
31	5.7	---	47	131	---	118	---	103	---	16	12	---
TOTAL	196.5	308.5	1643	8624	5613	7531	3602	2659	1387	562	604.1	4857.7
MEAN	6.34	10.3	53.0	278	200	243	120	85.8	46.2	18.1	19.5	162
MAX	19	34	244	2220	1310	748	221	236	110	35	47	1930
MIN	4.3	5.7	14	38	35	82	66	39	20	11	9.5	9.3
CFSM	.10	.15	.79	4.16	2.99	3.63	1.79	1.28	.69	.27	.29	2.42
IN.	.11	.17	.91	4.80	3.12	4.19	2.00	1.48	.77	.31	.34	2.70
CAL YR 1978	TOTAL	31739.0	MEAN	87.0	MAX	2120	MIN	4.3	CFSM	1.30	IN	17.65
WTR YR 1979	TOTAL	37587.8	MEAN	103	MAX	2220	MIN	4.3	CFSM	1.54	IN	20.90

POTOMAC RIVER BASIN

01638500 POTOMAC RIVER AT POINT OF ROCKS, MD

LOCATION.--Lat 39°16'25", long 77°32'35", Frederick County, Hydrologic Unit 02070008, on left bank at downstream side of bridge on U.S. Highway 15 at Point of Rocks, 0.3 mi (0.5 km) downstream from Catoctin Creek (Virginia), 6 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 October 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. Low flow affected slightly since 1913 by Stony River Reservoir (see station 01595200) and since December 1950 by Savage River Reservoir (see station 01597500). Low flow affected extensively at times by run-of-the-river hydroelectric plants. Gage-height telemeter at station.

AVERAGE DISCHARGE.--84 years, 9,362 ft³/s (265.1 m³/s), 13.17 in/yr (335 mm/yr).

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

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

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 3 or 4	Unknown	Unknown	Unknown	Mar. 7	1000	81100 2300	15.36 4.682
Jan. 23	0230	63100 1790	13.01 3.965	Mar. 26	1830	43600 1230	10.13 3.088
Jan. 25	2330	96900 2740	17.29 5.270	May 27	0600	35600 1010	8.81 2.685
Feb. 27	0730	*178000 5040	25.94 7.907	Sept. 7	1700	87800 2490	16.19 4.935

Minimum discharge, 1,580 ft³/s (44.7 m³/s) Nov. 12, gage height, 0.97 ft (0.296 m).

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	1820	1640	3230	7920	13200	56400	14300	14900	12400	4240	4860	6780
2	1790	1710	4570	11400	11900	46900	13800	13300	13200	4940	4480	5200
3	1760	1690	4290	27500	10300	44500	18800	11800	12700	5280	4360	4440
4	1780	1660	4350	35500	9170	44700	23900	10800	19600	5110	4030	4490
5	1860	1630	4290	25100	9130	46800	27100	10300	28500	4800	3780	6180
6	1920	1620	6430	18300	8240	65600	30500	10500	25700	5330	3490	23000
7	1900	1620	8360	15000	7100	78200	26300	10700	19800	6080	3100	74400
8	1810	1610	7370	13700	7270	58600	21600	10200	15400	5820	2890	53000
9	1780	1620	7080	16300	6000	43100	18800	9380	12400	4760	2950	27000
10	1750	1630	11200	17200	5000	34900	17900	8670	10700	4110	2730	18300
11	1700	1610	17900	16100	4500	31100	16800	8020	13300	3770	2780	13700
12	1650	1610	15600	13700	4100	27500	15000	7660	18900	3570	2820	10900
13	1720	1640	11800	11200	4100	23900	13500	9510	15900	3530	3400	9240
14	1820	1630	9700	10200	4300	21000	12600	16700	12100	3880	4140	8050
15	1930	1730	8120	9760	4500	18600	12400	22700	9960	4240	5360	7620
16	1950	1820	6780	9000	4600	16800	12300	20900	8490	4420	5140	8400
17	1940	1890	5830	8270	4600	15400	11900	16500	7890	6570	4220	7990
18	1910	2080	5200	7620	4400	13900	11300	13500	7950	7820	3480	6970
19	1920	2140	4600	7380	4200	12800	10700	11300	7940	6660	3160	6230
20	1900	2450	4420	7470	4000	12000	10100	9990	7100	5790	3240	5560
21	1850	2690	4220	14300	4800	11300	9550	9120	6310	6040	3220	5440
22	1820	2660	4120	35500	6000	10600	9000	8420	5770	5460	3360	11100
23	1760	2450	6730	57900	7200	10000	8600	7960	5470	6220	3940	23700
24	1720	2350	9580	48000	10000	9890	8240	8830	5250	5070	5240	28900
25	1640	2170	9890	78000	91800	16100	7970	13500	4930	4650	4540	25200
26	1660	2020	17100	72500	161000	40800	8020	22500	4780	4550	4030	19100
27	1670	2100	18600	38600	172000	37700	8250	33300	4540	4990	4230	14800
28	1640	2170	14700	27700	103000	28000	10800	24900	4260	5800	4430	12000
29	1630	2270	11700	22600	---	23000	15300	19800	4070	5900	4250	10300
30	1650	2530	9380	18600	---	18500	16500	16700	3890	4960	6260	9080
31	1640	---	7760	15600	---	16200	---	14300	---	4780	8620	---
TOTAL	55290	58440	264900	717920	686410	934790	441830	426660	329200	159140	126530	467070
MEAN	1784	1948	8545	23160	24510	30150	14730	13760	10970	5134	4082	15570
MAX	1950	2690	18600	78000	172000	78200	30500	33300	28500	7820	8620	74400
MIN	1630	1610	3230	7380	4000	9890	7970	7660	3890	3530	2730	4440
CFSM	.19	.20	.89	2.40	2.54	3.12	1.53	1.43	1.14	.53	.42	1.61
IN.	.21	.23	1.02	2.77	2.65	3.60	1.70	1.64	1.27	.61	.49	1.80
CAL YR 1978	TOTAL	4286980	MEAN	11750	MAX	133000	MIN	1610	CFSM	1.22	IN	16.52
WTR YR 1979	TOTAL	4668180	MEAN	12790	MAX	172000	MIN	1610	CFSM	1.33	IN	17.99

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, 31.0°C Aug. 14 and 25; minimum daily, river was ice covered on many days during winter periods.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 876 mg/L Feb. 26; minimum daily mean, 3 mg/L Oct. 11, 16, 18.

SEDIMENT LOADS: Maximum daily, 400,000 tons (364,000 tonnes) Feb. 27; minimum daily, 14 tons (13 tonnes) Oct. 11.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	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)
OCT												
31...	1130	1610	560	8.9	14.0	12.5	20	220	69	62	15	30
NOV												
30...	1100	2530	555	8.5	9.5	6.5	20	200	70	59	13	33
FEB												
01...	1400	13200	240	8.2	.5	1.5	0	100	32	30	6.2	6.0
MAR												
14...	1130	20900	240	8.2	12.0	7.5	5	91	36	27	5.7	4.5
MAY												
01...	1215	14900	265	8.5	18.5	14.5	5	100	38	30	6.8	8.0
JUN												
01...	1115	13200	220	7.9	22.5	19.0	10	81	21	24	5.1	6.1
JUL												
16...	1110	4300	360	8.4	26.5	26.0	5	150	46	43	11	17
AUG												
29...	0930	4180	405	8.4	23.5	24.5	5	160	43	45	11	21

DATE	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)
OCT												
31...	23	.9	3.0	180	150	.4	84	28	.1	.2	324	311
NOV												
30...	26	1.0	3.4	160	130	.8	90	27	.1	2.3	332	307
FEB												
01...	11	.3	1.8	83	68	.8	29	7.8	.1	6.9	146	129
MAR												
14...	10	.2	1.5	67	55	.7	30	7.3	.1	7.1	131	116
MAY												
01...	14	.3	1.7	79	65	.4	38	9.6	.1	3.4	160	137
JUN												
01...	14	.3	1.7	73	60	1.5	28	6.0	.1	6.9	136	114
JUL												
16...	19	.6	2.6	130	110	.8	54	13	.1	2.3	242	207
AUG												
29...	22	.7	2.7	140	110	.9	53	17	.1	4.1	242	223

POTOMAC RIVER BASIN

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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- 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 31...	.44	1410	.88	.09	.28	140	130	10	30	30	0
NOV 30...	.45	2270	1.2	.13	.40	170	150	20	20	0	20
FEB 01...	.20	5200	1.5	.06	.18	550	480	70	50	20	30
MAR 14...	.18	7390	1.3	.05	.15	1000	950	50	70	30	40
MAY 01...	.22	6440	.83	.04	.12	440	420	20	30	30	4
JUN 01...	.19	4850	1.0	.07	.21	1200	1200	20	70	60	8
JUL 16...	.33	2810	.62	.08	.25	610	610	0	80	80	5
AUG 29...	.33	2730	.85	.12	.37	760	760	0	80	70	10

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
JAN 26...	0930	77800	2.0	188	39500	43	54	66
FEB 25...	1310	92800	2.0	345	86400	33	42	53
SEP 07...	1845	82600	23.0	669	149000	--	50	57

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM
JAN 26...	78	87	92	96	99	100	--
FEB 25...	63	71	80	87	94	100	--
SEP 07...	71	77	81	86	96	99	100

DATE	TRITIUM IN WATER MOLE- CULES (TU)	TRITIUM WATER MOLE- CULES COUNT ERROR (TU)
OCT 01-31	43.0	1.5
NOV 01-30	39.7	1.4
DEC 01-31	49.0	1.7

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

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.0	12.0	6.0	4.0	---	6.0	13.0	16.0	---	23.0	29.0	26.0
2	19.0	11.0	6.0	4.5	2.0	6.0	13.0	15.0	20.0	23.0	28.0	26.0
3	17.0	11.0	6.0	3.0	1.0	6.0	13.0	---	20.0	22.0	29.0	28.0
4	18.0	11.0	8.0	2.5	4.0	6.0	12.0	16.0	20.0	23.0	29.0	28.0
5	18.0	11.0	7.5	2.0	4.0	7.0	13.0	14.0	20.0	21.0	27.0	26.0
6	19.0	12.0	7.0	2.0	---	8.0	10.0	19.0	20.0	24.0	29.0	25.0
7	16.0	12.0	7.0	---	---	7.0	8.0	17.0	21.0	25.0	29.0	23.0
8	14.0	12.0	7.5	2.0	2.0	8.0	8.0	18.0	22.0	21.0	29.0	22.0
9	12.0	11.0	8.0	2.0	---	7.0	9.0	19.0	22.0	26.0	30.0	20.0
10	15.0	11.0	4.0	1.0	---	8.0	8.0	21.0	23.0	23.0	30.0	22.0
11	14.0	11.5	5.0	1.0	---	8.0	12.0	22.0	22.0	---	30.0	---
12	14.0	11.0	4.5	---	---	7.0	11.0	23.0	23.0	27.0	28.0	26.0
13	20.0	11.0	4.0	1.0	---	7.0	11.0	23.0	22.0	27.0	26.0	24.0
14	16.0	12.0	4.0	2.0	---	8.0	11.0	22.0	22.0	26.0	31.0	23.0
15	14.0	14.0	3.0	2.0	---	6.0	12.0	21.0	25.0	26.0	---	23.0
16	13.0	11.0	4.0	3.0	---	6.0	11.0	20.0	21.0	28.0	24.0	23.0
17	13.0	11.0	5.0	2.0	---	7.0	11.0	19.0	22.0	29.0	28.0	23.0
18	11.0	13.0	4.5	1.0	---	7.0	12.0	20.0	22.0	28.0	22.0	23.0
19	13.0	10.0	4.0	---	---	8.0	12.0	20.0	22.0	28.0	29.0	22.0
20	14.0	9.0	3.0	1.0	---	8.0	12.0	22.0	22.0	27.0	30.0	21.0
21	13.0	9.0	4.5	1.0	---	9.0	13.0	---	22.0	27.0	23.0	20.0
22	13.0	9.0	4.0	---	---	10.0	15.0	---	21.0	25.0	30.0	20.0
23	14.0	9.0	3.0	2.0	---	10.0	16.0	---	24.0	27.0	29.0	20.0
24	13.0	10.0	3.5	2.0	---	12.0	16.0	21.0	22.0	28.0	26.0	18.0
25	11.0	8.0	4.0	3.0	2.0	11.0	---	20.0	21.0	28.0	31.0	19.0
26	14.0	6.0	4.0	2.0	2.5	10.0	17.0	19.0	21.0	28.0	25.0	---
27	13.0	5.0	3.0	4.0	3.0	8.0	16.0	18.0	21.0	28.0	26.0	19.0
28	12.0	5.0	2.0	4.0	4.0	8.0	17.0	17.0	22.0	26.0	28.0	19.0
29	12.0	5.0	3.0	3.0	---	---	17.0	16.0	23.0	26.0	26.0	20.0
30	12.0	6.0	2.0	4.0	---	10.0	16.0	17.0	23.0	27.0	28.0	20.0
31	12.0	---	4.0	3.0	---	12.0	---	---	---	29.0	28.0	---

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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	9	44	7	31	10	87	13	278	27	962	140	21300					
2	8	39	6	28	16	197	22	677	22	707	100	12700					
3	6	29	6	27	12	139	102	8460	20	556	77	9250					
4	8	38	7	31	13	153	255	24400	22	545	77	9290					
5	8	40	7	31	13	151	127	8880	27	666	112	14200					
6	8	41	6	26	19	330	60	2960	25	556	173	30500					
7	7	36	6	26	23	519	30	1220	25	479	254	53600					
8	7	34	6	26	17	338	35	1290	30	589	169	27400					
9	5	24	6	26	22	421	36	1580	25	405	82	9540					
10	5	24	7	31	45	1360	20	929	25	337	62	5840					
11	3	14	9	39	72	3480	16	696	20	243	50	4200					
12	5	22	9	39	47	1980	16	592	20	221	46	3420					
13	5	23	8	35	32	1020	16	484	20	221	30	1940					
14	5	25	7	31	21	550	20	551	20	232	28	1590					
15	5	26	6	28	15	329	30	791	20	243	32	1610					
16	3	16	6	29	12	220	44	1070	20	248	18	816					
17	4	21	6	31	12	189	57	1270	25	310	22	915					
18	3	15	7	39	12	168	55	1130	50	594	40	1500					
19	4	21	10	58	18	224	32	638	75	850	16	553					
20	4	21	8	53	10	119	10	202	90	972	14	454					
21	4	20	10	73	11	125	130	5340	75	972	15	458					
22	5	25	11	79	8	89	439	47500	50	810	12	343					
23	6	29	7	46	13	236	402	66700	30	583	13	351					
24	5	23	6	38	14	362	66	8940	74	2000	15	401					
25	5	22	6	35	15	401	210	47300	409	109000	39	2090					
26	6	27	4	22	46	2120	145	29700	876	384000	245	27400					
27	7	32	4	23	58	2910	104	10800	856	400000	154	15800					
28	7	31	4	23	38	1510	65	4860	378	114000	48	3630					
29	7	31	4	25	23	727	62	3780	---	---	21	1300					
30	7	31	5	34	17	431	50	2510	---	---	17	849					
31	7	31	---	---	12	251	33	1390	---	---	14	612					
TOTAL	---	855	---	1063	---	21136	---	286918	---	1021301	---	263852					
APRIL			MAY			JUNE			JULY			AUGUST			SEPTEMBER		
1	14	541	16	644	33	1100	17	195	23	302	29	531					
2	15	559	13	467	33	1180	27	360	22	266	24	337					
3	18	914	12	382	33	1130	26	371	19	224	26	312					
4	31	2000	10	292	69	3970	24	331	17	185	40	485					
5	46	3370	9	250	290	22400	24	311	20	204	56	944					
6	48	3950	8	227	185	12800	23	331	12	113	117	7350					
7	43	3050	6	173	96	5130	26	427	14	117	444	93600					
8	25	1460	7	193	64	2660	30	471	18	140	633	101000					
9	12	609	10	253	49	1640	20	257	13	104	142	10400					
10	11	532	8	187	43	1240	12	133	14	103	80	3950					
11	7	318	10	217	43	1540	16	163	18	135	50	1850					
12	10	405	16	331	58	2960	20	193	21	160	32	942					
13	10	364	30	770	84	3610	21	200	23	211	30	748					
14	5	170	46	2070	65	2120	22	230	26	291	26	565					
15	7	234	77	4720	82	2210	23	263	32	463	27	555					
16	6	199	71	4010	57	1310	26	310	36	500	24	544					
17	7	225	44	1960	38	810	38	674	23	262	20	431					
18	12	366	31	1130	33	708	38	802	18	169	20	376					
19	15	433	30	915	32	686	32	575	17	145	22	370					
20	7	191	29	782	26	498	34	532	20	175	14	210					
21	5	129	28	689	20	341	36	587	22	191	12	176					
22	7	170	26	591	20	312	32	472	22	200	44	1310					
23	6	139	24	516	18	266	40	672	22	234	132	8690					
24	5	111	26	620	13	184	36	493	28	396	148	11500					
25	7	151	37	1350	13	173	31	389	28	343	104	7080					
26	9	195	71	4370	13	168	29	356	26	283	67	3460					
27	13	290	145	13000	12	147	28	377	33	377	50	2000					
28	18	525	152	10200	14	161	37	579	28	335	27	875					
29	23	950	63	3370	15	165	39	621	29	333	21	584					
30	18	802	40	1800	15	158	39	522	52	879	27	662					
31	---	---	32	1240	---	---	29	374	39	908	---	---					
TOTAL	---	23352	---	57719	---	71777	---	12571	---	8748	---	261837					
TOTAL LOAD FOR YEAR:			2031129 TONS.														

01639000 MONOCACY RIVER AT BRIDGEPORT, MD

LOCATION.--Lat 39°40'43", long 77°14'06", Frederick County, Hydrologic Unit 02070009, on right bank 60 ft (18 m) downstream from bridge on State Highway 97 at Bridgeport, 0.9 mi (1.4 km) upstream from Cattail Branch, 3.4 mi (5.5 km) northwest of Taneytown, 4.8 mi (7.7 km) downstream from confluence of Rock and Marsh Creeks at Pennsylvania-Maryland State line, and 52 mi (83.7 km) upstream from mouth.

DRAINAGE AREA.--173 mi² (448 km²).

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1382: 1944(M).

GAGE.--Water-stage recorder. Concrete control since Sept. 15, 1947. Datum of gage is 340.83 ft (103.885 m) Corps of Engineers datum. Prior to May 3, 1946, nonrecording gage and crest-stage gages at site 0.3 mi (0.5 km) downstream at datum 0.98 ft (0.299 m) lower.

REMARKS.--Water-discharge records good. Occasional regulation at low flow from unknown source above station.

AVERAGE DISCHARGE.--37 years, 205 ft³/s (5.806 m³/s), 16.09 in/yr (409 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,300 ft³/s (603 m³/s) June 22, 1972, gage height, 24.05 ft (7.330 m), from rating curve extended above 7,000 ft³/s (198 m³/s) on basis of slope-conveyance study; no flow July 24-29, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 24, 1933, reached a stage of about 25 ft (7.6 m) present site and datum, from floodmarks, discharge, about 23,000 ft³/s (651 m³/s). Stage exceeded that of June 1889, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,800 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. 24	2300	8240 233	15.96 4.865	Sept. 6	1000	*13600 385	17.41 5.307
Feb. 26	0600	8870 251	13.88 4.231	Sept. 22	0700	9090 257	14.06 4.285
Aug. 2	2330	6160 174	11.48 3.499				

Minimum discharge, 5.2 ft³/s (0.15 m³/s) Oct. 1, 3, 4, gage height, 1.86 ft (0.567 m).

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	8.0	95	432	216	1180	126	74	116	74	90	32
2	5.9	18	57	3100	168	1130	292	66	126	47	1340	28
3	5.7	19	40	798	141	867	533	64	240	41	1430	39
4	5.7	17	96	246	141	687	651	77	381	31	145	40
5	6.4	9.6	163	219	104	2700	1090	90	204	44	78	921
6	13	8.5	91	191	95	2900	388	72	129	44	53	9310
7	19	8.0	61	207	97	1060	246	62	107	29	41	795
8	14	7.1	54	1420	93	710	206	57	94	22	48	319
9	9.3	8.7	811	646	87	506	347	52	79	19	69	200
10	7.2	11	683	297	73	437	855	47	69	19	44	147
11	6.6	9.2	177	225	69	857	292	45	216	17	40	119
12	6.7	9.0	121	151	60	368	248	43	119	20	123	102
13	6.9	9.4	89	168	61	283	277	49	73	19	208	87
14	65	10	80	262	70	256	516	84	55	18	84	98
15	44	13	61	347	70	238	347	64	46	18	55	230
16	19	18	60	180	58	171	264	61	38	23	42	106
17	23	25	54	139	54	161	211	51	39	20	34	80
18	36	57	49	119	44	152	177	41	56	16	29	69
19	35	54	44	90	44	135	148	46	47	14	30	63
20	34	27	42	92	49	123	127	66	35	14	31	56
21	33	19	54	2620	58	114	115	46	31	16	81	188
22	33	16	87	1890	93	105	106	44	29	20	173	5030
23	32	15	56	638	179	98	98	121	31	33	67	653
24	30	17	72	3690	1930	413	90	1320	31	210	77	309
25	31	23	2520	3140	3520	891	87	955	26	66	496	221
26	31	21	422	725	6320	397	83	505	23	44	154	181
27	18	21	241	665	2030	235	124	280	22	41	95	142
28	9.7	24	131	603	1440	183	126	224	20	32	70	122
29	24	44	112	357	---	163	96	223	20	29	55	119
30	13	101	96	368	---	149	82	163	115	32	45	108
31	8.6	---	101	286	---	134	---	126	---	32	39	---
TOTAL	631.1	647.5	6820	24311	17364	17803	8348	5218	2617	1104	5366	19914
MEAN	20.4	21.6	220	784	620	574	278	168	87.2	35.6	173	664
MAX	65	101	2520	3690	6320	2900	1090	1320	381	210	1430	9310
MIN	5.4	7.1	40	90	44	98	82	41	20	14	29	28
CFSM	.12	.13	1.27	4.53	3.58	3.32	1.61	.97	.50	.21	1.00	3.84
IN.	.14	.14	1.47	5.23	3.73	3.83	1.80	1.12	.56	.24	1.15	4.28

CAL YR 1978 TOTAL 77177.9 MEAN 211 MAX 5240 MIN 5.2 CFSM 1.22 IN 16.60
WTR YR 1979 TOTAL 110143.6 MEAN 302 MAX 9310 MIN 5.4 CFSM 1.75 IN 23.68

POTOMAC RIVER BASIN

01639000 MONOCACY RIVER AT BRIDGEPORT, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1948-51, 1969-72, 1974 to February 1979 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)
OCT							
11...	0945	6.4	420	8.3	12.5	11.0	5
25...	1000	32	230	7.8	7.0	9.0	5
NOV							
15...	0950	12	340	7.8	12.5	12.0	2
29...	1315	46	350	8.1	5.0	3.5	1
DEC							
20...	1030	43	340	7.8	2.5	1.5	2
JAN							
03...	0945	826	175	8.1	-8.0	2.0	35
17...	1030	109	275	8.1	-1.0	.5	3
31...	1030	293	200	8.3	.0	1.5	4
FEB							
14...	1015	76	245	7.9	-10.0	1.0	3

DATE	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT						
11...	10.6	10	--	2.8	190	120
25...	10.1	8	--	1.4	200	92
NOV						
15...	8.6	--	--	.6	190	250
29...	13.5	--	--	--	230	520
DEC						
20...	13.1	--	17	2.7	620	300
JAN						
03...	13.2	--	16	1.9	K6500	K27000
17...	14.1	--	42	1.3	120	570
31...	13.4	--	21	1.4	670	3000
FEB						
14...	13.1	--	74	1.6	80	130

DATE	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	BICAR- BONATE (MG/L AS HCO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
NOV									
29...	28	7.6	4.1	15	95	78	1.2	38	25

POTOMAC RIVER BASIN

01639000 MONOCACY RIVER AT BRIDGEPORT, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SILICA, DIS- SOLVED (MG/L AS SI02)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	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)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)
OCT										
11...	2.3	237	16	.32	4.10	.69	.01	.70	.06	.47
25...	4.9	122	11	.17	10.5	.83	.04	.87	.06	.72
NOV										
15...	3.1	192	17	.26	6.22	.27	.01	.28	.01	.32
29...	--	186	2	.25	23.1	.78	.00	.78	.01	.34
DEC										
20...	--	173	7	.24	20.1	2.9	.02	2.9	.12	.27
JAN										
03...	--	110	34	.15	245	2.5	.02	2.5	.15	.75
17...	--	63	1	.09	18.5	1.1	.01	1.1	.04	.03
31...	--	107	21	.15	84.6	2.1	.01	2.1	.11	.28
FEB										
14...	--	144	23	.20	29.5	1.8	.02	1.8	.32	.50

DATE	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	CARBON, ORGANIC TOTAL (MG/L AS C)	OIL AND GREASE (MG/L)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)
OCT									
11...	.53	1.2	5.4	.29	280	2.4	--	3.41	.000
25...	.78	1.7	7.3	.36	260	5.2	--	3.07	.000
NOV									
15...	.33	.61	2.7	.29	360	8.8	--	7.27	.000
29...	.35	1.1	5.0	.33	130	4.5	0	1.49	.000
DEC									
20...	.39	3.3	15	.18	--	3.9	--	.360	.000
JAN									
03...	.90	3.4	15	.18	1200	6.6	--	1.33	.000
17...	.11	1.2	5.4	.05	110	--	--	.830	.000
31...	.39	2.5	11	.08	210	3.3	--	.040	.000
FEB									
14...	.82	2.6	12	.17	440	3.2	--	1.68	.000

POTOMAC RIVER BASIN

01639500 BIG PIPE CREEK AT BRUCEVILLE, MD

LOCATION.--Lat 39°36'45", long 77°14'10", Carroll County, Hydrologic Unit 02070009, on left bank 300 ft (91 m) downstream from bridge on State Highway 194, 800 ft (240 m) downstream from Bruceville, 3.5 mi (5.6 km) upstream from Detour, and confluence with Little Pipe Creek.

DRAINAGE AREA.--102 mi² (264 km²).

PERIOD OF RECORD.--October 1947 to current year. Prior to December 1947, monthly discharge only, published in WSP 1302.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 340 ft (104 m), from topographic map.

REMARKS.--Records good. Occasional diversion for irrigation above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--32 years, 112 ft³/s (3.172 m³/s), 14.91 in/yr (379 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,000 ft³/s (793 m³/s) Sept. 26, 1975, gage height, 18.98 ft (5.785 m), from rating curve extended above 3,900 ft³/s (110 m³/s) on the basis of contracted-opening measurement at gage height 17.86 ft (5.444 m); minimum daily, 1.0 ft³/s (0.028 m³/s) Sept. 12, 1966.

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. 25	0130	1660 47.0	5.23 1.594	Feb. 26	0400	4200 119	9.70 2.957
Jan. 21	0530	2390 67.7	6.69 2.039	Sept. 6	0230	3660 104	8.94 2.725
Jan. 24	1700	*4400 125	9.93 3.027	Sept. 22	0130	2280 64.6	6.46 1.969
Feb. 25	0130	2710 76.7	7.30 2.225				

Minimum discharge, 15 ft³/s (0.42 m³/s) Oct. 10, gage height, 0.85 ft (0.259 m).

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	23	25	55	257	123	451	116	84	96	52	39	34
2	24	25	43	1060	110	408	135	80	90	59	113	34
3	23	25	38	356	105	315	180	80	125	49	114	35
4	24	25	137	166	100	286	200	87	216	46	52	34
5	28	26	141	145	98	686	240	92	121	61	41	638
6	37	25	75	124	95	673	159	80	99	47	35	2020
7	31	25	55	156	87	369	132	76	90	44	34	218
8	26	26	56	645	96	286	128	73	82	41	32	126
9	26	25	852	254	90	236	218	71	75	40	48	95
10	24	24	334	159	87	216	281	68	102	38	37	80
11	25	26	129	153	88	415	170	67	82	39	37	72
12	24	25	97	110	100	228	160	65	74	39	117	66
13	25	25	83	130	96	198	156	85	66	60	99	61
14	29	26	73	179	93	198	210	125	62	54	51	64
15	28	26	63	179	92	171	169	80	59	58	43	75
16	25	32	60	119	91	145	149	75	58	43	39	55
17	25	40	57	114	75	142	137	65	87	40	36	51
18	27	105	51	96	65	135	126	63	90	38	35	49
19	25	48	49	79	70	125	117	83	63	36	37	48
20	25	34	48	102	90	119	110	73	58	36	37	45
21	24	32	75	1900	135	114	106	67	55	38	80	178
22	23	29	61	744	334	109	103	67	55	38	64	1070
23	24	30	50	287	400	105	100	112	54	36	43	200
24	21	35	152	2400	1350	288	97	338	51	37	72	128
25	23	33	772	1270	2440	263	97	227	49	37	146	106
26	24	30	168	308	2930	185	95	177	47	40	56	95
27	26	34	118	237	802	150	121	124	46	39	49	85
28	28	45	89	211	598	134	115	112	45	33	48	79
29	26	59	86	185	---	128	95	107	45	56	44	83
30	25	98	85	167	---	122	89	90	47	51	42	76
31	25	---	75	144	---	116	---	83	---	43	38	---
TOTAL	793	1063	4227	12436	10840	7516	4311	3076	2289	1368	1758	6000
MEAN	25.6	35.4	136	401	387	242	144	99.2	76.3	44.1	56.7	200
MAX	37	105	852	2400	2930	686	281	338	216	61	146	2020
MIN	21	24	38	79	65	105	89	63	45	33	32	34
CFSM	.25	.35	1.33	3.93	3.79	2.37	1.41	.97	.75	.43	.56	1.96
IN.	.29	.39	1.54	4.54	3.95	2.74	1.57	1.12	.83	.50	.64	2.19

CAL YR 1978 TOTAL 46716 MEAN 128 MAX 3990 MIN 21 CFSM 1.26 IN 17.04
MTR YR 1979 TOTAL 55677 MEAN 153 MAX 2930 MIN 21 CFSM 1.50 IN 20.31

01640500 OWENS CREEK AT LANTZ, MD

LOCATION.--Lat 39°40'36", long 77°27'50", Frederick County, Hydrologic Unit 02070009, on right bank 0.5 mi (0.8 km) west of Lantz Post Office (Deerfield station on Western Maryland Railway), 1.5 mi (2.4 km) south of Sabillasville, 4.5 mi (7.2 km) northwest of Thurmont, and 14.2 mi (22.8 km) upstream from mouth.

DRAINAGE AREA.--5.93 mi² (15.36 km²).

PERIOD OF RECORD.--October 1931 to current year.

REVISED RECORDS.--WSP 921: 1932(M). WSP 1202: 1935(M). WSP 1382: Drainage area. WSP 1432: 1937(M), 1943(M), 1949(P).

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 965 ft (294 m), from topographic map.

REMARKS.--Records good except those for February, June, and July, which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--48 years, 9.36 ft³/s (0.265 m³/s), 21.43 in/yr (544 mm/yr), adjusted for diversions.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,270 ft³/s (92.6 m³/s) Dec. 1, 1934, gage height, 8.4 ft (2.56 m), from rating curve extended above 750 ft³/s (21.2 m³/s) on basis of slope-area measurements at gage heights 5.11 ft (1.558 m) and 6.30 ft (1.920 m); no flow Sept. 2-11, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 120 ft³/s (3.4 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	1415	1210 34.3	5.64 1.719	Sept. 5	2345	*2680 75.9	7.75 2.362
Feb. 26	0115	225 6.37	3.34 1.018	Sept. 21	2230	415 11.8	3.96 1.207
Mar. 5	0930	236 6.68	3.38 1.030				

Minimum discharge, 0.60 ft³/s (0.017 m³/s) Oct. 13, gage height, 1.07 ft (0.326 m).

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	.76	.85	3.6	14	16	49	21	13	12	4.0	1.6	1.3
2	.75	.87	2.6	50	15	64	23	12	12	3.8	15	1.5
3	.71	.89	2.9	23	14	51	24	12	20	3.4	6.0	2.6
4	1.1	.90	8.9	13	13	52	27	13	21	4.0	2.4	2.3
5	1.0	.88	4.4	9.0	11	149	27	13	12	3.6	1.8	284
6	1.4	.86	2.7	8.1	10	108	25	10	10	3.2	1.6	326
7	.77	.89	2.1	13	10	74	20	9.0	9.0	3.0	1.4	42
8	.74	.87	3.1	28	9.3	60	20	9.0	8.0	2.8	1.9	26
9	.74	.86	22	16	9.0	50	21	8.6	9.0	2.8	3.5	19
10	.73	.85	8.3	13	8.7	50	22	7.7	9.0	2.8	4.9	16
11	.72	.85	4.4	12	8.1	54	22	7.6	7.0	2.7	5.8	14
12	.67	.86	3.5	10	8.4	41	22	7.6	6.6	2.7	16	12
13	1.8	1.0	3.1	9.6	10	38	22	11	6.0	2.7	5.4	11
14	3.2	1.2	2.8	11	8.4	37	22	12	5.6	2.9	2.9	34
15	1.1	1.1	2.6	8.7	7.3	31	21	9.8	5.4	2.7	2.7	17
16	1.0	2.7	2.5	7.2	6.8	26	18	11	5.0	2.6	2.1	12
17	1.1	3.6	2.4	6.6	6.2	23	17	8.1	5.8	2.5	1.8	11
18	.95	4.4	2.2	6.0	5.9	21	14	7.6	6.0	2.4	1.9	9.9
19	.90	1.8	2.2	7.7	6.3	20	13	12	5.2	2.3	2.0	9.2
20	.83	1.3	2.2	8.4	5.9	18	12	10	5.0	2.6	1.8	8.5
21	.79	1.1	4.4	51	8.2	17	11	9.3	4.4	2.8	6.2	53
22	.79	1.0	2.8	22	11	16	10	8.8	4.1	2.6	3.0	64
23	.76	1.2	2.4	12	12	15	10	16	3.9	2.4	2.5	29
24	.76	1.8	10	360	74	42	9.6	30	3.7	2.0	2.7	22
25	.78	1.2	25	65	89	64	9.6	29	3.5	1.8	2.0	19
26	.90	1.1	7.7	41	109	42	14	25	3.4	2.0	1.9	17
27	1.8	1.3	5.7	32	52	34	22	20	3.3	1.7	1.8	16
28	1.0	2.0	4.8	27	44	28	17	18	3.3	1.9	1.7	15
29	.90	2.6	4.3	22	---	24	15	16	3.4	2.4	1.6	16
30	.86	6.2	4.3	19	---	22	14	13	3.6	2.8	1.7	15
31	.87	---	4.4	17	---	21	---	12	---	2.0	1.5	---
TOTAL	31.18	47.03	164.3	942.3	588.5	1341	545.2	401.1	216.2	83.9	109.1	1125.3
MEAN	1.01	1.57	5.30	30.4	21.0	43.3	18.2	12.9	7.21	2.71	3.52	37.5
MAX	3.2	6.2	25	360	109	149	27	30	21	4.0	16	326
MIN	.67	.85	2.1	6.0	5.9	15	9.6	7.6	3.3	1.7	1.4	1.3
CFSM	.17	.27	.89	5.13	3.54	7.30	3.07	2.18	1.22	.46	.59	6.32
IN.	.20	.29	1.03	5.91	3.69	8.41	3.42	2.52	1.36	.53	.68	7.06

CAL YR 1978 TOTAL 3909.57 MEAN 10.7 MAX 160 MIN .67 CFSM 1.80 IN 24.52
WTR YR 1979 TOTAL 5595.11 MEAN 15.3 MAX 360 MIN .67 CFSM 2.58 IN 35.09

POTOMAC RIVER BASIN

01641000 HUNTING CREEK AT JIMTOWN, MD

LOCATION.--Lat 39°35'40", long 77°23'50", Frederick County, Hydrologic Unit 02070009, on right bank just downstream from highway bridge, 0.4 mi (0.6 km) southwest of Jimtown, about 2.2 mi (3.5 km) southeast of Thurmont, 2.2 mi (3.5 km) upstream from Little Hunting Creek, and 5.2 mi (8.4 km) upstream from mouth.

DRAINAGE AREA.--18.4 mi² (47.7 km²).

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

REVISED RECORDS.--WSP 1332: 1952.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 355 ft (108 m), from topographic map.

REMARKS.--Records good. Slight regulation at irregular intervals caused by pumpage at recreation camp near Foxville, and from occasional draining and refilling of pond near Thurmont by Maryland Game and Inland Fish Commission. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--30 years, 26.6 ft³/s (0.753 m³/s), 19.63 in/yr (499 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,670 ft³/s (75.6 m³/s) Oct. 9, 1976, gage height, 6.32 ft (1.926 m); minimum, 0.4 ft³/s (0.011 m³/s) Sept. 9, 1966, gage height, 1.48 ft (0.451 m).

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)
Jan. 24	1630	1600 45.3	5.14 1.567	Sept. 6	0300	*2470 70.0	6.12 1.865
Feb. 26	0030	1040 29.5	4.36 1.329	Sept. 22	0200	596 16.9	3.60 1.097
Mar. 5	1530	508 14.4	3.42 1.042				

Minimum discharge, 2.4 ft³/s (0.068 m³/s) Oct. 21, 22, gage height, 1.62 ft (0.494 m).

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	4.5	5.1	8.6	33	44	98	27	29	30	11	6.1	6.3
2	4.4	6.0	6.6	121	39	110	38	27	27	10	24	9.8
3	4.3	6.4	7.2	62	36	107	47	27	29	8.5	14	9.0
4	5.3	6.3	21	39	33	94	46	29	34	12	8.3	7.2
5	4.2	6.2	15	29	32	339	44	29	27	11	6.4	196
6	4.8	6.1	8.4	26	29	369	37	26	22	9.0	6.0	1090
7	3.7	6.3	6.8	33	27	227	35	24	21	7.8	5.9	148
8	3.5	6.4	9.3	70	26	137	37	22	20	7.0	7.5	70
9	3.3	6.5	43	46	25	111	78	21	20	6.7	9.0	53
10	3.3	6.7	19	35	25	96	82	20	18	7.0	9.4	45
11	3.3	6.7	11	28	24	104	63	19	17	7.0	8.6	42
12	3.3	6.7	9.1	25	26	84	57	23	16	6.8	18	40
13	5.3	8.2	8.3	27	26	75	53	23	14	6.9	14	38
14	5.3	8.0	7.4	34	24	67	61	26	13	7.2	9.5	50
15	3.3	7.2	7.0	28	22	54	53	24	12	6.7	8.0	43
16	3.7	9.6	6.7	23	19	44	47	24	12	6.2	6.8	38
17	3.3	11	6.5	20	16	33	43	20	16	6.1	6.2	36
18	2.8	11	6.3	19	16	32	39	18	15	5.8	6.6	35
19	3.0	5.8	5.9	17	23	32	36	22	13	5.6	6.5	30
20	3.3	5.2	6.6	22	22	36	34	22	11	6.2	5.8	29
21	2.8	4.8	13	177	24	36	31	21	11	6.5	25	45
22	3.0	4.8	8.0	108	29	41	28	19	11	6.1	13	186
23	3.7	5.3	7.2	60	32	40	28	45	9.9	9.4	14	59
24	4.0	5.6	41	785	151	61	27	89	9.3	8.3	14	54
25	4.2	5.0	62	261	310	74	26	89	8.8	6.7	9.4	59
26	4.2	4.8	19	132	443	79	30	61	8.5	7.0	7.7	55
27	5.2	6.9	14	97	158	75	45	50	7.9	6.3	7.2	52
28	4.9	8.4	11	81	107	73	40	46	7.6	7.3	6.9	46
29	4.7	9.9	10	69	---	64	35	40	7.8	11	6.6	29
30	4.2	14	9.7	59	---	35	31	34	8.2	8.1	6.6	29
31	4.5	---	11	51	---	27	---	31	---	6.8	6.5	---
TOTAL	123.3	210.9	425.6	2617	1788	2854	1278	1000	477.0	238.0	303.5	2629.3
MEAN	3.98	7.03	13.7	84.4	63.9	92.1	42.6	32.3	15.9	7.68	9.79	87.6
MAX	5.3	14	62	785	443	369	82	89	34	12	25	1090
MIN	2.8	4.8	5.9	17	16	27	26	18	7.6	5.6	5.8	6.3
CFSM	.22	.38	.75	4.59	3.47	5.01	2.32	1.76	.86	.42	.53	4.76
IN.	.25	.43	.86	5.29	3.61	5.77	2.58	2.02	.96	.48	.61	5.32

CAL YR 1978 TOTAL 11917.3 MEAN 32.7 MAX 680 MIN 2.8 CFSM 1.78 IN 24.09
WTR YR 1979 TOTAL 13944.6 MEAN 38.2 MAX 1090 MIN 2.8 CFSM 2.08 IN 28.19

POTOMAC RIVER BASIN

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01641500 FISHING CREEK NEAR LEWISTOWN, MD

LOCATION.--Lat 39°31'35", long 77°28'00", Frederick County, Hydrologic Unit 02070009, on left bank immediately upstream from Fishing Creek Reservoir, 50 ft (15 m) downstream from Little Fishing Creek, 2.8 mi (4.5 km) west of Lewistown, and 9.9 mi (15.9 km) upstream from mouth.

DRAINAGE AREA.--7.29 mi² (18.88 km²).

PERIOD OF RECORD.--October 1947 to current year.

REVISED RECORDS.--WSP 1432: Drainage area.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 735 ft (224 m), from topographic map.

REMARKS.--Records good except those above 60 ft³/s (1.7 m³/s), which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--32 years, 11.6 ft³/s (0.329 m³/s), 21.61 in/yr (549 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,200 ft³/s (62.3 m³/s) Oct. 9, 1976, gage height, 5.75 ft (1.753 m), from rating curve extended above 100 ft³/s (2.83 m³/s) on basis of slope-area measurement at gage height 3.73 ft (1.137 m), and computation of flow over dam at gage height, 5.75 ft (1.753 m); minimum, 0.6 ft³/s (0.017 m³/s) Sept. 10, 11, 12, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft³/s (2.8 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 24	1700	206 5.83	2.80 0.853	Sept. 5	2400	*539 15.3	3.83 1.167
Mar. 5	1930	135 3.82	2.50 0.762				

Minimum discharge, 1.5 ft³/s (0.042 m³/s) part or all of each day, Oct. 11-13, 18-26, Nov. 2-7, 9, 12, gage height, 1.18 ft (0.360 m).

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	1.8	1.7	2.8	18	28	47	19	12	18	6.5	3.1	2.1
2	1.7	1.6	2.2	50	24	48	22	11	17	5.5	7.0	2.2
3	1.7	1.6	2.3	42	22	48	24	12	17	4.9	5.4	2.3
4	2.3	1.7	6.0	34	20	49	23	12	17	6.2	3.4	2.5
5	2.0	1.7	4.6	29	18	99	25	12	14	5.7	3.0	52
6	2.0	1.7	3.1	26	16	121	24	11	13	4.6	2.7	194
7	1.8	1.7	2.6	26	16	90	23	11	12	4.3	2.5	57
8	1.7	1.7	3.3	32	15	73	23	11	11	4.4	2.9	39
9	1.7	1.6	14	26	13	60	28	11	11	4.2	3.7	28
10	1.7	1.7	11	25	13	52	27	10	10	4.3	4.2	23
11	1.7	1.7	8.3	23	12	49	24	10	10	4.2	3.0	20
12	1.7	1.7	7.3	22	12	41	25	10	9.4	4.1	6.1	17
13	3.1	2.1	7.0	22	11	36	25	13	8.9	4.0	3.9	15
14	3.3	2.3	6.4	22	11	34	27	12	8.3	4.4	2.9	21
15	1.8	2.0	6.1	18	11	30	25	11	7.9	4.1	2.7	17
16	1.7	3.1	5.8	16	10	27	23	11	7.5	3.9	2.5	13
17	1.8	3.5	5.6	16	9.3	25	21	10	12	3.7	2.3	12
18	1.7	4.1	5.4	15	8.8	23	20	10	9.1	3.6	2.4	11
19	1.7	2.1	5.3	14	10	22	18	12	7.3	3.5	2.5	10
20	1.6	1.8	5.3	15	8.8	20	17	11	6.6	3.6	2.3	9.7
21	1.6	1.7	8.7	35	10	19	16	11	6.7	3.7	10	21
22	1.6	1.7	6.4	31	11	17	15	10	6.7	3.5	3.9	51
23	1.6	1.8	5.8	27	11	16	15	16	6.3	3.3	3.3	33
24	1.6	1.9	10	101	21	22	14	24	6.1	3.2	3.8	28
25	1.7	1.7	26	101	36	24	13	25	5.8	3.2	2.9	26
26	1.7	1.7	17	71	75	21	15	24	5.4	3.2	2.6	23
27	1.9	2.0	15	58	58	20	17	24	5.2	3.0	2.5	21
28	1.7	2.7	14	50	50	20	14	24	5.6	5.1	2.3	20
29	1.7	2.9	13	42	---	20	13	22	5.7	4.7	2.3	19
30	1.7	4.3	12	35	---	19	12	20	5.8	3.8	2.3	17
31	1.7	---	12	31	---	19	---	19	---	3.4	2.2	---
TOTAL	57.0	63.5	254.3	1073	560.9	1211	607	442	286.3	129.8	106.6	806.8
MEAN	1.84	2.12	8.20	34.6	20.0	39.1	20.2	14.3	9.54	4.19	3.44	26.9
MAX	3.3	4.3	26	101	75	121	28	25	18	6.5	10	194
MIN	1.6	1.6	2.2	14	8.8	16	12	10	5.2	3.0	2.2	2.1
CFSM	.25	.29	1.13	4.75	2.74	5.36	2.77	1.96	1.31	.58	.47	3.69
IN.	.29	.32	1.30	5.47	2.86	6.18	3.10	2.26	1.46	.66	.54	4.12

CAL YR 1978 TOTAL 5174.6 MEAN 14.2 MAX 191 MIN 1.6 CFSM 1.95 IN 26.40
WTR YR 1979 TOTAL 5598.2 MEAN 15.3 MAX 194 MIN 1.6 CFSM 2.10 IN 28.56

POTOMAC RIVER BASIN

01641810 MONOCACY RIVER NEAR WALKERSVILLE, MD

LOCATION.--Lat 39°28'47", long 77°23'18", Frederick County, Hydrologic Unit 02070009, at Biggs Ford Bridge on Biggs Ford Road, 2.0 mi (3.2 km) west of Walkersville, 4.7 mi (7.6 km) north of Frederick, 9.3 mi (15.0 km) upstream from Linganore Creek, and 26.5 mi (42.6 km) upstream from mouth.

DRAINAGE AREA.--637 mi² (1,650 km²), approximately.

PERIOD OF RECORD.--Water years 1974 to February 1979 (discontinued).

REMARKS.--Records of discharge are based on records for station 01643000 Monocacy River at Jug Bridge near Frederick, adjusted on the basis of the drainage area ratio.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	
OCT												
11...	1120	95	300	8.3	16.5	12.0	2	10.4	6	--	1.6	
25...	1130	114	300	8.2	9.0	10.0	5	10.8	25	--	1.8	
NOV												
15...	1115	112	285	7.8	13.0	12.5	2	8.3	--	--	2.0	
29...	1130	214	300	8.1	4.5	3.5	2	12.6	--	--	--	
DEC												
20...	1145	242	280	7.7	1.5	2.5	2	12.5	--	17	.7	
JAN												
03...	1130	4310	170	7.3	-7.0	4.0	55	12.3	--	22	2.7	
17...	1200	604	255	7.6	.0	.5	4	13.2	--	8	1.2	
31...	1145	1300	195	7.4	.5	2.0	4	13.2	--	12	1.1	
FEB												
14...	1145	490	235	7.4	-2.0	1.0	1	13.3	--	53	1.0	
DATE		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)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT
OCT												
11...	590	250	120	120	--	35	--	7.9	--	10	15	
25...	130	99	110	110	--	33	--	7.0	--	11	17	
NOV												
15...	390	780	110	--	--	33	--	6.4	--	9.0	15	
29...	K8700	K12000	110	37	28	34	6.5	7.0	11	11	17	
DEC												
20...	270	740	100	--	--	30	--	7.2	--	8.3	14	
JAN												
03...	K9400	K25000	54	--	--	15	--	4.0	--	4.0	13	
17...	470	3200	87	--	--	24	--	6.5	--	11	21	
31...	190	1000	64	--	--	18	--	4.7	--	6.4	17	
FEB												
14...	K12	43	83	--	--	24	--	5.5	--	6.6	15	
DATE		SODIUM AD- SORP- TION RATIO	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HC03)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)
OCT												
11...	.4	--	3.1	--	--	--	--	--	--	2.4	166	14
25...	.5	--	3.2	--	--	--	--	--	--	1.6	150	5
NOV												
15...	.4	--	2.8	--	--	--	--	--	--	1.4	169	11
29...	.4	2.9	3.4	94	77	1.2	21	20	5.1	162	7	
DEC												
20...	.4	--	2.6	--	--	--	--	--	--	9.2	149	5
JAN												
03...	.2	--	3.5	--	--	--	--	--	--	7.4	104	96
17...	.5	--	2.0	--	--	--	--	--	--	8.6	130	4
31...	.3	--	1.8	--	--	--	--	--	--	8.7	106	22
FEB												
14...	.3	--	1.7	--	--	--	--	--	--	9.7	128	7

POTOMAC RIVER BASIN

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01641810 MONOCACY RIVER NEAR WALKERSVILLE, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	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)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)
OCT											
11...	--	.23	42.6	1.7	.00	1.7	.03	.29	.32	2.0	8.9
25...	--	.20	46.2	1.6	.01	1.6	.05	.50	.55	2.2	9.5
NOV											
15...	--	.23	51.1	1.4	.01	1.4	.01	.31	.32	1.7	7.6
29...	148	.22	93.6	1.9	.01	1.9	.06	.33	.39	2.3	10
DEC											
20...	--	.20	97.4	3.5	.02	3.5	.06	.21	.27	3.8	17
JAN											
03...	--	.14	1210	2.3	.03	2.3	.11	.99	1.1	3.4	15
17...	--	.18	212	2.7	.02	2.7	.17	.53	.70	3.4	15
31...	--	.14	372	2.5	.01	2.5	.08	.22	.30	2.8	12
FEB											
14...	--	.17	169	3.0	.02	3.0	.10	.07	.17	3.2	14
DATE	PHOS- PHORUS, TOTAL (MG/L AS P)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDE RECOV. (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)
OCT											
11...	.14	170	--	--	--	0	<10	11	340	--	--
25...	.24	160	--	--	--	3	10	5	270	--	--
NOV											
15...	.12	200	--	--	1	1	<10	4	340	--	--
29...	.23	50	40	10	1	2	10	4	130	80	50
DEC											
20...	.12	60	--	--	0	8	<10	0	140	--	--
JAN											
03...	.28	1500	--	--	1	2	20	5	3700	--	--
17...	.09	80	--	--	1	1	10	3	210	--	--
31...	.07	150	--	--	1	0	10	1	190	--	--
FEB											
14...	.14	40	--	--	0	3	<10	2	130	--	--
DATE	LEAD, TOTAL RECOV- ERABLE (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)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	OIL AND GREASE (MG/L)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)
OCT											
11...	1	30	--	--	1	30	--	3.2	0	5.36	.000
25...	1	30	--	--	0	10	--	3.4	0	14.1	1.16
NOV											
15...	8	40	--	--	0	0	--	8.7	0	4.31	.000
29...	2	20	10	10	0	--	0	3.6	0	1.28	.000
DEC											
20...	6	20	--	--	0	30	--	2.2	--	.570	.000
JAN											
03...	13	170	--	--	0	60	--	7.8	--	2.76	.000
17...	13	20	--	--	0	100	--	2.8	--	.690	.000
31...	4	20	--	--	0	10	--	2.2	--	.000	.000
FEB											
14...	0	20	--	--	0	30	--	4.5	--	.540	.000

01642500 LINGANORE CREEK NEAR FREDERICK, MD

LOCATION.--Lat 39°24'55", long 77°20'00", Frederick County, Hydrologic Unit 02070009, on left bank 2.4 mi (3.9 km) upstream from mouth and 4 mi (6.4 km) east of Frederick.

DRAINAGE AREA.--82.3 mi² (213.2 km²).

PERIOD OF RECORD.--November 1931 to March 1932, September 1934 to current year.

REVISED RECORDS.--WSP 891: 1938-39. WSP 1432: 1934, 1936, 1937(M).

GAGE.--Water-stage recorder. Concrete control since Sept. 23, 1946. Altitude of gage is 270 ft (82 m), from topographic map. Prior to Mar. 27, 1932, nonrecording gage at Frederick pumping station, 1.5 mi (2.4 km) downstream at datum about 20 ft (6.1 m) lower. Sept. 12, 1934, to Sept. 25, 1946, nonrecording gage at present site and datum.

REMARKS.--Records good. Occasional regulation by Linganore Reservoir 0.5 mi (0.8 km) upstream beginning September 1972, total capacity, 883,200,000 gal (3.343 km³). Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--45 years, 86.5 ft³/s (2.450 m³/s), 14.27 in/yr (362 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,100 ft³/s (569 m³/s) June 22, 1972, gage height, 19.46 ft (5.931 m), from high-water mark in well, from rating curve extended above 1,500 ft³/s (42.5 m³/s) on basis of slope-area measurement at gage height 10.01 ft (3.051 m) and contracted-opening measurement at gage height 19.46 ft (5.931 m) at site 2.6 mi (4.2 km) upstream, adjusted for flow from intervening area; minimum discharge, 1.4 ft³/s (0.040 m³/s) Nov. 24, 1972, gage height, 1.10 ft (0.335 m), result of regulation.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,400 ft³/s (39 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	0715	2260 64.0	7.85 2.393	Feb. 26	0415	4140 117	10.75 3.277
Jan. 24	1700	3960 112	10.52 3.206	Sept. 6	0045	*5390 153	12.06 3.676
Feb. 25	0115	3330 94.3	9.66 2.944	Sept. 22	0400	1550 43.9	6.57 2.003

Minimum discharge, 14 ft³/s (0.40 m³/s) Sept. 14; minimum daily, 18 ft³/s (0.51 m³/s) Oct. 1, 2, 3, 25.

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	18	20	47	135	115	400	117	73	110	64	41	39
2	18	20	35	692	90	361	121	70	103	75	42	38
3	18	20	33	276	93	292	132	70	226	55	57	40
4	19	20	89	140	95	253	146	74	336	55	40	37
5	24	20	120	122	80	407	163	78	185	66	34	1140
6	40	20	66	110	71	462	128	71	141	51	32	2600
7	27	20	46	130	83	303	113	67	123	46	29	260
8	22	20	45	345	79	241	111	64	108	44	28	197
9	20	20	363	192	74	211	148	62	98	42	34	142
10	20	19	229	127	61	193	201	60	91	41	60	91
11	21	20	93	110	66	307	142	60	86	43	39	90
12	20	20	70	93	65	211	131	58	80	42	94	88
13	20	22	60	102	65	183	128	73	73	44	91	92
14	22	22	53	116	65	174	144	112	68	55	48	85
15	20	22	47	109	65	158	131	74	66	45	38	70
16	20	31	45	85	69	140	119	67	63	41	34	70
17	22	38	42	83	60	136	111	59	72	39	32	66
18	21	90	38	75	49	131	105	56	89	36	31	64
19	21	46	37	59	64	124	99	64	68	36	35	62
20	21	31	38	97	67	118	94	62	63	41	32	58
21	20	27	53	1660	74	114	90	59	58	68	60	116
22	20	25	47	466	128	110	86	59	61	47	67	696
23	20	25	39	229	171	107	85	90	58	40	42	200
24	19	27	79	2000	948	221	84	337	54	37	51	133
25	18	25	615	672	2200	271	84	254	53	36	117	102
26	19	23	141	248	2610	184	82	164	50	38	57	99
27	23	31	97	198	598	152	96	122	48	37	101	89
28	21	38	71	181	453	137	97	108	49	49	135	84
29	20	46	60	155	---	130	81	103	55	77	62	86
30	20	75	58	141	---	125	77	86	52	68	50	81
31	20	---	65	128	---	117	---	79	---	50	43	---
TOTAL	654	883	2921	9276	8658	6473	3446	2835	2787	1508	1656	7015
MEAN	21.1	29.4	94.2	299	309	209	115	91.5	92.9	48.6	53.4	234
MAX	40	90	615	2000	2610	462	201	337	336	77	135	2600
MIN	18	19	33	59	49	107	77	56	48	36	28	37
CFSM	.26	.36	1.15	3.63	3.76	2.54	1.40	1.11	1.13	.59	.65	2.84
IN.	.30	.40	1.32	4.19	3.91	2.93	1.56	1.28	1.26	.68	.75	3.17

CAL YR 1978 TOTAL 37112.3 MEAN 102 MAX 3410 MIN 9.3 CFSM 1.24 IN 16.77
WTR YR 1979 TOTAL 48112.0 MEAN 132 MAX 2610 MIN 18 CFSM 1.60 IN 21.75

01643000 MONOCACY RIVER AT JUG BRIDGE NEAR FREDERICK, MD

LOCATION.--Lat 39°24'13", long 77°21'58", Frederick County, Hydrologic Unit 02070009, on right bank 0.2 mi (0.3 km) upstream from Jug Bridge on U.S. Highway 40, 0.4 mi (0.6 km) downstream from Linganore Creek, 2 mi (3.2 km) east of Frederick, and 16.9 mi (27.2 km) upstream from mouth.

DRAINAGE AREA.--817 mi² (2,116 km²).

PERIOD OF RECORD.--October 1929 to current year. Monthly discharge only for October, November 1929, published in WSP 1302.

REVISED RECORDS.--WSP 711: 1930.

GAGE.--Water-stage recorder. Nonrecording gage at site 0.2 mile (0.3 km) downstream. Datum of gage is 231.92 ft (70.689 m) Corps of Engineers datum.

REMARKS.--Records good. Several observations of water temperature were made during the year. Gage-height tele-meter at station.

AVERAGE DISCHARGE.--50 years, 931 ft³/s (26.37 m³/s), 15.47 in/yr (393 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 81,600 ft³/s (2,310 m³/s) June 23, 1972, gage height, 35.9 ft (10.94 m), from floodmark; minimum daily, 19 ft³/s (0.54 m³/s) Sept. 7-13, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1889 reached a stage of 30 ft (9.1 m), from floodmarks, discharge, 56,000 ft³/s (1,590 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 8,800 ft³/s (250 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 25	1700	9560 271	10.66 3.249	Feb. 26	1930	26800 759	19.40 5.913
Jan. 3	0130	12100 343	12.22 3.725	Mar. 6	0630	12400 351	12.40 3.780
Jan. 22	0600	14400 408	13.48 4.109	Sept. 6	2200	*33700 955	22.03 6.715
Jan. 25	1030	28900 818	20.25 6.172	Sept. 22	2000	16200 459	14.64 4.462

Minimum discharge, 113 ft³/s (3.20 m³/s) Oct. 1, 2, 3, 4, gage height, 1.28 ft (0.390 m).

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	116	136	538	1070	1460	5410	1060	658	890	390	242	278
2	115	134	389	7280	1070	4550	1220	610	952	442	584	248
3	116	132	306	7210	1030	4250	1690	585	1210	357	3650	254
4	121	135	567	1790	1070	3330	2620	619	2220	320	981	268
5	129	142	999	1320	794	5630	3020	685	1660	361	469	1210
6	171	144	737	1200	726	11500	2130	653	1120	344	329	25200
7	158	134	467	1160	769	5930	1560	573	919	300	268	16500
8	153	132	405	3330	732	3810	1360	532	805	263	244	2000
9	140	132	2040	2560	684	3020	1490	502	703	244	290	1410
10	130	130	4320	1680	551	2480	3450	474	656	237	567	1070
11	125	130	1430	1260	562	3500	2060	453	693	239	374	897
12	124	135	864	994	572	2720	1620	436	796	238	528	794
13	123	135	684	884	551	2060	1610	524	597	234	1430	703
14	155	138	578	1330	605	1870	1770	807	504	321	732	679
15	200	149	495	1520	583	1780	1990	690	454	299	436	972
16	222	173	432	1070	567	1460	1550	569	420	260	335	813
17	171	220	405	884	551	1330	1340	521	488	235	287	618
18	150	397	361	750	456	1260	1190	453	628	220	259	554
19	157	446	332	578	550	1160	1050	461	506	209	253	499
20	163	283	328	606	600	1080	970	524	419	202	252	454
21	158	214	432	8120	622	1020	893	503	374	253	393	624
22	154	182	515	11300	812	960	842	461	363	225	867	12100
23	152	172	442	3360	1510	913	801	819	352	209	553	4860
24	150	174	454	9300	4690	1370	767	3410	332	256	472	1820
25	148	174	6960	25100	17200	3470	738	3760	321	449	1200	1360
26	147	173	3020	5250	24500	2390	712	2800	305	299	996	1170
27	155	199	1430	3800	13700	1710	861	1750	289	256	691	1020
28	156	229	959	2800	5830	1440	992	1400	285	256	630	885
29	152	283	690	2230	---	1320	818	1318	315	299	439	819
30	136	476	627	2100	---	1220	720	1090	291	311	360	768
31	145	---	679	1760	---	1100	---	888	---	278	312	---
TOTAL	4592	5833	32885	113596	83347	85043	42894	29520	19867	8806	19423	80847
MEAN	148	194	1061	3664	2977	2743	1430	952	662	284	627	2695
MAX	222	476	6960	25100	24500	11500	3450	3760	2220	449	3650	25200
MIN	115	130	306	578	456	913	712	436	285	202	242	248
CFSM	.18	.24	1.30	4.49	3.64	3.36	1.75	1.17	.81	.35	.77	3.30
IN.	.21	.27	1.50	5.17	3.79	3.87	1.95	1.34	.90	.40	.88	3.68

CAL YR 1978 TOTAL 406674 MEAN 1114 MAX 20600 MIN 115 CFSM 1.36 IN 18.52
WTR YR 1979 TOTAL 526653 MEAN 1443 MAX 25200 MIN 115 CFSM 1.77 IN 23.98

01643020 MONOCACY RIVER AT REICH'S FORD BRIDGE NEAR FREDERICK, MD

LOCATION.--Lat 39°23'16", long 77°22'40", Frederick County, Hydrologic Unit 02070009, at Reich's Ford Bridge, 1.1 mi (1.8 km) downstream from U.S. Highway 40, 1.2 mi (1.9 km) downstream from gaging station, 2 mi (3.2 km) southeast of Frederick, and 15.0 mi (25.1 km), upstream from mouth.

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 sample. Water-discharge records for Monocacy River at Jug Bridge near Frederick (station 01643000) are used for computation of sediment loads. Prior to 1970, published as Monocacy River at Jug Bridge near Frederick (station 01643000).

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES (water years 1961-72, 1975, 1977): Maximum daily, 31.0°C Aug. 1, 4, 1975, many days during July 1977; minimum daily, 0.0°C on many days during winter periods.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,000 mg/L July 10, 1970; minimum daily mean, 1 mg/L on many days in 1961-67, 1970, and 1972.

SEDIMENT LOADS: Maximum daily, 134,000 tons (122,000 tonnes) June 22, 1972; minimum daily, less than 0.50 ton (0.45 tonne) on many days in 1961-67.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 923 mg/L Aug. 3; minimum daily mean, 5 mg/L Dec. 15.

SEDIMENT LOADS: Maximum daily, 43,100 tons (39,100 tonnes) Jan. 25; minimum daily, 5.0 tons (4.5 tonnes) Nov. 5.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN, DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	OXYGEN, DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT												
11...	1215	122	350	7.9	17.0	13.0	3	8.4	7	--	5.6	110
25...	1230	148	355	8.0	14.0	11.0	4	9.4	6	--	3.3	K15
NOV												
15...	1200	143	350	7.6	12.0	13.0	2	12.5	--	--	1.3	43
29...	0945	275	340	8.1	3.5	5.0	2	11.1	--	--	--	320
DEC												
20...	1245	311	325	7.6	.5	3.0	3	11.4	--	20	1.8	K13
JAN												
03...	1330	5520	175	7.3	-5.5	4.0	60	11.7	--	25	2.9	K8200
17...	1330	774	295	7.6	1.0	1.0	3	12.8	--	7	1.6	K11
31...	1315	1670	220	7.4	-1.0	2.5	6	12.8	--	12	1.3	72
FEB												
14...	1315	628	270	7.4	-6.0	.5	3	13.2	--	64	1.6	<1
DATE	100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)
OCT												
11...	200	140	140	--	43	--	8.2	--	12	15	.4	--
25...	K20	140	140	--	42	--	7.8	--	13	17	.5	--
NOV												
15...	120	130	--	--	40	--	6.9	--	12	16	.5	--
29...	320	130	36	32	39	6.6	7.1	12	12	17	.5	3.2
DEC												
20...	69	110	--	--	34	--	7.2	--	8.8	14	.4	--
JAN												
03...	K25000	56	--	--	16	--	4.0	--	4.0	13	.2	--
17...	77	100	--	--	29	--	6.7	--	13	22	.6	--
31...	140	72	--	--	21	--	4.8	--	6.9	17	.4	--
FEB												
14...	K13	98	--	--	30	--	5.7	--	7.0	13	.3	--

01643020 MONOCACY RIVER AT REICH'S FORD BRIDGE NEAR FREDERICK, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C SUS- PENDED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)
OCT												
11...	3.7	--	--	--	--	--	4.0	197	10	--	.27	64.9
25...	3.6	--	--	--	--	--	2.7	185	8	--	.25	73.9
NOV												
15...	3.2	--	--	--	--	--	2.9	202	21	--	.27	78.0
29...	3.7	110	90	1.4	22	24	5.1	175	0	167	.24	130
DEC												
20...	3.1	--	--	--	--	--	8.8	159	10	--	.22	134
JAN												
03...	3.5	--	--	--	--	--	7.1	103	123	--	.14	1540
17...	2.4	--	--	--	--	--	8.3	153	4	--	.21	320
31...	2.1	--	--	--	--	--	8.2	117	27	--	.16	528
FEB												
14...	1.8	--	--	--	--	--	9.0	148	12	--	.20	251
DATE	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	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)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDED RECOV. (UG/L AS AL)	
OCT												
11...	2.3	.09	2.4	.47	.63	1.1	3.5	16	.47	210	--	
25...	2.0	.09	2.1	.56	.00	.51	2.6	12	.49	140	--	
NOV												
15...	1.8	.10	1.9	.47	.53	1.0	2.9	13	.56	230	--	
29...	2.0	.04	2.0	.43	.49	.92	2.9	13	.35	100	80	
DEC												
20...	3.4	.02	3.4	.22	.29	.51	3.9	17	.21	20	--	
JAN												
03...	2.3	.03	2.3	.13	.87	1.0	3.3	15	.29	1700	--	
17...	2.9	.02	2.9	.24	.86	1.1	4.0	18	.16	100	--	
31...	2.7	.01	2.7	.14	.27	.41	3.1	14	.11	220	--	
FEB												
14...	3.4	.02	3.4	.17	.11	.28	3.7	16	.13	60	--	
DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	
OCT												
11...	--	--	1	10	13	430	--	--	4	90	--	
25...	--	--	4	<10	5	220	--	--	35	20	--	
NOV												
15...	--	1	1	10	5	470	--	--	5	90	--	
29...	20	1	2	<10	2	210	160	50	5	50	30	
DEC												
20...	--	0	1	<10	0	160	--	--	6	40	--	
JAN												
03...	--	1	1	<10	5	4100	--	--	7	190	--	
17...	--	1	1	10	1	120	--	--	10	30	--	
31...	--	1	1	10	1	320	--	--	2	30	--	
FEB												
14...	--	1	1	<10	2	170	--	--	0	30	--	

POTOMAC RIVER BASIN

01643020 MONOCACY RIVER AT REICH'S FORD BRIDGE NEAR FREDERICK, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	OIL AND GREASE (MG/L)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT											
11...	--	3	30	--	5.3	0	3.00	.000	41	14	100
25...	--	5	10	--	5.5	0	--	--	39	16	100
NOV											
15...	--	0	10	--	--	0	3.15	.000	--	--	--
29...	20	0	--	10	5.5	0	1.19	.000	--	--	--
DEC											
20...	--	0	40	--	3.6	--	.920	.000	--	--	--
JAN											
03...	--	0	30	--	7.7	--	2.66	.000	126	1880	95
17...	--	0	20	--	8.6	--	.450	.000	--	--	--
31...	--	0	10	--	2.3	--	.000	.000	--	--	--
FEB											
14...	--	0	10	--	2.5	--	.020	.000	--	--	--

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
JAN							
03...	1330	5520	4.0	126	1880	--	--
FEB							
26...	1700	24500	2.0	441	29200	50	64
SEP							
06...	1500	30300	--	368	30100	60	80

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM
JAN						
03...	--	--	95	100	--	--
FEB						
26...	80	89	97	99	99	100
SEP						
06...	90	94	98	99	100	--

01643020 MONOCACY RIVER AT REICH'S FORD BRIDGE NEAR FREDERICK, MD--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.0	12.0	6.0	---	1.0	4.0	16.0	17.5	---	23.5	29.0	26.0
2	---	---	6.0	6.0	1.0	6.0	13.5	17.0	---	23.0	28.0	26.0
3	18.0	13.0	---	1.0	---	---	12.0	---	19.0	24.0	24.0	26.0
4	19.0	11.5	8.0	1.0	3.0	---	9.0	17.0	20.0	---	26.0	27.0
5	---	15.0	9.0	3.0	1.0	6.0	9.0	17.0	22.0	21.0	28.0	24.0
6	17.0	13.0	8.0	---	1.0	6.0	9.0	---	22.0	22.0	28.0	23.0
7	15.0	12.0	7.0	2.0	---	7.0	10.0	20.5	23.0	24.0	28.0	22.0
8	13.0	---	---	2.0	---	12.5	---	21.0	23.0	24.5	28.0	21.0
9	15.0	12.0	6.0	1.0	---	4.0	7.0	21.0	22.0	24.0	28.0	19.0
10	15.0	12.0	5.0	1.5	---	---	8.0	25.0	---	23.0	28.0	20.0
11	13.5	12.0	3.0	1.0	---	6.0	11.5	---	22.0	22.0	26.0	21.0
12	18.0	11.5	4.0	1.5	---	7.0	---	23.0	21.5	26.0	21.0	21.0
13	19.0	---	5.0	---	---	8.0	10.0	---	---	---	20.0	19.0
14	17.0	---	4.0	2.0	---	8.0	9.0	21.0	23.0	---	22.0	20.0
15	---	---	4.0	2.0	---	6.0	---	21.0	24.5	27.0	22.0	21.0
16	12.0	---	5.0	3.0	---	6.5	---	21.0	---	28.0	22.0	20.0
17	---	---	---	2.0	---	9.0	11.0	21.0	21.0	28.0	20.0	20.0
18	12.0	---	5.0	1.0	---	10.0	---	19.0	23.5	28.0	20.0	21.0
19	---	---	5.0	1.0	---	10.0	16.5	---	24.0	---	23.0	21.0
20	14.5	---	---	---	---	11.0	13.0	21.0	24.0	---	24.0	19.0
21	16.0	---	4.0	---	---	12.0	---	19.5	21.0	---	21.0	17.0
22	17.0	---	5.0	5.0	---	12.0	17.0	22.5	24.0	---	21.0	18.0
23	17.0	---	---	2.0	---	---	17.0	---	23.0	---	22.0	17.0
24	14.0	---	---	3.0	2.5	---	18.0	19.5	---	---	24.0	17.0
29	14.0	5.0	1.5	3.0	---	---	14.0	18.0	23.5	---	25.0	19.0
30	9.0	6.0	---	3.0	---	17.0	17.0	---	23.5	29.5	27.0	19.0
31	13.0	---	2.0	2.0	---	13.0	---	20.0	---	27.0	24.0	---

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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)																																																																																																																																																																																																																																																																																																																																																																																																								
	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)	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)																																																																																																																																																																																																																																																																																																																																																																																																									
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1	33	10	26	9.5	47	68	29	99	24	95	264	4060	2	28	8.7	22	8.0	31	33	247	5830	28	81	151	2080	3	36	11	16	5.7	24	20	166	4220	25	70	120	1390	4	51	17	20	7.3	52	88	44	226	20	58	80	719	5	34	12	13	5.0	81	218	23	82	15	32	141	2730	6	42	19	15	5.8	50	99	22	71	15	29	368	11600	7	25	11	15	5.4	36	45	21	66	15	31	122	2040	8	36	15	15	5.3	31	34	87	988	15	30	90	926	9	25	9.5	20	7.1	85	691	106	1280	15	28	105	856	10	24	8.4	20	7.0	178	2170	28	127	10	15	88	589	11	26	8.8	20	7.0	63	263	20	68	10	15	130	1260	12	27	9.0	20	7.3	25	58	18	48	10	15	92	676	13	23	7.6	20	7.3	14	26	19	45	10	15	86	478	14	31	13	15	5.6	8	12	20	72	10	16	76	384	15	42	23	15	6.0	5	6.7	17	70	10	16	68	327	16	38	23	15	7.0	8	9.3	18	52	10	15	75	296	17	28	13	20	12	9	9.8	13	31	10	15	82	294	18	28	11	35	38	10	9.7	16	32	10	12	92	313	19	31	13	40	48	12	11	18	28	10	15	82	257	20	34	15	30	23	11	9.7	40	67	20	32	50	146	21	28	12	20	12	10	12	425	10800	30	50	65	179	22	37	15	16	7.9	20	28	220	7120	40	88	75	194	23	32	13	14	6.5	19	23	81	771	75	306	75	185	24	29	12	14	6.6	20	30	361	14100	210	3070	90	333	25	19	7.6	12	5.6	106	2020	610	43100	430	20400	125	1170	26	24	9.5	11	5.1	48	401	143	2210	623	40400	85	549	27	25	10	16	8.6	36	139	55	564	196	8120	53	245	28	25	11	13	8.0	25	65	42	318	177	2720	50	194	29	26	11	21	16	24	45	38	229	---	---	50	178	30	22	8.1	41	53	22	37	44	249	---	---	50	165	31	23	9.0	---	---	18	33	31	147	---	---	45	134	TOTAL	---	376.2	---	356.6	---	6714.2	---	93110	---	75789	---	34947
APRIL																									MAY																									JUNE																									JULY																									AUGUST																									SEPTEMBER																																																																																																																																																																																																																																																																																																		
1	45	129	92	163	40	96	50	53	24	16	22	17	2	50	165	86	142	40	103	40	48	101	295	18	12	3	67	306	70	111	92	301	30	29	923	11400	16	11	4	85	601	49	82	202	1210	30	26	194	552	16	12	5	101	858	50	92	113	506	33	32	75	95	78	707	6	80	460	52	92	72	218	48	45	40	36	397	26500	7	55	232	50	77	63	156	44	36	27	20	111	6280	8	47	173	44	63	57	124	54	38	21	14	60	324	9	45	187	60	81	56	106	42	28	23	18	42	160	10	128	1240	70	90	56	99	36	23	62	95	27	78	11	72	400	80	98	64	120	35	23	34	34	20	48	12	53	232	90	106	72	155	28	18	52	74	18	39	13	38	165	110	156	56	90	27	17	146	563	16	30	14	54	258	125	272	46	63	54	47	64	126	16	29	15	65	349	100	186	44	54	62	50	37	44	37	97	16	38	159	93	143	42	48	45	32	28	25	25	55	17	29	105	86	121	85	112	35	22	20	15	20	33	18	21	67	67	82	82	139	29	17	16	11	11	16	19	30	85	60	75	56	77	25	14	15	10	7	9.4	20	62	162	62	88	49	55	25	14	16	11	7	8.6	21	62	149	80	109	42	42	35	24	20	21	15	38	22	67	152	60	75	30	29	30	18	67	157	426	16200	23	80	173	58	131	22	21	25	14	42	63	141	2360	24	98	203	297	2940	22	20	30	21	31	40	47	231	25	98	195	276	2890	30	26	80	97	90	361	22	81	26	60	115	127	960	26	21	60	48	94	271	19	60	27	50	116	93	439	32	25	30	21	115	248	14	39	28	45	121	66	249	32	25	35	24	55	94	12	29	29	85	188	54	191	30	26	50	40	33	39	10	22	30	100	194	48	141	36	28	40	34	30	29	8	17	31	---	---	42	101	---	---	30	23	28	24	---	---	TOTAL	---	7939	---	10546	---	4095	---	976	---	14801	---	53543.0
TOTAL LOAD FOR YEAR:																									303193.0																									TONS.																																																																																																																																																																																																																																																																																																																																																																													

01643500 BENNETT CREEK AT PARK MILLS, MD

LOCATION.--Lat 39°17'40", long 77°24'30", Frederick County, Hydrologic Unit 02070009, on left bank 75 ft (23 m) downstream from highway bridge, 0.2 mi (0.3 km) south of Park Mills, 1.8 mi (2.9 km) upstream from mouth, and 3.7 mi (6.0 km) southwest of Urbana.

DRAINAGE AREA.--62.8 mi² (162.7 km²).

PERIOD OF RECORD.--July 1948 to September 1958. Annual maximum, water years 1960-66. August 1966 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 240 ft (73.2 m), from topographic map.

REMARKS.--Records good except those for July and August 27 to September 7, which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--23 years (water years 1949-58, 1967-79), 71.7 ft³/s (2.031 m³/s), 15.50 in/yr (394 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,200 ft³/s (912 m³/s) June 21, 1972, gage height, 22.1 ft (6.74 m), from floodmark, from rating curve extended above 2,700 ft³/s (76.5 m³/s) on basis of contracted-opening measurements at gage heights 11.15 ft (3.399 m), 14.33 ft (4.368 m), and 22.1 ft (6.74 m); minimum, 0.30 ft³/s (0.008 m³/s) Sept. 8, 1966, gage height, 0.80 ft (0.244 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 2	1415	1270 36.0	4.82 1.469	Feb. 26	0245	2690 76.2	7.53 2.295
Jan. 21	0700	1340 37.9	5.00 1.524	May 24	0330	1370 38.8	5.08 1.548
Jan. 24	1515	2820 79.9	7.72 2.353	Sept. 6	Unknown	*4880 138	9.61 2.929
Feb. 24	2215	2180 61.7	6.75 2.057	Sept. 22	0315	1420 40.2	5.51 1.679

Minimum discharge, 14 ft³/s (0.40 m³/s) part or all of each day Oct. 1-4, 22-26, 28-30, gage height, 1.52 ft (0.463 m).

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	15	15	33	103	99	349	99	63	162	66	30	35
2	15	15	27	706	94	319	100	61	88	100	29	40
3	14	15	26	185	92	261	119	62	187	45	34	33
4	16	15	52	116	88	231	130	64	244	54	29	33
5	19	16	76	94	86	348	144	66	133	60	26	500
6	31	16	43	82	82	415	112	61	107	40	24	2000
7	19	15	34	117	78	267	100	59	95	38	22	300
8	16	15	34	336	74	237	98	57	84	37	62	175
9	16	15	330	134	60	191	161	55	74	36	69	139
10	16	15	113	106	69	175	166	53	87	36	74	117
11	16	15	60	92	69	261	120	53	70	35	34	101
12	16	15	49	117	71	180	115	51	64	35	135	92
13	16	16	44	149	64	158	109	63	59	70	69	86
14	16	16	40	89	68	153	124	74	55	100	41	89
15	15	17	37	74	63	137	108	57	52	40	34	82
16	15	23	35	68	60	121	98	59	50	36	31	71
17	18	29	33	62	53	112	93	51	120	34	29	67
18	16	65	30	60	49	105	88	50	76	32	29	65
19	16	28	30	56	55	100	84	59	57	32	31	63
20	16	22	30	109	60	99	80	52	51	38	31	58
21	15	20	39	1010	70	96	77	50	48	51	162	187
22	14	19	32	254	90	94	75	50	49	35	63	532
23	14	20	30	136	110	92	74	68	47	33	47	202
24	14	22	92	1370	923	283	73	480	45	31	119	128
25	14	19	378	450	1370	266	72	228	44	30	143	111
26	15	19	82	220	1450	161	74	133	41	32	61	101
27	16	26	64	154	549	137	79	99	40	29	60	93
28	15	33	55	169	407	122	73	88	39	40	80	89
29	15	36	48	135	---	112	68	82	42	44	50	89
30	14	64	50	126	---	105	66	68	46	42	42	84
31	15	---	50	110	---	101	---	64	---	34	37	---
TOTAL	498	676	2076	6989	6403	5788	2979	2580	2356	1365	1727	5762
MEAN	16.1	22.5	67.0	225	229	187	99.3	83.2	78.5	44.0	55.7	192
MAX	31	65	378	1370	1450	415	166	480	244	100	162	2000
MIN	14	15	26	56	49	92	66	50	39	29	22	33
CFSM	.26	.36	1.07	3.58	3.65	2.98	1.58	1.33	1.25	.70	.89	3.06
IN.	.29	.40	1.23	4.14	3.79	3.43	1.76	1.53	1.40	.81	1.02	3.41

CAL YR 1978 TOTAL 29624 MEAN 81.2 MAX 1900 MIN 14 CFSM 1.29 IN 17.55
WTR YR 1979 TOTAL 39199 MEAN 107 MAX 2000 MIN 14 CFSM 1.70 IN 23.22

POTOMAC RIVER BASIN

01645000 SENECA CREEK AT DAWSONVILLE, MD

LOCATION.--Lat 39°07'41", long 77°20'13", Montgomery County, Hydrologic Unit 02070008, on right bank 60 ft (18 m) downstream from bridge on State Highway 28, 150 ft (46 m) downstream from mouth of Great Seneca Creek, 0.5 mi (0.8 km) east of Dawsonville, and 5.8 mi (9.3 km) upstream from mouth.

DRAINAGE AREA.--101 mi² (262 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1930 to current year.

REVISED RECORDS.--WSP 726: Drainage area. WSP 1232: 1930. WSP 1272: 1933. WSP 1432: 1934-35(M), 1941(M). WDR MD-DE-74-1: 1970(M).

GAGE.--Water-stage recorder. Concrete control since Mar. 3, 1934. Datum of gage is 214.02 ft (65.233 m) National Geodetic Vertical Datum of 1929. Sept. 26 to Nov. 9, 1930, chain gage, and Nov. 10, 1930, to Apr. 6, 1934, water-stage recorder, at highway bridge 60 ft (18 m) upstream at same datum.

REMARKS.--Water-discharge records good. Small diversion at times for irrigation above station.

AVERAGE DISCHARGE.--49 years, 102 ft³/s (2.889 m³/s), 13.71 in/yr (348 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,100 ft³/s (739 m³/s) June 22, 1972, gage height, 16.4 ft (5.00 m), from high-water mark in gage house, from rating curve extended above 3,000 ft³/s (850 m³/s) on basis of contracted-opening and flow-over-road measurement at gage height 12.17 ft (3.709 m) at gage; and contracted-opening and flow-over-road measurement at gage height 16.32 ft (4.974 m) at site 5.0 mi (8.0 km) downstream, adjusted for flow from intervening area; minimum observed, 1.7 ft³/s (0.048 m³/s) Sept. 28, 29, 1930, gage height, 0.56 ft (0.171 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,300 ft³/s (36 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. 25	0430	1300 36.8	5.57 1.698	May 24	0615	1640 46.4	6.37 1.942
Jan. 2	1315	2730 77.3	7.69 2.344	June 3	1630	1990 56.4	6.91 2.106
Jan. 21	1645	2720 77.0	7.68 2.341	July 30	0330	1510 42.8	6.10 1.859
Jan. 24	1600	3530 100	8.27 2.521	Sept. 6	0100	*16000 453	12.69 3.868
Feb. 25	0300	5540 157	9.19 2.801	Sept. 22	0600	3380 95.7	8.19 2.496
Feb. 26	0630	5870 166	9.31 2.838				

Minimum discharge, 29 ft³/s (0.82 m³/s) Oct. 25, gage height, 1.88 ft (0.573 m).

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	33	33	67	199	141	500	166	109	451	160	79	77
2	33	33	54	1750	131	445	164	105	191	187	131	77
3	32	33	51	332	128	356	193	104	899	95	156	74
4	34	34	130	159	127	304	238	109	650	100	79	69
5	36	36	206	143	114	476	251	115	276	109	71	1600
6	72	35	87	135	111	565	179	106	200	84	61	6640
7	39	34	68	245	109	337	155	100	172	79	57	400
8	35	35	70	584	109	277	151	95	162	74	55	236
9	34	33	461	230	103	239	254	94	143	74	101	176
10	35	34	241	159	98	221	298	92	260	73	69	156
11	34	34	111	141	96	406	187	90	147	72	91	143
12	34	35	93	128	96	252	172	87	135	69	346	128
13	34	35	82	138	105	216	166	129	119	150	176	115
14	33	35	75	172	101	206	187	174	110	188	91	135
15	32	35	70	154	105	185	167	110	106	86	75	133
16	33	41	67	121	100	169	154	142	101	75	69	105
17	37	57	64	125	91	167	146	99	214	69	65	100
18	35	129	59	118	83	162	137	93	208	65	65	93
19	35	54	60	103	92	157	133	115	122	67	137	91
20	35	42	60	137	108	151	129	103	108	101	182	87
21	33	40	83	2210	112	146	126	95	102	143	389	268
22	34	38	64	490	153	142	125	92	100	82	147	1860
23	34	38	60	227	183	139	121	107	99	71	99	382
24	32	43	98	2060	1490	558	120	769	96	67	102	205
25	32	39	581	987	4210	435	118	274	92	65	156	168
26	33	37	131	267	3870	241	122	194	83	67	142	154
27	39	58	104	218	796	198	149	147	81	59	129	140
28	37	68	85	208	597	179	132	133	81	67	188	134
29	35	73	82	188	---	171	118	134	93	86	105	137
30	34	156	77	171	---	163	114	113	100	532	94	129
31	34	---	92	155	---	159	---	105	---	101	82	---
TOTAL	1102	1427	3633	12454	13559	8322	4872	4334	5701	3317	3789	14212
MEAN	35.5	47.6	117	402	484	268	162	140	190	107	122	474
MAX	72	156	581	2210	4210	565	298	769	899	532	389	6640
MIN	32	33	51	103	83	139	114	87	81	59	55	69
CFSM	.35	.47	1.16	3.98	4.79	2.65	1.60	1.39	1.88	1.06	1.21	4.69
IN.	.41	.53	1.34	4.59	4.99	3.07	1.79	1.60	2.10	1.22	1.40	5.23

CAL YR 1978 TOTAL 50885 MEAN 139 MAX 5020 MIN 32 CFSM 1.38 IN 18.74
WTR YR 1979 TOTAL 76722 MEAN 210 MAX 6640 MIN 32 CFSM 2.08 IN 28.26

POTOMAC RIVER BASIN

243

01645000 SENECA CREEK AT DAWSONVILLE, MD--Continued

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	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)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)
DEC 13...	10	46	20	12	4.0	6.3	22	.4	2.5	32
MAR 14...	10	38	18	9.6	3.3	7.6	29	.5	1.6	24
AUG 29...	10	51	18	14	4.0	10	28	.6	2.8	41

DATE	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)
DEC 13...	26	2.0	10	13	.0	12	87	76	.12	18.6
MAR 14...	20	.4	12	13	.1	10	84	69	.11	46.5
AUG 29...	34	.3	12	14	.1	9.6	109	87	.15	31.2

DATE	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- 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)
DEC 13...	2.4	.07	.21	460	340	120	90	10	80
MAR 14...	2.7	.02	.06	410	270	140	40	0	50
AUG 29...	2.3	.09	.28	990	850	140	70	20	50

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)
OCT 31...	1530	34	155	8.2	16.0	10.5
DEC 13...	1245	79	160	7.4	9.5	3.0
FEB 01...	1500	137	170	8.0	-1.5	1.0
MAR 14...	1345	205	150	8.0	11.5	8.5
MAY 01...	1400	109	160	8.8	15.5	15.0
JUN 01...	1000	702	140	7.5	24.0	19.0
JUL 16...	1445	78	180	7.8	26.5	22.5
AUG 29...	1100	106	170	8.4	24.0	22.0

POTOMAC RIVER BASIN

01645200 WATTS BRANCH AT ROCKVILLE, MD

LOCATION.--Lat 39°05'03", long 77°10'38", Montgomery County, Hydrologic Unit 02070008, on left bank 0.2 mi (0.3 km) south of State Highway 28, 1.3 mi (2.1 km) west of post office in Rockville, and 9.4 mi (15.0 km) upstream from mouth.

DRAINAGE AREA.--3.70 mi² (9.58 km²).

PERIOD OF RECORD.--June 1957 to current year.

REVISED RECORDS.--WSP 2103: 1965. WDR MD-DE-75-1: 1967-70.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 330 ft (100 m), from topographic map.

REMARKS.--Records good except those above 250 ft³/s (7.1 m³/s) which are poor. Some regulation of low flow from unknown source above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--22 years, 4.20 ft³/s (0.119 m³/s), 15.42 in/yr (392 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,400 ft³/s (96.3 m³/s) Sept. 26, 1975, gage height, 7.32 ft (2.231 m), from rating curve extended above 280 ft³/s (7.93 m³/s) on basis of combined computation of peak flow through culvert and slope-area measurement of tributary inflow at gage height 7.22 ft (2.201 m) in gage well, 7.83 ft (2.387 m), from floodmarks; minimum, 0.10 ft³/s (0.003 m³/s) Sept. 2, 1966, gage height, 1.10 ft (0.335 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 220 ft³/s (6.2 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Jan. 21	1215	305	8.64	4.60	1.402	Aug. 2	1715	407	11.5	5.21	1.588
Jan. 24	0800	318	9.01	4.68	1.426	Aug. 19	1915	331	9.38	4.76	1.451
Feb. 24	2215	348	9.86	4.87	1.484	Aug. 27	1700	*2600	73.6	7.14	2.176
Feb. 25	2030	348	9.86	4.87	1.484	Sept. 5	1445	739	20.9	6.21	1.892
Mar. 24	0630	316	8.95	4.67	1.423	Sept. 5	1800	562	15.9	5.83	1.777
May 24	0015	235	6.66	4.04	1.231	Sept. 5	2015	636	18.0	6.03	1.838
June 1	0245	224	6.34	3.95	1.204	Sept. 21	2000	447	12.7	5.43	1.655
June 3	1400	820	23.2	6.34	1.932	Sept. 21	2400	539	15.3	5.76	1.756
July 1	1830	301	8.52	4.57	1.393						

Minimum discharge, 0.66 ft³/s (0.019 m³/s) Oct. 28, gage height, 1.20 ft (0.366 m).

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	.94	.86	1.6	18	3.7	12	5.8	2.8	32	20	1.6	2.3
2	.87	.92	1.8	92	3.7	12	4.6	2.8	3.2	3.5	29	2.3
3	.84	1.1	4.6	5.5	3.5	6.9	9.4	2.9	109	2.3	3.3	2.2
4	1.6	.81	12	3.5	3.6	6.8	14	3.4	15	5.2	1.8	2.0
5	8.8	.81	17	3.1	3.4	27	6.6	3.7	5.1	2.5	1.6	235.
6	4.3	.83	2.1	3.2	3.1	12	4.3	2.8	4.0	2.0	1.6	30
7	.87	.92	1.7	23	3.0	5.3	4.0	2.6	3.5	2.0	1.4	5.6
8	.90	.92	4.6	23	3.1	4.4	3.9	2.6	3.3	2.4	9.0	4.2
9	.93	.93	31	4.1	2.9	3.9	18	2.5	3.1	2.3	2.0	3.7
10	.96	.92	3.7	3.3	3.1	4.6	6.0	2.5	3.0	2.0	1.4	3.5
11	.94	.92	2.5	3.1	3.3	18	4.3	2.4	3.2	1.9	7.1	3.3
12	.92	.92	2.1	3.0	4.1	4.0	4.1	2.4	2.8	1.7	31	3.2
13	.92	.92	2.0	8.2	3.5	4.0	4.0	16	2.7	6.1	2.6	3.1
14	.99	.90	1.8	11	3.1	3.6	6.5	5.6	2.6	2.1	1.8	8.9
15	.98	2.0	1.7	3.2	2.8	3.2	3.9	5.5	2.7	1.8	1.7	3.3
16	1.3	1.9	1.7	3.0	2.9	3.1	3.7	3.8	2.5	1.7	1.5	3.0
17	.94	6.9	1.6	3.4	2.6	3.2	3.5	2.5	14	1.6	1.4	2.9
18	.82	9.1	1.5	2.8	2.6	3.0	3.4	3.1	3.0	1.6	1.9	2.9
19	1.1	1.2	1.5	2.6	2.9	2.9	3.3	7.7	2.6	1.6	22	2.8
20	.90	1.1	4.9	27	3.5	2.9	3.2	3.0	2.4	15	2.7	2.7
21	.89	1.3	3.3	88	4.6	2.8	3.2	3.0	2.4	8.8	23	96
22	.86	1.2	1.7	7.7	10	2.7	3.1	2.6	2.4	2.1	2.5	51
23	.88	1.8	1.6	4.2	8.5	2.7	3.1	9.6	3.7	1.8	2.0	8.6
24	1.0	1.4	32	85	110	58	3.1	20	2.5	1.7	13	4.5
25	.79	1.1	15	8.8	149	9.1	3.1	4.6	2.2	1.7	13	4.1
26	.82	1.0	2.9	6.9	75	5.1	3.7	3.1	2.1	1.8	3.9	4.1
27	2.1	8.5	2.4	6.0	19	4.4	7.0	2.8	2.0	1.5	138	3.7
28	.77	2.9	2.1	7.6	18	4.2	3.3	2.7	3.9	5.6	7.8	4.1
29	.79	13	2.0	5.8	---	4.1	3.0	2.6	2.3	5.5	3.6	3.7
30	.79	3.6	2.0	4.0	---	3.9	3.0	2.4	6.6	5.5	2.9	3.8
31	.81	---	5.2	3.8	---	5.4	---	2.6	---	1.7	2.5	---
TOTAL	41.32	70.68	171.6	473.8	458.5	245.2	152.1	136.6	249.8	117.0	338.6	510.5
MEAN	1.33	2.36	5.54	15.3	16.4	7.91	5.07	4.41	8.33	3.77	10.9	17.0
MAX	8.8	13	32	92	149	58	18	20	109	20	138	235
MIN	.77	.81	1.5	2.6	2.6	2.7	3.0	2.4	2.0	1.5	1.4	2.0
CFSM	.36	.64	1.50	4.14	4.43	2.14	1.37	1.19	2.25	1.02	2.95	4.60
IN.	.42	.71	1.72	4.76	4.61	2.46	1.53	1.37	2.51	1.18	3.40	5.13

CAL YR 1978 TOTAL 1968.23 MEAN 5.39 MAX 167 MIN .77 CFSM 1.46 IN 19.78
WTR YR 1979 TOTAL 2965.70 MEAN 8.13 MAX 235 MIN .77 CFSM 2.20 IN 29.81

01646500 POTOMAC RIVER NEAR WASHINGTON, DC

LOCATION.--Lat 38°56'58", long 77°07'40", Montgomery County, Md., Hydrologic Unit 02070008, on left bank just above Little Falls Dam, 1 mi (1.6 km) upstream from District of Columbia boundary line, 1.2 mi (1.9 km) upstream from Chain Bridge, 1.8 mi (2.9 km) east of Langley, Fairfax County, Va., and at mile 117.4 (188.9 km).

DRAINAGE AREA.--11,560 mi² (29,940 km²).

PERIOD OF RECORD.--March 1930 to current year.

REVISED RECORDS.--WSP 726: Drainage area. WDR MD-DE-75-1: 1973-74(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 37.95 ft (11.567 m) National Geodetic Vertical Datum of 1929. Prior to June 7, 1930, nonrecording gage, and June 7, 1930, to Jan. 22, 1965, water-stage recorder at site 1 mi (1.6 km) upstream on right bank at same datum.

REMARKS.--Records good. Diversions at Great Falls through aqueducts, and since June 1959, from gage pool at Little Falls Dam, for municipal supply of Washington, D. C.; since October 1958, at Rockville Filtration Plant, for municipal supply of city of Rockville; since April 1961, at Potomac Filtration Plant for water supply of Washington Suburban Sanitary District; since October 1961, at Fairfax Water Treatment Plant for water supply of city of Fairfax (from Goose Creek); and since April 1964, at Violets Lock to Chesapeake and Ohio Canal. Low flow affected slightly by Stony River Reservoir (see station 01595200) and since December 1950, by Savage River Reservoir (see station 01597500). Gage-height telemeter at station.

AVERAGE DISCHARGE.--49 years, 11,390 ft³/s (322.6 m³/s), 13.38 in/yr (340 mm/yr), adjusted for diversions.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 484,000 ft³/s (13,700 m³/s) Mar. 19, 1936, gage height, 28.1 ft (8.56 m) site then in use; minimum daily observed at gaging station, 121 ft³/s (3.43 m³/s) Sept. 9, 1966, does not include diversion of 489 ft³/s (13.8 m³/s) for municipal use; minimum daily (adjusted), 601 ft³/s (17.0 m³/s) Sept. 10, 1966, includes diversion of 449 ft³/s (12.7 m³/s) for municipal use.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 2, 1889, was of approximately the same magnitude as that of March 19, 1936.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 45,000 ft³/s (1,200 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 26	0330	123000 3480	9.66 2.944	Mar. 26	2345	51200 1450	6.76 2.061
Feb. 26	2300	206000 5830	13.12 3.999	Sept. 7	2030	107000 3030	9.09 2.771
Mar. 7	1145	93500 2650	8.61 2.624				

Minimum daily discharge, 1,660 ft³/s (47.0 m³/s) Nov. 9, does not include diversion for municipal use; minimum daily (adjusted), 2,150 ft³/s (60.9 m³/s) Nov. 9.

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	1770	1690	3430	10000	17800	78200	18700	18500	19400	4600	4970	8820
2	1770	1700	4260	22400	15400	61200	17200	17000	16400	5630	5170	7020
3	1790	1720	5030	35100	13500	55500	18600	16000	21500	5820	5920	5690
4	1790	1800	5220	41900	12200	54400	27800	14500	33100	5750	8010	4920
5	1880	1740	6360	33600	11200	55500	32200	13300	33900	5810	5030	8390
6	2150	1700	6240	24200	10000	77500	36400	13000	32600	5450	4100	51200
7	2080	1690	9320	20000	9340	91200	33700	13200	26800	5710	3600	84000
8	2040	1710	8700	20600	8470	76200	27800	13200	20500	6370	3130	77500
9	1950	1660	10800	22600	8920	55200	24200	12200	16400	5970	3260	38900
10	1930	1700	16300	21200	6900	44000	24500	11200	14000	4950	3180	25000
11	1840	1740	20700	20200	5000	41000	23300	10400	12900	4350	3120	18600
12	1790	1700	18600	16700	4800	37100	20300	9710	18300	4000	4610	14700
13	1710	1680	14600	14200	4800	31000	18000	9970	20600	4040	5080	12200
14	1720	1720	12300	13100	4900	27200	16900	15700	16000	4170	5040	10700
15	1840	1720	10400	12800	5200	24200	16600	22900	12800	4430	5000	9740
16	1980	1870	8790	11800	5600	21500	16100	25800	10800	4540	5630	9640
17	2170	2130	7370	10700	5600	19800	15500	21300	10200	4660	5400	10200
18	2130	2620	6310	9480	4900	18000	14600	17200	10900	6850	4380	9030
19	2080	2730	5700	8470	4800	16600	13800	14500	9670	7690	3900	7860
20	2040	2700	5170	8370	4600	15500	13000	12700	8920	6540	4100	6970
21	2020	2760	5120	22700	6500	14500	12300	11400	7950	6100	5540	7240
22	2000	2910	4800	44700	7810	13700	11600	10600	7140	6200	4790	24700
23	1960	2870	4790	68100	9350	12800	11100	9960	6450	5500	4580	32100
24	1920	2870	9070	65200	14300	14100	10600	13900	6080	5970	5340	36600
25	1880	2490	16700	101000	106000	19600	10200	17100	5640	5120	10200	31400
26	1800	2320	21400	103000	189000	39800	10100	23700	5250	4930	7510	25900
27	1810	2440	22900	54200	201000	48300	10300	36500	5000	4640	7770	20000
28	1800	2540	19300	36900	147000	36800	11100	33200	4790	4920	9400	16300
29	1770	2750	15300	29800	---	28800	15700	25400	4600	6190	6820	13800
30	1700	3380	12300	24700	---	24100	19100	21200	4480	6850	5600	12100
31	1770	---	10300	21200	---	21000	---	18100	---	5320	8270	---
TOTAL	58880	65050	327580	948920	844890	1174300	551300	523340	423070	169070	168450	641220
MEAN	1899	2168	10570	30610	30170	37880	18380	16880	14100	5454	5434	21370
MAX	2170	3380	22900	103000	201000	91200	36400	36500	33900	7690	10200	84000
MIN	1700	1660	3430	8370	4600	12800	10100	9710	4480	4000	3120	4920
(*)	477	477	453	462	470	460	458	478	486	508	505	494
MEAN*	2376	2645	11020	31070	30640	38340	18840	17360	14590	5962	5939	21860
CFSM*	.21	.23	.95	2.69	2.65	3.32	1.63	1.50	1.26	.52	.51	1.89
IN*	.24	.26	1.30	3.10	2.76	3.82	1.82	1.73	1.41	.59	.59	2.11

CAL YR 1978 TOTAL 5174760 MEAN 14180 MAX 140000 MIN 1660 MEAN* 14660 CFSM* 1.27 IN* 17.21
WTR YR 1979 TOTAL 5896070 MEAN 16150 MAX 201000 MIN 1660 MEAN* 16630 CFSM* 1.44 IN* 19.55

* Diversion in cfs, for municipal supply of Washington, D.C., Washington Suburban Sanitary District, city of Rockville, city of Fairfax (from Goose Creek), and the Chesapeake and Ohio Canal (insignificant diversion to canal during current water year); records furnished by Corps of Engineers, Washington Suburban Sanitary Commission, city of Rockville, and city of Fairfax.

* Adjusted for diversion.

POTOMAC RIVER BASIN

01646550 LITTLE FALLS BRANCH NEAR BETHESDA, MD

LOCATION.--Lat 38°57'27", long 77°06'31", Montgomery County, Hydrologic Unit 02070008, on left bank at downstream side of bridge on Massachusetts Avenue, 0.3 mi (0.5 km) downstream from Willett Branch, 1.7 mi (2.7 km) upstream from mouth, and 2.0 mi (3.2 km) southwest of Bethesda.

DRAINAGE AREA.--4.1 mi² (10.6 km²), approximately.

PERIOD OF RECORD.--June 1944 to September 1959. Annual maximum, water years 1960-61. December 1961 to January 1979 (discontinued).

REVISED RECORDS.--WSP 1171: 1945.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 169.32 ft (51.609 m) Maryland State Highway Administration datum. Prior to Oct. 1959, water-stage recorder and concrete control at site 50 ft (15 m) upstream at same datum. Oct. 1, 1959, to Nov. 30, 1961, crest-stage gage at present site and datum.

REMARKS.--Records good. Occasional slight regulation at low flow from unknown source above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--31 years (water years 1945-59, 1963-78), 3.36 ft³/s (0.095 m³/s), 11.13 in/yr (283 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,680 ft³/s (75.9 m³/s) Sept. 14, 1966, gage height, 6.82 ft (2.079 m), from rating curve extended above 630 ft³/s (17.8 m³/s) on basis of slope-area measurement at gage height 5.92 ft (1.804 m); no flow at times in 1944, 1954, 1959.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period October 1978 to January 1979, 192 ft³/s (5.44 m³/s) Jan. 2, gage height, 2.47 ft (0.753 m), no peak above base of 450 ft³/s (12 m³/s); minimum daily discharge, 0.85 ft³/s (0.024 m³/s) Oct. 14, 15.

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	1.1	.96	1.5	18								
2	1.2	1.1	1.4	59								
3	1.1	1.2	4.9	3.3								
4	3.4	.92	14	2.5								
5	6.1	.94	22	2.4								
6	3.4	1.0	2.0	2.3								
7	1.1	.98	1.5	26								
8	1.0	.99	4.0	18								
9	1.1	1.0	26	3.2								
10	1.2	1.0	2.2	2.8								
11	1.1	1.0	1.7	2.6								
12	1.1	1.0	1.7	2.6								
13	.91	1.0	1.6	17								
14	.85	1.0	1.5	6.5								
15	.85	2.2	1.5	2.9								
16	1.4	2.0	1.5	3.1								
17	.94	8.0	1.3	2.4								
18	1.2	10	1.4	---								
19	1.4	1.6	1.5	---								
20	.97	1.3	6.7	---								
21	1.0	1.2	3.5	---								
22	.91	1.2	1.4	---								
23	1.6	2.0	1.6	---								
24	1.2	1.5	30	---								
25	.97	1.2	8.3	---								
26	.87	1.2	2.0	---								
27	2.1	16	1.6	---								
28	.88	3.3	1.5	---								
29	.86	17	2.0	---								
30	.92	2.9	1.5	---								
31	.90	---	7.8	---								
TOTAL	43.63	86.69	161.1	---								
MEAN	1.41	2.89	5.20	---								
MAX	6.1	17	30	---								
MIN	.85	.92	1.3	---								
CFSM	.34	.71	1.27	---								
IN.	.40	.79	1.46	---								

CAL YR 1978 TOTAL 1566.32 MEAN 4.29 MAX 73 MIN .85 CFSM 1.05 IN 14.21

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC
(National stream-quality accounting network station)

LOCATION.--Lat 38°55'46", long 77°07'02", Arlington County, Va., Hydrologic Unit 02070010, under right downstream side of bridge on Virginia State Highway 123, and at river mile 115.9 (186.5 km).

DRAINAGE AREA.--11,570 mi² (29,970 km²).

PERIOD OF RECORD.--March 1973 to current year. Prior to October 1977, published as "at Great Falls."

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: June 1978 to current year.

pH: June 1978 to current year.

WATER TEMPERATURES: June 1978 to current year.

DISSOLVED OXYGEN: June 1978 to current year.

SUSPENDED SEDIMENT: October 1978 to current year.

INSTRUMENTATION.--Water-quality monitor since June 1978.

REMARKS.--Records of discharge are given for station 01646500 Potomac River near Washington, D.C. (unadjusted for diversions). Interruptions in record were due to malfunctions of the recording instruments.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 584 micromhos Nov. 27, 1979; minimum, 116 micromhos Jan. 25, 1979.

pH: Maximum, 9.1 units on several days in 1978 and 1979; minimum, 7.4 units June 4, Aug. 27, and Sept. 7, 1979.

WATER TEMPERATURES: Maximum, 31.0°C July 23, 24, 1978; minimum, 0.0°C on many days during winter periods.

DISSOLVED OXYGEN: Maximum, 16.4 mg/L on many days in 1979; minimum, 6.6 mg/L Aug. 3, 1979.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 584 micromhos Nov. 27; minimum, 116 micromhos Jan. 25.

pH: Maximum, 9.1 units June 28; minimum, 7.4 units June 4, Aug. 27, Sept. 7.

WATER TEMPERATURE: Maximum, 30.5°C Aug. 7, 8; minimum, 0.0°C on many days during January and February.

DISSOLVED OXYGEN: Maximum, 16.4 mg/L Nov. 22, Jan. 11, Feb. 17, 18; minimum, 6.6 mg/L Aug. 3.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 812 mg/L Sept. 6; minimum daily mean, 2 mg/L Feb. 13-22.

SEDIMENT LOADS: Maximum daily, 281,000 tons (253,000 tonnes) Feb. 27; minimum daily, 25 tons (23 tonnes) Feb. 20.

REVISIONS.--

pH: Minimums for water year 1978 have been revised to 8.8 units for June 2, 1978, and 8.0 units for Aug. 5, 1978, superseding values previously published.

DISSOLVED OXYGEN: Minimums of July 19, 28, 29, and Sept. 20 for water year 1978 have been revised to 9.1, 7.5, 7.6, and 7.7 mg/L respectively, superseding values previously published.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	ATRA- ZINE, TOTAL (UG/L)	SIMA- ZINE TOTAL COUL- SON COND. (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
APR 11...	ND	ND	ND	ND	ND
AUG 16...	ND	ND	ND	ND	ND

ND NOT DETECTED

POTOMAC RIVER BASIN

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	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)
OCT										
04...	1423	1840	--	--	--	--	--	--	--	--
10...	1020	1940	450	8.6	14.0	14.5	2.0	10.8	K13	270
NOV										
14...	1015	1790	450	8.5	18.5	12.5	7.0	11.1	80	240
DEC										
19...	1000	5780	290	8.2	5.5	3.5	5.0	13.7	60	240
JAN										
16...	1115	11700	275	7.7	4.5	1.0	4.0	14.1	40	400
FEB										
27...	1900	197000	135	8.0	3.5	3.0	90	14.2	1700	7000
MAR										
19...	1230	16500	265	8.2	--	8.0	--	--	--	--
27...	1000	49800	200	8.0	10.5	9.0	65	--	1500	3800
APR										
26...	1300	10100	245	8.7	16.0	18.0	4.0	9.6	K9	360
MAY										
23...	1045	9970	195	8.4	21.5	22.0	6.0	9.6	48	270
JUN										
05...	1030	34200	230	8.1	--	21.0	--	--	--	--
13...	1030	21200	260	8.1	23.0	21.0	25	9.8	170	140
JUL										
17...	1030	4440	325	8.5	28.8	29.0	7.0	8.5	60	530
AUG										
15...	1030	4940	310	8.5	20.0	24.5	15	9.5	120	1100
SEP										
06...	1030	62000	180	7.8	26.5	24.5	150	8.5	K11000	E84000
06...	1330	62300	177	8.3	--	24.7	--	--	--	--
06...	2000	58700	160	--	--	24.6	--	--	--	--
07...	0745	70600	165	--	--	23.7	--	--	--	--
07...	1100	84200	205	--	--	24.1	--	--	--	--
07...	1430	95300	220	--	--	--	--	--	--	--
07...	1830	104000	230	--	--	--	--	--	--	--
08...	1030	80900	168	--	--	--	--	--	--	--
09...	1415	36200	178	--	--	--	--	--	--	--

DATE	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)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CAC03)
OCT									
02...	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--
10...	180	58	50	13	22	21	.7	2.7	120
NOV									
14...	200	58	58	13	26	22	.8	3.0	140
DEC									
19...	120	47	34	7.6	9.3	15	.4	2.2	69
JAN									
16...	92	32	27	5.9	8.0	16	.4	1.8	60
FEB									
27...	43	14	13	2.5	3.0	13	.2	2.1	29
MAR									
01...	56	26	17	3.4	3.6	12	.2	1.9	30
19...	100	36	30	6.8	7.0	13	.3	1.6	67
27...	78	33	23	4.9	5.2	12	.3	1.7	45
APR									
26...	110	35	33	7.0	8.2	14	.3	1.5	76
MAY									
23...	100	31	30	6.2	8.6	15	.4	1.8	69
JUN									
13...	110	29	33	6.6	7.4	12	.3	2.8	81
JUL									
17...	120	37	34	9.6	15	20	.6	2.4	87
AUG									
15...	120	38	34	8.1	13	19	.5	3.0	80
SEP									
06...	69	6	21	3.9	5.9	15	.3	3.3	63
06...	68	6	21	3.8	5.4	14	.3	3.3	62
06...	60	9	18	3.6	4.7	14	.3	4.3	51
07...	64	18	19	3.9	5.5	15	.3	4.0	46
07...	76	16	23	4.6	7.5	17	.4	3.7	60
07...	83	14	25	5.1	7.1	15	.3	3.5	69
07...	89	14	27	5.2	8.1	16	.4	3.3	75
09...	72	23	22	4.1	4.0	10	.2	2.6	49

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	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 AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)		
OCT										
02...	--	--	--	2.6	--	--	--	--		
04...	--	--	--	2.3	--	--	--	--		
10...	66	20	.1	1.4	259	247	.35	1360		
NOV										
14...	74	25	.2	.2	306	284	.42	1480		
DEC										
19...	40	9.0	.1	6.1	149	116	.20	2330		
JAN										
16...	27	13	.1	7.3	149	126	.20	4710		
FEB										
27...	16	4.5	.1	4.3	70	63	.10	37200		
MAR										
01...	18	5.4	.1	5.9	--	79	.11	15700		
19...	30	7.8	.1	7.1	147	138	.20	6550		
27...	25	7.2	.0	5.7	113	100	.15	15200		
APR										
26...	34	9.4	.1	1.1	157	140	.21	4280		
MAY										
23...	30	7.5	.1	5.8	154	132	.21	4150		
JUN										
13...	29	7.0	.1	6.7	154	141	.21	8820		
JUL										
17...	49	15	.1	1.5	222	181	.30	2540		
AUG										
15...	43	15	.1	5.8	185	172	.25	2470		
SEP										
06...	15	6.3	.1	6.1	118	104	.16	19800		
06...	15	6.4	.1	5.8	--	103	.14	17300		
06...	11	6.1	.1	6.1	--	89	.12	14100		
07...	16	6.0	.1	6.6	--	93	.13	17700		
07...	20	6.9	.1	6.5	--	113	.15	25700		
07...	20	7.7	.1	6.7	--	119	.16	30600		
07...	23	8.3	.1	7.0	--	135	.18	37900		
09...	19	4.6	.1	7.9	--	96	.13	9380		
DATE	SOLIDS, RESIDUE AT 105 DEG. C. TOTAL (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO2)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)
OCT										
02...	--	--	--	--	--	--	--	--	.58	--
04...	--	--	--	--	--	--	--	--	.64	--
10...	--	--	--	--	--	--	--	.79	--	.04
NOV										
14...	--	--	--	--	--	--	--	.53	--	.01
DEC										
19...	--	1.5	--	--	.01	--	--	1.5	1.5	.03
JAN										
16...	--	--	--	--	--	--	--	1.7	--	.08
FEB										
27...	--	--	--	--	--	--	--	.90	--	.16
MAR										
01...	--	1.1	--	--	.02	--	--	1.1	1.2	.07
19...	--	1.6	1.6	7.0	.01	.01	.03	1.6	1.6	.02
27...	134	--	--	--	--	--	--	1.4	--	.05
APR										
26...	158	--	--	--	--	--	--	.79	--	.08
MAY										
23...	162	--	--	--	--	--	--	1.0	--	.01
JUN										
05...	233	1.3	1.3	5.7	.02	.02	.07	1.3	1.3	.02
13...	207	--	--	--	--	--	--	1.1	--	.02
JUL										
17...	224	.40	.40	1.8	.01	.01	.03	.41	.41	.07
AUG										
15...	209	.45	.44	1.9	.01	.01	.03	.46	.45	.04
SEP										
06...	1030	--	--	--	--	--	--	1.2	1.0	.07
06...	767	1.2	.97	4.3	.00	.03	.10	1.2	1.0	.05
06...	682	.97	.85	3.8	.03	.02	.07	1.0	.87	.10
07...	568	1.1	.97	4.3	.02	.03	.10	1.1	1.0	.01
07...	622	1.4	.98	4.3	.03	.02	.07	1.4	1.0	.13
07...	623	2.0	.46	2.0	.01	.03	.10	2.0	.49	.90
07...	589	1.8	1.8	7.9	.01	.01	.03	1.8	1.8	.66
08...	308	--	--	--	--	--	--	--	--	--
09...	363	.77	.36	1.6	.06	.03	.10	.83	.39	.85

POTOMAC RIVER BASIN

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (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- SOLVED (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)
OCT										
02...	--	--	--	--	--	.38	--	--	--	--
04...	--	--	--	--	--	.53	.36	.17	--	--
10...	--	.05	--	.32	--	.36	.01	.35	1.2	--
NOV										
14...	--	.01	--	.55	--	.56	.34	.22	1.1	--
DEC										
19...	--	.04	--	.30	--	.33	.25	.08	1.8	--
JAN										
16...	--	.10	--	.31	--	.39	.04	.35	2.1	--
FEB										
27...	--	.21	--	1.1	--	1.3	1.1	.22	2.2	--
MAR										
01...	--	.09	--	.63	--	.70	--	--	1.8	--
19...	.03	.03	.04	.06	.03	.08	.02	.06	1.7	1.7
27...	--	.06	--	.58	--	.63	.35	.28	2.0	--
APR										
26...	--	.10	--	.28	--	.36	.27	.09	1.2	--
MAY										
23...	--	.01	--	.60	--	.61	.21	.40	1.6	--
JUN										
05...	.00	.02	.00	.95	.42	.97	.55	.42	2.3	1.7
13...	--	.02	--	.47	--	.49	.36	.13	1.6	--
JUL										
17...	.01	.08	.01	.68	.40	.75	.34	.41	1.2	.82
AUG										
15...	.00	.05	.00	.69	.68	.73	.05	.68	1.2	1.1
SEP										
06...	.01	1.1	.01	2.6	.59	3.5	2.9	.60	4.7	1.6
06...	.08	.06	.10	2.4	.92	2.4	1.4	1.0	3.6	2.0
06...	.08	.12	.10	2.2	.71	2.3	1.5	.79	3.3	1.7
07...	.00	.01	.00	.99	1.0	1.0	.00	1.0	2.1	2.0
07...	.05	.16	.06	2.1	.54	2.2	1.6	.59	3.6	1.6
07...	.25	1.1	.32	1.3	.68	2.2	1.3	.93	4.2	1.4
07...	.01	.80	.01	1.7	1.1	2.4	1.3	1.1	4.2	2.9
08...	--	--	--	--	--	--	--	--	--	--
09...	.31	1.0	.40	.45	.10	1.3	.89	.41	2.1	.80
DATE	NITRO- GEN, TOTAL (MG/L AS N03)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P04)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOPHOS- PHATE, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS P04)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDE RECOV. (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)
OCT										
02...	--	.06	.18	.01	--	--	--	--	--	--
04...	--	.04	.12	.00	--	--	--	--	--	--
10...	5.1	.04	.12	.01	--	--	--	--	--	--
NOV										
14...	4.8	.04	.12	.01	--	--	--	--	--	--
DEC										
19...	8.1	.07	.21	.06	.05	.04	.12	200	170	30
JAN										
16...	9.3	.06	.18	.05	--	--	--	--	--	--
FEB										
27...	9.7	.41	1.3	.06	--	--	--	--	--	--
MAR										
01...	8.0	.11	.34	.04	.04	.03	.09	2500	2500	30
19...	7.4	.05	.15	.03	.02	.02	.06	190	150	40
27...	9.0	.14	.43	.03	--	.01	.03	--	--	--
APR										
26...	5.1	.00	.00	.00	--	.00	.00	80	0	80
MAY										
23...	7.1	.09	.28	.03	--	.00	.00	130	80	50
JUN										
05...	10	.18	.55	.05	.02	.01	.03	2400	2400	40
13...	7.0	.11	.34	.04	--	.03	.09	830	780	50
JUL										
17...	5.1	.06	.18	.01	.02	.00	.00	220	170	50
AUG										
15...	5.3	.11	.34	.01	.04	.00	.00	170	120	50
SEP										
06...	21	.76	2.3	--	--	--	--	13000	13000	60
06...	16	.63	1.9	.06	.05	.03	.09	12000	12000	40
06...	15	.68	2.1	.08	.08	.03	.09	9800	9800	40
07...	9.3	.57	1.7	.12	.06	.03	.09	7000	7000	40
07...	16	.60	1.8	.11	.05	.04	.12	7100	7100	30
07...	19	.56	1.7	.17	.12	.04	.12	7700	7700	40
07...	19	.52	1.6	.09	.07	.02	.06	7700	7700	30
08...	--	--	--	--	--	--	--	--	--	--
09...	9.4	.26	.80	.10	.23	.04	.12	3100	3100	30

POTOMAC RIVER BASIN

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01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)
DEC 19...	1	0	1	100	0	100	--	3	0	3
MAR 01...	1	--	--	--	--	--	0	0	--	--
MAR 19...	0	--	--	--	--	--	0	1	--	--
MAR 27...	1	0	1	100	100	0	--	2	2	0
APR 26...	3	--	--	--	--	--	0	0	--	--
JUN 13...	2	0	2	0	0	--	0	0	0	0
JUL 17...	0	--	--	--	--	--	0	1	--	--
AUG 15...	1	--	--	--	--	--	0	0	--	--
SEP 06...	2	1	1	200	200	30	--	1	0	1

DATE	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)
DEC 19...	<10	<10	0	1	0	1	0	0	0
MAR 01...	10	--	--	--	--	--	10	--	--
MAR 19...	<10	--	--	--	--	--	4	--	--
MAR 27...	20	10	10	4	4	0	7	6	1
APR 26...	10	--	--	--	--	--	4	--	--
JUN 13...	20	0	30	2	0	2	9	8	1
JUL 17...	20	--	--	--	--	--	4	--	--
AUG 15...	20	--	--	--	--	--	4	--	--
SEP 06...	40	20	20	19	19	0	34	31	3

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	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)
DEC 19...	310	40	270	38	33	5	30	10	20
MAR 01...	5200	5200	50	8	--	--	190	170	20
MAR 19...	430	290	140	7	--	--	40	20	20
MAR 27...	4300	4300	20	38	35	3	220	220	3
APR 26...	290	240	50	4	--	--	30	30	0
MAY 23...	530	520	10	--	--	--	40	40	3
JUN 05...	4500	4400	70	--	--	--	190	170	20
JUN 13...	1800	1800	0	59	50	9	110	100	10
JUL 17...	450	450	1	30	--	--	90	90	2
AUG 15...	940	920	20	13	--	--	90	90	3
SEP 06...	23000	23000	0	130	120	6	1200	1200	6
SEP 06...	24000	24000	130	--	--	--	990	980	8
SEP 06...	20000	20000	60	--	--	--	850	850	3
SEP 07...	14000	14000	80	--	--	--	600	590	7
SEP 07...	14000	14000	50	--	--	--	650	640	10
SEP 07...	15000	15000	80	--	--	--	710	700	10
SEP 07...	16000	16000	110	--	--	--	650	640	6
SEP 09...	6300	--	50	--	--	--	370	370	4
SEP 09...	--	6300	--	--	--	--	--	--	--

POTOMAC RIVER BASIN

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE D RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, SUS- PENDE D RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)
DEC 19...	<.5	.0	<.5	15	0	0	10
MAR 01...	<.5	--	--	30	0	--	--
19...	<.5	--	--	21	0	--	--
27...	.5	.0	.5	--	0	0	0
APR 26...	.5	--	--	18	0	--	--
JUN 13...	<.5	.0	<.5	11	0	0	0
JUL 17...	<.5	--	--	4	0	--	--
AUG 15...	<.5	--	--	5	0	--	--
SEP 06...	<.5	.0	<.5	29	0	0	0

DATE	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE D RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE D RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
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DEC 19...	0	0	0	50	50	0
MAR 01...	--	--	--	30	--	--
19...	--	--	--	30	--	--
27...	0	0	0	50	40	10
APR 26...	--	--	--	30	--	--
JUN 13...	0	0	0	40	40	2
JUL 17...	--	--	--	10	--	--
AUG 15...	--	--	--	30	--	--
SEP 06...	0	0	0	150	70	80

DATE	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, TOTAL (PCI/L AS CS-137)	GROSS BETA, SUSP. SOLVED (PCI/L AS YT-90)	GROSS BETA, TOTAL (PCI/L AS YT-90)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L)	URANIUM DIS- SOLVED, EXTRAC- TION (UG/L)
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MAR 27...	<1.2	7.2	2.5	4.9	2.4	4.7	.06	.08
-----------	------	-----	-----	-----	-----	-----	-----	-----

DATE	CARBON, TOTAL (MG/L AS C)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, INOR- GANIC, TOTAL (MG/L AS C)	CARBON, INOR- GANIC, DIS- SOLVED (MG/L AS C)	DATE	CARBON, TOTAL (MG/L AS C)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, INOR- GANIC, TOTAL (MG/L AS C)	CARBON, INOR- GANIC, DIS- SOLVED (MG/L AS C)
OCT 10...	--	3.3	--	--	--	JUN 13...	--	--	2.1	23	24
NOV 14...	--	3.6	--	--	--	JUL 17...	22	5.0	3.6	17	20
DEC 19...	--	--	2.4	14	--	AUG 15...	26	4.0	3.0	22	23
FEB 27...	--	--	6.2	--	--	SEP 06...	--	--	5.9	19	6.5
MAR 01...	--	--	--	8.5	--	06...	29	13	5.8	16	4.5
19...	--	--	8.1	--	--	06...	24	12	6.5	12	11
27...	--	--	5.0	--	--	07...	28	11	--	17	1.8
APR 26...	25	7.0	3.2	18	19	07...	29	9.4	5.2	20	14
MAY 23...	--	3.1	--	--	--	07...	--	--	--	26	16
JUN 05...	30	6.9	5.2	23	19	07...	30	9.7	6.1	20	--
						08...	29	12	6.2	17	12
						09...	20	6.4	5.3	14	9.3

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	PCB, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	ATRA- ZINE, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN, TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)
MAR											
01...	.0	.00	.00	.0	.00	.00	.00	--	.00	.00	.00
27...	.0	.00	.00	.0	.00	.00	.00	--	.00	.00	.00
APR											
26...	.0	.00	.00	.0	.00	.00	.00	--	.00	.00	.00
MAY											
09...	ND	ND	--	ND	ND	ND	ND	ND	ND	--	ND
23...	.0	.00	.20	.0	.00	.00	.00	--	.00	.00	.00
JUN											
13...	.0	.00	.40	.0	.00	.00	.00	--	.00	.00	.00
JUL											
17...	.5	.00	.30	.0	.00	.00	.00	--	.00	.00	.00
AUG											
15...	.0	.00	.30	.0	.00	.00	.00	--	.00	.00	.00
SEP											
06...	.0	.00	.40	.0	.01	.01	.00	--	.01	.00	.00

DATE	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR, TOTAL (UG/L)
MAR											
01...	--	.00	.00	.00	--	--	--	--	.00	--	.00
27...	--	.00	.00	.00	--	--	--	--	.00	--	.00
APR											
26...	--	.00	.00	.00	--	--	--	--	.00	--	.00
MAY											
09...	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	--
23...	--	.00	.00	.00	--	--	--	--	.00	--	.00
JUN											
13...	--	.00	.00	.00	--	--	--	--	.00	--	.00
JUL											
17...	--	.00	.00	.00	--	--	--	--	.00	--	.00
AUG											
15...	--	.00	.00	.00	--	--	--	--	.00	--	.00
SEP											
06...	--	.00	.00	.00	--	.00	--	--	.00	--	.00

DATE	PER- THANE TOTAL (UG/L)	PROME- TONE TOTAL (UG/L)	PROME- TRYNE TOTAL (UG/L)	SIME- TRYNE TOTAL (UG/L)	SIMA- ZINE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
MAR										
01...	.00	--	--	--	--	0	--	.01	.01	.00
27...	.00	--	--	--	--	0	--	.01	.01	.00
APR										
26...	.00	--	--	--	--	0	--	.01	.00	.00
MAY										
09...	--	--	--	--	--	ND	ND	--	--	--
23...	.00	--	--	--	--	0	--	.01	.00	.00
JUN										
13...	.00	--	--	--	--	0	--	.02	.00	.00
JUL										
17...	.00	.0	.2	.0	.0	0	--	.07	.00	.00
AUG										
15...	.00	.1	.3	.0	.0	0	--	.00	.00	.00
SEP										
06...	.00	.0	.3	.0	.0	0	--	.14	.01	.00

ND NOT DETECTED

POTOMAC RIVER BASIN

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

		CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)				CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)	
DATE	TIME				DATE	TIME			
MAR					AUG				
27...		4.80	.000		15...		32.9	4.69	
MAY					SEP				
23...		25.0	.000		07...		9.05	.000	
JUN					07...		9.11	.000	
05...		2.54	.000		08...		5.95	.000	
13...		14.3	.000		09...		.230	.000	
JUL									
17...		48.5	8.79						
		SEDI- MENT, SUS- PENDE (MG/L)	SED- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM			SEDI- MENT, SUS- PENDE (MG/L)	SED- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DATE	TIME				DATE	TIME			
OCT					MAY				
10...	1020	56	293	100	18...	1610	37	--	--
NOV					19...	1450	31	--	--
14...	1015	11	53	100	20...	1940	22	--	--
DEC					21...	1200	19	--	--
19...	1000	10	156	100	22...	1220	16	--	--
JAN					23...	1045	24	646	92
16...	1115	13	411	83	23...	1430	15	--	--
FEB					24...	1355	41	--	--
27...	1230	466	255000	71	25...	1320	122	--	--
27...	1430	480	260000	87	26...	1400	122	--	--
27...	1615	423	228000	90	27...	1835	154	--	--
27...	1815	425	227000	88	28...	2250	117	--	--
27...	1900	583	310000	86	29...	1955	91	--	--
MAR					30...	1300	59	--	--
01...	1230	178	35500	86	31...	1405	45	--	--
27...	1000	209	28100	91	JUN				
APR					01...	1600	91	--	--
26...	1300	8	218	100	02...	1320	253	--	--
MAY					03...	1255	40	--	--
06...	1030	91	--	--	04...	1050	331	--	--
14...	2030	50	--	--	05...	1030	134	12400	98
15...	0950	63	--	--	05...	1400	149	--	--
16...	1255	83	--	--	05...	1405	157	--	--
17...	1640	64	--	--	JUN				
JUN					22...	1930	13	--	--
05...	1410	119	--	--	23...	2105	9	--	--
05...	1415	148	--	--	24...	1845	17	--	--
05...	1930	175	--	--	25...	1830	13	--	--
06...	1505	208	--	--	26...	1905	11	--	--
07...	1925	129	--	--	27...	2025	10	--	--
08...	1510	98	--	--	28...	1010	11	--	--
09...	1725	70	--	--	29...	1955	10	--	--
10...	1825	51	--	--	30...	1510	10	--	--
11...	1920	49	--	--	JUL				
12...	1540	70	--	--	01...	1510	12	--	--
13...	1030	47	2690	98	02...	1020	26	--	--
13...	1310	61	--	--	03...	1825	16	--	--
13...	1940	57	--	--	04...	1005	17	--	--
14...	1530	70	--	--	05...	1400	18	--	--
15...	1720	48	--	--	06...	1520	14	--	--
16...	1700	53	--	--	07...	1315	11	--	--
17...	1740	65	--	--	08...	1710	16	--	--
18...	1930	48	--	--	09...	1800	13	--	--
19...	1815	26	--	--					
20...	1755	21	--	--					
21...	1800	16	--	--					

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	DATE	TIME	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
JUL					AUG				
10...	1830	13	--	--	01...	1200	12	--	--
11...	1910	11	--	--	01...	1800	14	--	--
12...	1805	11	--	--	02...	1200	13	--	--
13...	1955	36	--	--	03...	1200	33	--	--
14...	2020	17	--	--	03...	1800	33	--	--
15...	1800	25	--	--	04...	1925	29	--	--
16...	2010	18	--	--	05...	2010	44	--	--
17...	1030	19	217	96	06...	1830	26	--	--
17...	1230	15	185	94	07...	1940	25	--	--
17...	1235	18	--	--	08...	1510	16	--	--
21...	1300	21	--	--	08...	1840	15	--	--
22...	1355	25	--	--	09...	2100	19	--	--
23...	1705	24	--	--	10...	1835	19	--	--
24...	1830	25	--	--	11...	1710	22	--	--
25...	1630	22	--	--	12...	2000	40	--	--
26...	2010	24	--	--	13...	1200	41	--	--
27...	1130	25	--	--	14...	1950	28	--	--
29...	1840	27	--	--	15...	1030	25	333	85
30...	1505	36	--	--	15...	1910	36	--	--
31...	1435	25	--	--					
AUG					SEP				
16...	1800	39	--	--	04...	1935	32	--	--
17...	2000	33	--	--	05...	1220	34	--	--
18...	1910	35	--	--	05...	2010	383	--	--
19...	2010	53	--	--	05...	2330	505	--	--
20...	1955	28	--	--	06...	0930	1169	--	--
21...	1930	72	--	--	06...	1000	1080	--	--
22...	1810	49	--	--	06...	1030	947	159000	92
23...	1920	38	--	--	06...	1130	958	--	--
24...	1910	30	--	--	06...	1230	850	--	--
25...	1845	65	--	--	06...	1330	786	132000	--
26...	1705	66	--	--	06...	1430	835	--	--
27...	1945	176	--	--	06...	1530	868	--	--
28...	1200	164	--	--	06...	1700	826	--	--
28...	1810	87	--	--	06...	1945	490	--	--
29...	1710	55	--	--	06...	2045	634	--	--
30...	1930	45	--	--	07...	0600	395	--	--
31...	1900	56	--	--	07...	0720	467	--	--
SEP					07...	0815	532	--	--
02...	1650	37	--	--	07...	0845	532	--	--
03...	1910	34	--	--					
04...	1700	33	--	--					
SEP					SEP				
07...	0855	452	--	--	08...	0930	464	--	--
07...	0930	451	--	--	08...	1000	455	--	--
07...	1000	524	--	--	08...	1030	553	121000	--
07...	1030	533	--	--	08...	1100	448	--	--
07...	1100	526	120000	90	08...	1130	455	--	--
07...	1130	494	--	--	08...	1200	450	--	--
07...	1205	652	--	--	08...	1205	453	--	--
07...	1230	519	--	--	08...	1555	410	--	--
07...	1310	483	--	--	08...	2005	374	--	--
07...	1400	583	--	--	09...	0830	282	--	--
07...	1440	582	--	--	09...	1230	247	--	--
07...	1515	589	--	--	09...	1245	249	--	--
07...	1600	607	--	--	09...	1300	274	--	--
07...	1630	553	--	--	09...	1335	233	--	--
07...	1640	581	--	--	09...	1435	232	--	--
07...	1730	531	--	--	09...	1530	235	--	--
07...	1830	560	157000	--	09...	1545	236	--	--
07...	1900	547	--	--	09...	1945	220	--	--
07...	1925	548	--	--	10...	1310	155	--	--
07...	2005	549	--	--					
SEP					SEP				
11...	1120	94	--	--	22...	1435	333	--	--
11...	1253	93	--	--	23...	1710	196	--	--
12...	2040	57	--	--	24...	1800	177	--	--
13...	2005	41	--	--	25...	1450	163	--	--
14...	1915	34	--	--	26...	1055	125	--	--
15...	1455	37	--	--	27...	1035	73	--	--
16...	1130	33	--	--	28...	1215	47	--	--
17...	1445	29	--	--	29...	1135	38	--	--
19...	1420	28	--	--	30...	1300	30	--	--
20...	2030	20	--	--					
21...	1245	20	--	--					

POTOMAC RIVER BASIN

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
FEB								
27...	1230	203000	--	466	255000	--	39	51
27...	1430	201000	--	480	260000	--	44	61
27...	1615	200000	--	423	228000	--	48	64
27...	1815	198000	--	425	227000	--	46	62
MAR								
01...	1230	73800	--	178	35500	36	48	61
JUN								
05...	1030	34200	21.0	134	12400	56	59	71
13...	1030	21200	21.0	47	2690	50	55	70
JUL								
17...	1030	4440	29.0	19	217	70	67	75
SEP								
06...	1030	62000	24.5	947	159000	--	43	57
07...	1100	84200	24.1	526	120000	--	52	59

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
FEB								
27...	62	65	71	75	79	87	98	100
27...	73	81	87	92	95	98	100	--
27...	79	85	90	93	97	100	--	--
27...	75	82	88	93	97	99	100	--
MAR								
01...	72	80	86	89	91	93	98	100
JUN								
05...	82	91	98	100	--	--	--	--
13...	82	92	98	99	99	100	--	--
JUL								
17...	86	90	96	96	98	100	--	--
SEP								
06...	73	81	92	99	100	--	--	--
07...	70	76	90	97	100	--	--	--

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	449	438	443	484	478	481	477	467	472	228	224	226
2	450	442	446	484	478	481	487	469	480	225	170	203
3	461	445	454	486	481	483	488	477	482	191	169	177
4	470	456	465	493	482	490	520	487	502	231	191	215
5	475	452	468	496	489	493	510	441	463	198	176	187
6	462	444	452	497	492	495	440	387	413	189	177	184
7	448	444	446	504	496	501	385	355	368	198	189	194
8	456	445	453	505	501	503	370	357	365	197	186	193
9	462	453	457	508	500	506	369	287	335	202	186	195
10	468	462	464	513	506	510	286	267	274	215	202	210
11	474	467	469	520	512	518	267	249	258	221	212	217
12	498	468	480	525	519	522	274	254	268	218	205	209
13	500	496	498	524	520	523	254	234	241	268	218	233
14	505	498	502	520	514	517	234	215	224	248	233	239
15	506	498	502	514	509	511	234	217	225	240	231	236
16	505	498	501	522	509	515	243	235	239	243	239	241
17	515	507	510	525	521	523	245	239	241	248	239	243
18	522	514	520	523	498	513	253	245	250	256	247	252
19	528	519	523	509	500	504	265	254	259	260	254	257
20	521	513	516	510	500	505	273	265	270	307	259	272
21	518	513	516	505	493	502	278	270	273	300	179	235
22	525	513	519	494	485	489	277	273	275	210	158	173
23	515	500	508	520	495	507	293	277	283	244	174	205
24	516	478	499	540	522	533	294	287	291	176	130	160
25	497	483	493	547	540	544	292	233	264	141	116	126
26	511	497	507	556	547	552	239	207	221	138	118	125
27	519	504	513	584	541	553	252	224	243	146	132	140
28	522	510	517	544	521	534	232	210	219	165	146	156
29	512	498	506	526	497	520	219	211	214	178	165	171
30	499	481	490	510	470	488	217	211	213	186	178	182
31	485	478	481	---	---	---	226	218	224	197	186	192
MONTH	528	438	488	584	470	511	520	207	302	307	116	202
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	210	197	204	---	---	---	---	---	---	281	233	247
2	221	210	215	---	---	---	---	---	---	239	231	235
3	232	221	227	---	---	---	---	---	---	239	226	231
4	239	232	236	---	---	---	---	---	---	227	216	222
5	249	240	244	---	---	---	---	---	---	214	209	211
6	262	249	256	---	---	---	206	187	199	218	211	214
7	280	262	269	---	---	---	187	176	180	234	218	228
8	283	279	280	---	---	---	186	180	183	246	231	239
9	287	277	281	---	---	---	189	184	186	253	246	250
10	294	287	291	---	---	---	194	185	189	264	251	258
11	305	295	299	---	---	---	205	192	197	281	264	272
12	322	305	313	---	---	---	214	205	210	282	278	280
13	329	320	322	---	---	---	218	213	216	284	265	278
14	330	320	325	---	---	---	225	213	219	281	266	272
15	333	317	324	---	---	---	230	222	225	294	277	284
16	360	327	333	---	---	---	235	230	233	290	227	260
17	342	324	334	---	---	---	241	234	237	225	210	214
18	346	331	338	---	---	---	252	241	246	217	206	211
19	348	342	346	---	---	---	257	249	253	211	206	209
20	357	348	353	---	---	---	263	254	258	220	211	215
21	353	344	349	251	249	250	269	263	265	228	219	223
22	359	349	352	256	250	253	272	267	270	243	227	235
23	351	333	341	265	256	256	279	269	276	252	243	249
24	339	310	332	---	---	---	279	277	278	255	216	245
25	---	---	---	---	---	---	286	278	281	235	213	229
26	---	---	---	---	---	---	290	281	286	243	231	236
27	---	---	---	---	---	---	287	282	284	247	224	236
28	---	---	---	---	---	---	290	286	288	224	186	203
29	---	---	---	---	---	---	295	283	289	184	175	179
30	---	---	---	---	---	---	295	276	285	182	166	176
31	---	---	---	---	---	---	---	---	---	177	173	175
MONTH	360	197	299	265	249	253	295	176	241	294	166	233

POTOMAC RIVER BASIN

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	178	168	173	302	288	297	332	313	322	409	378	397
2	192	172	181	299	279	285	339	329	335	382	362	373
3	204	162	191	303	283	293	336	290	307	374	357	364
4	169	144	156	321	301	311	341	318	330	378	368	373
5	228	169	205	326	315	320	328	251	284	408	224	357
6	216	185	193	333	323	328	290	253	272	228	145	181
7	210	193	202	332	325	328	315	289	302	233	147	193
8	208	205	206	339	329	334	319	310	314	194	149	162
9	224	207	214	330	312	323	---	---	---	172	159	164
10	233	224	230	314	305	309	---	---	---	179	224	174
11	235	232	234	326	312	320	---	---	---	186	174	179
12	247	224	235	334	324	330	---	---	---	201	186	192
13	248	239	243	330	298	323	---	---	---	210	100	204
14	249	223	234	319	278	303	---	---	---	225	210	218
15	227	217	222	317	295	308	---	---	---	230	222	227
16	239	227	231	319	308	315	---	---	---	237	228	233
17	242	228	237	340	313	328	---	---	---	249	237	243
18	238	229	235	339	328	334	---	---	---	270	250	261
19	248	232	240	342	330	335	328	316	322	273	265	269
20	268	247	260	332	319	327	343	322	334	265	259	261
21	274	267	271	330	303	313	339	275	304	262	210	255
22	286	267	277	347	298	327	289	270	280	210	169	184
23	288	270	283	298	280	286	325	284	307	192	148	163
24	270	260	264	294	278	284	357	312	330	257	192	230
25	261	247	255	300	288	296	376	221	320	219	178	194
26	271	261	266	304	285	294	315	224	289	196	176	189
27	278	270	274	323	304	314	369	212	321	198	192	195
28	290	278	284	324	312	321	298	212	257	196	186	189
29	299	289	296	312	297	302	307	231	265	199	188	193
30	298	292	296	332	304	323	282	240	266	209	195	204
31	---	---	---	320	286	303	375	282	282	---	---	---
MONTH	299	144	236	347	278	313	376	212	302	409	100	234

PH (UNITS), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	8.6	8.4	8.5	8.8	8.5	8.7	8.4	8.3	8.3	8.0	7.9	7.9
2	8.6	8.4	8.5	8.9	8.5	8.7	8.4	8.2	8.3	7.9	7.7	7.8
3	8.7	8.4	8.5	8.9	8.5	8.7	8.4	8.3	8.3	7.7	7.6	7.7
4	8.6	8.4	8.5	8.7	8.5	8.6	8.3	7.6	8.2	7.9	7.7	7.8
5	8.4	8.3	8.4	8.8	8.4	8.6	8.2	8.0	8.2	7.8	7.7	7.7
6	8.4	8.2	8.3	8.7	8.4	8.6	8.2	8.1	8.2	7.8	7.7	7.8
7	8.4	8.2	8.3	8.7	8.4	8.6	8.2	8.1	8.1	7.8	7.8	7.8
8	8.5	8.3	8.4	8.6	8.4	8.5	8.2	8.0	8.1	7.8	7.8	7.8
9	8.6	8.3	8.5	8.7	8.4	8.6	8.1	8.0	8.0	7.8	7.8	7.8
10	8.6	8.4	8.5	8.6	8.4	8.5	8.0	7.9	7.9	7.9	7.8	7.9
11	8.7	8.4	8.6	8.7	8.4	8.6	7.9	7.8	7.9	7.9	7.9	7.9
12	8.6	8.4	8.5	8.6	8.4	8.5	7.9	7.9	7.9	7.9	7.9	7.9
13	8.6	8.4	8.5	8.5	8.4	8.4	7.9	7.9	7.9	7.9	7.9	7.9
14	8.5	8.4	8.4	8.6	8.3	8.5	7.9	7.9	7.9	7.9	7.9	7.9
15	8.6	8.3	8.5	8.5	8.3	8.4	8.0	7.9	8.0	8.0	7.9	8.0
16	8.5	8.3	8.5	8.4	8.3	8.3	8.1	8.0	8.0	8.0	7.9	8.0
17	8.6	7.9	8.4	8.3	8.2	8.3	8.1	8.0	8.1	8.0	8.0	8.0
18	8.6	8.4	8.5	8.4	8.2	8.3	8.1	8.1	8.1	8.1	8.0	8.1
19	8.6	8.3	8.5	8.4	8.2	8.3	8.2	8.1	8.1	8.1	8.1	8.1
20	8.6	8.4	8.5	8.4	8.3	8.4	8.2	8.1	8.1	8.1	8.1	8.1
21	8.6	8.4	8.5	8.4	8.3	8.4	8.2	8.0	8.1	8.1	7.7	7.9
22	8.7	8.4	8.6	8.3	8.2	8.3	8.3	8.1	8.2	7.8	7.5	7.6
23	8.9	8.6	8.7	8.2	8.2	8.2	8.3	8.1	8.2	8.0	7.9	7.9
24	8.8	8.5	8.7	8.3	8.2	8.3	8.2	8.1	8.2	7.9	7.6	7.8
25	8.7	8.5	8.6	8.4	8.3	8.3	8.2	7.9	8.0	8.0	7.5	7.7
26	8.6	8.4	8.5	8.4	8.3	8.4	7.9	7.7	7.8	8.0	7.7	7.8
27	8.6	8.4	8.6	8.4	7.6	8.2	7.9	7.7	7.8	7.7	7.7	7.7
28	8.7	8.4	8.6	8.4	7.6	8.1	7.9	7.9	7.9	7.8	7.7	7.8
29	8.7	8.5	8.6	8.4	8.0	8.3	7.9	7.8	7.9	7.9	7.8	7.8
30	8.8	8.5	8.7	8.3	8.3	8.3	7.9	7.8	7.8	7.9	7.9	7.9
31	8.8	8.5	8.7	---	---	---	7.9	7.9	7.9	7.9	7.9	7.9
MONTH	8.9	7.9	8.5	8.9	7.6	8.4	8.4	7.6	8.1	8.1	7.5	7.9

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

PM (UNITS), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	8.0	7.9	8.0	---	---	---	8.0	7.8	7.9	8.4	8.1	8.2
2	8.1	8.0	8.0	---	---	---	8.0	7.9	8.0	8.5	8.0	8.2
3	8.1	8.1	8.1	---	---	---	---	---	---	8.5	8.1	8.3
4	8.1	8.1	8.1	---	---	---	---	---	---	8.5	8.3	8.4
5	8.1	8.1	8.1	---	---	---	---	---	---	8.6	8.3	8.5
6	8.2	8.1	8.1	---	---	---	7.9	7.9	7.9	8.7	8.4	8.6
7	8.2	8.2	8.2	---	---	---	7.9	7.9	7.9	8.7	8.6	8.7
8	8.2	8.1	8.2	---	---	---	8.0	7.9	7.9	8.8	8.6	8.7
9	8.2	8.2	8.2	---	---	---	8.0	7.9	7.9	8.9	8.7	8.8
10	8.2	8.2	8.2	---	---	---	8.0	8.0	8.0	9.0	8.7	8.9
11	8.2	8.2	8.2	---	---	---	8.0	7.9	8.0	9.0	8.8	8.9
12	8.2	8.2	8.2	---	---	---	8.0	7.9	8.0	8.9	8.7	8.8
13	8.2	8.2	8.2	---	---	---	8.0	8.0	8.0	8.7	8.2	8.6
14	8.2	8.2	8.2	---	---	---	8.1	8.0	8.0	8.2	8.0	8.1
15	8.2	8.2	8.2	---	---	---	8.1	8.0	8.0	8.2	7.8	8.0
16	8.2	8.2	8.2	---	---	---	8.1	8.0	8.1	7.9	7.8	7.8
17	8.2	8.2	8.2	---	---	---	8.2	8.1	8.1	7.8	7.7	7.8
18	8.2	8.2	8.2	---	---	---	8.3	8.1	8.2	7.8	7.8	7.8
23	8.2	8.1	8.2	8.1	8.0	8.1	8.6	8.3	8.5	8.6	8.0	8.3
24	8.1	8.0	8.1	---	---	---	8.7	8.4	8.5	8.6	7.9	8.4
25	---	---	---	---	---	---	8.9	8.4	8.7	8.2	7.8	8.0
26	---	---	---	---	---	---	8.7	8.5	8.6	8.3	8.0	8.1
27	---	---	---	---	---	---	8.8	8.4	8.6	8.0	7.8	7.9
28	---	---	---	---	---	---	8.7	8.4	8.6	7.8	7.8	7.8
29	---	---	---	---	---	---	8.7	8.5	8.6	7.8	7.7	7.8
30	---	---	---	---	---	---	8.7	8.3	8.5	7.8	7.8	7.8
31	---	---	---	---	---	---	---	---	---	7.8	7.8	7.8
MONTH	8.2	7.9	8.2	8.1	8.0	8.1	8.9	7.8	8.2	9.0	7.7	8.2
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	7.9	7.6	7.8	8.8	8.4	8.6	8.4	8.0	8.2	8.3	8.1	8.2
2	7.8	7.6	7.7	8.8	8.4	8.6	8.5	8.1	8.2	8.1	8.0	8.0
3	7.9	7.6	7.8	9.0	8.5	8.8	8.3	7.8	7.9	8.0	7.9	8.0
4	7.6	7.4	7.5	8.8	8.4	8.6	8.4	7.9	8.2	8.2	8.0	8.1
5	7.8	7.6	7.8	8.6	8.4	8.5	8.2	7.7	7.9	8.0	7.5	7.9
6	7.8	7.7	7.8	8.8	8.4	8.6	8.3	7.7	8.0	7.6	7.5	7.5
7	7.8	7.8	7.8	8.9	8.5	8.8	8.7	7.9	8.3	7.6	7.4	7.5
8	7.9	7.8	7.9	8.9	8.7	8.8	8.7	8.0	8.3	7.7	7.6	7.6
9	8.0	7.9	7.9	8.9	8.7	8.8	---	---	---	7.7	7.6	7.6
10	8.0	7.9	8.0	8.8	8.4	8.7	---	---	---	7.7	7.7	7.7
11	8.0	8.0	8.0	8.9	8.3	8.7	---	---	---	7.8	7.7	7.7
12	8.2	8.0	8.1	9.0	8.5	8.7	---	---	---	7.8	7.8	7.8
13	8.2	8.1	8.1	9.0	8.3	8.6	---	---	---	7.9	7.8	7.8
14	8.2	8.0	8.0	8.7	8.0	8.4	---	---	---	7.9	7.9	7.9
15	8.0	7.9	8.0	8.8	8.2	8.4	---	---	---	8.0	7.9	8.0
16	8.1	8.0	8.1	8.9	8.3	8.6	---	---	---	8.1	8.0	8.0
17	8.3	8.1	8.2	8.7	8.3	8.5	---	---	---	8.2	8.0	8.1
18	8.2	8.0	8.1	8.5	8.2	8.4	---	---	---	8.4	8.1	8.2
19	8.3	8.1	8.2	8.6	8.3	8.5	8.7	7.9	8.3	8.4	8.2	8.3
20	8.5	8.1	8.3	8.5	8.3	8.4	8.6	8.0	8.3	8.5	8.2	8.4
21	8.6	8.4	8.5	8.4	8.2	8.3	8.1	7.6	7.8	8.4	8.1	8.4
22	8.8	8.5	8.6	8.6	8.2	8.4	7.8	7.5	7.7	8.1	7.7	7.8
23	9.0	8.7	8.9	8.6	8.2	8.4	7.9	7.6	7.7	7.7	7.5	7.6
24	8.9	8.7	8.9	8.6	8.2	8.3	7.9	7.6	7.7	7.9	7.7	7.9
25	9.0	8.7	8.9	8.6	8.2	8.4	8.2	7.6	8.0	7.8	7.8	7.8
26	9.0	8.8	8.9	8.5	8.1	8.3	7.8	7.6	7.7	7.8	7.8	7.8
27	9.0	8.7	8.8	8.7	8.1	8.4	8.0	7.4	7.8	7.8	7.8	7.8
28	9.1	8.6	8.9	8.7	8.2	8.4	7.8	7.5	7.6	7.8	7.8	7.8
29	9.0	8.7	8.9	8.6	8.2	8.4	7.8	7.7	7.7	7.9	7.8	7.8
30	9.0	8.7	8.8	8.4	8.1	8.3	7.8	7.7	7.7	7.9	7.8	7.8
31	---	---	---	8.3	7.8	8.1	8.2	7.8	8.0	---	---	---
MONTH	9.1	7.4	8.2	9.0	7.8	8.5	8.7	7.4	8.0	8.5	7.4	7.9

POTOMAC RIVER BASIN

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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

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

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	20.5	19.0	19.5	26.0	24.5	25.0	29.5	27.0	28.0	28.0	27.0	27.5
2	21.5	20.0	20.5	25.0	24.0	24.5	30.5	28.5	29.5	27.5	27.0	27.0
3	21.5	20.5	21.0	25.0	24.0	24.5	29.0	28.5	28.5	27.5	26.5	27.0
4	20.5	19.5	20.0	25.0	23.5	24.5	29.0	28.5	28.5	28.5	27.0	27.5
5	22.0	20.0	21.0	23.5	22.0	22.5	29.5	28.5	28.5	27.5	25.0	27.0
6	22.0	20.5	21.0	23.5	22.0	23.0	30.0	28.0	29.0	25.0	24.0	24.5
7	22.5	21.0	21.5	24.5	22.5	23.5	30.5	28.0	28.5	25.0	23.5	24.0
8	23.5	22.0	22.5	25.5	24.0	25.0	30.5	28.5	29.5	23.5	21.5	22.5
9	25.0	23.0	24.0	26.0	24.5	25.5	---	---	---	22.0	21.0	21.5
10	25.5	24.5	25.0	26.0	25.0	25.5	---	---	---	21.5	20.5	21.0
11	25.5	23.5	24.5	27.0	24.5	25.5	---	---	---	22.0	20.5	21.5
12	23.5	22.0	23.0	28.5	25.5	27.0	---	---	---	22.0	21.5	22.0
13	23.0	21.5	22.5	29.0	27.0	28.0	---	---	---	22.5	21.5	22.0
14	23.0	22.0	22.5	29.0	27.0	28.0	---	---	---	23.0	22.0	22.5
15	23.0	22.0	22.5	29.5	28.0	28.5	---	---	---	22.5	22.0	22.5
16	23.5	23.0	23.0	30.0	28.0	29.0	---	---	---	22.5	21.5	22.0
17	23.5	22.5	23.0	30.0	28.5	29.0	---	---	---	22.5	21.5	22.0
18	23.0	22.0	22.5	29.5	28.5	29.0	23.5	23.0	23.5	22.5	21.5	22.0
19	23.0	22.5	23.0	28.5	28.0	28.0	24.5	23.0	23.5	22.5	22.0	22.0
20	24.0	22.5	23.5	28.0	27.0	27.5	26.0	23.5	24.5	22.0	20.5	21.0
21	23.5	22.0	23.0	27.0	26.5	27.0	25.0	24.5	25.0	21.0	20.0	20.5
22	23.5	22.0	22.5	27.5	26.5	27.0	25.5	24.0	24.5	20.0	19.0	20.0
23	24.5	23.0	23.5	28.0	27.0	27.5	26.0	24.5	25.0	19.0	18.5	18.5
24	24.0	23.0	23.5	28.0	27.0	27.5	26.0	25.0	25.5	18.5	18.5	18.5
25	23.0	22.0	22.5	28.5	27.5	28.0	26.5	25.0	25.5	18.5	17.5	18.0
26	23.5	21.5	22.5	29.0	28.0	28.0	26.0	25.0	25.5	18.5	17.5	18.0
27	24.0	22.0	23.0	29.0	27.5	28.5	27.0	25.0	26.0	18.5	18.0	18.5
28	25.0	23.0	25.0	29.0	28.0	28.5	26.5	25.5	26.0	18.5	18.0	18.5
29	26.5	24.0	25.0	28.5	27.5	28.0	26.5	25.5	26.0	19.0	18.5	18.5
30	26.5	25.5	26.0	27.5	26.5	27.0	27.0	25.5	26.0	19.5	19.5	19.5
31	---	---	---	27.5	26.0	27.0	27.5	26.5	27.0	---	---	---
MONTH	26.5	19.0	23.0	30.0	22.0	26.5	30.5	23.0	26.5	28.5	17.5	22.0

DISSOLVED OXYGEN (DO), MG/L, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	9.8	9.1	9.4	13.2	12.0	12.5	12.5	9.6	11.2	15.0	14.2	14.7
2	9.9	9.1	9.5	14.0	12.1	12.8	10.8	10.2	10.5	14.2	13.4	13.8
3	10.0	9.2	9.5	13.4	12.3	12.7	11.0	10.7	10.9	15.3	10.5	13.6
4	10.1	9.2	9.5	12.7	12.1	12.3	10.8	10.1	10.6	---	---	---
5	9.9	9.3	9.6	13.0	11.9	12.4	---	---	---	16.1	15.8	16.0
6	9.8	9.3	9.5	13.1	12.0	12.5	---	---	---	15.8	15.5	15.7
7	10.1	9.4	9.8	13.0	11.2	12.0	---	---	---	15.6	15.3	15.5
8	10.3	9.8	10.1	12.0	11.2	11.6	---	---	---	15.5	15.2	15.4
9	10.9	10.3	10.6	12.4	11.4	11.9	---	---	---	16.0	15.6	15.9
10	11.2	10.5	10.8	12.7	11.8	12.2	14.9	12.1	14.0	16.3	15.9	16.2
11	11.2	10.5	10.8	12.8	12.0	12.3	15.6	14.9	15.4	16.4	16.1	16.3
12	11.6	10.5	10.9	13.0	12.1	12.4	15.7	15.5	15.6	16.2	15.9	16.1
13	11.6	10.5	11.0	12.5	12.1	12.3	15.6	15.1	15.4	15.9	15.2	15.6
14	11.0	10.3	10.6	13.0	12.2	12.6	15.6	15.1	15.4	15.2	14.9	15.1
15	11.4	10.6	10.9	13.1	12.4	12.7	15.6	15.4	15.5	15.7	15.0	15.5
16	11.5	10.8	11.1	13.1	12.6	12.8	15.6	15.3	15.4	15.7	15.5	15.6
17	11.9	10.9	11.5	13.2	12.9	13.0	15.3	15.0	15.2	15.5	15.1	15.3
18	12.3	11.6	11.9	13.8	13.2	13.5	15.5	15.2	15.3	15.4	15.0	15.2
19	12.1	11.5	11.7	14.2	13.8	14.0	15.4	15.2	15.3	15.5	15.4	15.4
20	12.7	11.5	11.9	14.9	14.1	14.6	15.3	15.0	15.2	15.4	14.8	15.1
21	12.2	11.5	11.8	15.5	14.7	15.1	15.0	14.3	14.6	15.1	14.5	14.9
22	12.2	11.5	11.7	16.3	15.1	15.6	14.7	14.3	14.5	15.4	14.9	15.1
23	12.2	11.2	11.6	13.2	12.8	13.1	15.0	14.6	14.8	15.4	14.3	15.0
24	13.1	11.0	11.9	13.1	12.7	12.9	14.9	14.6	14.7	14.9	13.8	14.4
25	12.6	11.7	12.0	13.4	12.9	13.1	15.1	14.5	14.8	14.9	14.2	14.6
26	12.8	11.6	12.0	13.7	13.1	13.4	15.5	15.1	15.4	15.1	13.9	14.5
27	12.4	11.5	11.9	14.5	13.3	13.8	15.7	15.1	15.5	14.9	14.0	14.5
28	12.6	11.8	12.1	14.3	13.7	14.1	15.8	15.3	15.6	14.5	14.3	14.4
29	12.7	11.8	12.2	14.7	14.1	14.4	15.8	15.5	15.7	14.4	13.3	14.3
30	13.0	12.0	12.4	14.5	9.6	12.8	15.7	15.4	15.6	14.6	12.7	13.8
31	13.0	12.0	12.4	---	---	---	15.4	15.0	15.2	14.6	13.1	13.7
MONTH	13.1	9.1	11.1	16.3	9.6	13.1	15.8	9.6	14.5	16.4	10.5	15.0

POTOMAC RIVER BASIN

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

DISSOLVED OXYGEN (DO), MG/L, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	13.9	13.4	13.7	---	---	---	11.5	11.1	11.3	10.5	9.8	10.2
2	14.5	13.9	14.3	---	---	---	11.5	11.2	11.3	10.4	9.4	9.9
3	14.6	14.2	14.4	---	---	---	---	---	---	10.2	8.8	9.6
4	14.3	13.9	14.1	---	---	---	---	---	---	10.4	9.3	9.9
5	14.5	13.9	14.3	---	---	---	---	---	---	11.1	9.8	10.5
6	14.9	14.6	14.7	---	---	---	12.7	12.0	12.2	11.1	9.7	10.3
7	14.8	14.6	14.7	---	---	---	13.1	12.7	12.9	10.8	9.5	10.1
8	14.8	14.7	14.8	---	---	---	13.0	12.3	12.7	10.4	8.7	9.6
9	15.0	14.8	14.9	---	---	---	12.4	12.2	12.3	10.2	8.0	9.2
10	15.1	15.0	15.1	---	---	---	13.2	12.5	12.9	10.0	7.6	8.9
11	15.2	15.1	15.1	---	---	---	13.1	12.1	12.7	9.6	7.8	8.7
12	16.1	15.1	15.6	---	---	---	12.2	11.7	12.1	9.0	7.7	8.4
13	16.2	16.0	16.1	---	---	---	12.0	11.7	11.9	8.8	7.7	8.2
14	16.2	16.0	16.1	---	---	---	12.1	11.2	11.8	9.3	8.2	8.7
15	16.1	16.0	16.0	---	---	---	11.6	11.2	11.4	9.8	8.7	9.3
16	16.1	15.9	15.9	---	---	---	11.8	11.3	11.6	9.8	9.2	9.6
17	16.4	16.1	16.3	---	---	---	12.2	11.5	11.9	10.1	9.6	9.8
18	16.4	16.2	16.3	---	---	---	12.1	11.2	11.7	10.0	9.6	9.8
19	16.1	15.9	16.0	---	---	---	12.3	11.1	11.6	9.9	9.4	9.7
20	16.0	15.9	16.0	---	---	---	12.1	11.0	11.6	9.8	9.3	9.5
21	16.0	15.9	16.0	---	---	---	11.8	10.7	11.2	9.6	9.1	9.4
22	---	---	---	---	---	---	11.3	10.0	10.7	10.1	9.3	9.6
23	---	---	---	---	---	---	10.6	9.4	10.1	10.3	8.9	9.5
24	---	---	---	---	---	---	10.8	9.6	10.3	10.0	8.8	9.3
25	---	---	---	---	---	---	11.1	9.6	10.4	9.5	9.2	9.3
26	---	---	---	---	---	---	10.3	8.9	9.7	10.3	9.4	10.0
27	---	---	---	---	---	---	10.5	9.1	9.8	10.7	10.2	10.5
28	---	---	---	---	---	---	10.9	9.2	10.1	10.8	10.5	10.7
29	---	---	---	13.9	10.7	12.7	11.5	9.7	10.6	10.7	10.3	10.6
30	---	---	---	---	---	---	11.1	10.0	10.5	10.6	9.8	10.3
31	---	---	---	---	---	---	---	---	---	10.1	9.6	9.8
MONTH	16.4	13.4	15.3	13.9	10.7	12.7	13.2	8.9	11.4	11.1	7.6	9.6

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	9.6	9.0	9.3	8.4	7.6	8.0	8.8	7.7	8.2	8.8	8.0	8.4
2	9.1	8.6	8.9	8.7	7.8	8.3	8.3	6.9	7.5	8.5	8.1	8.3
3	9.3	8.6	8.8	9.6	7.9	8.8	8.0	6.6	7.2	8.4	8.0	8.2
4	9.6	9.2	9.3	8.2	7.8	8.0	8.6	7.3	7.9	8.4	8.0	8.2
5	9.4	8.9	9.2	9.4	8.0	8.8	7.6	6.9	7.2	8.7	7.7	8.1
6	9.4	9.0	9.2	9.6	8.6	9.1	7.4	6.7	7.0	9.1	8.1	8.7
7	9.3	8.9	9.2	9.5	8.3	8.9	8.6	6.7	7.5	9.6	7.3	9.0
8	9.0	8.6	8.9	9.2	7.8	8.4	8.4	7.4	7.8	10.1	9.4	9.9
9	8.8	8.1	8.6	8.6	7.3	8.0	---	---	---	10.2	9.8	10.0
10	8.3	8.0	8.2	7.9	7.1	7.5	---	---	---	10.1	9.7	9.9
11	8.5	7.9	8.2	8.7	7.2	8.0	---	---	---	10.0	9.2	9.7
12	9.5	8.5	9.1	8.5	7.5	8.0	---	---	---	9.4	9.1	9.3
13	9.8	9.1	9.5	8.2	7.2	7.6	---	---	---	9.4	9.1	9.3
14	9.6	9.0	9.3	7.6	7.0	7.3	---	---	---	9.2	9.0	9.1
15	9.3	8.9	9.2	7.9	7.0	7.4	---	---	---	9.4	9.0	9.3
16	9.1	8.8	9.0	8.0	7.0	7.5	---	---	---	9.8	9.3	9.6
17	8.9	8.6	8.8	8.9	6.9	7.9	---	---	---	10.0	9.5	9.8
18	9.1	8.8	9.0	9.1	7.1	8.2	---	---	---	10.2	9.5	9.8
19	9.3	8.6	9.0	9.7	7.5	8.6	10.3	8.7	9.3	10.1	9.4	9.7
20	9.4	8.8	9.1	9.1	7.6	8.3	9.6	8.6	9.0	10.7	9.6	10.1
21	9.2	8.5	8.9	9.3	7.7	8.5	8.5	8.0	8.2	10.1	9.7	9.9
22	9.8	8.7	9.2	9.3	7.8	8.5	8.6	8.2	8.4	10.8	9.9	10.4
23	9.7	8.3	9.0	9.1	7.7	8.5	8.5	8.2	8.3	11.1	10.8	11.0
24	9.1	8.1	8.6	9.4	7.8	8.5	8.8	8.2	8.5	11.3	11.1	11.2
25	9.9	8.6	9.3	9.1	7.7	8.3	9.0	8.3	8.6	11.4	11.0	11.3
26	9.7	8.8	9.3	8.7	7.5	8.1	8.5	8.3	8.4	11.4	11.1	11.3
27	9.6	8.7	9.2	9.0	7.6	8.3	8.6	8.1	8.3	11.5	11.1	11.3
28	9.2	8.5	8.9	8.5	7.4	7.9	8.5	8.3	8.4	11.3	11.1	11.2
29	8.9	8.2	8.5	8.4	7.1	7.7	8.5	8.1	8.3	11.2	10.8	11.1
30	8.6	7.8	8.1	8.6	7.1	7.8	8.4	8.3	8.4	10.9	10.8	10.9
31	---	---	---	9.1	7.5	8.1	8.8	8.1	8.4	---	---	---
MONTH	9.9	7.8	9.0	9.7	6.9	8.2	10.3	6.6	8.1	11.5	7.3	9.8

POTOMAC RIVER BASIN

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01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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	17	81	14	64	15	139	22	594	24	1150	187	39500
2	17	81	14	64	18	207	200	13600	22	915	99	16400
3	18	87	14	65	21	285	271	25900	20	729	78	11700
4	18	87	14	68	24	338	333	37700	18	593	83	12200
5	17	86	13	61	26	446	180	16100	16	484	106	15900
6	16	93	13	60	25	421	103	6460	15	405	134	28000
7	16	90	13	59	23	579	58	3130	14	353	158	38900
8	15	83	12	55	18	423	23	1280	13	297	165	33900
9	15	79	11	49	38	1180	27	1650	12	289	161	24000
10	14	73	11	50	118	5200	31	1770	8	158	146	17300
11	14	70	11	52	141	7800	29	1580	6	90	116	12800
12	13	63	12	55	73	3620	27	1220	4	63	81	8110
13	13	60	12	54	42	1680	25	958	2	28	44	3680
14	13	60	12	56	32	1070	23	814	2	28	32	2350
15	13	65	11	51	26	730	21	726	2	32	29	1890
16	12	64	11	56	21	498	19	605	2	31	26	1510
17	12	70	12	69	18	358	17	491	2	33	21	1120
18	12	69	12	85	15	256	15	384	2	28	16	778
19	12	67	13	96	11	169	15	343	2	27	11	493
20	12	66	14	102	7	98	15	339	2	25	6	251
21	12	65	12	89	7	97	78	6340	2	36	10	391
22	12	65	9	71	7	91	295	35600	2	42	13	481
23	13	69	9	70	7	91	350	64400	4	101	10	346
24	13	67	9	70	45	1240	322	56700	53	2580	20	761
25	11	56	9	61	119	5500	593	169000	328	99000	79	4180
26	10	49	10	63	186	10700	512	149000	533	272000	131	14100
27	11	54	10	66	111	6860	212	31000	517	281000	172	22400
28	12	58	11	75	60	3130	112	11200	351	139000	106	10500
29	13	62	11	82	32	1320	62	4990	---	---	68	5290
30	14	64	12	110	20	664	43	2870	---	---	51	3320
31	15	72	---	---	20	556	28	1600	---	---	40	2270
TOTAL	---	2175	---	2028	---	55746	---	648344	---	799517	---	334821
APRIL			MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	25	1260	29	1450	64	3350	12	149	14	188	48	1140
2	21	975	16	734	70	3100	21	319	20	279	39	739
3	21	1050	15	648	118	8790	19	299	35	559	35	538
4	66	4950	13	509	310	27700	17	264	41	887	32	425
5	140	12200	12	431	152	13900	15	235	40	543	160	6200
6	196	19300	10	351	196	17300	12	177	36	399	812	112000
7	203	18500	8	285	143	10300	12	185	25	243	525	119000
8	155	11600	6	214	102	5650	16	275	18	152	443	93900
9	61	4000	6	198	75	3320	13	210	18	158	262	27300
10	29	1920	6	181	58	2190	11	147	15	129	158	10500
11	32	2010	6	168	46	1600	10	117	20	168	96	4700
12	22	1210	6	157	69	3410	10	108	33	411	65	2580
13	20	972	6	162	67	3730	18	196	40	549	45	1480
14	18	821	45	1910	66	2850	20	225	30	408	32	924
15	16	717	68	4200	51	1760	22	263	31	418	32	842
16	14	609	80	5570	60	1750	18	221	38	578	30	781
17	12	502	70	4030	60	1650	16	201	36	525	28	771
18	9	355	41	1900	57	1680	22	407	34	402	30	731
19	9	335	30	1170	34	888	25	519	46	484	25	531
20	9	316	26	892	22	530	27	477	35	387	22	414
21	9	299	18	554	14	301	20	329	48	718	27	540
22	9	282	12	343	10	193	21	352	53	685	246	16800
23	9	270	10	269	8	139	21	312	40	495	212	17800
24	9	258	38	1430	11	181	22	355	37	533	230	22000
25	9	248	108	4990	15	228	20	276	78	2150	174	14400
26	9	245	144	9210	12	170	23	306	67	1360	122	8530
27	9	250	206	20300	11	148	26	326	74	1870	80	4320
28	9	270	129	11600	11	142	28	372	75	1900	45	1980
29	36	1530	98	6720	10	124	28	468	62	1140	36	1340
30	62	3200	64	3660	10	121	30	555	58	877	30	980
31	---	---	45	2200	---	---	24	345	52	1160	---	---
TOTAL	---	90454	---	86436	---	117195	---	8990	---	20755	---	474186
TOTAL LOAD FOR YEAR:			2640647		TONS.							

POTOMAC RIVER BASIN

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

PHYTOPLANKTON ANALYSES, AUGUST 1978 TO SEPTEMBER 1978

DATE TIME	AUG 15, 78 1000	SEP 12, 78 1045
TOTAL CELLS/ML	7900	53000
DIVERSITY: DIVISION	1.6	1.1
..CLASS	1.6	1.1
..ORDER	2.0	1.1
...FAMILY	2.4	1.7
....GENUS	3.0	2.2

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)				
..CHLOROPHYCEAE				
...CHLOROCOCCALES				
....MICRACTINIACEAE				
.....GOLENKINIA	--	-	*	0
....OOCYSTACEAE				
.....ANKISTRODESMUS	200	2	290	1
.....DICTYOSPHAERIUM	--	-	3300	6
.....KIRCHNERIELLA	--	-	4600	9
.....TETRAEDRON	--	-	290	1
...SCENEDESMACEAE				
....CRUCIGENIA	130	2	--	-
....SCENEDESMUS	1900#	24	25000#	47
....TETRASTRUM	130	2	1700	3
..ZYGNEMATALES				
...DESMIDIACEAE				
....STAUSTRUM	*	0	--	-
CHRYSTOPHYTA				
..BACILLARIOPHYCEAE				
...CENTRALES				
...COSCINODISCACEAE				
....CYCLOTELLA	1200#	15	870	2
....MELOSIRA	1000	13	1200	2
..PENNALES				
...ACHNANTHACEAE				
....ACHNANTHES	*	0	--	-
....COCCONEIS	*	0	--	-
....RHOTICOSPHEA	*	0	--	-
...CYMBELLACEAE				
....CYMBELLA	160	2	--	-
...FRAGILARIACEAE				
....SYNEDRA	*	0	290	1
...GOMPHONEMACEAE				
....GOMPHONEMA	66	1	--	-
...NAVICULACEAE				
....NAVICULA	490	6	--	-
...NITZSCHACEAE				
....NITZSCHIA	200	2	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)				
..CYANOPHYCEAE				
...CHROOCOCCALES				
....CHROOCOCCACEAE				
.....AGMENELLUM	2100#	27	14000#	27
....ANACYSTIS	130	2	1000	2
EUGLENOPHYTA (EUGLENOIDS)				
..EUGLENOPHYCEAE				
...EUGLENALES				
....EUGLENACEAE				
.....TRACHELOMONAS	*	0	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

01646580 POTOMAC RIVER AT CHAIN BRIDGE AT WASHINGTON, DC--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO JULY 1979

DATE TIME	NOV 14,78 1015	MAR 27,79 1000	MAY 23,79 1045	JUN 13,79 1030	JUL 17,79 1030
TOTAL CELLS/ML	20000	2100	27000	1800	110000
DIVERSITY: DIVISION	0.8	0.0	1.5	0.8	0.7
..CLASS	0.8	0.0	1.5	0.8	0.7
..ORDER	0.9	0.7	1.7	1.3	0.8
...FAMILY	1.0	2.6	1.9	2.1	1.7
....GENUS	1.1	2.6	2.5	2.4	3.3

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
....OOCYSTACEAE										
....DICHOTOMOCOCCLUS	--	-	--	-	--	-	--	-	6900	6
....COELASTRACEAE										
....COELASTRUM	--	-	--	-	--	-	310#	17	--	-
....OOCYSTACEAE										
....ANKISTRODESMUS	300	2	--	-	1000	4	39	2	6200	5
....CHODATELLA	150	1	--	-	--	-	--	-	1700	2
....DICTYOSPHAERIUM	--	-	--	-	--	-	--	-	1400	1
....KIRCHNERIELLA	450	2	--	-	--	-	--	-	15000	13
....OOCYSTIS	--	-	--	-	--	-	--	-	6900	6
....SELENASTRUM	--	-	--	-	150	1	--	-	1000	1
....TETRAEDRON	--	-	--	-	--	-	--	-	*	0
...SCENEDESMACEAE										
....ACTINASTRUM	--	-	--	-	1200	4	--	-	15000	13
....CRUCIGENIA	--	-	--	-	2400	9	--	-	4100	4
....SCENEDESMUS	3900#	20	--	-	1200	4	880#	48	33000#	29
....TETRASTRUM	--	-	--	-	--	-	51	3	4800	4
..VOLVOCELES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	150	1	--	-	590	2	130	7	690	1
....CHLOROGONIUM	--	-	--	-	--	-	13	1	--	-
CHRYSOPHYTA										
..BACILLARIOPHYCEAE										
...CENTRALES										
...COSCINODISCACEAE										
....CYCLOTELLA	15000#	75	440#	21	11000#	42	51	3	6500	6
....MELOSINA	--	-	--	-	--	-	26	1	690	1
....STEPHANODISCUS	--	-	--	-	2200	8	77	4	--	-
...PENNALES										
....CYMBELLACEAE										
....CYMBELLA	--	-	40	2	--	-	--	-	--	-
....FRAGILARIACEAE										
....FRAGILARIA	--	-	81	4	--	-	--	-	--	-
....GOMPHONEMATACEAE										
....GOMPHONEMA	--	-	400#	19	--	-	--	-	--	-
....MERIDIONACEAE										
....MERIDION	--	-	120	6	--	-	--	-	--	-
....NAVICULACEAE										
....NAVICULA	--	-	490#	23	--	-	51	3	--	-
....NITZSCHACEAE										
....NITZSCHIA	--	-	400#	19	290	1	190	11	1400	1
....SURIPELLACEAE										
....SURIPELLA	--	-	120	6	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)										
..CYANOPHYCEAE										
...CHROOCOCCALES										
....CHROOCOCCACEAE										
....AGMENELLUM	--	-	--	-	--	-	--	-	6900	6
....ANACYSTIS	--	-	--	-	6300#	24	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)										
..EUGLENOPHYCEAE										
...EUGLENALES										
....EUGLENACEAE										
....TRACHELOMONAS	--	-	--	-	--	-	--	-	*	0
PYRRHOPHYTA (FIRE ALGAE)										
..DINOPHYCEAE										
...GYMNODINIALES										
....GYMNODINIACEAE										
....GYMNODINIUM	--	-	--	-	150	1	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

01648000 ROCK CREEK AT SHERRILL DRIVE, WASHINGTON, DC

LOCATION.--Lat 38°58'21", long 77°02'25", District of Columbia, Hydrologic Unit 02070010, on left bank 125 ft (38 m) downstream from Sherrill Drive Bridge in Rock Creek Park in Washington, and 7.5 mi (12 km) upstream from mouth.

DRAINAGE AREA.--62.2 mi² (161.1 km²).

PERIOD OF RECORD.--October 1929 to current year.

REVISED RECORDS.--WSP 1432: 1933(M).

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 148.87 ft (45.376 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow affected by two upstream reservoirs which control flow from about 25 mi² (65 km²), Needwood Lake on Rock Creek since Sept. 1966 and Bernard Frank Lake on North Branch Rock Creek since February 1968. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--50 years, 62.3 ft³/s (1.764 m³/s), 13.60 in/yr (345 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,500 ft³/s (354 m³/s) June 22, 1972, gage height, 16.2 ft (4.94 m), from floodmark, from rating curve extended above 5,640 ft³/s (160 m³/s) on basis of contracted-opening measurements at gage heights 13.19 ft (4.020 m) and 16.2 ft (4.94 m); minimum, 0.5 ft³/s (0.014 m³/s) Oct. 1-7, 1930, gage height, 1.04 ft (0.317 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 25	0500	1630 46.2	6.98 2.128	Aug. 28	0230	2040 57.8	7.93 2.417
Feb. 26	0600	2010 56.9	7.85 2.393	Sept. 6	Unknown	*8940 253	14.28 4.353
June 3	2215	2070 58.6	7.98 2.432	Sept. 22	0445	3020 85.5	9.73 2.966

Minimum discharge, 18 ft³/s (0.51 m³/s) Oct. 15, 16, gage height, 1.33 ft (0.405 m).

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	20	23	37	211	104	261	109	67	330	125	40	82
2	21	23	32	738	93	236	104	66	81	136	87	77
3	20	22	33	170	84	203	131	65	741	55	134	66
4	26	23	147	120	78	178	142	87	369	68	80	65
5	50	22	235	105	74	324	129	83	143	57	68	1580
6	111	23	55	98	76	248	96	60	123	45	55	3100
7	27	23	43	234	70	175	85	59	113	42	47	630
8	23	23	54	300	72	151	83	58	103	39	100	405
9	23	26	260	116	69	139	169	55	96	38	73	216
10	23	22	110	97	68	130	136	43	89	38	38	159
11	23	22	68	85	68	252	95	40	84	45	90	144
12	22	23	57	76	66	131	93	39	72	42	350	198
13	22	23	49	174	63	122	90	301	67	128	88	188
14	21	23	43	143	65	119	120	122	64	95	56	158
15	19	25	40	92	65	107	87	54	62	46	47	151
16	20	34	38	72	64	97	83	70	60	41	43	116
17	23	68	37	73	64	92	81	52	290	40	40	101
18	22	125	35	68	56	88	74	53	92	39	38	90
19	23	28	35	62	63	84	75	91	72	30	57	81
20	23	24	45	138	102	82	73	62	67	84	95	73
21	22	23	80	742	101	80	89	54	64	61	190	261
22	21	21	36	195	159	78	87	52	65	41	55	1250
23	23	22	34	139	142	77	85	75	66	37	52	259
24	25	26	133	671	645	511	81	127	86	35	89	177
25	22	21	290	324	1080	180	78	122	57	35	309	159
26	22	20	77	174	1370	122	75	89	55	36	109	147
27	34	101	59	143	586	111	121	67	52	33	325	138
28	22	49	51	152	321	101	73	61	54	75	648	131
29	21	73	45	146	---	95	67	57	62	57	170	126
30	22	130	42	125	---	87	66	64	67	98	113	113
31	22	---	79	113	---	90	---	56	---	48	99	---
TOTAL	818	1111	2379	6096	5868	4751	2877	2351	3746	1789	3785	10441
MEAN	26.4	37.0	76.7	197	210	153	95.9	75.8	125	57.7	122	348
MAX	111	130	290	742	1370	511	169	301	741	136	648	3100
MIN	19	20	32	62	56	77	66	39	52	30	38	65
CFSM	.42	.60	1.23	3.17	3.38	2.46	1.54	1.22	2.01	.93	1.96	5.60
IN.	.49	.66	1.42	3.65	3.51	2.84	1.72	1.41	2.24	1.07	2.26	6.24

CAL YR 1978 TOTAL 29903 MEAN 81.9 MAX 1720 MIN 19 CFSM 1.32 IN 17.88
WTR YR 1979 TOTAL 46012 MEAN 126 MAX 3100 MIN 19 CFSM 2.03 IN 27.52

01649500 NORTHEAST BRANCH ANACOSTIA RIVER AT RIVERDALE, MD

LOCATION.--Lat 38°57'37", long 76°55'34", Prince Georges County, Hydrologic Unit 02070010, on right bank 200 ft (61 m) downstream from bridge on Riverdale Road, 1.8 mi (2.9 km) downstream from Indian Creek, and 1.8 mi (2.9 km) upstream from confluence with Northwest Branch.

DRAINAGE AREA.--72.8 mi² (188.6 km²).

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

REVISED RECORDS.--WDR MD-DE-75-1: 1972(M).

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 12.68 ft (3.865 m) Washington Suburban Sanitary Commission datum. Prior to June 12, 1942, nonrecording gage; June 12, 1942, to Mar. 22, 1966, and Apr. 12, 1967, to Sept. 3, 1969, water-stage recorder, all at bridge at datum 14.00 ft (4.267 m) above mean sea level. Mar. 23, 1966, to Apr. 11, 1967, nonrecording gage 600 ft (183 m) downstream from bridge at datum 9.25 ft (2.819 m) above mean sea level.

REMARKS.--Records fair. Some regulation at low flow by sand and gravel plants above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--41 years, 85.3 ft³/s (2.416 m³/s), 15.91 in/yr (404 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,000 ft³/s (340 m³/s) June 22, 1972, gage height, 9.52 ft (2.902 m), from rating curve extended above 3,800 ft³/s (108 m³/s) on basis of the average of contracted-opening and slope-area measurements at gage height 9.52 ft (2.902 m); maximum gage height, 12.93 ft (3.941 m) Oct. 16, 1942; minimum daily discharge, 1.4 ft³/s (0.040 m³/s) Sept. 12, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 23 or 24, 1933, reached a stage of about 15.5 ft (4.72 m), at datum 14.00 ft (4.267 m) above mean sea level, from floodmarks, discharge, 10,500 ft³/s (297 m³/s), from rating curve extended above 3,000 ft³/s (85.0 m³/s) on basis of velocity-area study.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (56 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. 2	1200	2410 68.3	5.48 1.670	July 14	1330	2060 58.3	5.10 1.554
Jan. 21	1315	2170 61.5	5.22 1.591	Aug. 27	1845	4870 138	7.69 2.344
Feb. 25	Unknown	4670 132	7.52 2.292	Sept. 5	Unknown	*9410 266	a10.16 3.097
June 3	1530	3040 86.1	6.09 1.856	Sept. 22	0100	5550 157	8.18 2.493

a From floodmark in well.

Minimum daily discharge, 13 ft³/s (0.37 m³/s) Oct. 3.

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	14	16	40	412	78	220	106	48	493	178	240	37
2	14	14	27	1480	75	200	109	46	243	118	85	36
3	13	14	34	421	70	150	159	46	954	46	60	50
4	30	14	232	112	70	130	197	80	664	62	44	49
5	52	14	408	69	65	500	187	111	223	58	40	2600
6	73	15	72	64	65	363	90	65	262	37	38	3000
7	22	15	39	409	75	132	75	60	135	32	36	150
8	19	15	50	839	75	90	70	50	82	31	36	96
9	16	15	342	249	70	80	193	44	65	29	60	72
10	16	15	193	112	70	70	179	40	51	23	111	61
11	16	19	70	77	70	350	80	38	55	25	135	53
12	16	19	46	75	75	190	70	38	49	25	510	47
13	16	17	36	274	80	110	75	463	43	203	176	45
14	15	17	32	299	75	85	140	306	39	482	60	68
15	15	18	32	135	75	76	76	100	40	112	46	54
16	15	28	30	78	70	73	66	55	36	50	44	38
17	18	90	28	76	65	73	62	48	211	30	42	35
18	17	150	26	69	70	72	58	48	68	26	42	33
19	20	40	28	71	85	69	53	141	43	24	99	32
20	20	24	55	287	130	64	52	60	36	170	63	29
21	19	21	90	1460	110	62	50	42	35	80	285	208
22	18	20	40	424	450	60	50	40	37	40	71	1270
23	17	22	35	149	250	58	50	201	47	30	36	214
24	22	26	247	1050	900	404	50	301	125	28	43	88
25	20	22	416	569	1800	244	50	266	42	50	73	61
26	19	22	110	181	1200	134	54	181	35	36	51	52
27	32	140	50	118	500	99	233	55	32	37	847	44
28	21	76	40	161	240	85	108	46	42	57	398	46
29	19	118	34	148	---	79	75	44	45	136	74	45
30	17	148	36	115	---	73	55	44	88	80	84	52
31	16	---	119	86	---	81	---	46	---	35	44	---
TOTAL	657	1184	3037	10069	6958	4476	2872	3153	4320	2370	3973	8665
MEAN	21.2	39.5	98.0	325	249	144	95.7	102	144	76.5	128	289
MAX	73	150	416	1480	1800	500	233	463	954	482	847	3000
MIN	13	14	26	64	65	58	50	38	32	23	36	29
CFSM	.29	.54	1.35	4.46	3.42	1.98	1.32	1.40	1.98	1.05	1.76	3.97
IN.	.34	.61	1.55	5.15	3.56	2.29	1.47	1.61	2.21	1.21	2.03	4.43

CAL YR 1978 TOTAL 40627 MEAN 111 MAX 3430 MIN 13 CFSM 1.53 IN 20.76
WTR YR 1979 TOTAL 51734 MEAN 142 MAX 3000 MIN 13 CFSM 1.95 IN 26.44

POTOMAC RIVER BASIN

01650500 NORTHWEST BRANCH ANACOSTIA RIVER NEAR COLESVILLE, MD

LOCATION.--Lat 39°03'55", long 77°01'48", Montgomery County, Hydrologic Unit 02070010, on right bank 400 ft (120 m) upstream from bridge on State Highway 183, 1.5 mi (2.4 km) southwest of Colesville, 3 mi (4.8 km) upstream from Burnt Mills, 10 mi (16.1 km) upstream from Sligo Creek, and 12.5 mi (20.1 km) upstream from confluence with Northeast Branch.

DRAINAGE AREA.--21.1 mi² (54.6 km²).

PERIOD OF RECORD.--October 1923 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 1432: 1924(M), 1925-26, 1929-30(M), 1933(M), 1939(P), 1940(M), 1943-46, 1948-49(P).
WSP 1903: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 264.75 ft (80.700 m) National Geodetic Vertical Datum of 1929. Prior to Apr. 22, 1932, nonrecording gages in same general vicinity at different datums.
Apr. 22, 1932, to Apr. 11, 1934, nonrecording gages at present site and datum.

REMARKS.--Records good. Diversions at low flow since 1962 for irrigation of golf courses above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--56 years, 22.8 ft³/s (0.646 m³/s), 14.67 in/yr (373 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,000 ft³/s (312 m³/s) June 22, 1972, gage height, 15.89 ft (4.843 m), from high-water mark in well, from rating curve extended above 1,200 ft³/s (34.0 m³/s) on basis of contracted-opening and flow-over-road measurement at gage height 10.99 ft (3.350 m) and computation of flow over Burnt Mills Dam, 3 miles (4.8 km) downstream, adjusted for flow from intervening area, at gage height 15.89 ft (4.843 m); no flow several days during August and September 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 600 ft³/s (17 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 2	1330	671 19.0	6.12 1.865	Aug. 19	2045	794 22.5	6.77 2.064
Jan. 24	1430	909 25.7	7.22 2.201	Aug. 27	1900	1130 32.0	7.90 2.408
Feb. 25	0130	1190 33.7	8.08 2.463	Sept. 5	2330	*6300 178	11.47 3.496
Feb. 26	0200	1360 38.5	8.43 2.570	Sept. 22	0130	2130 60.3	9.52 2.902
June 3	1600	1620 45.9	8.93 2.722				

Minimum discharge, 3.9 ft³/s (0.110 m³/s) Oct. 3, 4, gage height 1.62 ft (0.494 m).

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	4.5	5.6	12	108	20	85	33	19	111	45	12	12
2	4.8	5.4	9.2	421	18	81	33	18	25	25	28	11
3	3.9	5.5	11	48	17	55	43	18	524	12	23	11
4	4.8	5.6	57	26	16	48	56	20	110	14	11	10
5	11	5.9	99	19	15	135	52	23	40	14	8.7	1260
6	17	5.7	18	20	15	78	31	18	27	11	7.8	1010
7	6.2	5.9	13	90	15	45	26	17	23	9.7	7.0	35
8	5.2	5.9	15	199	14	36	24	16	20	9.3	6.6	23
9	5.2	5.5	136	37	14	32	60	15	18	8.9	7.4	19
10	4.8	5.5	39	26	15	30	58	15	17	9.0	8.3	18
11	5.2	5.8	17	19	16	84	30	14	18	9.2	17	16
12	4.8	5.7	14	18	16	38	28	14	16	9.2	106	16
13	4.8	5.9	13	56	16	31	27	66	14	32	24	15
14	4.5	5.9	11	69	17	31	42	49	13	23	12	24
15	4.2	6.6	11	27	17	27	29	22	13	15	9.2	19
16	4.5	8.1	10	20	17	25	26	21	12	11	7.8	14
17	6.0	15	9.4	20	15	25	24	16	121	10	7.4	14
18	5.8	36	9.1	18	16	25	23	17	25	9.2	7.8	14
19	5.8	8.8	9.1	15	23	24	22	26	16	9.2	101	13
20	5.3	6.8	13	83	33	23	21	19	14	14	31	11
21	4.6	6.2	20	409	28	22	20	17	13	16	48	233
22	4.8	6.0	11	55	42	22	20	16	13	12	17	511
23	4.7	6.5	10	32	46	21	20	20	13	9.6	18	67
24	4.7	7.0	72	422	346	183	20	36	13	9.2	42	29
25	4.9	5.9	127	77	738	66	20	34	12	8.7	77	24
26	5.2	5.9	22	36	592	36	21	31	11	9.6	22	22
27	6.9	21	16	30	137	29	39	19	10	7.8	267	20
28	5.8	17	13	31	111	27	26	17	11	25	75	20
29	5.5	33	13	29	---	26	21	16	11	14	25	21
30	5.5	43	12	27	---	25	20	16	12	26	17	21
31	5.5	---	23	24	---	27	---	14	---	11	14	---
TOTAL	176.4	312.6	864.8	2511	2385	1442	915	679	1296	448.6	1065.0	3533
MEAN	5.69	10.4	27.9	81.0	85.2	46.5	30.5	21.9	43.2	14.5	34.4	118
MAX	17	43	136	422	738	183	60	66	524	45	267	1260
MIN	3.9	5.4	9.1	15	14	21	20	14	10	7.8	6.6	10
CFSM	.27	.49	1.32	3.84	4.04	2.20	1.45	1.04	2.05	.69	1.63	5.59
IN.	.31	.55	1.52	4.43	4.20	2.54	1.61	1.20	2.28	.79	1.88	6.23

CAL YR 1978 TOTAL 10137.7 MEAN 27.8 MAX 861 MIN 3.9 CFSM 1.32 IN 17.87
WTR YR 1979 TOTAL 15628.4 MEAN 42.8 MAX 1260 MIN 3.9 CFSM 2.03 IN 27.55

LOCATION.--Lat 38°57'09", long 76°58'00", Prince Georges County, Hydrologic Unit 02070010, on right bank at downstream side of bridge on Queens Chapel Road (State Highway 500), 0.8 mi (1.3 km) downstream from Sligo Branch, 1 mi (1.6 km) west of Hyattsville, and 1.6 mi (2.6 km) upstream from confluence with Northeast Branch.

REVISÉD RECORDS.--WSP 971: 1942(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 17.10 ft (5.273 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 22, 1938, nonrecording gage; Oct. 22, 1938, to Sept. 17, 1951, water-stage recorder; Sept. 17, 1951, to Aug. 29, 1952, nonrecording gage and crest-stage gage.

AVERAGE DISCHARGE.--41 years, 46.5 ft³/s (1.317 m³/s), 12.78 in/yr (325 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD:--Maximum discharge, 18,000 ft³/s (510 m³/s) June 22, 1972, gage height, 14.47 ft (4.410 m), from rating curve extended above 4,000 ft³/s (113 m³/s) on the basis of the average of slope-area and step-back-water measurements at gage height 14.47 ft (4.410 m); minimum, 0.2 ft³/s (0.006 m³/s) Sept. 11, 1966.

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

Date	Time	Discharge		Gage height		Date	Time	Discharge		Gage height	
		(ft ³ /s)	(m ³ /s)	(ft)	(m)			(ft ³ /s)	(m ³ /s)	(ft)	(m)
Feb. 24	2315	2190	62.0	4.11	1.253	Aug. 27	1830	2440	69.1	4.31	1.314
Feb. 26	0100	2720	77.0	4.53	1.381	Sept. 6	0045	*12000	340	9.40	2.865
June 3	1900	1930	54.7	3.89	1.186	Sept. 22	0115	4880	138	5.95	1.814

Minimum discharge, 5.6 ft³/s (0.16 m³/s) Oct. 9, 15, 16, gage height, 1.02 ft (0.311 m)

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	6.5	12	25	245	42	137	78	35	306	144	21	21
2	6.7	13	17	857	38	125	76	33	56	93	38	20
3	7.2	12	25	132	36	90	108	33	791	26	50	34
4	20	12	154	50	35	68	116	62	262	37	18	23
5	44	11	273	43	35	301	104	57	75	27	15	3450
6	75	12	35	40	37	183	57	34	86	17	14	3060
7	13	12	24	239	38	91	49	34	46	17	13	83
8	7.5	12	35	419	38	72	47	33	38	17	59	48
9	6.4	12	225	83	38	61	140	31	35	16	25	37
10	6.4	12	103	48	36	60	122	28	34	16	17	31
11	6.4	13	32	43	36	211	58	27	37	16	94	29
12	6.2	11	25	48	38	74	53	27	30	15	327	27
13	6.2	13	23	187	42	61	56	311	28	117	65	26
14	6.0	14	21	139	38	60	94	114	28	114	24	47
15	5.8	14	19	66	36	52	55	43	26	27	17	43
16	8.5	22	19	38	36	46	50	41	26	21	15	25
17	13	64	17	39	32	45	48	31	409	16	15	24
18	11	115	16	33	36	47	45	33	63	16	15	23
19	12	20	17	30	50	47	43	69	32	15	163	23
20	12	13	40	180	70	46	41	37	28	141	109	21
21	11	12	57	893	78	45	41	29	26	32	187	243
22	10	11	23	128	302	43	40	28	30	21	33	1240
23	11	13	19	63	173	44	39	61	35	15	27	125
24	14	16	144	739	795	318	39	84	85	13	72	50
25	10	13	282	192	1430	138	39	112	24	35	174	38
26	10	13	43	72	1140	64	40	63	19	22	58	35
27	23	108	28	59	241	52	111	34	17	13	429	31
28	12	45	21	92	172	48	49	30	32	33	246	36
29	8.7	97	19	63	---	49	38	31	27	37	48	33
30	8.3	107	18	52	---	47	36	34	71	44	39	34
31	11	---	66	45	---	55	---	36	---	17	23	---
TOTAL	409.8	854	1865	5357	5118	2780	1912	1655	2802	1190	2450	8960
MEAN	13.2	28.5	60.2	173	183	89.7	63.7	53.4	93.4	38.4	79.0	299
MAX	75	115	282	893	1430	318	140	311	791	144	429	3450
MIN	5.8	11	16	30	32	43	36	27	17	13	13	20
CFSM	.27	.58	1.22	3.50	3.70	1.82	1.29	1.08	1.89	.78	1.60	6.05
IN.	.31	.64	1.40	4.03	3.85	2.09	1.44	1.25	2.11	.90	1.84	6.75
CAL YR 1978	TOTAL	23872.7	MEAN	65.4	MAX	1860	MIN 5.8	CFSM 1.32	IN 17.98			
WTR YR 1979	TOTAL	35352.8	MEAN	96.9	MAX	3450	MIN 5.8	CFSM 1.96	IN 26.62			

01653600 PISCATAWAY CREEK AT PISCATAWAY, MD

LOCATION.--Lat 38°42'20", long 76°58'00", Prince Georges County, Hydrologic Unit 02070010, on left bank 75 ft (23 m) downstream from bridge on State Highway 223, at Piscataway, 0.4 mi (0.6 km) upstream from Tinker Creek, and 4.8 mi (7.7 km) upstream from mouth.

DRAINAGE AREA.--39.5 mi² (102.3 km²).

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 10 ft (3 m), from topographic map.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--14 years, 49.9 ft³/s (1.413 m³/s), 17.16 in/yr (436 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,540 ft³/s (242 m³/s) Sept. 6, 1979, gage height, 11.21 ft (3.417 m), from rating curve extended above 1,700 ft³/s (48.1 m³/s) on basis of contracted-opening measurement of peak flow at bridge 100 ft (30 m) upstream; no flow at times in 1966, 1970, and 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 450 ft³/s (12 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. 3	0300	603 17.1	6.43 1.960	Mar. 6	0330	521 14.8	6.08 1.853
Jan. 21	1830	588 16.7	6.37 1.942	Aug. 12	1030	466 13.2	5.83 1.777
Jan. 25	0700	544 15.4	6.18 1.884	Aug. 21	2300	562 15.9	6.26 1.908
Feb. 24	2130	468 13.3	5.84 1.780	Sept. 6	Unknown	*8500 241	11.21 3.417
Feb. 26	0400	2630 74.5	9.18 2.798				

Minimum discharge, 0.38 ft³/s (0.011 m³/s) Oct. 1, gage height, 1.88 ft (0.57 m).

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	.58	4.0	15	56	56	211	70	41	176	133	25	21
2	1.7	3.8	10	320	49	178	59	34	70	74	21	20
3	1.5	3.6	8.7	409	47	152	74	36	65	24	45	19
4	1.7	4.0	51	82	48	132	98	35	199	18	78	20
5	5.0	4.9	200	57	43	289	98	38	79	22	22	228
6	7.0	5.0	49	52	39	346	66	31	45	14	15	4500
7	4.7	5.1	23	89	41	155	54	28	34	11	13	410
8	2.0	6.4	19	215	44	122	52	25	27	9.5	11	120
9	1.4	7.5	62	105	43	105	62	23	24	9.1	18	81
10	1.2	7.1	100	60	41	97	66	22	21	8.0	12	68
11	1.1	8.0	30	47	39	187	49	21	24	9.9	80	60
12	1.0	6.6	22	40	40	121	48	20	21	9.5	410	54
13	.94	4.9	19	77	42	94	47	100	16	19	160	50
14	.86	5.2	16	155	44	90	61	80	14	115	49	55
15	1.5	5.1	15	76	42	79	49	40	13	22	31	51
16	1.5	7.1	14	55	40	71	44	32	12	14	24	38
17	1.8	11	13	50	38	70	41	30	70	10	20	35
18	1.9	25	12	45	39	67	39	26	54	9.1	19	32
19	2.1	13	12	37	39	63	38	50	23	8.1	22	29
20	2.8	8.0	14	60	40	60	36	28	18	19	19	24
21	2.5	6.8	39	467	46	58	36	24	16	104	242	35
22	1.8	6.4	22	288	55	55	34	21	16	29	204	375
23	1.6	6.3	17	99	74	53	35	20	15	18	46	140
24	1.3	8.1	30	298	220	166	35	28	16	26	35	66
25	1.2	7.4	181	402	900	123	33	37	15	19	30	53
26	1.5	6.4	47	121	1900	78	32	21	11	28	41	48
27	3.4	22	29	93	557	64	183	18	11	16	47	42
28	3.9	36	22	100	282	58	132	17	10	13	102	41
29	3.0	14	19	95	---	57	61	18	12	46	44	178
30	2.3	34	18	74	---	54	48	14	17	157	39	104
31	2.6	---	30	64	---	53	---	14	---	48	26	---
TOTAL	67.38	292.7	1158.7	4188	4888	3508	1780	972	1144	1062.2	1950	6997
MEAN	2.17	9.76	37.4	135	175	113	59.3	31.4	38.1	34.3	62.9	233
MAX	7.0	36	200	467	1900	346	183	100	199	157	410	4500
MIN	.58	3.6	8.7	37	38	53	32	14	10	8.0	11	19
CFSM	.06	.25	.95	3.42	4.43	2.86	1.50	.80	.97	.87	1.59	5.90
IN.	.06	.28	1.09	3.94	4.60	3.30	1.68	.92	1.08	1.00	1.84	6.59
CAL YR 1978 TOTAL	21086.79			MEAN 57.8	MAX 1780	MIN .44	CFSM 1.46	IN 19.86				
WTR YR 1979 TOTAL	28007.98			MEAN 76.7	MAX 4500	MIN .58	CFSM 1.94	IN 26.38				

POTOMAC RIVER BASIN

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01655480 POTOMAC RIVER AT INDIAN HEAD, MD
(National stream-quality accounting network station)

LOCATION.--Lat 38°36'03", long 77°10'56", Charles County, Hydrologic Unit 02070010, in brick building at end of wooden dock on left bank at U.S. Naval Ordnance Station at Indian Head, and 3.5 mi (5.6 km) above mouth of Mattawoman Creek.

DRAINAGE AREA.--12,160 mi² (31,490 km²).

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1977 to current year.

pH: October 1977 to current year.

WATER TEMPERATURES: October 1977 to current year.

DISSOLVED OXYGEN: October 1977 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1977.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 3,490 micromhos Nov. 4, 1977; minimum, 116 micromhos May 19, 20, 1978.

pH: Maximum, 9.2 units Oct. 3, 1978; minimum, 7.0 units Sept. 7, 8, 13, 14, 1979.

WATER TEMPERATURES: Maximum, 30.5°C Aug. 10, 1978; minimum, 0.0°C on many days during winter periods.

DISSOLVED OXYGEN: Maximum, 15.5 mg/L June 14, 1978; minimum, 3.4 mg/L July 4, 1978.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 2,300 micromhos Nov. 23; minimum, 118 micromhos Feb. 28 and Mar. 1.

pH: Maximum, 9.2 units Oct. 3; minimum, 7.0 units Sept. 7, 8, 13, 14.

WATER TEMPERATURES: Maximum, 30.5°C Aug. 1, 6; minimum, 0.0°C on many days during winter periods.

DISSOLVED OXYGEN: Maximum, 14.8 mg/L Aug. 17; minimum, 3.4 mg/L Aug. 1.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	308	291	299	438	386	404	---	---	---	286	256	266
2	319	302	307	891	392	453	---	---	---	274	232	251
3	319	296	307	734	404	498	---	---	---	238	224	229
4	317	293	303	711	450	535	---	---	---	230	198	220
5	313	300	304	877	499	617	---	---	---	214	190	199
6	321	306	311	1120	615	761	---	---	---	198	190	194
7	334	315	323	1060	584	763	---	---	---	218	194	199
8	340	321	332	858	510	654	740	564	617	210	200	204
9	342	327	335	955	528	674	---	---	---	214	194	201
10	336	329	333	1580	651	880	535	509	525	204	192	196
11	---	---	---	1290	604	871	---	---	---	204	194	199
12	---	---	---	1660	618	940	---	---	---	214	202	204
13	340	329	333	1970	794	1220	---	---	---	228	200	207
14	342	334	337	1870	1060	1460	456	388	416	218	200	206
15	343	334	339	1500	750	1040	446	368	400	---	---	---
16	345	334	338	1050	638	839	456	378	407	---	---	---
17	340	333	337	1520	823	1140	434	396	407	---	---	---
18	345	334	338	1570	767	1130	426	404	418	244	212	226
19	347	340	342	816	550	675	418	402	411	---	---	---
20	358	343	350	908	535	632	412	360	398	---	---	---
21	365	345	353	1710	620	900	408	358	388	---	---	---
22	362	347	353	2080	967	1350	418	352	379	---	262	---
23	365	353	361	2300	1360	1760	386	342	366	286	238	270
24	376	360	368	2060	643	1290	---	---	---	268	208	226
25	369	360	364	1020	566	693	---	---	---	220	176	199
26	372	360	365	763	564	650	---	---	---	178	140	155
27	379	358	369	1940	746	1210	290	276	281	150	138	144
28	381	363	373	1410	696	962	284	276	279	170	132	138
29	378	360	371	1400	750	924	284	274	278	146	134	139
30	379	362	379	---	---	---	280	268	275	158	140	148
31	405	371	382	---	---	---	278	260	270	162	148	154
MONTH	405	291	342	2300	386	894	740	260	383	286	132	199

POTOMAC RIVER BASIN

01655480 POTOMAC RIVER AT INDIAN HEAD, MD--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	184	154	172	130	118	123	206	186	194	264	256	260
2	---	---	---	144	126	131	206	192	198	268	264	266
3	---	---	---	148	136	141	210	196	202	270	264	267
4	---	---	---	156	146	152	202	184	194	272	264	269
5	---	---	---	174	156	164	204	188	195	276	270	274
6	---	---	---	194	166	171	220	198	210	276	270	274
7	---	---	---	180	168	171	232	216	219	276	272	274
8	---	---	---	174	164	168	218	214	215	274	266	270
9	---	---	---	168	162	165	220	210	214	268	258	265
10	---	---	---	176	158	162	216	204	208	264	256	262
11	---	---	---	166	158	161	206	200	203	264	254	259
12	---	---	---	186	162	165	202	200	201	258	254	257
13	---	---	---	174	166	170	202	200	201	258	254	256
14	---	---	---	194	158	173	204	200	202	254	248	250
15	---	---	---	194	176	184	210	202	205	264	248	256
16	---	---	---	196	186	191	212	206	209	270	262	264
17	---	---	---	196	188	193	226	212	216	268	266	267
18	---	---	---	202	194	199	228	218	219	268	266	267
19	---	---	---	206	200	202	224	218	220	268	266	267
20	---	---	---	208	202	205	224	218	221	270	266	267
21	---	---	---	216	206	210	226	218	221	272	268	270
22	---	---	---	220	210	215	228	218	224	272	268	270
23	---	---	---	226	216	220	234	222	227	268	262	266
24	---	---	---	226	220	222	242	224	231	262	256	259
25	---	---	---	244	222	232	238	226	233	256	248	253
26	---	---	---	252	236	242	240	228	235	252	242	246
27	194	126	151	258	248	254	240	228	234	244	240	242
28	136	118	123	256	248	252	248	236	240	246	242	243
29	---	---	---	254	244	250	256	242	249	246	240	243
30	---	---	---	246	216	229	258	248	254	248	242	246
31	---	---	---	226	200	215	---	---	---	246	246	246
MONTH	194	118	149	258	118	191	258	184	216	276	240	260
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	246	232	239	231	217	225	290	252	265	298	280	294
2	234	220	228	237	217	227	282	258	265	288	278	284
3	228	212	223	242	220	235	308	252	277	288	278	285
4	222	198	208	239	221	230	319	271	289	292	278	287
5	212	202	205	250	214	225	315	281	292	289	243	275
6	210	194	204	223	215	219	302	276	290	281	267	274
7	209	197	202	278	208	227	328	268	292	271	189	233
8	219	205	208	294	220	257	338	306	320	193	173	183
9	225	213	220	319	233	265	322	298	309	204	193	197
10	231	221	227	322	282	299	363	299	315	194	178	189
11	238	228	234	313	261	287	305	279	297	188	166	177
12	242	238	240	314	246	287	289	277	283	172	152	167
13	249	240	246	299	263	285	281	269	276	172	164	167
14	256	247	252	295	251	274	278	264	272	170	166	168
15	261	255	258	328	268	299	284	272	275	177	167	173
16	263	255	261	323	235	275	276	272	275	179	173	176
17	268	262	264	292	256	273	276	270	273	183	175	180
18	279	263	271	322	270	291	275	267	270	187	175	182
19	286	276	280	319	273	296	279	271	275	195	181	189
20	289	281	285	317	273	301	281	269	276	197	185	191
21	292	240	264	318	256	276	281	275	278	197	187	192
22	243	223	230	280	250	267	284	276	280	210	192	199
23	226	222	225	276	252	268	282	278	281	240	216	229
24	228	218	221	299	249	271	324	274	284	248	232	239
25	227	219	223	305	267	282	292	272	280	244	206	227
26	228	222	224	293	253	272	282	268	275	206	194	199
27	229	223	226	306	254	276	285	273	277	218	198	208
28	232	224	229	300	274	286	291	271	282	228	212	221
29	231	223	226	343	263	286	289	273	282	231	223	227
30	230	220	225	271	263	267	397	275	316	227	223	225
31	---	---	---	291	259	265	310	294	300	---	---	---
MONTH	292	194	235	343	208	268	397	252	285	298	152	215

01655480 POTOMAC RIVER AT INDIAN HEAD, MD--Continued

PH (UNITS), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	9.1	8.7	8.9	8.9	8.4	8.6	---	---	---	7.6	7.5	7.6
2	9.1	8.7	8.9	8.9	8.4	8.5	---	---	---	7.6	7.5	7.6
3	9.2	8.7	8.9	8.7	8.3	8.5	---	---	---	7.7	7.6	7.6
4	9.1	8.7	8.9	8.4	8.2	8.3	---	---	---	7.6	7.5	7.6
5	8.9	8.7	8.8	8.6	8.0	8.2	---	---	---	7.5	7.5	7.5
6	9.0	8.5	8.8	8.4	8.0	8.2	---	---	---	7.5	7.5	7.5
7	8.7	8.3	8.5	8.4	7.9	8.1	---	---	---	7.6	7.5	7.5
8	8.7	8.1	8.4	8.1	7.8	8.0	7.6	7.5	7.5	7.6	7.5	7.6
9	8.8	8.0	8.4	8.2	7.7	7.9	7.7	7.5	7.6	7.6	7.5	7.6
10	8.9	8.1	8.5	8.1	7.7	7.9	7.9	7.7	7.8	7.6	7.5	7.6
11	---	8.2	---	8.0	7.6	7.8	---	7.7	---	7.5	7.5	7.5
12	8.9	---	---	8.0	7.6	7.7	---	---	---	7.5	7.5	7.5
13	8.8	8.3	8.5	7.9	7.6	7.7	---	---	---	7.5	7.5	7.5
14	8.6	8.4	8.5	8.1	7.6	7.7	7.9	7.7	7.8	7.5	7.5	7.5
15	8.9	8.3	8.6	7.7	7.5	7.6	7.8	7.7	7.8	7.5	7.5	7.5
16	8.8	8.5	8.6	7.6	7.4	7.5	7.8	7.7	7.7	---	---	---
17	8.8	8.4	8.6	7.7	7.5	7.6	8.0	7.7	7.8	7.4	7.4	7.4
18	8.8	8.4	8.6	7.7	7.5	7.6	7.9	7.8	7.8	7.5	7.4	7.4
19	8.7	8.4	8.5	7.6	7.5	7.5	7.8	7.7	7.8	---	---	---
20	8.8	8.3	8.5	7.6	7.4	7.5	7.8	7.7	7.8	---	---	---
21	8.8	8.3	8.6	7.7	7.4	7.6	7.8	7.7	7.8	---	---	---
22	8.7	8.3	8.5	7.7	7.5	7.6	7.8	7.7	7.7	7.5	7.4	7.5
23	8.7	8.2	8.4	7.7	7.6	7.6	7.8	7.7	7.7	7.6	7.3	7.4
24	8.5	8.3	8.4	7.7	7.5	7.6	---	---	---	7.4	7.3	7.3
25	8.8	8.4	8.5	7.7	7.5	7.6	---	---	---	7.8	7.3	7.6
26	8.8	8.3	8.5	7.8	7.6	7.7	---	---	---	7.7	7.6	7.6
27	8.8	8.3	8.6	7.8	7.7	7.8	7.7	7.6	7.6	7.7	7.6	7.7
28	8.9	8.5	8.7	7.8	7.5	7.6	7.7	7.6	7.7	7.7	7.6	7.7
29	8.9	8.4	8.7	7.7	7.5	7.6	7.7	7.6	7.6	7.6	7.6	7.6
30	8.9	8.4	8.6	---	---	---	7.6	7.6	7.6	7.6	7.6	7.6
31	8.9	8.4	8.6	---	---	---	7.6	7.6	7.6	7.6	7.6	7.6
MONTH	9.2	8.0	8.6	8.9	7.4	7.8	8.0	7.5	7.7	7.8	7.3	7.5
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	7.7	7.6	7.6	7.4	7.4	7.4	7.7	7.5	7.6	7.6	7.4	7.5
2	7.7	7.6	7.7	7.4	7.4	7.4	7.5	7.4	7.5	7.7	7.5	7.5
3	---	---	---	7.4	7.4	7.4	7.5	7.4	7.4	7.9	7.5	7.6
4	---	---	---	7.5	7.4	7.4	7.5	7.4	7.4	8.0	7.7	7.8
5	---	---	---	7.9	7.5	7.5	7.6	7.4	7.5	8.3	7.9	8.1
6	---	---	---	7.6	7.5	7.5	7.8	7.5	7.7	8.1	7.7	7.9
7	---	---	---	7.6	7.4	7.5	7.8	7.7	7.8	8.0	7.7	7.8
8	---	---	---	7.5	7.4	7.4	7.8	7.7	7.7	8.0	7.7	7.8
9	---	---	---	7.5	7.4	7.5	7.7	7.7	7.7	8.2	7.7	7.8
10	---	---	---	7.5	7.4	7.5	7.8	7.7	7.7	8.2	7.6	7.8
11	---	---	---	7.6	7.5	7.5	7.7	7.6	7.7	8.0	7.6	7.7
12	---	---	---	7.6	7.5	7.6	7.6	7.6	7.6	8.1	7.5	7.6
13	---	---	---	7.8	7.5	7.5	7.6	7.6	7.6	7.6	7.4	7.5
14	---	---	---	7.6	7.5	7.6	7.7	7.6	7.6	7.4	7.3	7.4
15	---	---	---	7.7	7.6	7.6	7.7	7.6	7.6	7.5	7.2	7.3
16	---	---	---	7.7	7.6	7.7	7.7	7.6	7.7	7.6	7.4	7.5
17	---	---	---	7.6	7.6	7.6	7.7	7.7	7.7	7.5	7.3	7.4
18	---	---	---	7.6	7.6	7.6	7.8	7.7	7.7	7.5	7.3	7.4
19	---	---	---	7.6	7.6	7.6	7.8	7.7	7.7	7.5	7.4	7.4
20	---	---	---	7.6	7.6	7.6	7.8	7.6	7.7	7.5	7.4	7.4
21	---	---	---	7.6	7.5	7.6	7.9	7.6	7.7	7.5	7.3	7.4
22	---	---	---	7.6	7.5	7.6	8.3	7.7	7.9	7.5	7.3	7.3
23	---	---	---	7.7	7.6	7.6	8.1	7.8	7.9	7.4	7.2	7.3
24	---	---	---	7.6	7.5	7.6	8.2	7.8	7.9	7.4	7.2	7.3
25	---	---	---	7.7	7.6	7.6	8.1	7.8	7.9	7.5	7.3	7.3
26	7.6	7.5	7.5	7.7	7.7	7.7	7.8	7.7	7.8	7.6	7.3	7.4
27	7.6	7.5	7.5	7.7	7.7	7.7	7.8	7.6	7.7	7.5	7.3	7.4
28	7.9	7.4	7.5	7.7	7.6	7.7	7.7	7.6	7.6	7.5	7.3	7.4
29	---	---	---	7.7	7.7	7.7	7.6	7.6	7.6	7.4	7.3	7.4
30	---	---	---	7.7	7.6	7.6	7.5	7.4	7.4	7.5	7.4	7.4
31	---	---	---	7.8	7.6	7.6	---	---	---	7.5	7.4	7.4
MONTH	7.9	7.4	7.6	7.9	7.4	7.6	8.3	7.4	7.7	8.3	7.2	7.5

POTOMAC RIVER BASIN

01655480 POTOMAC RIVER AT INDIAN HEAD, MD--Continued

PH (UNITS), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	7.5	7.2	7.3	8.6	7.8	8.2	8.7	7.2	7.5	8.2	7.3	7.6
2	7.6	7.2	7.3	8.4	7.8	8.2	7.8	7.3	7.5	8.2	7.3	7.6
3	7.3	7.2	7.2	8.7	7.8	8.3	8.4	7.4	7.7	8.4	7.3	7.6
4	7.3	7.2	7.2	8.5	7.9	8.1	8.5	7.4	7.8	8.5	7.3	7.7
5	7.4	7.2	7.3	8.5	7.8	8.2	8.5	7.4	7.9	7.5	7.3	7.4
6	7.4	7.1	7.2	8.6	8.0	8.2	8.5	7.5	7.8	7.6	7.2	7.3
7	7.2	7.1	7.1	8.8	8.0	8.3	8.5	7.4	7.8	7.2	7.0	7.1
8	7.3	7.1	7.2	8.8	8.1	8.4	8.4	7.4	7.7	7.1	7.0	7.1
9	7.6	7.2	7.3	8.6	8.0	8.3	8.5	7.5	7.8	7.3	7.2	7.2
10	7.5	7.2	7.3	8.6	8.0	8.2	8.2	7.4	7.8	7.3	7.2	7.2
11	7.6	7.3	7.4	8.4	7.8	8.0	8.1	7.5	7.7	7.2	7.1	7.2
12	7.8	7.4	7.6	8.3	7.7	8.0	7.7	7.5	7.6	7.3	7.1	7.1
13	7.8	7.4	7.6	8.4	7.7	7.9	8.2	7.4	7.8	7.1	7.0	7.1
14	8.2	7.5	7.7	8.5	7.7	8.1	8.3	7.5	7.8	7.1	7.0	7.1
15	8.6	7.5	7.9	8.4	7.7	7.9	8.4	7.5	7.9	7.4	7.2	7.3
16	8.7	7.7	8.1	8.9	7.6	7.9	8.6	7.5	8.0	7.6	7.2	7.3
17	8.2	7.7	7.9	8.7	7.6	8.0	9.1	7.8	8.3	7.7	7.1	7.1
18	8.5	7.7	8.0	8.9	7.6	8.2	8.3	7.6	8.0	7.7	7.1	7.2
19	8.5	7.8	8.1	8.7	7.6	8.0	8.1	7.5	7.7	7.5	7.1	7.3
20	8.4	7.7	8.0	8.5	7.6	7.9	8.5	7.6	7.8	7.5	7.2	7.3
21	8.1	7.7	7.8	8.4	7.4	7.8	7.9	7.5	7.7	7.3	7.2	7.2
22	8.3	7.6	7.8	8.5	7.4	7.7	8.0	7.5	7.7	7.3	7.1	7.2
23	8.4	7.6	7.9	8.1	7.3	7.6	7.7	7.4	7.5	7.7	7.3	7.5
24	7.8	7.6	7.7	8.4	7.4	7.7	7.9	7.3	7.5	7.6	7.4	7.5
25	8.3	7.5	7.8	8.1	7.3	7.5	8.2	7.4	7.7	7.4	7.3	7.4
26	8.4	7.6	8.0	8.2	7.3	7.6	8.1	7.5	7.7	7.2	7.2	7.2
27	8.5	7.7	8.1	7.8	7.3	7.5	7.9	7.4	7.6	7.3	7.2	7.2
28	8.4	7.7	8.1	8.2	7.3	7.5	8.3	7.4	7.7	7.3	7.2	7.2
29	8.4	7.8	8.1	7.8	7.3	7.4	7.8	7.3	7.6	7.4	7.2	7.3
30	8.4	7.8	8.1	7.6	7.4	7.4	8.6	7.2	7.7	7.3	7.2	7.3
31	---	---	---	8.1	7.3	7.4	8.9	7.3	7.7	---	---	---
MONTH	8.7	7.1	7.7	8.9	7.3	7.9	9.1	7.2	7.7	8.5	7.0	7.3

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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

POTOMAC RIVER BASIN

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01655480 POTOMAC RIVER AT INDIAN HEAD, MD--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	1.5	.5	1.5	4.0	2.5	3.5	13.0	12.0	12.5	18.5	16.5	17.5
2	---	---	---	5.0	3.5	4.0	13.0	12.5	12.5	19.5	17.0	17.5
3	---	---	---	5.0	4.5	4.5	12.5	12.5	12.5	18.0	17.0	17.5
4	---	---	---	6.0	5.0	5.5	12.5	12.0	12.5	18.5	17.0	18.0
5	---	---	---	6.5	6.0	6.5	13.5	12.0	12.5	19.5	17.0	18.0
6	---	---	---	7.5	6.5	7.0	12.5	11.0	12.0	19.0	17.5	18.0
7	.5	.0	.5	8.0	7.0	7.5	12.0	10.0	11.0	20.0	18.0	18.5
8	---	---	---	9.5	7.0	8.0	11.5	10.5	11.0	20.5	18.5	19.0
9	---	---	---	10.5	7.5	8.5	10.5	9.5	10.5	21.0	19.0	20.0
10	---	---	---	9.0	8.0	8.5	11.5	8.5	10.0	22.5	20.0	21.0
11	---	---	---	8.5	7.5	8.0	11.5	9.5	10.0	24.0	21.0	22.0
12	---	---	---	9.0	6.0	7.5	11.0	10.0	10.5	23.5	22.0	22.5
13	---	---	---	9.5	7.0	8.0	10.5	10.0	10.5	23.5	22.0	22.5
14	---	---	---	9.0	7.5	8.5	12.0	10.0	11.0	22.5	22.0	22.5
15	---	---	---	8.0	6.0	7.0	11.5	11.0	11.0	24.5	21.5	22.5
16	---	---	---	8.0	5.0	6.5	11.0	10.0	10.5	23.5	21.5	22.5
17	---	---	---	8.5	6.0	7.5	11.5	10.0	10.5	23.0	21.5	22.0
18	---	---	---	9.0	7.0	8.0	12.5	10.0	11.0	22.0	21.5	21.5
19	---	---	---	9.5	7.5	8.0	13.0	11.0	11.5	22.0	21.0	21.5
20	---	---	---	9.5	7.5	8.5	13.0	11.5	12.0	22.0	21.0	21.5
21	---	---	---	10.0	8.5	9.0	13.5	11.5	12.5	22.0	21.0	21.5
22	---	---	---	10.5	8.5	9.5	16.0	12.5	13.5	22.5	21.0	21.5
23	---	---	---	11.0	9.5	10.0	14.5	13.5	14.0	22.5	21.5	21.5
24	---	---	---	11.0	10.0	10.5	14.5	14.0	14.0	22.5	21.5	22.0
25	---	---	---	12.0	10.5	11.0	15.5	14.0	15.0	22.5	21.5	22.0
26	---	---	---	12.0	10.5	11.0	15.5	15.0	15.5	22.0	20.0	21.0
27	1.5	.5	.5	12.0	10.0	11.0	16.5	15.5	16.0	21.0	19.5	20.5
28	3.0	1.5	2.5	12.0	10.0	11.0	16.5	15.5	16.0	21.0	19.5	20.0
29	---	---	---	12.0	10.5	11.0	17.5	15.0	16.0	20.5	19.5	20.0
30	---	---	---	12.5	11.0	11.5	18.0	15.5	16.5	21.0	19.5	20.0
31	---	---	---	13.0	11.5	12.0	---	---	---	21.0	20.0	20.5
MONTH	3.0	.0	1.5	13.0	2.5	8.5	18.0	8.5	12.5	24.5	16.5	20.5
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	22.5	20.5	21.0	25.0	23.0	24.0	30.5	27.5	28.5	28.0	27.0	27.5
2	22.0	21.0	21.0	24.5	23.5	24.0	29.5	28.0	28.5	28.5	27.0	27.5
3	21.0	21.0	21.0	26.0	23.5	24.5	29.5	28.5	29.0	28.5	27.0	27.5
4	21.5	20.5	21.0	24.5	23.0	24.0	30.0	28.5	29.0	29.0	27.0	28.0
5	24.5	20.5	21.5	24.5	23.0	23.5	30.0	28.5	29.5	27.5	26.5	27.0
6	24.0	21.5	21.5	24.5	22.0	23.5	30.5	29.0	29.5	27.5	26.5	27.0
7	23.5	21.5	22.0	25.5	23.5	24.0	30.0	28.5	29.0	26.5	25.0	26.0
8	23.5	22.0	22.5	25.5	23.5	24.5	30.0	28.5	29.0	25.0	23.5	24.0
9	25.0	22.5	23.5	25.5	24.0	24.5	30.0	27.5	29.0	23.5	22.5	23.0
10	25.0	23.5	24.0	25.5	24.0	24.5	30.0	28.0	29.0	24.5	22.0	23.0
11	24.0	23.0	24.0	26.5	24.0	25.0	30.0	27.5	29.0	24.5	22.0	22.5
12	24.5	22.0	23.5	27.0	25.0	25.5	28.0	25.5	27.0	24.0	22.0	22.5
13	24.0	22.5	23.5	27.5	25.5	26.0	26.5	25.0	25.5	23.0	22.0	22.5
14	24.5	22.5	23.5	28.0	26.0	27.0	26.0	25.0	25.5	23.5	22.5	23.0
15	24.5	22.5	23.5	28.0	26.5	27.0	25.5	24.5	25.0	23.5	22.0	22.5
16	25.0	23.0	23.5	30.0	27.0	27.5	25.5	23.5	24.0	24.0	22.0	22.5
17	24.0	23.0	23.5	29.0	27.0	28.0	25.5	23.5	24.5	25.0	22.0	23.0
18	25.5	23.0	24.0	29.5	27.5	28.5	24.0	23.0	23.5	24.5	22.5	23.0
19	24.5	23.0	23.5	29.0	28.0	28.5	24.5	23.0	23.5	23.5	22.0	22.5
20	25.5	23.5	24.0	29.0	27.5	28.0	25.0	23.5	24.0	22.5	21.0	22.0
21	23.5	23.0	23.0	28.5	28.0	28.0	24.0	23.0	24.0	22.0	21.5	21.5
22	25.0	22.5	23.5	28.5	27.5	28.0	24.5	22.5	23.0	22.0	21.0	21.5
23	24.5	23.0	23.5	29.0	27.5	28.0	24.0	23.0	23.0	21.5	20.0	21.0
24	23.5	22.0	23.0	29.0	27.5	28.0	25.0	22.5	24.0	21.0	20.0	20.5
25	23.5	21.5	22.5	28.5	27.0	28.0	26.0	24.5	25.0	20.0	19.5	20.0
26	23.5	21.5	22.5	28.5	27.5	28.0	26.5	25.0	25.5	19.5	19.0	19.5
27	23.5	22.0	22.5	29.0	27.0	28.0	26.5	25.5	26.0	20.0	19.0	19.0
28	24.0	22.0	23.0	29.0	27.5	28.0	27.0	26.0	26.5	19.5	19.0	19.0
29	24.5	23.0	23.5	29.0	27.5	28.0	27.5	26.0	26.5	20.5	19.0	19.5
30	24.0	23.0	23.5	28.0	27.0	27.5	29.5	26.5	27.5	20.0	19.5	19.5
31	---	---	---	29.5	27.5	27.5	29.5	27.0	27.5	---	---	---
MONTH	25.5	20.5	23.0	30.0	22.0	26.5	30.5	22.5	26.5	29.0	19.5	23.0

POTOMAC RIVER BASIN

01655480 POTOMAC RIVER AT INDIAN HEAD, MD--Continued

DISSOLVED OXYGEN (DO), MG/L, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	10.5	7.9	8.8	12.5	9.6	10.7	---	---	---	12.1	11.6	11.9
2	10.7	7.7	9.0	12.3	9.5	10.5	---	---	---	12.9	11.8	12.3
3	10.7	7.5	8.9	11.5	9.3	10.2	---	---	---	13.3	12.7	13.0
4	9.6	7.5	8.2	9.9	9.0	9.5	---	---	---	12.8	12.4	12.6
5	8.2	7.1	7.6	10.8	8.4	9.4	---	---	---	12.8	12.3	12.4
6	8.8	6.5	7.7	10.1	8.6	9.2	---	---	---	13.1	12.4	12.7
7	8.4	6.4	7.5	10.0	8.0	8.9	8.6	---	---	13.3	12.5	12.9
8	8.7	6.7	7.7	9.3	7.9	8.6	9.3	7.7	8.1	13.5	12.9	13.3
9	9.7	6.6	8.0	9.5	7.8	8.5	9.5	8.1	8.8	13.5	13.1	13.3
10	10.0	7.0	8.1	9.2	7.5	8.3	10.8	9.5	10.0	13.2	13.0	13.1
11	---	6.9	---	8.8	6.9	7.8	---	9.8	---	13.1	13.0	13.0
12	11.3	---	---	8.8	6.5	7.5	---	---	---	13.0	12.8	12.9
13	10.7	8.0	9.1	8.3	6.5	7.3	---	---	---	12.9	12.8	12.9
14	9.0	8.4	8.7	9.2	6.8	7.6	11.7	10.2	11.0	13.0	12.7	12.8
15	11.1	8.7	9.8	7.4	6.2	6.8	11.4	10.9	11.1	13.3	13.0	13.2
16	11.0	9.2	9.9	7.6	5.9	6.9	11.3	11.0	11.2	---	---	---
17	11.0	9.0	9.7	7.9	7.1	7.5	12.9	---	11.8	13.3	13.1	13.2
18	10.9	9.1	9.8	8.2	6.8	7.5	12.0	11.6	11.8	13.7	13.2	13.4
19	10.7	8.9	9.5	7.8	6.8	7.3	11.8	11.5	11.6	---	---	---
20	11.2	8.8	9.9	8.2	6.7	7.4	12.1	11.6	11.9	---	---	---
21	11.0	9.3	10.2	8.6	6.7	7.7	11.9	11.5	11.7	---	---	---
22	11.0	9.1	9.9	9.2	7.7	8.3	11.8	11.3	11.5	---	---	---
23	10.9	8.7	9.7	9.1	8.3	8.7	12.1	11.6	11.8	13.5	13.1	13.2
24	12.4	9.4	10.0	9.5	8.1	8.7	12.0	---	---	13.8	13.2	13.5
25	11.6	9.3	10.0	10.1	8.4	9.3	---	---	---	14.1	13.4	13.7
26	11.4	9.0	9.9	10.7	9.2	9.9	12.0	---	---	13.6	13.3	13.4
27	12.2	9.1	10.4	10.3	9.7	10.0	12.1	11.4	11.8	13.6	13.4	13.5
28	12.6	9.7	10.8	10.0	8.7	9.3	12.2	11.7	12.0	13.7	13.3	13.5
29	12.3	9.5	10.9	9.8	7.0	8.9	12.4	11.9	12.0	13.7	13.3	13.4
30	12.3	9.8	10.7	---	---	---	12.1	11.8	11.9	13.4	13.1	13.3
31	13.4	9.6	11.0	---	---	---	12.0	11.6	11.8	13.2	13.0	13.1
MONTH	13.4	6.4	9.4	12.5	5.9	8.6	12.9	7.7	11.2	14.1	11.6	13.1

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	13.4	13.0	13.2	13.5	13.1	13.3	9.6	8.8	9.2	8.3	7.8	8.1
2	---	---	---	13.4	13.2	13.3	9.4	8.7	9.1	8.7	7.8	8.1
3	---	---	---	13.3	13.0	13.2	9.1	8.4	8.8	9.0	7.6	8.3
4	---	---	---	13.1	12.5	12.8	8.6	8.3	8.4	9.4	8.4	8.9
5	---	---	---	12.8	11.5	12.5	9.7	8.0	8.7	10.3	9.0	9.4
6	---	---	---	12.5	11.4	11.9	10.3	9.4	9.8	9.7	8.3	8.9
7	13.5	13.4	13.4	12.3	12.1	12.2	10.4	9.3	9.9	9.4	8.2	8.7
8	---	---	---	12.6	12.1	12.4	9.6	8.9	9.2	9.2	8.3	8.8
9	---	---	---	12.5	12.3	12.4	9.2	8.7	8.9	9.7	8.2	8.7
10	---	---	---	12.4	11.9	12.2	9.8	9.3	9.5	9.6	8.0	8.5
11	---	---	---	12.1	11.7	11.9	9.6	9.1	9.3	8.9	7.6	8.0
12	---	---	---	12.1	11.8	11.9	10.2	8.9	9.4	9.1	7.2	7.6
13	---	---	---	11.8	11.6	11.7	9.4	8.8	9.1	8.0	6.9	7.3
14	---	---	---	11.8	11.5	11.7	9.4	8.8	9.0	7.3	6.7	7.0
15	---	---	---	12.2	11.2	12.0	9.1	8.4	8.7	6.5	5.3	6.1
16	---	---	---	12.3	11.8	12.0	9.2	8.7	9.0	7.0	5.1	6.0
17	---	---	---	11.9	11.5	11.7	9.7	8.8	9.1	6.5	5.3	5.8
18	---	---	---	11.6	11.4	11.5	9.1	8.6	8.9	7.0	5.2	6.1
19	---	---	---	11.5	11.3	11.4	10.6	8.7	9.2	7.2	6.2	6.7
20	---	---	---	11.4	11.2	11.3	10.6	10.0	10.3	7.4	6.2	6.7
21	---	---	---	11.4	11.2	11.3	10.7	10.0	10.3	7.3	5.8	6.3
22	---	---	---	11.3	10.5	10.9	11.7	10.1	10.6	7.1	5.9	6.3
23	---	---	---	10.5	10.2	10.4	11.4	10.2	10.6	6.8	5.5	5.9
24	---	---	---	10.2	9.3	9.9	11.5	10.2	10.7	6.7	5.6	6.0
25	---	---	---	9.6	9.3	9.4	11.0	10.2	10.5	7.7	5.9	6.4
26	---	---	---	9.7	9.1	9.4	10.3	9.6	9.9	8.1	6.3	7.0
27	13.4	13.0	13.2	9.5	8.9	9.2	9.7	9.1	9.3	7.8	6.3	7.0
28	13.5	13.0	13.1	9.3	8.8	9.0	9.0	8.6	8.8	7.7	7.0	7.3
29	---	---	---	9.9	9.1	9.4	8.7	7.5	8.2	7.5	6.8	7.1
30	---	---	---	9.9	9.6	9.7	8.2	7.0	7.5	8.1	7.1	7.6
31	---	---	---	9.9	9.3	9.5	---	---	---	8.1	7.4	7.7
MONTH	13.5	13.0	13.2	13.5	8.8	11.3	11.7	7.0	9.3	10.3	5.1	7.4

POTOMAC RIVER BASIN

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01655480 POTOMAC RIVER AT INDIAN HEAD, MD--Continued

DISSOLVED OXYGEN (DO), MG/L, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	8.2	6.6	7.4	10.5	8.0	9.0	11.5	3.4	5.3	9.3	5.5	6.8
2	8.3	6.6	7.2	9.9	7.7	8.9	6.8	3.9	5.2	9.5	5.5	7.0
3	7.4	6.7	6.9	11.2	7.7	9.4	10.2	4.8	6.7	10.8	5.7	7.4
4	7.3	6.7	7.0	9.8	8.0	8.7	10.0	5.0	7.1	11.1	5.2	7.4
5	8.0	6.6	7.1	10.5	7.7	9.0	9.1	5.2	7.0	7.1	5.2	6.3
6	7.7	6.6	6.9	10.9	8.2	9.3	10.4	5.0	7.0	7.7	5.4	6.1
7	7.2	6.3	6.8	11.7	8.6	9.6	10.2	5.2	6.7	5.6	4.8	5.1
8	7.8	6.4	7.1	11.3	8.3	9.6	9.3	5.5	6.7	6.8	5.2	6.1
9	8.6	6.7	7.3	10.3	8.3	9.3	9.5	5.7	6.9	7.3	6.7	7.0
10	8.5	6.6	7.5	9.9	7.9	8.8	8.5	5.0	6.7	7.3	6.5	6.8
11	8.0	7.0	7.5	9.5	7.3	8.3	8.1	5.5	6.6	---	---	---
12	8.9	7.4	8.0	9.3	7.0	8.0	6.7	5.9	6.4	---	---	---
13	8.8	7.2	8.0	9.5	7.4	8.1	8.9	5.9	7.3	---	---	---
14	10.1	7.5	8.5	10.1	7.3	8.5	9.5	6.1	7.3	---	---	---
15	12.2	8.0	9.5	9.6	7.5	8.2	10.1	6.7	8.2	---	---	---
16	12.4	8.2	9.3	11.9	6.9	7.9	11.4	6.9	8.9	---	---	---
17	9.9	8.1	8.7	12.1	7.1	8.4	14.8	8.0	9.7	---	---	---
18	10.7	8.2	9.1	13.0	6.5	8.8	9.2	7.3	8.3	---	---	---
19	10.5	8.0	9.2	11.7	6.6	8.2	8.9	6.8	7.4	---	---	---
20	10.6	7.6	8.8	10.1	6.3	7.4	10.4	6.9	7.8	---	---	---
21	8.8	7.3	7.9	9.2	5.2	6.9	8.2	6.6	7.3	---	---	---
22	8.9	6.4	7.5	10.0	5.1	6.6	9.2	6.6	7.5	---	---	---
23	9.7	7.0	8.1	8.3	4.9	6.3	7.9	6.3	7.0	---	---	---
24	8.3	7.1	7.6	10.0	4.9	6.7	7.5	6.1	6.6	---	---	---
25	9.9	6.9	8.2	8.4	4.4	6.0	9.2	6.3	7.7	---	---	---
26	10.1	7.5	8.7	7.8	4.1	5.4	8.9	6.7	7.6	---	---	---
27	11.3	8.2	9.5	7.5	4.3	5.6	8.5	6.4	7.3	---	---	---
28	10.2	8.1	9.0	8.7	3.9	5.6	10.3	6.6	7.8	---	---	---
29	10.3	8.5	9.2	7.5	4.3	5.3	8.3	5.6	6.9	---	---	---
30	10.1	8.1	8.8	6.2	4.8	5.4	11.8	4.7	7.3	---	---	---
31	---	---	---	8.2	3.9	4.9	13.9	5.3	7.3	---	---	---
MONTH	12.4	6.3	8.1	13.0	3.9	7.7	14.8	3.4	7.2	11.1	4.8	6.6

POTOMAC RIVER BASIN

01661050 ST. CLEMENT CREEK NEAR CLEMENTS, MD

LOCATION.--Lat 38°20'00", long 76°43'31", St. Marys County, Hydrologic Unit 02070011, on left bank 60 ft (18 m) downstream from bridge on State Highway 242, 0.5 mi (0.8 km) north of Clements, 2.3 mi (3.7 km) upstream from mouth, and 5.7 mi (9.2 km) northwest of Leonardtown.

DRAINAGE AREA.--18.5 mi² (47.9 km²).

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

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Altitude of gage is 8 ft (2.4 m), from topographic map.

REMARKS.--Records good. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--11 years, 22.5 ft³/s (0.637 m³/s), 16.52 in/yr (420 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,500 ft³/s (127 m³/s) Sept. 6, 1979, from rating curve extended above 480 ft³/s (13.6 m³/s) on basis of contracted-opening and flow-over-road measurement of peak flow; maximum gage height, 6.96 ft (2.121 m) Sept. 6, 1979 (backwater from tide); maximum gage height unaffected by backwater, 6.55 ft (1.996 m) June 22, 1972; no flow for part of Sept. 6, Oct. 1, 2, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 220 ft³/s (6.2 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 8	1730	222 6.29	3.55 1.082	July 30	0930	373 10.6	4.44 1.353
Feb. 25	0330	2100 59.5	5.95 1.814	Aug. 3	0600	501 14.2	4.86 1.481
Feb. 26	0600	915 25.9	5.34 1.628	Sept. 6	0300	*4500 127	6.96 2.121

a Backwater from tide.

Minimum discharge, 2.6 ft³/s (0.074 m³/s) Oct. 1, gage height, 1.01 ft (0.308 m).

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	2.9	4.6	15	18	21	75	26	18	93	98	21	12
2	3.2	4.5	10	78	18	64	26	16	29	22	28	11
3	3.1	4.3	9.3	100	17	52	39	16	21	12	286	12
4	4.6	4.7	13	24	17	46	62	18	44	9.5	53	12
5	10	9.1	50	19	16	58	54	27	45	12	22	138
6	7.9	7.9	25	20	13	90	33	18	24	8.9	16	1310
7	5.5	5.9	14	40	13	59	27	17	19	7.4	13	81
8	4.0	5.7	12	183	15	44	26	16	15	6.5	12	60
9	3.3	5.7	61	66	15	39	31	15	14	5.9	19	33
10	3.2	5.4	69	28	13	37	35	14	12	5.4	12	27
11	3.3	7.0	21	24	12	64	25	13	31	5.3	29	24
12	3.7	7.8	16	20	12	50	24	13	22	5.3	167	22
13	3.4	6.8	14	26	13	37	25	15	13	4.9	64	20
14	3.2	6.5	13	36	12	37	31	18	11	4.9	24	21
15	3.0	6.4	11	22	13	36	27	15	9.8	6.3	17	23
16	2.8	7.6	11	19	13	31	25	13	8.9	5.6	14	18
17	3.2	13	11	18	12	30	23	12	13	8.3	13	16
18	3.8	16	10	18	11	30	22	11	14	21	12	16
19	3.6	12	9.7	13	11	29	22	21	9.9	17	15	15
20	3.8	8.2	10	25	15	28	21	15	8.9	8.7	13	14
21	3.6	7.6	20	167	16	28	20	13	8.2	31	49	16
22	3.4	7.3	14	103	28	26	20	13	9.1	22	48	135
23	3.4	7.3	11	39	40	26	20	12	11	11	18	50
24	3.4	10	18	116	116	62	20	48	9.0	17	15	26
25	3.5	9.2	58	93	1090	49	20	119	9.0	11	17	22
26	3.6	7.4	23	38	575	34	22	26	7.9	8.3	14	23
27	3.7	12	17	30	161	30	32	18	7.0	7.1	28	21
28	4.0	20	13	33	93	28	25	22	6.8	6.8	79	20
29	4.0	12	10	32	---	28	20	28	6.2	41	23	22
30	4.0	25	11	25	---	27	19	16	7.9	273	17	35
31	4.0	---	16	23	---	26	---	42	---	69	14	---
TOTAL	122.1	266.9	616.0	1496	2401	1304	822	678	539.6	772.1	1172	2255
MEAN	3.94	8.90	19.9	48.3	85.8	42.1	27.4	21.9	18.0	24.9	37.8	75.2
MAX	10	25	69	183	1090	90	62	119	93	273	286	1310
MIN	2.8	4.3	9.3	13	11	26	19	11	6.2	4.9	12	11
CFSM	.21	.48	1.08	2.61	4.64	2.28	1.48	1.18	.97	1.35	2.04	4.07
IN.	.25	.54	1.24	3.01	4.83	2.62	1.65	1.36	1.08	1.55	2.36	4.53

CAL YR 1978 TOTAL 11225.6 MEAN 30.8 MAX 360 MIN 2.6 CFSM 1.67 IN 22.57
WTR YR 1979 TOTAL 12444.7 MEAN 34.1 MAX 1310 MIN 2.8 CFSM 1.84 IN 25.02

01661500 ST. MARYS RIVER AT GREAT MILLS, MD

LOCATION.--Lat 38°14'36", long 76°30'13", St. Marys County, Hydrologic Unit 02070011, on left bank at downstream side of bridge on State Highway 471 in Great Mills, 0.3 mi (0.5 km) downstream from Western Branch, and 12.0 mi (19.3 km) upstream from mouth.

DRAINAGE AREA.--24.0 mi² (62.2 km²).

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

REVISED RECORDS.--WSP 1702: 1946, 1948-49, 1955, 1957-58.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 10 ft (3 m), from topographic map.

REMARKS.--Records excellent. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--33 years, 23.9 ft³/s (0.677 m³/s), 13.52 in/yr (343 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,950 ft³/s (225 m³/s) Aug. 20, 1969, gage height, 13.34 ft (4.066 m), from rating curve extended above 1,500 ft³/s (42.5 m³/s) on basis of contracted-opening measurement at gage height 12.08 ft (3.682 m); minimum, 0.2 ft³/s (0.006 m³/s) Sept. 7, 1966, gage height, 1.13 ft (0.344 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges 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. 25	0300	*3160 89.5	10.97 3.344	July 29	2130	463 13.1	4.96 1.512
Feb. 26	0630	1090 30.9	8.22 2.506	Aug. 3	0800	557 15.8	5.59 1.704
June 4	1300	428 12.1	4.72 1.439	Sept. 6	0430	2610 73.9	10.51 3.204
July 24	2330	444 12.6	4.83 1.472				

Minimum discharge, 3.1 ft³/s (0.088 m³/s) Oct. 1, gage height 1.34 ft (0.408 m)

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	3.3	4.6	14	13	23	130	16	12	91	22	49	16
2	4.5	4.7	11	68	20	120	15	11	48	21	29	25
3	4.0	4.7	9.4	111	18	90	23	10	31	11	377	18
4	4.6	5.5	10	43	18	80	40	12	267	9.9	143	17
5	5.8	7.5	46	29	17	100	40	14	148	11	51	216
6	5.6	6.6	24	25	13	250	24	11	71	8.4	30	1280
7	4.6	6.0	16	38	14	223	19	9.8	43	7.4	21	288
8	4.0	5.9	13	104	16	135	17	9.2	29	6.5	17	235
9	3.7	5.7	41	71	16	86	22	8.6	22	5.8	19	212
10	3.7	5.7	59	42	14	62	25	8.3	18	5.6	14	198
11	3.7	7.6	26	31	13	81	18	8.2	22	5.7	42	94
12	3.7	7.4	19	25	13	68	17	8.1	18	5.5	290	51
13	3.7	6.8	16	29	14	52	16	17	14	5.6	183	35
14	3.5	6.4	14	35	13	45	22	29	12	5.8	81	31
15	3.5	6.5	12	27	14	33	18	14	11	5.5	44	29
16	3.4	7.4	11	22	14	20	16	10	10	5.1	28	21
17	4.4	10	11	19	13	19	14	8.3	11	5.0	21	18
18	4.2	11	9.7	18	11	18	14	9.1	11	5.3	18	16
19	4.2	9.1	9.2	15	11	18	13	18	9.6	5.3	18	15
20	4.4	7.7	9.6	23	16	18	13	12	8.8	5.2	16	14
21	4.1	7.2	18	206	17	17	12	9.9	8.3	22	59	15
22	4.1	7.1	13	193	29	17	12	9.2	9.8	21	54	181
23	4.1	6.8	11	108	48	16	13	9.9	9.3	12	34	100
24	4.5	8.2	17	163	282	43	12	76	8.8	59	25	54
25	4.5	7.4	38	171	1320	34	12	192	9.4	99	20	46
26	4.5	6.8	21	91	708	38	19	34	7.9	26	30	41
27	4.3	12	16	58	300	24	26	20	7.3	17	23	30
28	4.4	14	13	48	200	20	18	18	7.0	13	45	25
29	4.4	12	12	39	---	18	14	21	6.7	88	34	25
30	4.4	22	11	31	---	17	13	16	7.2	267	28	28
31	4.6	---	12	26	---	16	---	34	---	147	20	---
TOTAL	130.4	240.3	562.9	1922	3205	1908	553	679.6	977.1	933.6	1863	3374
MEAN	4.21	8.01	18.2	62.0	114	61.5	18.4	21.9	32.6	30.1	60.1	112
MAX	5.8	22	59	206	1320	250	40	192	267	267	377	1280
MIN	3.3	4.6	9.2	13	11	16	12	8.1	6.7	5.0	14	14
CFSM	.18	.33	.76	2.58	4.75	2.56	.77	.91	1.36	1.25	2.50	4.67
IN.	.20	.37	.87	2.98	4.97	2.96	.86	1.05	1.51	1.45	2.89	5.23

CAL YR 1978 TOTAL 12879.7 MEAN 35.3 MAX 494 MIN 3.0 CFSM 1.47 IN 19.96
WTR YR 1979 TOTAL 16348.9 MEAN 44.8 MAX 1320 MIN 3.3 CFSM 1.87 IN 25.34

OHIO RIVER BASIN

MONONGAHELA RIVER BASIN

03075500 YOUGHIOGHENY RIVER NEAR OAKLAND, MD

LOCATION.--Lat 39°25'19", long 79°25'32", Garrett County, Hydrologic Unit 05020006, on left bank 200 ft (61 m) downstream from Baltimore and Ohio Railroad bridge, 250 ft (76 m) downstream from Little Youghiogheny River, 1.2 mi (1.9 km) northwest of Oakland, and 1.5 mi (2.4 km) upstream from Dunkard Lick Run.

DRAINAGE AREA.--134 mi² (347 km²).

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

REVISED RECORDS.--WSP 1113: 1947(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 2,353.61 ft (717.380 m) National Geodetic Vertical Datum of 1929. Prior to Aug. 1, 1946, nonrecording gage at bridge 200 ft (61 m) upstream at same datum.

REMARKS.--Records good. Town of Oakland diverted an average of 0.4 ft³/s (0.011 m³/s) for water supply. The diversion is returned above station as sewage. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--38 years, 295 ft³/s (8.354 m³/s), 29.90 in/yr (759 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,800 ft³/s (334 m³/s) Oct. 16, 1954, gage height, 12.16 ft (3.706 m); minimum daily, 2.5 ft³/s (0.071 m³/s) Oct. 4, 1953.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1936 reached a stage of 15.3 ft (4.66 m), from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (56 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. 4	1545	2600 73.6	5.99 1.826	Jan. 21	0815	2180 61.7	5.55 1.692
Dec. 9	1430	3090 87.5	6.45 1.966	Feb. 25	0245	4100 116	7.32 2.231
Dec. 21	1215	3450 97.7	6.77 2.063	Mar. 5	1130	*4450 126	7.60 2.316

Minimum discharge, 22 ft³/s (0.62 m³/s) Oct. 12, 13, gage height 1.97 ft (0.600 m).

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	27	68	471	1040	180	691	278	310	296	112	86	79
2	28	64	374	1590	170	933	720	261	250	113	72	70
3	27	56	416	1100	171	1300	624	242	223	94	64	133
4	31	54	2130	719	155	2390	612	377	287	262	56	104
5	39	50	1570	555	141	4080	649	458	209	407	48	79
6	28	48	785	446	130	2580	539	395	167	173	42	443
7	27	46	539	499	128	1480	444	349	143	116	39	360
8	28	50	1100	1320	126	1060	406	301	137	87	44	234
9	30	48	2730	783	114	854	464	258	125	75	62	180
10	27	44	1770	601	107	833	577	227	104	79	46	145
11	24	41	872	448	100	937	523	486	113	85	91	119
12	23	39	622	399	96	675	452	394	104	70	280	100
13	24	41	482	344	92	545	409	983	84	59	259	86
14	34	42	410	340	88	706	370	586	75	68	139	91
15	46	66	342	335	88	678	337	427	70	72	126	133
16	41	698	291	345	500	520	350	355	66	64	100	88
17	77	535	330	635	350	457	347	285	64	52	79	70
18	57	430	266	878	250	420	307	240	75	46	82	64
19	39	313	239	561	220	387	278	211	66	44	138	99
20	37	239	407	497	200	357	247	185	56	39	104	81
21	32	194	2860	1850	300	324	219	168	52	64	88	107
22	30	163	1490	1090	1000	291	201	164	52	142	112	778
23	28	144	758	652	1600	271	365	152	52	83	85	437
24	31	218	576	500	3400	310	306	345	66	68	81	298
25	36	183	845	435	3680	475	263	1190	54	59	136	227
26	41	149	600	385	2600	371	263	912	46	62	106	182
27	426	317	476	370	1340	319	568	662	39	70	131	149
28	214	1350	395	321	837	279	520	559	36	68	130	201
29	128	931	365	272	---	257	444	450	56	131	136	287
30	94	639	328	256	---	228	373	373	105	195	105	222
31	76	---	433	225	---	212	---	316	---	118	89	---
TOTAL	1830	7260	25272	19791	18163	25220	12455	12621	3272	3177	3156	5646
MEAN	59.0	242	815	638	649	814	415	407	109	102	102	188
MAX	426	1350	2860	1850	3680	4080	720	1190	296	407	280	778
MIN	23	39	239	225	88	212	201	152	36	39	39	64
CFSM	.44	1.81	6.08	4.76	4.84	6.08	3.10	3.04	.81	.76	.76	1.40
IN.	.51	2.02	7.02	5.49	5.04	7.00	3.46	3.50	.91	.88	.88	1.57
CAL YR 1978	TOTAL	138015	MEAN 378	MAX 4760	MIN 23	CFSM 2.82	IN 38.31					
WTR YR 1979	TOTAL	137863	MEAN 378	MAX 4080	MIN 23	CFSM 2.82	IN 38.27					

MONONGAHELA RIVER BASIN

281

03076000 DEEP CREEK RESERVOIR NEAR OAKLAND, MD

LOCATION.--Lat 39°30'34", long 79°23'28", Garrett County, Hydrologic Unit 05020006, on Deep Creek at dam, 1.8 mi (2.9 km) upstream from mouth and 7.0 mi (11.3 km) north of Oakland.

DRAINAGE AREA.--64.7 mi² (167.6 km²).

PERIOD OF RECORD.--July 1925 to current year. Prior to October 1950, monthend contents published in WSP 1305, and October 1950 to September 1955, monthend contents published in WSP 1385.

GAGE.--Water-stage recorder at right end of spillway. Datum of gage is at mean sea level, unadjusted.

REMARKS.--Reservoir is formed by an earthfill dam completed January 1925, with storage beginning at that time. Usable capacity, 92,975 acre-ft (115 hm³) between elevations 2,425 ft (739.1 m), top of intake to outlet tunnel, and 2,462 ft (750.4 m), crest of spillway. Dead storage, 13,085 acre-ft (16.1 hm³). Figures given herein represent usable contents. Reservoir is used for hydroelectric power.

COOPERATION.--Elevations and capacity table furnished by Pennsylvania Electric Co.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 93,258 acre-ft (115 hm³) July 24, 25, 1949, elevation, 2,462.075 ft (750.440 m); minimum observed, 11,763 acre-ft (14.5 hm³) Sept. 30, 1925, elevation, 2,433.45 ft (741.716 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 89,300 acre-ft (110 hm³) Mar. 12, elevation, 2,461.00 ft (750.113 m); minimum, 67,700 acre-ft (83.5 hm³) Nov. 30, elevation, 2,455.00 ft (748.284 m).

MONTHEND ELEVATION AND CONTENTS, AT 2400, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	2457.0	74700	
Oct. 31	2455.6	69800	-4900
Nov. 30	2455.0	67700	-2100
Dec. 31	2457.9	77900	+10200
CAL YR 1978			-4000
Jan. 31	2458.6	80400	+2500
Feb. 28	2459.0	81900	+1500
Mar. 31	2459.6	84100	+2200
Apr. 30	2458.2	78900	-5200
May 31	2458.9	81500	+2600
June 30	2458.0	78200	-3300
July 31	2457.5	76400	-1800
Aug. 31	2456.3	72200	-4200
Sept. 30	2455.8	70500	-1700
WTR YR 1979			-4200

MONONGAHELA RIVER BASIN

03076500 YOUGHIOGHENY RIVER AT FRIENDSVILLE, MD

LOCATION.--Lat 39°39'13", long 79°24'31", Garrett County, Hydrologic Unit 05020006, on left bank 0.7 mi (1.1 km) upstream from bridge on State Highway 42 at Friendsville, and 1.5 mi (2.4 km) upstream from Bear Creek.

DRAINAGE AREA.--295 mi² (764 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1898 to December 1904 and October 1940 to current year. October, November 1940 monthly discharge only, published in WSP 1305. September 1922 to September 1926 (gage heights only) in reports of Pennsylvania Department of Forests and Waters.

REVISED RECORDS.--WSP 1385: Drainage area at former site, 1898-1905, 1941(M), 1942, 1944-45, 1948-49, 1951(M).

GAGE.--Water-stage recorder. Datum of gage is 1,487.33 ft (453.338 m) National Geodetic Vertical Datum of 1929. Aug. 17, 1898, to Dec. 31, 1904, and Sept. 1, 1922, to Sept. 30, 1926, nonrecording gages at bridge 0.7 mi (1.1 km) downstream at datum 16.24 ft (4.950 m) and 16.29 ft (4.965 m) lower, respectively.

REMARKS.--Records good except those for winter periods which are fair. Low and medium flow regulated since July 1925 by Deep Creek Reservoir (see station 03076000). Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--45 years (water years 1899-1904, 1941-79), 642 ft³/s (18.18 m³/s), 29.55 in/yr (751 mm/yr), adjusted for storage since October 1940.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,000 ft³/s (368 m³/s) Oct. 16, 1954, gage height, 8.99 ft (2.740 m), from rating curve extended above 5,800 ft³/s (164 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 8.2 ft³/s (0.23 m³/s) Sept. 11, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1898, 14.2 ft (4.33 m) Mar. 29, 1924, from floodmarks, site and datum then in use or 10.2 ft (3.11 m), present site and datum; discharge, about 15,600 ft³/s (440 m³/s), from rating curve extended as explained above.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,300 ft³/s (207 m³/s) Mar. 5, gage height, 6.88 ft (2.097 m); minimum, 48 ft³/s (1.36 m³/s) Oct. 12, 13, gage height, 1.97 ft (0.600 m).

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	60	232	965	1660	570	1520	650	698	629	168	276	177
2	176	230	674	3170	678	1790	1560	618	453	266	257	156
3	181	216	779	2490	400	2090	1400	567	398	284	219	199
4	185	151	3820	1680	336	3990	1350	897	572	212	151	339
5	70	113	3100	1310	490	6820	1410	903	459	782	95	272
6	111	119	1620	768	361	5250	1240	754	404	383	191	644
7	107	254	1120	870	323	3400	862	814	389	198	176	747
8	65	197	2160	2310	400	2730	688	714	351	163	180	404
9	168	196	5000	1600	414	2400	952	624	247	176	240	315
10	156	190	3310	1200	165	2070	1370	577	226	256	229	355
11	152	131	1870	966	120	2000	1260	903	314	228	127	313
12	117	96	1290	841	100	1740	1120	681	303	216	400	284
13	145	158	1080	606	198	1760	819	1360	275	202	607	265
14	115	188	911	738	212	2020	741	1100	251	103	360	285
15	91	219	767	1010	181	2070	613	814	235	111	322	233
16	181	983	496	865	777	1660	903	589	130	206	298	200
17	185	974	545	939	900	1240	940	521	120	192	243	244
18	231	797	665	1710	600	918	863	550	218	180	168	180
19	156	575	605	2770	600	1100	809	361	232	174	262	251
20	170	537	726	840	700	1010	772	324	207	163	310	285
21	138	435	4690	2140	1000	964	444	390	193	81	274	299
22	81	451	3040	1980	1300	906	371	396	198	299	271	1130
23	110	304	1410	1230	1940	862	734	397	104	289	272	759
24	153	465	1020	1010	3960	579	787	700	106	237	276	580
25	160	395	1320	999	4830	840	720	2380	207	194	254	518
26	177	317	1240	873	4230	929	705	1740	188	206	241	447
27	729	433	1130	588	2420	798	1080	1290	178	209	408	338
28	529	2060	950	496	1500	727	858	1300	173	122	397	534
29	276	1770	751	614	---	737	688	1070	178	296	364	628
30	276	1190	503	596	---	614	741	832	137	490	341	514
31	262	---	615	596	---	512	---	692	---	351	298	---
TOTAL	5713	14376	48172	39465	29705	56046	27450	25556	8075	7437	8507	11895
MEAN	184	479	1554	1273	1061	1808	915	824	269	240	274	397
MAX	729	2060	5000	3170	4830	6820	1560	2380	629	782	607	1130
MIN	60	96	496	496	100	512	371	324	104	81	95	156
(*)	-79.7	-35.3	+166	+40.6	+27.0	+35.8	-87.2	+42.3	-55.5	-29.3	-68.1	-28.6
MEAN*	1.04	444	1720	1314	1088	1844	828	866	214	211	206	368
CFSM*	0.35	1.51	5.83	4.45	3.69	6.25	2.81	2.94	0.73	0.72	0.70	1.25
IN*	0.40	1.68	6.72	5.13	3.84	7.21	3.14	3.39	0.81	0.83	0.81	1.40

CAL YR 1978 TOTAL 281838 MEAN 772 MAX 6110 MIN 60 MEAN* 766 CFSM* 2.60 IN* 35.28
WTR YR 1979 TOTAL 282397 MEAN 774 MAX 6820 MIN 60 MEAN* 768 CFSM* 2.60 IN* 35.33

* Change in contents, equivalent in cubic feet per second, in Deep Creek Reservoir furnished by Pennsylvania Electric Co.

* Adjusted for change in contents.

03076500 YOUGHIOGHENY RIVER AT FRIENDSVILLE, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1979.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHO'S)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)
APR 18...	1300	873	75	7.0	9.0	8.0	11.3
MAY 30...	0945	680	65	7.7	17.0	12.5	--
JUN 20...	1140	103	77	7.9	24.0	19.2	--
JUL 27...	1530	118	77	7.7	25.0	21.0	9.0
AUG 20...	1030	221	83	7.3	25.5	18.5	9.4
SEP 25...	0900	407	77	7.8	11.0	14.5	9.6

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	SODIUM+ POTAS- SIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
APR 18...	--	--	--	--	--	--	--	--	--	--	--
MAY 30...	20	5	.0	.0	6.0	1.3	1.6	14	.2	2.3	.7
JUN 20...	26	23	.0	.0	7.3	1.8	1.9	13	.2	2.8	.9
JUL 27...	26	19	.0	.0	7.6	1.7	1.9	13	.2	2.9	1.0
AUG 20...	32	20	.0	.0	9.7	1.8	2.9	16	.2	4.2	1.3
SEP 25...	25	17	.0	.0	7.4	1.5	1.8	13	.2	2.9	1.1

DATE	ALKA- LITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
APR 18...	--	--	12	--	--	--	--	--	--	--	--
MAY 30...	11	.6	13	2.5	.0	4.0	--	41	.06	75.3	.60
JUN 20...	3	.1	22	2.8	.1	2.3	48	43	.07	13.3	.50
JUL 27...	7	.3	20	3.2	.0	1.6	44	43	.06	14.0	.47
AUG 20...	12	1.2	16	4.4	.0	3.2	56	47	.08	33.4	--
SEP 25...	8	.2	15	2.7	.1	3.3	49	40	.07	53.8	.51

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC IN BOT- TOM MA- TERIAL (UG/G AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (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, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)
AUG 20...	1	0	0	1	<10	10	10	10	4	10

MONONGAHELA RIVER BASIN

03076500 YOUGHIOGHENY RIVER AT FRIENDSVILLE, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOVERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)
APR 18...	380	330	50	--	--	--	70	10	60	--
MAY 30...	620	570	50	--	--	--	70	30	40	--
JUN 20...	140	130	10	--	--	--	30	10	20	--
JUL 27...	280	230	50	--	--	--	20	10	10	--
AUG 20...	500	270	230	33000	6	20	50	40	10	1000
SEP 25...	690	570	120	--	--	--	30	10	20	--

DATE	MERCURY TOTAL RECOVER- ABLE (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	SILVER, TOTAL RECOVER- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOVER- ERABLE (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)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 30...	--	--	--	--	--	--	--	9	17	--
JUN 20...	--	--	--	--	--	--	--	2	.56	100
JUL 27...	--	--	--	--	--	--	--	36	11	59
AUG 20...	<.5	.00	0	0	0	10	120	17	10	--
SEP 25...	--	--	--	--	--	--	--	24	26	--

03076600 BEAR CREEK AT FRIENDSVILLE, MD

LOCATION.--Lat 39°39'22", long 79°23'41", Garrett County, Hydrologic Unit 05020006, on right bank 0.2 mi (0.3 km) downstream from bridge on Accident-Friendsville Road, 0.6 mi (1.0 km) downstream from South Branch Bear Creek, 0.8 mi (1.3 km) southeast of Friendsville, and 1.2 mi (1.9 km) upstream from mouth.

DRAINAGE AREA.--48.9 mi² (126.7 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 1,551.34 ft (472.848 m) National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--15 years, 87.0 ft³/s (2.464 m³/s), 24.16 in/yr (614 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,650 ft³/s (132 m³/s) Sept. 14, 1971, gage height, 9.6 ft (2.93 m), from floodmarks, from rating curve extended above 2,000 ft³/s (56.6 m³/s) on basis of slope-area measurement of peak flow; minimum, 1.5 ft³/s (0.042 m³/s) Sept. 12, 1966, gage height, 0.42 ft (0.128 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 600 ft³/s (17 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 4	0930	1140 32.3	4.19 1.277	Feb. 21	1845	1250 35.4	4.37 1.332
Dec. 8	1730	1600 45.3	4.94 1.506	Feb. 24	1830	1800 51.0	5.26 1.603
Dec. 21	0315	914 25.9	3.82 1.164	Mar. 5	0645	*1870 53.0	5.37 1.637

a Ice jam.

Minimum discharge, 10 ft³/s (0.28 m³/s) Oct. 26, gage height, 0.95 ft (0.290 m).

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	15	23	109	345	45	229	114	54	92	36	47	33
2	16	21	90	506	44	302	351	51	76	35	39	31
3	14	20	198	335	44	438	298	59	69	30	32	42
4	17	18	739	239	42	1190	256	102	63	76	28	31
5	14	18	448	152	39	1570	200	152	52	110	24	29
6	14	17	284	125	37	741	145	136	46	43	21	113
7	14	16	170	184	36	428	115	112	42	31	20	87
8	14	17	537	355	35	345	102	93	43	26	19	69
9	13	15	799	220	34	309	121	79	36	21	25	56
10	12	14	451	170	31	304	125	70	33	23	20	48
11	11	14	291	130	29	305	122	64	36	24	31	42
12	12	14	197	110	27	255	120	63	31	20	96	38
13	12	14	138	100	26	184	108	74	27	18	76	34
14	20	14	111	95	25	219	98	59	25	30	54	37
15	17	21	88	90	24	192	98	53	23	27	50	35
16	16	85	77	88	94	147	106	48	22	46	40	28
17	20	69	76	86	84	126	111	44	22	30	35	25
18	14	105	65	130	70	115	111	41	30	25	38	22
19	14	87	59	115	60	106	103	39	22	22	36	24
20	13	71	138	103	55	102	90	37	18	20	33	21
21	12	59	668	170	120	97	81	38	18	20	36	36
22	11	51	370	114	360	90	72	35	20	23	32	108
23	11	48	248	88	600	87	65	35	18	18	31	87
24	12	55	190	96	1080	123	59	90	16	17	33	69
25	11	47	244	96	1090	205	54	228	16	15	40	56
26	16	44	162	80	791	154	54	162	14	21	34	48
27	69	51	132	75	353	126	75	152	12	24	65	42
28	40	220	105	71	272	104	64	292	14	18	51	62
29	32	194	90	62	---	90	60	244	20	76	48	84
30	28	139	80	53	---	80	57	152	33	96	42	70
31	25	---	138	49	---	79	---	113	---	62	37	---
TOTAL	559	1581	7492	4632	5547	8842	3535	2971	989	1083	1213	1507
MEAN	18.0	52.7	242	149	198	285	118	95.8	33.0	34.9	39.1	50.2
MAX	69	220	799	506	1090	1570	351	292	92	110	96	113
MIN	11	14	59	49	24	79	54	35	12	15	19	21
CFSM	.37	1.08	4.95	3.05	4.05	5.83	2.41	1.96	.68	.71	.80	1.03
IN.	.43	1.20	5.70	3.52	4.22	6.73	2.69	2.26	.75	.82	.92	1.15

CAL YR 1978 TOTAL 44081 MEAN 121 MAX 843 MIN 11 CFSM 2.47 IN 33.53
WTR YR 1979 TOTAL 39951 MEAN 109 MAX 1570 MIN 11 CFSM 2.23 IN 30.39

MONONGAHELA RIVER BASIN

03076600 BEAR CREEK AT FRIENDSVILLE, MD--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--August to September 1979.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
APR 18...	1215	113	95	6.9	9.0	7.0	11.3	--	--	11
AUG 20...	0845	32	115	7.3	19.5	16.0	9.7	.0	.0	9.6

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G 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)
APR 18...	--	--	--	--	--	--	--	150	150	0
AUG 20...	78	.11	0	<10	<10	10	10	310	280	30

DATE	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G 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)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)
APR 18...	--	--	20	10	10	--	--	--	--
AUG 20...	26000	10	30	30	0	620	.00	0	80

03078000 CASSELMAN RIVER AT GRANTSVILLE, MD

LOCATION.--Lat 39°42'08", long 79°08'12", Garrett County, Hydrologic Unit 05020006, on left bank at downstream side of highway bridge, 0.3 mi (0.5 km) upstream from Slaubaugh Run, 0.7 mi (1.1 km) downstream from U.S. Highway 40, and 1.0 mi (1.6 km) northeast of Grantsville.

DRAINAGE AREA.--62.5 mi² (161.9 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1947 to current year.

REVISED RECORDS.--WSP 1143: 1948.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 2,088.97 ft (636.718 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good except those for winter periods, which are fair.

AVERAGE DISCHARGE.--32 years, 119 ft³/s (3.370 m³/s), 25.86 in/yr (657 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,400 ft³/s (238 m³/s) Oct. 15, 1954, gage height, 10.70 ft (3.261 m), from rating curve extended above 1,600 ft³/s (73.6 m³/s) on basis of contracted-opening measurement at gage height 8.13 ft (2.478 m); no flow Aug. 31, 1962, result of regulation from unknown source.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28 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. 4	1200	1190 33.7	3.93 1.198	Feb. 24	2045	1530 43.3	4.37 1.332
Dec. 8	2130	1280 36.2	4.04 1.231	Mar. 5	0545	*2160 61.2	5.09 1.551
Dec. 21	0615	1390 39.4	4.19 1.277				

Minimum discharge, 8.9 ft³/s (0.25 m³/s) Oct. 12, gage height, 1.16 ft (0.354 m).

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	13	22	139	559	70	292	198	84	122	69	34	34
2	12	32	113	752	68	419	547	74	106	61	27	32
3	12	31	258	351	86	527	320	96	96	64	23	55
4	14	29	989	246	78	1300	258	242	111	106	20	43
5	14	24	448	227	70	1840	254	254	92	139	17	38
6	12	17	254	184	72	946	209	165	73	61	15	271
7	12	14	191	198	70	644	165	139	63	42	14	117
8	13	15	553	342	66	553	152	122	59	33	19	68
9	12	15	911	198	62	513	216	108	55	27	31	55
10	11	15	438	171	60	565	231	108	47	31	36	47
11	11	15	267	144	58	530	181	134	50	34	53	41
12	9.5	13	220	129	57	351	157	120	47	26	287	37
13	10	14	181	131	55	299	139	129	39	25	139	34
14	19	15	157	165	54	448	131	104	33	100	71	47
15	21	23	139	139	55	351	165	88	30	59	69	52
16	17	162	120	136	86	258	242	80	27	50	53	37
17	20	115	131	195	120	227	220	69	25	49	42	30
18	18	144	108	235	105	227	171	64	34	34	42	26
19	15	88	94	138	94	235	141	59	31	27	61	26
20	15	64	181	133	84	235	124	56	24	23	52	25
21	15	56	946	316	170	212	111	55	20	38	69	88
22	12	50	342	215	400	195	100	56	23	31	52	238
23	12	50	227	165	684	181	92	61	26	24	43	124
24	12	94	227	146	999	320	84	279	21	20	45	76
25	12	74	469	148	1160	480	76	384	20	18	129	59
26	15	59	254	116	821	258	84	235	17	21	66	50
27	71	63	195	105	412	198	168	205	15	27	76	45
28	39	227	165	96	304	162	139	374	13	23	59	82
29	25	165	146	90	---	149	106	212	18	47	52	106
30	20	141	135	86	---	131	94	160	37	139	46	82
31	18	---	201	78	---	127	---	131	---	55	39	---
TOTAL	531.5	1846	9199	6334	6420	13173	5275	4447	1374	1503	1781	2065
MEAN	17.1	61.5	297	204	229	425	176	143	45.8	48.5	57.5	68.8
MAX	71	227	989	752	1160	1840	547	384	122	139	287	271
MIN	9.5	13	94	78	54	127	76	55	13	18	14	25
CFSM	.27	.98	4.75	3.26	3.66	6.80	2.82	2.29	.73	.78	.92	1.10
IN.	.32	1.10	5.48	3.77	3.82	7.84	3.14	2.65	.82	.89	1.06	1.23

CAL YR 1978	TOTAL	54127.5	MEAN	148	MAX	1120	MIN	9.5	CFSM	2.37	IN	32.22
WTR YR 1979	TOTAL	53948.5	MEAN	148	MAX	1840	MIN	9.5	CFSM	2.37	IN	32.11

03078000 CASSELMAN RIVER AT GRANTSVILLE, MD--Continued

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)
APR 17...	1130	223	120	6.9	5.5	5.0	11.8
MAY 30...	1045	155	100	7.2	17.0	12.0	--
JUN 20...	1345	22	130	8.3	22.5	24.0	--
JUL 27...	1400	31	166	8.5	24.0	23.0	10.2
AUG 20...	1145	52	136	7.7	25.0	19.0	9.6
SEP 25...	1045	59	118	8.4	10.5	13.0	10.2

DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
APR 17...	--	--	--	--	--	--	--	--	--	--	--
MAY 30...	32	16	.0	.0	9.0	2.2	3.2	18	.2	3.9	.7
JUN 20...	46	30	.0	.0	13	3.4	4.5	17	.3	--	1.0
JUL 27...	59	28	.0	.0	17	4.0	6.2	18	.4	7.6	1.4
AUG 20...	45	28	.0	.0	13	3.1	5.7	21	.4	7.0	1.3
SEP 25...	39	25	.0	.0	11	2.8	3.7	17	.3	4.7	1.0

DATE	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
APR 17...	--	--	20	--	--	--	--	--	--	--	--
MAY 30...	16	2.0	19	5.9	.1	4.1	--	56	.08	23.4	.55
JUN 20...	16	--	26	9.2	.1	3.7	78	72	.11	4.63	.38
JUL 27...	31	.2	31	12	.1	3.0	87	95	.12	7.28	.35
AUG 20...	17	.7	23	11	.1	3.2	71	71	.10	9.97	--
SEP 25...	14	.1	21	7.3	.1	3.9	68	63	.09	10.9	.75

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (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, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)
AUG 20...	1	0	0	0	<10	10	10	30	5	10

MONONGAHELA RIVER BASIN

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03078000 CASSELMAN RIVER AT GRANTSVILLE, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE D RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (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- PENDE D RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)
APR 17...	370	320	50	--	--	--	140	10	130	--
MAY 30...	470	440	30	--	--	--	100	10	90	--
JUN 20...	390	280	110	--	--	--	40	10	30	--
JUL 27...	610	520	90	--	--	--	40	20	20	--
AUG 20...	840	700	140	28000	6	20	100	40	60	1000
SEP 25...	770	700	70	--	--	--	50	0	60	--
DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, IN BOT- TOM MA- TERIAL (UG/G)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE D (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE D (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 30...	--	--	--	--	--	--	--	10	4.2	100
JUN 20...	--	--	--	--	--	--	--	2	.12	100
AUG 20...	<.5	.00	0	0	0	10	30	25	3.5	100
SEP 25...	--	--	--	--	--	--	--	27	4.3	--

TEMPERATURE MEASUREMENTS AT GAGING STATIONS

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)
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DELAWARE RIVER BASIN

01477800 - SHELLPOT CREEK AT WILMINGTON, DEL. (LAT 39 45 39 LONG 075 31 10)

OCT , 1978					APR , 1979				
10...	1035	.76	19.5	16.5	13...	1300	3.8	14.0	10.5
NOV					MAY				
01...	1145	.80	19.5	15.0	16...	1215	3.4	20.0	18.0
DEC					JUN				
13...	1330	2.8	4.0	3.5	15...	1120	2.6	23.0	19.5
29...	1240	2.6	1.5	2.5	JUL				
JAN , 1979					13...	1145	1.6	34.0	23.0
30...	1215	7.8	4.0	4.5	AUG				
FEB					14...	1240	1.5	27.5	21.0
22...	1315	16	6.5	1.0	31...	0945	1.5	21.0	26.0
MAR									
20...	1120	2.8	13.0	11.5					

01478000 - CHRISTINA RIVER AT COOCHS BRIDGE, DEL. (LAT 39 38 16 LONG 075 43 46)

OCT , 1978					MAR , 1979				
06...	1055	24	21.5	19.0	30...	1155	18	26.0	13.5
12...	1005	2.2	15.0	13.0	APR				
NOV					16...	0950	27	10.0	9.5
14...	0840	9.8	14.0	11.0	MAY				
DEC					10...	0835	14	20.5	21.0
12...	1235	17	4.0	3.0	JUN				
JAN , 1979					13...	0940	15	16.0	17.5
31...	1030	28	1.0	3.0	JUL				
FEB					13...	1400	3.6	24.0	23.0
26...	1300	498	1.0	.5	SEP				
27...	1340	91	3.0	1.0	07...	1330	27	28.0	24.0
MAR									
15...	0930	41	1.0	5.5					

01478040 - CHRISTINA RIVER NEAR BEAR, DE (LAT 39 38 12 LONG 075 40 53.01)

OCT , 1978					MAR , 1979				
12...	1050	6.3	17.5	13.0	14...	1220	57	10.0	8.5
NOV					APR				
14...	1050	7.6	15.0	11.5	16...	1145	56	14.0	10.0
DEC					MAY				
12...	1030	39	2.5	2.0	10...	1500	23	25.5	22.5
JAN , 1979					JUN				
24...	1205	160	11.0	3.0	13...	1055	33	20.0	21.0
24...	1330	255	11.0	3.0	JUL				
31...	1130	57	.5	3.0	12...	1000	7.6	31.0	21.0
FEB					SEP				
27...	1115	418	2.5	1.5	07...	1445	67	27.5	24.0

01478500 - WHITE CLAY CREEK ABOVE NEWARK, DEL. (LAT 39 42 50 LONG 075 45 35.01)

OCT , 1978					MAR , 1979				
13...	1300	31	21.0	15.0	15...	1115	128	1.0	5.0
NOV					APR				
15...	1115	37	14.0	12.0	17...	0915	102	12.0	10.0
DEC					JUN				
15...	1005	63	2.0	1.5	20...	1200	53	24.5	19.0
FEB , 1979					JUL				
06...	1010	122	-3.5	.0	18...	1200	55	25.0	22.0

01479000 - WHITE CLAY CREEK NEAR NEWARK, DEL. (LAT 39 42 00 LONG 075 41 10)

OCT , 1978					APR , 1979				
11...	1345	67	20.0	16.0	17...	1350	100	13.5	10.0
NOV					JUN				
15...	1330	49	15.0	12.5	20...	1410	68	25.0	22.0
JAN , 1979					JUL				
26...	1200	293	7.0	3.5	16...	1315	80	34.0	30.0
FEB					AUG				
06...	1305	205	-3.0	1.0	22...	1410	53	33.0	20.0
27...	1540	471	1.0	2.5					
MAR									
16...	0950	115	.0	5.5					

TEMPERATURE MEASUREMENTS AT GAGING STATIONS
WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)
DELAWARE RIVER BASIN--CONTINUED									
01480000 - RED CLAY CREEK AT WOODDALE, DEL. (LAT 39 45 52 LONG 075 38 08)									
OCT , 1978					MAR , 1979				
10...	1310	34	21.0	10.5	16...	1330	89	--	4.5
NOV					APR				
14...	1330	30	15.0	11.0	17...	1200	74	13.0	9.0
DEC					JUN				
13...	1110	52	4.0	2.5	18...	1240	55	23.0	21.0
FEB , 1979					JUL				
05...	1100	76	-3.0	1.0	16...	1110	35	29.0	24.5
01480100 - LITTLE MILL CREEK AT ELSMERE, DEL. (LAT 39 44 05 LONG 075 35 14)									
OCT , 1978					MAR , 1979				
11...	0930	1.3	19.5	15.0	16...	1130	6.6	2.0	7.0
NOV					APR				
15...	1000	1.0	16.5	13.0	19...	1305	6.1	16.5	15.0
DEC					JUL				
13...	0950	3.6	3.5	2.5	16...	0915	1.8	29.5	24.0
FEB , 1979					SEP				
05...	1250	8.6	-1.0	1.0	13...	1330	1.3	24.5	23.0
01481500 - BRANDYWINE CREEK AT WILMINGTON, DEL. (LAT 39 46 09 LONG 075 34 25.01)									
OCT , 1978					APR , 1979				
02...	1110	234	21.0	18.0	02...	1130	557	9.0	13.5
DEC					06...	1130	591	8.0	9.5
01...	1245	458	7.0	6.0	MAY				
JAN , 1979					01...	1210	507	19.5	16.0
02...	1325	1770	12.5	8.5	SEP				
FEB					04...	1230	293	28.5	25.0
01...	1145	986	-1.0	2.5					
MAR									
01...	1145	1640	9.5	6.0					
01483200 - BLACKBIRD CREEK AT BLACKBIRD, DEL. (LAT 39 21 58 LONG 075 40 10)									
OCT , 1978					APR , 1979				
04...	1130	1.5	20.5	17.0	12...	0905	6.7	15.5	13.0
NOV					MAY				
08...	1300	1.3	12.0	12.5	10...	1305	3.2	26.5	24.0
DEC					JUN				
11...	0855	4.8	-2.5	3.0	06...	1210	6.9	29.0	24.0
JAN , 1979					JUL				
22...	0940	31	3.0	5.5	11...	0950	1.4	23.0	23.5
MAR					AUG				
09...	0955	13	13.0	8.0	22...	0835	1.6	24.0	20.0
ST. JONES RIVER BASIN									
01483700 - ST. JONES RIVER AT DOVER, DEL. (LAT 39 09 49 LONG 075 31 10)									
OCT , 1978					APR , 1979				
02...	1010	7.6	23.0	19.0	02...	1430	48	13.5	13.5
NOV					MAY				
01...	0945	7.9	14.0	13.5	02...	0915	35	12.5	17.5
DEC					JUN				
01...	0950	25	4.5	7.0	01...	1335	44	21.5	22.5
JAN , 1979					JUL				
03...	1115	121	-7.5	4.5	02...	1020	43	23.0	24.0
FEB					AUG				
01...	1035	70	-1.0	2.0	01...	1410	19	30.0	29.0
MAR					31...	0955	15	26.5	27.5
02...	1130	170	11.0	4.0					

TEMPERATURE MEASUREMENTS AT GAGING STATIONS
WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)
MURDERKILL RIVER BASIN									
01484000 - MURDERKILL RIVER NEAR FELTON, DEL. (LAT 38 58 33 LONG 075 34 03)									
OCT , 1978					APR , 1979				
03...	1415	3.4	19.5	14.5	10...	1500	31	13.5	12.5
NOV					JUN				
13...	1530	4.0	12.0	12.5	06...	1510	41	24.0	19.0
DEC					JUL				
13...	1515	9.0	13.0	6.0	13...	1140	8.4	28.5	18.5
JAN , 1979					AUG				
22...	1520	114	3.5	5.0	27...	1515	11	30.0	22.5
MAR									
09...	1340	51	13.5	9.5					
MISPIILLION RIVER BASIN									
01484100 - BEAVERDAM BRANCH AT HOUSTON, DEL. (LAT 38 54 20 LONG 075 30 49)									
OCT , 1978					APR , 1979				
05...	1505	1.2	22.5	16.5	10...	1355	6.7	13.5	14.0
NOV					MAY				
15...	1545	.97	15.0	14.5	30...	1045	4.7	20.5	15.5
DEC					JUN				
14...	1125	1.6	4.0	7.5	04...	1355	10	17.0	15.5
JAN , 1979					JUL				
31...	1525	6.4	-5	8.0	13...	1435	14	24.0	21.0
MAR					AUG				
07...	1405	27	10.5	10.0	22...	1450	3.5	27.0	17.5
BROADKILL RIVER BASIN									
01484270 - BEAVERDAM CREEK NEAR MILTON, DEL. (LAT 38 45 41 LONG 075 16 03)									
OCT , 1978					MAR , 1979				
04...	1320	7.4	17.0	15.0	07...	1225	59	7.5	10.0
NOV					APR				
14...	1310	5.6	19.5	15.0	03...	1030	23	12.5	14.0
DEC					JUN				
13...	1315	6.3	11.0	9.0	08...	1445	18	28.5	21.0
JAN , 1979					JUL				
30...	1510	11	5.0	8.5	12...	1500	13	32.0	21.0
FEB					AUG				
26...	1410	52	11.0	4.5	22...	1230	12	29.0	19.5
INDIAN RIVER BASIN									
01484500 - STOCKLEY BRANCH AT STOCKLEY, DEL. (LAT 38 38 19 LONG 075 20 31)									
OCT , 1978					APR , 1979				
04...	1125	1.4	21.0	15.0	10...	1100	17	9.5	10.5
NOV					JUN				
14...	1045	1.1	17.5	12.5	08...	1210	14	26.5	19.5
DEC					JUL				
13...	1125	2.8	8.5	6.5	16...	1305	3.6	26.5	19.5
JAN , 1979					AUG				
26...	1345	19	4.5	6.5	22...	1030	3.0	22.5	18.0
MAR									
07...	1010	125	7.5	10.0					
POCOMOKE RIVER BASIN									
01485000 - POCOMOKE RIVER NEAR WILLARDS, MD. (LAT 38 23 20 LONG 075 19 30)									
OCT , 1978					APR , 1979				
10...	1340	8.0	17.5	12.0	11...	1245	97	15.0	11.5
NOV					JUN				
30...	1115	71	9.0	9.5	05...	1150	1070	26.5	17.5
DEC					06...	1155	795	31.0	19.0
15...	1215	62	9.5	5.5	07...	1130	429	29.0	19.0
JAN , 1979					JUL				
30...	1215	201	2.5	5.0	17...	1140	52	25.0	22.5
FEB					SEP				
27...	1025	1560	6.5	5.0	17...	1130	47	20.5	17.0
MAR									
08...	1130	1190	10.0	10.5					

TEMPERATURE MEASUREMENTS AT GAGING STATIONS
WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)
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POCOMOKE RIVER BASIN--CONTINUED

01485500 - NASSAWANGO CREEK NEAR SNOW HILL, MD. (LAT 38 13 44 LONG 075 28 19.01)

OCT , 1978					APR , 1979				
10...	1200	3.4	16.0	10.0	18...	1345	52	14.0	12.0
NOV					JUN				
29...	1415	20	9.0	8.0	05...	1430	1030	28.0	17.5
FEB , 1979					JUL				
05...	1225	51	-4.0	1.0	19...	1115	54	24.5	22.5
27...	1255	1270	8.0	5.5	SEP				
MAR					10...	1540	130	21.0	19.0
08...	1330	883	11.5	9.5					

MANOKIN RIVER BASIN

01486000 - MANOKIN BRANCH NEAR PRINCESS ANNE, MD. (LAT 38 12 50 LONG 075 40 18)

OCT , 1978					APR , 1979				
06...	1225	.71	24.0	19.0	18...	1155	3.9	19.5	14.0
NOV					JUN				
29...	1130	1.9	7.0	7.0	07...	1345	16	29.0	24.5
FEB , 1979					JUL				
02...	1355	6.6	5.0	4.5	19...	1410	1.3	26.0	23.5
MAR					AUG				
16...	1210	8.9	6.5	6.5	30...	1315	33	34.0	25.0

NANTICOKE RIVER BASIN

01487000 - NANTICOKE RIVER NEAR BRIDGEVILLE, DEL. (LAT 38 43 45 LONG 075 33 41)

NOV , 1978					APR , 1979				
13...	1045	27	11.5	13.0	13...	1100	141	9.5	12.5
DEC					JUN				
11...	1155	46	-5	5.5	13...	1500	185	23.5	19.0
JAN , 1979					JUL				
22...	1120	378	3.0	7.5	10...	1215	72	26.0	18.5
MAR					AUG				
12...	1145	337	3.5	7.5	20...	1230	74	28.5	21.0

01488500 - MARSHYHOPE CREEK NEAR ADAMSVILLE, DEL. (LAT 38 50 59 LONG 075 40 24)

NOV , 1978					JUN , 1979				
13...	1350	11	12.0	12.5	12...	1510	204	20.0	20.0
DEC					JUL				
11...	1420	26	2.5	4.5	09...	1130	33	26.0	21.0
JAN , 1979					AUG				
22...	1315	305	4.0	6.0	13...	1140	239	19.5	19.5
MAR					SEP				
12...	1425	152	6.5	9.5	06...	1215	674	27.5	24.0
APR									
16...	1255	78	13.0	13.0					

01489000 - FAULKNER BRANCH AT FEDERALSBURG, MD. (LAT 38 42 44 LONG 075 47 34)

OCT , 1978					APR , 1979				
03...	1155	2.9	16.0	14.5	13...	1400	11	8.5	12.0
NOV					MAY				
13...	1215	1.4	12.0	12.5	25...	1315	13	22.0	20.5
DEC					JUL				
12...	1025	7.6	3.5	4.5	10...	1445	6.0	21.5	21.0
JAN , 1979					AUG				
29...	1400	25	7.0	6.0	23...	1310	9.0	27.0	22.5
FEB					SEP				
27...	1725	77	4.0	5.5	06...	1015	65	26.0	23.0
MAR									
05...	1110	21	16.5	12.0					

TEMPERATURE MEASUREMENTS AT GAGING STATIONS
WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)
TRANSQUAKING RIVER BASIN									
01490000 - CHICAMACOMICO RIVER NEAR SALEM, MD. (LAT 38 30 45 LONG 075 52 50)									
OCT , 1978					APR , 1979				
05...	1110	7.3	19.5	18.0	17...	1035	24	11.0	12.0
NOV					MAY				
21...	1230	5.7	14.5	12.0	31...	1400	17	24.5	21.0
DEC					JUL				
12...	1125	14	9.5	4.5	18...	1130	7.3	29.5	16.0
JAN , 1979					AUG				
31...	1150	34	4.0	4.0	27...	1300	22	30.5	25.5
MAR									
05...	1450	47	19.5	13.5					
28...	1415	30	11.5	14.5					
CHOPTANK RIVER BASIN									
01491000 - CHOPTANK RIVER NEAR GREENSBORO, MD. (LAT 38 59 50 LONG 075 47 10)									
NOV , 1978					FEB , 1979				
24...	1010	27	12.5	10.0	22...	1125	123	7.5	.5
DEC					MAR				
26...	1100	254	4.5	4.0	26...	1100	311	9.5	11.0
01492000 - BEAVERDAM BRANCH AT MATTHEWS, MD. (LAT 38 48 40 LONG 075 58 15)									
OCT , 1978					APR , 1979				
23...	1215	.26	16.5	15.5	16...	1435	5.6	11.0	11.0
NOV					JUN				
15...	1245	.61	16.5	14.0	11...	1440	95	17.0	18.0
DEC					JUL				
14...	1335	2.5	4.5	4.0	11...	1440	1.2	29.0	19.5
JAN , 1979					AUG				
29...	1135	17	6.5	4.0	27...	1125	7.7	28.0	23.5
MAR									
14...	1230	11	16.0	9.0					
CHESTER RIVER BASIN									
01493000 - UNICORN BRANCH NEAR MILLINGTON, MD. (LAT 39 14 59 LONG 075 51 40)									
OCT , 1978					MAR , 1979				
18...	1100	8.8	17.5	14.0	19...	1145	8.8	13.0	10.5
NOV					APR				
21...	1235	9.6	12.0	9.0	30...	1340	31	17.5	13.0
DEC					MAY				
21...	1145	10	9.0	6.0	25...	1030	52	23.0	20.5
FEB , 1979					JUN				
08...	1240	32	1.0	2.5	07...	0935	30	25.0	21.0
01493500 - MORGAN CREEK NEAR KENNEDYVILLE, MD. (LAT 39 16 48 LONG 076 00 54)									
OCT , 1978					APR , 1979				
24...	1135	4.2	9.5	11.0	23...	1300	7.8	24.0	17.5
NOV					MAY				
24...	1130	5.9	13.0	9.5	24...	1225	19	25.0	19.5
DEC					JUN				
04...	1015	25	15.5	9.5	25...	1445	5.6	27.5	18.0
05...	1025	37	9.5	9.0	JUL				
26...	1245	12	7.5	3.0	25...	1215	10	29.5	23.0
JAN , 1979					AUG				
23...	1315	16	4.0	.0	28...	1105	11	28.0	22.0
FEB					SEP				
22...	1410	13	10.0	1.0	25...	1105	7.3	17.0	15.5
26...	1100	642	4.5	.5					
MAR									
27...	1050	8.8	8.5	7.0					

TEMPERATURE MEASUREMENTS AT GAGING STATIONS
WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)
ELK RIVER BASIN									
01495000 - BIG ELK CREEK AT ELK MILLS, MD. (LAT 39 39 26 LONG 075 49 20)									
OCT , 1978					APR , 1979				
16...	0950	33	19.0	9.0	18...	1030	60	14.0	9.5
NOV					JUN				
16...	0930	47	10.0	12.0	04...	0930	252	19.0	20.0
DEC					JUL				
19...	1020	48	1.0	1.5	19...	1100	26	29.5	24.0
FEB , 1979					SEP				
08...	1105	88	-1.0	1.5	11...	1045	42	22.0	19.5
MAR									
15...	1310	75	1.5	3.5					
NORTHEAST RIVER BASIN									
01496000 - NORTHEAST CREEK AT LESLIE, MD. (LAT 39 37 40 LONG 075 56 40)									
OCT , 1978					MAR , 1979				
16...	1230	10	19.5	13.0	13...	1030	33	3.5	3.0
NOV					JUN				
16...	1120	11	14.0	11.0	04...	1115	354	21.0	21.5
DEC					JUL				
19...	1155	18	-5	3.0	20...	1130	9.1	25.0	23.0
FEB , 1979					SEP				
08...	1320	37	1.0	2.5	11...	1230	14	23.0	19.5
PRINCIPIO CREEK BASIN									
01496200 - PRINCIPIO CREEK NEAR PRINCIPIO FURNACE, MD. (LAT 39 37 34 LONG 076 02 27)									
OCT , 1978					MAY , 1979				
17...	1035	4.4	14.0	11.0	01...	1025	12	13.5	12.0
NOV					JUN				
17...	1010	3.2	11.0	9.0	04...	1400	50	23.5	17.5
DEC					JUL				
20...	1300	6.0	1.5	3.0	20...	1325	4.3	29.0	24.0
FEB , 1979					SEP				
09...	1200	12	-5.0	.5	12...	1510	5.3	24.0	21.0
MAR									
13...	1305	13	11.5	7.0					
SUSQUEHANNA RIVER BASIN									
01500000 - DEER CREEK AT ROCKS, MARYLAND (LAT 39 37 49 LONG 076 24 13.01)									
OCT , 1978					APR , 1979				
24...	1010	47	7.5	9.5	25...	1255	137	27.0	17.0
DEC					JUN				
04...	1320	140	17.0	9.0	04...	1510	348	22.0	17.0
MAR , 1979					AUG				
08...	1435	222	10.5	7.5	29...	1045	137	24.0	21.0
13...	1205	197	8.5	5.0					
BUSH RIVER BASIN									
01581700 - WINTERS RUN NEAR BENSON, MD. (LAT 39 31 12 LONG 076 22 24)									
OCT , 1978					APR , 1979				
23...	1215	18	25.0	13.0	25...	1525	48	22.0	20.0
DEC					JUN				
04...	0945	88	15.0	8.0	04...	1205	123	20.0	16.0
MAR , 1979					AUG				
13...	0910	69	6.5	3.0	27...	1305	41	28.5	22.0

TEMPERATURE MEASUREMENTS AT GAGING STATIONS

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)
GUNPOWDER RIVER BASIN									
01582000 - LITTLE FALLS AT BLUE MOUNT, MD. (LAT 39 36 16 LONG 076 37 16)									
OCT , 1978					JUN , 1979				
16...	0940	28	7.0	8.0	07...	1320	111	25.0	17.0
NOV					JUL				
28...	1030	43	3.0	3.0	11...	1330	61	24.0	19.5
MAR , 1979					30...	1630	101	27.0	21.0
06...	1135	239	9.5	7.0	AUG				
13...	1340	116	12.0	6.0	28...	1330	62	25.0	21.0
16...	1340	116	12.0	6.0					
APR									
26...	1710	79	15.0	16.0					
01583000 - SLADE RUN NEAR GLYNDON, MD. (LAT 39 29 40 LONG 076 47 45)									
OCT , 1978					JUN , 1979				
23...	1010	1.2	19.0	11.0	04...	0925	6.6	17.0	14.0
DEC					JUL				
04...	0950	4.1	17.5	9.5	09...	0945	2.1	23.0	16.0
MAR , 1979					AUG				
01...	0935	5.5	5.0	4.0	20...	1045	2.5	25.0	18.0
APR									
23...	0930	3.0	20.0	13.5					
01583500 - WESTERN RUN AT WESTERN RUN, MD. (LAT 39 30 38 LONG 076 40 37)									
OCT , 1978					JUN , 1979				
16...	1410	29	10.5	10.0	07...	0940	110	19.0	16.0
NOV					JUL				
29...	1125	44	6.0	4.0	11...	1100	56	23.0	19.0
MAR , 1979					30...	1315	111	27.0	21.0
13...	1520	122	12.0	7.0	AUG				
APR					31...	1305	58	26.0	22.5
27...	1045	111	16.0	15.0					
01584050 - LONG GREEN CREEK AT GLEN ARM, MD. (LAT 39 27 17 LONG 076 28 45.01)									
OCT , 1978					JUN , 1979				
20...	1125	6.3	15.0	12.0	11...	1345	13	18.0	17.5
NOV					JUL				
29...	1455	7.4	4.0	4.0	12...	1500	7.2	31.0	22.0
MAR , 1979					AUG				
09...	1055	20	13.0	7.0	30...	1220	8.8	31.0	21.0
APR									
26...	0940	12	17.0	15.5					
01585100 - WHITEMARSH RUN AT WHITE MARSH, MD. (LAT 39 22 15 LONG 076 26 46)									
OCT , 1978					APR , 1979				
19...	1405	2.4	15.5	14.0	24...	1430	4.4	17.0	16.0
DEC					JUN				
01...	1430	4.9	7.0	7.0	05...	1400	14	25.0	25.0
MAR , 1979					JUL				
12...	1520	10	8.0	9.0	10...	1230	2.1	24.0	25.5

TEMPERATURE MEASUREMENTS AT GAGING STATIONS
WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)
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BACK RIVER BASIN

01585200 - WEST BRANCH HERRING RUN AT IDLEWYLDE, MD. (LAT 39 22 25 LONG 076 35 35)

OCT , 1978					JUL , 1979				
19...	0855	.32	11.0	11.0	10...	1515	.69	24.0	20.0
DEC					AUG				
01...	0905	.64	4.0	5.0	29...	1525	1.2	31.0	24.0
JUN , 1979									
06...	1305	1.6	26.0	22.0					

01585300 - STEMMERS RUN AT ROSSVILLE, MD. (LAT 39 20 28 LONG 076 29 17)

OCT , 1978					JUN , 1979				
19...	1025	.94	13.0	12.0	06...	1045	4.0	24.0	21.0
DEC					JUL				
01...	1135	1.8	5.5	6.5	09...	1030	.93	25.5	24.5
MAR , 1979					AUG				
12...	1105	4.6	4.0	5.5	29...	1135	2.3	25.0	24.5
APR									
23...	1435	2.0	26.0	19.0					

01585400 - BRIEN RUN AT STEMMERS RUN, MD. (LAT 39 20 01 LONG 076 28 23)

OCT , 1978					APR , 1979				
19...	1135	.32	12.0	12.0	24...	1030	.78	16.0	14.0
DEC					JUN				
01...	1300	.81	6.0	7.0	05...	1618	3.1	23.0	17.0
MAR , 1979									
12...	1235	1.7	6.5	7.0					

PATAPSCO RIVER BASIN

01585500 - CRANBERRY BRANCH NEAR WESTMINSTER, MD. (LAT 39 35 35 LONG 076 58 05)

OCT , 1978					APR , 1979				
23...	1210	1.0	23.5	12.5	23...	1130	3.2	21.0	14.5
DEC					JUN				
04...	1145	6.2	17.0	10.0	04...	1130	5.9	19.0	15.0
JAN , 1979					JUL				
25...	0955	8.7	-1.0	1.5	09...	1155	1.6	21.5	17.0
MAR					AUG				
01...	1410	14	9.0	6.0	20...	1505	1.6	27.0	18.5

01586000 - NORTH BRANCH PATAPSCO RIVER AT CEDARHURST, MD. (LAT 39 30 00 LONG 076 53 00)

OCT , 1978					JUN , 1979				
23...	1430	19	23.5	13.5	04...	1405	163	20.0	17.0
DEC					JUL				
04...	1400	146	20.0	10.0	09...	1400	37	24.5	20.0
05...	0920	147	7.5	8.0	AUG				
MAR , 1979					20...	1240	43	22.0	20.5
01...	1130	176	10.0	3.5					
APR									
23...	1340	67	22.5	16.0					

01587500 - SOUTH BRANCH PATAPSCO RIVER AT MENNYTON, MD. (LAT 39 21 05 LONG 076 54 50)

OCT , 1978					MAR , 1979				
18...	0935	30	4.0	8.0	14...	1105	145	10.0	7.5
DEC					JUL				
05...	0940	176	8.0	8.5	20...	1025	47	22.5	20.5

TEMPERATURE MEASUREMENTS AT GAGING STATIONS

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)
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PATAPSCO RIVER BASIN--CONTINUED

01589000 - PATAPSCO RIVER AT HOLLOFIELD, MD. (LAT 39 18 36 LONG 076 47 34)

OCT , 1978					APR , 1979				
18...	1240	55	15.0	11.0	02...	1415	249	10.5	11.5
DEC					JUL				
05...	1200	279	11.0	9.0	23...	1440	86	29.0	24.0
MAR , 1979					30...	1430	316	26.5	21.5
21...	1045	237	12.5	8.0					

01589100 - E. BR. HERBERT RUN AT ARBUTUS, MD. (LAT 39 14 24 LONG 076 41 33)

OCT , 1978					NOV , 1978				
17...	1220	.90	11.0	12.0	30...	1225	1.3	11.0	9.0

01589300 - GWYNNS FALLS AT VILLA NOVA, MD. (LAT 39 20 45 LONG 076 44 01)

OCT , 1978					JUL , 1979				
18...	1500	13	13.5	10.5	05...	1200	18	19.0	17.0
DEC					20...	1150	19	26.0	22.0
06...	1535	31	10.0	7.0	24...	1445	21	28.0	24.5
FEB , 1979					30...	1300	63	26.0	20.5
15...	1155	30	-6.0	.0	SEP				
MAR					04...	1315	22	30.0	24.0
21...	1315	37	15.5	10.0					
APR									
02...	1535	42	12.0	11.0					

01589330 - DEAD RUN AT FRANKLINTOWN, MD. (LAT 39 18 40 LONG 076 43 02)

OCT , 1978					JUL , 1979				
17...	1430	2.2	11.0	12.0	23...	1145	1.4	25.0	24.0
DEC					SEP				
05...	1415	7.3	9.0	9.0	04...	1530	1.8	30.0	26.0
MAR , 1979									
14...	1355	9.0	12.0	9.5					

01589440 - JONES FALLS AT SORRENTO, MD. (LAT 39 23 30 LONG 076 39 42)

OCT , 1978					JUN , 1979				
17...	1010	16	8.5	10.0	13...	1200	20	20.0	21.0
NOV					JUL				
29...	0945	21	1.5	4.0	24...	1140	24	27.0	19.5
FEB , 1979					30...	1555	58	24.0	20.0
15...	1010	32	-7.0	.0	AUG				
MAR					03...	1045	40	25.0	19.5
21...	1405	46	14.5	11.0	31...	1610	29	24.5	21.5
APR					SEP				
30...	1225	39	25.0	14.0	07...	1205	99	--	19.5
JUN									
05...	1350	26	20.0	16.0					

SOUTH RIVER BASIN

01590500 - BACON RIDGE BRANCH AT CHESTERFIELD, MD. (LAT 39 00 07 LONG 076 36 53)

OCT , 1978					AUG , 1979				
17...	1400	4.2	11.5	11.0	27...	1150	6.7	31.5	20.0
NOV									
29...	1300	6.3	8.5	4.5					

TEMPERATURE MEASUREMENTS AT GAGING STATIONS
WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)
PATUXENT RIVER BASIN									
01591000 - PATUXENT RIVER NEAR UNITY, MD. (LAT 39 14 18 LONG 077 03 23)									
OCT , 1978					JUL , 1979				
24...	1335	12	11.0	11.0	20...	1150	21	23.0	19.0
DEC					AUG				
05...	1325	70	8.5	8.5	28...	1100	39	24.0	19.5
JAN , 1979									
22...	1330	130	2.0	2.5					
01592500 - PATUXENT RIVER NEAR LAUREL, MD. (LAT 39 06 56 LONG 076 52 27)									
OCT , 1978					MAR , 1979				
16...	1140	15	12.5	15.5	07...	1125	17	9.5	3.5
NOV									
27...	1445	16	1.0	9.0					
01593500 - LITTLE PATUXENT RIVER AT GUILFORD, MD. (LAT 39 10 04 LONG 076 51 07)									
OCT , 1978					JAN , 1979				
11...	1240	12	19.0	13.0	11...	1135	38	-3.0	1.0
NOV									
28...	1145	36	5.0	4.5					
01594000 - LITTLE PATUXENT RIVER AT SAVAGE, MD. (LAT 39 08 00 LONG 076 48 58)									
OCT , 1978					JAN , 1979				
11...	1525	34	17.5	14.0	11...	1315	122	-1.5	1.0
NOV									
28...	1350	86	6.5	4.5					
POTOMAC RIVER BASIN									
01595000 - NORTH BRANCH POTOMAC RIVER AT STEYER, MD. (LAT 39 18 07 LONG 079 18 26)									
OCT , 1978					MAY , 1979				
19...	1440	22	13.0	10.0	17...	1015	197	13.0	11.0
DEC					JUL				
06...	1100	337	3.0	4.0	19...	1130	24	21.0	22.0
APR , 1979					SEP				
11...	1035	229	8.0	6.0	13...	1020	54	18.0	17.0
01595500 - N B POTOMAC R AT KITZMILLER, MD. (LAT 39 23 38 LONG 079 10 55)									
OCT , 1978					AUG , 1979				
02...	1115	39	15.0	14.0	01...	1445	73	31.0	27.0
31...	1130	48	9.0	7.0	SEP				
FEB , 1979					04...	1045	121	28.0	20.5
28...	1040	1550	5.0	2.5					
MAY									
01...	0945	512	6.0	9.0					
01595800 - NORTH BR. POTOMAC RIVER AT BARNUM, W. VA. (LAT 39 26 44 LONG 079 06 39)									
OCT , 1978					MAY , 1979				
04...	1445	41	20.0	18.0	17...	1400	603	18.0	16.0
DEC					JUL				
11...	1050	947	-6.0	2.0	20...	1115	134	24.0	23.0
MAR , 1979					SEP				
05...	1500	5790	7.0	5.0	06...	1510	2980	25.0	19.0
APR									
11...	1535	764	12.0	6.0					

TEMPERATURE MEASUREMENTS AT GAGING STATIONS

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE, WATER (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE, WATER (DEG C)
POTOMAC RIVER BASIN--CONTINUED									
01596500 - SAVAGE RIVER NEAR BARTON, MD. (LAT 39 34 05 LONG 079 06 10)									
OCT , 1978					MAY , 1979				
18...	1120	7.9	3.0	5.5	15...	1225	100	17.0	12.0
NOV					JUL				
29...	1155	3.2	-2.0	2.0	11...	1035	15	20.0	17.0
JAN , 1979					SEP				
23...	1200	93	-5.0	1.0	13...	1510	25	21.0	16.0
MAR									
15...	1035	189	-7.0	1.0					
01597000 - CRABTREE CREEK NEAR SHANTON, MD. (LAT 39 30 00 LONG 079 09 35)									
OCT , 1978					MAY , 1979				
18...	1000	2.5	2.0	4.5	15...	1005	52	15.0	10.0
NOV					JUL				
29...	1030	22	-2.0	2.5	11...	1315	8.2	16.5	22.0
JAN , 1979					SEP				
23...	1415	47	-3.0	1.0	13...	1350	8.7	21.0	18.0
MAR					18...	1120	5.9	17.0	12.0
30...	1220	34	20.0	10.0					
01597500 - SAVAGE R. BEL SAVAGE R. DAM NR BLOOMINGTON, MD. (LAT 39 30 05 LONG 079 07 25)									
NOV , 1978					AUG , 1979				
01...	1015	94	8.0	13.0	01...	1220	28	28.0	18.0
MAY , 1979					SEP				
01...	1350	202	15.0	12.0	18...	1225	103	19.0	11.0
JUN									
01...	1215	161	20.0	15.0					
01598500 - NORTH BRANCH POTOMAC RIVER AT LUKE MD. (LAT 39 28 45 LONG 079 03 55)									
NOV , 1978					SEP , 1979				
01...	1215	152	12.0	9.0	06...	1205	3420	24.0	19.0
AUG , 1979					07...	1500	1570	27.0	23.5
01...	1040	137	25.0	24.5	12...	1405	631	21.0	20.0
01599000 - GEORGES CREEK AT FRANKLIN, MD. (LAT 39 29 38 LONG 079 02 42)									
OCT , 1978					JUL , 1979				
04...	1605	13	19.0	16.5	02...	1415	25	20.0	18.0
31...	0930	11	1.0	7.0	AUG				
FEB , 1979					02...	1035	15	25.0	23.0
15...	1115	31	-8.0	.0	21...	1115	24	19.0	19.0
MAR					29...	1040	108	31.0	21.0
05...	1130	1700	6.0	4.0	SEP				
APR					06...	1025	684	20.0	18.5
16...	1530	113	8.5	8.5	07...	1100	208	26.0	22.0
MAY					24...	1500	70	13.0	15.0
01...	1555	126	17.0	14.0					
JUN									
01...	1435	71	21.0	16.0					

TEMPERATURE MEASUREMENTS AT GAGING STATIONS
WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)
POTOMAC RIVER BASIN--CONTINUED									
01600000 - NORTH BRANCH POTOMAC RIVER AT PINTO, MD. (LAT 39 33 59 LONG 078 50 25)									
JAN . 1979					JUL . 1979				
02... 1430	4170	2.0	5.5		05... 1530	1280	20.0	19.0	
MAR					AUG				
09... 0845	5600	1.0	6.0		02... 1300	189	28.5	29.5	
MAY					SEP				
02... 0930	1100	8.0	12.0		05... 1050	239	24.0	22.0	
14... 1520	2170	19.0	17.0						
JUN									
01... 1535	1030	21.0	19.0						
01601500 - WILLS CREEK NEAR CUMBERLAND, MD. (LAT 39 40 07 LONG 078 47 18)									
OCT . 1978					JUN . 1979				
23... 1400	35	19.0	13.0		06... 1310	199	23.0	19.0	
JAN . 1979					SEP				
19... 1510	134	-10.0	.0		11... 1400	283	24.0	16.0	
APR									
25... 0915	226	17.0	14.0						
01603000 - NORTH BRANCH POTOMAC RIVER NEAR CUMBERLAND, MD. (LAT 39 37 16 LONG 078 46 24)									
OCT . 1978					MAY . 1979				
31... 1510	212	18.0	13.0		02... 0900	1740	8.0	11.0	
NOV					JUN				
01... 1245	202	13.0	11.5		01... 1600	1580	21.0	19.0	
JAN . 1979					JUL				
02... 1530	7870	2.0	5.0		05... 1500	1940	20.0	21.0	
MAR					AUG				
09... 0830	8500	1.0	6.0		02... 1440	384	26.0	28.5	
APR					22... 1330	328	17.0	21.0	
26... 0910	1050	17.0	15.0						
01603500 - EVITTS CR NR CENTERVILLE, PA. (LAT 39 47 23 LONG 078 38 48)									
OCT . 1978					APR . 1979				
23... 1210	4.4	20.0	11.0		23... 1140	27	17.0	14.0	
DEC					JUN				
05... 0910	23	3.0	5.0		06... 1040	30	19.0	15.0	
JAN . 1979					JUL				
26... 1015	77	-3.0	1.0		23... 1105	19	23.0	19.0	
MAR					SEP				
09... 1340	158	10.0	8.0		10... 1415	47	19.0	14.5	
01609000 - TOWN CREEK NEAR OLDTOWN, MD. (LAT 39 33 12 LONG 078 33 19)									
OCT . 1978					APR . 1979				
23... 1050	12	14.0	11.0		23... 1000	96	15.0	16.0	
DEC					JUN				
05... 1225	175	7.0	6.5		06... 1510	105	24.0	20.0	
JAN . 1979					JUL				
19... 1215	53	-10.0	.0		23... 0925	78	23.0	23.0	
MAR					SEP				
09... 0950	658	8.0	5.0		11... 1015	132	17.0	16.0	

TEMPERATURE MEASUREMENTS AT GAGING STATIONS
WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)
POTOMAC RIVER BASIN--CONTINUED									
01610000 - POTOMAC RIVER AT PAN PAW, W. VA. (LAT 39 32 13 LONG 078 27 28.01)									
NOV , 1978					SEP , 1979				
22...	1240	744	11.0	14.0	10...	1150	4200	20.0	18.0
01613000 - POTOMAC RIVER AT MANCOCK MARYLAND (LAT 39 41 49 LONG 078 10 39)									
OCT , 1978					SEP , 1979				
27...	1700	569	15.0	14.5	07...	1205	25100	25.0	20.0
01614500 - CONOCOCHEAGUE CREEK AT FAIRVIEW, MD. (LAT 39 42 29 LONG 077 50 00)									
DEC , 1978					MAR , 1979				
14...	1200	361	1.0	2.0	20...	1240	754	12.0	10.5
FEB , 1979					JUN				
01...	1115	990	.0	2.0	29...	1120	207	22.0	20.0
MAR									
14...	1105	1270	14.0	10.0					
01617800 - MARSH RUN AT GRIMES, MD. (LAT 39 30 53 LONG 077 46 38)									
OCT , 1978					MAY , 1979				
30...	1200	5.0	16.5	11.0	08...	1315	17	27.0	21.0
DEC					JUN				
14...	1425	7.8	1.5	2.0	28...	1455	8.0	25.0	20.0
MAR , 1979					AUG				
13...	1500	33	12.0	9.0	09...	1255	5.9	25.0	25.0
01618000 - POTOMAC RIVER AT SHEPHERDSTOWN, W. VA. (LAT 39 26 04 LONG 077 48 07)									
OCT , 1978					MAY , 1979				
31...	1225	987	14.0	14.5	09...	1145	6240	25.0	19.0
MAR , 1979									
13...	1050	14800	10.0	7.0					
01619000 - ANTIETAM CREEK NEAR WAYNESBORO, PA. (LAT 39 42 59 LONG 077 36 28)									
OCT , 1978					MAY , 1979				
30...	1500	36	17.0	10.0	08...	1145	108	24.0	17.0
DEC					JUN				
14...	0845	49	-2.0	3.0	29...	1310	70	23.0	16.0
MAR , 1979					AUG				
14...	1330	269	12.0	9.0	08...	1015	58	28.0	21.0
01619500 - ANTIETAM CREEK NEAR SHARPSBURG, MD. (LAT 39 27 01 LONG 077 43 52)									
OCT , 1978					MAY , 1979				
26...	1400	115	19.5	12.0	08...	1355	323	27.0	20.0
FEB , 1979					JUN				
01...	1245	538	.5	4.0	28...	1250	202	25.0	19.0
MAR					AUG				
20...	1145	533	10.0	9.5	09...	1150	173	26.0	24.0
01637500 - CATOCTIN CREEK NEAR MIDDLETOWN, MD. (LAT 39 25 35 LONG 077 33 25)									
OCT , 1978					JUN , 1979				
26...	1330	5.8	15.0	11.5	06...	1430	70	26.0	20.0
JAN , 1979					JUL				
30...	1010	148	1.0	1.0	18...	1430	15	25.0	23.5
MAR					AUG				
07...	1440	492	11.5	7.5	21...	0930	17	19.0	20.5
APR									
26...	1320	71	16.0	16.0					

TEMPERATURE MEASUREMENTS AT GAGING STATIONS
WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)
POTOMAC RIVER BASIN--CONTINUED									
01639000 - MONOCACY RIVER AT BRIDGEPORT, MD. (LAT 39 40 43 LONG 077 14 06)									
DEC , 1978					JUL , 1979				
06...	1335	89	8.5	6.5	17...	1415	19	27.5	27.5
APR , 1979					AUG				
25...	1305	94	20.5	19.0	23...	1135	68	20.5	20.5
JUN									
05...	1320	188	24.5	21.0					
01639500 - BIG PIPE CREEK AT BRUCEVILLE, MD. (LAT 39 36 45 LONG 077 14 10)									
OCT , 1978					JUN , 1979				
25...	1040	26	7.0	9.0	05...	1045	123	20.0	18.5
DEC					JUL				
06...	1100	73	10.0	5.5	17...	1115	40	26.0	24.5
JAN , 1979					AUG				
25...	1350	534	.0	1.0	23...	1340	40	18.0	20.5
APR									
25...	1030	102	21.0	16.0					
01640500 - OWENS CREEK AT LANTZ, MD. (LAT 39 40 36 LONG 077 27 50)									
OCT , 1978					APR , 1979				
25...	1540	.88	15.0	12.0	25...	1610	9.6	22.0	17.0
JAN , 1979					JUN				
25...	1615	57	-2.5	1.0	05...	1555	12	24.0	16.5
MAR					JUL				
06...	1615	97	5.5	4.5	17...	1610	2.5	27.0	22.5
01641000 - HUNTING CREEK AT JIMTOWN, MD. (LAT 39 35 40 LONG 077 23 50)									
OCT , 1978					JUN , 1979				
26...	0830	4.1	12.0	11.0	06...	0900	24	19.5	16.0
JAN , 1979					JUL				
26...	0855	138	.0	1.0	18...	0935	5.9	20.0	20.0
MAR					AUG				
07...	0845	282	4.0	3.5	22...	1545	12	22.0	19.0
APR									
26...	0840	26	16.0	13.5					
01641500 - FISHING CREEK NEAR LEWISTOWN, MD. (LAT 39 31 35 LONG 077 28 00)									
OCT , 1978					JUL , 1979				
26...	1115	1.8	13.0	10.0	18...	1135	3.8	18.0	16.5
MAR , 1979					AUG				
07...	1125	119	7.0	7.0	22...	1345	3.7	--	16.0
JUN									
06...	1130	13	16.0	13.5					
01642500 - LINGANORE CREEK NEAR FREDERICK, MD. (LAT 39 24 55 LONG 077 20 00)									
OCT , 1978					APR , 1979				
27...	1035	22	12.0	13.0	27...	1100	91	16.5	15.5
JAN , 1979					JUL				
29...	1435	158	2.0	2.0	19...	0830	35	19.5	25.0
MAR					AUG				
08...	1040	264	10.0	7.0	21...	1645	79	19.5	23.0
01643000 - MONOCACY R AT JUG BRIDGE NR FREDERICK, MD. (LAT 39 23 16 LONG 077 22 48)									
OCT , 1978					JUL , 1979				
26...	1545	144	16.0	12.5	18...	1705	225	26.5	25.5

TEMPERATURE MEASUREMENTS AT GAGING STATIONS

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)
POTOMAC RIVER BASIN--CONTINUED									
01643500 - BENNETT CREEK AT PARK MILLS, MD. (LAT 39 17 40 LONG 077 24 30)									
OCT , 1978					APR , 1979				
27...	0830	17	10.0	11.5	05...	1115	145	9.0	9.0
JAN , 1979					27...	0845	75	15.0	14.0
29...	1200	131	3.0	3.0	JUN				
MAR					07...	0840	100	19.0	17.0
08...	0830	222	4.0	4.5	JUL				
30...	1100	111	23.0	12.0	19...	1105	33	22.0	20.5
01645000 - SENECA CREEK AT DAWSONVILLE, MD. (LAT 39 07 41 LONG 077 20 13)									
OCT , 1978					JUL , 1979				
31...	1530	34	16.0	10.5	16...	1445	78	26.5	22.5
JAN , 1979					AUG				
30...	1405	166	1.5	3.0	27...	1155	96	24.0	22.0
MAR					SEP				
26...	1130	243	4.0	6.0	25...	1230	163	16.5	14.5
APR									
30...	1200	116	17.5	12.5					
01645200 - WATTS BRANCH AT ROCKVILLE, MD. (LAT 39 05 03 LONG 077 10 38)									
OCT , 1978					APR , 1979				
30...	1325	.72	14.5	12.0	30...	1415	2.9	18.0	16.0
JAN , 1979					JUL				
23...	1420	3.9	3.5	3.5	19...	1330	1.7	24.0	21.5
FEB					AUG				
25...	1735	166	3.5	1.5	27...	1350	2.6	26.5	22.5
MAR									
05...	1355	22	14.0	9.0					
01648000 - ROCK CREEK AT SHERRILL DRIVE, WASHINGTON, D. C. (LAT 38 58 21 LONG 077 02 25)									
NOV , 1978					APR , 1979				
21...	1340	22	10.5	7.5	03...	1125	131	11.0	11.5
MAR , 1979									
12...	1055	143	4.0	4.0					
01649500 - N.E. BR. ANACOSTIA RIVER AT RIVERDALE, MD. (LAT 38 57 37 LONG 076 55 34)									
APR , 1979					JUL , 1979				
03...	1345	196	12.0	12.0	27...	1425	35	29.5	29.5
JUL									
03...	1100	48	25.0	4.5					
01650500 - N W BR ANACOSTIA R NR COLESVILLE, MD (LAT 39 03 55 LONG 077 01 48)									
MAY , 1979									
01...	1350	18	19.0	17.0					
01651000 - NORTHWEST BRANCH ANACOSTIA RIVER NEAR HYATTSVILLE (LAT 38 57 09 LONG 076 58 00)									
OCT , 1978					MAR , 1979				
16...	1550	7.2	9.5	12.5	07...	1455	82	13.0	10.0
JAN , 1979					12...	1255	71	7.0	7.5
10...	1155	47	1.0	1.0					
01653600 - PISCATAWAY CREEK AT PISCATAWAY, MD. (LAT 38 42 20 LONG 076 58 00)									
OCT , 1978					APR , 1979				
18...	1510	1.8	13.5	10.5	26...	1000	33	18.0	17.0
JAN , 1979									
15...	1225	67	-1.0	1.0					
01661050 - ST. CLEMENT CREEK NEAR CLEMENTS, MARYLAND (LAT 38 20 00 LONG 076 43 31)									
OCT , 1978					DEC , 1978				
19...	1210	3.6	11.0	10.0	05...	1230	63	10.0	10.0

TEMPERATURE MEASUREMENTS AT GAGING STATIONS
WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)
POTOMAC RIVER BASIN--CONTINUED									
01661500 - ST. MARYS RIVER AT GREAT MILLS, MD. (LAT 38 14 36 LONG 076 30 13)									
DEC , 1978					APR , 1979				
05...	1615	50	8.5	10.0	25...	0915	13	26.0	16.5
MONONGAHELA RIVER BASIN									
03075500 - YOUGHIOGHENY RIVER NEAR OAKLAND, MD. (LAT 39 25 19 LONG 079 25 32)									
OCT , 1978					MAY , 1979				
19...	1255	42	12.0	8.5	16...	1230	345	14.0	13.0
NOV					JUL				
30...	1355	656	4.0	5.0	13...	1325	62	24.0	20.0
APR , 1979					AUG				
10...	1410	549	7.0	5.0	30...	1025	103	19.0	19.5
03076500 - YOUGHIOGHENY RIVER AT FRIENDSVILLE, MD. (LAT 39 39 13 LONG 079 24 31)									
OCT , 1978					JUL , 1979				
19...	1025	94	13.0	10.5	10...	1200	118	18.0	19.5
NOV					AUG				
30...	1100	1130	5.0	5.0	31...	1125	194	22.0	19.0
APR , 1979									
10...	0950	1100	4.0	5.0					
03076600 - BEAR CREEK AT FRIENDSVILLE, MD. (LAT 39 39 22 LONG 079 23 41)									
OCT , 1978					MAY , 1979				
19...	0925	13	11.0	7.5	16...	1015	51	13.0	11.0
NOV					JUL				
30...	1200	136	5.0	4.0	18...	1400	33	18.5	16.0
APR , 1979					AUG				
10...	1135	119	4.0	5.0	31...	1210	39	25.0	19.0
03078000 - CASSELMAN RIVER AT GRANTSVILLE, MD. (LAT 39 42 08 LONG 079 08 12)									
OCT , 1978					MAY , 1979				
18...	1250	18	9.0	7.5	15...	1415	82	17.0	15.0
NOV					JUL				
29...	1315	152	-1.0	2.5	13...	1055	22	23.0	21.0
MAR , 1979					AUG				
30...	1035	127	17.0	9.0	30...	1605	47	24.0	20.0

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations and the second is a table of annual maximum stage and discharge at crest-stage stations. Discharge measurements made at miscellaneous sites for both low flow and high flow are given in a third table.

Low-flow partial-record stations

Measurements of streamflow in the area covered by this report made at low-flow partial-record stations are given in the following table. These measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements, when correlated with the simultaneous discharge of a nearby stream where 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 made at low-flow partial-record stations during water year 1979

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Measurements	
					Date	Discharge (ft ³ /s)
Susquehanna River basin						
01579875	Deer Creek at Gorsuch Mills, MD	Lat 39°42'21", long 76°35'15", Baltimore County, at bridge on West Liberty Road at Gorsuch Mills, and 0.8 mi downstream from Harris Mill Creek.	25	1975-79	11- 3-78 5- 2-79	12 34
01579900	Big Branch at Harkins, MD	Lat 39°41'53", long 76°27'59", Harford County, at bridge on State Highway 517, 0.8 mi west of Harkins, and 1.8 mi upstream from mouth.	6.39	1975-79	11- 3-78 5- 2-79	3.7 8.2
01579925	Little Deer Creek near Federal Hill, MD	Lat 39°39'42", long 76°26'55", Harford County, at bridge on State Highway 165, 0.5 mi upstream from mouth, and 1.9 mi northeast of Federal Hill.	14.0	1975-79	11- 3-78 5- 2-79	6.8 19
Gunpowder River basin						
01581830	Grave Run near Beckleysville, MD	Lat 39°39'17", long 76°46'47", Baltimore County, at bridge on Upper Beckleysville Road, 0.9 mi north of Beckleysville, and 1.7 mi downstream from Indian Run.	7.68	1977-79	11- 3-78 5- 2-79	3.4 11
01581870	Georges Run near Beckleysville, MD	Lat 39°37'33", long 76°46'23", Baltimore County, at bridge on Georges Creek Road, 0.6 mi upstream from mouth, and 1.2 mi south of Beckleysville.	15.8	1977-79	11- 3-78 5- 2-79	6.2 15
01581960	Beetree Run at Bentley Springs, MD	Lat 39°40'23", long 76°40'31", Baltimore County, at bridge on Bentley Road in Bentley Springs, and 200 feet upstream from mouth.	9.72	1975-79	11- 3-78 5- 2-79	5.4 13
01581980	Third Mine Branch near Stablersville, MD	Lat 39°39'27", long 76°37'24", Baltimore County, at bridge on Ensor Road, 0.6 mi northwest of Stablersville, and 2.6 mi upstream from mouth.	5.27	1975-79	11 -3-78 5- 2-79	2.5 7.5
01582900	Greene Branch at Phoenix, MD	Lat 39°30'22", long 76°36'50", Baltimore County, at bridge on Phoenix Road, 0.4 mi upstream from mouth, and 0.6 mi northwest of Phoenix.	4.45	1973, 1975-79	11- 6-78 5- 2-79	1.8 7.0
01583100	Piney Run at Dover, MD	Lat 39°31'17", long 76°46'00", Baltimore County, at bridge on State Highway 128, 0.7 mi north of Dover, and 0.8 mi upstream from mouth.	12.3	1975-79	11- 6-78 5- 2-79	5.8 14
Patapsco River basin						
01585700	Deep Run at Lawndale, MD	Lat 39°32'06", long 76°52'33", Carroll County, at bridge on county highway, 0.9 mi upstream from mouth, and 1.0 mi north of Lawndale.	6.70	1975-79	11- 3-78 5- 1-79	3.2 6.3

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DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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Discharge measurements made at low-flow partial-record stations during water year 1979

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Measurements	
					Date	Discharge (ft ³ /s)
Patapsco River basin--Continued						
01586550	Middle Run near Finksburg, MD	Lat 39°27'44", long 76°54'30", Carroll County, at bridge on Louisville Road, 1.0 mi upstream from Prugh Branch, and 1.5 mi east of Gamber.	6.18	1973, 1975-79	11- 3-78 5- 1-79	3.4 6.2
01586650	Little Morgan Run near Eldersburg, MD	Lat 39°25'35", long 76°57'40", Carroll County, at bridge on Bartholow Road, 0.7 mi north of Johnsville, and 0.9 mi upstream from mouth.	7.13	1973, 1976-79	11- 3-78 5- 1-79	3.4 7.6
01587070	South Branch Patapsco River at Woodbine, MD	Lat 39°21'44", long 77°04'00", Carroll County, at bridge on county highway, 0.1 mi upstream from Gillis Falls, and 0.3 mi west of Woodbine.	11.4	1975-79	11- 3-78 5- 1-79	3.6 12
01587170	Gillis Falls at Woodbine, MD	Lat 39°21'48", long 77°03'59", Carroll County, at bridge on dirt road, 0.2 mi upstream from mouth, and 0.3 mi northwest of Woodbine.	19.4	1975-79	11- 3-78 5- 1-79	6.5 20
01589080	Deep Run at Hanover, MD	Lat 39°11'24", long 76°43'12", Howard County, at bridge on county highway, 0.3 mi southeast of Hanover, and 2.4 mi upstream from mouth.	18.0	1975-79	11- 6-78 5- 1-79	3.8 17
01589230	Red Run near Owings Mills, MD	Lat 39°24'17", long 76°46'45", Baltimore County, at bridge on Painters Mill Road, 0.2 mi upstream from mouth, and 1.1 mi south of Owings Mills.	7.39	1975-79	11- 3-78 5- 2-79	3.1 8.9
01589370	Jones Falls at Eccleston, MD	Lat 39°24'35", long 76°43'37", Baltimore County, at bridge on State Highway 129 at Eccleston, and 1.1 mi up- stream from North Branch.	2.86	1976-79	11- 3-78 5- 2-79	2.9 5.5
Patuxent River basin						
01590900	Cabin Branch near Florence, MD	Lat 39°16'36", long 77°06'20", Howard County, at bridge on light-duty road, 0.9 mi upstream from mouth, and 2.3 mi south of Florence.	8.36	1975-79	11- 7-78 5- 3-79	4.2 10
01591375	Cattail Creek tributary at Daisy, MD	Lat 39°17'58", long 77°03'52", Howard County, at bridge on Daisy Road, 0.3 mi upstream from mouth, and 0.5 mi north of Daisy.	3.12	1977-79	11- 7-78 5- 3-79	1.8 3.4
01591650	Hawlings River near Unity, MD	Lat 39°13'03", long 77°06'21", Mont- gomery County, at bridge on Sundown Road, 2.2 mi southwest of Unity, and 5.0 mi upstream from Reddy Branch.	5.08	1977-79	11- 7-78 5- 3-79	1.8 6.0
01591700	Hawlings River near Sandy Spring, MD	Lat 39°10'29", long 77°01'22", Mont- gomery County, 100 ft downstream from bridge on State Highway 650, 1.0 mi upstream from mouth, and 1.7 mi north of Sandy Spring.	27.2	1975-79	11- 7-78 5- 3-79	14 28
01593650	Middle Patuxent River tribu- tary near Dayton, MD	Lat 39°14'12", long 76°56'27", Howard County, at bridge on Sheppard Road, 1.6 mi upstream from mouth, and 2.5 mi east of Dayton.	4.25	1977-79	11- 6-78 5- 3-79	1.7 3.9
01593700	Middle Patuxent River tribu- tary near Clarksville, MD	Lat 39°12'00", long 76°55'12", Howard County, 0.1 mi upstream from bridge on Trotter Road, 0.8 mi upstream from mouth, and 1.3 mi southeast of Clarksville.	6.24	1977-79	11- 6-78 5- 3-79	2.5 5.4
01594300	Towers Branch at Conaways, MD	Lat 39°02'00", long 76°41'38", Anne Arundel County, at bridge on Evergreen Road, 0.7 mi north of Conaways, and 0.8 mi upstream from mouth.	5.69	1975-79	11- 6-78 5- 2-79	1.2 2.4
01594455	Stocketts Run near Hardesty, MD	Lat 38°52'58", long 76°39'47", Anne Arundel County, at bridge on Sands Road, 0.9 mi upstream from mouth, and 1.3 mi southeast of Hardesty.	6.68	1977-79	11- 6-78 5- 2-79	1.1 7.2
01594465	Rock Branch at Bayard, MD	Lat 38°51'17", long 76°41'16", Anne Arundel County, at bridge on Sands Road, 0.2 mi upstream from mouth, and 0.8 mi northwest of Bayard.	5.88	1977-79	11- 6-78 5- 2-79	.89 6.8

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at low-flow partial-record stations during water year 1979

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Measurements	
					Date	Discharge (ft ³ /s)
Patuxent River basin--Continued						
01594490	Northeast Branch at Kolbes Corner, MD	Lat 38°54'03", long 76°47'35", Prince Georges County, at bridge on State Highway 556, 0.1 mi north of Kolbes Corner, and 0.5 mi upstream from mouth.	7.74	1977-79	11- 3-78 5- 2-79	1.5 7.8
01594525	Collington Branch at Upper Marl- boro, MD	Lat 38°49'16", long 76°44'40", Prince Georges County, at railroad bridge at Upper Marlboro, and 0.1 mi up- stream from mouth.	22.9	1964-66, 1975-79	11- 3-78 5- 1-79	4.7 30
Potomac River basin						
01594975	Glade Run at Steyer, MD	Lat 39°18'08", long 79°19'33", Garrett County, on Steyer Gorman Road, 0.1 mi upstream from mouth, and 0.7 mi west of Steyer.	8.86	1977-79	4-18-79 5- 2-79 8-21-79	13 14 1.6
01596600	Big Run near Swanton, MD	Lat 39°32'45", long 79°08'31", Garrett County, on Big Run Road, 0.3 mi down- stream from Monroe Run, and 7.5 mi northeast of Swanton.	13.4	1977-79	4-17-79 8-21-79	35 2.2
01597100	Middle Fork near Swanton, MD	Lat 39°30'46", long 79°09'17", Garrett County, on Savage River Road, 1.0 mi downstream from Toms Spring Run, and 5.5 mi northeast of Swanton.	10.8	1977-79	4-17-79 8-21-79	21 1.5
01601325	Jennings Run at Corriganville, MD	Lat 39°41'36", long 78°47'17", Allegany County, at bridge on State Highway 36 at Corriganville, and 0.1 mi upstream from mouth.	37.7	1975-78	9-12-78	6.1
01605425	Mill Run at Oldtown, MD	Lat 39°32'26", long 78°36'43", Allegany County, at bridge on county highway, 0.1 mi south of Oldtown, and 0.3 mi upstream from mouth.	10.6	1975-79	5-3-79	5.5
01605475	Seven Springs Run at Old- town, MD	Lat 39°32'29", long 78°36'28", Allegany County, at bridge on county highway at Oldtown, and 1.4 mi downstream from mouth of Trading Run.	9.16	1975-79	5- 3-79	5.2
01608950	Murley Branch near Flint- stone, MD	Lat 39°41'37", long 78°34'07", Allegany County, on Town Creek Road, 0.7 mi upstream from mouth, and 1.1 mi south of Flintstone.	11.9	1977-78	9-21-78	10
01608975	Maple Run near Town Creek, MD	Lat 39°36'46", long 78°31'52", Allegany County, on Jacobs Road, 2.7 mi up- stream from mouth, and 6.0 mi north of Town Creek.	7.10	1977-78	9-21-78	.32
01610060	Fifteen Mile Creek near Piney Grove, MD	Lat 39°41'13", long 78°27'17", Allegany County, at bridge on light-duty road, 1.1 mi upstream from Piclic Run, and 4.3 mi southwest of Piney Grove.	20.2	1975-79	5- 3-79	18
01610065	Deep Run near Little Orleans, MD	Lat 39°39'12", long 78°27'09", Allegany County, at bridge on light-duty road, 0.5 mi upstream from mouth, and 3.9 mi northwest of Little Orleans.	6.26	1975-79	5- 3-79	5.4
01610075	Fifteen Mile Creek at Little Orleans, MD	Lat 39°37'41", long 78°23'22", Allegany County, at bridge on light-duty road at Little Orleans, and 1.5 mi down- stream from Flat Run.	61.6	1975-79	5- 3-79	54
*01610150	Bear Creek at Forest Park, MD	Lat 39°42'07", long 78°19'02", Washing- ton County, at upstream side of cul- vert on U.S. Highway 40, 0.2 mi up- stream from mouth, and 0.9 mi west of Forest Park.	10.4	1975-79	5- 3-79	12
*01613150	Ditch Run near Hancock, MD	Lat 39°41'30", long 78°07'57", Washing- ton County, at upstream side of cul- vert on U.S. Highway 40, 0.3 mi up- stream from mouth, and 2.7 mi east of Hancock.	4.80	1975-79	5- 3-79	2.8

* Also a crest-stage partial-record station.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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Discharge measurements made at low-flow partial-record stations during water year 1979

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Measurements	
					Date	Discharge (ft ³ /s)
Potomac River basin--Continued						
01614525	Rockdale Run at Fairview, MD	Lat 39°42'07", long 77°50'45", Washington County, at bridge on Rockdale Road, 0.7 mi south of Fairview, and 1.7 mi upstream from mouth.	9.67	1976-79	11- 6-78 5- 3-79	3.0 9.9
01614575	Rush Run near Huyett, MD	Lat 39°40'23", long 77°47'37", Washington County, at bridge on State Highway 63, 1.5 mi north of Huyett, and 1.9 mi upstream from mouth.	5.20	1976-79	11- 6-78 5- 3-79	1.6 9.2
01614625	Meadow Brook at Conococheague, MD	Lat 39°38'55", long 77°51'19", Washington County, at bridge on Ridge Road, 0.7 mi southwest of Conococheague, and 2.1 mi upstream from mouth.	6.77	1976-79	11- 6-78 5- 3-79	.71 5.0
01614675	Conococheague Creek tributary near Huyett, MD	Lat 39°37'39", long 77°48'43", Washington County, at bridge on light-duty road, 0.4 mi upstream from mouth, and 1.9 mi south of Huyett.	7.94	1977-79	11- 6-78 5- 3-79	.99 6.0
01617600	Downey Branch near Downsville, MD	Lat 39°32'19", long 77°49'11", Washington County, at bridge on Dellinger Road, 0.6 mi upstream from mouth, and 1.1 mi southwest of Downsville.	3.00	1976-79	11- 6-78 5- 2-79	.91 4.8
01617780	St. James Run at Spielman, MD	Lat 39°33'03", long 77°45'52", Washington County, at bridge on Jordon Road, 0.9 mi north of Spielman, and 1.0 mi upstream from Marsh Run.	7.14	1977-79	11- 6-78 5- 2-79	2.6 5.5
01619050	Little Antietam Creek at Leitersburg, MD	Lat 39°40'57", long 77°37'44", Washington County, at bridge on State Highway 62, 0.4 mi upstream from mouth, and 0.8 mi southwest of Leitersburg.	24.5	1976-79	11- 6-78 5- 3-79	7.8 20
01619145	West Branch at Paramount, MD	Lat 39°41'25", long 77°41'25", Washington County, at bridge on Marsh Pike, 0.3 mi upstream from mouth, and 0.6 mi north of Paramount.	5.07	1977-79	11- 6-78 5- 3-79	1.1 6.3
01619150	Marsh Run at Fiddlesburg, MD	Lat 39°39'29", long 77°41'16", Washington County, at bridge on Old Forge Road at Fiddlesburg, 0.5 mi east of Hagerstown city limits, and 0.6 mi above mouth.	a31	1965-74, 1976-79	11- 6-78 5- 3-79	2.7 26
01619275	Landis Spring Branch near Benevola, MD	Lat 39°34'17", long 77°41'23", Washington County, at bridge on Alternate U.S. Highway 40, 100 ft upstream from mouth, and 1.9 mi northwest of Benevola.	6.60	1976-79	11- 6-78 5- 2-79	1.2 5.2
01619325	Beaver Creek at Benevola, MD	Lat 39°33'04", long 77°40'55", Washington County, at bridge on light-duty road at Benevola, and 0.4 mi upstream from Little Beaver Creek.	22.9	1975-79	11- 6-78 5- 2-79	13 27
01619350	Little Beaver Creek at Benevola, MD	Lat 39°32'48", long 77°40'39", Washington County, at bridge on U.S. Highway 40 (Alternate) at Benevola, and 0.2 mi upstream from Beaver Creek.	8.70	1975-79	11- 6-78 5- 2-79	3.3 8.5
01619480	Little Antietam Creek at Keedysville, MD	Lat 39°29'10", long 77°42'05", Washington County, at bridge on Koffman Lane at Keedysville, and 1.2 mi upstream from mouth.	a24	1964-67, 1976-79	11- 6-78 5- 2-79	6.0 25
01619525	Sharmans Branch near Antietam, MD	Lat 39°25'42", long 77°43'26", Washington County, at bridge on Mills Road, 0.7 mi upstream from mouth, and 1.3 mi northeast of Antietam.	4.62	1977-79	11- 6-78 5- 2-79	.25 2.5
01636730	Israel Creek at Weverton, MD	Lat 39°19'45", long 77°41'03", Washington County, at bridge on light-duty road at Weverton, and 0.1 mi upstream from mouth.	13.2	1975-79	11- 3-78 5- 3-79	1.6 12
01636850	Little Catoctin Creek near Brunswick, MD	Lat 39°19'25", long 77°35'35", Frederick County, at bridge on State Highway 464, 1.4 mi northeast of Brunswick, and 2.4 mi upstream from mouth.	8.64	1977-79	11- 3-78 5- 3-79	.74 4.7

a Approximately.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at low-flow partial-record stations during water year 1979

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Measurements	
					Date	Discharge (ft ³ /s)
Potomac River basin--Continued						
01636975	Middle Creek at Ellerton, MD	Lat 39°31'33", long 77°32'15", Frederick County, at bridge on Crow Rock Road, 0.4 mi east of Ellerton, and 0.4 mi upstream from West Branch.	22.7	1977-79	11- 3-78 5- 2-79	2.1 25
01638600	Tuscarora Creek at Tuscarora, MD	Lat 39°15'06", long 77°28'49", Frederick County, at bridge on light-duty road, 0.7 mi southwest of Tuscarora, and 0.8 mi upstream from mouth.	20.3	1975-79	11- 7-78 5- 2-79	4.8 15
01639325	Friends Creek near Emmitsburg, MD	Lat 39°43'03", long 77°23'35", Frederick County, at concrete ford on Hornets Nest Road, 2.1 mi upstream from mouth, and 3.5 mi northwest of Emmitsburg.	12.2	1977-79	11- 3-78 5- 2-79	.46 16
01639420	Deep Run at Union Mills, MD	Lat 39°40'08", long 77°00'41", Carroll County, at bridge on light-duty road, 0.1 mi upstream from mouth, and 0.7 mi east of Union Mills.	5.46	1975-79	11- 6-78 5- 1-79	.83 5.9
01639440	Silver Run near Silver Run, MD	Lat 39°40'38", long 77°05'37", Carroll County, at bridge on light-duty road, 1.0 mi upstream from mouth, and 2.6 mi west of Silver Run.	8.77	1975-79	11- 6-78 5- 1-79	1.4 6.9
01639465	Bear Branch near Mayberry, MD	Lat 39°38'07", long 77°07'41", Carroll County, at bridge on State Highway 32, 0.8 mi upstream from mouth, and 1.6 mi west of Mayberry.	13.9	1975-79	11- 6-78 5- 1-79	3.6 12
01640160	Beaver Dam Creek near Union Bridge, MD	Lat 39°34'11", long 77°12'53", Frederick County, at bridge on Good Intent Road, 0.4 mi upstream from mouth, and 1.9 mi west of Union Bridge.	7.04	1977-79	11- 3-78 5- 3-79	1.4 5.2
01640600	Owens Creek near Thurmont, MD	Lat 39°38'26", long 77°23'40", Frederick County, at bridge on county highway, 0.8 mi upstream from Little Owens Creek, and 1.2 mi northwest of Thurmont.	14.4	1975-79	11- 3-78 5- 2-79	2.0 26
01640650	Little Owens Creek near Thurmont, MD	Lat 39°38'58", long 77°23'41", Frederick County, at bridge on light-duty road, 1.0 mi upstream from mouth, and 2.0 mi northeast of Thurmont.	6.16	1975-79	11- 3-78 5- 2-79	.84 8.2
01640720	Beaver Branch at Rocky Ridge, MD	Lat 39°36'20", long 77°19'50", Frederick County, at bridge on State Highway 77, 0.6 mi west of Rocky Ridge, and 0.8 mi upstream from mouth.	6.53	1977-79	11- 3-78 5- 2-79	.14 3.3
01641900	Tuscarora Creek near Frederick, MD	Lat 39°27'52", long 77°24'11", Frederick County, 0.1 mi upstream from U.S. Highway 15 bridge, 1.8 mi upstream from mouth, and 2.0 mi north of Frederick.	16.5	1975-79	11- 3-78 5- 3-79	2.6 16
01642050	Israel Creek near Walkersville, MD	Lat 39°28'27", long 77°20'26", Frederick County, at bridge on Crum Road, 1.1 mi southeast of Walkersville, and 2.8 mi upstream from mouth.	a29	1964-66, 1975-79	11- 3-78 5- 3-79	3.5 17
01642450	Bens Branch near New Market, MD	Lat 39°24'58", long 77°16'45", Frederick County, at bridge on light-duty road, 1.1 mi upstream from mouth, and 2.3 mi north of New Market.	11.8	1975-79	11- 3-78 5- 3-79	3.1 11
01643125	Ballenger Creek near Lime Kiln, MD	Lat 39°21'52", long 77°25'01", Frederick County, at bridge on State Highway 85, 0.5 mi upstream from mouth, and 1.2 mi northeast of Lime Kiln.	20.2	1977-79	11- 3-78 5- 3-79	5.3 17
01643400	Little Bennett Creek at Hyattstown, MD	Lat 39°16'46", long 77°18'54", Montgomery County, at bridge on State Highway 355 at Hyattstown, and 0.7 mi downstream from Soper Branch.	12.8	1968-69, 1975-79	11- 7-78 5- 2-79	3.3 11

a Approximately.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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Discharge measurements made at low-flow partial-record stations during water year 1979

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Measurements	
					Date	Discharge (ft ³ /s)
Potomac River basin--Continued						
01643615	Broad Run at Elmer, MD	Lat 39°07'22", long 77°28'52", Montgomery County, at bridge on River Road, 0.5 mi upstream from mouth, and 1.2 mi south of Elmer.	14.0	1975-79	11- 8-78 5- 2-79	.41 5.5
01644425	Bucklodge Branch near Dawsonville, MD	Lat 39°09'11", long 77°20'30", Montgomery County, at bridge on light-duty road, 0.7 mi upstream from mouth, and 1.7 mi north of Dawsonville.	8.47	1975-79	11- 8-78 5- 2-79	1.7 7.1
01644480	Goshen Branch at Goshen, MD	Lat 39°12'10", long 77°12'06", Montgomery County, 0.1 mi upstream from mouth, and 0.7 mi west of Goshen.	7.63	1975-77, 1979	11- 7-78 5- 2-79	3.9 9.2
01645050	Dry Seneca Creek near Seneca, MD	Lat 39°05'38", long 77°20'15", Montgomery County, at bridge on Montevideo Road, 0.4 mi upstream from mouth, and 1.1 mi northwest of Seneca.	19.2	1975-79	11- 8-78 5- 2-79	1.7 7.8
01647620 (revised)	Rock Creek at Redland, MD	Lat 39°08'14", long 77°07'46", Montgomery County, at bridge on State Highway 115, 0.6 mi upstream from Mill Creek and 1.0 mi southeast of Redland.	7.45	1977-79	11- 8-78 5- 3-79	2.7 8.9
01653625	Tinkers Creek at Piscataway, MD	Lat 38°42'50", long 76°58'16", Prince Georges County, at bridge on Gallahan Road, 0.5 mi upstream from mouth, and 0.8 mi north of Piscataway.	15.9	1975-79	11- 3-78 5- 1-79	2.6 14
01660740	Port Tobacco Creek near Marshalls Corner, MD	Lat 38°32'34", long 77°01'04", Charles County, at bridge on State Highway 225, 0.25 mi downstream from Jennie Run, and 1.4 mi southeast of Marshalls Corner.	15.8	1977-79	5- 1-79	18
01660905	Zekiah Swamp Run near Malcom, MD	Lat 38°36'52", long 76°49'59", Charles County, at bridge on State Highway 382, 0.4 mi downstream from Wolf Den Branch, and 2.4 mi west of Malcom.	12.1	1975-79	11- 3-78 5- 1-79	2.1 17
*01660930	Clark Run near Bel Alton, MD	Lat 38°28'21", long 76°57'22", Charles County, at bridge on Newtown Road, 1.5 mi northeast of Bel Alton, and 1.8 mi upstream from mouth.	10.4	1975-79	11- 3-78 5- 1-79	.78 8.5
Monongahela River basin						
03075350	Cherry Creek near Crellin, MD	Lat 39°22'06", long 79°27'16", Garrett County, at bridge on Underwood Road, 0.4 mi upstream from mouth, and 1.5 mi south of Crellin.	16.7	1977-79	4-19-79 5- 2-79 8-22-79	23 22 4.4
03075475	Little Youghiogheny River at Loch Lynn Heights, MD	Lat 39°23'54", long 79°22'11", Garrett County, at bridge on State Highway 41, 0.4 mi northeast of Loch Lynn Heights, and 3.2 mi downstream from Block Run.	13.2	1975-79	5- 2-79	24
03075900	Cherry Creek near McHenry, MD	Lat 39°32'20", long 79°18'55", Garrett County, 200 ft east of Rock Lodge Road, 200 ft upstream from mouth, and 2.4 mi southeast of McHenry.	12.3	1973, 1975-79	5- 2-79	17
03076590	South Branch Bear Creek near Friendsville, MD	Lat 39°39'11", long 79°23'06", Garrett County, at bridge on light-duty road, 100 ft upstream from mouth, and 1.2 mi southeast of Friendsville.	16.8	1975-79	5- 2-79	17
03077925	North Branch Casselman River near Grantsville, MD	Lat 39°40'08", long 79°10'43", Garrett County, at bridge on State Highway 495, 250 ft upstream from confluence with South Branch Casselman River, and 2.3 mi southwest of Grantsville.	24.4	1975-79	4-17-79 5- 2-79	93 30
03077950	South Branch Casselman River near Grantsville, MD	Lat 39°40'05", long 79°10'42", Garrett County, 250 ft upstream from confluence with North Branch Casselman River, 2.2 mi southwest of Grantsville.	20.8	1975-79	5- 2-79	27

* Also a crest-stage partial-record station.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain, but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained, but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Annual maximum discharge at crest-stage partial-record stations during water year 1979

					Annual maximum		
Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Date	Gage height (ft)	Dis-charge (ft ³ /s)
Susquehanna River basin							
01577940	Broad Creek tributary at Whiteford, MD	Lat 39°42'14", long 76°21'49", Harford County, at upstream side of culvert on State Highway 165, 0.8 mi upstream from mouth, and 1.0 mi southwest of Whiteford.	.77	1971-79	9-22-79	7.6	210
Gunpowder River basin							
01582510	Piney Creek near Hereford, MD	Lat 39°34'38", long 76°40'39", Baltimore County, at upstream side of culvert on Highway I-83, 1.1 mi southwest of Hereford, and 5.3 mi upstream from mouth.	al.5	1962-79	9- 6-79	20.6	1,450
01584500	Little Gunpowder Falls at Laurel Brook, MD	Lat 39°30'18", long 76°25'56", Baltimore County, 750 ft upstream from bridge on Bottom Road, 5 mi southwest of Bel Air, and 10.5 mi upstream from mouth.	36.1	1927-70†, 1971-79	9- 6-79	9.5	7,920
Patapsco River basin							
01589240	Gwynns Falls at McDonogh, MD	Lat 39°23'28", long 76°45'56", Baltimore County, at bridge on McDonogh Road at McDonogh, and 0.3 mi upstream from Horsehead Branch.	19.3	1958-79	9- 6-79	al0.0	2,400
Potomac River basin							
01596005	Savage River near Frostburg, MD	Lat 39°40'56", long 78°57'54", Garrett County, at upstream side of culvert on U.S. Highway 40, 1.9 mi northwest of Frostburg city limits, and about 26 mi upstream from mouth.	al.5	1971-79	3- 5-79	19.5	51
01601000	Wills Creek below Hyndman, PA	Lat 39°48'43", long 78°43'00", Bedford County, 150 ft above county highway bridge, 150 ft downstream from Pennsylvania Railroad bridge, 0.35 mi downstream from Little Wills Creek, and 0.5 mi south of Hyndman.	146	1951-67†, 1968-79	3- 5-79	7.52	5,230
01610105	Pratt Hollow tributary at Pratt, MD	Lat 39°41'35", long 78°30'18", Allegany County, at upstream side of culvert on U.S. Highway 40, 0.2 mi northeast of Pratt, and 1.0 mi upstream from Kifer Hollow.	.70	1971-79	3- 5-79	11.2	32

a Approximately.

† Operated as a continuous-record station.

Annual maximum discharge at crest-stage partial-record stations during water year 1979

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Annual maximum		
					Date	Gage height (ft)	Dis-charge (ft ³ /s)
Potomac River Basin--Continued							
*01610150	Bear Creek at Forest Park, MD	Lat 39°42'07", long 78°19'02", Washington County, at upstream side of culvert on U.S. Highway 40, 0.2 mi upstream from mouth, and 0.9 mi west of Forest Park.	10.4	1965-69, 1971-79	3- 5-79	5.6	430
*01613150	Ditch Run near Hancock, MD	Lat 39°41'30", long 78°07'57", Washington County, at upstream side of culvert on U.S. Highway 40, 0.3 mi upstream from mouth, and 2.7 mi east of Hancock.	a4.8	1965-79	3- 5-79	6.5	285
01640000	Little Pipe Creek at Avondale, MD	Lat 39°33'40", long 77°02'38", Carroll County, at private bridge 0.1 mi below Copps Branch, and 0.5 mi northwest of Avondale.	8.10	1948-56†, 1959-64, 1967-79	9- 6-79	4.68	452
01646550	Little Falls Branch near Bethesda, MD	Lat 38°57'27", long 77°06'31", Montgomery County, on left bank at downstream side of bridge on Massachusetts Avenue, 1.7 mi upstream from mouth, and 2.0 mi southwest of Bethesda.	a4.1	1944-59†, 1960-61, 1962-78†, 1979	9- 5-79	4.19	993
01658000	Mattawoman Creek near Pomonkey MD	Lat 38°35'45", long 77°03'25", Charles County, at downstream side of bridge on State Highway 227, 1.2 mi southeast of Pomonkey, and 12.6 mi upstream from mouth.	54.8	1949-72†, 1973-79	9- 6-79	6.48	4,900
01660900	Wolf Den Branch near Cedarville, MD	Lat 38°38'29", long 76°49'02", Charles County, at upstream side of culvert on Forest Road, 1.5 mi upstream from mouth, and 1.6 mi southwest of Cedarville.	a2.3	1966-79	9- 6-79	9.0	480
Monongahela River basin							
03075600	Toliver Run tributary near Hoyes Run, MD	Lat 39°29'39", long 79°25'14", Garrett County, at upstream side of culvert on Swallow Falls Road, 100 ft upstream from mouth, and 2.4 mi south of Hoyes Run.	.53	1965-79	5-13-79	5.1	38
03078500	Big Piney Run near Salisbury, PA	Lat 39°43'34", long 79°02'55", Somerset County, 660 ft upstream from Little Piney Run, and 2.5 mi southeast of Salisbury.	24.5	1932-70†, 1974-79	3- 5-79	4.64	1,310

* Also a low-flow partial-record station.

a Approximately.

† Operated as a continuous-record station.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Annual maximum discharge at crest-stage partial-record stations during water year 1979

Tidal crest-stage partial-record stations

The following table contains annual maximum stages for tidal crest-stage stations. The information is obtained from a crest-stage gage or a water-stage recorder located at each site. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. All stages are elevations above National Geodetic Vertical Datum of 1929. Only the maximum stage is given. Information on some other high stages 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 stage at tidal crest-stage partial-record stations during water year 1979

Station No.	Station name	Location	Period of Record	Annual maximum	
				Date	Elevation, in feet NGVD
Smyrna River basin					
01483335	Duck Creek at Smyrna, DE	Lat 39°18'31", long 75°36'34", Kent County, at bridge on U.S. High- way 13, at north edge of Smyrna, 2 mi north of intersection of State Highway 300 and U.S. Highway 13 on downstream right wingwall of bridge.	1966-79	2-26-79	5.55
Murderkill River basin					
01484085	Murderkill River at Bowers, DE	Lat 39°03'30", long 75°23'51", Kent County, at Faulkner's Landing in Bowers, on left bank 10 ft south- east of southeast corner of res- taurant on Faulkner's Pier.	1966-79	2-26-79	6.47
Cedar Creek basin					
01484235	Cedar Creek near Slaughter Beach, DE	Lat 38°56'06", long 75°19'26", Sussex County, at bridge No. S-164 on State Highway 36, 1.8 mi northwest of Slaughter Beach.	1966-79	2-26-79	4.65
Indian River basin					
01484595	Indian River at Oak Orchard, DE	Lat 38°35'45", long 75°10'24", Sussex County, at Hanes Landing 2.0 mi southeast of intersection of State Highways 24 and 5, at Oak Orchard.	1966-79	2-26-79	4.20

Measurements at miscellaneous sites

Measurements of streamflow at points other than gaging stations or partial-record stations are given in the following table. All measurements in this table were made during periods of base flow, except as otherwise noted.

Discharge measurements made at miscellaneous sites during water year 1979

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
Gunpowder River basin						
01581955 Gunpowder Falls	Gunpowder River	Lat 39°36'32", long 76°38'08", Baltimore County, at bridge on Big Falls Road, 2.0 mi northeast of Hereford, Md.	91.6	1975-78	10-16-78	29
					11-28-78	65
					4-26-79	124
					6- 7-79	165
					7-11-79	74
	8-28-79	82				
01583985 Gunpowder Falls	Gunpowder River	Lat 39°25'31", long 76°31'47", Baltimore County, at bridge on Crowwell Bridge Road, 0.5 mi northeast of Loch Raven, Md.	308	1975-78	11-20-78	3.2
					8-20-79	65
					9-20-79	146
Potomac River basin						
Hoffman Drainage Tunnel	Braddock Run	Lat 39°38'18", long 78°53'38", Allegany County, upstream from State Highway 55, 0.5 mi southwest of Clarysville, and 2.1 mi southeast of Frostburg, Md.	--	1944, 1958-59, 1964, 1965, 1967-78	8-20-79	18
01601490 Braddock Run	Wills Creek	Lat 39°40'12", long 78°47'37", Allegany County, 0.2 mi upstream from mouth, and 2.0 mi northwest of Cumberland, Md.	17.5	1975-78	10-18-78	18
					3-16-79	61
					4-17-79	58
					8- 1-79	24
					8-22-79	22
	9-18-79	26				
01643580 Monocacy River	Potomac River	Lat 39°14'11", long 77°26'25", Frederick County, at bridge on State Highway 28, 1.9 mi northwest of Dickerson, Md., and 2.0 mi upstream from mouth.	968	1975-77	9-27-79	1220
01645080 Seneca Creek	Potomac River	Lat 39°05'28", long 77°19'47", Montgomery County, 50 ft upstream from Hooker Branch, 1.0 mi northeast of Seneca, Md., and 1.9 mi upstream from mouth.	128	1975-78	8-24-79	127

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

Water-quality partial-record stations are particular sites where chemical-quality, biological, and/or sediment data are collected systematically over a period of years for use in hydrologic analyses. The data are collected usually less than quarterly.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DELAWARE RIVER BASIN

01477875 - CHRISTINA RIVER AT HUNTING HILLS, NEWARK, DE

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARDNESS (MG/L AS CaCO_3)	HARDNESS, NONCARBONATE (MG/L AS CaCO_3)	CALCIUM, DIS-SOLVED (MG/L AS Ca)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg)
NOV 24...	1200	5.1	125	7.6	6.0	9.0	12.0	23	5	3.8	3.4

DATE	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DIS-SOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO_3)	ALKALINITY (MG/L AS CaCO_3)	SULFATE, DIS-SOLVED (MG/L AS SO_4)	CHLORIDE, DIS-SOLVED (MG/L AS Cl)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO_2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
NOV 24...	7.4	37	.7	2.7	22	18	13	9.8	.0	16	80

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, $\text{NO}_2 + \text{NO}_3$ TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO_3)
NOV 24...	67	.11	1.10	2.2	.00	2.2	.03	.04	.07	2.3	10

DATE	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)	CHROMIUM, DIS-SOLVED (UG/L AS Cr)	COBALT, DIS-SOLVED (UG/L AS Co)	COPPER, DIS-SOLVED (UG/L AS Cu)	IRON, DIS-SOLVED (UG/L AS Fe)	MANGANESE, DIS-SOLVED (UG/L AS Mn)	NICKEL, DIS-SOLVED (UG/L AS Ni)	ZINC, DIS-SOLVED (UG/L AS Zn)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
NOV 24...	.01	.01	0	1	0	70	30	0	10	.00

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA
WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DELAWARE RIVER BASIN--CONTINUED

01477875 CHRISTINA RIVER AT HUNTING HILLS, NEWARK, DE
BENTHIC INVERTEBRATE ANALYSES, OCTOBER 1978 TO NOVEMBER 1978

DATE	NOV 24, 78
TIME	1200
TOTAL COUNT	129
DIVERSITY: PHYLUM	0.5
..CLASS	0.5
...ORDER	1.3
....FAMILY	1.6
.....GENUS	2.9
.....GENUS-INSECTA	2.5

ORGANISM	COUNT
ANNELIDA	
..OLIGOCHAETA	
...PLESIOPORA	
....NAIDIDAE	
.....UNKNOWN GENUS	5
ARTHROPODA (ARTHROPODS)	
..INSECTA	
...DIPTERA	
....CHIRONOMIDAE	
.....CONCHAPELOPIA, ARCTO, RHEO	2
.....CRICOTOPUS	6
.....DIAMESA	1
.....MICROTENDIPES	1
.....RHEOTANYTARSUS	6
.....THIENEMANNIELLA	1
...TIPULIDAE	
....ANTOCHA	3
...PLECOPTERA	
...CAPNIIDAE	
....CAPNIA	3
...NEMOURIDAE	
....UNKNOWN GENUS	2
...TRICHOPTERA	
....GLOSSOSOMATIDAE	
.....GLOSSOSOMA	1
....HYDROPSYCHIDAE	
.....CHEUMATOPSYCHE	46
.....SYMPHITOPSYCHE	32
....HYDROPSYCHE	14
MOLLUSCA (MOLLUSCS)	
..GASTROPODA	
...BASOMMATOPHORA	
....ANCYLIDAE	
.....FERRISSIA	2
....LYMNAEIDAE	
.....LYMNAEA	1
...PHYSIDAE	
....PHYSA	3

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DELAWARE RIVER BASIN--CONTINUED

01477960 - CHRISTINA RIVER AT ROLLING GREEN, NEWARK, DE

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARDNESS (MG/L AS CaCO3)	HARDNESS, NONCARBONATE (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg)
NOV 24...	0930	10	165	7.3	9.0	8.0	11.1	47	21	12	4.1

DATE	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DIS-SOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	ALKALINITY (MG/L AS CaCO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS Cl)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
NOV 24...	11	32	.7	3.1	32	26	16	15	.1	15	104

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)
NOV 24...	92	.14	2.94	1.9	.01	1.9	.04	.29	.33	2.2	9.9

DATE	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)	CHROMIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	MANGANESE, DIS-SOLVED (UG/L AS MN)	NICKEL, DIS-SOLVED (UG/L AS NI)	ZINC, DIS-SOLVED (UG/L AS ZN)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
NOV 24...	.08	.06	0	0	1	100	30	0	10	.00

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA
WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DELAWARE RIVER BASIN--CONTINUED

01477960 CHRISTINA RIVER AT ROLLING GREEN, NEWARK, DE
BENTHIC INVERTEBRATE ANALYSES, OCTOBER 1978 TO NOVEMBER 1978

DATE	NOV 24.78
TIME	0930
TOTAL COUNT	135
DIVERSITY: PHYLUM	0.5
.CLASS	0.5
..ORDER	1.1
...FAMILY	1.2
....GENUS	2.4
....GENUS-INSECTA	2.1

ORGANISM	COUNT
ANNELIDA	
.OLIGOCHAETA	
..PLESIOPORA	
...NAIDIDAE	
....UNKNOWN GENUS	9
ARTHROPODA (ARTHROPODS)	
.INSECTA	
..DIPTERA	
...CHIRONOMIDAE	
....CRICOTOPUS	6
....RHEOTANYTARSUS	3
...TIPULIDAE	
....ANTOCHA	3
..EPHEMEROPTERA	
...HEPTAGENIIDAE	
....STENONEMA	1
...SIPHONURIDAE	
....ISONYCHIA	4
..TRICHOPTERA	
...HYDROPSYCHIDAE	
....CHEUMATOPSYCHE	26
....SYMPHITOPSYCHE	21
....HYDROPSYCHE	60
MOLLUSCA (MOLLUSCS)	
.GASTROPODA	
..BASOMMATOPHORA	
...ANCYLIDAE	
....FERRISSIA	1
PLATYHELMINTHES (FLATWORMS)	
.TURBELLARIA	
..TRICLADIDA	
...PLANARIIDAE	
....UNKNOWN GENUS	1

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DELAWARE RIVER BASIN--CONTINUED

01478700 - WHITE CLAY CREEK BELOW NEWARK, DE

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCTI- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
NOV 27...	1235	76	219	7.2	4.5	4.5	13.0	80	38	20	7.2
DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	ALKA- LINITY (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 27...	8.5	18	.4	3.2	51	42	22	18	.0	12	126
DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	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)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)
NOV 27...	119	.17	25.9	2.8	.02	2.8	.00	.26	.26	3.1	14
DATE	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
NOV 27...	.07	.04	2	0	1	3	50	50	0	2800	.00

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA
WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DELAWARE RIVER BASIN--CONTINUED

01478700 WHITE CLAY CREEK BELOW NEWARK, DE
BENTHIC INVERTEBRATE ANALYSES, OCTOBER 1978 TO NOVEMBER 1978DATE NOV 27,78
TIME 1235

TOTAL COUNT 1

DIVERSITY: PHYLUM	0.0
..CLASS	0.0
...ORDER	0.0
....FAMILY	0.0
.....GENUS	0.0
.....GENUS-INSECTA	0.0

ORGANISM COUNT

ARTHROPODA (ARTHROPODS)	
..INSECTA	
...DIPTERA	
....CHIRONOMIDAE	
.....CRICOTOPUS	1

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DELAWARE RIVER BASIN--CONTINUED

01478880 - TRID. TO WHITE CLAY CR. NR. NEWARK, DEL.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	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 CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
APR 02...	1140	1.3	255	6.3	9.0	10.0	30	10.8	79	55	17	8.8

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
APR 02...	14	27	.7	2.9	29	24	23	40	23	.1	7.0	146

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 TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	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)
APR 02...	129	.20	.51	2.0	.05	2600	1100	1500	370	20	350

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DELAWARE RIVER BASIN--CONTINUED

01479955 - MED CLAY CREEK AT ASHLAND, DE

DATE	TIME	STREAM- FLOW- INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCTI- ANCE (MICHO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
NOV 27...	1350	30	383	7.6	4.0	4.5	11.4	100	35	26	9.4
DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	ALKA- LINITY (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 27...	30	37	1.3	7.0	84	69	49	32	.1	15	234
DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	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)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)
NOV 27...	211	.32	19.0	3.5	.01	3.5	.13	1.1	1.2	4.7	21
DATE	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	
NOV 27...	.27	.05	2	1	6	80	60	2	570	.10	

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA
WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DELAWARE RIVER BASIN--CONTINUED

01479955 RED CLAY CREEK AT ASHLAND, DE
BENTHIC INVERTEBRATE ANALYSES, OCTOBER 1978 TO NOVEMBER 1978

DATE	NOV 27, 78
TIME	1350
TOTAL COUNT	129
DIVERSITY: PHYLUM	0.4
..CLASS	0.4
...ORDER	0.4
....FAMILY	0.4
....GENUS	0.4
....GENUS-INSECTA	1.3

ORGANISM	COUNT
ARTHROPODA (ARTHROPODS)	
..INSECTA	
...DIPTERA	
....CHIRONOMIDAE	
....CHIRONOMUS	1
....CONCHAPELOPIA, ARCTO, RHEO	1
....LIMNOCHIRONOMUS	4
MOLLUSCA (MOLLUSCS)	
..GASTROPODA	
...BASOMMATOPHORA	
....PHYSIDAE	
....PHYSA	121
PLATYHELMINTHES (FLATWORMS)	
..TURBELLARIA	
...TRICLADIDA	
....PLANARIIDAE	
....UNKNOWN GENUS	2

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DELAWARE RIVER BASIN--CONTINUED

01440019 - RED CLAY CREEK AT STANTON, DE

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICHO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
NOV 28...	0950	62	250	7.5	3.5	4.0	12.8	80	39	20	7.4
DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HC03)	ALKA- LINITY (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)
NOV 28...	15	28	.7	3.4	51	42	27	24	.1	14	154
DATE	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	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)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)
NOV 28...	137	.21	25.8	2.7	.02	2.7	.08	.38	.46	3.2	14
DATE	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	
NOV 28...	.16	.12	2	0	2	80	550	0	310	.10	

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA
WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DELAWARE RIVER BASIN--CONTINUED

01480019 RED CLAY CREEK AT STANTON, DE
BENTHIC INVERTEBRATE ANALYSES, OCTOBER 1978 TO NOVEMBER 1978

DATE	NOV 28.78
TIME	0950
TOTAL COUNT	3
DIVERSITY: PHYLUM	0.9
..CLASS	0.9
...ORDER	1.6
...FAMILY	1.6
....GENUS	1.6
....GENUS-INSECTA	1.0

ORGANISM	COUNT
ARTHROPODA (ARTHROPODS)	
..INSECTA	
...DIPTERA	
....CHIRONOMIDAE	
....CARDIACLADIUS	1
...TRICHOPTERA	
....HYDROPSYCHIDAE	
....HYDROPSYCHE	1
MOLLUSCA (MOLLUSCS)	
..GASTROPODA	
...BASOMMATOPHORA	
...PHYSIDAE	
....PHYSA	1

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DELAWARE RIVER BASIN--CONTINUED

01491240 - SPANDYWINE CREEK AT SMITH BRIDGE, DE

DATE	TIME	STREAM- FLOW- INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS, DIS- SOLVED AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
NOV 20...	1120	220	210	7.5	8.5	9.0	10.7	78	37	20	6.7

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	ALKA- LINITY (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 20...	9.7	20	.5	3.5	49	40	25	16	.1	13	132

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	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)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)
NOV 20...	118	.18	78.4	2.3	.04	2.3	.08	.50	.58	2.9	13

DATE	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CORALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
NOV 20...	.19	.16	0	1	2	90	40	3	10	.00

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA
WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DELAWARE RIVER BASIN--CONTINUED

01481280 BRANDYWINE CREEK AT SMITH BRIDGE, DE
BENTHIC INVERTEBRATE ANALYSES, OCTOBER 1978 TO NOVEMBER 1978

DATE NOV 20, 78
TIME 1120

TOTAL COUNT 883

DIVERSITY: PHYLUM 0.1
 ..CLASS 0.1
 ..ORDER 1.3
 ...FAMILY 1.6
 GENUS 3.1
 GENUS-INSECTA 3.0

ORGANISM COUNT

ANNELIDA
..OLIGOCHAETA
...PLESIOPORA
...NAIDIDAE
....UNKNOWN GENUS 4

ARTHROPODA (ARTHROPODS)
..INSECTA
...COLEOPTERA
...PSEPHENIDAE
....PSEPHENUS 1
...DIPTERA
...CHIRONOMIDAE
....CARDIOCLADIUS 10
....CRICOTOPUS 64
....DIAMESA 38
....ORTHOCLADIUS 8
....POLYPEDILUM 8
....RHEOCRICOTOPUS 22
....RHEOTANYTARSUS 44
....THIENEMANNIELLA 4
...EMPIDIDAE
...HEMERODROMIA 2
...SIMULIIDAE
...SIMULIUM 16
...TIPULIDAE
...ANTOCHA 6
...EPHEMEROPTERA
...EPHEMERELLIDAE
...EPHEMERELLA 1
...HEPTAGENIIDAE
...STENONEMA 47
...TRICHOPTERA
...GLOSSOSOMATIDAE
....GLOSSOSOMA 1
...HYDROPSYCHIDAE
...CHEUMATOPSYCHE 233
...SYMPHITOPSYCHE 260
...HYDROPTILIDAE
...LEUCOTRICHIA 17
...HYDROPSYCHIDAE
...HYDROPSYCHE 81
...LEPIDOPTERA
...PYRALIIDAE
...PARARGYACTIS 7

MOLLUSCA (MOLLUSCS)
..GASTROPODA
...BASOMMATOPHORA
...ANCYLIDAE
....FERRISSIA 4

PLATYHELMINTHES (FLATWORMS)
..TURBELLARIA
...TRICLADIDA
...PLANARIIDAE
....UNKNOWN GENUS 5

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DELAWARE RIVER BASIN--CONTINUED

01441490 - BRANDYWINE CR. AT HAGLEY MUSEUM, WILMINGTON, DE

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROHMS)	PH (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARDNESS (MG/L AS CAC03)	HARDNESS, NONCARBONATE (MG/L AS CAC03)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNESIUM, DIS-SOLVED (MG/L AS MG)
NOV 22...	0910	190	239	7.6	3.5	7.0	11.9	82	36	20	7.7

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DIS-SOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	ALKALINITY (MG/L AS CAC03)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SI02)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
NOV 22...	10	20	.5	3.4	56	46	26	17	.1	12	144

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N03)
NOV 22...	124	.20	73.9	2.4	.03	2.4	.05	.35	.40	2.8	12

DATE	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO. TOTAL (MG/L AS P)	CHROMIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	MANGANESE, DIS-SOLVED (UG/L AS MN)	NICKEL, DIS-SOLVED (UG/L AS NI)	ZINC, DIS-SOLVED (UG/L AS ZN)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
NOV 22...	.22	.19	0	1	2	120	40	2	30	.10

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA
WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DELAWARE RIVER BASIN--CONTINUED

01481490 BRANDYWINE CR. AT MAGLEY MUSEUM, WILMINGTON, DE
BENTHIC INVERTEBRATE ANALYSES, OCTOBER 1978 TO NOVEMBER 1978

DATE	NOV 22, 78
TIME	0910
TOTAL COUNT	99
DIVERSITY: PHYLUM	1.8
..CLASS	1.9
...ORDER	2.7
...FAMILY	3.3
....GENUS	3.4
....GENUS-INSECTA	3.5
ORGANISM	COUNT
ANNELIDA	
..HIRUDINEA	
...PHARYNGOBODELLIDA	
...ERPOBODELLIDAE	
....UNKNOWN GENUS	1
...RHYNCHOBODELLIDA	
...GLOSSIPHONIIDAE	
....PLACOBDELLA	5
ARTHROPODA (ARTHROPODS)	
..CRUSTACEA	
...ISOPODA	
...ASELLIDAE	
....ASELLUS	2
..INSECTA	
...COLEOPTERA	
...PSEPHENIDAE	
....PSEPHENUS	1
...DIPTERA	
...CHIRONOMIDAE	
....CARDIOCLADIUS	1
...CRICOTOPUS	2
...RHEOTANYTARSUS	4
...EMPIDIDAE	
...HEMEROPTERIDAE	1
...TIPULIDAE	
...ANTOCHA	1
...EPHEMEROPTERA	
...HEPTAGENIIDAE	
....STENONEMA	3
...PLECOPTERA	
...TAENIOPTERYGIDAE	
...TAENIOPTERYX	1
...TRICHOPTERA	
...HYDROPSYCHIDAE	
...CHEUMATOPSYCHE	1
...HYDROPTILIDAE	
...LEUCOTRICHIA	2
...POLYCENTROPIDIDAE	
...NEURECLIPSIS	1
...HYDROPSYCHIDAE	
...HYDROPSYCHE	1
...LEPIDOPTERA	
...PYRALIDIDAE	
....PARARGYACTIS	1
MOLLUSCA (MOLLUSCS)	
..GASTROPODA	
...BASOMMATOPHORA	
...ANCYLIDAE	
...FERRISSIA	7
...PHYSIDAE	
....PHYSA	3
...PLANORBIDAE	
....GYRAULUS	1
...MESOGASTROPODA	
...HYDROBIIDAE	
...AMNICOLA	10
...VIVIPARIDAE	
....CAMPELONA	20
PLATYHELMINTHES (FLATWORMS)	
..TURBELLARIA	
...TRICLADIDA	
...PLANARIIDAE	
....UNKNOWN GENUS	30

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DELAWARE RIVER BASIN--CONTINUED

01481550 - BRANDYWINE CR. BELOW ALAPOCAS RUN AT WILMINGTON

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
NOV 22...	1300	124	234	7.6	6.5	7.5	12.2	82	36	21	7.2

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AN- ION- SOMP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	ALKA- LINITY (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 22...	12	23	.6	3.4	56	46	26	19	.1	12	145

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, NITRATE TOTAL (MG/L AS N)	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)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)
NOV 22...	129	.20	48.5	2.4	.04	2.4	.05	.32	.37	2.8	12

DATE	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, DIS- SOLVED (UG/L AS ZN)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
NOV 22...	.22	.20	0	1	2	80	30	2	10	.10

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA
WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DELAWARE RIVER BASIN--CONTINUED

01481550 BRANDYWINE CR. BELOW ALAPOCAS RUN AT WILMINGTON
BENTHIC INVERTEBRATE ANALYSES, OCTOBER 1978 TO NOVEMBER 1978

DATE	NOV 22.78
TIME	1300
TOTAL COUNT	526
DIVERSITY: PHYLUM	0.1
..CLASS	0.1
...ORDER	0.8
....FAMILY	0.9
.....GENUS	2.4
.....GENUS-INSECTA	2.3

ORGANISM	COUNT
ARTHROPODA (ARTHROPODS)	
..INSECTA	
...DIPTERA	
....CHIRONOMIDAE	
.....CARDIOCLADIUS	7
.....CRICOTOPUS	20
.....DIAMESA	17
.....POLYPEDILUM	2
.....RHEOTANYTARSUS	43
...TIPULIDAE	
....ANTOCHA	2
..EPHEMEROPTERA	
...HEPTAGENIIDAE	
....STENONEMA	3
..TRICHOPTERA	
....HYDROPSYCHIDAE	
.....CHEUMATOPSYCHE	142
.....SYMPHITOPSYCHE	211
...HYDROPTILIDAE	
....LEUCOTRICHIA	1
....HYDROPSYCHIDAE	
.....HYDROPSYCHE	69
MOLLUSCA (MOLLUSCS)	
..GASTROPODA	
...BASOMMATOPHORA	
....ANCYLIDAE	
.....FERRISSIA	2
PLATYHELMINTHES (FLATWORMS)	
..TURRELLARIA	
...TRICLADIDA	
....PLANARIIDAE	
.....UNKNOWN GENUS	7

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DELAWARE RIVER BASIN--CONTINUED

01482310 - DOLL RUN AT RED LION, DEL.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	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)
APR 02...	1330	1.3	169	6.4	10.0	12.0	10	10.3	55	45	11	6.7
AUG 28...	1220	.60	215	7.6	26.0	16.0	10	8.5	53	37	10	6.7

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
APR 02...	7.0	21	.4	2.0	12	10	7.6	26	15	.0	10	108
AUG 28...	7.5	37	.5	2.3	20	16	.8	22	15	.1	12	107

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 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)
APR 02...	84	.15	.38	3.4	.01	.03	310	180	130	200	0	200
AUG 28...	86	.15	.17	3.9	.01	.03	340	250	90	140	10	130

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DELAWARE RIVER BASIN--CONTINUED

01483170 - TRIB. TO DRAWYER CR. NR. ODESSA, DEL

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	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 CACO3)
MAY 04...	1100	3.2	156	7.4	15.0	13.5	10	10.2	46	28
SEP 19...	1035	2.4	189	7.9	17.5	16.5	5	7.6	62	--

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)
MAY 04...	11	4.6	5.0	18	.3	2.6	23	19	1.5
SEP 19...	15	6.0	18	37	1.0	3.2	--	--	--

DATE	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)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)
MAY 04...	9.2	12	.1	9.4	91	66	.12	.79	4.2
SEP 19...	45	12	.1	16	149	116	.20	.99	5.0

DATE	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS TOTAL (MG/L AS PO4)	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)
MAY 04...	.06	.18	.18	1200	860	340	120	0	120
SEP 19...	.02	--	.06	800	--	450	160	0	170

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DELAWARE RIVER BASIN--CONTINUED

01483348 - MILL CREEK NEAR SMYRNA, DEL.

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)
APR 03...	1000	2.1	167	6.9	14.0	13.0	30	7.0	51	35	12	5.1
SEP 28...	1430	1.0	179	7.2	23.0	19.5	15	7.7	51	26	13	4.6
DATE	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
APR 03...	6.5	21	.4	2.5	20	16	4.0	22	16	.1	12	115
SEP 28...	5.7	19	.3	2.4	31	25	3.1	18	12	.1	18	115
DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS TOTAL (MG/L AS PO4)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
APR 03...	86	.16	.65	3.2	.09	.18	1000	660	340	90	10	80
SEP 28...	89	.16	.34	2.6	.12	.37	370	30	340	60	0	60

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DELAWARE RIVER BASIN--CONTINUED

01483500 - LEIPSIC RIVER NEAR CHESWOLD, DEL.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	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 CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
APR 03...	0800	15	202	7.4	15.0	13.0	30	10.8	64	40	17	5.3
SEP 19...	1245	5.8	235	7.8	24.0	18.0	5	9.0	73	--	20	5.6

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
APR 03...	12	28	.7	2.3	30	25	1.9	24	20	.1	15	139
SEP 19...	18	34	.9	2.8	--	--	--	24	26	.1	23	166

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 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)
APR 03...	111	.19	5.63	2.6	.14	.43	750	570	180	80	10	70
SEP 19...	120	.23	2.61	3.1	.13	.40	460	300	160	10	10	0

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DELAWARE RIVER BASIN--CONTINUED

01483675 - CAHOON BRANCH AT DOVER, DEL.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	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 CACO3)
MAY 04...	1300	4.3	95	7.2	25.0	16.0	50	11.8	22	6
SEP 20...	1100	1.8	121	7.6	16.5	14.0	20	9.3	25	--

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SOMP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)
MAY 04...	4.9	2.3	7.5	40	.7	1.9	19	16	1.9
SEP 20...	5.7	2.6	9.0	42	.8	2.0	--	--	--

DATE	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)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)
MAY 04...	5.1	10	.1	15	71	56	.10	.82	2.1
SEP 20...	5.9	11	.0	22	83	71	.11	.42	2.8

DATE	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, TOTAL (MG/L AS PO4)	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)
MAY 04...	.09	.28	.28	920	670	250	40	0	50
SEP 20...	.08	.24	.25	470	330	140	30	10	20

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DELAWARE RIVER BASIN--CONTINUED

014R4050 - PRATT BRANCH NEAR FELTON, DEL.

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNESIUM, DIS-SOLVED (MG/L AS MG)
APR 03...	1335	11	148	8.3	13.0	12.5	40	--	41	29	9.1	4.4
SEP 20...	1330	2.3	180	7.1	19.0	14.5	5	8.6	39	--	8.7	4.1

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DIS-SOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
APR 03...	7.0	26	.5	2.3	15	12	.1	18	12	.0	10	97
SEP 20...	7.2	28	.5	2.0	--	--	--	16	12	.0	19	92

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS TOTAL (MG/L AS PO4)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOVERABLE (UG/L AS MN)	MANGANESE, DIS-SOLVED (UG/L AS MN)
APR 03...	70	.13	2.88	2.4	.08	.24	790	600	190	80	20	60
SEP 20...	69	.13	.59	4.0	.03	.09	280	210	70	20	0	30

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DELAWARE RIVER BASIN--CONTINUED

01490600 - MEMEDITH BRANCH NEAR SANDTOWN, DEL.

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	HARDNESS, AS CaCO3 (MG/L)	HARDNESS, NONCARBONATE (MG/L)	CALCIUM, DIS-SOLVED (MG/L AS Ca)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg)
MAR 31...	1330	2.9	85	7.6	21.0	17.0	70	10.2	20	14	4.8	2.0
SEP 18...	1340	1.5	83	7.2	16.5	23.5	10	9.0	29	--	6.8	2.8

DATE	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DIS-SOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	ALKALINITY (MG/L AS CaCO3)	CARBON DIOXIDE, DIS-SOLVED (MG/L AS CO2)	SULFATE, DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
MAR 31...	5.2	34	.5	1.5	8	7	.3	14	8.4	.0	15	82
SEP 18...	7.5	34	.6	2.4	--	--	--	15	10	.0	22	87

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS PO4)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOVERABLE (UG/L AS MN)	MANGANESE, DIS-SOLVED (UG/L AS MN)
MAR 31...	55	.11	.64	1.0	.04	.12	870	300	570	50	0	50
SEP 18...	67	.12	.36	1.9	.05	.15	930	530	400	20	0	20

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

SUSQUEHANNA RIVER BASIN

01580600 - SUSQUEHANNA RIVER AT RTE. 40 BRIDGE

DATE	TIME	SAMPLE LOC- ATION, CROSS SECTION (% FROM L BANK)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
AUG , 1978											
03...	1445	75	298	--	--	120	62	31	10	8.6	.3
03...	1500	25	299	--	--	120	65	32	10	8.6	.3
FEB , 1979											
28...	1200	12	170	8.2	2.0	48	26	13	3.7	5.6	.4
28...	1330	38	140	8.1	1.0	44	24	12	3.4	5.5	.4
MAR											
07...	1115	12	135	7.7	5.0	39	22	11	2.8	3.7	.3
07...	1200	38	130	7.2	5.0	39	21	11	2.9	3.8	.3
07...	1400	62	125	7.7	5.0	36	17	10	2.6	3.5	.3
07...	1500	88	125	7.2	4.5	36	15	10	2.6	3.5	.3
08...	1130	38	120	7.2	5.5	33	14	9.4	2.3	3.1	.2
08...	1145	12	125	7.3	5.0	33	16	9.3	2.4	3.1	.2
08...	1400	62	110	7.3	4.5	33	21	9.3	2.3	2.9	.2
08...	1430	88	120	7.2	4.5	33	21	9.3	2.3	3.0	.2
09...	1015	38	115	7.6	5.5	35	17	9.8	2.5	3.1	.2
09...	1045	12	105	7.5	5.5	34	17	9.5	2.5	3.1	.2
09...	1230	62	120	7.4	5.0	35	21	9.9	2.5	3.0	.2
09...	1300	88	120	7.2	5.0	35	17	9.9	2.6	2.8	.2
12...	1115	38	145	7.8	4.5	44	23	12	3.3	3.4	.2
12...	1130	12	140	7.7	4.5	44	23	12	3.3	3.4	.2
12...	1330	62	125	7.6	5.0	47	26	13	3.5	3.5	.2
12...	1400	88	145	7.6	5.5	47	27	13	3.5	3.5	.2
13...	1000	12	160	7.5	4.5	47	22	13	3.6	3.5	.2
13...	1030	38	155	8.0	4.5	50	29	14	3.7	3.6	.2
13...	1215	62	170	8.0	4.5	51	32	14	3.9	3.6	.2
13...	1245	88	160	7.7	4.5	51	30	14	3.9	3.4	.2

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY (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 SI02)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)
AUG , 1978										
03...	2.2	57	54	12	.1	--	204	--	--	1.2
03...	2.2	56	55	12	.1	--	200	--	--	1.2
FEB , 1979										
28...	2.4	22	22	9.3	.1	3.5	--	77	.03	1.0
28...	2.5	20	20	8.8	.1	3.3	--	72	.02	.94
MAR										
07...	1.5	17	20	6.7	.0	3.8	--	64	.02	.80
07...	1.3	18	21	7.1	.0	4.0	--	66	.01	.91
07...	1.2	19	19	6.4	.0	3.9	--	62	.02	.71
07...	1.2	21	19	6.4	.0	4.1	--	63	.02	.69
08...	1.4	19	18	5.5	.1	3.8	--	58	--	--
08...	1.3	17	18	5.4	.1	3.7	--	57	--	--
08...	1.4	12	18	5.0	.1	3.8	--	53	--	--
08...	1.3	12	18	5.2	.1	3.8	--	53	--	--
09...	1.4	18	19	5.2	.1	3.9	--	59	--	--
09...	1.4	17	18	5.3	.1	3.9	--	57	--	--
09...	1.3	14	19	5.0	.1	3.9	--	56	--	--
09...	1.3	18	20	5.0	.0	4.1	--	60	--	--
12...	1.3	21	23	5.6	.1	4.3	--	70	--	--
12...	1.3	21	23	5.7	.1	4.4	--	70	--	--
12...	1.3	21	24	5.7	.1	4.4	--	72	--	--
12...	1.3	20	24	5.7	.1	4.6	--	72	--	--
13...	1.4	25	25	5.9	.0	4.6	--	76	.01	1.3
13...	1.4	21	25	5.9	.0	4.6	--	75	.01	.90
13...	1.4	19	26	6.0	.0	4.7	--	75	.01	.93
13...	1.4	21	26	6.1	.0	4.7	--	76	.01	.94

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

SUSQUEHANNA RIVER BASIN--CONTINUED

01580600 - SUSQUEHANNA RIVER AT RTE. 40 BRIDGE

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO. TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO. DIS- SOLVED (MG/L AS P)	CARBON, INOR- GANIC, TOTAL (MG/L AS C)
AUG. 1978										
03...	--	.02	.10	.12	1.3	.03	.01	--	--	--
03...	--	.05	.14	.19	1.4	.04	.01	--	--	--
FEB. 1979										
28...	.98	.39	1.0	1.4	2.4	.30	.05	.06	.02	9.8
28...	.97	.35	.95	1.3	2.2	.26	.05	.05	.02	11
MAR										
07...	.86	.19	1.3	1.5	2.3	.42	.01	.03	.00	--
07...	.76	.24	.96	1.2	2.1	.29	.01	.02	.00	11
07...	.69	.23	1.2	1.4	2.1	.36	.02	.04	.00	13
07...	.70	.24	1.5	1.7	2.4	.32	.01	.03	.00	11
08...	.71	--	--	--	--	--	--	--	--	--
08...	.70	--	--	--	--	--	--	--	--	--
08...	.73	--	--	--	--	--	--	--	--	--
08...	.68	--	--	--	--	--	--	--	--	--
09...	.70	--	--	--	--	--	--	--	--	--
09...	.72	--	--	--	--	--	--	--	--	--
09...	.70	--	--	--	--	--	--	--	--	--
09...	.72	--	--	--	--	--	--	--	--	--
12...	.94	--	--	--	--	--	--	--	--	--
12...	.92	--	--	--	--	--	--	--	--	--
12...	.90	--	--	--	--	--	--	--	--	--
12...	.91	--	--	--	--	--	--	--	--	--
13...	.95	.09	.35	.44	1.7	.07	.01	.01	.00	1.8
13...	.85	.08	.35	.43	1.3	.07	.01	.01	.00	9.6
13...	.85	.07	.33	.40	1.3	.06	.01	.01	.00	4.5
13...	.85	.06	.34	.40	1.3	.05	.01	.01	.00	4.4

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

POTOMAC RIVER BASIN

01594930 - LAUREL RUN AT DOBBIN RD. NR WILSON, MD.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLOR (PLAT- INUM- COBALT UNITS)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)
APR 18...	1030	30	370	3.7	12.0	5.0	11.4	--	73	73	--	--
JUL 11...	1000	8.0	700	3.2	--	17.0	--	5	140	130	2.4	119
AUG 15...	1000	14	463	3.0	--	16.0	--	5	97	96	1.4	70
21...	1500	12	510	3.3	21.0	18.5	7.6	--	97	--	1.7	84

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	SODIUM+ POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
APR 18...	18	6.9	1.5	4	.1	--	1.2	--	0	--	110	1.2
JUL 11...	36	13	4.8	7	.2	--	2.0	19	16	19200	250	3.8
AUG 15...	25	8.4	1.8	4	.1	3.4	1.6	1	1	1600	160	2.6
21...	24	9.0	2.2	5	.1	--	1.4	--	--	--	160	--

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)
APR 18...	.1	10	--	157	.21	12.7	--	.47	--	--	--
JUL 11...	.2	19	404	357	.55	8.73	.08	--	.00	.00	6900
AUG 15...	.2	12	253	221	.34	10.0	.26	--	.00	.00	--
21...	.2	14	283	--	.38	9.17	--	--	--	--	--

DATE	ARSENIC TOTAL DIS- SOLVED (UG/L AS AS)	ARSENIC IN BOT- TOM MA- TERIAL (UG/G AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM, DIS- SOLVED (UG/L AS CD)	CADMIUM RECov. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, RECov. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, DIS- SOLVED (UG/L AS CO)	COBALT, RECov. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)
APR 18...	--	--	--	--	--	--	--	--	--	--	--
JUL 11...	0	--	30	4	3	--	2	--	87	--	9
AUG 15...	3	--	50	2	2	--	--	--	54	--	4
21...	--	0	--	--	--	<10	--	10	--	20	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

POTOMAC RIVER BASIN--CONTINUED

01594930 - LAUNEL RUN AT DOBBIN RD. NR WILSON, MD.

DATE	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G 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)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G 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)
APR 18...	--	5600	100	5500	--	--	--	--	760	0	790
JUL 11...	--	5400	0	5800	--	10	--	40	1300	0	1300
AUG 15...	--	5000	0	5000	--	1	--	30	1200	0	1200
21...	30	4200	0	4200	220000	--	20	--	1000	0	1200
DATE	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY DIS- SOLVED (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)
APR 18...	--	--	--	--	--	--	--	--	--	--	--
JUL 11...	--	<.5	--	0	170	0	--	1	210	400	--
AUG 15...	--	<.5	--	0	85	0	--	--	120	240	--
21...	40	--	.00	--	--	--	0	--	--	--	60

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

POTOMAC RIVER BASIN--CONTINUED

01594940 - N B POTOMAC R AT WILSON, MD

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	TEMPER- ATURE (DEG C)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
APR 18...	1230	91	460	4.8	12.0	10.0	9.0	--	--	190
AUG 21...	1145	36	710	3.9	20.5	7.7	19.0	.6	30	350

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G 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)
APR 18...	--	--	--	--	--	--	--	2100	700	1400
AUG 21...	532	.72	0	<10	20	<10	20	1400	480	920

DATE	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G 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)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)
APR 18...	--	--	360	0	370	--	--	--	--
AUG 21...	42000	10	620	0	630	150	.00	0	50

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

POTOMAC RIVER BASIN--CONTINUED

01594942 - SAND RN AT WILSON, MD

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)
APR 18...	1130	8.0	140	5.4	12.0	7.5	11.1	43	37	--	--	13
AUG 21...	1330	1.9	260	4.2	21.5	18.5	7.3	95	95	.6	30	29

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	SODIUM+ POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)
APR 18...	2.6	.6	3	.0	--	.8	6	--	45	1.5	.1	3.7
AUG 21...	5.4	.9	2	.0	2.2	1.3	0	.0	100	1.3	.1	5.1

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CAQMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)
APR 18...	--	74	.10	1.60	.58	--	--	--	--	--	2900
AUG 21...	154	145	.21	.79	--	11	<10	20	10	10	2100

DATE	IRON, SUS- PENDE- D RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE- D RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)
APR 18...	2600	270	--	--	340	20	320	--	--	--	--
AUG 21...	1600	470	46000	10	560	0	590	480	.00	0	140

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

POTOMAC RIVER BASIN--CONTINUED

01594975 - GLADE RUN AT STEYER, MD.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)
APR 18...	1630	13	70	6.8	16.0	8.0	12.0	31	20	--	--
AUG 21...	0830	1.6	160	7.5	17.0	16.5	8.0	--	--	.0	.0
DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (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)
APR 18...	8.7	2.2	1.4	9	.1	.9	11	19	3.2	.0	3.2
AUG 21...	--	--	--	--	--	--	--	38	--	--	--
DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)
APR 18...	--	49	.07	1.72	.92	--	--	--	--	--	410
AUG 21...	107	--	.15	.46	--	0	<10	10	30	<10	1000
DATE	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G 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)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)
APR 18...	360	50	--	--	70	20	50	--	--	--	--
AUG 21...	950	50	24000	10	90	80	10	1100	.00	0	90

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

POTOMAC RIVER BASIN--CONTINUED

01595495 - WOLF DEN RN AT KITZMILLER, MD

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	TEMPER- ATURE (DEG C)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)
APR 18...	1400	8.4	85	5.3	16.0	11.1	8.8	--	--	29
AUG 22...	1300	.89	138	5.9	21.0	9.4	15.0	.0	.0	52

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	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)
APR 18...	--	--	--	--	--	--	--	250	200	50
AUG 22...	85	.12	0	<10	<10	20	20	340	220	120

DATE	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	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)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)
APR 18...	--	--	160	10	150	--	--	--	--
AUG 22...	11000	20	230	0	240	1100	.00	0	100

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

POTOMAC RIVER BASIN--CONTINUED

01596200 - L SAVAGE R NR AVILTON, MD

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	TEMPER- ATURE (DEG C)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
APR 17...	0915	4.2	40	5.6	7.0	11.5	4.5	--	--	8.7
AUG 21...	1800	.21	29	6.7	18.0	8.3	17.0	.0	.0	6.9
DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G 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)
APR 17...	--	--	--	--	--	--	--	200	70	130
AUG 21...	30	.04	1	<10	<10	<10	<10	2300	2200	100
DATE	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G 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)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	
APR 17...	--	--	110	0	120	--	--	--	--	--
AUG 21...	4400	<10	100	20	80	20	.00	0	10	

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

POTOMAC RIVER BASIN--CONTINUED

01596600 - BIG RUN NR SWANTON, MD.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	TEMPER- ATURE (DEG C)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)
APR 17...	1330	35	65	7.5	10.0	11.6	8.0	--	--	13
AUG 21...	1530	2.2	75	7.8	20.5	9.2	16.0	.0	.0	10

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G 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)
APR 17...	--	--	--	--	--	--	--	110	110	0
AUG 21...	46	.06	1	<10	<10	20	10	120	120	0

DATE	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G 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)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)
APR 17...	--	--	10	0	10	--	--	--	--
AUG 21...	24000	20	0	0	0	530	.00	0	80

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

POTOMAC RIVER BASIN--CONTINUED

01597100 - MIDDLE FORK NR SWANTON, MD.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	TEMPER- ATURE (DEG C)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
APR 17...	1230	21	65	7.5	10.0	11.6	8.0	--	--	13
AUG 21...	1400	1.5	72	7.6	20.5	9.2	16.0	.0	.0	12

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	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)
APR 17...	--	--	--	--	--	--	--	70	70	0
AUG 21...	47	.06	1	<10	10	20	10	90	90	0

DATE	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	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)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)
APR 17...	--	--	30	20	10	--	--	--	--
AUG 21...	20000	20	10	10	0	500	.00	0	60

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

POTOMAC RIVER BASIN--CONTINUED

01597900 - AARON RN AT BLOOMINGTON, MD

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE, AIR (DEG C)	TEMPERATURE, WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	HARDNESS, AS CACO3	HARDNESS, NONCARBONATE (MG/L AS CACO3)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)
APR 17...	0900	3.3	960	4.3	12.5	7.0	12.0	460	460	--	--
AUG 21...	1100	.50	1830	3.6	20.0	17.0	8.8	--	--	2.1	104
22...	0915	--	--	--	--	--	--	980	980	--	--

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	SODIUM+ POTASSIUM DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
APR 17...	110	46	9.8	4	.2	--	1.8	3	500	2.6	.3
AUG 21...	--	--	--	--	--	--	--	--	990	--	--
22...	240	92	13	3	.2	16	2.7	2	1000	3.0	.4

DATE	SILICA, DISSOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOVERABLE FM BOTTOM MATERIAL (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOVERABLE FM BOTTOM MATERIAL (UG/L)
APR 17...	7.3	--	688	.94	1.0	--	--	--	--	--	--
AUG 21...	--	1600	--	2.18	--	1	--	--	<10	--	10
22...	15	1590	1370	2.16	--	--	0	3	--	10	--

DATE	COBALT, RECOVERABLE FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOVERABLE FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	IRON, RECOVERABLE FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOVERABLE FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)
APR 17...	--	--	--	4100	3800	320	--	--	--	3800
AUG 21...	20	--	30	1100	0	1100	39000	--	20	5900
22...	--	57	--	960	--	--	--	7	--	6000

DATE	MANGANESE, SUSPENDED RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MANGANESE, RECOVERABLE FM BOTTOM MATERIAL (UG/G)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOVERABLE FM BOTTOM MATERIAL (UG/G AS HG)	SELENIUM, TOTAL RECOVERABLE (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOVERABLE FM BOTTOM MATERIAL (UG/G AS ZN)
APR 17...	200	3600	--	--	--	--	--	--	--	--
AUG 21...	0	6200	190	--	.00	--	0	--	--	30
22...	--	--	--	<.5	--	2	--	1	420	--

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

POTOMAC RIVER BASIN--CONTINUED

01598770 - GEORGES C NR MIDLAND, MD

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	TEMPER- ATURE (DEG C)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)
APR 16...	1500	13	335	7.4	9.0	10.4	9.0	--	--	64
AUG 20...	1445	2.0	380	7.8	24.0	8.4	20.0	.0	.0	44

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS AC-FT)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE D RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)
APR 16...	--	--	--	--	--	--	--	930	880	50
AUG 20...	202	.27	1	<10	<10	40	20	340	330	10

DATE	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE D RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)
APR 16...	--	--	150	--	--	--	--	--	--
AUG 20...	45000	90	100	20	80	1800	.00	0	140

01598775 - WOODLAND C AT OCEAN, MD

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)
APR 16...	1530	5.7	192	7.5	7.5	10.0	10.6

DATE	SULFATE DIS- SOLVED (MG/L AS S04)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE D 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 D RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
APR 16...	19	110	110	0	20	0	20

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

POTOMAC RIVER BASIN--CONTINUED

01598980 - MILL RN AT MORRISON, MD

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)
APR 16...	1630	14	480	4.1	7.0	8.0	11.4	210	210	--	--	55
AUG 21...	0945	2.5	900	3.8	22.0	17.5	8.8	410	410	1.3	65	110

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	SODIUM+ POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)
APR 16...	17	1.0	1	.0	--	1.2	0	--	220	1.1	.1	6.7
AUG 21...	33	1.5	1	.0	3.2	1.7	0	.0	420	1.1	.2	9.5

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)
APR 16...	--	306	.42	11.7	.44	--	--	--	--	--	4600
AUG 21...	659	581	.90	4.45	--	0	<10	30	30	30	12000

DATE	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G 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)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)
APR 16...	3200	1400	--	--	910	40	870	--	--	--	--
AUG 21...	10000	1700	61000	20	1200	0	1200	1200	.00	0	100

01599700 - DEEP HOLLOW AT DAWSON CHURCH, MD

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)
APR 16...	1330	1.1	115	7.3	11.5	9.0	11.3

DATE	SULFATE DIS- SOLVED (MG/L AS S04)	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)
APR 16...	25	180	170	10	20	10	10

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

POTOMAC RIVER BASIN--CONTINUED

01599800 - MILL RUN AT RAWLINGS, MD.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)
APR 16...	1430	3.4	90	7.7	10.5	9.0	10.8	--	--	--	--	--
AUG 21...	1400	.80	185	8.0	19.0	18.0	8.9	87	7	.0	.0	28

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	SODIUM+ POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
APR 16...	--	--	--	--	--	--	--	--	16	--	--
AUG 21...	4.1	2.9	7	.1	4.2	1.3	80	1.6	10	1.3	.0

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)
APR 16...	--	--	--	--	--	--	--	--	--	--	80
AUG 21...	8.6	103	104	.14	.22	0	<10	30	20	30	250

DATE	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	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)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)
APR 16...	30	50	--	--	10	0	10	--	--	--	--
AUG 21...	240	10	53000	60	20	10	9	900	.00	0	190

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

POTOMAC RIVER BASIN--CONTINUED

01600500 - WARRIOR RN AT CRESAPTOWN, MD

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	TEMPER- ATURE (DEG C)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)
APR 16...	1245	6.9	185	8.6	10.0	11.2	8.5	--	--	19
AUG 21...	1530	.66	315	8.2	19.0	8.8	18.0	.0	.0	25

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G 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)
APR 16...	--	--	--	--	--	--	--	120	120	0
AUG 21...	176	.24	0	<10	10	20	20	220	220	0

DATE	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G 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)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)
APR 16...	--	--	10	0	10	--	--	--	--
AUG 21...	32000	40	10	0	10	1000	.00	0	90

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

POTOMAC RIVER BASIN--CONTINUED

01601100 - WILLS C AT ELLERSLIE, MD

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	TEMPER- ATURE (DEG C)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)
APR 17...	1330	230	60	7.3	14.0	12.2	7.0	--	--	17
AUG 20...	1130	80	140	8.0	26.0	10.8	20.0	.0	.0	17

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G 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)
APR 17...	--	--	--	--	--	--	--	170	160	10
AUG 20...	71	.10	0	<10	10	10	10	190	180	10

DATE	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G 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)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)
APR 17...	--	--	20	0	30	--	--	--	--
AUG 20...	35000	10	10	0	10	490	.00	0	90

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

POTOMAC RIVER BASIN--CONTINUED

01601300 - NB JENNINGS RN AT BARRELVILLE, MD.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	TEMPER- ATURE (DEG C)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	
APR 17...	1500	14	170	7.4	13.0	10.8	9.0	--	--	46	
AUG 20...	1830	5.7	250	7.7	24.0	8.8	20.0	.0	.0	56	
DATE		SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	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)
APR 17...	--	--	--	--	--	--	--	--	1000	1000	0
AUG 20...	145	.20	0	<10	40	60	30	780	780		0
DATE		IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	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)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	
APR 17...	--	--	--	1100	960	140	--	--	--	--	--
AUG 20...	78000	40	80	30	50	1900	.00	0	270		

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

POTOMAC RIVER BASIN--CONTINUED

01601310 - JENNINGS RN AT BARRELVILLE, MD

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)
APR 17...	1530	32	430	7.1	13.0	10.0	10.6	190	180	--	--	51
AUG 20...	1930	9.4	405	7.2	23.0	19.5	9.0	170	160	.0	.0	47

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	SODIUM+ POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SI02)
APR 17...	16	5.7	6	.2	--	1.4	16	--	170	10	.1	7.5
AUG 20...	13	6.3	7	.2	8.1	1.8	8	1.0	150	9.2	.2	9.3

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)
APR 17...	--	276	.38	24.0	1.0	--	--	--	--	--	1000
AUG 20...	275	242	.37	6.98	--	0	<10	20	90	40	600

DATE	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G 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)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)
APR 17...	940	60	--	--	700	50	650	--	--	--	--
AUG 20...	590	10	71000	50	410	10	400	2800	.00	0	230

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

POTOMAC RIVER BASIN--CONTINUED

01601420 - HOFFMAN DRAINAGE TUNNEL AT CLARYSVILLE MD.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CAC03)
APR 16...	1630	45	1080	6.1	6.0	12.0	8.8	560	460	--	--
AUG 20...	1600	18	1010	6.4	19.0	13.0	10.4	--	--	.0	.0
DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (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)
APR 16...	140	50	5.7	2	.1	1.7	98	460	18	.3	8.5
AUG 20...	--	--	--	--	--	--	--	460	--	--	--
DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)
APR 16...	--	749	1.02	91.0	.52	--	--	--	--	--	3900
AUG 20...	740	--	1.01	36.0	--	0	<10	<10	60	30	9700
DATE	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	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)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)
APR 16...	2400	1500	--	--	1900	0	1900	--	--	--	--
AUG 20...	3400	6300	69000	40	3000	0	3000	1900	.00	0	150

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

POTOMAC RIVER BASIN--CONTINUED

01601490 - BRADDOCK RN AT NARROWS PARK, MD

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)
APR 17...	0830	58	820	8.0	8.0	9.0	11.4	430	360	--	--	110
AUG 22...	1130	22	930	8.0	17.0	14.5	9.9	470	410	.0	.0	120

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	SODIUM+ POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)
APR 17...	38	8.3	4	.2	--	1.7	67	330	21	.3	6.9
AUG 22...	41	11	5	.2	13	1.8	59	390	23	.3	8.9

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)
APR 17...	--	562	.76	88.0	.92	--	--	--	--	--	1100
AUG 22...	692	632	.94	41.1	--	0	<10	30	100	100	890

DATE	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G 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)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS MG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G AS SE)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)
APR 17...	1100	0	--	--	1000	0	1000	--	--	--	--
AUG 22...	890	0	96000	80	1100	100	1000	180	.00	0	290

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONONGAHELA RIVER BASIN

03075250 - YOUGHIOGMENY R AT US 219 NR REDHOUSE, MD

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	
APR 18...	0930	18	75	7.4	6.0	7.0	11.8	17	5	--	--	
AUG 21...	1635	4.9	72	7.2	22.0	21.0	7.9	--	--	.0	.0	
DATE		CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (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)
APR 18...	5.1	1.1	2.5	23	.3	.8	12	7.9	4.3	.0	3.5	
AUG 21...	--	--	--	--	--	--	--	7.4	--	--	--	
DATE		SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV: FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)
APR 18...	--	35	.05	1.70	.70	--	--	--	--	--	--	410
AUG 21...	52	--	.07	.69	--	0	<10	10	10	10	10	1600
DATE		IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G 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)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)
APR 18...	270	140	--	--	50	10	40	--	--	--	--	
AUG 21...	1100	490	33000	30	110	30	80	720	.00	0	80	

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONONGAHELA RIVER BASIN--CONTINUED

03075340 - YOUGHIOGHENY R AT UNDERWOOD RD NR CHELLIN, MD

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	TEMPER- ATURE (DEG C)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
APR 19...	1030	72	60	7.5	9.5	10.4	7.5	--	--	7.6
AUG 22...	1100	19	75	7.3	20.0	8.1	17.5	.0	.0	7.0

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G 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)
APR 19...	--	--	--	--	--	--	--	410	250	160
AUG 22...	46	.06	0	<10	10	10	10	940	730	210

DATE	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G 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)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)
APR 19...	--	--	50	10	40	--	--	--	--
AUG 22...	15000	30	60	10	50	620	.00	0	40

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONONGAHELA RIVER BASIN--CONTINUED

03075350 - CHERRY CREEK NR CRELLIN, MD.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	TEMPER- ATURE (DEG C)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	
APR 19...	0930	23	75	7.4	7.0	10.8	7.0	--	--	7.7	
AUG 22...	0945	4.4	100	7.0	20.0	6.7	17.5	.0	.0	6.9	
DATE		SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G 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)
APR 19...	--	--	--	--	--	--	--	--	450	340	110
AUG 22...	69	.09	0	<10	10	10	<10	2000	1800	240	
DATE		IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G 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)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	
APR 19...	--	--	--	50	10	40	--	--	--	--	
AUG 22...	13000	20	150	10	140	170	.00	0	30		

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONONGAHELA RIVER BASIN--CONTINUED

03075495 - L YOUGHIOGHENY R AT 3RD ST AT OAKLAND, MD

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	TEMPER- ATURE (DEG C)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
APR 19...	0930	52	70	6.5	8.0	11.3	6.5	--	--	10
AUG 22...	0800	16	125	7.2	17.0	6.6	17.0	.0	.0	11

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	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)
APR 19...	--	--	--	--	--	--	--	640	550	90
AUG 22...	86	.12	0	<10	<10	<10	10	1900	1400	500

DATE	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	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)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)
APR 19...	--	--	80	0	80	--	--	--	--
AUG 22...	16000	20	340	20	320	480	.00	0	50

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONONGAHELA RIVER BASIN--CONTINUED

03075700 - MUDDY C AT SWALLOW FALLS STATE PARK

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)
APR 19...	1130	48	40	6.5	11.6	8.0	10.6	11	7	--	--	3.2
AUG 20...	1830	24	35	6.5	19.0	18.5	8.6	13	8	.0	.0	4.2

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)
APR 19...	.7	.6	10	.1	--	.7	4	--	7.1	1.2	.0	3.0
AUG 20...	.7	.8	11	.1	1.5	.7	5	3.1	7.4	1.4	.0	4.2

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)
APR 19...	--	21	.03	2.73	.44	--	--	--	--	--	210
AUG 20...	34	23	.05	2.20	--	0	<10	<10	<10	<10	590

DATE	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G 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)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)
APR 19...	160	50	--	--	60	10	50	--	--	--	--
AUG 20...	360	230	4000	<10	50	30	20	170	.00	0	20

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONONGAHELA RIVER BASIN--CONTINUED

03075900 - CHERRY CREEK NR MCHENRY, MD.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	TEMPER- ATURE (DEG C)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)
APR 18...	0845	35	200	4.5	3.5	11.7	4.0	--	--	62
AUG 20...	1530	9.6	280	4.0	25.0	8.6	18.0	.6	30	98

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	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)
APR 18...	--	--	--	--	--	--	--	690	220	470
AUG 20...	167	.23	0	<10	<10	<10	<10	1100	630	470

DATE	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	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)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)
APR 18...	--	--	2000	0	2100	--	--	--	--
AUG 20...	12000	10	4200	0	4300	140	.00	0	20

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONONGAHELA RIVER BASIN--CONTINUED

03076010 - DEEP CREEK LAKE OUTFLOW

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	TEMPER- ATURE (DEG C)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
APR 19...	1030	4.2	45	5.9	8.5	10.9	8.0	--	--	10
AUG 20...	1645	.77	40	6.8	21.0	8.0	20.5	.0	.0	8.7

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G 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)
APR 19...	--	--	--	--	--	--	--	240	150	90
AUG 20...	31	.04	0	<10	<10	40	<10	680	510	170

DATE	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G 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)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)
APR 19...	--	--	150	0	150	--	--	--	--
AUG 20...	18000	20	110	30	80	6300	.00	0	140

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONONGAHELA RIVER BASIN--CONTINUED

03076700 - BUFFALO RN NR FRIENDSVILLE, MD

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	TEMPER- ATURE (DEG C)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
APR 18...	1100	48	100	5.5	9.0	11.8	7.0	--	--	16
AUG 20...	1250	6.9	130	7.6	23.0	9.2	18.5	.0	.0	25

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	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)
APR 18...	--	--	--	--	--	--	--	350	330	20
AUG 20...	75	.10	0	<10	10	20	<10	360	310	50

DATE	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	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)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)
APR 18...	--	--	90	30	60	--	--	--	--
AUG 20...	31000	<10	30	20	10	940	.00	0	130

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONONGAHELA RIVER BASIN--CONTINUED

03077925 - NB CASSELMAN RIVER NR GRANTSVILLE, MD.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	TEMPER- ATURE (DEG C)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
APR 17...	1345	93	95	7.0	7.0	11.2	6.5	--	--	19
AUG 20...	1545	15	98	7.4	22.0	7.6	19.0	.0	.0	19

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	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)
APR 17...	--	--	--	--	--	--	--	400	300	100
AUG 20...	61	.08	1	<10	<10	30	<10	740	540	200

DATE	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	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)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)
APR 17...	--	--	240	20	220	--	--	--	--
AUG 20...	23000	<10	150	10	140	920	.00	0	100

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONONGAHELA RIVER BASIN--CONTINUED

03077945 - S B CASSELMAN R AT JENNINGS, MD

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	TEMPER- ATURE (DEG C)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
APR 17...	1415	55	80	6.7	7.0	11.0	7.5	--	--	17
AUG 20...	1430	5.8	138	7.6	22.0	8.7	19.0	.0	.0	33

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G 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)
APR 17...	--	--	--	--	--	--	--	240	190	50
AUG 20...	84	.11	1	<10	<10	20	<10	470	370	100

DATE	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G 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)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)
APR 17...	--	--	110	0	110	--	--	--	--
AUG 20...	16000	<10	60	0	60	1000	.00	0	90

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONONGAHELA RIVER BASIN--CONTINUED

03077975 - BIG SHADE RUN AT GRANTSVILLE MO.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	TEMPER- ATURE (DEG C)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
APR 17...	1300	27	160	6.9	8.0	11.0	6.5	--	--	27
AUG 20...	1630	10	117	7.2	20.0	7.4	16.0	.0	.0	25

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G 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)
APR 17...	--	--	--	--	--	--	--	330	320	10
AUG 20...	66	.09	1	<10	10	30	10	670	630	40

DATE	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G 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)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)
APR 17...	--	--	140	10	130	--	--	--	--
AUG 20...	17000	10	100	10	90	1300	.00	0	110

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MONONGAHELA RIVER BASIN--CONTINUED

03078500 - BIG PINEY RUN NEAR SALISBURY, PA.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	TEMPER- ATURE (DEG C)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CAC03)
APR 17...	1045	41	135	6.2	7.5	11.6	6.0	--	--
AUG 20...	1900	22	97	7.3	19.5	8.0	18.5	.0	.0

DATE	SULFATE DIS- SOLVED (MG/L AS S04)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)
APR 17...	10	--	--	--	--	--	--	340	240
AUG 20...	10	58	.08	<10	<10	20	<10	820	570

DATE	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G 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)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)
APR 17...	100	--	--	40	10	30	--	--
AUG 20...	250	13000	20	50	20	30	900	60

GROUND-WATER RECORDS

GROUND-WATER LEVELS

DELAWARE

KENT COUNTY

391026075304901. Local number, ID 55-1.

LOCATION.--Lat 39°10'26", long 75°30'49", Hydrologic Unit 02040207, White Oak Road at Dover.

Owner: City of Dover.

AQUIFER.--Piney Point.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 2.5 in (0.06 m), depth 349 ft (106 m), cased to 329 ft (100 m), screened 329 to 349 ft (100 to 106 m).

DATUM.--Altitude of land-surface datum is 20 ft (6.1 m). Measuring point: Top of casing at land-surface datum.

REMARKS.--Water level affected by pumping in the Dover area.

PERIOD OF RECORD.--August 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 67.40 ft (20.54 m) below land-surface datum, May 5, 1970; lowest, 143.0 ft (43.59 m) below land-surface datum, Sept. 6, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	129.8	121.4	e118.5	.....	114.6	118.9	.....	124.4	.....	.....	129.0	132.1
10	128.5	121.0	e118.5	.....	114.7	.....	.....	125.0	.....	123.6	130.3	132.9
15	128.5	120.5	e117.3	.....	114.8	.....	122.2	126.3	.....	.....	131.4	133.3
20	127.3	120.2	e116.7	.....	115.1	.....	e121.8	127.2	.....	126.3	.....	132.5
25	125.0	119.3	e116.1	e113.5	115.4	.....	123.4	.....	126.8	126.7	131.4	130.8
EOM	123.3	e118.8	e115.0	e114.1	.....	.....	124.2	.....	.....	127.4	132.2	130.4
WTR YEAR 1979	MAX	a113.5	JAN 25, 1979	MIN	133.4	SEP 9, 1979						

e Estimated.

a May have been higher for period Jan. 3-22, 1979.

390935075320001. Local number, JD 14-1.

LOCATION.--Lat 39°09'35", long 75°32'00", Hydrologic Unit 02040207, Division Street at Dover.

Owner: City of Dover.

AQUIFER.--Cheswold.

WELL CHARACTERISTICS.--Drilled former public supply well, diameter 12 in (0.30 m), depth 227 ft (69.2 m) cased to 195 ft (59.4 m), screened 195 to 227 ft (59.4 to 69.2 m).

DATUM.--Altitude of land-surface datum is 35 ft (10.7 m). Measuring point: Top of casing at land-surface datum.

REMARKS.--Water level affected by pumping in the Dover area.

PERIOD OF RECORD.--August 1972 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 91.05 ft (27.75 m) below land-surface datum, Nov. 28, 1976; lowest, 131.4 ft (40.05 m) below land-surface datum, Sept. 2, 1972.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	118.7	117.1	114.8	111.8	109.2	107.8	107.3	107.6	112.4	115.4	119.9	114.1
10	118.5	117.9	114.4	111.5	109.8	107.6	107.6	107.8	115.6	115.9	119.7	115.4
15	118.5	117.4	115.1	110.5	109.9	107.8	106.8	108.8	115.5	115.0	113.1	116.2
20	117.9	115.4	114.7	110.2	107.2	107.3	107.4	109.5	116.2	118.0	111.5	116.3
25	117.6	113.8	110.7	109.4	106.4	106.4	107.5	110.9	115.8	118.6	112.5	116.1
EOM	117.7	114.0	110.0	109.7	106.0	106.8	107.6	112.0	116.2	118.8	112.5	114.7
WTR YEAR 1979	MAX	105.1	MAR 26, 1979	MIN	120.7	AUG 9, 1979						

390607075331501. Local number, JD 42-3.

LOCATION.--Lat 39°06'07", long 75°33'15", Hydrologic Unit 02040207, 1 mi (1.6 km) south of Camden.

Owner: Delaware Department of Highways and Transportation.

AQUIFER.--Columbia Deposits.

WELL CHARACTERISTICS.--Bored observation water-table well, diameter 1.25 in (0.03 m), depth 11 ft (3.4 m), well point 8.5 to 11 ft (2.6 to 3.4 m).

DATUM.--Altitude of land-surface datum is about 44 ft (13.4 m). Measuring point: Top of casing at land-surface datum.

REMARKS.--This is a replacement well and is located 2 ft (0.6 m) north of the original well. The measurements published in WSP 1782, for the years 1958-61 for the original well, are doubtful.

PERIOD OF RECORD.--October 1950 to December 1961, August 1971 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.69 ft (0.82 m) below land-surface datum, July 18, 1975; lowest measured, 9.56 ft (2.91 m) below land-surface datum, Oct. 25, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	6.67	DEC 26	7.09	FEB 22	5.44	APR 24	4.64	JUN 25	4.44	AUG 24	5.70
NOV 24	7.18	JAN 23	6.17	MAR 26	4.01	MAY 24	5.10	JUL 25	5.15	SEP 25	6.05

GROUND-WATER LEVELS

377

DELAWARE--Continued

KENT COUNTY--Continued

385041075395601. Local number, MC 51-1.

LOCATION.--Lat 38°50'41", long 75°39'56", Hydrologic Unit 02060008, 1.3 mi (2.1 km) northeast of Adamsville.

Owner: Delaware Department of Highways and Transportation.

AQUIFER.--Columbia Deposits.

WELL CHARACTERISTICS.--Bored observation water-table well, diameter 2 in (0.05 m), depth 19 ft (5.8 m), well point 15 to 19 ft (4.6 to 5.8 m).

DATUM.--Altitude of land-surface datum is about 55 ft (16.8 m). Measuring point: Top of casing at land-surface datum.

REMARKS.--This is a replacement well and is located about 60 ft (18.3 m) north of original well.

PERIOD OF RECORD.--September 1958 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.52 ft (1.38 m) below land-surface datum, July 16, 1975; lowest measured, 15.69 ft (4.78 m) below land-surface datum, Nov. 1, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	13.29	DEC 11	14.62	MAR 12	5.03	JUN 18	10.41	AUG 29	11.36		
NOV 13	14.23	JAN 22	13.56	APR 16	8.59	JUL 9	11.35				

385310075331301. Local number, MD 22-1.

LOCATION.--Lat 38°53'10", long 75°33'13", Hydrologic Unit 02040207, 2.4 mi (3.9 km) west of Williamsville.

Owner: Delaware Department of Highways and Transportation.

AQUIFER.--Columbia Deposits.

WELL CHARACTERISTICS.--Bored observation water-table well, diameter 1 in (0.03 m), depth 17 ft (5.2 m), well point 14 to 17 ft (4.3 to 5.2 m).

DATUM.--Altitude of land-surface datum is about 58 ft (17.7 m). Measuring point: Top of casing at land-surface datum.

PERIOD OF RECORD.--September 1958 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.07 ft (0.33 m) below land-surface datum, July 14, 1975; lowest measured, 11.14 ft (3.40 m) below land-surface datum, Jan. 6, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	7.57	DEC 14	7.31	MAR 7	1.28	APR 30	3.15	JUL 13	4.93		
NOV 15	8.73	JAN 31	2.18	APR 10	2.54	JUN 18	3.36	AUG 22	4.29		

NEW CASTLE COUNTY

393854075415401. Local number, DB 24-10.

LOCATION.--Lat 39°38'54", long 75°41'54", Hydrologic Unit 02040205, 2 mi (3.2 km) south of Ogleton.

Owner: Delaware Department of Highways and Transportation.

AQUIFER.--Columbia Deposits.

WELL CHARACTERISTICS.--Bored observation water-table well, diameter 1 in (0.03 m), depth 24 ft (7.3 m), well point 21 to 24 ft (6.4 to 7.3 m).

DATUM.--Altitude of land-surface datum is about 77 ft (23.5 m). Measuring point: Top of casing at land-surface datum.

PERIOD OF RECORD.--August 1957 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.33 ft (1.32 m) below land-surface datum, Oct. 6, 1978; lowest measured, 17.43 ft (5.31 m) below land-surface datum, Feb. 10, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 6	4.33	JAN 31	7.09	APR 16	5.79	AUG 9	9.73	OCT 30	9.55		
JAN 5	10.78	MAR 14	5.15	JUN 13	7.55	AUG 31	10.33				

GROUND-WATER LEVELS

DELAWARE--Continued

NEW CASTLE COUNTY--Continued

393755075364802. Local number, DC 34-6.

LOCATION.--Lat 39°37'55", long 75°36'48", Hydrologic Unit 02040205, at Delaware National Guard Rifle Range, New Castle.

Owner: Delaware Geological Survey.

AQUIFER.--Upper Potomac.

WELL CHARACTERISTICS.--Drilled artesian observation well, diameter 6 in (0.15 m) to 43 ft (13.1 m), 2 in (0.05 m) to 190 ft (57.9 m), depth 190 ft (57.9 m), screened 183 to 188 ft (55.8 to 57.3 m).

REMARKS.--Water level subject to tidal fluctuation.

DATUM.--Altitude of land-surface datum is 28 ft (8.5 m). Measuring point: Top of casing, 2.0 ft (0.61 m) above land-surface datum.

PERIOD OF RECORD.--November 1975 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 39.30 ft (11.98 m) below land-surface datum, Feb. 2, 1976; lowest, 53.35 ft (16.26 m) below land-surface datum, Mar. 7, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	.....	48.34	48.08	49.22	48.22	47.71	46.30	45.50	44.95	44.15	44.25	43.88
10	.....	48.45	48.13	48.65	47.64	46.50	46.20	45.55	44.59	43.86	43.40	44.93
15	.....	48.20	47.80	48.47	47.33	46.89	45.47	45.67	44.90	44.65	44.50	44.20
20	48.67	48.38	47.46	48.10	47.92	47.05	45.88	45.03	44.48	43.92	43.90	43.60
25	48.42	48.45	47.98	47.60	46.95	45.85	45.50	44.59	44.15	44.56	44.10	47.35
EOM	48.18	47.78	48.05	48.00	47.09	45.95	45.06	45.80	43.82	44.34	44.25	44.61

WTR YEAR 1979 MAX 42.63 AUG 10, 1979 MIN 49.38 JAN 18, 1979

a Minimum for period Oct. 21, 1978, to Sept. 30, 1979, may have been lower during period Oct. 1-20, 1978.

391949075410701. Local number, HB 14-1.

LOCATION.--Lat 39°19'49", long 75°41'07", Hydrologic Unit 02040205, at Prices Corners.

Owner: Delaware Department of Highways and Transportation.

AQUIFER.--Columbia Deposits.

WELL CHARACTERISTICS.--Bored observation water-table well, diameter 1 in (0.03 m), depth 19 ft (5.8 m), well point 16 to 19 ft (4.9 to 5.8 m).

DATUM.--Altitude of land-surface datum is about 72 ft (21.9 m). Measuring point: Top of casing at land-surface datum.

PERIOD OF RECORD.--October 1957 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.49 ft (0.45 m) below land-surface datum, Apr. 7, 1958; lowest measured, 11.95 ft (3.64 m) below land-surface datum, Aug. 31, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	7.26	DEC 11	7.80	MAR 9	2.66	JUN 6	5.10	AUG 27	6.03		
NOV 2	6.97	JAN 22	4.67	APR 12	3.80	JUL 11	6.12				

SUSSEX COUNTY

384930075370201. Local number, NC 13-3.

LOCATION.--Lat 38°49'30", long 75°37'02", Hydrologic Unit 02060008, 2.0 mi (3.2 km) northwest of Greenwood.

Owner: University of Delaware.

AQUIFER.--Piney Point.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in (0.15 m), depth 630 ft (192 m), cased to 620 ft (189 m), screened 620 to 630 ft (189 to 192 m).

DATUM.--Land surface datum is 62.5 ft (19.1 m) above mean sea level. Measuring point: Top of casing, 3.0 ft (0.9 m) above land-surface datum.

PERIOD OF RECORD.--December 1970 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 69.70 ft (21.24 m) below land-surface datum, Jan. 1, 1971; lowest, 80.05 ft (24.40 m) below land-surface datum, Nov. 20, 21, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	79.72	79.78	79.61	79.76	79.62	79.56	79.43	79.57	79.38	79.53	79.54	79.51
10	79.93	79.90	79.75	79.19	79.69	79.47	79.52	79.61	79.55	79.60	79.51	79.51
15	79.84	79.93	79.70	.....	79.57	79.64	79.36	79.65	79.61	79.53	79.43	79.51
20	79.78	80.05	79.55	.....	79.63	79.53	79.64	79.62	79.68	79.66	79.52	79.64
25	79.73	79.81	79.61	.....	79.34	79.27	79.65	79.33	79.63	79.62	79.53	79.58
EOM	79.98	79.74	79.80	79.41	79.57	79.56	79.59	79.61	79.48	79.60	79.47	79.49

WTR YEAR 1979 MAX 79.02 JAN 10, 1979 MIN 80.05 NOV 20, 21, 1978

a May have been higher for period Jan. 12-31, 1979.

GROUND-WATER LEVELS

379

DELAWARE--Continued

SUSSEX COUNTY--Continued

384639075353101. Local number, NC 45-1.

LOCATION.--Lat 38°46'39", long 75°35'31", Hydrologic Unit 02060008, 2.0 mi (3.2 km) south of Greenwood.

Owner: P. H. Cannon.

AQUIFER.--Columbia Deposits.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1 in (0.03 m), depth 15 ft (4.6 m), screened 14 to 15 ft (4.3 to 4.6 m).

DATUM.--Altitude of land-surface datum is about 43 ft (13.1 m). Measuring point: Top of casing, 1.00 ft (0.30 m) above land-surface datum.

PERIOD OF RECORD.--October 1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.67 ft (2.03 m) below land-surface datum, Jan. 30, 1952; lowest measured, 14.66 ft (4.47 m) below land-surface datum, Dec. 11, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	13.55	DEC 11	14.66	MAR 12	9.25	JUN 18	11.37	AUG 20	12.23		
NOV 21	13.98	JAN 22	11.96	APR 11	11.27	JUL 17	12.44				

384955075192801. Local number, NG 11-1.

LOCATION.--Lat 38°49'55", long 75°19'28", Hydrologic Unit 02040207, 1.2 mi (1.9 km) east of Jefferson Crossroads.

Owner: Delaware Department of Highways and Transportation.

AQUIFER.--Columbia Deposits.

WELL CHARACTERISTICS.--Bored observation water-table well, diameter 1 in (0.03 m), depth 19 ft (5.8 m), well point 16 to 19 ft (4.9 to 5.8 m).

DATUM.--Altitude of land-surface datum is 24 ft (7.3 m). Measuring point: Top of casing at land-surface datum.

PERIOD OF RECORD.--September 1959 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.12 ft (2.17 m) below land-surface datum, Mar. 7, 1979; lowest measured, 14.64 ft (4.46 m) below land-surface datum, Jan. 7, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	11.98	DEC 13	12.68	MAR 7	7.12	JUN 14	8.25	AUG 22	10.11		
NOV 14	12.69	JAN 30	10.31	APR 10	8.32	JUL 12	9.48				

383730075213501. Local number, PF 24-2.

LOCATION.--Lat 38°37'30", long 75°21'35", Hydrologic Unit 02060010, 1.5 mi (2.4 km) southwest of Stockley.

Owner: Delaware Department of Highways and Transportation.

AQUIFER.--Columbia Deposits.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 4 in (0.10 m), depth 49 ft (14.9 m), cased to 46 ft (14.0 m), screened 46 to 49 ft (14.0 to 14.9 m).

DATUM.--Altitude of land-surface datum is about 50 ft (15.2 m). Measuring point: Top of casing, 3.00 ft (0.91 m) above land-surface datum.

PERIOD OF RECORD.--January 1970 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 5.01 ft (1.53 m) below land-surface datum, Mar. 7, 1979; lowest, 11.98 ft (3.65 m) below land-surface datum, Sept. 5, 6, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.08	11.36	10.95	9.40	7.70	6.15	7.27	8.36	7.57	8.61	9.80	e10.23
10	11.17	11.40	10.64	8.80	8.00	5.53	7.45	8.50	7.84	8.89	9.96	e10.18
15	11.24	11.41	10.33	8.65	8.25	6.14	7.62	8.60	7.89	9.13	9.94	e10.15
20	11.30	11.38	10.23	8.57	8.48	6.57	7.76	8.72	7.95	9.32	10.06	e10.11
25	11.35	11.40	9.97	7.14	e5.93	6.72	8.07	8.59	8.22	9.46	10.10	e10.08
EOM	11.40	11.14	9.67	7.33	e5.55	7.19	8.16	8.65	8.46	9.62	10.23	e10.07

WTR YEAR 1979 MAX 5.01 MAR 7, 1979 MIN 11.41 NOV 15, 1978

e Estimated.

383138075260201. Local number, QE 44-1.

LOCATION.--Lat 38°31'38", long 75°26'02", Hydrologic Unit 02060008, 1.0 mi (1.6 km) east of Whaleys Crossroads.

Owner: Delaware Department of Highways and Transportation.

AQUIFER.--Columbia Deposits.

WELL CHARACTERISTICS.--Bored observation water-table well, diameter 1 in (0.03 m), depth 25 ft (7.6 m), well point 22 to 25 ft (6.7 to 7.6 m).

DATUM.--Altitude of land-surface datum is about 50 ft (15.2 m). Measuring point: Top of casing at land-surface datum.

PERIOD OF RECORD.--September 1959 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.98 ft (1.52 m) below land-surface datum, Mar. 16, 1979; lowest measured, 12.18 ft (3.71 m) below land-surface datum, Oct. 16, 1962, Sept. 8, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	10.60	DEC 15	7.81	MAR 16	4.98	JUN 18	5.93	AUG 30	8.82		
NOV 21	11.06	JAN 30	5.31	APR 11	5.69	JUL 17	8.33				

GROUND-WATER LEVELS

MARYLAND

ALLEGANY COUNTY

394024078273401. Local number, AL-Ah 1.

LOCATION.--Lat 39°40'24", long 78°27'34", Hydrologic Unit 02070003, on Fifteen Mile Creek, 2.8 mi (4.5 km) southeast of Pratt.

Owner: Green Ridge State Forest.

AQUIFER.--Jennings Formation.

WELL CHARACTERISTICS.--Drilled unused artesian (?) well, diameter 8 in (0.20 m), reported depth 300 ft (91.4 m), measured depth 113 ft (34.4 m), cased to unknown depth, open hole.

DATUM.--Altitude of land-surface datum is 720 ft (219 m). Measuring point: Top of sanitary seal in casing, 0.3 ft (0.09 m) above land-surface datum.

REMARKS.--Water level was deeper than 40 ft (12 m) below land-surface datum on Nov. 19, 1969, and Feb. 12, 1970, when well was being pumped.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.80 ft (0.55 m) below land-surface datum, May 18, 1978; lowest measured, 22.80 ft (6.95 m) below land-surface datum, July 16, 1968.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	5.87	JAN 3	3.20	MAY 3	3.28	AUG 8	4.52				
DEC 15	4.50	MAR 13	3.16	JUL 5	3.35	SEP 25	3.79				

ANNE ARUNDEL COUNTY

391208076353501. Local number, AA-Ad 10.

LOCATION.--Lat 39°12'08", long 76°35'35", Hydrologic Unit 02060003, at Curtis Bay.

Owner: U.S. Army Reserve Center.

AQUIFER.--Patapsco Formation.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 to 6 in (0.20 to 0.15 m), depth 109 ft (33.2 m), length of casing and position of screen unknown.

DATUM.--Altitude of land-surface datum is 45 ft (14 m). Measuring point: Top of casing, 1.0 ft (0.30 m) above land-surface datum.

PERIOD OF RECORD.--August 1944, January 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 29.96 ft (9.13 m) below land-surface datum, June 18, 1953; lowest measured, 36.56 ft (11.14 m) below land-surface datum, Apr. 21, 1944.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13	32.17	NOV 17	32.53	JAN 5	33.01	MAR 9	32.18	MAY 4	31.77	JUN 21	31.40

390303076463201. Local number, AA-Cb 1.

LOCATION.--Lat 39°03'03", long 76°46'32", Hydrologic Unit 02060006, on Duvall Bridge Rd., Fort George G. Meade.

Owner: U.S. Army.

AQUIFER.--Patuxent Formation.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in (0.15 m), depth 505 ft (153.9 m), cased to 485 ft (147.8 m), screened 485 to 505 ft (147.8 to 153.9 m).

DATUM.--Altitude of land-surface datum is 126 ft (38 m). Measuring point: Top lip of 3-in (0.08 m) extension pipe, 3.35 ft (1.02 m) above land-surface datum.

REMARKS.--Equipped with water-stage recorder during many periods.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 40.60 ft (12.37 m) below land-surface datum, May 1, 1962; lowest measured, 72.80 ft (22.19 m) below land-surface datum, Aug. 10, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	70.86	NOV 30	69.22	JAN 25	67.35	APR 17	67.68	JUN 12	69.07	SEP 6	73.33
NOV 2	70.22	DEC 28	68.61	MAR 19	67.52	MAY 14	68.41	AUG 6	72.72		

GROUND-WATER LEVELS

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MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

390423076432001. Local number, AA-Cc 40.

LOCATION.--Lat 39°04'23", long 76°43'20", Hydrologic Unit 02060006, on Rifle Range Rd., Fort George G. Meade.

Owner: U.S. Army.

AQUIFER.--Patapsco Formation.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in (0.15 m), depth 238 ft (72.5 m), cased to 208 ft (63.4 m), screened 208 to 238 ft (63.4 to 72.5 m).

DATUM.--Altitude of land-surface datum is 137 ft (42 m) (incorrectly reported as 148 ft (45 m) in 1978 report).

Measuring point: Top of recorder platform, 1.0 ft (0.30 m) above land-surface datum.

REMARKS.--Equipped with water-stage recorder Dec. 4, 1959, to July 21, 1960.

PERIOD OF RECORD.--December 1959 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 42.58 ft (12.98 m) below land-surface datum, Mar. 25, 1961; lowest measured, 49.22 ft (15.00 m), June 2, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	47.60	NOV 30	47.74	JAN 25	46.57	APR 17	45.43	JUN 12	45.50	SEP 6	45.48
NOV 2	47.84	DEC 28	47.42	MAR 19	45.79	MAY 14	45.33	AUG 6	46.33		

BALTIMORE CITY

391617076322001. Local number, 2S5E-1.

LOCATION.--Lat 39°16'17", long 76°32'20", Hydrologic Unit 02060003, near Holabird Avenue and Pumphrey Street, at Fort Holabird, Baltimore.

Owner: City of Baltimore.

AQUIFER.--Patuxent Formation.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 12 in (0.30 m), depth 290 ft (88.4 m), length of casing and position of screen unknown.

DATUM.--Altitude of land-surface datum is 30 ft (9.1 m). Measuring point: Top of casing, 1.8 ft (0.55 m) above land-surface datum.

PERIOD OF RECORD.--1934, April 1943 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 43.15 ft (13.15 m) below land-surface datum, Sept. 27, 1976; lowest measured, 103.70 ft (31.61 m), Oct. 15, 1948.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13	73.27	JAN 5	71.65	MAY 4	67.85	JUL 27	71.42				
NOV 17	72.78	MAR 9	72.77	JUN 21	70.31	SEP 11	69.09				

BALTIMORE COUNTY

393102076341801. Local number, BA-Ce 21.

LOCATION.--Lat 39°31'02", long 76°34'18", Hydrologic Unit 02060003, on Paper Mill Rd, about 0.2 mi (0.3 km) west of Jacksonville.

Owner: Baltimore County.

AQUIFER.--Loch Raven Schist (Wissahickon Group), revised.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 10 to 6 in (0.25 to 0.15 m), depth 350 ft (106.7 m), cased to 33 ft (10.1 m), open hole.

DATUM.--Altitude of land-surface datum is 536 ft (163 m). Measuring point: Top of casing, 2 ft (0.61 m) above land-surface datum.

PERIOD OF RECORD.--November and December 1955, November 1956 through September 1975, July 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.60 ft (3.84 m) below land-surface datum, June 23, 1972; lowest measured, 21.54 ft (6.57 m) below land-surface datum, Feb. 10, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 8	16.50	MAR 9	13.66	MAY 7	15.15	JUL 12	15.94				

GROUND-WATER LEVELS

MARYLAND--Continued

CALVERT COUNTY

381952076270901. Local number, CA-Gd 6.

LOCATION.--Lat 38°19'52", long 76°27'09", Hydrologic Unit 02060006, at the Lord Calvert Yacht Club, about 0.5 mi (0.8 km) northeast of Solomons.

Owner: Calvert Marina.

AQUIFER.--Aquia Formation.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 to 6 in (0.20 to 0.15 m), depth 493 ft (150.3 m), cased to 472 ft (143.9 m), screened 469 to 493 ft (143.0 to 150.3 m).

DATUM.--Altitude of land-surface datum is 10 ft (3.0 m). Measuring point: Top of pump base, 10 ft (3.0 m) above land-surface datum.

REMARKS.--Equipped with water-stage recorder Oct. 19, 1949, to Feb. 25, 1960.

PERIOD OF RECORD.--1942, January 1944, October 1949 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level reported, at land-surface datum, 1942; lowest measured, 58.9 ft (17.95 m) below land-surface datum, Jan. 13, 1944.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	49.16	JAN 9	47.79	APR 24	49.30	JUL 13	51.10				
DEC 6	48.17	MAR 6	48.06	JUN 5	49.45	AUG 20	51.74				

CARROLL COUNTY

393638076510001. Local number, CL-Bf 1.

LOCATION.--Lat 39°36'38", long 76°51'00", Hydrologic Unit 02060003, on Hillcrest Street, Hampstead.

Owner: Town of Hampstead.

AQUIFER.--Prettyboy Schist (Wissahickon Group).

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 8 in (0.20 m), depth 407 ft (124.1 m), cased to about 65 ft (19.8 m), open hole.

DATUM.--Altitude of land-surface datum is 933 ft (284 m). Measuring point: Top of 2-in casing extension, 2.35 ft (0.72 m) above land-surface datum.

REMARKS.--Equipped with water-stage recorder Apr. 15, 1952, to Nov. 7, 1962.

PERIOD OF RECORD.--September and December 1946, April and September 1947, February 1949 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 52.30 ft (15.94 m) below land-surface datum, May 13, 1952; lowest measured, 76.26 ft (23.24 m) below land-surface datum, Feb. 10, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	70.62	JAN 8	71.35	JUN 4	62.92	AUG 20	67.40				
DEC 4	72.56	MAR 15	60.10	JUL 9	64.27						

CHARLES COUNTY

383422077114601. Local number, CH-Cb 7.

LOCATION.--Lat 38°34'22", long 77°11'46", Hydrologic Unit 02070011, at Caffee and Greenslade Roads, about 2.5 mi (4.0 km) southwest of Indian Head.

Owner: U.S. Navy: Naval Ordnance Station.

AQUIFER.--Patapsco Formation.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 to 6 in (0.20 to 0.15 m), depth 400 ft (121.9 m), cased to 400 ft (121.9 m), screened 154 to 167 ft (46.9 to 50.9 m).

DATUM.--Altitude of land-surface datum is 36 ft (11 m). Measuring point: Top of casing at land-surface datum.

REMARKS.--Equipped with water-stage recorder Sept. 21, 1953, to July 8, 1965.

PERIOD OF RECORD.--March and April 1952, August 1953 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 57.35 ft (17.48 m) below land-surface datum, Apr. 18, 1952; lowest measured, 88.58 ft (27.00 m) below land-surface datum, Oct. 22, 1968.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 19	70.76	JAN 10	73.69	APR 25	75.72	JUL 11	70.66				
DEC 4	73.47	MAR 8	76.88	JUN 6	74.60	AUG 22	70.85				

GROUND-WATER LEVELS

383

MARYLAND--Continued

DORCHESTER COUNTY

383346076030301. Local number, DO-Ce 21.

LOCATION.--Lat 38°33'46", long 76°03'03", Hydrologic Unit 02060005, on Shoal Creek about 1.5 mi (2.4 km) southeast of Cambridge.

Owner: Eastern Shore State Hospital.

AQUIFER.--Piney Point Formation.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 to 4.5 in (0.20 to 0.11 m), depth 368 ft (112.2 m), cased to 368 ft (112.2 m).

DATUM.--Altitude of land-surface datum is 12 ft (3.7 m). Measuring point: Top of casing at land-surface datum.

REMARKS.--Equipped with water-stage recorder Aug. 23, 1956, to Nov. 6, 1958, and Sept. 11, 1965, to Oct. 13, 1966.

PERIOD OF RECORD.--August 1914, February 1952, August 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level reported, 14 ft (4.3 m) below land-surface datum, August 1914; lowest measured, 137.49 ft (41.91 m) below land-surface datum, Feb. 8, 1962, affected by pumpage of nearby well.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	82.69	DEC 12	82.59	JAN 31	79.97	APR 17	82.12	JUL 18	75.16		
NOV 21	82.81	JAN 5	82.28	MAR 15	82.05	JUN 17	75.10	SEP 14	68.73		

GARRETT COUNTY

394016078581601. Local number, GA-Ag 1.

LOCATION.--Lat 39°40'16", long 78°58'16", Hydrologic Unit 02070002, in the Savage River valley, 2.5 mi (4.0 km) northwest of Frostburg.

Owner: Town of Frostburg.

AQUIFER.--Pocono Sandstone or Greenbrier Limestone.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 8 in (0.20 m), depth 30 ft (9.1 m), cased to unknown depth, open hole.

DATUM.--Altitude of land-surface datum is 2,530 ft (771 m). Measuring point: Top of casing at land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.71 ft (1.74 m) below land-surface datum, Jan. 14, 1950; lowest measured, 9.37 ft (2.86 m) below land-surface datum, Nov. 24, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	7.42	JAN 3	6.84	FEB 22	7.05	APR 24	6.83	JUN 25	6.86	AUG 17	7.12
NOV 22	7.46	24	6.80	MAR 26	6.71	MAY 24	6.72	JUL 25	6.94	SEP 24	6.80
DEC 22	6.95										

HARFORD COUNTY

392343076161901. Local number, HA-Ed 24.

LOCATION.--Lat 39°23'43", long 76°16'19", Hydrologic Unit 02060003, at Bush River Road and 29th Street, about 2 mi (3.2 km) southeast of Edgewood.

Owner: U.S. Army: Edgewood Arsenal.

AQUIFER.--Patapsco Formation.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 18 to 10 in (0.46 to 0.25 m), depth 149 ft (45.4 m), cased to 120 ft (36.6 m), screened 120 to 135 ft (36.6 to 41.1 m).

DATUM.--Altitude of land-surface datum is 13 ft (4.0 m). Measuring point: Top of casing, 1.15 ft (0.35 m) above land-surface datum.

REMARKS.--Equipped with water-stage recorder Jan. 24, 1950, to June 6, 1961.

PERIOD OF RECORD.--April 1944, September 1949, January 1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.24 ft (2.51 m) below land-surface datum, Apr. 13, 1944; lowest measured, 38.40 ft (11.70 m) below land-surface datum, Apr. 23, 1967.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 2	10.15	JAN 8	9.42	MAR 13	9.79	May 7	9.15	Jul 25	9.40	AUG 24	9.70

GROUND-WATER LEVELS

MARYLAND--Continued

MONTGOMERY COUNTY

390434076573002. Local number, MO-Eh 20.

LOCATION.--Lat 39°04'34", long 76°57'30", Hydrologic Unit 02070010, at State Highway 196 and Fairland Road, Fairland.

Owner: Cities Service Oil Co.

AQUIFER.--Wissahickon Group.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 5.6 in (0.14 m), depth 103 ft (31.4 m), cased to 50 ft (15.2 m), open hole.

DATUM.--Altitude of land-surface datum is 410 ft (125 m). Measuring point: West side of bell housing at inside of lip at land-surface datum.

PERIOD OF RECORD.--March 1955 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.39 ft (1.34 m) below land-surface datum, June 25, 1972; lowest measured, 14.88 ft (4.54 m) below land-surface datum, Sept. 26, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	13.33	DEC 26	11.71	FEB 22	11.26	APR 25	10.54	JUN 25	11.27	AUG 22	11.90
NOV 22	13.77	JAN 25	9.33	MAR 26	9.87	MAY 24	11.29	JUL 25	11.97	SEP 25	10.2

WASHINGTON COUNTY

393638078001301. Local number, WA-Be 2.

LOCATION.--Lat 39°36'38", long 78°00'13", Hydrologic Unit 02070004, about 1.2 mi (1.9 km) southeast of Big Pool.

Owner: Fort Frederick State Park.

AQUIFER.--Romney Shale.

WELL CHARACTERISTICS.--Dug unused water-table well, diameter 42 in (1.07 m), depth 43 ft (13.1 m), cribbed with stone.

DATUM.--Altitude of land-surface datum is 470 ft (143 m). Measuring point: Top of stone sill, 0.8 ft (0.24 m) above land-surface datum.

PERIOD OF RECORD.--December 1949, June 1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 17.90 ft (5.46 m) below land-surface datum, May 15, 1972; lowest measured, 36.92 ft (11.25 m) below land-surface datum, Jan. 11, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	34.36	JAN 3	33.40	MAR 13	26.50	MAY 8	27.25	JUN 28	31.80	AUG 8	33.90

WICOMICO COUNTY

382037075310801. Local number, WI-Cf 3.

LOCATION.--Lat 38°20'37", long 75°31'08", Hydrologic Unit 02060007, on Airport Road, about 5 mi (8.0 km) southeast of Salisbury.

Owner: Salisbury Wicomico Airport.

AQUIFER.--Columbia Deposits.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 16 in (0.41 m), depth 109 ft (33.2 m), cased to 90 ft (27.4 m), screened 90 to 108 ft (27.4 to 32.9 m).

DATUM.--Altitude of land-surface datum is 45 ft (14 m). Measuring point: Top of casing, 2.0 ft (0.61 m) above land-surface datum.

REMARKS.--Equipped with water-stage recorder Aug. 2, 1949, to Apr. 11, 1960, and Aug. 29, 1963, to Aug. 20, 1968.

PERIOD OF RECORD.--October 1942, September 1947 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.90 ft (0.58 m) below land-surface datum, May 7, 1958; lowest measured, 13.44 ft (4.10 m) below land-surface datum, Sept. 18, 1947.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	8.51	DEC 15	6.63	FEB 5	5.51	APR 11	5.50	JUL 17	5.76		
NOV 21	8.88	JAN 5	5.71	MAR 8	3.10	JUN 18	5.34	SEP 18	4.54		

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MULTIPLE STATION LISTING										
LOCAL IDENT- IFIER	STATION NUMBER	GEO- LOGIC UNIT	DATE OF SAMPLE	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	SAMP- LING DEPTH (FT)	DEPTH TO BOT- TOM OF WATER- BEARING ZONE (FT)	DEPTH TO TOP OF WATER- BEARING ZONE (FT)	DEPTH OF WELL, TOTAL (FEET)	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT)	
ANNE ARUNDEL										
CC 115	739755	390103076402601	217PPSC	79-07-19	89.00	671	718	646	673	671
CC 116	739756	390103076402602	217PPSC	79-07-24	87.00	483	490	395	486	483
CC 117	739757	390103076402603	211MGTY	79-07-26	78.00	146	150	70	147	146
CF 135	740172	390136076271201	217PPSC	79-09-19	37.00	550	555	360	550	550
ED 45	741005	385406076383901	125AQUI	79-08-15	65.00	150	202	60	150	150
FD 43	741004	384646076352401	125AQUI	79-08-07	145.40	280	395	222	280	280
BALTIMORE										
CC 241		393158076401101	400BLMR	79-03-01	--	--	--	--	--	--
CC 242		393312076415501	400BLMR	79-03-02	--	--	--	--	--	--
CC 243		393403076414701	300CCKV	79-03-02	--	--	--	--	--	--
CC 244		393424076435001	--	79-03-02	--	--	--	--	--	--
CC 245		393104076425401	400BLMR	79-03-02	--	--	--	--	--	--
CD 217		393153076395701	400BLMR	79-03-01	--	--	--	--	--	--
EA 89		392059076504901	300WDCK	79-02-06	--	--	--	--	--	--
EB 289		392058076481701	400BLMR	79-02-06	--	--	--	--	--	--
EB 290		392150076492301	400BLMR	79-02-06	--	--	--	--	--	--
CALVERT										
HB 27	733303	384331076395201	125AQUI	79-08-03	137.20	320	418	254	320	320
DB 47	733304	383239076354301	125AQUI	79-07-25	141.20	570	660	468	680	570
FD 54	732892	382119076260001	125AQUI	78-10-11	151.00	638	682	584	695	638
DORCHESTER										
CE 86	731028	383344076041201	124PNPN	79-07-18	--	--	526	368	516	516
GARRETT										
CC 58	730352	393340079185901	331MCCK	78-10-18	80.00	--	183	23	183	183
CD 28	731718	393446079120401	324PSVL	78-10-19	45.00	--	258	48	258	258
KENT										
BE 43	730659	391823075594701	211MGTY	78-12-07	54.00	280	320	260	--	285
BE 33	730670	391815075472101	217PTMC	78-10-25	62.40	700	705	695	--	690
BE 34		391815075472102	125AQUI	78-10-26	27.70	160	220	70	--	186
DB 40	730805	390837076140401	217PTMC	78-12-04	12.40	1025	1112	964	--	1030
			217PTMC	78-12-05	12.40	1025	1112	964	--	1030
MONTGOMERY										
CB 24	090097	391313077253101	231NOXF	78-10-18	30.00	--	--	--	125	125
CC 30	730590	391211077224601	300IJMV	78-10-18	41.00	--	--	--	124	124
DB 47	731584	390809077252101	231NOXF	78-10-18	33.00	--	--	--	600	600
DB 49	730740	390804077245901	231NOXF	78-10-19	50.00	--	--	--	245	245
DC 05		390946077240401	300IJMV	78-10-18	--	--	--	--	90	90
DC 31	730075	390834077242001	231NOXF	78-10-18	12.20	--	--	--	285	285
DC 48	730950	390614077213401	231NOXF	78-10-19	29.00	--	--	--	105	105
DC 72	732284	390752077243101	231NOXF	78-10-18	4.90	--	--	--	275	275
PRINCE GEORGES										
ED 50		384715076522001	217PPSC	79-06-08	196.00	--	345	320	350	345
ST MARYS										
BB 15	733430	382838076470101	125AQUI	79-07-19	162.20	460	580	440	600	460
DB 49	733081	381616076364701	125AQUI	78-10-20	143.20	539	600	485	529	539
DD 50	733082	381807076380001	125AQUI	78-10-26	120.00	513	550	434	503	513
DF 71	733431	381527076283101	125AQUI	79-07-13	119.00	550	596	492	220	560
FE 31	733088	380834076303501	125AQUI	78-10-18	29.60	448	500	404	448	458

Geologic unit (aquifer):

124PNPN - Piney Point Formation
 125AQUI - Aquia Formation
 211MGTY - Magothy Formation
 217PPSC - Patapsco Formation
 217PTMC - Potomac Group
 231NOXF - New Oxford Formation

300CCKV - Cockeysville Marble
 300IJMV - Ijamsville Formation-Marburg Schist-Undifferentiated
 300WDCK - Woodstock Quartz Monzonite
 324PSVL - Pottsville Formation
 331MCCK - Mauch Chunk Formation
 400BLMR - Baltimore Gneiss

QUALITY OF GROUND WATER

387

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MULTIPLE STATION LISTING											
LOCAL IDENT- I- FIER		DATE OF SAMPLE	DEPTH	ELEV.	PUMP	DEPTH	FLOW	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)
			TO TOP OF SAMPLE INTER- VAL (FT)	OF LAND SURFACE DATUM (FT. NGVD)	OR FLOW PERIOD PRIOR TO SAM- PLING (MIN)		OF HOLE. TOTAL (FEET)					HATE, INSTAN- TANEOUS (GPM)
ANNE ARUNDEL											
CC 115	739755	79-07-19	661	135.00	1420	723	35	45	4.5	15.0	0
CC 116	739756	79-07-24	473	135.00	1430	492	50	25	--	14.0	3
CC 117	739757	79-07-26	136	135.00	1430	154	50	90	--	12.5	0
CF 135	740172	79-09-19	350	34.00	1405	565	1620	--	5.7	15.1	5
ED 45	741005	79-08-15	140	100.00	60	218	17	--	--	--	3
FD 43	741004	79-08-07	270	140.00	60	418	15	--	--	--	80
BALTIMORE											
CC 241		79-03-01	--	350.00	--	--	15	--	8.8	10.0	5
CC 242		79-03-02	--	540.00	--	--	.02	--	6.1	10.0	5
CC 243		79-03-02	--	520.00	--	--	10	--	6.0	6.0	20
CC 244		79-03-02	--	560.00	--	--	.05	--	5.8	5.0	75
CC 245		79-03-02	--	380.00	--	--	100	--	6.1	6.0	30
CD 217		79-03-01	--	400.00	--	--	.03	--	6.8	7.0	5
EA 89		79-02-06	--	450.00	--	--	1.0	--	6.9	3.0	0
EB 289		79-02-06	--	490.00	--	--	3.0	--	6.9	3.0	0
EB 290		79-02-06	--	460.00	--	--	5.0	--	6.5	4.0	5
CALVERT											
BB 27	733303	79-08-03	310	130.00	60	440	20	--	--	--	4
DB 47	733304	79-07-25	560	140.00	60	680	25	--	--	--	3
FD 54	732892	78-10-11	--	--	--	--	--	228	--	--	15
DORCHESTER											
CE 86	731028	79-07-18	371	15.00	2815	575	1012	750	8.0	17.5	0
GARRETT											
CC 58	730352	78-10-18	23	2700.00	--	183	--	140	--	9.0	10
CD 28	731718	78-10-19	48	2810.00	--	258	18	80	--	9.0	10
KENT											
BE 43	730659	78-12-07	275	65.00	240	1670	10	290	7.1	16.0	100
BE 33	730670	78-10-25	695	63.00	--	2190	20	435	8.1	20.5	5
BE 34		78-10-26	124	63.00	--	188	--	295	7.1	14.0	10
DB 40	730805	78-12-04	1020	20.00	--	1830	--	163	5.6	19.0	500
		78-12-05	1020	20.00	--	1830	--	153	6.0	18.0	10
MONTGOMERY											
CB 24	890097	78-10-18	24	350.00	240	125	15	260	5.8	11.0	10
CC 30	730590	78-10-18	46	540.00	60	124	15	65	4.2	16.0	5
DB 47	731584	78-10-18	62	420.00	1440	600	50	275	7.3	13.0	5
DB 49	730740	78-10-19	41	310.00	60	245	3.0	195	7.1	15.0	10
DC 65		78-10-18	--	470.00	--	90	--	65	5.4	15.0	5
DC 31	730075	78-10-18	82	378.00	1440	285	100	355	7.2	13.0	10
DC 49	730950	78-10-19	30	290.00	120	105	7.0	285	7.3	19.0	5
DC 72	732284	78-10-18	40	330.00	60	275	12	350	7.3	14.0	10
PRINCE GEORGES											
ED 50		79-06-08	320	242.00	1400	780	150	315	7.6	14.8	0
ST MARYS											
BB 15	733430	79-07-19	450	170.00	60	600	45	--	--	--	5
DD 49	733081	78-10-20	529	115.00	3	617	15	275	--	--	35
DD 80	733082	78-10-26	503	90.00	3	513	15	243	--	--	75
DF 71	733431	79-07-13	550	170.00	75	620	30	--	--	--	8
FE 31	733088	78-10-18	448	8.00	3	598	15	510	--	--	10

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MULTIPLE STATION LISTING

LOCAL IDENT- IFIER	DATE OF SAMPLE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)
ANNE ARUNDEL										
CC 115 739755	79-07-19	6	6	1.4	.7	1.0	22	.2	1.0	0
CC 116 739756	79-07-24	2	--	.4	.2	.8	41	.3	.5	--
CC 117 739757	79-07-26	5	5	1.0	.7	1.4	31	.3	1.2	0
CF 135 740172	79-09-19	21	21	4.3	2.5	1.0	8	.1	2.4	--
ED 45 741005	79-08-15	160	--	57	4.9	3.1	4	.1	4.4	--
FD 43 741004	79-08-07	190	--	54	14	5.0	5	.2	10	--
BALTIMORE										
CC 241	79-03-01	170	29	46	13	3.5	4	.1	1.3	170
CC 242	79-03-02	36	23	8.1	3.8	8.6	33	.6	2.0	16
CC 243	79-03-02	67	50	18	5.3	2.0	5	.1	12	21
CC 244	79-03-02	23	0	6.0	2.0	1.4	7	.1	13	65
CC 245	79-03-02	9	4	2.1	.8	.5	8	.1	2.6	5
CD 217	79-03-01	20	3	5.4	1.6	3.1	24	.3	.9	21
EA 89	79-02-06	19	5	5.2	1.5	4.9	34	.5	1.5	17
EB 289	79-02-06	39	31	9.5	3.7	11	36	.8	2.3	10
EB 290	79-02-06	93	70	26	6.9	8.6	16	.4	6.0	28
CALVERT										
BB 27 733303	79-08-03	140	--	36	11	6.0	8	.2	12	--
DB 47 733304	79-07-25	110	--	23	13	9.5	14	.4	15	--
FD 54 732892	78-10-11	22	0	6.1	1.7	33	68	3.0	9.2	130
DORCHESTER										
CE 86 731028	79-07-18	25	0	5.0	3.0	170	91	15	8.5	490
GARRETT										
CC 58 730352	78-10-18	60	4	18	3.6	2.7	9	.2	1.1	68
CD 28 731718	78-10-19	34	0	8.5	3.1	2.4	13	.2	1.2	42
KENT										
BE 43 730659	78-12-07	130	0	44	4.5	6.8	10	.3	3.9	170
BE 33 730670	78-10-25	16	0	4.7	1.0	90	90	9.8	4.1	180
BE 34	78-10-26	140	0	52	1.9	3.0	4	.1	1.9	170
DB 40 730805	78-12-04	24	0	4.8	2.8	16	54	1.4	5.0	43
	78-12-05	24	0	5.0	2.9	15	52	1.3	4.9	45
MONTGOMERY										
CB 24 090097	78-10-18	95	43	28	6.0	9.1	17	.4	1.8	63
CC 30 730590	78-10-18	13	13	1.6	2.1	6.4	51	.8	.6	0
DB 47 731584	78-10-18	140	2	47	5.9	10	13	.4	1.1	170
DB 49 730740	78-10-19	110	0	35	4.4	8.7	15	.4	.8	140
DC 05	78-10-18	24	13	4.9	2.9	2.1	15	.2	.8	14
DC 31 730075	78-10-18	160	26	53	6.1	9.7	12	.3	.9	160
DC 48 730950	78-10-19	140	9	45	6.7	8.2	11	.3	.8	160
DC 72 732284	78-10-18	150	0	47	9.1	12	14	.4	.7	200
PRINCE GEORGES										
ED 50	79-06-08	150	0	46	8.0	5.0	7	.2	4.8	180
ST MARYS										
BB 15 733430	79-07-19	100	--	26	8.5	7.5	12	.3	15	--
DD 49 733081	78-10-20	13	0	4.4	.6	54	82	6.4	9.6	160
DD 50 733082	78-10-26	31	0	10	1.5	43	71	3.4	6.0	140
DF 71 733431	79-07-13	7	--	1.7	.6	71	91	12	6.0	--
FE 31 733088	78-10-18	12	0	3.0	1.2	110	91	14	9.5	310

QUALITY OF GROUND WATER

389

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MULTIPLE STATION LISTING

LOCAL IDENT- I- FIEN	DATE OF SAMPLE	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
ANNE ARUNDEL										
CC 115 739755	79-07-19	0	0	.0	9.7	.9	.0	9.6	24	28
CC 116 739756	79-07-24	0	--	--	4.7	.9	.0	9.3	20	--
CC 117 739757	79-07-26	--	0	--	25	2.4	.0	14	53	48
CF 135 740172	79-09-19	--	0	--	27	.7	.1	8.2	48	62
ED 45 741005	79-08-15	--	--	--	17	2.5	.2	22	232	112
FD 43 741004	79-08-07	--	--	--	36	2.0	.2	14	227	135
BALTIMORE										
CC 241	79-03-01	0	140	.4	14	10	--	--	181	--
CC 242	79-03-02	0	13	20	7.7	20	--	--	88	--
CC 243	79-03-02	0	17	34	19	18	--	--	132	--
CC 244	79-03-02	0	53	165	7.7	4.7	--	--	89	--
CC 245	79-03-02	0	4	6.4	2.8	.8	--	--	26	--
CD 217	79-03-01	0	17	5.3	14	1.6	--	--	49	--
EA 89	79-02-06	0	14	3.4	--	--	--	--	--	--
EB 289	79-02-06	0	8	2.0	--	--	--	--	--	--
EB 290	79-02-06	0	23	14	--	--	--	--	--	--
CALVERT										
BB 27 733303	79-08-03	--	--	--	8.0	1.6	.2	13	177	88
DB 47 733304	79-07-25	--	--	--	8.8	1.1	.2	12	159	83
FD 54 732892	78-10-11	--	110	--	5.1	2.4	.3	14	144	136
DORCHESTER										
CE 86 731028	79-07-18	0	400	7.8	12	7.6	1.1	21	478	470
GARRETT										
CC 58 730352	78-10-18	--	56	--	6.3	.5	.1	8.4	72	74
CD 28 731718	78-10-19	--	56	--	6.3	.5	.1	7.2	--	51
KENT										
BE 43 730659	78-12-07	0	140	19	8.8	2.4	.1	11	168	168
BE 33 730670	78-10-25	0	150	2.3	8.6	47	.6	9.1	261	255
BE 34	78-10-26	0	140	22	4.3	2.4	.1	23	182	174
DB 40 730805	78-12-04	0	35	154	14	11	.2	10	112	93
	78-12-05	0	37	64	12	10	.2	9.8	77	89
MONTGOMERY										
CB 24 090097	78-10-18	0	52	142	22	28	.0	14	178	140
CC 30 730590	78-10-18	0	0	.0	.1	9.2	.0	6.2	46	26
DB 47 731584	78-10-18	0	140	12	13	4.3	.1	24	200	189
DB 49 730740	78-10-19	0	110	16	9.6	2.8	.1	23	154	153
DC 05	78-10-18	0	11	79	.5	3.3	.0	7.5	62	29
DC 31 730075	78-10-18	0	130	14	21	7.9	.0	27	223	205
DC 48 730950	78-10-19	0	130	11	7.5	4.1	.1	21	188	172
DC 72 732284	78-10-18	0	160	14	4.4	5.1	.1	24	210	201
PRINCE GEORGES										
ED 50	79-06-08	0	150	7.2	7.3	2.4	.2	14	174	177
ST MARYS										
BB 15 733430	79-07-19	--	--	--	8.0	2.1	.2	11	154	78
DD 49 733081	78-10-20	--	130	--	7.8	2.1	.2	11	179	169
DD 50 733082	78-10-26	--	110	--	9.5	1.9	.2	9.8	176	152
DF 71 733431	79-07-13	--	--	--	6.7	1.9	.6	11	224	100
FE 31 733088	78-10-18	--	250	--	11	2.4	.8	12	316	303

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MULTIPLE STATION LISTING

LOCAL IDENT- IFIER	DATE OF SAMPLE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHATE, TOTAL (MG/L AS PO4)	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)
ANNE ARUNDEL										
CC 115 739755	79-07-19	.00	.00	--	3100	0	3400	80	0	80
CC 116 739756	79-07-24	.00	.00	--	1000	0	1100	40	20	20
CC 117 739757	79-07-26	.02	.00	--	2300	100	2200	20	0	40
CF 135 740172	79-09-19	.01	.09	--	16000	--	16000	200	0	210
ED 45 741005	79-08-15	.02	.03	--	890	--	540	40	20	20
FD 43 741004	79-08-07	.02	.04	--	4600	--	90	40	20	20
BALTIMORE										
CC 241	79-03-01	4.1	.01	--	60	0	80	0	0	10
CC 242	79-03-02	1.8	.24	--	3000	2400	620	110	0	110
CC 243	79-03-02	5.1	.59	--	380	200	180	260	0	260
CC 244	79-03-02	.63	1.1	--	3800	3600	210	250	20	230
CC 245	79-03-02	.07	.12	--	2100	1300	840	90	0	270
CD 217	79-03-01	.06	.03	--	310	0	--	10	10	0
EA 89	79-02-06	.15	.02	--	150	20	130	30	0	30
EB 289	79-02-06	4.6	.03	--	330	190	140	30	0	30
EB 290	79-02-06	16	.21	--	1600	1200	380	50	0	60
CALVERT										
BB 27 733303	79-08-03	.06	.01	--	1800	--	250	20	0	20
DB 47 733304	79-07-25	.02	.01	--	100	--	50	20	20	0
FD 54 732892	78-10-11	.00	.00	--	130	60	70	0	0	10
DORCHESTER										
CE 86 731028	79-07-18	.01	.12	--	50	30	20	0	0	1
GARRETT										
CC 58 730352	78-10-18	.54	.01	--	30	0	40	0	0	10
CD 28 731718	78-10-19	.08	.02	--	1200	0	--	240	0	--
KENT										
BE 43 730659	78-12-07	.00	.08	--	3100	400	2700	60	0	60
BE 33 730670	78-10-25	.00	.07	--	870	10	860	20	0	20
BE 34	78-10-26	.00	.05	--	1100	0	1100	80	10	70
DB 40 730805	78-12-04	.00	.54	--	7700	0	7700	230	0	230
	78-12-05	.00	.21	--	7200	100	7100	240	0	240
MONTGOMERY										
CB 24 090097	78-10-18	3.8	.01	--	180	160	20	20	0	30
CC 30 730590	78-10-18	3.1	.00	--	60	10	50	60	0	60
DB 47 731584	78-10-18	2.6	.05	--	60	0	60	0	0	0
DB 49 730740	78-10-19	1.6	.03	--	90	40	50	10	0	10
DC 05	78-10-18	5.0	.00	--	100	50	50	--	0	10
DC 31 730075	78-10-18	3.4	.04	--	90	60	30	0	0	0
DC 48 730950	78-10-19	2.6	.04	--	40	0	40	0	0	0
DC 72 732284	78-10-18	1.8	.02	--	50	10	40	0	0	0
PRINCE GEORGES										
ED 50	79-06-08	.00	.15	.46	320	60	260	10	0	10
ST MARYS										
BB 15 733430	79-07-19	.15	.00	--	100	--	20	10	10	0
DD 49 733081	78-10-20	.00	.04	--	420	340	80	0	0	10
DD 50 733082	78-10-26	.00	.06	--	3700	2900	840	10	0	20
DF 71 733431	79-07-13	.01	.07	--	20	--	90	10	10	0
FE 31 733088	78-10-18	.01	.04	--	120	0	130	--	0	10

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MULTIPLE STATION LISTING

MULTIPLE STATION LISTING											
LOCAL IDENTIFIER	STATION	NUMBER	GEO-LOGIC UNIT	DATE OF SAMPLE	SAMPLING DEPTH (FT)	DEPTH TO BOTTOM OF SAMPLE INTERVAL (FT)	ELEV. OF LAND SURFACE DATUM (FT. NGVD)	PUMP OR FLOW PERIOD PRIOR TO SAMPLING (MIN)	DEPTH OF HOLE, TOTAL (FEET)	FLOW RATE, INSTANTANEOUS (GPM)	
SOMERSET											
CD 41	731425	380605075483601	217PTMC	79-05-29	1125	1140	3.00	60	1240	100	
			217PTMC	79-05-29	1125	1140	3.00	720	1240	100	
			217PTMC	79-05-30	1125	1140	3.00	1350	1238	100	
DD 47	79 001	380057075493201	217PTXN	79-06-23	4127	4215	3.50	--	5550	--	
			217PTXN	79-06-28	3957	4024	3.50	360	5550	170	
			217PTXN	79-07-05	3815	3838	3.50	540	5550	19	
LOCAL IDENTIFIER	DATE OF SAMPLE	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	DENSITY (GM/ML AT 20 C)	HARDNESS (MG/L AS CaCO3)	HARDNESS, NONCARBONATE (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg)	
SOMERSET											
CD 41	731425	79-05-29	1000	8.3	--	0	--	6	0	1.6	.6
		79-05-29	1000	8.3	--	0	--	6	0	1.7	.5
		79-05-30	1000	8.4	--	0	--	6	0	1.6	.6
DD 47	79 001	79-06-23	90000	6.7	42.0	80	1.043	20000	20000	7200	490
		79-06-28	90000	6.3	52.0	290	1.042	20000	20000	7100	510
		79-07-05	88400	6.7	36.0	150	1.040	19000	19000	6900	470
LOCAL IDENTIFIER	DATE OF SAMPLE	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DIS-SOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CaCO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	
SOMERSET											
CD 41	731425	79-05-29	260	98	45	5.8	620	0	510	5.0	27
		79-05-29	240	97	42	7.4	620	0	510	5.0	27
		79-05-30	220	97	38	6.1	610	12	520	4.0	30
DD 47	79 001	79-06-23	18000	66	55	62	--	--	41	16	870
		79-06-28	21000	70	65	60	--	--	41	40	820
		79-07-05	19000	68	60	120	--	--	29	11	1000
LOCAL IDENTIFIER	DATE OF SAMPLE	CHLORIDE, DIS-SOLVED (MG/L AS Cl)	FLUORIDE, DIS-SOLVED (MG/L AS F)	IODIDE, DIS-SOLVED (MG/L AS I)	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)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	
SOMERSET											
CD 41	731425	79-05-29	7.7	2.6	--	12	613	623	--	--	.04
		79-05-29	8.1	2.6	--	11	611	604	--	--	.01
		79-05-30	8.0	2.6	--	12	629	595	--	--	.07
DD 47	79 001	79-06-23	42000	.8	.01	16	71300	69000	.08	.02	.10
		79-06-28	42000	.7	.00	17	68900	71900	2.7	.00	2.7
		79-07-05	41000	.5	.02	15	65100	68800	.05	.01	.06

Geologic unit (aquifer):

217PTMC - Potomac Group

217PTXN - Patuxent Formation

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

MULTIPLE STATION LISTING

LOCAL IDENT- I- FIER	DATE OF SAMPLE	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM DIS- SOLVED (UG/L AS CD)
SOMENSET										
CD 41 731425	79-05-29	.31	.95	--	--	--	--	--	--	--
	79-05-29	.29	.89	--	--	--	--	--	--	--
	79-05-30	.28	.86	--	0	3	0	--	1100	0
DD 47 79 001	79-06-23	--	--	.01	--	0	100	0	9200	0
	79-06-28	--	--	.01	--	0	100	0	8600	0
	79-07-05	--	--	.01	--	1	500	20	1000	0
LOCAL IDENT- I- FIER	DATE OF SAMPLE	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	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)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
SOMENSET										
CD 41 731425	79-05-29	--	--	--	360	0	--	--	--	20
	79-05-29	--	--	--	130	50	80	--	--	10
	79-05-30	2	2	--	--	--	80	0	10	--
DD 47 79 001	79-06-23	7	0	4	25000	0	25000	0	670	12000
	79-06-28	7	0	29	23000	16000	7200	0	590	13000
	79-07-05	7	0	3	18000	9300	8700	1	600	13000
LOCAL IDENT- I- FIER	DATE OF SAMPLE	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	ZINC, DIS- SOLVED (UG/L AS ZN)
SOMENSET										
CD 41 731425	79-05-29	0	20	--	--	--	--	--	--	--
	79-05-29	0	10	--	--	--	--	--	--	--
	79-05-30	--	20	<.5	--	--	0	--	--	0
DD 47 79 001	79-06-23	1000	11000	1.0	0	3	0	0	270000	3800
	79-06-28	0	13000	1.0	0	--	0	0	270000	410
	79-07-05	1000	12000	.8	0	0	0	--	260000	800

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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)
<u>million gallons</u>	3.785×10^3	cubic meters (m ³)
	3.785×10^{-3}	cubic hectometers (hm³)
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

Monthly Runoff in Watershed Inches

$$11.2 = \frac{\text{(monthly mean daily CFS)}}{\text{(Drainage Area (mi}^2\text{))}} \cdot 1.1518$$

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